

# Цельные твердосплавные сверла (VHM)

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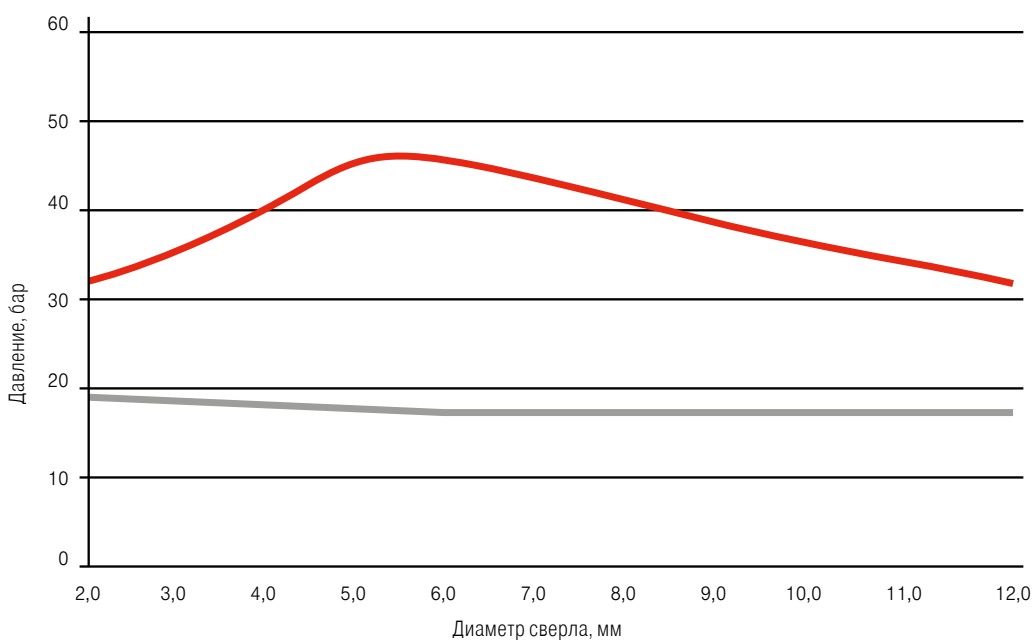
## Рекомендации по применению – инструментов WTX Performance

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● = Основная область применения  
○ = Дополнительная область применения

| WTX – Тип             |                                    | Сквозное отверстие | Глухое отверстие | Отверстие с плоским дном | Сверление с большой подачей | Сверление с большой скоростью | Сверление в пакете | Сверление через пересекающее отверстие | Засверливание в наклонную поверхность на входе > 5° | Выход из отверстия в наклонную поверхность > 5° | Сверление с допуском | Сверление глубоких отверстий | Сверление миниатюрных отверстий |
|-----------------------|------------------------------------|--------------------|------------------|--------------------------|-----------------------------|-------------------------------|--------------------|----------------------------------------|-----------------------------------------------------|-------------------------------------------------|----------------------|------------------------------|---------------------------------|
| Монолитный инструмент | WTX – UNI                          | ●                  | ●                |                          |                             |                               | ●                  | ●                                      |                                                     |                                                 |                      |                              |                                 |
|                       | WTX – Speed                        | ●                  | ●                |                          |                             | ●                             | ●                  |                                        |                                                     |                                                 |                      |                              |                                 |
|                       | WTX – HFDS                         | ●                  | ●                |                          | ●                           |                               | ●                  | ●                                      |                                                     |                                                 |                      |                              |                                 |
|                       | WTX – Feed                         | ●                  | ●                |                          | ●                           |                               | ●                  | ●                                      | ●                                                   | ●                                               |                      |                              |                                 |
|                       | WTX – Speed VA                     | ●                  | ●                |                          |                             | ●                             |                    |                                        |                                                     |                                                 |                      |                              |                                 |
|                       | WTX – VA                           | ●                  | ●                |                          |                             |                               |                    |                                        |                                                     |                                                 |                      |                              |                                 |
|                       | WTX – Ti                           | ●                  | ●                |                          |                             |                               |                    | ●                                      |                                                     |                                                 |                      |                              |                                 |
|                       | WTX – AL                           | ●                  | ●                |                          |                             |                               |                    |                                        |                                                     |                                                 |                      |                              |                                 |
|                       | WTX – 180                          | ●                  | ●                | ●                        |                             |                               |                    | ●                                      | ●                                                   | ●                                               |                      |                              |                                 |
|                       | WTX – Quattro 4F                   | ●                  | ●                |                          |                             |                               |                    |                                        |                                                     | ○                                               |                      |                              |                                 |
|                       | WTX – Feed BR                      | ●                  | ●                |                          | ●                           |                               | ○                  | ○                                      | ○                                                   | ○                                               | ●                    |                              |                                 |
|                       | WTX – H                            | ●                  | ●                |                          |                             |                               |                    |                                        |                                                     |                                                 |                      |                              |                                 |
|                       | WTX – TB                           | ●                  | ●                |                          |                             |                               |                    |                                        |                                                     |                                                 |                      | ●                            |                                 |
|                       | WTX – Micro                        | ●                  | ●                |                          |                             |                               |                    |                                        |                                                     |                                                 |                      | ●                            | ●                               |
| Модульная система     | WTX – Change Feed UNI              | ●                  | ●                |                          | ●                           |                               |                    |                                        | ●                                                   | ●                                               |                      |                              |                                 |
|                       | WTX – Change Монолитный инструмент | ●                  | ●                |                          |                             |                               |                    |                                        |                                                     |                                                 |                      |                              |                                 |

## Диаграмма подачи СОЖ



— Рекомендованное давление СОЖ

— Минимальное давление СОЖ

## Toolfinder

| Наименование продукта                               | Тип инструмента | Описание                                                                                                                                                                                 | Внутреннее охлаждение | Головки | 1xD | 3xD            | 5xD            | 8xD   | 12xD  |
|-----------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------|-----|----------------|----------------|-------|-------|
| <b>Твердосплавные сверла</b>                        |                 |                                                                                                                                                                                          |                       |         |     |                |                |       |       |
| WTX                                                 | Speed UNI       | ▲ высокопроизводительное сверло для высокой скорости резания<br>▲ новое покрытие DPX14S Dragonskin<br>▲ новая геометрия режущей кромки                                                   | ✓                     |         |     | 23-26          | 41-45          | 60-63 |       |
| WTX                                                 | Feed UNI        | ▲ сверло с 3 режущими кромками для высокой подачи<br>▲ для сложных случаев засверливания<br>▲ высокая точность позиционирования                                                          | ✓                     |         |     |                | 58             | 68    | 74    |
| WTX                                                 | HFDS            | ▲ сверло с четырьмя режущими кромками для высокой подачи<br>▲ максимальная точность позиционирования ~ 0,03 мм<br>▲ оптимальное охлаждение за счет четырех спиральных каналов охлаждения | ✓                     |         |     | 34             | 59             |       |       |
| WTX                                                 | UNI             | ▲ наивысшие рабочие показатели при обработке любых материалов до 1200 Н/мм²<br>▲ подходит для серийного производства                                                                     | ✗<br>✓                |         |     | 11-15<br>23-26 | 35-38<br>41-45 | 60-63 |       |
| WPC                                                 | UNI             | ▲ высококачественный инструмент для стандартных случаев применения                                                                                                                       | ✗<br>✓                |         |     | 16-19<br>27-30 | 39<br>53-56    | 64    | 73    |
| WTX                                                 | 180             | ▲ для наклонных плоскостей до 45° и ровного дна отверстия                                                                                                                                | ✓                     |         |     | 33             | 57             |       |       |
| WTX                                                 | Quattro 4F      | ▲ с дополнительными ленточками для оптимальной прямолинейности, соосности и точности позиционирования                                                                                    | ✗<br>✓                |         |     |                | 35-38<br>41-45 | 60-63 | 69-72 |
|                                                     | N               | ▲ твердосплавное сверло без покрытия<br>▲ универсальность в применении                                                                                                                   | ✗                     |         |     | 21             | 40             |       |       |
| <b>Миниатюрные сверла</b>                           |                 |                                                                                                                                                                                          |                       |         |     |                |                |       |       |
| WTX                                                 | MINI            | ▲ унифицированный хвостовик Ø 3,0 мм для применения в термоусадочной оправке                                                                                                             | ✗                     |         |     |                | 79             |       |       |
| WTX                                                 | MICRO           | ▲ универсальное высокопроизводительное микросверло<br>▲ специальная геометрия и покрытие<br>▲ WTX - Micro (5xD) пилотное сверло для глубоких спиральных свёрел                           | ✓                     |         |     |                | 80             | 80    | 81    |
| <b>Сверла-развертки</b>                             |                 |                                                                                                                                                                                          |                       |         |     |                |                |       |       |
| WTX                                                 | Feed BR/BR100   | ▲ цельное твердосплавное сверло-развертка повышенной эффективности<br>▲ отличное качество поверхности<br>▲ для глухих и сквозных отверстий                                               | ✓                     |         |     | 84+86          | 85+86          |       |       |
| <b>Ступенчатые сверла</b>                           |                 |                                                                                                                                                                                          |                       |         |     |                |                |       |       |
| WTX                                                 | SB              | ▲ для сверления и зенкерования отверстий под нарезку и формирования резьбы                                                                                                               | ✗<br>✓                |         |     | 87<br>88       |                |       |       |
| <b>Центровочные сверла NC</b>                       |                 |                                                                                                                                                                                          |                       |         |     |                |                |       |       |
|                                                     | NC-A            | ▲ с винтовыми канавками<br>▲ 90°, 120°, 142°                                                                                                                                             | ✗                     |         |     | 89+90          |                |       |       |
| <b>Центровочные сверла</b>                          |                 |                                                                                                                                                                                          |                       |         |     |                |                |       |       |
|                                                     | ZB              | ▲ с винтовыми канавками<br>▲ 120°                                                                                                                                                        | ✗                     |         |     | 91             |                |       |       |
| <b>Сверла со сменными головками</b>                 |                 |                                                                                                                                                                                          |                       |         |     |                |                |       |       |
| WTX                                                 | Change Feed UNI | ▲ 3-кромочное сверло со сменной твердосплавной головкой типа Feed UNI, Ø 14,0–32,0 мм<br>▲ универсальное применение (сталь, чугун)                                                       | ✓                     | 92+93   |     | 94             | 94             | 95    |       |
| WTX                                                 | Change UNI      | ▲ сверло со сменной твердосплавной головкой типа UNI, Ø 12,0–41,0 мм<br>▲ для сталей < 700 Н/мм²                                                                                         | ✓                     | 96–101  | 102 | 102            | 103            | 103   | 104   |
| WTX                                                 | Change P        | ▲ сверло со сменной твердосплавной головкой типа P, Ø 12,0–41,0 мм<br>▲ для сталей > 700 Н/мм²                                                                                           | ✓                     | 96–101  | 102 | 102            | 103            | 103   | 104   |
| <b>Центровочные сверла NC со сменными головками</b> |                 |                                                                                                                                                                                          |                       |         |     |                |                |       |       |
|                                                     | NC-A            | ▲ центровочные сверла NC — система сменных головок<br>▲ 90°, 120°, 142°                                                                                                                  | ✗                     | 106     |     |                |                |       |       |

Сталь / универсальные



✗ = без внутреннего охлаждения

✓ = с внутренним охлаждением

# Toolfinder

2

|                                | Наименование продукта        | Тип инструмента | Описание                                                                                                                                       | Внутреннее охлаждение | Головки | 1xD | 3xD            | 5xD            | 8xD   | 12xD  |
|--------------------------------|------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------|-----|----------------|----------------|-------|-------|
| Нержавеющие стали              | Твердосплавные сверла        |                 |                                                                                                                                                |                       |         |     |                |                |       |       |
|                                | WTX                          | VA              | ▲ высочайшие рабочие показатели при обработке коррозионно- и кислотостойких сталей и алюминия<br>▲ подходит для серийного производства         | ✗<br>✓                |         |     | 11-15<br>23-26 | 35-38<br>46-52 | 65-67 |       |
|                                | WPC                          | VA              | ▲ высококачественный инструмент для обработки коррозионно- и кислотостойких сталей и алюминия                                                  | ✗<br>✓                |         |     | 16-19<br>27-30 | 53-56          |       |       |
|                                | WTX                          | Speed VA        | ▲ для двойной скорости резания при обработке коррозионно- и кислотостойких сталей и алюминия                                                   | ✓                     |         |     |                | 46-52          |       | 69-72 |
|                                | Сверла со сменными головками |                 |                                                                                                                                                |                       |         |     |                |                |       |       |
|                                | WTX                          | Change VA       | ▲ сверло со сменной твердосплавной головкой типа VA, Ø 12,0-32,0 мм                                                                            | ✓                     | 96-101  | 102 | 102            | 103            | 103   | 104   |
| Чугуны                         | Твердосплавные сверла        |                 |                                                                                                                                                |                       |         |     |                |                |       |       |
|                                | WTX                          | GG              | ▲ высочайшие рабочие показатели при обработке литых материалов до 250 HB                                                                       | ✓                     |         |     |                | 46-52          | 65-67 |       |
|                                | Сверла со сменными головками |                 |                                                                                                                                                |                       |         |     |                |                |       |       |
|                                | WTX                          | Change GG       | ▲ сверло со сменной твердосплавной головкой типа GG, Ø 12,0-32,0 мм                                                                            | ✓                     | 96-101  | 102 | 102            | 103            | 103   | 104   |
| Цветные металлы                | Твердосплавные сверла        |                 |                                                                                                                                                |                       |         |     |                |                |       |       |
|                                | WTX                          | AL              | ▲ высокопроизводительное твердосплавное сверло, предназначенное для обработки алюминия, меди и латуни<br>▲ подходит для серийного производства | ✓                     |         |     |                | 46-52          | 65-67 | 69-72 |
|                                | Сверла со сменными головками |                 |                                                                                                                                                |                       |         |     |                |                |       |       |
|                                | WTX                          | Change AL       | ▲ сверло со сменной твердосплавной головкой типа AL, Ø 12,0-32,0 мм                                                                            | ✓                     | 96-101  | 102 | 102            | 103            | 103   | 104   |
| Жаропрочные сплавы             | Твердосплавные сверла        |                 |                                                                                                                                                |                       |         |     |                |                |       |       |
|                                | WTX                          | TI              | ▲ высочайшие рабочие показатели при обработке титана, титановых сплавов, коррозионно- и кислотостойких сталей, а также жаропрочных сплавов     | ✓                     |         |     | 31+32          | 46-52          |       |       |
| Материалы повышенной твердости | Твердосплавные сверла        |                 |                                                                                                                                                |                       |         |     |                |                |       |       |
|                                | WTX                          | H               | ▲ высочайшие рабочие показатели при обработке закаленных сталей 46-70 HRC                                                                      | ✗<br>✓                |         |     | 20<br>22       |                |       |       |

|                       | Наименование продукта | Тип инструмента | Описание                                                                                                                                                                              | Внутреннее охлаждение | 16xD | 20xD | 25xD | 30xD | 40xD | 50xD |
|-----------------------|-----------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------|------|------|------|------|------|
| Сталь / универсальные | для глубокого         |                 |                                                                                                                                                                                       |                       |      |      |      |      |      |      |
|                       | WTX                   | MICRO           | ▲ универсальное высокопроизводительное микросверло для глубокого сверления<br>▲ специальная геометрия и покрытие<br>▲ глубина сверления до 30xD                                       |                       | 81   | 82   | 82   | 83   |      |      |
|                       | WTX                   | CP 20 UNI       | ▲ обеспечивает еще большую надежность процесса глубокого сверления<br>▲ высочайшая точность соосности<br>▲ для оптимального направления сверла глубокого сверления при глубине > 30xD | ✓                     |      | 75   |      |      |      |      |
|                       | WTX                   | TB UNI          | ▲ универсальное твердосплавное сверло глубокого сверления, до 50xD без цикла удаления стружки<br>▲ геометрия головки с 4 фасками для высокой точности соосности                       | ✓                     | 76   | 76   | 77   | 77   | 78   | 78   |
|                       | WTX                   | TB ALU          | ▲ твердосплавное сверло глубокого сверления, до 30xD без цикла удаления стружки<br>▲ геометрия головки с 6 фасками для высочайшей точности соосности                                  | ✓                     | 76   | 76   | 77   | 77   |      |      |
| Цветные металлы       | WTX                   | TB ALU          |                                                                                                                                                                                       |                       |      |      |      |      |      |      |

✗ = без внутреннего охлаждения      ✓ = с внутренним охлаждением

## Обзор твердосплавных свёрл

| Наименование продукта | Тип инструмента | Длина | Диаметр в мм<br>Ø DC | <div> <div>Р</div> <div>М</div> <div>К</div> <div>Н</div> <div>С</div> <div>Н</div> <div>О</div> </div> <div> <div>Стали</div> <div>Нержавеющие стали</div> <div>Чугуны</div> <div>Цветные металлы</div> <div>Жаропрочные сплавы</div> <div>Материалы повышенной твердости</div> <div>Неметаллические материалы</div> </div> | <div> <div>■</div> <div>□</div> </div> <div> <div>С покрытием</div> <div>Без покрытия</div> </div> | <div> <div>WNT</div> <div>Performance</div> </div> <div> <div>WNT</div> <div>Standard</div> </div> |
|-----------------------|-----------------|-------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|-----------------------|-----------------|-------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

## 3xD без внутреннего охлаждения

|  |     |     |       |         |                                                                                                            |   |                 |
|--|-----|-----|-------|---------|------------------------------------------------------------------------------------------------------------|---|-----------------|
|  | WTX | UNI | ≤ 3xD | 3-25    | <div> <div>●</div> <div>●</div> <div>○</div> </div> <div> <div>HA</div> <div>HB</div> <div>HE</div> </div> | ■ | 11-15           |
|  | WTX | VA  | ≤ 3xD | 2-20    | <div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HE</div> </div>               | ■ | 11-15           |
|  | WPC | UNI | ≤ 3xD | 1-20    | <div> <div>●</div> <div>●</div> </div> <div> <div>HA</div> <div>HB</div> </div>                            | ■ | 16-19           |
|  | WPC | VA  | ≤ 3xD | 1-20    | <div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HB</div> </div>               | ■ | 16-19           |
|  | WTX | H   | ≤ 3xD | 2,55-14 | <div> <div>○</div> </div> <div> <div>HA</div> </div>                                                       | ■ | до 70 HRC<br>20 |
|  |     | N   | ≤ 3xD | 0,5-20  | <div> <div>○</div> </div>                                                                                  | □ | 21              |

## 3xD с внутренним охлаждением

|  |     |           |       |         |                                                                                                            |   |                        |
|--|-----|-----------|-------|---------|------------------------------------------------------------------------------------------------------------|---|------------------------|
|  | WTX | Speed UNI | ≤ 3xD | 3-20    | <div> <div>●</div> <div>●</div> </div> <div> <div>HA</div> </div>                                          | ■ | 23-26                  |
|  | WTX | UNI       | ≤ 3xD | 3-25    | <div> <div>●</div> <div>●</div> <div>○</div> </div> <div> <div>HA</div> <div>HB</div> <div>HE</div> </div> | ■ | 23-26                  |
|  | WTX | VA        | ≤ 3xD | 3-20    | <div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HE</div> </div>               | ■ | 23-26                  |
|  | WPC | UNI       | ≤ 3xD | 1-20    | <div> <div>●</div> <div>●</div> </div> <div> <div>HA</div> <div>HB</div> </div>                            | ■ | 27-30                  |
|  | WPC | VA        | ≤ 3xD | 1-20    | <div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HE</div> </div>               | ■ | 27-30                  |
|  | WTX | Ti        | ≤ 3xD | 3-20    | <div> <div>○</div> </div> <div> <div>HA</div> </div>                                                       | ■ | 31+32                  |
|  | WTX | 180       | ≤ 3xD | 3-20    | <div> <div>●</div> <div>●</div> </div> <div> <div>HA</div> </div>                                          | ■ | 33                     |
|  | WTX | H         | ≤ 3xD | 2,55-14 | <div> <div>○</div> </div> <div> <div>HA</div> </div>                                                       | ■ | до 58 HRC<br>22        |
|  | WTX | HFDS      | ≤ 3xD | 6-16    | <div> <div>●</div> <div>○</div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> </div>   | ■ | 4 режущие кромки<br>34 |

## Обзор твердосплавных свёрл

| Наименование продукта | Тип инструмента | Длина | Диаметр в мм<br>Ø DC | <div> <div>Стали</div> <div>Нержавеющие стали</div> <div>Чугуны</div> <div>Цветные металлы</div> <div>Жаропрочные сплавы</div> <div>Материалы повышенной твердости</div> <div>Неметаллические материалы</div> </div> | <div> <div>С покрытием</div> <div>Без покрытия</div> </div> <div> <div>WNT / Performance</div> <div>WNT / Standard</div> </div> |
|-----------------------|-----------------|-------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
|-----------------------|-----------------|-------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|

## 5xD без внутреннего охлаждения

|  |     |            |       |        |                                                        |                               |
|--|-----|------------|-------|--------|--------------------------------------------------------|-------------------------------|
|  | WTX | UNI        | ≤ 5xD | 3-20   | <div> <div>HA</div> <div>HB</div> <div>HE</div> </div> | <div> <div>35-38</div> </div> |
|  | WTX | Quattro 4F | ≤ 5xD | 3-20   | <div> <div>HA</div> </div>                             | <div> <div>35-38</div> </div> |
|  | WTX | VA         | ≤ 5xD | 3-20   | <div> <div>HA</div> <div>HE</div> </div>               | <div> <div>35-38</div> </div> |
|  | WPC | UNI        | ≤ 5xD | 3-20   | <div> <div>HA</div> <div>HB</div> </div>               | <div> <div>39</div> </div>    |
|  |     | N          | ≤ 5xD | 0,5-16 | <div> <div>HA</div> </div>                             | <div> <div>40</div> </div>    |

## 5xD с внутренним охлаждением

|  |     |            |       |        |                                                        |                               |
|--|-----|------------|-------|--------|--------------------------------------------------------|-------------------------------|
|  | WTX | Feed UNI   | ≤ 5xD | 4-20   | <div> <div>HA</div> </div> <div>3 режущие кромки</div> | <div> <div>58</div> </div>    |
|  | WTX | Speed UNI  | ≤ 5xD | 3-20   | <div> <div>HA</div> </div>                             | <div> <div>41-45</div> </div> |
|  | WTX | UNI        | ≤ 5xD | 3-25   | <div> <div>HA</div> <div>HB</div> <div>HE</div> </div> | <div> <div>41-45</div> </div> |
|  | WTX | Quattro 4F | ≤ 5xD | 3-20   | <div> <div>HA</div> </div>                             | <div> <div>41-45</div> </div> |
|  | WTX | Speed VA   | ≤ 5xD | 3-20   | <div> <div>HA</div> </div>                             | <div> <div>46-52</div> </div> |
|  | WTX | VA         | ≤ 5xD | 3-20   | <div> <div>HA</div> <div>HE</div> </div>               | <div> <div>46-52</div> </div> |
|  | WTX | GG         | ≤ 5xD | 3-20   | <div> <div>HA</div> </div>                             | <div> <div>46-52</div> </div> |
|  | WTX | AL         | ≤ 5xD | 2,5-20 | <div> <div>HA</div> </div>                             | <div> <div>46-52</div> </div> |
|  | WTX | Ti         | ≤ 5xD | 3-20   | <div> <div>HA</div> </div>                             | <div> <div>46-52</div> </div> |
|  | WPC | UNI        | ≤ 5xD | 1-20   | <div> <div>HA</div> <div>HB</div> </div>               | <div> <div>53-56</div> </div> |
|  | WPC | VA         | ≤ 5xD | 1-20   | <div> <div>HA</div> <div>HB</div> </div>               | <div> <div>53-56</div> </div> |
|  | WTX | 180        | ≤ 5xD | 3-20   | <div> <div>HA</div> </div>                             | <div> <div>57</div> </div>    |
|  | WTX | HFDS       | ≤ 5xD | 6-16   | <div> <div>HA</div> </div> <div>4 режущие кромки</div> | <div> <div>59</div> </div>    |

## Обзор твердосплавных свёрл

| Наименование продукта | Тип инструмента | Длина | Диаметр в мм<br>Ø DC | <div> <div>Р</div> <div>М</div> <div>К</div> <div>Н</div> <div>С</div> <div>Н</div> <div>О</div> </div> <div> <div>Стали</div> <div>Нержавеющие стали</div> <div>Чугуны</div> <div>Цветные металлы</div> <div>Жаропрочные сплавы</div> <div>Материалы повышенной твердости</div> <div>Неметаллические материалы</div> </div> | <div> <div>■</div> <div>□</div> </div> <div> <div>С покрытием</div> <div>Без покрытия</div> </div> | <div> <div>WNT</div> <div>Performance</div> </div> <div> <div>WNT</div> <div>Standard</div> </div> |
|-----------------------|-----------------|-------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|-----------------------|-----------------|-------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

## 8xD с внутренним охлаждением

|  |     |            |       |      |                                                                                                                                                                |                  |   |       |
|--|-----|------------|-------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---|-------|
|  | WTX | Feed UNI   | ≤ 8xD | 4-20 | <div> <div>●</div> <div>●</div> <div>●</div> <div>○</div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HA</div> </div>               | 3 режущие кромки | ■ | 68    |
|  | WTX | Speed UNI  | ≤ 8xD | 3-20 | <div> <div>●</div> <div>●</div> <div>●</div> <div>○</div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HA</div> </div>               |                  | ■ | 60-63 |
|  | WTX | UNI        | ≤ 8xD | 3-20 | <div> <div>●</div> <div>●</div> <div>●</div> <div>○</div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HB</div> <div>HE</div> </div> |                  | ■ | 60-63 |
|  | WTX | Quattro 4F | ≤ 8xD | 3-20 | <div> <div>●</div> <div>●</div> <div>●</div> <div>○</div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HA</div> </div>               |                  | ■ | 60-63 |
|  | WPC | UNI        | ≤ 8xD | 3-20 | <div> <div>●</div> <div>●</div> <div>●</div> <div>○</div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HA</div> </div>               |                  | ■ | 64    |
|  | WTX | VA         | ≤ 8xD | 3-20 | <div> <div>●</div> <div>●</div> <div>●</div> <div>○</div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HA</div> </div>               |                  | ■ | 65-67 |
|  | WTX | GG         | ≤ 8xD | 3-20 | <div> <div>●</div> <div>●</div> <div>●</div> <div>○</div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HA</div> </div>               |                  | ■ | 65-67 |
|  | WTX | AL         | ≤ 8xD | 3-20 | <div> <div>●</div> <div>●</div> <div>●</div> <div>○</div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HA</div> </div>               |                  | ■ | 65-67 |

## 12xD с внутренним охлаждением

|  |     |            |        |        |                                                                                                                                                  |                  |   |       |
|--|-----|------------|--------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---|-------|
|  | WTX | Feed UNI   | ≤ 12xD | 4-20   | <div> <div>●</div> <div>●</div> <div>●</div> <div>○</div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HA</div> </div> | 3 режущие кромки | ■ | 74    |
|  | WTX | Speed VA   | ≤ 12xD | 3-17,5 | <div> <div>●</div> <div>●</div> <div>●</div> <div>○</div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HA</div> </div> |                  | ■ | 69-72 |
|  | WTX | Quattro 4F | ≤ 12xD | 3-20   | <div> <div>●</div> <div>●</div> <div>●</div> <div>○</div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HA</div> </div> |                  | ■ | 69-72 |
|  | WTX | AL         | ≤ 12xD | 3-20   | <div> <div>●</div> <div>●</div> <div>●</div> <div>○</div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HA</div> </div> |                  | ■ | 69-72 |
|  | WPC | UNI        | ≤ 12xD | 3-18   | <div> <div>●</div> <div>●</div> <div>●</div> <div>○</div> <div>○</div> <div>○</div> <div>○</div> </div> <div> <div>HA</div> <div>HA</div> </div> |                  | ■ | 73    |

# Обзор твердосплавных свёрл

2

| Наименование продукта | Тип инструмента | Длина | Диаметр в мм<br>Ø DC | <div> <div>Стали</div> <div>Нержавеющие стали</div> <div>Чугуны</div> <div>Цветные металлы</div> <div>Жаропрочные сплавы</div> <div>Материалы повышенной твердости</div> <div>Неметаллические материалы</div> </div> | <div> <div>С покрытием</div> <div>Без покрытия</div> </div> <div> <div>WNT / Performance</div> <div>WNT / Standard</div> </div> |
|-----------------------|-----------------|-------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
|-----------------------|-----------------|-------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|

## Свёрла для глубоких отверстий 16xD / 20xD / 25xD / 30xD / 40xD / 50xD

|  |     |           |                  |       |  |  |    |
|--|-----|-----------|------------------|-------|--|--|----|
|  | WTX | CP 20 UNI | ≤ 20xD           | 3-9   |  |  | 75 |
|  | WTX | TB UNI    | ≤ 16xD<br>≤ 20xD | 2-12  |  |  | 76 |
|  | WTX | TB UNI    | ≤ 25xD<br>≤ 30xD | 2-12  |  |  | 77 |
|  | WTX | TB UNI    | ≤ 40xD           | 3-9   |  |  | 78 |
|  | WTX | TB UNI    | ≤ 50xD           | 3-6,8 |  |  | 78 |
|  | WTX | TB ALU    | ≤ 16xD<br>≤ 20xD | 2-12  |  |  | 76 |
|  | WTX | TB ALU    | ≤ 25xD<br>≤ 30xD | 2-12  |  |  | 77 |

## Миниатюрные сверла 5xD / 8xD / 12xD / 16xD / 20xD / 25xD / 30xD

|  |     |       |        |         |  |                          |    |
|--|-----|-------|--------|---------|--|--------------------------|----|
|  | WTX | MINI  | ≤ 5xD  | 0,1-2,9 |  |                          | 79 |
|  | WTX | MICRO | ≤ 5xD  | 0,8-2,9 |  | с внутренним охлаждением | 80 |
|  | WTX | MICRO | ≤ 8xD  | 0,8-2,9 |  | с внутренним охлаждением | 80 |
|  | WTX | MICRO | ≤ 12xD | 0,8-2,9 |  | с внутренним охлаждением | 81 |
|  | WTX | MICRO | ≤ 16xD | 0,8-2,9 |  | с внутренним охлаждением | 81 |
|  | WTX | MICRO | ≤ 20xD | 0,8-2,9 |  | с внутренним охлаждением | 82 |
|  | WTX | MICRO | ≤ 25xD | 1,0-2,9 |  | с внутренним охлаждением | 82 |
|  | WTX | MICRO | ≤ 30xD | 1,0-2,9 |  | с внутренним охлаждением | 83 |

## Сверла-развертки

|  |     |            |                |            |  |                               |       |
|--|-----|------------|----------------|------------|--|-------------------------------|-------|
|  | WTX | Feed BR100 | ≤ 3xD<br>≤ 5xD | 3,97-12,02 |  | 1/100<br>3 режущие кромки     | 84+85 |
|  | WTX | Feed BR    | ≤ 3xD          | 4-16       |  | Допуск H7<br>3 режущие кромки | 86    |
|  | WTX | Feed BR    | ≤ 5xD          | 4-20       |  | Допуск H7<br>3 режущие кромки | 86    |

## Обзор твердосплавных свёрл

| Наименование продукта | Тип инструмента | Угол при вершине сверла | Диаметр в мм<br>Ø DC | <div> <div>Стали</div> <div>Нержавеющие стали</div> <div>Чугуны</div> <div>Цветные металлы</div> <div>Жаропрочные сплавы</div> <div>Материалы повышенной твердости</div> <div>Неметаллические материалы</div> </div> | <div> <div>С покрытием</div> <div>Без покрытия</div> </div> | <div> <div>WNT \ Performance</div> <div>WNT \ Standard</div> </div> |
|-----------------------|-----------------|-------------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------|
|-----------------------|-----------------|-------------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------|

## Ступенчатые свёрла

|  |     |    |        |                                                                                                |                                     |    |
|--|-----|----|--------|------------------------------------------------------------------------------------------------|-------------------------------------|----|
|  | WTX | SB | 2,5-14 | <div> <div>HA</div> <div>под резьбу</div> </div>                                               | <input checked="" type="checkbox"/> | 87 |
|  | WTX | SB | 2,8-15 | <div> <div>HA</div> <div>сверление под резьбу</div> </div>                                     | <input checked="" type="checkbox"/> | 87 |
|  | WTX | SB | 3,3-14 | <div> <div>HA</div> <div>под резьбу</div> <div>с внутренним охлаждением</div> </div>           | <input checked="" type="checkbox"/> | 88 |
|  | WTX | SB | 3,7-15 | <div> <div>HA</div> <div>сверление под резьбу</div> <div>с внутренним охлаждением</div> </div> | <input checked="" type="checkbox"/> | 88 |

## Центровочные свёрла NC

|  |      |                                                             |      |                                                                                |                                     |    |
|--|------|-------------------------------------------------------------|------|--------------------------------------------------------------------------------|-------------------------------------|----|
|  | NC-A | <div> <div>90°</div> <div>120°</div> <div>142°</div> </div> | 2-20 | <div> <div>HA</div> </div>                                                     | <input type="checkbox"/>            | 89 |
|  | NC-A | <div> <div>90°</div> <div>120°</div> <div>142°</div> </div> | 2-20 | <div> <div>HB</div> </div>                                                     | <input checked="" type="checkbox"/> | 89 |
|  | NC-A | <div> <div>90°</div> <div>120°</div> <div>142°</div> </div> | 3-16 | <div> <div>HA</div> <div>HB</div> <div>длинный вариант исполнения</div> </div> | <input checked="" type="checkbox"/> | 90 |

## Центровочные свёрла

|  |    |                              |         |  |                          |    |
|--|----|------------------------------|---------|--|--------------------------|----|
|  | ZB | <div> <div>120°</div> </div> | 0,5-6,3 |  | <input type="checkbox"/> | 91 |
|--|----|------------------------------|---------|--|--------------------------|----|

## Система сменных головок — головки

|  |     |             |       |  |                                     |        |
|--|-----|-------------|-------|--|-------------------------------------|--------|
|  | WTX | Change Feed | 14-32 |  | <input checked="" type="checkbox"/> | 92+93  |
|  | WTX | Change UNI  | 12-41 |  | <input checked="" type="checkbox"/> | 96-101 |
|  | WTX | Change P    | 12-41 |  | <input checked="" type="checkbox"/> | 96-101 |
|  | WTX | Change VA   | 12-32 |  | <input checked="" type="checkbox"/> | 96-101 |
|  | WTX | Change GG   | 12-32 |  | <input checked="" type="checkbox"/> | 96-101 |
|  | WTX | Change ALU  | 12-32 |  | <input checked="" type="checkbox"/> | 96-101 |

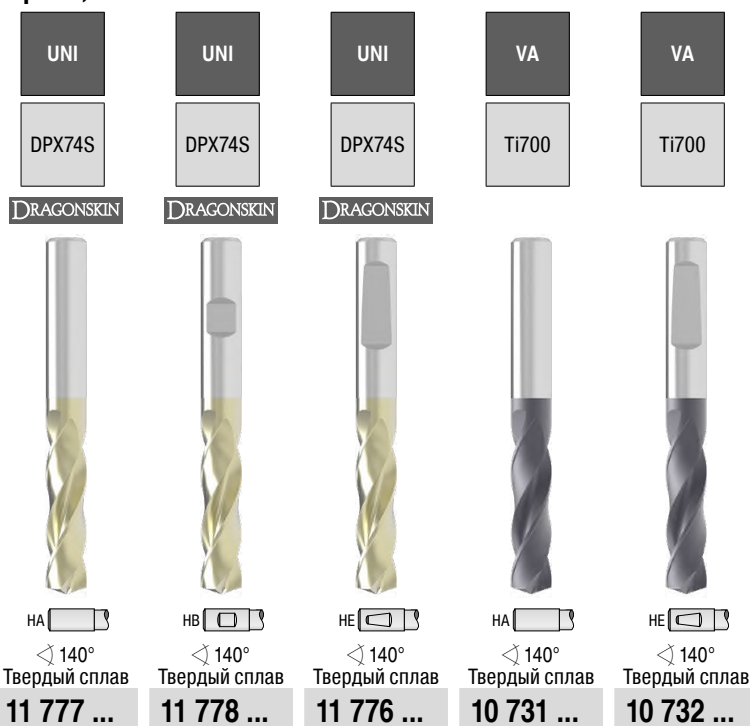
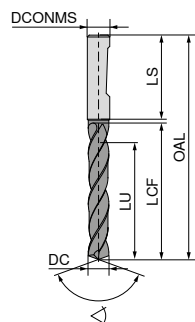
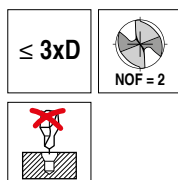
## Система сменных головок — державки 1xD / 3xD / 5xD / 8xD / 12xD

|  |     |             |       |                            |  |         |
|--|-----|-------------|-------|----------------------------|--|---------|
|  | WTX | Change Feed | 14-32 | <div> <div>HB</div> </div> |  | 94+95   |
|  | WTX | Change      | 12-41 | <div> <div>HB</div> </div> |  | 102-104 |

## Центровочные свёрла NC MultiChange

|  |      |                                                             |      |  |                                     |     |
|--|------|-------------------------------------------------------------|------|--|-------------------------------------|-----|
|  | NC-A | <div> <div>90°</div> <div>120°</div> <div>142°</div> </div> | 8-20 |  | <input checked="" type="checkbox"/> | 106 |
|--|------|-------------------------------------------------------------|------|--|-------------------------------------|-----|

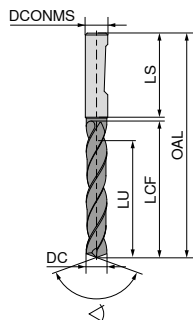
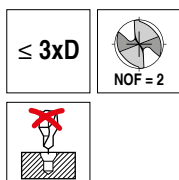
## WTX – Высокопроизводительное сверло, DIN 6537



| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |   |   |   |   |   |
|------------------------|----------------------------|-----------|-----------|----------|----------|---|---|---|---|---|
| 2,00                   | 6                          | 58        | 16        | 11       | 36       |   |   |   |   |   |
| 2,10                   | 6                          | 58        | 16        | 11       | 36       |   |   |   |   |   |
| 2,20                   | 6                          | 58        | 16        | 11       | 36       |   |   |   |   |   |
| 2,30                   | 6                          | 58        | 16        | 11       | 36       |   |   |   |   |   |
| 2,33                   | 6                          | 58        | 16        | 11       | 36       |   |   |   |   |   |
| 2,40                   | 6                          | 58        | 16        | 11       | 36       |   |   |   |   |   |
| 2,43                   | 6                          | 58        | 16        | 11       | 36       |   |   |   |   |   |
| 2,50                   | 6                          | 58        | 16        | 11       | 36       |   |   |   |   |   |
| 2,55                   | 6                          | 58        | 16        | 11       | 36       |   |   |   |   |   |
| 2,60                   | 6                          | 58        | 16        | 11       | 36       |   |   |   |   |   |
| 2,62                   | 6                          | 58        | 16        | 11       | 36       |   |   |   |   |   |
| 2,70                   | 6                          | 58        | 16        | 11       | 36       |   |   |   |   |   |
| 2,80                   | 6                          | 58        | 16        | 11       | 36       |   |   |   |   |   |
| 2,90                   | 6                          | 58        | 16        | 11       | 36       |   |   |   |   |   |
| 3,00                   | 6                          | 62        | 20        | 14       | 36       |   |   |   |   |   |
| 3,10                   | 6                          | 62        | 20        | 14       | 36       |   |   |   |   |   |
| 3,15                   | 6                          | 62        | 20        | 14       | 36       |   |   |   |   |   |
| 3,20                   | 6                          | 62        | 20        | 14       | 36       |   |   |   |   |   |
| 3,22                   | 6                          | 62        | 20        | 14       | 36       |   |   |   |   |   |
| 3,25                   | 6                          | 62        | 20        | 14       | 36       |   |   |   |   |   |
| 3,30                   | 6                          | 62        | 20        | 14       | 36       |   |   |   |   |   |
| 3,40                   | 6                          | 62        | 20        | 14       | 36       |   |   |   |   |   |
| 3,50                   | 6                          | 62        | 20        | 14       | 36       |   |   |   |   |   |
| 3,60                   | 6                          | 62        | 20        | 14       | 36       |   |   |   |   |   |
| 3,70                   | 6                          | 62        | 20        | 14       | 36       |   |   |   |   |   |
| 3,80                   | 6                          | 66        | 24        | 17       | 36       |   |   |   |   |   |
| 3,85                   | 6                          | 66        | 24        | 17       | 36       |   |   |   |   |   |
| 3,90                   | 6                          | 66        | 24        | 17       | 36       |   |   |   |   |   |
| 4,00                   | 6                          | 66        | 24        | 17       | 36       |   |   |   |   |   |
| 4,10                   | 6                          | 66        | 24        | 17       | 36       |   |   |   |   |   |
| 4,20                   | 6                          | 66        | 24        | 17       | 36       |   |   |   |   |   |
| 4,25                   | 6                          | 66        | 24        | 17       | 36       |   |   |   |   |   |
| 4,30                   | 6                          | 66        | 24        | 17       | 36       |   |   |   |   |   |
| 4,35                   | 6                          | 66        | 24        | 17       | 36       |   |   |   |   |   |
| 4,40                   | 6                          | 66        | 24        | 17       | 36       |   |   |   |   |   |
| 4,45                   | 6                          | 66        | 24        | 17       | 36       |   |   |   |   |   |
| 4,50                   | 6                          | 66        | 24        | 17       | 36       |   |   |   |   |   |
| 4,60                   | 6                          | 66        | 24        | 17       | 36       |   |   |   |   |   |
| 4,65                   | 6                          | 66        | 24        | 17       | 36       |   |   |   |   |   |
| 4,70                   | 6                          | 66        | 24        | 17       | 36       |   |   |   |   |   |
| 4,80                   | 6                          | 66        | 28        | 20       | 36       |   |   |   |   |   |
| P                      |                            |           |           |          |          | ● | ● | ● | ○ | ○ |
| M                      |                            |           |           |          |          |   |   |   | ● | ● |
| K                      |                            |           |           |          |          | ● | ● | ● | ○ | ○ |
| N                      |                            |           |           |          |          |   |   |   | ○ | ○ |
| S                      |                            |           |           |          |          |   |   |   | ● | ● |
| H                      |                            |           |           |          |          | ○ | ○ | ○ |   |   |
| O                      |                            |           |           |          |          |   |   |   |   |   |

→ v<sub>c</sub> на стр. 112+114

## WTX – Высокопроизводительное сверло, DIN 6537



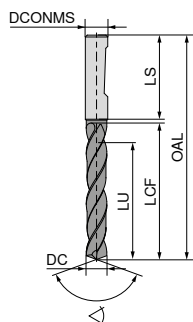
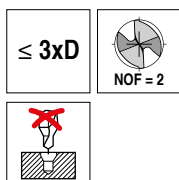
| UNI        | UNI        | UNI        | VA         | VA         |
|------------|------------|------------|------------|------------|
| DPX74S     | DPX74S     | DPX74S     | Ti700      | Ti700      |
| DRAGONSKIN | DRAGONSKIN | DRAGONSKIN |            |            |
|            |            |            |            |            |
| HA         | HB         | HE         | HA         | HE         |
| 11 777 ... | 11 778 ... | 11 776 ... | 10 731 ... | 10 732 ... |

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |       |       |       |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|--|-------|-------|-------|-----|
| 4,90                   | 6                          | 66        | 28        | 20       | 36       |  | 04900 | 04900 | 04900 | 049 |
| 4,95                   | 6                          | 66        | 28        | 20       | 36       |  | 04950 | 04950 | 04950 | 049 |
| 5,00                   | 6                          | 66        | 28        | 20       | 36       |  | 05000 | 05000 | 05000 | 050 |
| 5,05                   | 6                          | 66        | 28        | 20       | 36       |  | 05050 | 05050 | 05050 | 050 |
| 5,10                   | 6                          | 66        | 28        | 20       | 36       |  | 05100 | 05100 | 05100 | 051 |
| 5,20                   | 6                          | 66        | 28        | 20       | 36       |  | 05200 | 05200 | 05200 | 052 |
| 5,30                   | 6                          | 66        | 28        | 20       | 36       |  | 05300 | 05300 | 05300 | 053 |
| 5,40                   | 6                          | 66        | 28        | 20       | 36       |  | 05400 | 05400 | 05400 | 054 |
| 5,50                   | 6                          | 66        | 28        | 20       | 36       |  | 05500 | 05500 | 05500 | 055 |
| 5,55                   | 6                          | 66        | 28        | 20       | 36       |  | 05550 | 05550 | 05550 | 902 |
| 5,60                   | 6                          | 66        | 28        | 20       | 36       |  | 05600 | 05600 | 05600 | 056 |
| 5,70                   | 6                          | 66        | 28        | 20       | 36       |  | 05700 | 05700 | 05700 | 057 |
| 5,75                   | 6                          | 66        | 28        | 20       | 36       |  | 05750 | 05750 | 05750 | 916 |
| 5,80                   | 6                          | 66        | 28        | 20       | 36       |  | 05800 | 05800 | 05800 | 058 |
| 5,90                   | 6                          | 66        | 28        | 20       | 36       |  | 05900 | 05900 | 05900 | 059 |
| 5,95                   | 6                          | 66        | 28        | 20       | 36       |  | 05950 | 05950 | 05950 | 959 |
| 6,00                   | 6                          | 66        | 28        | 20       | 36       |  | 06000 | 06000 | 06000 | 060 |
| 6,10                   | 8                          | 79        | 34        | 24       | 36       |  | 06100 | 06100 | 06100 | 061 |
| 6,20                   | 8                          | 79        | 34        | 24       | 36       |  | 06200 | 06200 | 06200 | 062 |
| 6,30                   | 8                          | 79        | 34        | 24       | 36       |  | 06300 | 06300 | 06300 | 063 |
| 6,40                   | 8                          | 79        | 34        | 24       | 36       |  | 06400 | 06400 | 06400 | 064 |
| 6,50                   | 8                          | 79        | 34        | 24       | 36       |  | 06500 | 06500 | 06500 | 065 |
| 6,60                   | 8                          | 79        | 34        | 24       | 36       |  | 06600 | 06600 | 06600 | 066 |
| 6,70                   | 8                          | 79        | 34        | 24       | 36       |  | 06700 | 06700 | 06700 | 067 |
| 6,80                   | 8                          | 79        | 34        | 24       | 36       |  | 06800 | 06800 | 06800 | 068 |
| 6,90                   | 8                          | 79        | 34        | 24       | 36       |  | 06900 | 06900 | 06900 | 069 |
| 7,00                   | 8                          | 79        | 34        | 24       | 36       |  | 07000 | 07000 | 07000 | 070 |
| 7,10                   | 8                          | 79        | 41        | 29       | 36       |  | 07100 | 07100 | 07100 | 071 |
| 7,20                   | 8                          | 79        | 41        | 29       | 36       |  | 07200 | 07200 | 07200 | 072 |
| 7,30                   | 8                          | 79        | 41        | 29       | 36       |  | 07300 | 07300 | 07300 | 073 |
| 7,40                   | 8                          | 79        | 41        | 29       | 36       |  | 07400 | 07400 | 07400 | 074 |
| 7,45                   | 8                          | 79        | 41        | 29       | 36       |  | 07450 | 07450 | 07450 | 924 |
| 7,50                   | 8                          | 79        | 41        | 29       | 36       |  | 07500 | 07500 | 07500 | 075 |
| 7,60                   | 8                          | 79        | 41        | 29       | 36       |  | 07600 | 07600 | 07600 | 076 |
| 7,70                   | 8                          | 79        | 41        | 29       | 36       |  | 07700 | 07700 | 07700 | 077 |
| 7,80                   | 8                          | 79        | 41        | 29       | 36       |  | 07800 | 07800 | 07800 | 078 |
| 7,90                   | 8                          | 79        | 41        | 29       | 36       |  | 07900 | 07900 | 07900 | 079 |
| 8,00                   | 8                          | 79        | 41        | 29       | 36       |  | 08000 | 08000 | 08000 | 080 |
| 8,10                   | 10                         | 89        | 47        | 35       | 40       |  | 08100 | 08100 | 08100 | 081 |
| 8,20                   | 10                         | 89        | 47        | 35       | 40       |  | 08200 | 08200 | 08200 | 082 |
| 8,30                   | 10                         | 89        | 47        | 35       | 40       |  | 08300 | 08300 | 08300 | 083 |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | • | • | • | ○ | ○ |
| M |   |   |   | • | • |
| K | • | • | • | ○ | ○ |
| N |   |   |   | ○ | ○ |
| S |   |   |   | • | • |
| H | ○ | ○ | ○ |   |   |
| O |   |   |   |   |   |

→ v<sub>c</sub> на стр. 112+114

## WTX – Высокопроизводительное сверло, DIN 6537



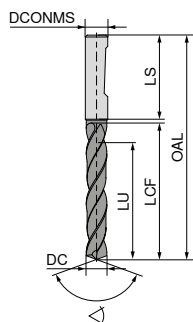
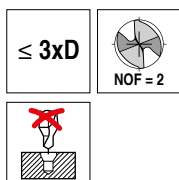
| UNI        | UNI        | UNI        | VA         | VA         |
|------------|------------|------------|------------|------------|
| DPX74S     | DPX74S     | DPX74S     | Ti700      | Ti700      |
| DRAGONSKIN | DRAGONSKIN | DRAGONSKIN |            |            |
|            |            |            |            |            |
| HA         | HB         | HE         | HA         | HE         |
| 11 777 ... | 11 778 ... | 11 776 ... | 10 731 ... | 10 732 ... |

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |       |       |     |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|-------|-------|-----|-----|
| 8,40                   | 10                         | 89        | 47        | 35       | 40       | 08400 | 08400 | 08400 | 084 | 084 |
| 8,50                   | 10                         | 89        | 47        | 35       | 40       | 08500 | 08500 | 08500 | 085 | 085 |
| 8,60                   | 10                         | 89        | 47        | 35       | 40       | 08600 | 08600 | 08600 | 086 | 086 |
| 8,70                   | 10                         | 89        | 47        | 35       | 40       | 08700 | 08700 | 08700 | 087 | 087 |
| 8,80                   | 10                         | 89        | 47        | 35       | 40       | 08800 | 08800 | 08800 | 088 | 088 |
| 8,90                   | 10                         | 89        | 47        | 35       | 40       | 08900 | 08900 | 08900 | 089 | 089 |
| 9,00                   | 10                         | 89        | 47        | 35       | 40       | 09000 | 09000 | 09000 | 090 | 090 |
| 9,10                   | 10                         | 89        | 47        | 35       | 40       | 09100 | 09100 | 09100 | 091 | 091 |
| 9,20                   | 10                         | 89        | 47        | 35       | 40       | 09200 | 09200 | 09200 | 092 | 092 |
| 9,30                   | 10                         | 89        | 47        | 35       | 40       | 09300 | 09300 | 09300 | 093 | 093 |
| 9,35                   | 10                         | 89        | 47        | 35       | 40       | 09350 | 09350 | 09350 | 930 |     |
| 9,40                   | 10                         | 89        | 47        | 35       | 40       | 09400 | 09400 | 09400 | 094 | 094 |
| 9,45                   | 10                         | 89        | 47        | 35       | 40       | 09450 | 09450 | 09450 | 994 |     |
| 9,50                   | 10                         | 89        | 47        | 35       | 40       | 09500 | 09500 | 09500 | 095 | 095 |
| 9,60                   | 10                         | 89        | 47        | 35       | 40       | 09600 | 09600 | 09600 | 096 | 096 |
| 9,70                   | 10                         | 89        | 47        | 35       | 40       | 09700 | 09700 | 09700 | 097 | 097 |
| 9,80                   | 10                         | 89        | 47        | 35       | 40       | 09800 | 09800 | 09800 | 098 | 098 |
| 9,90                   | 10                         | 89        | 47        | 35       | 40       | 09900 | 09900 | 09900 | 099 | 099 |
| 10,00                  | 10                         | 89        | 47        | 35       | 40       | 10000 | 10000 | 10000 | 100 | 100 |
| 10,10                  | 12                         | 102       | 55        | 40       | 45       | 10100 | 10100 | 10100 | 101 | 101 |
| 10,20                  | 12                         | 102       | 55        | 40       | 45       | 10200 | 10200 | 10200 | 102 | 102 |
| 10,30                  | 12                         | 102       | 55        | 40       | 45       | 10300 | 10300 | 10300 | 103 | 103 |
| 10,40                  | 12                         | 102       | 55        | 40       | 45       | 10400 | 10400 | 10400 | 104 | 104 |
| 10,50                  | 12                         | 102       | 55        | 40       | 45       | 10500 | 10500 | 10500 | 105 | 105 |
| 10,55                  | 12                         | 102       | 55        | 40       | 45       | 10550 | 10550 | 10550 | 932 |     |
| 10,60                  | 12                         | 102       | 55        | 40       | 45       | 10600 | 10600 | 10600 | 106 | 106 |
| 10,70                  | 12                         | 102       | 55        | 40       | 45       | 10700 | 10700 | 10700 | 107 | 107 |
| 10,75                  | 12                         | 102       | 55        | 40       | 45       | 10750 | 10750 | 10750 |     |     |
| 10,80                  | 12                         | 102       | 55        | 40       | 45       | 10800 | 10800 | 10800 | 108 | 108 |
| 10,90                  | 12                         | 102       | 55        | 40       | 45       | 10900 | 10900 | 10900 | 109 | 109 |
| 11,00                  | 12                         | 102       | 55        | 40       | 45       | 11000 | 11000 | 11000 | 110 | 110 |
| 11,10                  | 12                         | 102       | 55        | 40       | 45       | 11100 | 11100 | 11100 | 111 | 111 |
| 11,20                  | 12                         | 102       | 55        | 40       | 45       | 11200 | 11200 | 11200 | 112 | 112 |
| 11,25                  | 12                         | 102       | 55        | 40       | 45       | 11250 | 11250 | 11250 | 912 |     |
| 11,30                  | 12                         | 102       | 55        | 40       | 45       | 11300 | 11300 | 11300 | 113 | 113 |
| 11,35                  | 12                         | 102       | 55        | 40       | 45       | 11350 | 11350 | 11350 | 913 |     |
| 11,40                  | 12                         | 102       | 55        | 40       | 45       | 11400 | 11400 | 11400 | 114 | 114 |
| 11,45                  | 12                         | 102       | 55        | 40       | 45       | 11450 | 11450 | 11450 | 914 |     |
| 11,50                  | 12                         | 102       | 55        | 40       | 45       | 11500 | 11500 | 11500 | 115 | 115 |
| 11,60                  | 12                         | 102       | 55        | 40       | 45       | 11600 | 11600 | 11600 | 116 | 116 |
| 11,70                  | 12                         | 102       | 55        | 40       | 45       | 11700 | 11700 | 11700 | 117 | 117 |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | • | • | • | ○ | ○ |
| M |   |   |   | • | • |
| K | • | • | • | ○ | ○ |
| N |   |   |   | ○ | ○ |
| S |   |   |   | • | • |
| H | ○ | ○ | ○ |   |   |
| O |   |   |   |   |   |

→ v<sub>c</sub> на стр. 112+114

## WTX – Высокопроизводительное сверло, DIN 6537



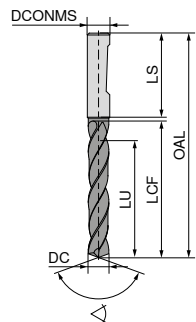
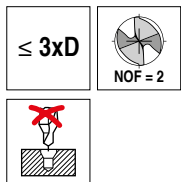
| UNI                   | UNI                   | UNI                   | VA                    | VA                    |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| DPX74S                | DPX74S                | DPX74S                | Ti700                 | Ti700                 |
| DRAGONSKIN            | DRAGONSKIN            | DRAGONSKIN            |                       |                       |
|                       |                       |                       |                       |                       |
| HA                    | HB                    | HE                    | HA                    | HE                    |
| 140°<br>Твердый сплав | 140°<br>Твердый сплав | 140°<br>Твердый сплав | 140°<br>Твердый сплав | 140°<br>Твердый сплав |
| 11 777 ...            | 11 778 ...            | 11 776 ...            | 10 731 ...            | 10 732 ...            |

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |       |       |       |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|--|-------|-------|-------|-----|
| 11,80                  | 12                         | 102       | 55        | 40       | 45       |  | 11800 | 11800 | 11800 | 118 |
| 11,90                  | 12                         | 102       | 55        | 40       | 45       |  | 11900 | 11900 | 11900 | 119 |
| 12,00                  | 12                         | 102       | 55        | 40       | 45       |  | 12000 | 12000 | 12000 | 120 |
| 12,15                  | 14                         | 107       | 60        | 43       | 45       |  | 12150 | 12150 | 12150 | 921 |
| 12,25                  | 14                         | 107       | 60        | 43       | 45       |  | 12250 | 12250 | 12250 |     |
| 12,50                  | 14                         | 107       | 60        | 43       | 45       |  | 12500 | 12500 | 12500 | 125 |
| 12,55                  | 14                         | 107       | 60        | 43       | 45       |  | 12550 | 12550 | 12550 | 925 |
| 12,70                  | 14                         | 107       | 60        | 43       | 45       |  | 12700 | 12700 | 12700 |     |
| 12,80                  | 14                         | 107       | 60        | 43       | 45       |  | 12800 | 12800 | 12800 | 128 |
| 12,90                  | 14                         | 107       | 60        | 43       | 45       |  | 12900 | 12900 | 12900 |     |
| 13,00                  | 14                         | 107       | 60        | 43       | 45       |  | 13000 | 13000 | 13000 | 130 |
| 13,10                  | 14                         | 107       | 60        | 43       | 45       |  | 13100 | 13100 | 13100 |     |
| 13,30                  | 14                         | 107       | 60        | 43       | 45       |  | 13300 | 13300 | 13300 |     |
| 13,35                  | 14                         | 107       | 60        | 43       | 45       |  | 13350 | 13350 | 13350 | 933 |
| 13,50                  | 14                         | 107       | 60        | 43       | 45       |  | 13500 | 13500 | 13500 | 135 |
| 13,70                  | 14                         | 107       | 60        | 43       | 45       |  | 13700 | 13700 | 13700 |     |
| 13,80                  | 14                         | 107       | 60        | 43       | 45       |  | 13800 | 13800 | 13800 | 138 |
| 14,00                  | 14                         | 107       | 60        | 43       | 45       |  | 14000 | 14000 | 14000 | 140 |
| 14,20                  | 16                         | 115       | 65        | 45       | 48       |  | 14200 | 14200 | 14200 |     |
| 14,50                  | 16                         | 115       | 65        | 45       | 48       |  | 14500 | 14500 | 14500 | 145 |
| 14,80                  | 16                         | 115       | 65        | 45       | 48       |  | 14800 | 14800 | 14800 | 148 |
| 15,00                  | 16                         | 115       | 65        | 45       | 48       |  | 15000 | 15000 | 15000 | 150 |
| 15,10                  | 16                         | 115       | 65        | 45       | 48       |  | 15100 | 15100 | 15100 |     |
| 15,25                  | 16                         | 115       | 65        | 45       | 48       |  | 15250 | 15250 | 15250 |     |
| 15,30                  | 16                         | 115       | 65        | 45       | 48       |  | 15300 | 15300 | 15300 |     |
| 15,35                  | 16                         | 115       | 65        | 45       | 48       |  | 15350 | 15350 | 15350 | 953 |
| 15,50                  | 16                         | 115       | 65        | 45       | 48       |  | 15500 | 15500 | 15500 | 155 |
| 15,60                  | 16                         | 115       | 65        | 45       | 48       |  | 15600 | 15600 | 15600 |     |
| 15,80                  | 16                         | 115       | 65        | 45       | 48       |  | 15800 | 15800 | 15800 | 158 |
| 16,00                  | 16                         | 115       | 65        | 45       | 48       |  | 16000 | 16000 | 16000 | 160 |
| 16,05                  | 18                         | 123       | 73        | 51       | 48       |  | 16050 | 16050 | 16050 | 960 |
| 16,50                  | 18                         | 123       | 73        | 51       | 48       |  | 16500 | 16500 | 16500 | 165 |
| 16,80                  | 18                         | 123       | 73        | 51       | 48       |  | 16800 | 16800 | 16800 | 168 |
| 16,90                  | 18                         | 123       | 73        | 51       | 48       |  | 16900 | 16900 | 16900 |     |
| 17,00                  | 18                         | 123       | 73        | 51       | 48       |  | 17000 | 17000 | 17000 | 170 |
| 17,50                  | 18                         | 123       | 73        | 51       | 48       |  | 17500 | 17500 | 17500 | 175 |
| 17,60                  | 18                         | 123       | 73        | 51       | 48       |  | 17600 | 17600 | 17600 |     |
| 17,80                  | 18                         | 123       | 73        | 51       | 48       |  | 17800 | 17800 | 17800 | 178 |
| 18,00                  | 18                         | 123       | 73        | 51       | 48       |  | 18000 | 18000 | 18000 | 180 |
| 18,50                  | 20                         | 131       | 79        | 55       | 50       |  | 18500 | 18500 | 18500 | 185 |
| 18,80                  | 20                         | 131       | 79        | 55       | 50       |  | 18800 | 18800 | 18800 | 188 |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | • | • | • | ○ | ○ |
| M |   |   |   | • | • |
| K | • | • | • | ○ | ○ |
| N |   |   |   | ○ | ○ |
| S |   |   |   | • | • |
| H | ○ | ○ | ○ |   |   |
| O |   |   |   |   |   |

→ v<sub>c</sub> на стр. 112+114

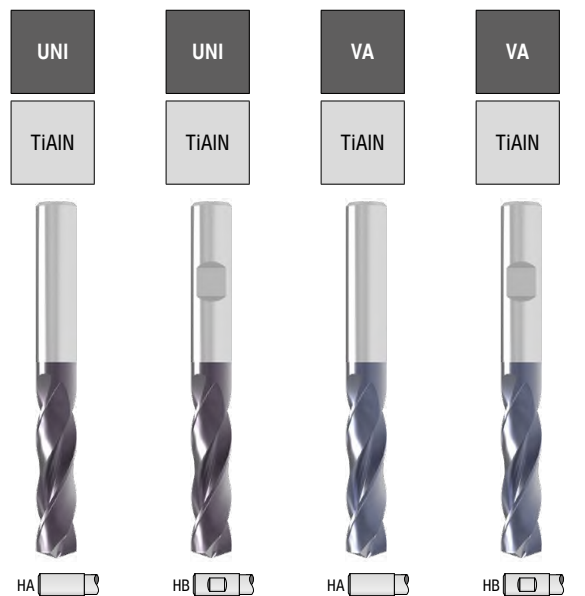
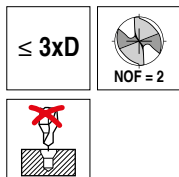
WTX – Высокопроизводительное сверло, DIN 6537



| UNI           | UNI           | UNI           | VA            | VA            |
|---------------|---------------|---------------|---------------|---------------|
| DPX74S        | DPX74S        | DPX74S        | Ti700         | Ti700         |
| DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    |               |               |
|               |               |               |               |               |
| HA            | HB            | HE            | HA            | HE            |
| 140°          | 140°          | 140°          | 140°          | 140°          |
| Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав |
| 11 777 ...    | 11 778 ...    | 11 776 ...    | 10 731 ...    | 10 732 ...    |
| 18900         | 18900         | 18900         |               |               |
| 19000         | 19000         | 19000         | 190           | 190           |
| 19350         | 19350         | 19350         | 993           |               |
| 19500         | 19500         | 19500         | 195           | 195           |
| 19600         | 19600         | 19600         |               |               |
| 19800         | 19800         | 19800         | 198           | 198           |
| 20000         | 20000         | 20000         | 200           | 200           |
| 20500         | 20500         | 20500         |               |               |
| 21000         | 21000         | 21000         |               |               |
| 21500         | 21500         | 21500         |               |               |
| 22000         | 22000         | 22000         |               |               |
| 22500         | 22500         | 22500         |               |               |
| 23000         | 23000         | 23000         |               |               |
| 23500         | 23500         | 23500         |               |               |
| 24000         | 24000         | 24000         |               |               |
| 24500         | 24500         | 24500         |               |               |
| 25000         | 25000         | 25000         |               |               |
| ●             | ●             | ●             | ○             | ○             |
|               |               |               | ●             | ●             |
| ●             | ●             | ●             | ○             | ○             |
|               |               |               | ○             | ○             |
|               |               |               | ●             | ●             |
| ○             | ○             | ○             |               |               |

→ v<sub>c</sub> на стр. 112+114

## WPC – Высокопроизводительное сверло, DIN 6537

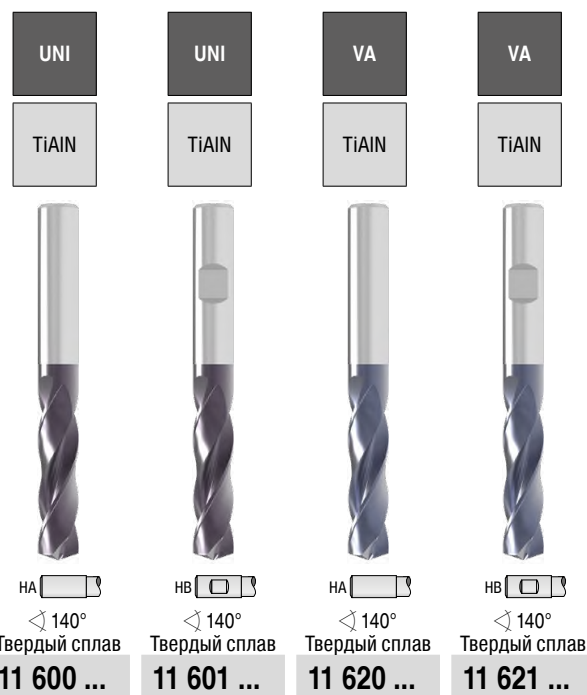
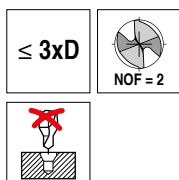


| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |     |     |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|--|-----|-----|-----|
| 1,00                   | 4                          | 45        | 5,0       | 4,5      | 32,0     |  | 010 |     | 010 |
| 1,10                   | 4                          | 45        | 5,5       | 5,0      | 31,5     |  | 011 |     | 011 |
| 1,20                   | 4                          | 45        | 6,0       | 5,4      | 31,0     |  | 012 |     | 012 |
| 1,30                   | 4                          | 45        | 6,5       | 5,9      | 31,5     |  | 013 |     | 013 |
| 1,40                   | 4                          | 45        | 7,0       | 6,3      | 30,0     |  | 014 |     | 014 |
| 1,50                   | 4                          | 50        | 7,5       | 6,8      | 35,0     |  | 015 |     | 015 |
| 1,60                   | 4                          | 50        | 8,0       | 7,2      | 34,5     |  | 016 |     | 016 |
| 1,70                   | 4                          | 50        | 8,5       | 7,7      | 34,0     |  | 017 |     | 017 |
| 1,80                   | 4                          | 50        | 9,0       | 8,1      | 33,5     |  | 018 |     | 018 |
| 1,90                   | 4                          | 50        | 9,5       | 8,6      | 33,0     |  | 019 |     | 019 |
| 2,00                   | 6                          | 58        | 14,0      | 11,0     | 36,0     |  | 020 | 020 | 020 |
| 2,10                   | 6                          | 58        | 14,0      | 11,0     | 36,0     |  | 021 | 021 | 021 |
| 2,20                   | 6                          | 58        | 14,0      | 11,0     | 36,0     |  | 022 | 022 | 022 |
| 2,30                   | 6                          | 58        | 14,0      | 11,0     | 36,0     |  | 023 | 023 | 023 |
| 2,40                   | 6                          | 58        | 14,0      | 11,0     | 36,0     |  | 024 | 024 | 024 |
| 2,50                   | 6                          | 58        | 14,0      | 11,0     | 36,0     |  | 025 | 025 | 025 |
| 2,60                   | 6                          | 58        | 14,0      | 11,0     | 36,0     |  | 026 | 026 | 026 |
| 2,70                   | 6                          | 58        | 14,0      | 11,0     | 36,0     |  | 027 | 027 | 027 |
| 2,80                   | 6                          | 58        | 14,0      | 11,0     | 36,0     |  | 028 | 028 | 028 |
| 2,90                   | 6                          | 58        | 14,0      | 11,0     | 36,0     |  | 029 | 029 | 029 |
| 3,00                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |  | 030 | 030 | 030 |
| 3,10                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |  | 031 | 031 | 031 |
| 3,20                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |  | 032 | 032 | 032 |
| 3,30                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |  | 033 | 033 | 033 |
| 3,40                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |  | 034 | 034 | 034 |
| 3,50                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |  | 035 | 035 | 035 |
| 3,60                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |  | 036 | 036 | 036 |
| 3,70                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |  | 037 | 037 | 037 |
| 3,80                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |  | 038 | 038 | 038 |
| 3,90                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |  | 039 | 039 | 039 |
| 4,00                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |  | 040 | 040 | 040 |
| 4,10                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |  | 041 | 041 | 041 |
| 4,20                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |  | 042 | 042 | 042 |
| 4,30                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |  | 043 | 043 | 043 |
| 4,40                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |  | 044 | 044 | 044 |
| 4,50                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |  | 045 | 045 | 045 |
| 4,60                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |  | 046 | 046 | 046 |
| 4,65                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |  | 900 | 900 | 900 |

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## WPC – Высокопроизводительное сверло, DIN 6537

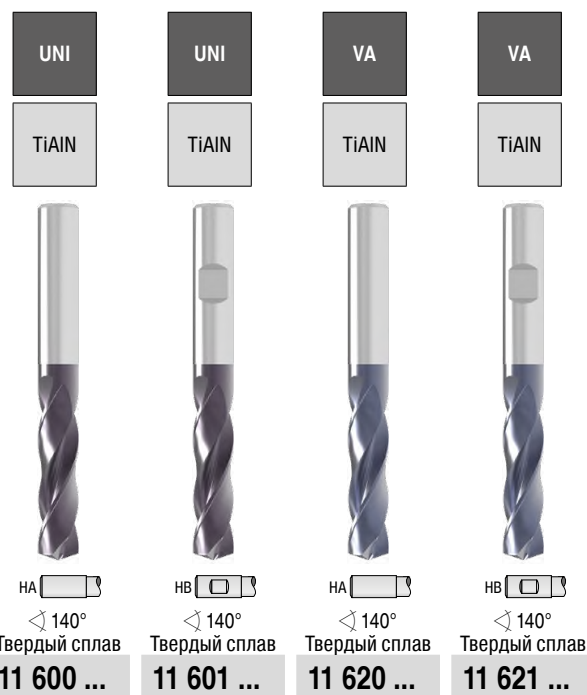
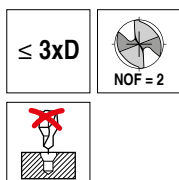


| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |     |     |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|--|-----|-----|-----|
| 4,70                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |  | 047 | 047 | 047 |
| 4,80                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 048 | 048 | 048 |
| 4,90                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 049 | 049 | 049 |
| 5,00                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 050 | 050 | 050 |
| 5,10                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 051 | 051 | 051 |
| 5,20                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 052 | 052 | 052 |
| 5,30                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 053 | 053 | 053 |
| 5,40                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 054 | 054 | 054 |
| 5,50                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 055 | 055 | 055 |
| 5,55                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 902 | 902 | 902 |
| 5,60                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 056 | 056 | 056 |
| 5,70                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 057 | 057 | 057 |
| 5,80                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 058 | 058 | 058 |
| 5,90                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 059 | 059 | 059 |
| 6,00                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 060 | 060 | 060 |
| 6,10                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 061 | 061 | 061 |
| 6,20                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 062 | 062 | 062 |
| 6,30                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 063 | 063 | 063 |
| 6,40                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 064 | 064 | 064 |
| 6,50                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 065 | 065 | 065 |
| 6,60                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 066 | 066 | 066 |
| 6,70                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 067 | 067 | 067 |
| 6,80                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 068 | 068 | 068 |
| 6,90                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 069 | 069 | 069 |
| 7,00                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 070 | 070 | 070 |
| 7,10                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 071 | 071 | 071 |
| 7,20                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 072 | 072 | 072 |
| 7,30                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 073 | 073 | 073 |
| 7,40                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 074 | 074 | 074 |
| 7,50                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 075 | 075 | 075 |
| 7,55                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 975 | 975 | 975 |
| 7,60                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 076 | 076 | 076 |
| 7,70                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 077 | 077 | 077 |
| 7,80                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 078 | 078 | 078 |
| 7,90                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 079 | 079 | 079 |
| 8,00                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 080 | 080 | 080 |
| 8,10                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 081 | 081 | 081 |
| 8,20                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 082 | 082 | 082 |

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## WPC – Высокопроизводительное сверло, DIN 6537

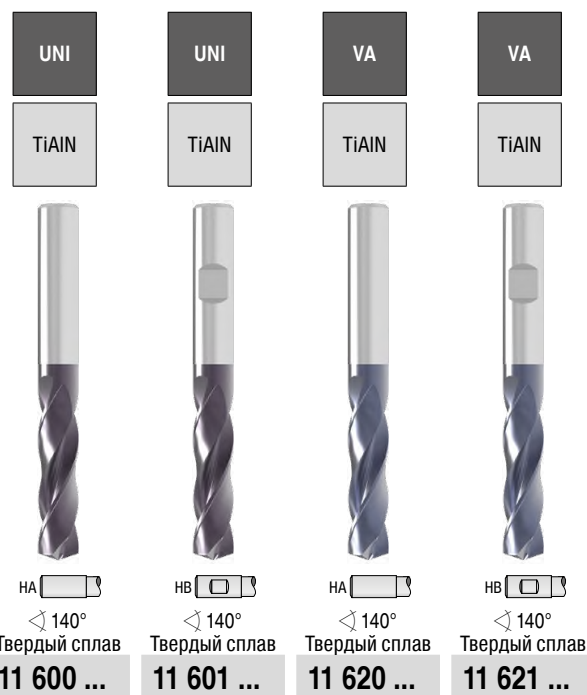
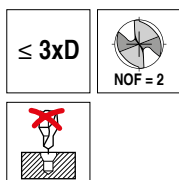


| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |     |     |     |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|-----|-----|-----|-----|
| 8,30                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 083 | 083 | 083 | 083 |
| 8,40                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 084 | 084 | 084 | 084 |
| 8,50                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 085 | 085 | 085 | 085 |
| 8,60                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 086 | 086 | 086 | 086 |
| 8,70                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 087 | 087 | 087 | 087 |
| 8,80                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 088 | 088 | 088 | 088 |
| 8,90                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 089 | 089 | 089 | 089 |
| 9,00                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 090 | 090 | 090 | 090 |
| 9,10                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 091 | 091 | 091 | 091 |
| 9,20                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 092 | 092 | 092 | 092 |
| 9,25                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 925 | 925 | 925 | 925 |
| 9,30                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 093 | 093 | 093 | 093 |
| 9,40                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 094 | 094 | 094 | 094 |
| 9,50                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 095 | 095 | 095 | 095 |
| 9,60                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 096 | 096 | 096 | 096 |
| 9,70                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 097 | 097 | 097 | 097 |
| 9,80                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 098 | 098 | 098 | 098 |
| 9,90                   | 10                         | 89        | 47,0      | 35,0     | 40,0     | 099 | 099 | 099 | 099 |
| 10,00                  | 10                         | 89        | 47,0      | 35,0     | 40,0     | 100 | 100 | 100 | 100 |
| 10,10                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 101 | 101 | 101 | 101 |
| 10,20                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 102 | 102 | 102 | 102 |
| 10,30                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 103 | 103 | 103 | 103 |
| 10,40                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 104 | 104 | 104 | 104 |
| 10,50                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 105 | 105 | 105 | 105 |
| 10,60                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 106 | 106 | 106 | 106 |
| 10,70                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 107 | 107 | 107 | 107 |
| 10,80                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 108 | 108 | 108 | 108 |
| 10,90                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 109 | 109 | 109 | 109 |
| 11,00                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 110 | 110 | 110 | 110 |
| 11,10                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 111 | 111 | 111 | 111 |
| 11,20                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 112 | 112 | 112 | 112 |
| 11,30                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 113 | 113 | 113 | 113 |
| 11,40                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 114 | 114 | 114 | 114 |
| 11,50                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 115 | 115 | 115 | 115 |
| 11,60                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 116 | 116 | 116 | 116 |
| 11,70                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 117 | 117 | 117 | 117 |
| 11,80                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 118 | 118 | 118 | 118 |
| 11,90                  | 12                         | 102       | 55,0      | 40,0     | 45,0     | 119 | 119 | 119 | 119 |

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## WPC – Высокопроизводительное сверло, DIN 6537



| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |     |     |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|--|-----|-----|-----|
| 12,00                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 120 | 120 | 120 |
| 12,25                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 122 | 122 |     |
| 12,50                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 125 | 125 | 125 |
| 12,70                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 127 | 127 | 127 |
| 12,80                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 128 | 128 |     |
| 12,90                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 129 | 129 |     |
| 13,00                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 130 | 130 | 130 |
| 13,30                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 133 | 133 |     |
| 13,50                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 135 | 135 | 135 |
| 13,70                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 137 | 137 | 137 |
| 13,80                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 138 | 138 |     |
| 14,00                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 140 | 140 | 140 |
| 14,20                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |  | 142 | 142 |     |
| 14,50                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |  | 145 | 145 | 145 |
| 14,70                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |  | 147 | 147 | 147 |
| 14,80                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |  | 148 | 148 |     |
| 15,00                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |  | 150 | 150 | 150 |
| 15,25                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |  | 152 | 152 |     |
| 15,30                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |  | 153 | 153 |     |
| 15,50                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |  | 155 | 155 | 155 |
| 15,70                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |  | 157 | 157 | 157 |
| 15,80                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |  | 158 | 158 |     |
| 16,00                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |  | 160 | 160 | 160 |
| 16,50                  | 18                         | 123       | 73,0      | 51,0     | 48,0     |  | 165 | 165 | 165 |
| 16,80                  | 18                         | 123       | 73,0      | 51,0     | 48,0     |  | 168 | 168 |     |
| 17,00                  | 18                         | 123       | 73,0      | 51,0     | 48,0     |  | 170 | 170 | 170 |
| 17,50                  | 18                         | 123       | 73,0      | 51,0     | 48,0     |  | 175 | 175 | 175 |
| 17,80                  | 18                         | 123       | 73,0      | 51,0     | 48,0     |  | 178 | 178 |     |
| 18,00                  | 18                         | 123       | 73,0      | 51,0     | 48,0     |  | 180 | 180 | 180 |
| 18,50                  | 20                         | 131       | 79,0      | 55,0     | 50,0     |  | 185 | 185 | 185 |
| 18,80                  | 20                         | 131       | 79,0      | 55,0     | 50,0     |  | 188 | 188 |     |
| 19,00                  | 20                         | 131       | 79,0      | 55,0     | 50,0     |  | 190 | 190 | 190 |
| 19,50                  | 20                         | 131       | 79,0      | 55,0     | 50,0     |  | 195 | 195 | 195 |
| 19,80                  | 20                         | 131       | 79,0      | 55,0     | 50,0     |  | 198 | 198 |     |
| 20,00                  | 20                         | 131       | 79,0      | 55,0     | 50,0     |  | 200 | 200 | 200 |

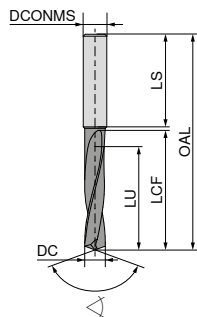
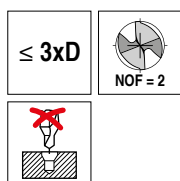
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→ v<sub>c</sub> на стр. 130+133

# WTH – Высокопроизводительное сверло, заводской стандарт

- ▲ специализированная геометрия режущих кромок
- ▲ специальная геометрия стружечной канавки

- ▲ специальная толщина сердцевины
- ▲ 46–70 HRC



| DC <sub>h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 2,55                   | 4                          | 55        | 20        | 7,6      | 28       | 02550 |
| 2,60                   | 4                          | 55        | 20        | 7,8      | 28       | 02600 |
| 2,70                   | 4                          | 55        | 20        | 8,1      | 28       | 02700 |
| 2,80                   | 4                          | 55        | 20        | 8,4      | 28       | 02800 |
| 2,90                   | 4                          | 55        | 20        | 8,7      | 28       | 02900 |
| 3,00                   | 6                          | 62        | 20        | 9,0      | 36       | 03000 |
| 3,10                   | 6                          | 62        | 20        | 9,3      | 36       | 03100 |
| 3,20                   | 6                          | 62        | 20        | 9,6      | 36       | 03200 |
| 3,30                   | 6                          | 62        | 20        | 9,9      | 36       | 03300 |
| 3,40                   | 6                          | 62        | 20        | 10,2     | 36       | 03400 |
| 3,50                   | 6                          | 62        | 20        | 10,5     | 36       | 03500 |
| 3,60                   | 6                          | 62        | 20        | 10,8     | 36       | 03600 |
| 3,70                   | 6                          | 62        | 20        | 11,1     | 36       | 03700 |
| 3,80                   | 6                          | 66        | 24        | 11,4     | 36       | 03800 |
| 3,90                   | 6                          | 66        | 24        | 11,7     | 36       | 03900 |
| 4,00                   | 6                          | 66        | 24        | 12,0     | 36       | 04000 |
| 4,10                   | 6                          | 66        | 24        | 12,3     | 36       | 04100 |
| 4,20                   | 6                          | 66        | 24        | 12,6     | 36       | 04200 |
| 4,30                   | 6                          | 66        | 24        | 12,9     | 36       | 04300 |
| 4,40                   | 6                          | 66        | 24        | 13,2     | 36       | 04400 |
| 4,50                   | 6                          | 66        | 24        | 13,5     | 36       | 04500 |
| 4,60                   | 6                          | 66        | 24        | 13,8     | 36       | 04600 |
| 4,70                   | 6                          | 66        | 24        | 14,1     | 36       | 04700 |
| 4,80                   | 6                          | 66        | 28        | 14,4     | 36       | 04800 |
| 4,90                   | 6                          | 66        | 28        | 14,7     | 36       | 04900 |
| 5,00                   | 6                          | 66        | 28        | 15,0     | 36       | 05000 |
| 5,10                   | 6                          | 66        | 28        | 15,3     | 36       | 05100 |
| 5,20                   | 6                          | 66        | 28        | 15,6     | 36       | 05200 |
| 5,30                   | 6                          | 66        | 28        | 15,9     | 36       | 05300 |
| 5,40                   | 6                          | 66        | 28        | 16,2     | 36       | 05400 |
| 5,50                   | 6                          | 66        | 28        | 16,5     | 36       | 05500 |
| 5,60                   | 6                          | 66        | 28        | 16,8     | 36       | 05600 |
| 5,70                   | 6                          | 66        | 28        | 17,1     | 36       | 05700 |
| 5,80                   | 6                          | 66        | 28        | 17,4     | 36       | 05800 |
| 5,90                   | 6                          | 66        | 28        | 17,7     | 36       | 05900 |
| 6,00                   | 6                          | 66        | 28        | 18,0     | 36       | 06000 |
| 6,10                   | 8                          | 79        | 34        | 18,3     | 36       | 06100 |
| 6,20                   | 8                          | 79        | 34        | 18,6     | 36       | 06200 |
| 6,30                   | 8                          | 79        | 34        | 18,9     | 36       | 06300 |
| 6,40                   | 8                          | 79        | 34        | 19,2     | 36       | 06400 |
| 6,50                   | 8                          | 79        | 34        | 19,5     | 36       | 06500 |
| 6,60                   | 8                          | 79        | 34        | 19,8     | 36       | 06600 |
| 6,70                   | 8                          | 79        | 34        | 20,1     | 36       | 06700 |
| 6,80                   | 8                          | 79        | 34        | 20,4     | 36       | 06800 |
| 6,90                   | 8                          | 79        | 34        | 20,7     | 36       | 06900 |
| 7,00                   | 8                          | 79        | 34        | 21,0     | 36       | 07000 |
| 7,10                   | 8                          | 79        | 41        | 21,3     | 36       | 07100 |
| 7,20                   | 8                          | 79        | 41        | 21,6     | 36       | 07200 |
| 7,30                   | 8                          | 79        | 41        | 21,9     | 36       | 07300 |
| 7,40                   | 8                          | 79        | 41        | 22,2     | 36       | 07400 |
| 7,50                   | 8                          | 79        | 41        | 22,5     | 36       | 07500 |

10 777 ...

| DC <sub>h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 7,60                   | 8                          | 79        | 41        | 22,8     | 36       | 07600 |
| 7,70                   | 8                          | 79        | 41        | 23,1     | 36       | 07700 |
| 7,80                   | 8                          | 79        | 41        | 23,4     | 36       | 07800 |
| 7,90                   | 8                          | 79        | 41        | 23,7     | 36       | 07900 |
| 8,00                   | 8                          | 79        | 41        | 24,0     | 36       | 08000 |
| 8,10                   | 10                         | 89        | 47        | 24,3     | 40       | 08100 |
| 8,20                   | 10                         | 89        | 47        | 24,6     | 40       | 08200 |
| 8,30                   | 10                         | 89        | 47        | 24,9     | 40       | 08300 |
| 8,40                   | 10                         | 89        | 47        | 25,2     | 40       | 08400 |
| 8,50                   | 10                         | 89        | 47        | 25,5     | 40       | 08500 |
| 8,60                   | 10                         | 89        | 47        | 25,8     | 40       | 08600 |
| 8,70                   | 10                         | 89        | 47        | 26,1     | 40       | 08700 |
| 8,80                   | 10                         | 89        | 47        | 26,4     | 40       | 08800 |
| 8,90                   | 10                         | 89        | 47        | 26,7     | 40       | 08900 |
| 9,00                   | 10                         | 89        | 47        | 27,0     | 40       | 09000 |
| 9,10                   | 10                         | 89        | 47        | 27,3     | 40       | 09100 |
| 9,20                   | 10                         | 89        | 47        | 27,6     | 40       | 09200 |
| 9,30                   | 10                         | 89        | 47        | 27,9     | 40       | 09300 |
| 9,40                   | 10                         | 89        | 47        | 28,2     | 40       | 09400 |
| 9,50                   | 10                         | 89        | 47        | 28,5     | 40       | 09500 |
| 9,60                   | 10                         | 89        | 47        | 28,8     | 40       | 09600 |
| 9,70                   | 10                         | 89        | 47        | 29,1     | 40       | 09700 |
| 9,80                   | 10                         | 89        | 47        | 29,4     | 40       | 09800 |
| 9,90                   | 10                         | 89        | 47        | 29,7     | 40       | 09900 |
| 10,00                  | 10                         | 89        | 47        | 30,0     | 40       | 10000 |
| 10,10                  | 12                         | 102       | 55        | 30,3     | 45       | 10100 |
| 10,20                  | 12                         | 102       | 55        | 30,6     | 45       | 10200 |
| 10,30                  | 12                         | 102       | 55        | 30,9     | 45       | 10300 |
| 10,40                  | 12                         | 102       | 55        | 31,2     | 45       | 10400 |
| 10,50                  | 12                         | 102       | 55        | 31,5     | 45       | 10500 |
| 10,60                  | 12                         | 102       | 55        | 31,8     | 45       | 10600 |
| 10,70                  | 12                         | 102       | 55        | 32,1     | 45       | 10700 |
| 10,80                  | 12                         | 102       | 55        | 32,4     | 45       | 10800 |
| 10,90                  | 12                         | 102       | 55        | 32,7     | 45       | 10900 |
| 11,00                  | 12                         | 102       | 55        | 33,0     | 45       | 11000 |
| 11,10                  | 12                         | 102       | 55        | 33,3     | 45       | 11100 |
| 11,20                  | 12                         | 102       | 55        | 33,6     | 45       | 11200 |
| 11,30                  | 12                         | 102       | 55        | 33,9     | 45       | 11300 |
| 11,40                  | 12                         | 102       | 55        | 34,2     | 45       | 11400 |
| 11,50                  | 12                         | 102       | 55        | 34,5     | 45       | 11500 |
| 11,60                  | 12                         | 102       | 55        | 34,8     | 45       | 11600 |
| 11,70                  | 12                         | 102       | 55        | 35,1     | 45       | 11700 |
| 11,80                  | 12                         | 102       | 55        | 35,4     | 45       | 11800 |
| 11,90                  | 12                         | 102       | 55        | 35,7     | 45       | 11900 |
| 12,00                  | 12                         | 102       | 55        | 36,0     | 45       | 12000 |
| 12,10                  | 14                         | 107       | 60        | 36,3     | 45       | 12100 |
| 12,20                  | 14                         | 107       | 60        | 36,6     | 45       | 12200 |
| 12,30                  | 14                         | 107       | 60        | 36,9     | 45       | 12300 |
| 12,40                  | 14                         | 107       | 60        | 37,2     | 45       | 12400 |
| 12,50                  | 14                         | 107       | 60        | 37,5     | 45       | 12500 |
| 12,60                  | 14                         | 107       | 60        | 37,8     | 45       | 12600 |
| 12,70                  | 14                         | 107       | 60        | 38,1     | 45       | 12700 |
| 12,80                  | 14                         | 107       | 60        | 38,4     | 45       | 12800 |
| 12,90                  | 14                         | 107       | 60        | 38,7     | 45       | 12900 |
| 13,00                  | 14                         | 107       | 60        | 39,0     | 45       | 13000 |
| 13,10                  | 14                         | 107       | 60        | 39,3     | 45       | 13100 |
| 13,20                  | 14                         | 107       | 60        | 39,6     | 45       | 13200 |
| 13,30                  | 14                         | 107       | 60        | 39,9     | 45       | 13300 |
| 13,40                  | 14                         | 107       | 60        | 40,2     | 45       | 13400 |
| 13,50                  | 14                         | 107       | 60        | 40,5     | 45       | 13500 |
| 13,60                  | 14                         | 107       | 60        | 40,8     | 45       | 13600 |
| 13,70                  | 14                         | 107       | 60        | 41,1     | 45       | 13700 |
| 13,80                  | 14                         | 107       | 60        | 41,4     | 45       | 13800 |
| 13,90                  | 14                         | 107       | 60        | 41,7     | 45       | 13900 |
| 14,00                  | 14                         | 107       | 60        | 42,0     | 45       | 14000 |

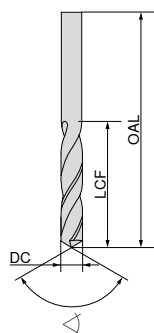
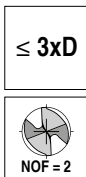
|       |   |
|-------|---|
| P     | ○ |
| K     | ● |
| S     |   |
| H.1.1 | ● |
| H.1.2 | ● |
| H.1.3 | ● |
| H.1.4 | ● |

→ v<sub>c</sub> на стр. 125

## Спиральное сверло, по DIN 1897

▲ передний угол 30°

▲ диаметр хвостовика h7



118°

Твердый сплав

10 700 ...

| DC <sub>h7</sub><br>mm | OAL<br>mm | LCF<br>mm |     |
|------------------------|-----------|-----------|-----|
| 0,5                    | 20        | 3,0       | 005 |
| 0,6                    | 21        | 3,5       | 006 |
| 0,7                    | 23        | 4,5       | 007 |
| 0,8                    | 24        | 5,0       | 008 |
| 0,9                    | 25        | 5,5       | 009 |
| 1,0                    | 26        | 6,0       | 010 |
| 1,2                    | 30        | 8,0       | 012 |
| 1,3                    | 30        | 8,0       | 013 |
| 1,4                    | 32        | 9,0       | 014 |
| 1,5                    | 32        | 9,0       | 015 |
| 1,6                    | 34        | 10,0      | 016 |
| 1,7                    | 34        | 10,0      | 017 |
| 1,8                    | 36        | 11,0      | 018 |
| 1,9                    | 36        | 11,0      | 019 |
| 2,0                    | 38        | 12,0      | 020 |
| 2,1                    | 38        | 12,0      | 021 |
| 2,2                    | 40        | 13,0      | 022 |
| 2,3                    | 40        | 13,0      | 023 |
| 2,4                    | 43        | 14,0      | 024 |
| 2,5                    | 43        | 14,0      | 025 |
| 2,6                    | 43        | 14,0      | 026 |
| 2,7                    | 46        | 16,0      | 027 |
| 2,8                    | 46        | 16,0      | 028 |
| 2,9                    | 46        | 16,0      | 029 |
| 3,0                    | 46        | 16,0      | 030 |
| 3,1                    | 49        | 18,0      | 031 |
| 3,2                    | 49        | 18,0      | 032 |
| 3,3                    | 49        | 18,0      | 033 |
| 3,4                    | 52        | 20,0      | 034 |
| 3,5                    | 52        | 20,0      | 035 |
| 3,6                    | 52        | 20,0      | 036 |
| 3,7                    | 52        | 20,0      | 037 |
| 3,8                    | 55        | 22,0      | 038 |
| 3,9                    | 55        | 22,0      | 039 |
| 4,0                    | 55        | 22,0      | 040 |
| 4,1                    | 55        | 22,0      | 041 |
| 4,2                    | 55        | 22,0      | 042 |
| 4,3                    | 58        | 24,0      | 043 |
| 4,4                    | 58        | 24,0      | 044 |
| 4,5                    | 58        | 24,0      | 045 |
| 4,6                    | 58        | 24,0      | 046 |
| 4,7                    | 58        | 24,0      | 047 |
| 4,8                    | 62        | 26,0      | 048 |
| 4,9                    | 62        | 26,0      | 049 |
| 5,0                    | 62        | 26,0      | 050 |
| 5,1                    | 62        | 26,0      | 051 |
| 5,2                    | 62        | 26,0      | 052 |
| 5,3                    | 62        | 26,0      | 053 |
| 5,4                    | 66        | 28,0      | 054 |
| 5,5                    | 66        | 28,0      | 055 |
| 5,6                    | 66        | 28,0      | 056 |
| 5,7                    | 66        | 28,0      | 057 |

10 700 ...

| DC <sub>h7</sub><br>mm | OAL<br>mm | LCF<br>mm |     |
|------------------------|-----------|-----------|-----|
| 5,8                    | 66        | 28,0      | 058 |
| 5,9                    | 66        | 28,0      | 059 |
| 6,0                    | 66        | 28,0      | 060 |
| 6,1                    | 70        | 31,0      | 061 |
| 6,2                    | 70        | 31,0      | 062 |
| 6,3                    | 70        | 31,0      | 063 |
| 6,4                    | 70        | 31,0      | 064 |
| 6,5                    | 70        | 31,0      | 065 |
| 6,6                    | 70        | 31,0      | 066 |
| 6,7                    | 70        | 31,0      | 067 |
| 6,8                    | 74        | 34,0      | 068 |
| 6,9                    | 74        | 34,0      | 069 |
| 7,0                    | 74        | 34,0      | 070 |
| 7,1                    | 74        | 34,0      | 071 |
| 7,2                    | 74        | 34,0      | 072 |
| 7,3                    | 74        | 34,0      | 073 |
| 7,4                    | 74        | 34,0      | 074 |
| 7,5                    | 74        | 34,0      | 075 |
| 7,6                    | 79        | 37,0      | 076 |
| 7,7                    | 79        | 37,0      | 077 |
| 7,8                    | 79        | 37,0      | 078 |
| 7,9                    | 79        | 37,0      | 079 |
| 8,0                    | 79        | 37,0      | 080 |
| 8,1                    | 79        | 37,0      | 081 |
| 8,2                    | 79        | 37,0      | 082 |
| 8,3                    | 79        | 37,0      | 083 |
| 8,4                    | 79        | 37,0      | 084 |
| 8,5                    | 79        | 37,0      | 085 |
| 8,6                    | 84        | 40,0      | 086 |
| 8,7                    | 84        | 40,0      | 087 |
| 8,8                    | 84        | 40,0      | 088 |
| 8,9                    | 84        | 40,0      | 089 |
| 9,0                    | 84        | 40,0      | 090 |
| 9,1                    | 84        | 40,0      | 091 |
| 9,2                    | 84        | 40,0      | 092 |
| 9,3                    | 84        | 40,0      | 093 |
| 9,4                    | 84        | 40,0      | 094 |
| 9,5                    | 84        | 40,0      | 095 |
| 9,6                    | 89        | 43,0      | 096 |
| 9,7                    | 89        | 43,0      | 097 |
| 9,8                    | 89        | 43,0      | 098 |
| 9,9                    | 89        | 43,0      | 099 |
| 10,0                   | 89        | 43,0      | 100 |
| 10,2                   | 89        | 43,0      | 102 |
| 10,5                   | 89        | 43,0      | 105 |
| 10,8                   | 95        | 47,0      | 108 |
| 11,0                   | 95        | 47,0      | 110 |
| 11,2                   | 95        | 47,0      | 112 |
| 11,5                   | 95        | 47,0      | 115 |
| 11,8                   | 95        | 47,0      | 118 |
| 12,0                   | 102       | 51,0      | 120 |
| 12,5                   | 102       | 51,0      | 125 |
| 13,0                   | 102       | 51,0      | 130 |
| 13,5                   | 107       | 54,0      | 135 |
| 14,0                   | 107       | 54,0      | 140 |
| 14,5                   | 111       | 56,0      | 145 |
| 15,0                   | 111       | 56,0      | 150 |
| 15,5                   | 115       | 58,0      | 155 |
| 16,0                   | 115       | 58,0      | 160 |
| 18,0                   | 123       | 62,0      | 180 |
| 20,0                   | 131       | 66,0      | 200 |

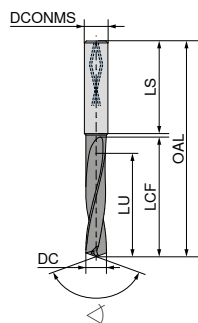
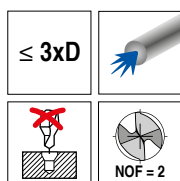
|   |   |
|---|---|
| P | ○ |
| M |   |
| K | ● |
| N | ● |
| S | ○ |
| H |   |
| O |   |

→ v<sub>c</sub> на стр. 128

# WTH – Высокопроизводительное сверло, заводской стандарт

- ▲ специализированная геометрия режущих кромок
- ▲ специальная геометрия стружечной канавки

- ▲ специальная толщина сердцевины
- ▲ 46–58 HRC



H

DPX64S

DRAGONSKIN



HA

140°

Твердый сплав

10 776 ...

| DC <sub>h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 2,55                   | 4                          | 55        | 20        | 7,6      | 28       | 02550 |
| 2,60                   | 4                          | 55        | 20        | 7,8      | 28       | 02600 |
| 2,70                   | 4                          | 55        | 20        | 8,1      | 28       | 02700 |
| 2,80                   | 4                          | 55        | 20        | 8,4      | 28       | 02800 |
| 2,90                   | 4                          | 55        | 20        | 8,7      | 28       | 02900 |
| 3,00                   | 6                          | 62        | 20        | 9,0      | 36       | 03000 |
| 3,10                   | 6                          | 62        | 20        | 9,3      | 36       | 03100 |
| 3,20                   | 6                          | 62        | 20        | 9,6      | 36       | 03200 |
| 3,30                   | 6                          | 62        | 20        | 9,9      | 36       | 03300 |
| 3,40                   | 6                          | 62        | 20        | 10,2     | 36       | 03400 |
| 3,50                   | 6                          | 62        | 20        | 10,5     | 36       | 03500 |
| 3,60                   | 6                          | 62        | 20        | 10,8     | 36       | 03600 |
| 3,70                   | 6                          | 62        | 20        | 11,1     | 36       | 03700 |
| 3,80                   | 6                          | 66        | 24        | 11,4     | 36       | 03800 |
| 3,90                   | 6                          | 66        | 24        | 11,7     | 36       | 03900 |
| 4,00                   | 6                          | 66        | 24        | 12,0     | 36       | 04000 |
| 4,10                   | 6                          | 66        | 24        | 12,3     | 36       | 04100 |
| 4,20                   | 6                          | 66        | 24        | 12,6     | 36       | 04200 |
| 4,30                   | 6                          | 66        | 24        | 12,9     | 36       | 04300 |
| 4,40                   | 6                          | 66        | 24        | 13,2     | 36       | 04400 |
| 4,50                   | 6                          | 66        | 24        | 13,5     | 36       | 04500 |
| 4,60                   | 6                          | 66        | 24        | 13,8     | 36       | 04600 |
| 4,70                   | 6                          | 66        | 24        | 14,1     | 36       | 04700 |
| 4,80                   | 6                          | 66        | 28        | 14,4     | 36       | 04800 |
| 4,90                   | 6                          | 66        | 28        | 14,7     | 36       | 04900 |
| 5,00                   | 6                          | 66        | 28        | 15,0     | 36       | 05000 |
| 5,10                   | 6                          | 66        | 28        | 15,3     | 36       | 05100 |
| 5,20                   | 6                          | 66        | 28        | 15,6     | 36       | 05200 |
| 5,30                   | 6                          | 66        | 28        | 15,9     | 36       | 05300 |
| 5,40                   | 6                          | 66        | 28        | 16,2     | 36       | 05400 |
| 5,50                   | 6                          | 66        | 28        | 16,5     | 36       | 05500 |
| 5,60                   | 6                          | 66        | 28        | 16,8     | 36       | 05600 |
| 5,70                   | 6                          | 66        | 28        | 17,1     | 36       | 05700 |
| 5,80                   | 6                          | 66        | 28        | 17,4     | 36       | 05800 |
| 5,90                   | 6                          | 66        | 28        | 17,7     | 36       | 05900 |
| 6,00                   | 6                          | 66        | 28        | 18,0     | 36       | 06000 |
| 6,10                   | 8                          | 79        | 34        | 18,3     | 36       | 06100 |
| 6,20                   | 8                          | 79        | 34        | 18,6     | 36       | 06200 |
| 6,30                   | 8                          | 79        | 34        | 18,9     | 36       | 06300 |
| 6,40                   | 8                          | 79        | 34        | 19,2     | 36       | 06400 |
| 6,50                   | 8                          | 79        | 34        | 19,5     | 36       | 06500 |
| 6,60                   | 8                          | 79        | 34        | 19,8     | 36       | 06600 |
| 6,70                   | 8                          | 79        | 34        | 20,1     | 36       | 06700 |
| 6,80                   | 8                          | 79        | 34        | 20,4     | 36       | 06800 |
| 6,90                   | 8                          | 79        | 34        | 20,7     | 36       | 06900 |
| 7,00                   | 8                          | 79        | 34        | 21,0     | 36       | 07000 |
| 7,10                   | 8                          | 79        | 41        | 21,3     | 36       | 07100 |
| 7,20                   | 8                          | 79        | 41        | 21,6     | 36       | 07200 |
| 7,30                   | 8                          | 79        | 41        | 21,9     | 36       | 07300 |
| 7,40                   | 8                          | 79        | 41        | 22,2     | 36       | 07400 |
| 7,50                   | 8                          | 79        | 41        | 22,5     | 36       | 07500 |

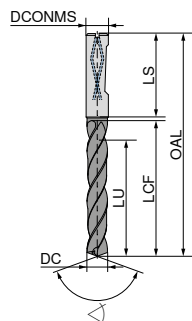
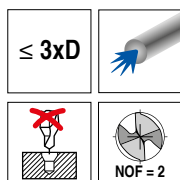
10 776 ...

| DC <sub>h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 7,60                   | 8                          | 79        | 41        | 22,8     | 36       | 07600 |
| 7,70                   | 8                          | 79        | 41        | 23,1     | 36       | 07700 |
| 7,80                   | 8                          | 79        | 41        | 23,4     | 36       | 07800 |
| 7,90                   | 8                          | 79        | 41        | 23,7     | 36       | 07900 |
| 8,00                   | 8                          | 79        | 41        | 24,0     | 36       | 08000 |
| 8,10                   | 10                         | 89        | 47        | 24,3     | 40       | 08100 |
| 8,20                   | 10                         | 89        | 47        | 24,6     | 40       | 08200 |
| 8,30                   | 10                         | 89        | 47        | 24,9     | 40       | 08300 |
| 8,40                   | 10                         | 89        | 47        | 25,2     | 40       | 08400 |
| 8,50                   | 10                         | 89        | 47        | 25,5     | 40       | 08500 |
| 8,60                   | 10                         | 89        | 47        | 25,8     | 40       | 08600 |
| 8,70                   | 10                         | 89        | 47        | 26,1     | 40       | 08700 |
| 8,80                   | 10                         | 89        | 47        | 26,4     | 40       | 08800 |
| 8,90                   | 10                         | 89        | 47        | 26,7     | 40       | 08900 |
| 9,00                   | 10                         | 89        | 47        | 27,0     | 40       | 09000 |
| 9,10                   | 10                         | 89        | 47        | 27,3     | 40       | 09100 |
| 9,20                   | 10                         | 89        | 47        | 27,6     | 40       | 09200 |
| 9,30                   | 10                         | 89        | 47        | 27,9     | 40       | 09300 |
| 9,40                   | 10                         | 89        | 47        | 28,2     | 40       | 09400 |
| 9,50                   | 10                         | 89        | 47        | 28,5     | 40       | 09500 |
| 9,60                   | 10                         | 89        | 47        | 28,8     | 40       | 09600 |
| 9,70                   | 10                         | 89        | 47        | 29,1     | 40       | 09700 |
| 9,80                   | 10                         | 89        | 47        | 29,4     | 40       | 09800 |
| 9,90                   | 10                         | 89        | 47        | 29,7     | 40       | 09900 |
| 10,00                  | 10                         | 89        | 47        | 30,0     | 40       | 10000 |
| 10,10                  | 12                         | 102       | 55        | 30,3     | 45       | 10100 |
| 10,20                  | 12                         | 102       | 55        | 30,6     | 45       | 10200 |
| 10,30                  | 12                         | 102       | 55        | 30,9     | 45       | 10300 |
| 10,40                  | 12                         | 102       | 55        | 31,2     | 45       | 10400 |
| 10,50                  | 12                         | 102       | 55        | 31,5     | 45       | 10500 |
| 10,60                  | 12                         | 102       | 55        | 31,8     | 45       | 10600 |
| 10,70                  | 12                         | 102       | 55        | 32,1     | 45       | 10700 |
| 10,80                  | 12                         | 102       | 55        | 32,4     | 45       | 10800 |
| 10,90                  | 12                         | 102       | 55        | 32,7     | 45       | 10900 |
| 11,00                  | 12                         | 102       | 55        | 33,0     | 45       | 11000 |
| 11,10                  | 12                         | 102       | 55        | 33,3     | 45       | 11100 |
| 11,20                  | 12                         | 102       | 55        | 33,6     | 45       | 11200 |
| 11,30                  | 12                         | 102       | 55        | 33,9     | 45       | 11300 |
| 11,40                  | 12                         | 102       | 55        | 34,2     | 45       | 11400 |
| 11,50                  | 12                         | 102       | 55        | 34,5     | 45       | 11500 |
| 11,60                  | 12                         | 102       | 55        | 34,8     | 45       | 11600 |
| 11,70                  | 12                         | 102       | 55        | 35,1     | 45       | 11700 |
| 11,80                  | 12                         | 102       | 55        | 35,4     | 45       | 11800 |
| 11,90                  | 12                         | 102       | 55        | 35,7     | 45       | 11900 |
| 12,00                  | 12                         | 102       | 55        | 36,0     | 45       | 12000 |
| 12,10                  | 14                         | 107       | 60        | 36,3     | 45       | 12100 |
| 12,20                  | 14                         | 107       | 60        | 36,6     | 45       | 12200 |
| 12,30                  | 14                         | 107       | 60        | 36,9     | 45       | 12300 |
| 12,40                  | 14                         | 107       | 60        | 37,2     | 45       | 12400 |
| 12,50                  | 14                         | 107       | 60        | 37,5     | 45       | 12500 |
| 12,60                  | 14                         | 107       | 60        | 37,8     | 45       | 12600 |
| 12,70                  | 14                         | 107       | 60        | 38,1     | 45       | 12700 |
| 12,80                  | 14                         | 107       | 60        | 38,4     | 45       | 12800 |
| 12,90                  | 14                         | 107       | 60        | 38,7     | 45       | 12900 |
| 13,00                  | 14                         | 107       | 60        | 39,0     | 45       | 13000 |
| 13,10                  | 14                         | 107       | 60        | 39,3     | 45       | 13100 |
| 13,20                  | 14                         | 107       | 60        | 39,6     | 45       | 13200 |
| 13,30                  | 14                         | 107       | 60        | 39,9     | 45       | 13300 |
| 13,40                  | 14                         | 107       | 60        | 40,2     | 45       | 13400 |
| 13,50                  | 14                         | 107       | 60        | 40,5     | 45       | 13500 |
| 13,60                  | 14                         | 107       | 60        | 40,8     | 45       | 13600 |
| 13,70                  | 14                         | 107       | 60        | 41,1     | 45       | 13700 |
| 13,80                  | 14                         | 107       | 60        | 41,4     | 45       | 13800 |
| 13,90                  | 14                         | 107       | 60        | 41,7     | 45       | 13900 |
| 14,00                  | 14                         | 107       | 60        | 42,0     | 45       | 14000 |

|       |   |
|-------|---|
| P     | ○ |
| K     | ● |
| S     | ○ |
| H.1.1 | ● |
| H.1.2 | ● |
| H.1.3 | ● |
| H.1.4 | ● |

→ v<sub>c</sub> на стр. 124

## WTX – Высокопроизводительное сверло, DIN 6537



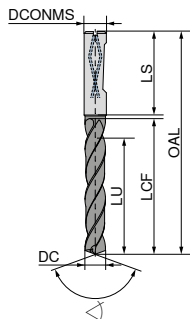
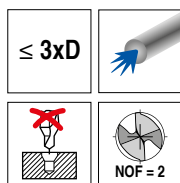
| Speed<br>UNI  | UNI           | UNI           | UNI           | VA            | VA            |
|---------------|---------------|---------------|---------------|---------------|---------------|
| DPX14S        | DPX74S        | DPX74S        | DPX74S        | Ti700         | Ti700         |
| DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    |               |               |
|               |               |               |               |               |               |
| HA            | HA            | HB            | HE            | HA            | HE            |
| 145°          | 140°          | 140°          | 140°          | 140°          | 140°          |
| Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав |
| 10 781 ...    | 11 780 ...    | 11 781 ...    | 11 779 ...    | 10 734 ...    | 10 733 ...    |

| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |       |       |       |     |     |
|---------------------------|----------------------------|-----------|-----------|----------|----------|--|-------|-------|-------|-----|-----|
| 3,00                      | 6                          | 62        | 20        | 14       | 36       |  | 03000 |       | 03000 |     | 030 |
| 3,10                      | 6                          | 62        | 20        | 14       | 36       |  | 03100 |       | 03100 |     | 031 |
| 3,15                      | 6                          | 62        | 20        | 14       | 36       |  |       | 03150 | 03150 | 831 |     |
| 3,20                      | 6                          | 62        | 20        | 14       | 36       |  | 03200 |       | 03200 | 032 | 032 |
| 3,22                      | 6                          | 62        | 20        | 14       | 36       |  |       | 03220 | 03220 | 832 |     |
| 3,25                      | 6                          | 62        | 20        | 14       | 36       |  |       | 03250 | 03250 | 890 |     |
| 3,30                      | 6                          | 62        | 20        | 14       | 36       |  | 03300 |       | 03300 | 033 | 033 |
| 3,40                      | 6                          | 62        | 20        | 14       | 36       |  | 03400 |       | 03400 | 034 | 034 |
| 3,50                      | 6                          | 62        | 20        | 14       | 36       |  | 03500 |       | 03500 | 035 | 035 |
| 3,60                      | 6                          | 62        | 20        | 14       | 36       |  | 03600 |       | 03600 | 036 | 036 |
| 3,70                      | 6                          | 62        | 20        | 14       | 36       |  | 03700 |       | 03700 | 037 | 037 |
| 3,80                      | 6                          | 66        | 24        | 17       | 36       |  | 03800 |       | 03800 | 038 | 038 |
| 3,85                      | 6                          | 66        | 24        | 17       | 36       |  |       | 03850 | 03850 | 838 |     |
| 3,90                      | 6                          | 66        | 24        | 17       | 36       |  | 03900 |       | 03900 | 039 | 039 |
| 4,00                      | 6                          | 66        | 24        | 17       | 36       |  | 04000 |       | 04000 | 040 | 040 |
| 4,10                      | 6                          | 66        | 24        | 17       | 36       |  | 04100 |       | 04100 | 041 | 041 |
| 4,20                      | 6                          | 66        | 24        | 17       | 36       |  | 04200 |       | 04200 | 042 | 042 |
| 4,25                      | 6                          | 66        | 24        | 17       | 36       |  |       | 04250 | 04250 |     |     |
| 4,30                      | 6                          | 66        | 24        | 17       | 36       |  | 04300 |       | 04300 | 043 | 043 |
| 4,35                      | 6                          | 66        | 24        | 17       | 36       |  |       | 04350 | 04350 | 843 |     |
| 4,40                      | 6                          | 66        | 24        | 17       | 36       |  | 04400 |       | 04400 | 044 | 044 |
| 4,45                      | 6                          | 66        | 24        | 17       | 36       |  |       | 04450 | 04450 | 844 |     |
| 4,50                      | 6                          | 66        | 24        | 17       | 36       |  | 04500 |       | 04500 | 045 | 045 |
| 4,60                      | 6                          | 66        | 24        | 17       | 36       |  | 04600 |       | 04600 | 046 | 046 |
| 4,65                      | 6                          | 66        | 24        | 17       | 36       |  |       | 04650 | 04650 | 900 |     |
| 4,70                      | 6                          | 66        | 24        | 17       | 36       |  | 04700 |       | 04700 | 047 | 047 |
| 4,80                      | 6                          | 66        | 28        | 20       | 36       |  | 04800 |       | 04800 | 048 | 048 |
| 4,90                      | 6                          | 66        | 28        | 20       | 36       |  | 04900 |       | 04900 | 049 | 049 |
| 4,95                      | 6                          | 66        | 28        | 20       | 36       |  |       | 04950 | 04950 |     |     |
| 5,00                      | 6                          | 66        | 28        | 20       | 36       |  | 05000 |       | 05000 | 050 | 050 |
| 5,05                      | 6                          | 66        | 28        | 20       | 36       |  |       | 05050 | 05050 |     |     |
| 5,10                      | 6                          | 66        | 28        | 20       | 36       |  | 05100 |       | 05100 | 051 | 051 |
| 5,20                      | 6                          | 66        | 28        | 20       | 36       |  | 05200 |       | 05200 | 052 | 052 |
| 5,30                      | 6                          | 66        | 28        | 20       | 36       |  | 05300 |       | 05300 | 053 | 053 |
| 5,40                      | 6                          | 66        | 28        | 20       | 36       |  | 05400 |       | 05400 | 054 | 054 |
| 5,50                      | 6                          | 66        | 28        | 20       | 36       |  | 05500 |       | 05500 | 055 | 055 |
| 5,55                      | 6                          | 66        | 28        | 20       | 36       |  |       | 05550 | 05550 | 902 |     |
| 5,60                      | 6                          | 66        | 28        | 20       | 36       |  | 05600 |       | 05600 | 056 | 056 |
| 5,70                      | 6                          | 66        | 28        | 20       | 36       |  | 05700 |       | 05700 | 057 | 057 |
| 5,75                      | 6                          | 66        | 28        | 20       | 36       |  |       | 05750 | 05750 | 916 |     |
| 5,80                      | 6                          | 66        | 28        | 20       | 36       |  | 05800 |       | 05800 | 058 | 058 |
| 5,90                      | 6                          | 66        | 28        | 20       | 36       |  | 05900 |       | 05900 | 059 | 059 |

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| P | • | • | • | • | ○ | ○ |
| M | • |   |   |   | • | • |
| K | • | • | • | • | ○ | ○ |
| N |   |   |   |   | ○ | ○ |
| S |   |   |   |   | • | • |
| H |   | ○ | ○ | ○ |   |   |
| O |   |   |   |   |   |   |

→ V<sub>c</sub> на стр. 108–114Ø DC<sub>m7</sub> для типа UNI и VA / Ø DC<sub>h7</sub> для типа Speed UNI

## WTX – Высокопроизводительное сверло, DIN 6537



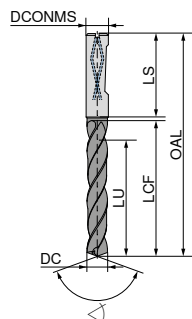
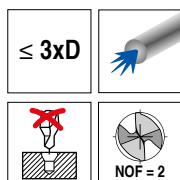
| Speed<br>UNI  | UNI           | UNI           | UNI           | VA            | VA            |
|---------------|---------------|---------------|---------------|---------------|---------------|
| DPX14S        | DPX74S        | DPX74S        | DPX74S        | Ti700         | Ti700         |
| DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    |               |               |
|               |               |               |               |               |               |
| HA            | HA            | HB            | HE            | HA            | HE            |
| ∠ 145°        | ∠ 140°        | ∠ 140°        | ∠ 140°        | ∠ 140°        | ∠ 140°        |
| Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав |
| 10 781 ...    | 11 780 ...    | 11 781 ...    | 11 779 ...    | 10 734 ...    | 10 733 ...    |

| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |       |       |       |     |     |
|---------------------------|----------------------------|-----------|-----------|----------|----------|-------|-------|-------|-------|-----|-----|
| 5,95                      | 6                          | 66        | 28        | 20       | 36       |       |       |       |       |     |     |
| 6,00                      | 6                          | 66        | 28        | 20       | 36       | 06000 | 05950 | 06000 | 06000 | 060 | 060 |
| 6,10                      | 8                          | 79        | 34        | 24       | 36       | 06100 | 06100 | 06100 | 06100 | 061 | 061 |
| 6,20                      | 8                          | 79        | 34        | 24       | 36       | 06200 | 06200 | 06200 | 06200 | 062 | 062 |
| 6,30                      | 8                          | 79        | 34        | 24       | 36       | 06300 | 06300 | 06300 | 06300 | 063 | 063 |
| 6,40                      | 8                          | 79        | 34        | 24       | 36       | 06400 | 06400 | 06400 | 06400 | 064 | 064 |
| 6,50                      | 8                          | 79        | 34        | 24       | 36       | 06500 | 06500 | 06500 | 06500 | 065 | 065 |
| 6,60                      | 8                          | 79        | 34        | 24       | 36       | 06600 | 06600 | 06600 | 06600 | 066 | 066 |
| 6,70                      | 8                          | 79        | 34        | 24       | 36       | 06700 | 06700 | 06700 | 06700 | 067 | 067 |
| 6,80                      | 8                          | 79        | 34        | 24       | 36       | 06800 | 06800 | 06800 | 06800 | 068 | 068 |
| 6,90                      | 8                          | 79        | 34        | 24       | 36       | 06900 | 06900 | 06900 | 06900 | 069 | 069 |
| 7,00                      | 8                          | 79        | 34        | 24       | 36       | 07000 | 07000 | 07000 | 07000 | 070 | 070 |
| 7,10                      | 8                          | 79        | 41        | 29       | 36       | 07100 | 07100 | 07100 | 07100 | 071 | 071 |
| 7,20                      | 8                          | 79        | 41        | 29       | 36       | 07200 | 07200 | 07200 | 07200 | 072 | 072 |
| 7,30                      | 8                          | 79        | 41        | 29       | 36       | 07300 | 07300 | 07300 | 07300 | 073 | 073 |
| 7,40                      | 8                          | 79        | 41        | 29       | 36       | 07400 | 07400 | 07400 | 07400 | 074 | 074 |
| 7,45                      | 8                          | 79        | 41        | 29       | 36       | 07450 | 07450 | 07450 | 07450 | 924 |     |
| 7,50                      | 8                          | 79        | 41        | 29       | 36       | 07500 | 07500 | 07500 | 07500 | 075 | 075 |
| 7,60                      | 8                          | 79        | 41        | 29       | 36       | 07600 | 07600 | 07600 | 07600 | 076 | 076 |
| 7,70                      | 8                          | 79        | 41        | 29       | 36       | 07700 | 07700 | 07700 | 07700 | 077 | 077 |
| 7,80                      | 8                          | 79        | 41        | 29       | 36       | 07800 | 07800 | 07800 | 07800 | 078 | 078 |
| 7,90                      | 8                          | 79        | 41        | 29       | 36       | 07900 | 07900 | 07900 | 07900 | 079 | 079 |
| 8,00                      | 8                          | 79        | 41        | 29       | 36       | 08000 | 08000 | 08000 | 08000 | 080 | 080 |
| 8,10                      | 10                         | 89        | 47        | 35       | 40       | 08100 | 08100 | 08100 | 08100 | 081 | 081 |
| 8,20                      | 10                         | 89        | 47        | 35       | 40       | 08200 | 08200 | 08200 | 08200 | 082 | 082 |
| 8,30                      | 10                         | 89        | 47        | 35       | 40       | 08300 | 08300 | 08300 | 08300 | 083 | 083 |
| 8,40                      | 10                         | 89        | 47        | 35       | 40       | 08400 | 08400 | 08400 | 08400 | 084 | 084 |
| 8,50                      | 10                         | 89        | 47        | 35       | 40       | 08500 | 08500 | 08500 | 08500 | 085 | 085 |
| 8,60                      | 10                         | 89        | 47        | 35       | 40       | 08600 | 08600 | 08600 | 08600 | 086 | 086 |
| 8,70                      | 10                         | 89        | 47        | 35       | 40       | 08700 | 08700 | 08700 | 08700 | 087 | 087 |
| 8,80                      | 10                         | 89        | 47        | 35       | 40       | 08800 | 08800 | 08800 | 08800 | 088 | 088 |
| 8,90                      | 10                         | 89        | 47        | 35       | 40       | 08900 | 08900 | 08900 | 08900 | 089 | 089 |
| 9,00                      | 10                         | 89        | 47        | 35       | 40       | 09000 | 09000 | 09000 | 09000 | 090 | 090 |
| 9,10                      | 10                         | 89        | 47        | 35       | 40       | 09100 | 09100 | 09100 | 09100 | 091 | 091 |
| 9,20                      | 10                         | 89        | 47        | 35       | 40       | 09200 | 09200 | 09200 | 09200 | 092 | 092 |
| 9,30                      | 10                         | 89        | 47        | 35       | 40       | 09300 | 09300 | 09300 | 09300 | 093 | 093 |
| 9,35                      | 10                         | 89        | 47        | 35       | 40       | 09350 | 09350 | 09350 | 09350 | 930 |     |
| 9,40                      | 10                         | 89        | 47        | 35       | 40       | 09400 | 09400 | 09400 | 09400 | 094 | 094 |
| 9,45                      | 10                         | 89        | 47        | 35       | 40       | 09450 | 09450 | 09450 | 09450 | 994 |     |
| 9,50                      | 10                         | 89        | 47        | 35       | 40       | 09500 | 09500 | 09500 | 09500 | 095 | 095 |
| 9,60                      | 10                         | 89        | 47        | 35       | 40       | 09600 | 09600 | 09600 | 09600 | 096 | 096 |
| 9,70                      | 10                         | 89        | 47        | 35       | 40       | 09700 | 09700 | 09700 | 09700 | 097 | 097 |

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| P | • | • | • | • | ○ | ○ |
| M | • | • | • | • | • | • |
| K | • | • | • | • | ○ | ○ |
| N |   |   |   |   | ○ | ○ |
| S |   |   |   |   | • | • |
| H |   | ○ | ○ | ○ |   |   |
| O |   |   |   |   |   |   |

→ V<sub>c</sub> на стр. 108–114Ø DC<sub>m7</sub> для типа UNI и VA / Ø DC<sub>h7</sub> для типа Speed UNI

## WTX – Высокопроизводительное сверло, DIN 6537



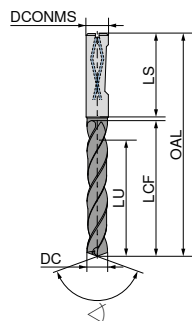
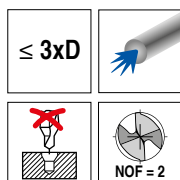
| Speed<br>UNI  | UNI           | UNI           | UNI           | VA            | VA            |
|---------------|---------------|---------------|---------------|---------------|---------------|
| DPX14S        | DPX74S        | DPX74S        | DPX74S        | Ti700         | Ti700         |
| DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    |               |               |
|               |               |               |               |               |               |
| HA            | HA            | HB            | HE            | HA            | HE            |
| 145°          | 140°          | 140°          | 140°          | 140°          | 140°          |
| Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав |
| 10 781 ...    | 11 780 ...    | 11 781 ...    | 11 779 ...    | 10 734 ...    | 10 733 ...    |

| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |       |       |       |     |     |
|---------------------------|----------------------------|-----------|-----------|----------|----------|-------|-------|-------|-------|-----|-----|
| 9,80                      | 10                         | 89        | 47        | 35       | 40       | 09800 | 09800 | 09800 | 09800 | 098 | 098 |
| 9,90                      | 10                         | 89        | 47        | 35       | 40       | 09900 | 09900 | 09900 | 09900 | 099 | 099 |
| 10,00                     | 10                         | 89        | 47        | 35       | 40       | 10000 | 10000 | 10000 | 10000 | 100 | 100 |
| 10,10                     | 12                         | 102       | 55        | 40       | 45       | 10100 | 10100 | 10100 | 10100 | 101 | 101 |
| 10,20                     | 12                         | 102       | 55        | 40       | 45       | 10200 | 10200 | 10200 | 10200 | 102 | 102 |
| 10,30                     | 12                         | 102       | 55        | 40       | 45       | 10300 | 10300 | 10300 | 10300 | 103 | 103 |
| 10,40                     | 12                         | 102       | 55        | 40       | 45       | 10400 | 10400 | 10400 | 10400 | 104 | 104 |
| 10,50                     | 12                         | 102       | 55        | 40       | 45       | 10500 | 10500 | 10500 | 10500 | 105 | 105 |
| 10,55                     | 12                         | 102       | 55        | 40       | 45       |       | 10550 | 10550 | 10550 | 932 |     |
| 10,60                     | 12                         | 102       | 55        | 40       | 45       | 10600 | 10600 | 10600 | 10600 | 106 | 106 |
| 10,70                     | 12                         | 102       | 55        | 40       | 45       | 10700 | 10700 | 10700 | 10700 | 107 | 107 |
| 10,75                     | 12                         | 102       | 55        | 40       | 45       |       | 10750 | 10750 | 10750 |     |     |
| 10,80                     | 12                         | 102       | 55        | 40       | 45       | 10800 | 10800 | 10800 | 10800 | 108 | 108 |
| 10,90                     | 12                         | 102       | 55        | 40       | 45       | 10900 | 10900 | 10900 | 10900 | 109 | 109 |
| 11,00                     | 12                         | 102       | 55        | 40       | 45       | 11000 | 11000 | 11000 | 11000 | 110 | 110 |
| 11,10                     | 12                         | 102       | 55        | 40       | 45       | 11100 | 11100 | 11100 | 11100 | 111 | 111 |
| 11,20                     | 12                         | 102       | 55        | 40       | 45       | 11200 | 11200 | 11200 | 11200 | 112 | 112 |
| 11,25                     | 12                         | 102       | 55        | 40       | 45       |       | 11250 | 11250 | 11250 | 912 |     |
| 11,30                     | 12                         | 102       | 55        | 40       | 45       | 11300 | 11300 | 11300 | 11300 | 113 | 113 |
| 11,35                     | 12                         | 102       | 55        | 40       | 45       |       | 11350 | 11350 | 11350 | 913 |     |
| 11,40                     | 12                         | 102       | 55        | 40       | 45       | 11400 | 11400 | 11400 | 11400 | 114 | 114 |
| 11,45                     | 12                         | 102       | 55        | 40       | 45       |       | 11450 | 11450 | 11450 | 914 |     |
| 11,50                     | 12                         | 102       | 55        | 40       | 45       | 11500 | 11500 | 11500 | 11500 | 115 | 115 |
| 11,60                     | 12                         | 102       | 55        | 40       | 45       | 11600 | 11600 | 11600 | 11600 | 116 | 116 |
| 11,70                     | 12                         | 102       | 55        | 40       | 45       | 11700 | 11700 | 11700 | 11700 | 117 | 117 |
| 11,80                     | 12                         | 102       | 55        | 40       | 45       | 11800 | 11800 | 11800 | 11800 | 118 | 118 |
| 11,90                     | 12                         | 102       | 55        | 40       | 45       | 11900 | 11900 | 11900 | 11900 | 119 | 119 |
| 12,00                     | 12                         | 102       | 55        | 40       | 45       | 12000 | 12000 | 12000 | 12000 | 120 | 120 |
| 12,15                     | 14                         | 107       | 60        | 43       | 45       |       | 12150 | 12150 | 12150 | 921 |     |
| 12,25                     | 14                         | 107       | 60        | 43       | 45       |       | 12250 | 12250 | 12250 |     |     |
| 12,50                     | 14                         | 107       | 60        | 43       | 45       | 12500 | 12500 | 12500 | 12500 | 125 | 125 |
| 12,55                     | 14                         | 107       | 60        | 43       | 45       |       | 12550 | 12550 | 12550 | 925 |     |
| 12,70                     | 14                         | 107       | 60        | 43       | 45       |       | 12700 | 12700 | 12700 |     |     |
| 12,80                     | 14                         | 107       | 60        | 43       | 45       | 12800 | 12800 | 12800 | 12800 | 128 | 128 |
| 12,90                     | 14                         | 107       | 60        | 43       | 45       |       | 12900 | 12900 | 12900 |     |     |
| 13,00                     | 14                         | 107       | 60        | 43       | 45       | 13000 | 13000 | 13000 | 13000 | 130 | 130 |
| 13,10                     | 14                         | 107       | 60        | 43       | 45       |       | 13100 | 13100 | 13100 |     |     |
| 13,30                     | 14                         | 107       | 60        | 43       | 45       |       | 13300 | 13300 | 13300 |     |     |
| 13,35                     | 14                         | 107       | 60        | 43       | 45       |       | 13350 | 13350 | 13350 | 933 |     |
| 13,50                     | 14                         | 107       | 60        | 43       | 45       | 13500 | 13500 | 13500 | 13500 | 135 | 135 |
| 13,70                     | 14                         | 107       | 60        | 43       | 45       |       | 13700 | 13700 | 13700 |     |     |
| 13,80                     | 14                         | 107       | 60        | 43       | 45       | 13800 | 13800 | 13800 | 13800 | 138 | 138 |

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| K | • | • | • | • | ○ | ○ |
| N |   |   |   |   | ○ | ○ |
| S |   |   |   |   | • | • |
| H |   | ○ | ○ | ○ |   |   |
| O |   |   |   |   |   |   |

→ V<sub>c</sub> на стр. 108–114Ø DC<sub>m7</sub> для типа UNI и VA / Ø DC<sub>h7</sub> для типа Speed UNI

## WTX – Высокопроизводительное сверло, DIN 6537



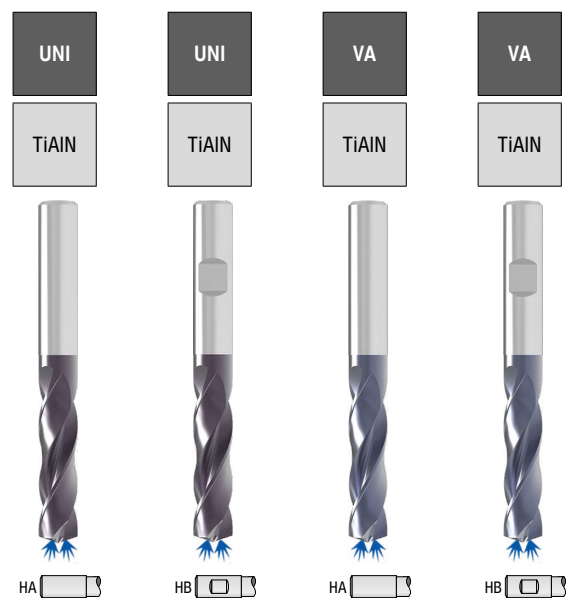
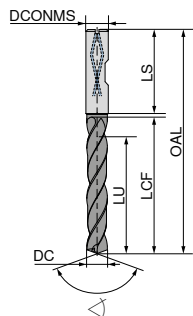
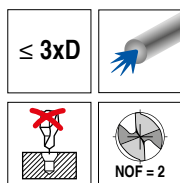
| Speed<br>UNI  | UNI           | UNI           | UNI           | VA            | VA            |
|---------------|---------------|---------------|---------------|---------------|---------------|
| DPX14S        | DPX74S        | DPX74S        | DPX74S        | Ti700         | Ti700         |
| DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    |               |               |
|               |               |               |               |               |               |
| HA            | HA            | HB            | HE            | HA            | HE            |
| ∠ 145°        | ∠ 140°        | ∠ 140°        | ∠ 140°        | ∠ 140°        | ∠ 140°        |
| Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав |
| 10 781 ...    | 11 780 ...    | 11 781 ...    | 11 779 ...    | 10 734 ...    | 10 733 ...    |

| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |       |       |       |  |  |
|---------------------------|----------------------------|-----------|-----------|----------|----------|--|-------|-------|-------|--|--|
| 14,00                     | 14                         | 107       | 60        | 43       | 45       |  | 14000 |       | 14000 |  |  |
| 14,20                     | 16                         | 115       | 65        | 45       | 48       |  |       | 14200 |       |  |  |
| 14,50                     | 16                         | 115       | 65        | 45       | 48       |  | 14500 |       | 14500 |  |  |
| 14,80                     | 16                         | 115       | 65        | 45       | 48       |  | 14800 |       | 14800 |  |  |
| 15,00                     | 16                         | 115       | 65        | 45       | 48       |  | 15000 |       | 15000 |  |  |
| 15,10                     | 16                         | 115       | 65        | 45       | 48       |  |       | 15100 |       |  |  |
| 15,25                     | 16                         | 115       | 65        | 45       | 48       |  |       | 15250 |       |  |  |
| 15,30                     | 16                         | 115       | 65        | 45       | 48       |  |       | 15300 |       |  |  |
| 15,35                     | 16                         | 115       | 65        | 45       | 48       |  |       | 15350 |       |  |  |
| 15,50                     | 16                         | 115       | 65        | 45       | 48       |  | 15500 |       | 15500 |  |  |
| 15,60                     | 16                         | 115       | 65        | 45       | 48       |  |       | 15600 |       |  |  |
| 15,80                     | 16                         | 115       | 65        | 45       | 48       |  | 15800 |       | 15800 |  |  |
| 16,00                     | 16                         | 115       | 65        | 45       | 48       |  | 16000 |       | 16000 |  |  |
| 16,05                     | 18                         | 123       | 73        | 51       | 48       |  |       | 16050 |       |  |  |
| 16,50                     | 18                         | 123       | 73        | 51       | 48       |  | 16500 |       | 16500 |  |  |
| 16,80                     | 18                         | 123       | 73        | 51       | 48       |  | 16800 |       | 16800 |  |  |
| 16,90                     | 18                         | 123       | 73        | 51       | 48       |  |       | 16900 |       |  |  |
| 17,00                     | 18                         | 123       | 73        | 51       | 48       |  | 17000 |       | 17000 |  |  |
| 17,50                     | 18                         | 123       | 73        | 51       | 48       |  | 17500 |       | 17500 |  |  |
| 17,60                     | 18                         | 123       | 73        | 51       | 48       |  |       | 17600 |       |  |  |
| 17,80                     | 18                         | 123       | 73        | 51       | 48       |  | 17800 |       | 17800 |  |  |
| 18,00                     | 18                         | 123       | 73        | 51       | 48       |  | 18000 |       | 18000 |  |  |
| 18,50                     | 20                         | 131       | 79        | 55       | 50       |  | 18500 |       | 18500 |  |  |
| 18,80                     | 20                         | 131       | 79        | 55       | 50       |  | 18800 |       | 18800 |  |  |
| 18,90                     | 20                         | 131       | 79        | 55       | 50       |  |       | 18900 |       |  |  |
| 19,00                     | 20                         | 131       | 79        | 55       | 50       |  | 19000 |       | 19000 |  |  |
| 19,35                     | 20                         | 131       | 79        | 55       | 50       |  |       | 19350 |       |  |  |
| 19,50                     | 20                         | 131       | 79        | 55       | 50       |  | 19500 |       | 19500 |  |  |
| 19,60                     | 20                         | 131       | 79        | 55       | 50       |  |       | 19600 |       |  |  |
| 19,80                     | 20                         | 131       | 79        | 55       | 50       |  | 19800 |       | 19800 |  |  |
| 20,00                     | 20                         | 131       | 79        | 55       | 50       |  | 20000 |       | 20000 |  |  |
| 20,50                     | 25                         | 151       | 93        | 66       | 56       |  |       | 20500 |       |  |  |
| 21,00                     | 25                         | 151       | 93        | 66       | 56       |  | 21000 |       | 21000 |  |  |
| 21,50                     | 25                         | 151       | 93        | 66       | 56       |  | 21500 |       | 21500 |  |  |
| 22,00                     | 25                         | 151       | 93        | 66       | 56       |  | 22000 |       | 22000 |  |  |
| 22,50                     | 25                         | 153       | 96        | 72       | 56       |  |       | 22500 |       |  |  |
| 23,00                     | 25                         | 153       | 96        | 72       | 56       |  | 23000 |       | 23000 |  |  |
| 23,50                     | 25                         | 153       | 96        | 72       | 56       |  | 23500 |       | 23500 |  |  |
| 24,00                     | 25                         | 153       | 96        | 72       | 56       |  | 24000 |       | 24000 |  |  |
| 24,50                     | 25                         | 153       | 96        | 75       | 56       |  | 24500 |       | 24500 |  |  |
| 25,00                     | 25                         | 153       | 96        | 75       | 56       |  | 25000 |       | 25000 |  |  |

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| K | • | • | • | • | ○ | ○ |
| N |   |   |   |   | ○ | ○ |
| S |   |   |   |   | • | • |
| H |   | ○ | ○ | ○ |   |   |
| O |   |   |   |   |   |   |

→ v<sub>c</sub> на стр. 108–114Ø DC<sub>m7</sub> для типа UNI и VA / Ø DC<sub>h7</sub> для типа Speed UNI

## WPC – Высокопроизводительное сверло, DIN 6537



Твердый сплав  
11 603 ...

Твердый сплав  
11 604 ...

Твердый сплав  
11 623 ...

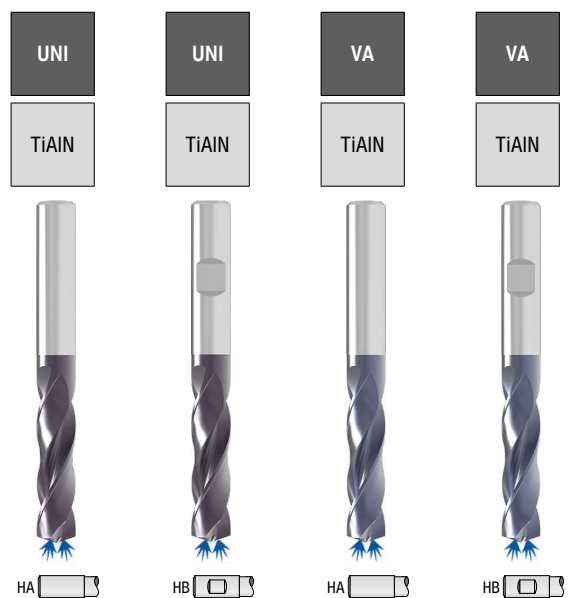
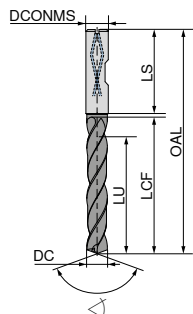
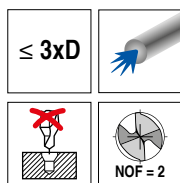
Твердый сплав  
11 624 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |
|------------------------|----------------------------|-----------|-----------|----------|----------|
| 1,00                   | 4                          | 45        | 6,0       | 4,5      | 32,0     |
| 1,10                   | 4                          | 45        | 6,6       | 5,0      | 31,5     |
| 1,20                   | 4                          | 45        | 7,2       | 5,4      | 31,0     |
| 1,30                   | 4                          | 45        | 7,8       | 5,9      | 31,5     |
| 1,40                   | 4                          | 45        | 8,4       | 6,3      | 30,0     |
| 1,50                   | 4                          | 50        | 9,0       | 6,8      | 35,0     |
| 1,60                   | 4                          | 50        | 9,6       | 7,2      | 34,5     |
| 1,70                   | 4                          | 50        | 10,2      | 7,7      | 34,0     |
| 1,80                   | 4                          | 50        | 10,8      | 8,1      | 33,5     |
| 1,90                   | 4                          | 50        | 11,4      | 8,6      | 33,0     |
| 2,00                   | 4                          | 50        | 12,0      | 9,0      | 33,0     |
| 2,10                   | 4                          | 55        | 12,6      | 9,5      | 37,5     |
| 2,20                   | 4                          | 55        | 13,2      | 9,9      | 37,0     |
| 2,30                   | 4                          | 55        | 13,8      | 10,4     | 36,5     |
| 2,40                   | 4                          | 55        | 14,4      | 10,8     | 36,0     |
| 2,50                   | 4                          | 55        | 15,0      | 11,3     | 35,5     |
| 2,60                   | 4                          | 55        | 15,6      | 11,7     | 35,5     |
| 2,70                   | 4                          | 55        | 16,2      | 12,2     | 35,0     |
| 2,80                   | 4                          | 55        | 16,8      | 12,6     | 34,0     |
| 2,90                   | 4                          | 55        | 17,4      | 13,1     | 34,0     |
| 3,00                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |
| 3,10                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |
| 3,20                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |
| 3,25                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |
| 3,30                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |
| 3,40                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |
| 3,50                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |
| 3,60                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |
| 3,70                   | 6                          | 62        | 20,0      | 14,0     | 36,0     |
| 3,80                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |
| 3,90                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |
| 4,00                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |
| 4,10                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |
| 4,20                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |
| 4,30                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |
| 4,40                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |
| 4,50                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |
| 4,60                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |
| 4,65                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |
| 4,70                   | 6                          | 66        | 24,0      | 17,0     | 36,0     |
| 4,80                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |
| 4,90                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |
| 5,00                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |
| 5,10                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |

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→ v<sub>c</sub> на стр. 130+133

## WPC – Высокопроизводительное сверло, DIN 6537



Твердый сплав  
11 603 ...

Твердый сплав  
11 604 ...

Твердый сплав  
11 623 ...

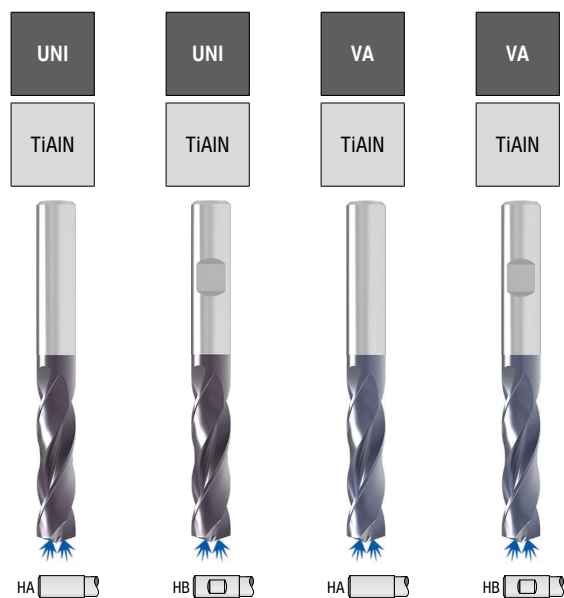
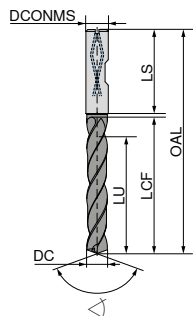
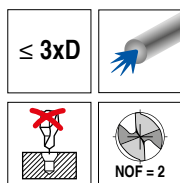
Твердый сплав  
11 624 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |     |     |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|--|-----|-----|-------|
| 5,20                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 052 | 052 | 052   |
| 5,30                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 053 | 053 | 053   |
| 5,40                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 054 | 054 | 054   |
| 5,50                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 055 | 055 | 055   |
| 5,55                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 902 | 902 | 902   |
| 5,60                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 056 | 056 | 056   |
| 5,70                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 057 | 057 | 057   |
| 5,80                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 058 | 058 | 058   |
| 5,90                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 059 | 059 | 059   |
| 6,00                   | 6                          | 66        | 28,0      | 20,0     | 36,0     |  | 060 | 060 | 060   |
| 6,10                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 061 | 061 | 061   |
| 6,20                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 062 | 062 | 062   |
| 6,30                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 063 | 063 | 063   |
| 6,40                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 064 | 064 | 064   |
| 6,50                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 065 | 065 | 065   |
| 6,60                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 066 | 066 | 066   |
| 6,70                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 067 | 067 | 067   |
| 6,80                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 068 | 068 | 068   |
| 6,90                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 069 | 069 | 069   |
| 7,00                   | 8                          | 79        | 34,0      | 24,0     | 36,0     |  | 070 | 070 | 070   |
| 7,10                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 071 | 071 | 071   |
| 7,20                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 072 | 072 | 072   |
| 7,30                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 073 | 073 | 073   |
| 7,40                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 074 | 074 | 074   |
| 7,45                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 924 | 924 | 07450 |
| 7,50                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 075 | 075 | 075   |
| 7,55                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 975 | 975 | 975   |
| 7,60                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 076 | 076 | 076   |
| 7,70                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 077 | 077 | 077   |
| 7,80                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 078 | 078 | 078   |
| 7,90                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 079 | 079 | 079   |
| 8,00                   | 8                          | 79        | 41,0      | 29,0     | 36,0     |  | 080 | 080 | 080   |
| 8,10                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 081 | 081 | 081   |
| 8,20                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 082 | 082 | 082   |
| 8,30                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 083 | 083 | 083   |
| 8,40                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 084 | 084 | 084   |
| 8,50                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 085 | 085 | 085   |
| 8,60                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 086 | 086 | 086   |
| 8,70                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 087 | 087 | 087   |
| 8,80                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 088 | 088 | 088   |
| 8,90                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 089 | 089 | 089   |
| 9,00                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 090 | 090 | 090   |
| 9,10                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 091 | 091 | 091   |
| 9,20                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 092 | 092 | 092   |

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→ v<sub>c</sub> на стр. 130+133

## WPC – Высокопроизводительное сверло, DIN 6537



Твердый сплав  
11 603 ...

Твердый сплав  
11 604 ...

Твердый сплав  
11 623 ...

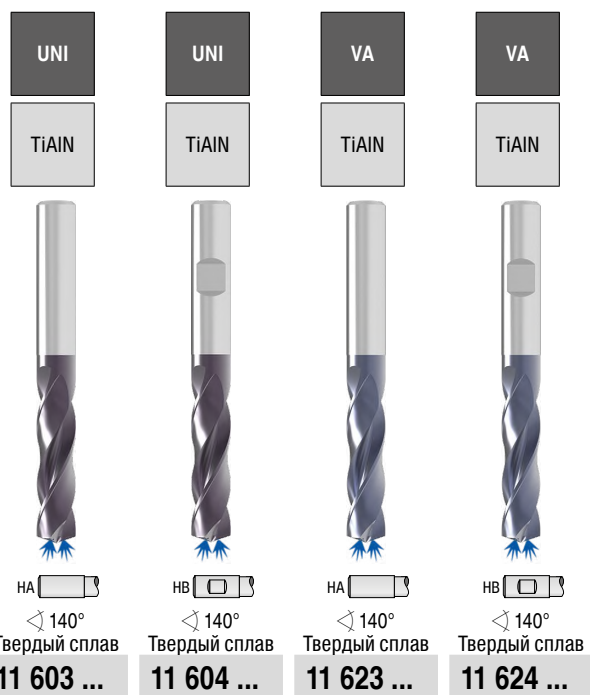
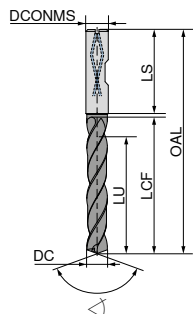
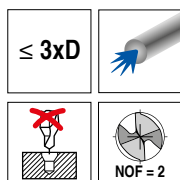
Твердый сплав  
11 624 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |     |     |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|--|-----|-----|-------|
| 9,25                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 925 | 925 | 925   |
| 9,30                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 093 | 093 | 093   |
| 9,35                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 930 | 930 | 09350 |
| 9,40                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 094 | 094 | 094   |
| 9,50                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 095 | 095 | 095   |
| 9,60                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 096 | 096 | 096   |
| 9,70                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 097 | 097 | 097   |
| 9,80                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 098 | 098 | 098   |
| 9,90                   | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 099 | 099 | 099   |
| 10,00                  | 10                         | 89        | 47,0      | 35,0     | 40,0     |  | 100 | 100 | 100   |
| 10,10                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 101 | 101 | 101   |
| 10,20                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 102 | 102 | 102   |
| 10,30                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 103 | 103 | 103   |
| 10,40                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 104 | 104 | 104   |
| 10,50                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 105 | 105 | 105   |
| 10,60                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 106 | 106 | 106   |
| 10,70                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 107 | 107 | 107   |
| 10,75                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 904 | 904 | 10750 |
| 10,80                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 108 | 108 | 108   |
| 10,90                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 109 | 109 | 109   |
| 11,00                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 110 | 110 | 110   |
| 11,10                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 111 | 111 | 111   |
| 11,20                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 112 | 112 | 112   |
| 11,25                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 912 | 912 | 11250 |
| 11,30                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 113 | 113 | 113   |
| 11,40                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 114 | 114 | 114   |
| 11,50                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 115 | 115 | 115   |
| 11,60                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 116 | 116 | 116   |
| 11,70                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 117 | 117 | 117   |
| 11,80                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 118 | 118 | 118   |
| 11,90                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 119 | 119 | 119   |
| 12,00                  | 12                         | 102       | 55,0      | 40,0     | 45,0     |  | 120 | 120 | 120   |
| 12,25                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 122 | 122 | 12250 |
| 12,50                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 125 | 125 | 125   |
| 12,70                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 127 | 127 | 127   |
| 12,80                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 128 | 128 |       |
| 12,90                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 129 | 129 |       |
| 13,00                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 130 | 130 | 130   |
| 13,10                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 131 | 131 |       |
| 13,30                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 133 | 133 |       |
| 13,50                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 135 | 135 | 135   |
| 13,70                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 137 | 137 | 137   |
| 13,80                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 138 | 138 |       |
| 14,00                  | 14                         | 107       | 60,0      | 43,0     | 45,0     |  | 140 | 140 | 140   |

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→ v<sub>c</sub> на стр. 130+133

## WPC – Высокопроизводительное сверло, DIN 6537



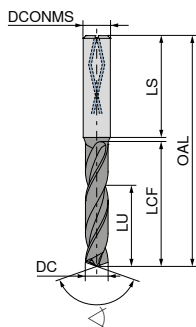
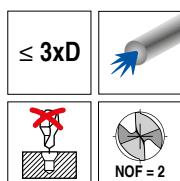
| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |
|------------------------|----------------------------|-----------|-----------|----------|----------|
| 14,20                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |
| 14,50                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |
| 14,70                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |
| 14,80                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |
| 15,00                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |
| 15,10                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |
| 15,25                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |
| 15,30                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |
| 15,50                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |
| 15,60                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |
| 15,70                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |
| 15,80                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |
| 16,00                  | 16                         | 115       | 65,0      | 45,0     | 48,0     |
| 16,50                  | 18                         | 123       | 73,0      | 51,0     | 48,0     |
| 16,80                  | 18                         | 123       | 73,0      | 51,0     | 48,0     |
| 16,90                  | 18                         | 123       | 73,0      | 51,0     | 48,0     |
| 17,00                  | 18                         | 123       | 73,0      | 51,0     | 48,0     |
| 17,50                  | 18                         | 123       | 73,0      | 51,0     | 48,0     |
| 17,60                  | 18                         | 123       | 73,0      | 51,0     | 48,0     |
| 17,80                  | 18                         | 123       | 73,0      | 51,0     | 48,0     |
| 18,00                  | 18                         | 123       | 73,0      | 51,0     | 48,0     |
| 18,50                  | 20                         | 131       | 79,0      | 55,0     | 50,0     |
| 18,80                  | 20                         | 131       | 79,0      | 55,0     | 50,0     |
| 18,90                  | 20                         | 131       | 79,0      | 55,0     | 50,0     |
| 19,00                  | 20                         | 131       | 79,0      | 55,0     | 50,0     |
| 19,50                  | 20                         | 131       | 79,0      | 55,0     | 50,0     |
| 19,60                  | 20                         | 131       | 79,0      | 55,0     | 50,0     |
| 19,80                  | 20                         | 131       | 79,0      | 55,0     | 50,0     |
| 20,00                  | 20                         | 131       | 79,0      | 55,0     | 50,0     |

| HA            | HB            | HA            | HB            |
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| 140°          | 140°          | 140°          | 140°          |
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| 11 603 ...    | 11 604 ...    | 11 623 ...    | 11 624 ...    |
| 142           | 142           |               |               |
| 145           | 145           | 145           | 145           |
| 147           | 147           | 147           | 147           |
| 148           | 148           |               |               |
| 150           | 150           | 150           | 150           |
| 151           | 151           |               |               |
| 152           | 152           |               |               |
| 153           | 153           |               |               |
| 155           | 155           | 155           | 155           |
| 156           | 156           |               |               |
| 157           | 157           | 157           | 157           |
| 158           | 158           |               |               |
| 160           | 160           | 160           | 160           |
| 165           | 165           | 165           | 165           |
| 168           | 168           |               |               |
| 169           | 169           |               |               |
| 170           | 170           | 170           | 170           |
| 175           | 175           | 175           | 175           |
| 176           | 176           |               |               |
| 178           | 178           |               |               |
| 180           | 180           | 180           | 180           |
| 185           | 185           | 185           | 185           |
| 188           | 188           |               |               |
| 189           | 189           |               |               |
| 190           | 190           | 190           | 190           |
| 195           | 195           | 195           | 195           |
| 196           | 196           |               |               |
| 198           | 198           |               |               |
| 200           | 200           | 200           | 200           |

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→ v<sub>c</sub> на стр. 130+133

## WTX – Высокопроизводительное сверло, DIN 6537

▲ специализированное решение для  
труднообрабатываемых материалов

Ti

DPA54

DRAGONSKIN



HA

140°

Твердый сплав

10 786 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|-----|
| 3,00                   | 6                          | 62        | 20        | 14       | 36       | 030 |
| 3,10                   | 6                          | 62        | 20        | 14       | 36       | 031 |
| 3,20                   | 6                          | 62        | 20        | 14       | 36       | 032 |
| 3,30                   | 6                          | 62        | 20        | 14       | 36       | 033 |
| 3,40                   | 6                          | 62        | 20        | 14       | 36       | 034 |
| 3,50                   | 6                          | 62        | 20        | 14       | 36       | 035 |
| 3,60                   | 6                          | 62        | 20        | 14       | 36       | 036 |
| 3,70                   | 6                          | 62        | 20        | 14       | 36       | 037 |
| 3,80                   | 6                          | 66        | 24        | 17       | 36       | 038 |
| 3,90                   | 6                          | 66        | 24        | 17       | 36       | 039 |
| 3,97                   | 6                          | 66        | 24        | 17       | 36       | 900 |
| 4,00                   | 6                          | 66        | 24        | 17       | 36       | 040 |
| 4,10                   | 6                          | 66        | 24        | 17       | 36       | 041 |
| 4,20                   | 6                          | 66        | 24        | 17       | 36       | 042 |
| 4,23                   | 6                          | 66        | 24        | 17       | 36       | 901 |
| 4,30                   | 6                          | 66        | 24        | 17       | 36       | 043 |
| 4,40                   | 6                          | 66        | 24        | 17       | 36       | 044 |
| 4,50                   | 6                          | 66        | 24        | 17       | 36       | 045 |
| 4,60                   | 6                          | 66        | 24        | 17       | 36       | 046 |
| 4,70                   | 6                          | 66        | 24        | 17       | 36       | 047 |
| 4,80                   | 6                          | 66        | 28        | 20       | 36       | 048 |
| 4,90                   | 6                          | 66        | 28        | 20       | 36       | 049 |
| 5,00                   | 6                          | 66        | 28        | 20       | 36       | 050 |
| 5,10                   | 6                          | 66        | 28        | 20       | 36       | 051 |
| 5,20                   | 6                          | 66        | 28        | 20       | 36       | 052 |
| 5,30                   | 6                          | 66        | 28        | 20       | 36       | 053 |
| 5,40                   | 6                          | 66        | 28        | 20       | 36       | 054 |
| 5,50                   | 6                          | 66        | 28        | 20       | 36       | 055 |
| 5,56                   | 6                          | 66        | 28        | 20       | 36       | 902 |
| 5,60                   | 6                          | 66        | 28        | 20       | 36       | 056 |
| 5,70                   | 6                          | 66        | 28        | 20       | 36       | 057 |
| 5,80                   | 6                          | 66        | 28        | 20       | 36       | 058 |
| 5,90                   | 6                          | 66        | 28        | 20       | 36       | 059 |
| 6,00                   | 6                          | 66        | 28        | 20       | 36       | 060 |
| 6,10                   | 8                          | 79        | 34        | 24       | 36       | 061 |
| 6,20                   | 8                          | 79        | 34        | 24       | 36       | 062 |
| 6,30                   | 8                          | 79        | 34        | 24       | 36       | 063 |
| 6,35                   | 8                          | 79        | 34        | 24       | 36       | 903 |
| 6,40                   | 8                          | 79        | 34        | 24       | 36       | 064 |
| 6,50                   | 8                          | 79        | 34        | 24       | 36       | 065 |
| 6,60                   | 8                          | 79        | 34        | 24       | 36       | 066 |
| 6,70                   | 8                          | 79        | 34        | 24       | 36       | 067 |
| 6,80                   | 8                          | 79        | 34        | 24       | 36       | 068 |
| 6,90                   | 8                          | 79        | 34        | 24       | 36       | 069 |
| 7,00                   | 8                          | 79        | 34        | 24       | 36       | 070 |
| 7,10                   | 8                          | 79        | 41        | 29       | 36       | 071 |
| 7,20                   | 8                          | 79        | 41        | 29       | 36       | 072 |
| 7,30                   | 8                          | 79        | 41        | 29       | 36       | 073 |
| 7,40                   | 8                          | 79        | 41        | 29       | 36       | 074 |
| 7,50                   | 8                          | 79        | 41        | 29       | 36       | 075 |
| 7,60                   | 8                          | 79        | 41        | 29       | 36       | 076 |

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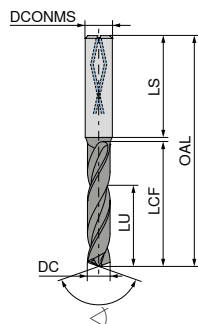
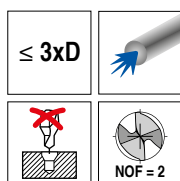
| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|-----|
| 7,70                   | 8                          | 79        | 41        | 29       | 36       | 077 |
| 7,80                   | 8                          | 79        | 41        | 29       | 36       | 078 |
| 7,90                   | 8                          | 79        | 41        | 29       | 36       | 079 |
| 7,94                   | 8                          | 79        | 41        | 29       | 36       | 904 |
| 8,00                   | 8                          | 79        | 41        | 29       | 36       | 080 |
| 8,10                   | 10                         | 89        | 47        | 35       | 40       | 081 |
| 8,20                   | 10                         | 89        | 47        | 35       | 40       | 082 |
| 8,30                   | 10                         | 89        | 47        | 35       | 40       | 083 |
| 8,40                   | 10                         | 89        | 47        | 35       | 40       | 084 |
| 8,50                   | 10                         | 89        | 47        | 35       | 40       | 085 |
| 8,60                   | 10                         | 89        | 47        | 35       | 40       | 086 |
| 8,70                   | 10                         | 89        | 47        | 35       | 40       | 087 |
| 8,80                   | 10                         | 89        | 47        | 35       | 40       | 088 |
| 8,90                   | 10                         | 89        | 47        | 35       | 40       | 089 |
| 9,00                   | 10                         | 89        | 47        | 35       | 40       | 090 |
| 9,10                   | 10                         | 89        | 47        | 35       | 40       | 091 |
| 9,20                   | 10                         | 89        | 47        | 35       | 40       | 092 |
| 9,30                   | 10                         | 89        | 47        | 35       | 40       | 093 |
| 9,40                   | 10                         | 89        | 47        | 35       | 40       | 094 |
| 9,50                   | 10                         | 89        | 47        | 35       | 40       | 095 |
| 9,55                   | 10                         | 89        | 47        | 35       | 40       | 905 |
| 9,60                   | 10                         | 89        | 47        | 35       | 40       | 096 |
| 9,70                   | 10                         | 89        | 47        | 35       | 40       | 097 |
| 9,80                   | 10                         | 89        | 47        | 35       | 40       | 098 |
| 9,90                   | 10                         | 89        | 47        | 35       | 40       | 099 |
| 10,00                  | 10                         | 89        | 47        | 35       | 40       | 100 |
| 10,10                  | 12                         | 102       | 55        | 40       | 45       | 101 |
| 10,20                  | 12                         | 102       | 55        | 40       | 45       | 102 |
| 10,30                  | 12                         | 102       | 55        | 40       | 45       | 103 |
| 10,40                  | 12                         | 102       | 55        | 40       | 45       | 104 |
| 10,50                  | 12                         | 102       | 55        | 40       | 45       | 105 |
| 10,60                  | 12                         | 102       | 55        | 40       | 45       | 106 |
| 10,70                  | 12                         | 102       | 55        | 40       | 45       | 107 |
| 10,80                  | 12                         | 102       | 55        | 40       | 45       | 108 |
| 10,90                  | 12                         | 102       | 55        | 40       | 45       | 109 |
| 11,00                  | 12                         | 102       | 55        | 40       | 45       | 110 |
| 11,10                  | 12                         | 102       | 55        | 40       | 45       | 111 |
| 11,11                  | 12                         | 102       | 55        | 40       | 45       | 906 |
| 11,20                  | 12                         | 102       | 55        | 40       | 45       | 112 |
| 11,30                  | 12                         | 102       | 55        | 40       | 45       | 113 |
| 11,40                  | 12                         | 102       | 55        | 40       | 45       | 114 |
| 11,50                  | 12                         | 102       | 55        | 40       | 45       | 115 |
| 11,60                  | 12                         | 102       | 55        | 40       | 45       | 116 |
| 11,70                  | 12                         | 102       | 55        | 40       | 45       | 117 |
| 11,80                  | 12                         | 102       | 55        | 40       | 45       | 118 |
| 11,90                  | 12                         | 102       | 55        | 40       | 45       | 119 |
| 12,00                  | 12                         | 102       | 55        | 40       | 45       | 120 |
| 12,10                  | 14                         | 107       | 60        | 43       | 45       | 121 |
| 12,20                  | 14                         | 107       | 60        | 43       | 45       | 122 |
| 12,30                  | 14                         | 107       | 60        | 43       | 45       | 123 |
| 12,40                  | 14                         | 107       | 60        | 43       | 45       | 124 |
| 12,50                  | 14                         | 107       | 60        | 43       | 45       | 125 |
| 12,60                  | 14                         | 107       | 60        | 43       | 45       | 126 |
| 12,70                  | 14                         | 107       | 60        | 43       | 45       | 907 |
| 12,80                  | 14                         | 107       | 60        | 43       | 45       | 128 |
| 12,90                  | 14                         | 107       | 60        | 43       | 45       | 129 |
| 13,00                  | 14                         | 107       | 60        | 43       | 45       | 130 |
| 13,10                  | 14                         | 107       | 60        | 43       | 45       | 131 |
| 13,20                  | 14                         | 107       | 60        | 43       | 45       | 132 |
| 13,30                  | 14                         | 107       | 60        | 43       | 45       | 133 |
| 13,40                  | 14                         | 107       | 60        | 43       | 45       | 134 |
| 13,50                  | 14                         | 107       | 60        | 43       | 45       | 135 |
| 13,60                  | 14                         | 107       | 60        | 43       | 45       | 136 |
| 13,70                  | 14                         | 107       | 60        | 43       | 45       | 137 |
| 13,80                  | 14                         | 107       | 60        | 43       | 45       | 138 |
| 13,90                  | 14                         | 107       | 60        | 43       | 45       | 139 |

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→ v<sub>c</sub> на стр. 123

# WTX – Высокопроизводительное сверло, DIN 6537

▲ специализированное решение для  
труднообрабатываемых материалов



Ti

DPA54

DRAGONSKIN



HA

140°

Твердый сплав

10 786 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|-----|
| 14,0                   | 14                         | 107       | 60        | 43       | 45       | 140 |
| 14,1                   | 16                         | 115       | 65        | 45       | 48       | 141 |
| 14,2                   | 16                         | 115       | 65        | 45       | 48       | 142 |
| 14,3                   | 16                         | 115       | 65        | 45       | 48       | 143 |
| 14,4                   | 16                         | 115       | 65        | 45       | 48       | 144 |
| 14,5                   | 16                         | 115       | 65        | 45       | 48       | 145 |
| 14,6                   | 16                         | 115       | 65        | 45       | 48       | 146 |
| 14,7                   | 16                         | 115       | 65        | 45       | 48       | 147 |
| 14,8                   | 16                         | 115       | 65        | 45       | 48       | 148 |
| 14,9                   | 16                         | 115       | 65        | 45       | 48       | 149 |
| 15,0                   | 16                         | 115       | 65        | 45       | 48       | 150 |
| 15,1                   | 16                         | 115       | 65        | 45       | 48       | 151 |
| 15,2                   | 16                         | 115       | 65        | 45       | 48       | 152 |
| 15,3                   | 16                         | 115       | 65        | 45       | 48       | 153 |
| 15,4                   | 16                         | 115       | 65        | 45       | 48       | 154 |
| 15,5                   | 16                         | 115       | 65        | 45       | 48       | 155 |
| 15,6                   | 16                         | 115       | 65        | 45       | 48       | 156 |
| 15,7                   | 16                         | 115       | 65        | 45       | 48       | 157 |
| 15,8                   | 16                         | 115       | 65        | 45       | 48       | 158 |
| 15,9                   | 16                         | 115       | 65        | 45       | 48       | 159 |
| 16,0                   | 16                         | 115       | 65        | 45       | 48       | 160 |
| 16,1                   | 18                         | 123       | 73        | 51       | 48       | 161 |
| 16,2                   | 18                         | 123       | 73        | 51       | 48       | 162 |
| 16,3                   | 18                         | 123       | 73        | 51       | 48       | 163 |
| 16,4                   | 18                         | 123       | 73        | 51       | 48       | 164 |
| 16,5                   | 18                         | 123       | 73        | 51       | 48       | 165 |
| 16,6                   | 18                         | 123       | 73        | 51       | 48       | 166 |
| 16,7                   | 18                         | 123       | 73        | 51       | 48       | 167 |
| 16,8                   | 18                         | 123       | 73        | 51       | 48       | 168 |
| 16,9                   | 18                         | 123       | 73        | 51       | 48       | 169 |
| 17,0                   | 18                         | 123       | 73        | 51       | 48       | 170 |
| 17,1                   | 18                         | 123       | 73        | 51       | 48       | 171 |
| 17,2                   | 18                         | 123       | 73        | 51       | 48       | 172 |
| 17,3                   | 18                         | 123       | 73        | 51       | 48       | 173 |
| 17,4                   | 18                         | 123       | 73        | 51       | 48       | 174 |
| 17,5                   | 18                         | 123       | 73        | 51       | 48       | 175 |
| 17,6                   | 18                         | 123       | 73        | 51       | 48       | 176 |
| 17,7                   | 18                         | 123       | 73        | 51       | 48       | 177 |
| 17,8                   | 18                         | 123       | 73        | 51       | 48       | 178 |
| 17,9                   | 18                         | 123       | 73        | 51       | 48       | 179 |
| 18,0                   | 18                         | 123       | 73        | 51       | 48       | 180 |
| 18,1                   | 20                         | 131       | 79        | 55       | 50       | 181 |
| 18,2                   | 20                         | 131       | 79        | 55       | 50       | 182 |
| 18,3                   | 20                         | 131       | 79        | 55       | 50       | 183 |
| 18,4                   | 20                         | 131       | 79        | 55       | 50       | 184 |
| 18,5                   | 20                         | 131       | 79        | 55       | 50       | 185 |
| 18,6                   | 20                         | 131       | 79        | 55       | 50       | 186 |
| 18,7                   | 20                         | 131       | 79        | 55       | 50       | 187 |
| 18,8                   | 20                         | 131       | 79        | 55       | 50       | 188 |
| 18,9                   | 20                         | 131       | 79        | 55       | 50       | 189 |
| 19,0                   | 20                         | 131       | 79        | 55       | 50       | 190 |

10 786 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|-----|
| 19,1                   | 20                         | 131       | 79        | 55       | 50       | 191 |
| 19,2                   | 20                         | 131       | 79        | 55       | 50       | 192 |
| 19,3                   | 20                         | 131       | 79        | 55       | 50       | 193 |
| 19,4                   | 20                         | 131       | 79        | 55       | 50       | 194 |
| 19,5                   | 20                         | 131       | 79        | 55       | 50       | 195 |
| 19,6                   | 20                         | 131       | 79        | 55       | 50       | 196 |
| 19,7                   | 20                         | 131       | 79        | 55       | 50       | 197 |
| 19,8                   | 20                         | 131       | 79        | 55       | 50       | 198 |
| 19,9                   | 20                         | 131       | 79        | 55       | 50       | 199 |
| 20,0                   | 20                         | 131       | 79        | 55       | 50       | 200 |

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→ v<sub>c</sub> на стр. 123

## WTX – Высокопроизводительное сверло, DIN 6537

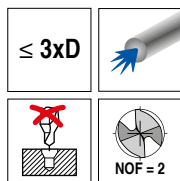
▲ для универсального применения

▲ полированные стружечные канавки

▲ PL = размер фаски

▲ четыре направляющие угловые ленточки

▲ тип ALU 3xD по запросу



10 720 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm | PL<br>mm |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|----------|-----|
| 8,20                   | 10                         | 89        | 47        | 35       | 40       | 0,41     | 082 |
| 8,30                   | 10                         | 89        | 47        | 35       | 40       | 0,42     | 083 |
| 8,40                   | 10                         | 89        | 47        | 35       | 40       | 0,42     | 084 |
| 8,50                   | 10                         | 89        | 47        | 35       | 40       | 0,43     | 085 |
| 8,60                   | 10                         | 89        | 47        | 35       | 40       | 0,43     | 086 |
| 8,70                   | 10                         | 89        | 47        | 35       | 40       | 0,44     | 087 |
| 8,80                   | 10                         | 89        | 47        | 35       | 40       | 0,44     | 088 |
| 8,90                   | 10                         | 89        | 47        | 35       | 40       | 0,45     | 089 |
| 9,00                   | 10                         | 89        | 47        | 35       | 40       | 0,45     | 090 |
| 9,10                   | 10                         | 89        | 47        | 35       | 40       | 0,46     | 091 |
| 9,20                   | 10                         | 89        | 47        | 35       | 40       | 0,46     | 092 |
| 9,30                   | 10                         | 89        | 47        | 35       | 40       | 0,47     | 093 |
| 9,40                   | 10                         | 89        | 47        | 35       | 40       | 0,47     | 094 |
| 9,50                   | 10                         | 89        | 47        | 35       | 40       | 0,48     | 095 |
| 9,60                   | 10                         | 89        | 47        | 35       | 40       | 0,48     | 096 |
| 9,70                   | 10                         | 89        | 47        | 35       | 40       | 0,49     | 097 |
| 9,80                   | 10                         | 89        | 47        | 35       | 40       | 0,49     | 098 |
| 9,90                   | 10                         | 89        | 47        | 35       | 40       | 0,50     | 099 |
| 10,00                  | 10                         | 89        | 47        | 35       | 40       | 0,50     | 100 |
| 10,10                  | 12                         | 100       | 53        | 38       | 45       | 0,51     | 101 |
| 10,20                  | 12                         | 100       | 53        | 38       | 45       | 0,51     | 102 |
| 10,30                  | 12                         | 100       | 53        | 38       | 45       | 0,52     | 103 |
| 10,40                  | 12                         | 100       | 53        | 38       | 45       | 0,52     | 104 |
| 10,50                  | 12                         | 100       | 53        | 38       | 45       | 0,53     | 105 |
| 10,60                  | 12                         | 100       | 53        | 38       | 45       | 0,53     | 106 |
| 10,70                  | 12                         | 100       | 53        | 38       | 45       | 0,54     | 107 |
| 10,80                  | 12                         | 100       | 53        | 38       | 45       | 0,54     | 108 |
| 10,90                  | 12                         | 100       | 53        | 38       | 45       | 0,55     | 109 |
| 11,00                  | 12                         | 100       | 53        | 38       | 45       | 0,55     | 110 |
| 11,10                  | 12                         | 100       | 53        | 38       | 45       | 0,56     | 111 |
| 11,20                  | 12                         | 100       | 53        | 38       | 45       | 0,56     | 112 |
| 11,30                  | 12                         | 100       | 53        | 38       | 45       | 0,57     | 113 |
| 11,40                  | 12                         | 100       | 53        | 38       | 45       | 0,57     | 114 |
| 11,50                  | 12                         | 100       | 53        | 38       | 45       | 0,58     | 115 |
| 11,60                  | 12                         | 100       | 53        | 38       | 45       | 0,58     | 116 |
| 11,70                  | 12                         | 100       | 53        | 38       | 45       | 0,59     | 117 |
| 11,80                  | 12                         | 100       | 53        | 38       | 45       | 0,59     | 118 |
| 11,90                  | 12                         | 100       | 53        | 38       | 45       | 0,60     | 119 |
| 12,00                  | 12                         | 100       | 53        | 38       | 45       | 0,60     | 120 |
| 12,50                  | 14                         | 105       | 58        | 41       | 45       | 0,63     | 125 |
| 12,80                  | 14                         | 105       | 58        | 41       | 45       | 0,64     | 128 |
| 13,00                  | 14                         | 105       | 58        | 41       | 45       | 0,65     | 130 |
| 13,50                  | 14                         | 105       | 58        | 41       | 45       | 0,68     | 135 |
| 13,80                  | 14                         | 105       | 58        | 41       | 45       | 0,69     | 138 |
| 14,00                  | 14                         | 105       | 58        | 41       | 45       | 0,70     | 140 |
| 14,50                  | 16                         | 113       | 63        | 43       | 48       | 0,73     | 145 |
| 14,80                  | 16                         | 113       | 63        | 43       | 48       | 0,74     | 148 |
| 15,00                  | 16                         | 113       | 63        | 43       | 48       | 0,75     | 150 |
| 15,50                  | 16                         | 113       | 63        | 43       | 48       | 0,78     | 155 |
| 15,80                  | 16                         | 113       | 63        | 43       | 48       | 0,79     | 158 |
| 16,00                  | 16                         | 113       | 63        | 43       | 48       | 0,80     | 160 |
| 16,50                  | 18                         | 121       | 71        | 49       | 48       | 0,83     | 165 |
| 16,80                  | 18                         | 121       | 71        | 49       | 48       | 0,84     | 168 |
| 17,00                  | 18                         | 121       | 71        | 49       | 48       | 0,85     | 170 |
| 17,50                  | 18                         | 121       | 71        | 49       | 48       | 0,88     | 175 |
| 17,80                  | 18                         | 121       | 71        | 49       | 48       | 0,89     | 178 |
| 18,00                  | 18                         | 121       | 71        | 49       | 48       | 0,90     | 180 |
| 18,50                  | 20                         | 129       | 77        | 53       | 50       | 0,93     | 185 |
| 18,80                  | 20                         | 129       | 77        | 53       | 50       | 0,94     | 188 |
| 19,00                  | 20                         | 129       | 77        | 53       | 50       | 0,95     | 190 |
| 19,50                  | 20                         | 129       | 77        | 53       | 50       | 0,98     | 195 |
| 19,80                  | 20                         | 129       | 77        | 53       | 50       | 0,99     | 198 |
| 20,00                  | 20                         | 129       | 77        | 53       | 50       | 1,00     | 200 |

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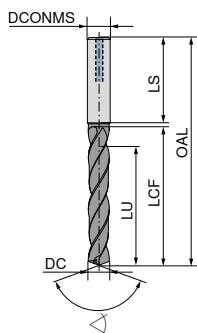
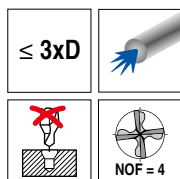
→ v<sub>c</sub> на стр. 126

# WTH – Высокопроизводительное сверло, DIN 6537

- ▲ 4-зубое быстропроходное сверло
- ▲ специализированное решение для обработки стали

- ▲ имеет 4 спиральных канала охлаждения
- ▲ новая геометрия режущих кромок гарантирует высокую точность позиционирования

- ▲ отличное качество выполняемых отверстий с точки зрения допусков, поверхности и позиционирования



NEW

HFDS

DPX14S

DRAGONSKIN



HA

130°

Твердый сплав

10 797 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 6,0                    | 8                          | 79        | 41        | 29       | 36       | 06000 |
| 6,1                    | 10                         | 89        | 47        | 35       | 40       | 06100 |
| 6,2                    | 10                         | 89        | 47        | 35       | 40       | 06200 |
| 6,3                    | 10                         | 89        | 47        | 35       | 40       | 06300 |
| 6,4                    | 10                         | 89        | 47        | 35       | 40       | 06400 |
| 6,5                    | 10                         | 89        | 47        | 35       | 40       | 06500 |
| 6,6                    | 10                         | 89        | 47        | 35       | 40       | 06600 |
| 6,7                    | 10                         | 89        | 47        | 35       | 40       | 06700 |
| 6,8                    | 10                         | 89        | 47        | 35       | 40       | 06800 |
| 6,9                    | 10                         | 89        | 47        | 35       | 40       | 06900 |
| 7,0                    | 10                         | 89        | 47        | 35       | 40       | 07000 |
| 7,1                    | 10                         | 89        | 47        | 35       | 40       | 07100 |
| 7,2                    | 10                         | 89        | 47        | 35       | 40       | 07200 |
| 7,3                    | 10                         | 89        | 47        | 35       | 40       | 07300 |
| 7,4                    | 10                         | 89        | 47        | 35       | 40       | 07400 |
| 7,5                    | 10                         | 89        | 47        | 35       | 40       | 07500 |
| 7,6                    | 10                         | 89        | 47        | 35       | 40       | 07600 |
| 7,7                    | 10                         | 89        | 47        | 35       | 40       | 07700 |
| 7,8                    | 10                         | 89        | 47        | 35       | 40       | 07800 |
| 7,9                    | 10                         | 89        | 47        | 35       | 40       | 07900 |
| 8,0                    | 10                         | 89        | 47        | 35       | 40       | 08000 |
| 8,1                    | 12                         | 102       | 55        | 40       | 45       | 08100 |
| 8,2                    | 12                         | 102       | 55        | 40       | 45       | 08200 |
| 8,3                    | 12                         | 102       | 55        | 40       | 45       | 08300 |
| 8,4                    | 12                         | 102       | 55        | 40       | 45       | 08400 |
| 8,5                    | 12                         | 102       | 55        | 40       | 45       | 08500 |
| 8,6                    | 12                         | 102       | 55        | 40       | 45       | 08600 |
| 8,7                    | 12                         | 102       | 55        | 40       | 45       | 08700 |
| 8,8                    | 12                         | 102       | 55        | 40       | 45       | 08800 |
| 8,9                    | 12                         | 102       | 55        | 40       | 45       | 08900 |
| 9,0                    | 12                         | 102       | 55        | 40       | 45       | 09000 |
| 9,1                    | 12                         | 102       | 55        | 40       | 45       | 09100 |
| 9,2                    | 12                         | 102       | 55        | 40       | 45       | 09200 |
| 9,3                    | 12                         | 102       | 55        | 40       | 45       | 09300 |
| 9,4                    | 12                         | 102       | 55        | 40       | 45       | 09400 |
| 9,5                    | 12                         | 102       | 55        | 40       | 45       | 09500 |
| 9,6                    | 12                         | 102       | 55        | 40       | 45       | 09600 |
| 9,7                    | 12                         | 102       | 55        | 40       | 45       | 09700 |
| 9,8                    | 12                         | 102       | 55        | 40       | 45       | 09800 |
| 9,9                    | 12                         | 102       | 55        | 40       | 45       | 09900 |
| 10,0                   | 12                         | 102       | 55        | 40       | 45       | 10000 |
| 10,2                   | 14                         | 107       | 60        | 43       | 45       | 10200 |
| 10,5                   | 14                         | 107       | 60        | 43       | 45       | 10500 |
| 11,0                   | 14                         | 107       | 60        | 43       | 45       | 11000 |
| 11,5                   | 14                         | 107       | 60        | 43       | 45       | 11500 |
| 12,0                   | 14                         | 107       | 60        | 43       | 45       | 12000 |

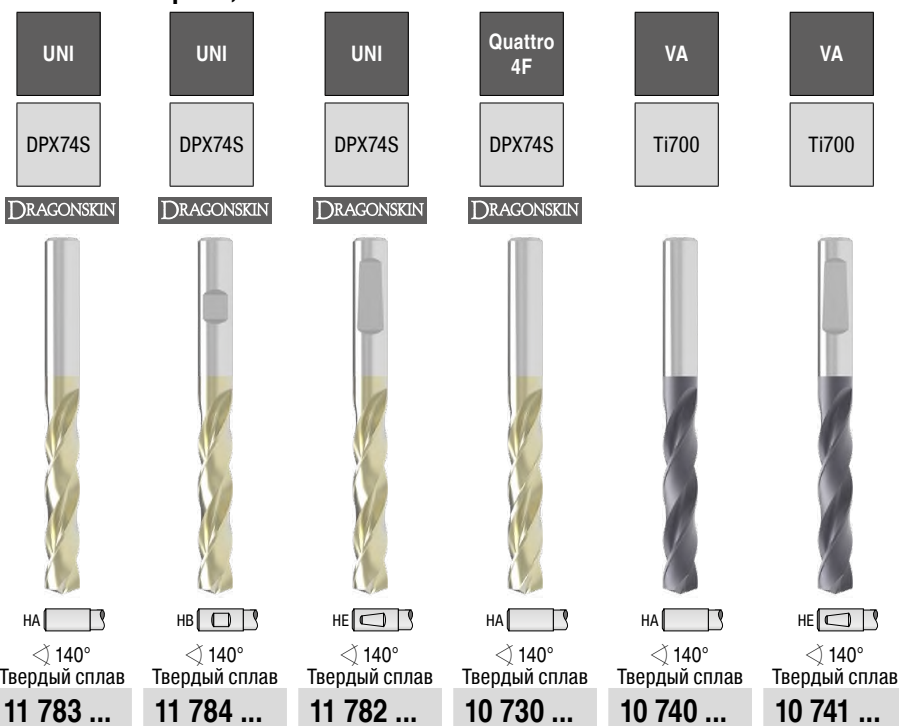
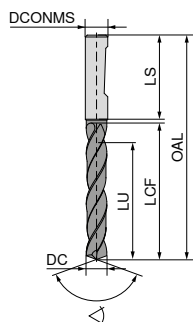
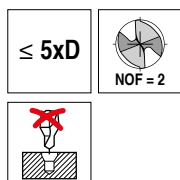
10 797 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 12,5                   | 16                         | 115       | 65        | 45       | 48       | 12500 |
| 13,0                   | 16                         | 115       | 65        | 45       | 48       | 13000 |
| 14,0                   | 16                         | 115       | 65        | 45       | 48       | 14000 |
| 14,3                   | 18                         | 123       | 73        | 51       | 48       | 14300 |
| 14,5                   | 18                         | 123       | 73        | 51       | 48       | 14500 |
| 15,0                   | 18                         | 123       | 73        | 51       | 48       | 15000 |
| 16,0                   | 18                         | 123       | 73        | 51       | 48       | 16000 |

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| S | ○ |
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| O | ○ |

→ v<sub>c</sub> на стр. 135

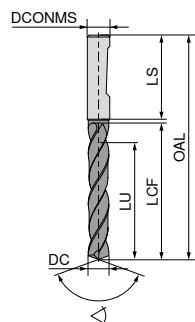
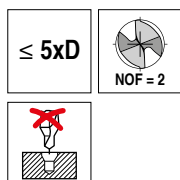
## WTX – Высокопроизводительное сверло, DIN 6537



| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm | Твердый сплав<br>11 783 ... | Твердый сплав<br>11 784 ... | Твердый сплав<br>11 782 ... | Твердый сплав<br>10 730 ... | Твердый сплав<br>10 740 ... | Твердый сплав<br>10 741 ... |
|------------------------|----------------------------|-----------|-----------|----------|----------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 3,00                   | 6                          | 66        | 28        | 23       | 36       | 03000                       | 03000                       | 03000                       | 03000                       | 030                         | 030                         |
| 3,10                   | 6                          | 66        | 28        | 23       | 36       | 03100                       | 03100                       | 03100                       | 03100                       | 031                         | 031                         |
| 3,15                   | 6                          | 66        | 28        | 23       | 36       | 03150                       | 03150                       | 03150                       |                             |                             |                             |
| 3,20                   | 6                          | 66        | 28        | 23       | 36       | 03200                       | 03200                       | 03200                       | 03200                       | 032                         | 032                         |
| 3,22                   | 6                          | 66        | 28        | 23       | 36       | 03220                       | 03220                       | 03220                       |                             |                             |                             |
| 3,25                   | 6                          | 66        | 28        | 23       | 36       | 03250                       | 03250                       | 03250                       |                             |                             |                             |
| 3,30                   | 6                          | 66        | 28        | 23       | 36       | 03300                       | 03300                       | 03300                       | 03300                       | 033                         | 033                         |
| 3,40                   | 6                          | 66        | 28        | 23       | 36       | 03400                       | 03400                       | 03400                       | 03400                       | 034                         | 034                         |
| 3,50                   | 6                          | 66        | 28        | 23       | 36       | 03500                       | 03500                       | 03500                       | 03500                       | 035                         | 035                         |
| 3,60                   | 6                          | 66        | 28        | 23       | 36       | 03600                       | 03600                       | 03600                       | 03600                       | 036                         | 036                         |
| 3,70                   | 6                          | 66        | 28        | 23       | 36       | 03700                       | 03700                       | 03700                       | 03700                       | 037                         | 037                         |
| 3,80                   | 6                          | 74        | 36        | 29       | 36       | 03800                       | 03800                       | 03800                       | 03800                       | 038                         | 038                         |
| 3,85                   | 6                          | 74        | 36        | 29       | 36       | 03850                       | 03850                       | 03850                       |                             |                             |                             |
| 3,90                   | 6                          | 74        | 36        | 29       | 36       | 03900                       | 03900                       | 03900                       | 03900                       | 039                         | 039                         |
| 4,00                   | 6                          | 74        | 36        | 29       | 36       | 04000                       | 04000                       | 04000                       | 04000                       | 040                         | 040                         |
| 4,10                   | 6                          | 74        | 36        | 29       | 36       | 04100                       | 04100                       | 04100                       | 04100                       | 041                         | 041                         |
| 4,20                   | 6                          | 74        | 36        | 29       | 36       | 04200                       | 04200                       | 04200                       | 04200                       | 042                         | 042                         |
| 4,25                   | 6                          | 74        | 36        | 29       | 36       | 04250                       | 04250                       | 04250                       |                             |                             |                             |
| 4,30                   | 6                          | 74        | 36        | 29       | 36       | 04300                       | 04300                       | 04300                       | 04300                       | 043                         | 043                         |
| 4,35                   | 6                          | 74        | 36        | 29       | 36       | 04350                       | 04350                       | 04350                       |                             |                             |                             |
| 4,40                   | 6                          | 74        | 36        | 29       | 36       | 04400                       | 04400                       | 04400                       | 04400                       | 044                         | 044                         |
| 4,45                   | 6                          | 74        | 36        | 29       | 36       | 04450                       | 04450                       | 04450                       |                             |                             |                             |
| 4,50                   | 6                          | 74        | 36        | 29       | 36       | 04500                       | 04500                       | 04500                       | 04500                       | 045                         | 045                         |
| 4,60                   | 6                          | 74        | 36        | 29       | 36       | 04600                       | 04600                       | 04600                       | 04600                       | 046                         | 046                         |
| 4,65                   | 6                          | 74        | 36        | 29       | 36       | 04650                       | 04650                       | 04650                       |                             |                             |                             |
| 4,70                   | 6                          | 74        | 36        | 29       | 36       | 04700                       | 04700                       | 04700                       | 04700                       | 047                         | 047                         |
| 4,80                   | 6                          | 82        | 44        | 35       | 36       | 04800                       | 04800                       | 04800                       | 04800                       | 048                         | 048                         |
| 4,90                   | 6                          | 82        | 44        | 35       | 36       | 04900                       | 04900                       | 04900                       | 04900                       | 049                         | 049                         |
| 4,95                   | 6                          | 82        | 44        | 35       | 36       | 04950                       | 04950                       | 04950                       |                             |                             |                             |
| 5,00                   | 6                          | 82        | 44        | 35       | 36       | 05000                       | 05000                       | 05000                       | 05000                       | 050                         | 050                         |
| 5,05                   | 6                          | 82        | 44        | 35       | 36       | 05050                       | 05050                       | 05050                       |                             |                             |                             |
| 5,10                   | 6                          | 82        | 44        | 35       | 36       | 05100                       | 05100                       | 05100                       | 05100                       | 051                         | 051                         |
| 5,20                   | 6                          | 82        | 44        | 35       | 36       | 05200                       | 05200                       | 05200                       | 05200                       | 052                         | 052                         |
| 5,30                   | 6                          | 82        | 44        | 35       | 36       | 05300                       | 05300                       | 05300                       | 05300                       | 053                         | 053                         |
| 5,40                   | 6                          | 82        | 44        | 35       | 36       | 05400                       | 05400                       | 05400                       | 05400                       | 054                         | 054                         |
| 5,50                   | 6                          | 82        | 44        | 35       | 36       | 05500                       | 05500                       | 05500                       | 05500                       | 055                         | 055                         |
| 5,55                   | 6                          | 82        | 44        | 35       | 36       | 05550                       | 05550                       | 05550                       |                             |                             |                             |
| 5,60                   | 6                          | 82        | 44        | 35       | 36       | 05600                       | 05600                       | 05600                       | 05600                       | 056                         | 056                         |
| 5,70                   | 6                          | 82        | 44        | 35       | 36       | 05700                       | 05700                       | 05700                       | 05700                       | 057                         | 057                         |
| 5,75                   | 6                          | 82        | 44        | 35       | 36       | 05750                       | 05750                       | 05750                       |                             |                             |                             |
| 5,80                   | 6                          | 82        | 44        | 35       | 36       | 05800                       | 05800                       | 05800                       | 05800                       | 058                         | 058                         |
| 5,90                   | 6                          | 82        | 44        | 35       | 36       | 05900                       | 05900                       | 05900                       | 05900                       | 059                         | 059                         |
| 5,95                   | 6                          | 82        | 44        | 35       | 36       | 05950                       | 05950                       | 05950                       |                             |                             |                             |
| P                      |                            |           |           |          |          | ●                           | ●                           | ●                           | ●                           | ○                           | ○                           |
| M                      |                            |           |           |          |          |                             |                             |                             |                             | ●                           | ●                           |
| K                      |                            |           |           |          |          | ●                           | ●                           | ●                           | ●                           | ○                           | ○                           |
| N                      |                            |           |           |          |          |                             |                             |                             |                             | ○                           | ○                           |
| S                      |                            |           |           |          |          |                             |                             |                             |                             | ●                           | ●                           |
| H                      |                            |           |           |          |          | ○                           | ○                           | ○                           | ○                           |                             |                             |
| Q                      |                            |           |           |          |          |                             |                             |                             |                             |                             |                             |

→ v<sub>c</sub> на стр. 113–118

## WTX – Высокопроизводительное сверло, DIN 6537



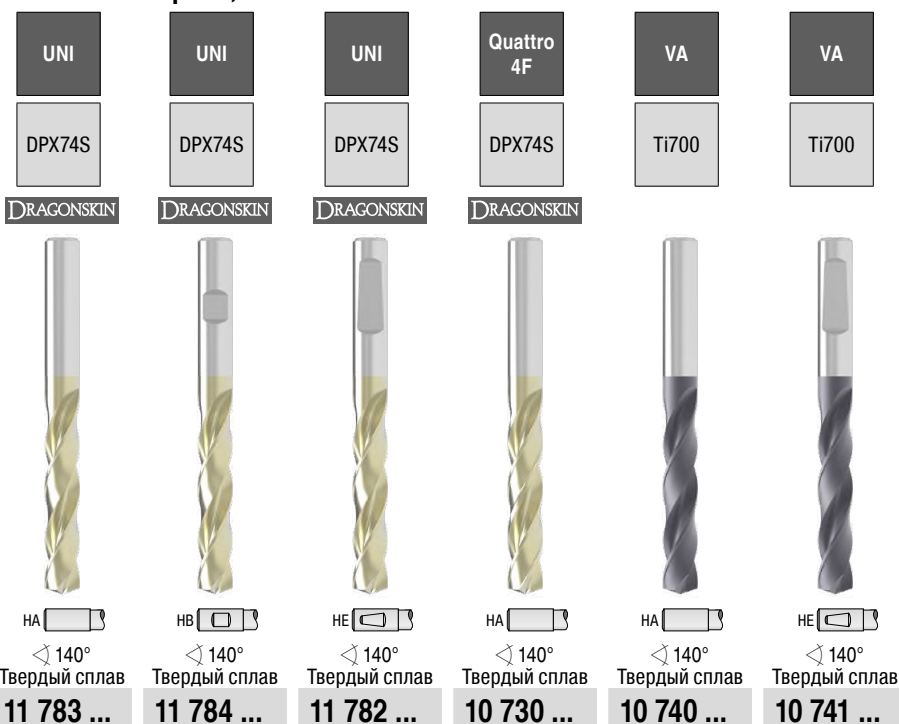
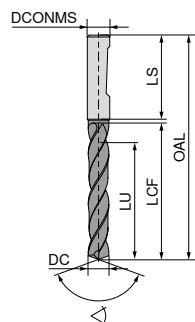
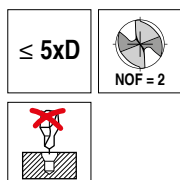
| UNI           | UNI           | UNI           | Quattro 4F    | VA            | VA            |
|---------------|---------------|---------------|---------------|---------------|---------------|
| DPX74S        | DPX74S        | DPX74S        | DPX74S        | Ti700         | Ti700         |
| DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    |               |               |
|               |               |               |               |               |               |
| HA            | HB            | HE            | HA            | HA            | HE            |
| 140°          | 140°          | 140°          | 140°          | 140°          | 140°          |
| Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав |
| 11 783 ...    | 11 784 ...    | 11 782 ...    | 10 730 ...    | 10 740 ...    | 10 741 ...    |

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |       |  |       |  |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|--|-------|--|-------|--|-----|
| 6,00                   | 6                          | 82        | 44        | 35       | 36       |  | 06000 |  | 06000 |  | 060 |
| 6,10                   | 8                          | 91        | 53        | 43       | 36       |  | 06100 |  | 06100 |  | 061 |
| 6,20                   | 8                          | 91        | 53        | 43       | 36       |  | 06200 |  | 06200 |  | 062 |
| 6,30                   | 8                          | 91        | 53        | 43       | 36       |  | 06300 |  | 06300 |  | 063 |
| 6,40                   | 8                          | 91        | 53        | 43       | 36       |  | 06400 |  | 06400 |  | 064 |
| 6,50                   | 8                          | 91        | 53        | 43       | 36       |  | 06500 |  | 06500 |  | 065 |
| 6,60                   | 8                          | 91        | 53        | 43       | 36       |  | 06600 |  | 06600 |  | 066 |
| 6,70                   | 8                          | 91        | 53        | 43       | 36       |  | 06700 |  | 06700 |  | 067 |
| 6,80                   | 8                          | 91        | 53        | 43       | 36       |  | 06800 |  | 06800 |  | 068 |
| 6,90                   | 8                          | 91        | 53        | 43       | 36       |  | 06900 |  | 06900 |  | 069 |
| 7,00                   | 8                          | 91        | 53        | 43       | 36       |  | 07000 |  | 07000 |  | 070 |
| 7,10                   | 8                          | 91        | 53        | 43       | 36       |  | 07100 |  | 07100 |  | 071 |
| 7,20                   | 8                          | 91        | 53        | 43       | 36       |  | 07200 |  | 07200 |  | 072 |
| 7,30                   | 8                          | 91        | 53        | 43       | 36       |  | 07300 |  | 07300 |  | 073 |
| 7,40                   | 8                          | 91        | 53        | 43       | 36       |  | 07400 |  | 07400 |  | 074 |
| 7,45                   | 8                          | 91        | 53        | 43       | 36       |  | 07450 |  | 07450 |  |     |
| 7,50                   | 8                          | 91        | 53        | 43       | 36       |  | 07500 |  | 07500 |  | 075 |
| 7,60                   | 8                          | 91        | 53        | 43       | 36       |  | 07600 |  | 07600 |  | 076 |
| 7,70                   | 8                          | 91        | 53        | 43       | 36       |  | 07700 |  | 07700 |  | 077 |
| 7,80                   | 8                          | 91        | 53        | 43       | 36       |  | 07800 |  | 07800 |  | 078 |
| 7,90                   | 8                          | 91        | 53        | 43       | 36       |  | 07900 |  | 07900 |  | 079 |
| 8,00                   | 8                          | 91        | 53        | 43       | 36       |  | 08000 |  | 08000 |  | 080 |
| 8,10                   | 10                         | 103       | 61        | 49       | 40       |  | 08100 |  | 08100 |  | 081 |
| 8,20                   | 10                         | 103       | 61        | 49       | 40       |  | 08200 |  | 08200 |  | 082 |
| 8,30                   | 10                         | 103       | 61        | 49       | 40       |  | 08300 |  | 08300 |  | 083 |
| 8,40                   | 10                         | 103       | 61        | 49       | 40       |  | 08400 |  | 08400 |  | 084 |
| 8,50                   | 10                         | 103       | 61        | 49       | 40       |  | 08500 |  | 08500 |  | 085 |
| 8,60                   | 10                         | 103       | 61        | 49       | 40       |  | 08600 |  | 08600 |  | 086 |
| 8,70                   | 10                         | 103       | 61        | 49       | 40       |  | 08700 |  | 08700 |  | 087 |
| 8,80                   | 10                         | 103       | 61        | 49       | 40       |  | 08800 |  | 08800 |  | 088 |
| 8,90                   | 10                         | 103       | 61        | 49       | 40       |  | 08900 |  | 08900 |  | 089 |
| 9,00                   | 10                         | 103       | 61        | 49       | 40       |  | 09000 |  | 09000 |  | 090 |
| 9,10                   | 10                         | 103       | 61        | 49       | 40       |  | 09100 |  | 09100 |  | 091 |
| 9,20                   | 10                         | 103       | 61        | 49       | 40       |  | 09200 |  | 09200 |  | 092 |
| 9,30                   | 10                         | 103       | 61        | 49       | 40       |  | 09300 |  | 09300 |  | 093 |
| 9,35                   | 10                         | 103       | 61        | 49       | 40       |  | 09350 |  | 09350 |  |     |
| 9,40                   | 10                         | 103       | 61        | 49       | 40       |  | 09400 |  | 09400 |  | 094 |
| 9,45                   | 10                         | 103       | 61        | 49       | 40       |  | 09450 |  | 09450 |  |     |
| 9,50                   | 10                         | 103       | 61        | 49       | 40       |  | 09500 |  | 09500 |  | 095 |
| 9,60                   | 10                         | 103       | 61        | 49       | 40       |  | 09600 |  | 09600 |  | 096 |
| 9,70                   | 10                         | 103       | 61        | 49       | 40       |  | 09700 |  | 09700 |  | 097 |
| 9,80                   | 10                         | 103       | 61        | 49       | 40       |  | 09800 |  | 09800 |  | 098 |
| 9,90                   | 10                         | 103       | 61        | 49       | 40       |  | 09900 |  | 09900 |  | 099 |

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| P | • | • | • | • | ○ | ○ |
| M |   |   |   |   | • | • |
| K | • | • | • | • | ○ | ○ |
| N |   |   |   |   | ○ | ○ |
| S |   |   |   |   | • | • |
| H | ○ | ○ | ○ | ○ |   |   |
| O |   |   |   |   |   |   |

→ v<sub>c</sub> на стр. 113–118

## WTX – Высокопроизводительное сверло, DIN 6537



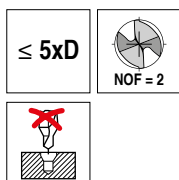
| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm | 11 783 ... | 11 784 ... | 11 782 ... | 10 730 ... | 10 740 ... | 10 741 ... |
|------------------------|----------------------------|-----------|-----------|----------|----------|------------|------------|------------|------------|------------|------------|
| 10,00                  | 10                         | 103       | 61        | 49       | 40       | 10000      | 10000      | 10000      | 10000      | 100        | 100        |
| 10,10                  | 12                         | 118       | 71        | 56       | 45       | 10100      | 10100      | 10100      | 10100      | 101        | 101        |
| 10,20                  | 12                         | 118       | 71        | 56       | 45       | 10200      | 10200      | 10200      | 10200      | 102        | 102        |
| 10,30                  | 12                         | 118       | 71        | 56       | 45       | 10300      | 10300      | 10300      | 10300      | 103        | 103        |
| 10,40                  | 12                         | 118       | 71        | 56       | 45       | 10400      | 10400      | 10400      | 10400      | 104        | 104        |
| 10,50                  | 12                         | 118       | 71        | 56       | 45       | 10500      | 10500      | 10500      | 10500      | 105        | 105        |
| 10,55                  | 12                         | 118       | 71        | 56       | 45       | 10550      | 10550      | 10550      |            |            |            |
| 10,60                  | 12                         | 118       | 71        | 56       | 45       | 10600      | 10600      | 10600      | 10600      | 106        | 106        |
| 10,70                  | 12                         | 118       | 71        | 56       | 45       | 10700      | 10700      | 10700      | 10700      | 107        | 107        |
| 10,75                  | 12                         | 118       | 71        | 56       | 45       | 10750      | 10750      | 10750      |            |            |            |
| 10,80                  | 12                         | 118       | 71        | 56       | 45       | 10800      | 10800      | 10800      | 10800      | 108        | 108        |
| 10,90                  | 12                         | 118       | 71        | 56       | 45       | 10900      | 10900      | 10900      | 10900      | 109        | 109        |
| 11,00                  | 12                         | 118       | 71        | 56       | 45       | 11000      | 11000      | 11000      | 11000      | 110        | 110        |
| 11,10                  | 12                         | 118       | 71        | 56       | 45       | 11100      | 11100      | 11100      | 11100      | 111        | 111        |
| 11,20                  | 12                         | 118       | 71        | 56       | 45       | 11200      | 11200      | 11200      | 11200      | 112        | 112        |
| 11,25                  | 12                         | 118       | 71        | 56       | 45       | 11250      | 11250      | 11250      |            |            |            |
| 11,30                  | 12                         | 118       | 71        | 56       | 45       | 11300      | 11300      | 11300      | 11300      | 113        | 113        |
| 11,35                  | 12                         | 118       | 71        | 56       | 45       | 11350      | 11350      | 11350      |            |            |            |
| 11,40                  | 12                         | 118       | 71        | 56       | 45       | 11400      | 11400      | 11400      | 11400      | 114        | 114        |
| 11,45                  | 12                         | 118       | 71        | 56       | 45       | 11450      | 11450      | 11450      |            |            |            |
| 11,50                  | 12                         | 118       | 71        | 56       | 45       | 11500      | 11500      | 11500      | 11500      | 115        | 115        |
| 11,60                  | 12                         | 118       | 71        | 56       | 45       | 11600      | 11600      | 11600      | 11600      | 116        | 116        |
| 11,70                  | 12                         | 118       | 71        | 56       | 45       | 11700      | 11700      | 11700      | 11700      | 117        | 117        |
| 11,80                  | 12                         | 118       | 71        | 56       | 45       | 11800      | 11800      | 11800      | 11800      | 118        | 118        |
| 11,90                  | 12                         | 118       | 71        | 56       | 45       | 11900      | 11900      | 11900      | 11900      | 119        | 119        |
| 12,00                  | 12                         | 118       | 71        | 56       | 45       | 12000      | 12000      | 12000      | 12000      | 120        | 120        |
| 12,15                  | 14                         | 124       | 77        | 60       | 45       | 12150      | 12150      | 12150      |            |            |            |
| 12,25                  | 14                         | 124       | 77        | 60       | 45       | 12250      | 12250      | 12250      |            |            |            |
| 12,50                  | 14                         | 124       | 77        | 60       | 45       | 12500      | 12500      | 12500      | 12500      | 125        | 125        |
| 12,55                  | 14                         | 124       | 77        | 60       | 45       | 12550      | 12550      | 12550      |            |            |            |
| 12,70                  | 14                         | 124       | 77        | 60       | 45       | 12700      | 12700      | 12700      |            |            |            |
| 12,80                  | 14                         | 124       | 77        | 60       | 45       | 12800      | 12800      | 12800      | 12800      | 128        | 128        |
| 12,90                  | 14                         | 124       | 77        | 60       | 45       | 12900      | 12900      | 12900      |            |            |            |
| 13,00                  | 14                         | 124       | 77        | 60       | 45       | 13000      | 13000      | 13000      | 13000      | 130        | 130        |
| 13,10                  | 14                         | 124       | 77        | 60       | 45       | 13100      | 13100      | 13100      |            |            |            |
| 13,30                  | 14                         | 124       | 77        | 60       | 45       | 13300      | 13300      | 13300      |            |            |            |
| 13,35                  | 14                         | 124       | 77        | 60       | 45       | 13350      | 13350      | 13350      |            |            |            |
| 13,50                  | 14                         | 124       | 77        | 60       | 45       | 13500      | 13500      | 13500      | 13500      | 135        | 135        |
| 13,70                  | 14                         | 124       | 77        | 60       | 45       | 13700      | 13700      | 13700      |            |            |            |
| 13,80                  | 14                         | 124       | 77        | 60       | 45       | 13800      | 13800      | 13800      | 13800      | 138        | 138        |
| 14,00                  | 14                         | 124       | 77        | 60       | 45       | 14000      | 14000      | 14000      | 14000      | 140        | 140        |
| 14,20                  | 16                         | 133       | 83        | 63       | 48       | 14200      | 14200      | 14200      |            |            |            |
| 14,50                  | 16                         | 133       | 83        | 63       | 48       | 14500      | 14500      | 14500      | 14500      | 145        | 145        |

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| P | • | • | • | • | ○ | ○ |
| M |   |   |   |   | • | • |
| K | • | • | • | • | ○ | ○ |
| N |   |   |   |   | ○ | ○ |
| S |   |   |   |   | • | • |
| H | ○ | ○ | ○ | ○ |   |   |
| O |   |   |   |   |   |   |

→ v<sub>c</sub> на стр. 113–118

Продолжение на следующей странице

## WTX – Высокопроизводительное сверло, DIN 6537



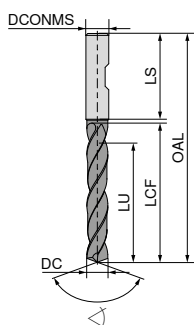
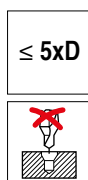
| UNI           | UNI           | UNI           | Quattro 4F    | VA            | VA            |
|---------------|---------------|---------------|---------------|---------------|---------------|
| DPX74S        | DPX74S        | DPX74S        | DPX74S        | Ti700         | Ti700         |
| DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    |               |               |
|               |               |               |               |               |               |
| HA            | HB            | HE            | HA            | HA            | HE            |
| 140°          | 140°          | 140°          | 140°          | 140°          | 140°          |
| Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав |
| 11 783 ...    | 11 784 ...    | 11 782 ...    | 10 730 ...    | 10 740 ...    | 10 741 ...    |

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |       |  |       |  |  |
|------------------------|----------------------------|-----------|-----------|----------|----------|--|-------|--|-------|--|--|
| 14,80                  | 16                         | 133       | 83        | 63       | 48       |  | 14800 |  | 14800 |  |  |
| 15,00                  | 16                         | 133       | 83        | 63       | 48       |  | 15000 |  | 15000 |  |  |
| 15,10                  | 16                         | 133       | 83        | 63       | 48       |  | 15100 |  | 15100 |  |  |
| 15,25                  | 16                         | 133       | 83        | 63       | 48       |  | 15250 |  | 15250 |  |  |
| 15,30                  | 16                         | 133       | 83        | 63       | 48       |  | 15300 |  | 15300 |  |  |
| 15,35                  | 16                         | 133       | 83        | 63       | 48       |  | 15350 |  | 15350 |  |  |
| 15,50                  | 16                         | 133       | 83        | 63       | 48       |  | 15500 |  | 15500 |  |  |
| 15,60                  | 16                         | 133       | 83        | 63       | 48       |  | 15600 |  | 15600 |  |  |
| 15,80                  | 16                         | 133       | 83        | 63       | 48       |  | 15800 |  | 15800 |  |  |
| 16,00                  | 16                         | 133       | 83        | 63       | 48       |  | 16000 |  | 16000 |  |  |
| 16,05                  | 18                         | 143       | 93        | 71       | 48       |  | 16050 |  | 16050 |  |  |
| 16,50                  | 18                         | 143       | 93        | 71       | 48       |  | 16500 |  | 16500 |  |  |
| 16,80                  | 18                         | 143       | 93        | 71       | 48       |  | 16800 |  | 16800 |  |  |
| 16,90                  | 18                         | 143       | 93        | 71       | 48       |  | 16900 |  | 16900 |  |  |
| 17,00                  | 18                         | 143       | 93        | 71       | 48       |  | 17000 |  | 17000 |  |  |
| 17,50                  | 18                         | 143       | 93        | 71       | 48       |  | 17500 |  | 17500 |  |  |
| 17,60                  | 18                         | 143       | 93        | 71       | 48       |  | 17600 |  | 17600 |  |  |
| 17,80                  | 18                         | 143       | 93        | 71       | 48       |  | 17800 |  | 17800 |  |  |
| 18,00                  | 18                         | 143       | 93        | 71       | 48       |  | 18000 |  | 18000 |  |  |
| 18,50                  | 20                         | 153       | 101       | 77       | 50       |  | 18500 |  | 18500 |  |  |
| 18,80                  | 20                         | 153       | 101       | 77       | 50       |  | 18800 |  | 18800 |  |  |
| 18,90                  | 20                         | 153       | 101       | 77       | 50       |  | 18900 |  | 18900 |  |  |
| 19,00                  | 20                         | 153       | 101       | 77       | 50       |  | 19000 |  | 19000 |  |  |
| 19,35                  | 20                         | 153       | 101       | 77       | 50       |  | 19350 |  | 19350 |  |  |
| 19,50                  | 20                         | 153       | 101       | 77       | 50       |  | 19500 |  | 19500 |  |  |
| 19,60                  | 20                         | 153       | 101       | 77       | 50       |  | 19600 |  | 19600 |  |  |
| 19,80                  | 20                         | 153       | 101       | 77       | 50       |  | 19800 |  | 19800 |  |  |
| 20,00                  | 20                         | 153       | 101       | 77       | 50       |  | 20000 |  | 20000 |  |  |

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| P | • | • | • | • | ○ | ○ |
| M |   |   |   |   | • | • |
| K | • | • | • | • | ○ | ○ |
| N |   |   |   |   | ○ | ○ |
| S |   |   |   |   | • | • |
| H | ○ | ○ | ○ | ○ |   |   |
| O |   |   |   |   |   |   |

→ V<sub>c</sub> на стр. 113–118

## WPC – Высокопроизводительное сверло, DIN 6537



140°  
Твердый сплав

140°  
Твердый сплав

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm | 11 606 ... |
|------------------------|----------------------------|-----------|-----------|----------|----------|------------|
| 3,00                   | 6                          | 66        | 28        | 23       | 36       | 030        |
| 3,10                   | 6                          | 66        | 28        | 23       | 36       | 031        |
| 3,20                   | 6                          | 66        | 28        | 23       | 36       | 032        |
| 3,30                   | 6                          | 66        | 28        | 23       | 36       | 033        |
| 3,40                   | 6                          | 66        | 28        | 23       | 36       | 034        |
| 3,50                   | 6                          | 66        | 28        | 23       | 36       | 035        |
| 3,60                   | 6                          | 66        | 28        | 23       | 36       | 036        |
| 3,70                   | 6                          | 66        | 28        | 23       | 36       | 037        |
| 3,80                   | 6                          | 74        | 36        | 29       | 36       | 038        |
| 3,90                   | 6                          | 74        | 36        | 29       | 36       | 039        |
| 4,00                   | 6                          | 74        | 36        | 29       | 36       | 040        |
| 4,10                   | 6                          | 74        | 36        | 29       | 36       | 041        |
| 4,20                   | 6                          | 74        | 36        | 29       | 36       | 042        |
| 4,30                   | 6                          | 74        | 36        | 29       | 36       | 043        |
| 4,40                   | 6                          | 74        | 36        | 29       | 36       | 044        |
| 4,50                   | 6                          | 74        | 36        | 29       | 36       | 045        |
| 4,60                   | 6                          | 74        | 36        | 29       | 36       | 046        |
| 4,65                   | 6                          | 74        | 36        | 29       | 36       | 900        |
| 4,70                   | 6                          | 74        | 36        | 29       | 36       | 047        |
| 4,80                   | 6                          | 82        | 44        | 35       | 36       | 048        |
| 4,90                   | 6                          | 82        | 44        | 35       | 36       | 049        |
| 5,00                   | 6                          | 82        | 44        | 35       | 36       | 050        |
| 5,10                   | 6                          | 82        | 44        | 35       | 36       | 051        |
| 5,20                   | 6                          | 82        | 44        | 35       | 36       | 052        |
| 5,30                   | 6                          | 82        | 44        | 35       | 36       | 053        |
| 5,40                   | 6                          | 82        | 44        | 35       | 36       | 054        |
| 5,50                   | 6                          | 82        | 44        | 35       | 36       | 055        |
| 5,55                   | 6                          | 82        | 44        | 35       | 36       | 902        |
| 5,60                   | 6                          | 82        | 44        | 35       | 36       | 056        |
| 5,70                   | 6                          | 82        | 44        | 35       | 36       | 057        |
| 5,80                   | 6                          | 82        | 44        | 35       | 36       | 058        |
| 5,90                   | 6                          | 82        | 44        | 35       | 36       | 059        |
| 6,00                   | 6                          | 82        | 44        | 35       | 36       | 060        |
| 6,10                   | 8                          | 91        | 53        | 43       | 36       | 061        |
| 6,20                   | 8                          | 91        | 53        | 43       | 36       | 062        |
| 6,30                   | 8                          | 91        | 53        | 43       | 36       | 063        |
| 6,40                   | 8                          | 91        | 53        | 43       | 36       | 064        |
| 6,50                   | 8                          | 91        | 53        | 43       | 36       | 065        |
| 6,60                   | 8                          | 91        | 53        | 43       | 36       | 066        |
| 6,70                   | 8                          | 91        | 53        | 43       | 36       | 067        |
| 6,80                   | 8                          | 91        | 53        | 43       | 36       | 068        |
| 6,90                   | 8                          | 91        | 53        | 43       | 36       | 069        |
| 7,00                   | 8                          | 91        | 53        | 43       | 36       | 070        |
| 7,10                   | 8                          | 91        | 53        | 43       | 36       | 071        |
| 7,20                   | 8                          | 91        | 53        | 43       | 36       | 072        |
| 7,30                   | 8                          | 91        | 53        | 43       | 36       | 073        |
| 7,40                   | 8                          | 91        | 53        | 43       | 36       | 074        |
| 7,50                   | 8                          | 91        | 53        | 43       | 36       | 075        |
| 7,55                   | 8                          | 91        | 53        | 43       | 36       | 975        |
| 7,60                   | 8                          | 91        | 53        | 43       | 36       | 076        |
| 7,70                   | 8                          | 91        | 53        | 43       | 36       | 077        |
| 7,80                   | 8                          | 91        | 53        | 43       | 36       | 078        |
| 7,90                   | 8                          | 91        | 53        | 43       | 36       | 079        |
| 8,00                   | 8                          | 91        | 53        | 43       | 36       | 080        |
| 8,10                   | 10                         | 103       | 61        | 49       | 40       | 081        |
| 8,20                   | 10                         | 103       | 61        | 49       | 40       | 082        |
| 8,30                   | 10                         | 103       | 61        | 49       | 40       | 083        |
| 8,40                   | 10                         | 103       | 61        | 49       | 40       | 084        |
| 8,50                   | 10                         | 103       | 61        | 49       | 40       | 085        |

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm | 11 606 ... | 11 607 ... |
|------------------------|----------------------------|-----------|-----------|----------|----------|------------|------------|
| 8,60                   | 10                         | 103       | 61        | 49       | 40       | 086        | 086        |
| 8,70                   | 10                         | 103       | 61        | 49       | 40       | 087        | 087        |
| 8,80                   | 10                         | 103       | 61        | 49       | 40       | 088        | 088        |
| 8,90                   | 10                         | 103       | 61        | 49       | 40       | 089        | 089        |
| 9,00                   | 10                         | 103       | 61        | 49       | 40       | 090        | 090        |
| 9,10                   | 10                         | 103       | 61        | 49       | 40       | 091        | 091        |
| 9,20                   | 10                         | 103       | 61        | 49       | 40       | 092        | 092        |
| 9,25                   | 10                         | 103       | 61        | 49       | 40       | 925        | 925        |
| 9,30                   | 10                         | 103       | 61        | 49       | 40       | 093        | 093        |
| 9,40                   | 10                         | 103       | 61        | 49       | 40       | 094        | 094        |
| 9,50                   | 10                         | 103       | 61        | 49       | 40       | 095        | 095        |
| 9,60                   | 10                         | 103       | 61        | 49       | 40       | 096        | 096        |
| 9,70                   | 10                         | 103       | 61        | 49       | 40       | 097        | 097        |
| 9,80                   | 10                         | 103       | 61        | 49       | 40       | 098        | 098        |
| 9,90                   | 10                         | 103       | 61        | 49       | 40       | 099        | 099        |
| 10,00                  | 10                         | 103       | 61        | 49       | 40       | 100        | 100        |
| 10,10                  | 12                         | 118       | 71        | 56       | 45       | 101        | 101        |
| 10,20                  | 12                         | 118       | 71        | 56       | 45       | 102        | 102        |
| 10,30                  | 12                         | 118       | 71        | 56       | 45       | 103        | 103        |
| 10,40                  | 12                         | 118       | 71        | 56       | 45       | 104        | 104        |
| 10,50                  | 12                         | 118       | 71        | 56       | 45       | 105        | 105        |
| 10,60                  | 12                         | 118       | 71        | 56       | 45       | 106        | 106        |
| 10,70                  | 12                         | 118       | 71        | 56       | 45       | 107        | 107        |
| 10,80                  | 12                         | 118       | 71        | 56       | 45       | 108        | 108        |
| 10,90                  | 12                         | 118       | 71        | 56       | 45       | 109        | 109        |
| 11,00                  | 12                         | 118       | 71        | 56       | 45       | 110        | 110        |
| 11,10                  | 12                         | 118       | 71        | 56       | 45       | 111        | 111        |
| 11,20                  | 12                         | 118       | 71        | 56       | 45       | 112        | 112        |
| 11,30                  | 12                         | 118       | 71        | 56       | 45       | 113        | 113        |
| 11,40                  | 12                         | 118       | 71        | 56       | 45       | 114        | 114        |
| 11,50                  | 12                         | 118       | 71        | 56       | 45       | 115        | 115        |
| 11,60                  | 12                         | 118       | 71        | 56       | 45       | 116        | 116        |
| 11,70                  | 12                         | 118       | 71        | 56       | 45       | 117        | 117        |
| 11,80                  | 12                         | 118       | 71        | 56       | 45       | 118        | 118        |
| 11,90                  | 12                         | 118       | 71        | 56       | 45       | 119        | 119        |
| 12,00                  | 12                         | 118       | 71        | 56       | 45       | 120        | 120        |
| 12,25                  | 14                         | 124       | 77        | 60       | 45       | 122        | 122        |
| 12,50                  | 14                         | 124       | 77        | 60       | 45       | 125        | 125        |
| 12,70                  | 14                         | 124       | 77        | 60       | 45       | 127        | 127        |
| 12,80                  | 14                         | 124       | 77        | 60       | 45       | 128        | 128        |
| 12,90                  | 14                         | 124       | 77        | 60       | 45       | 129        | 129        |
| 13,00                  | 14                         | 124       | 77        | 60       | 45       | 130        | 130        |
| 13,30                  | 14                         | 124       | 77        | 60       | 45       | 133        | 133        |
| 13,50                  | 14                         | 124       | 77        | 60       | 45       | 135        | 135        |
| 13,70                  | 14                         | 124       | 77        | 60       | 45       | 137        | 137        |
| 13,80                  | 14                         | 124       | 77        | 60       | 45       | 138        | 138        |
| 14,00                  | 14                         | 124       | 77        | 60       | 45       | 140        | 140        |
| 14,20                  | 16                         | 133       | 83        | 63       | 48       | 142        | 142        |
| 14,50                  | 16                         | 133       | 83        | 63       | 48       | 145        | 145        |
| 14,70                  | 16                         | 133       | 83        | 63       | 48       | 147        | 147        |
| 14,80                  | 16                         | 133       | 83        | 63       | 48       | 148        | 148        |
| 15,00                  | 16                         | 133       | 83        | 63       | 48       | 150        | 150        |
| 15,25                  | 16                         | 133       | 83        | 63       | 48       | 152        | 152        |
| 15,30                  | 16                         | 133       | 83        | 63       | 48       | 153        | 153        |
| 15,50                  | 16                         | 133       | 83        | 63       | 48       | 155        | 155        |
| 15,70                  | 16                         | 133       | 83        | 63       | 48       | 157        | 157        |
| 15,80                  | 16                         | 133       | 83        | 63       | 48       | 158        | 158        |
| 16,00                  | 16                         | 133       | 83        | 63       | 48       | 160        | 160        |
| 16,50                  | 18                         | 143       | 93        | 71       | 48       | 165        | 165        |
| 16,80                  | 18                         | 143       | 93        | 71       | 48       | 168        | 168        |
| 17,00                  | 18                         | 143       | 93        | 71       | 48       | 170        | 170        |
| 17,50                  | 18                         | 143       | 93        | 71       | 48       | 175        | 175        |
| 17,80                  | 18                         | 143       | 93        | 71       | 48       | 178        | 178        |
| 18,00                  | 18                         | 143       | 93        | 71       | 48       | 180        | 180        |
| 18,50                  | 20                         | 153       | 101       | 77       | 50       | 185        | 185        |
| 18,80                  | 20                         | 153       | 101       | 77       | 50       | 188        | 188        |
| 19,00                  | 20                         | 153       | 101       | 77       | 50       | 190        | 190        |
| 19,50                  | 20                         | 153       | 101       | 77       | 50       | 195        | 195        |
| 19,80                  | 20                         | 153       | 101       | 77       | 50       | 198        | 198        |
| 20,00                  | 20                         | 153       | 101       | 77       | 50       | 200        | 200        |

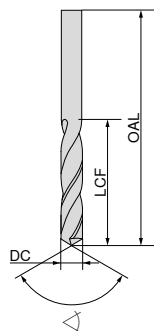
|   |   |   |
|---|---|---|
| P | • | • |
| M |   |   |
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| S |   |   |
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| O |   |   |

→ v<sub>c</sub> на стр. 131

## Спиральное сверло, по DIN 338

▲ передний угол 30°

▲ диаметр хвостовика h7



118°  
Твердый сплав

10 710 ...

| DC <sub>h7</sub><br>mm | OAL<br>mm | LCF<br>mm |     |
|------------------------|-----------|-----------|-----|
| 0,5                    | 22        | 6         | 005 |
| 0,6                    | 24        | 7         | 006 |
| 0,7                    | 28        | 9         | 007 |
| 0,8                    | 30        | 10        | 008 |
| 0,9                    | 32        | 11        | 009 |
| 1,0                    | 34        | 12        | 010 |
| 1,1                    | 36        | 14        | 011 |
| 1,2                    | 38        | 16        | 012 |
| 1,3                    | 38        | 16        | 013 |
| 1,4                    | 40        | 18        | 014 |
| 1,5                    | 40        | 18        | 015 |
| 1,6                    | 43        | 20        | 016 |
| 1,7                    | 43        | 20        | 017 |
| 1,8                    | 46        | 22        | 018 |
| 1,9                    | 46        | 22        | 019 |
| 2,0                    | 49        | 24        | 020 |
| 2,1                    | 49        | 24        | 021 |
| 2,2                    | 53        | 27        | 022 |
| 2,3                    | 53        | 27        | 023 |
| 2,4                    | 57        | 30        | 024 |
| 2,5                    | 57        | 30        | 025 |
| 2,6                    | 57        | 30        | 026 |
| 2,7                    | 61        | 33        | 027 |
| 2,8                    | 61        | 33        | 028 |
| 2,9                    | 61        | 33        | 029 |
| 3,0                    | 61        | 33        | 030 |
| 3,1                    | 65        | 36        | 031 |
| 3,2                    | 65        | 36        | 032 |
| 3,3                    | 65        | 36        | 033 |
| 3,4                    | 70        | 39        | 034 |
| 3,5                    | 70        | 39        | 035 |
| 3,6                    | 70        | 39        | 036 |
| 3,7                    | 70        | 39        | 037 |
| 3,8                    | 75        | 43        | 038 |
| 3,9                    | 75        | 43        | 039 |
| 4,0                    | 75        | 43        | 040 |
| 4,1                    | 75        | 43        | 041 |
| 4,2                    | 75        | 43        | 042 |
| 4,3                    | 80        | 47        | 043 |
| 4,4                    | 80        | 47        | 044 |
| 4,5                    | 80        | 47        | 045 |
| 4,6                    | 80        | 47        | 046 |
| 4,7                    | 80        | 47        | 047 |
| 4,8                    | 86        | 52        | 048 |
| 4,9                    | 86        | 52        | 049 |
| 5,0                    | 86        | 52        | 050 |
| 5,1                    | 86        | 52        | 051 |
| 5,2                    | 86        | 52        | 052 |
| 5,3                    | 86        | 52        | 053 |

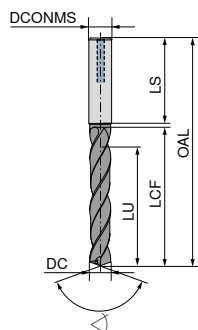
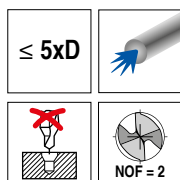
10 710 ...

| DC <sub>h7</sub><br>mm | OAL<br>mm | LCF<br>mm |     |
|------------------------|-----------|-----------|-----|
| 5,4                    | 93        | 57        | 054 |
| 5,5                    | 93        | 57        | 055 |
| 5,6                    | 93        | 57        | 056 |
| 5,7                    | 93        | 57        | 057 |
| 5,8                    | 93        | 57        | 058 |
| 5,9                    | 93        | 57        | 059 |
| 6,0                    | 93        | 57        | 060 |
| 6,1                    | 101       | 63        | 061 |
| 6,2                    | 101       | 63        | 062 |
| 6,3                    | 101       | 63        | 063 |
| 6,4                    | 101       | 63        | 064 |
| 6,5                    | 101       | 63        | 065 |
| 6,6                    | 109       | 69        | 066 |
| 6,8                    | 109       | 69        | 068 |
| 7,0                    | 109       | 69        | 070 |
| 7,5                    | 109       | 69        | 075 |
| 7,8                    | 117       | 75        | 078 |
| 8,0                    | 117       | 75        | 080 |
| 8,5                    | 117       | 75        | 085 |
| 8,8                    | 125       | 81        | 088 |
| 9,0                    | 125       | 81        | 090 |
| 9,5                    | 125       | 81        | 095 |
| 9,8                    | 133       | 87        | 098 |
| 10,0                   | 133       | 87        | 100 |
| 10,2                   | 133       | 87        | 102 |
| 10,5                   | 133       | 87        | 105 |
| 11,0                   | 142       | 94        | 110 |
| 11,5                   | 142       | 94        | 115 |
| 12,0                   | 151       | 101       | 120 |
| 13,0                   | 151       | 101       | 130 |
| 14,0                   | 160       | 108       | 140 |
| 16,0                   | 178       | 120       | 160 |

|   |   |
|---|---|
| P | ○ |
| M | ○ |
| K | ● |
| N | ● |
| S | ○ |
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| O | ○ |

→ v<sub>c</sub> на стр. 129

## WTX – Высокопроизводительное сверло, DIN 6537



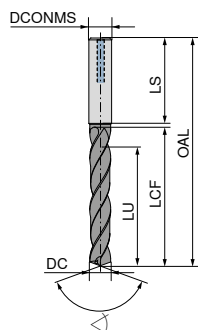
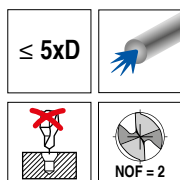
| Speed<br>UNI  | UNI           | UNI           | UNI           | Quattro<br>4F |
|---------------|---------------|---------------|---------------|---------------|
| DPX14S        | DPX74S        | DPX74S        | DPX74S        | DPX74S        |
| DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    |
|               |               |               |               |               |
| HA            | HA            | HB            | HE            | HA            |
| 145°          | 140°          | 140°          | 140°          | 140°          |
| Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав |
| 10 771 ...    | 11 786 ...    | 11 787 ...    | 11 785 ...    | 10 735 ...    |

| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |       |       |       |       |
|---------------------------|----------------------------|-----------|-----------|----------|----------|--|-------|-------|-------|-------|
| 3,00                      | 6                          | 66        | 28        | 23       | 36       |  | 03000 |       | 03000 | 03000 |
| 3,10                      | 6                          | 66        | 28        | 23       | 36       |  | 03100 |       | 03100 | 03100 |
| 3,15                      | 6                          | 66        | 28        | 23       | 36       |  |       | 03150 | 03150 |       |
| 3,20                      | 6                          | 66        | 28        | 23       | 36       |  | 03200 |       | 03200 | 03200 |
| 3,22                      | 6                          | 66        | 28        | 23       | 36       |  |       | 03220 | 03220 |       |
| 3,25                      | 6                          | 66        | 28        | 23       | 36       |  |       | 03250 | 03250 |       |
| 3,30                      | 6                          | 66        | 28        | 23       | 36       |  | 03300 |       | 03300 | 03300 |
| 3,40                      | 6                          | 66        | 28        | 23       | 36       |  | 03400 |       | 03400 | 03400 |
| 3,50                      | 6                          | 66        | 28        | 23       | 36       |  | 03500 |       | 03500 | 03500 |
| 3,60                      | 6                          | 66        | 28        | 23       | 36       |  | 03600 |       | 03600 | 03600 |
| 3,70                      | 6                          | 66        | 28        | 23       | 36       |  | 03700 |       | 03700 | 03700 |
| 3,80                      | 6                          | 74        | 36        | 29       | 36       |  | 03800 |       | 03800 | 03800 |
| 3,85                      | 6                          | 74        | 36        | 29       | 36       |  |       | 03850 | 03850 |       |
| 3,90                      | 6                          | 74        | 36        | 29       | 36       |  | 03900 |       | 03900 | 03900 |
| 4,00                      | 6                          | 74        | 36        | 29       | 36       |  | 04000 |       | 04000 | 04000 |
| 4,10                      | 6                          | 74        | 36        | 29       | 36       |  | 04100 |       | 04100 | 04100 |
| 4,20                      | 6                          | 74        | 36        | 29       | 36       |  | 04200 |       | 04200 | 04200 |
| 4,25                      | 6                          | 74        | 36        | 29       | 36       |  |       | 04250 | 04250 |       |
| 4,30                      | 6                          | 74        | 36        | 29       | 36       |  | 04300 |       | 04300 | 04300 |
| 4,35                      | 6                          | 74        | 36        | 29       | 36       |  |       | 04350 | 04350 |       |
| 4,40                      | 6                          | 74        | 36        | 29       | 36       |  | 04400 |       | 04400 | 04400 |
| 4,45                      | 6                          | 74        | 36        | 29       | 36       |  |       | 04450 | 04450 |       |
| 4,50                      | 6                          | 74        | 36        | 29       | 36       |  | 04500 |       | 04500 | 04500 |
| 4,60                      | 6                          | 74        | 36        | 29       | 36       |  | 04600 |       | 04600 | 04600 |
| 4,65                      | 6                          | 74        | 36        | 29       | 36       |  | 04650 |       | 04650 |       |
| 4,70                      | 6                          | 74        | 36        | 29       | 36       |  | 04700 |       | 04700 | 04700 |
| 4,80                      | 6                          | 82        | 44        | 35       | 36       |  | 04800 |       | 04800 | 04800 |
| 4,90                      | 6                          | 82        | 44        | 35       | 36       |  | 04900 |       | 04900 | 04900 |
| 4,95                      | 6                          | 82        | 44        | 35       | 36       |  |       | 04950 | 04950 |       |
| 5,00                      | 6                          | 82        | 44        | 35       | 36       |  | 05000 |       | 05000 | 05000 |
| 5,05                      | 6                          | 82        | 44        | 35       | 36       |  |       | 05050 | 05050 |       |
| 5,10                      | 6                          | 82        | 44        | 35       | 36       |  | 05100 |       | 05100 | 05100 |
| 5,20                      | 6                          | 82        | 44        | 35       | 36       |  | 05200 |       | 05200 | 05200 |
| 5,30                      | 6                          | 82        | 44        | 35       | 36       |  | 05300 |       | 05300 | 05300 |
| 5,40                      | 6                          | 82        | 44        | 35       | 36       |  | 05400 |       | 05400 | 05400 |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | • | • | • | • | • |
| M | • |   |   |   |   |
| K | • | • | • | • | • |
| N |   |   |   |   |   |
| S |   |   |   |   |   |
| H |   | ○ | ○ | ○ | ○ |
| O |   |   |   |   |   |

→ v<sub>c</sub> на стр. 108-118

## WTX – Высокопроизводительное сверло, DIN 6537



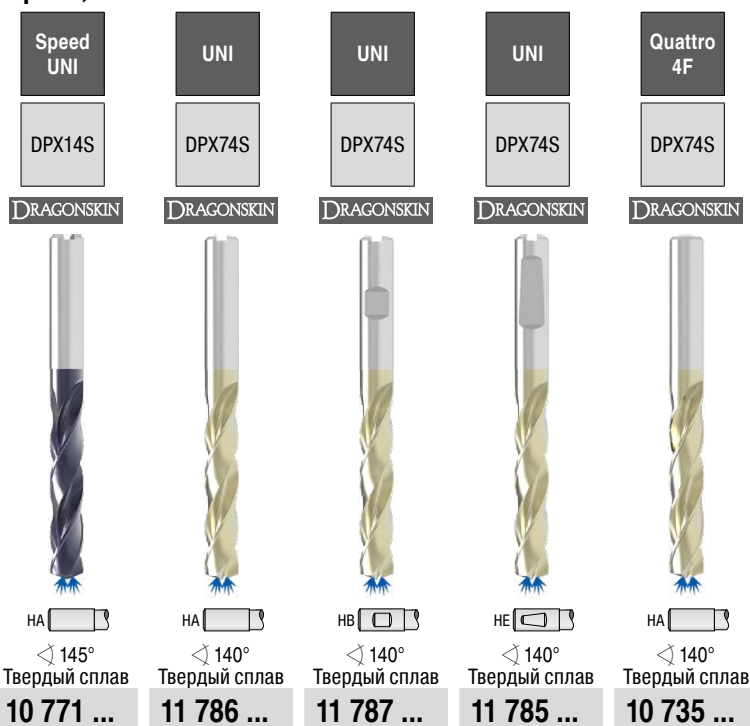
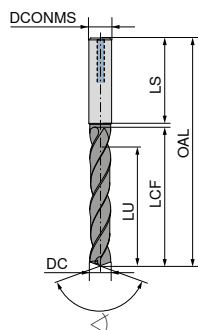
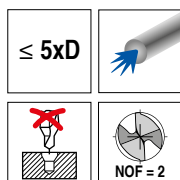
| Speed<br>UNI  | UNI           | UNI           | UNI           | Quattro<br>4F |
|---------------|---------------|---------------|---------------|---------------|
| DPX14S        | DPX74S        | DPX74S        | DPX74S        | DPX74S        |
| DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    | DRAGONSKIN    |
|               |               |               |               |               |
| HA            | HA            | HB            | HE            | HA            |
| 145°          | 140°          | 140°          | 140°          | 140°          |
| Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав | Твердый сплав |
| 10 771 ...    | 11 786 ...    | 11 787 ...    | 11 785 ...    | 10 735 ...    |

| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |       |       |       |       |
|---------------------------|----------------------------|-----------|-----------|----------|----------|--|-------|-------|-------|-------|
| 5,50                      | 6                          | 82        | 44        | 35       | 36       |  | 05500 | 05500 | 05500 | 05500 |
| 5,55                      | 6                          | 82        | 44        | 35       | 36       |  | 05550 | 05550 | 05550 |       |
| 5,60                      | 6                          | 82        | 44        | 35       | 36       |  | 05600 | 05600 | 05600 | 05600 |
| 5,70                      | 6                          | 82        | 44        | 35       | 36       |  | 05700 | 05700 | 05700 | 05700 |
| 5,75                      | 6                          | 82        | 44        | 35       | 36       |  |       | 05750 | 05750 |       |
| 5,80                      | 6                          | 82        | 44        | 35       | 36       |  | 05800 | 05800 | 05800 | 05800 |
| 5,90                      | 6                          | 82        | 44        | 35       | 36       |  | 05900 | 05900 | 05900 | 05900 |
| 5,95                      | 6                          | 82        | 44        | 35       | 36       |  |       | 05950 | 05950 |       |
| 6,00                      | 6                          | 82        | 44        | 35       | 36       |  | 06000 | 06000 | 06000 | 06000 |
| 6,10                      | 8                          | 91        | 53        | 43       | 36       |  | 06100 | 06100 | 06100 | 06100 |
| 6,20                      | 8                          | 91        | 53        | 43       | 36       |  | 06200 | 06200 | 06200 | 06200 |
| 6,30                      | 8                          | 91        | 53        | 43       | 36       |  | 06300 | 06300 | 06300 | 06300 |
| 6,40                      | 8                          | 91        | 53        | 43       | 36       |  | 06400 | 06400 | 06400 | 06400 |
| 6,50                      | 8                          | 91        | 53        | 43       | 36       |  | 06500 | 06500 | 06500 | 06500 |
| 6,60                      | 8                          | 91        | 53        | 43       | 36       |  | 06600 | 06600 | 06600 | 06600 |
| 6,70                      | 8                          | 91        | 53        | 43       | 36       |  | 06700 | 06700 | 06700 | 06700 |
| 6,80                      | 8                          | 91        | 53        | 43       | 36       |  | 06800 | 06800 | 06800 | 06800 |
| 6,90                      | 8                          | 91        | 53        | 43       | 36       |  | 06900 | 06900 | 06900 | 06900 |
| 7,00                      | 8                          | 91        | 53        | 43       | 36       |  | 07000 | 07000 | 07000 | 07000 |
| 7,10                      | 8                          | 91        | 53        | 43       | 36       |  | 07100 | 07100 | 07100 | 07100 |
| 7,20                      | 8                          | 91        | 53        | 43       | 36       |  | 07200 | 07200 | 07200 | 07200 |
| 7,30                      | 8                          | 91        | 53        | 43       | 36       |  | 07300 | 07300 | 07300 | 07300 |
| 7,40                      | 8                          | 91        | 53        | 43       | 36       |  | 07400 | 07400 | 07400 | 07400 |
| 7,45                      | 8                          | 91        | 53        | 43       | 36       |  |       | 07450 | 07450 |       |
| 7,50                      | 8                          | 91        | 53        | 43       | 36       |  | 07500 | 07500 | 07500 | 07500 |
| 7,60                      | 8                          | 91        | 53        | 43       | 36       |  | 07600 | 07600 | 07600 | 07600 |
| 7,70                      | 8                          | 91        | 53        | 43       | 36       |  | 07700 | 07700 | 07700 | 07700 |
| 7,80                      | 8                          | 91        | 53        | 43       | 36       |  | 07800 | 07800 | 07800 | 07800 |
| 7,90                      | 8                          | 91        | 53        | 43       | 36       |  | 07900 | 07900 | 07900 | 07900 |
| 8,00                      | 8                          | 91        | 53        | 43       | 36       |  | 08000 | 08000 | 08000 | 08000 |
| 8,10                      | 10                         | 103       | 61        | 49       | 40       |  | 08100 | 08100 | 08100 | 08100 |
| 8,20                      | 10                         | 103       | 61        | 49       | 40       |  | 08200 | 08200 | 08200 | 08200 |
| 8,30                      | 10                         | 103       | 61        | 49       | 40       |  | 08300 | 08300 | 08300 | 08300 |
| 8,40                      | 10                         | 103       | 61        | 49       | 40       |  | 08400 | 08400 | 08400 | 08400 |
| 8,50                      | 10                         | 103       | 61        | 49       | 40       |  | 08500 | 08500 | 08500 | 08500 |

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| N |   |   |   |   |   |
| S |   |   |   |   |   |
| H |   | ○ | ○ | ○ | ○ |
| O |   |   |   |   |   |

→ v<sub>c</sub> на стр. 108-118Ø DC<sub>m7</sub> для типа UNI и Quattro 4F/ Ø DC<sub>h7</sub> для типа Speed UNI

## WTX – Высокопроизводительное сверло, DIN 6537

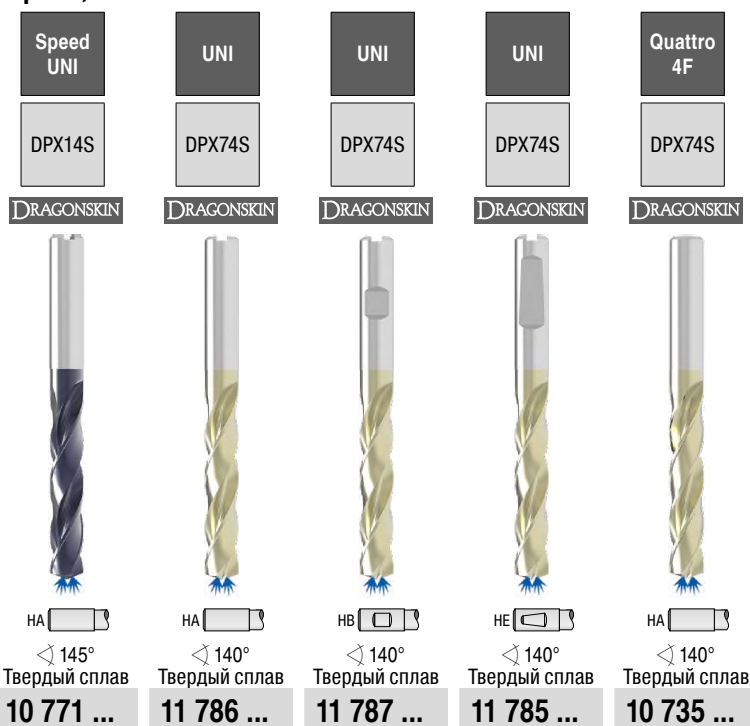
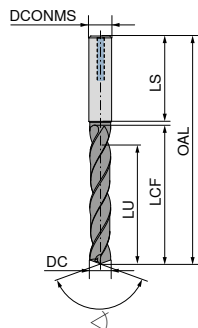
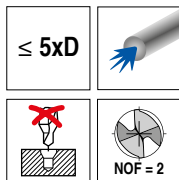


| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |       |       |       |       |
|---------------------------|----------------------------|-----------|-----------|----------|----------|--|-------|-------|-------|-------|
| 8,60                      | 10                         | 103       | 61        | 49       | 40       |  | 08600 | 08600 | 08600 | 08600 |
| 8,70                      | 10                         | 103       | 61        | 49       | 40       |  | 08700 | 08700 | 08700 | 08700 |
| 8,80                      | 10                         | 103       | 61        | 49       | 40       |  | 08800 | 08800 | 08800 | 08800 |
| 8,90                      | 10                         | 103       | 61        | 49       | 40       |  | 08900 | 08900 | 08900 | 08900 |
| 9,00                      | 10                         | 103       | 61        | 49       | 40       |  | 09000 | 09000 | 09000 | 09000 |
| 9,10                      | 10                         | 103       | 61        | 49       | 40       |  | 09100 | 09100 | 09100 | 09100 |
| 9,20                      | 10                         | 103       | 61        | 49       | 40       |  | 09200 | 09200 | 09200 | 09200 |
| 9,30                      | 10                         | 103       | 61        | 49       | 40       |  | 09300 | 09300 | 09300 | 09300 |
| 9,35                      | 10                         | 103       | 61        | 49       | 40       |  |       | 09350 | 09350 |       |
| 9,40                      | 10                         | 103       | 61        | 49       | 40       |  | 09400 | 09400 | 09400 | 09400 |
| 9,45                      | 10                         | 103       | 61        | 49       | 40       |  |       | 09450 | 09450 |       |
| 9,50                      | 10                         | 103       | 61        | 49       | 40       |  | 09500 | 09500 | 09500 | 09500 |
| 9,60                      | 10                         | 103       | 61        | 49       | 40       |  | 09600 | 09600 | 09600 | 09600 |
| 9,70                      | 10                         | 103       | 61        | 49       | 40       |  | 09700 | 09700 | 09700 | 09700 |
| 9,80                      | 10                         | 103       | 61        | 49       | 40       |  | 09800 | 09800 | 09800 | 09800 |
| 9,90                      | 10                         | 103       | 61        | 49       | 40       |  | 09900 | 09900 | 09900 | 09900 |
| 10,00                     | 10                         | 103       | 61        | 49       | 40       |  | 10000 | 10000 | 10000 | 10000 |
| 10,10                     | 12                         | 118       | 71        | 56       | 45       |  | 10100 | 10100 | 10100 | 10100 |
| 10,20                     | 12                         | 118       | 71        | 56       | 45       |  | 10200 | 10200 | 10200 | 10200 |
| 10,30                     | 12                         | 118       | 71        | 56       | 45       |  | 10300 | 10300 | 10300 | 10300 |
| 10,40                     | 12                         | 118       | 71        | 56       | 45       |  | 10400 | 10400 | 10400 | 10400 |
| 10,50                     | 12                         | 118       | 71        | 56       | 45       |  | 10500 | 10500 | 10500 | 10500 |
| 10,55                     | 12                         | 118       | 71        | 56       | 45       |  |       | 10550 | 10550 |       |
| 10,60                     | 12                         | 118       | 71        | 56       | 45       |  | 10600 | 10600 | 10600 | 10600 |
| 10,70                     | 12                         | 118       | 71        | 56       | 45       |  | 10700 | 10700 | 10700 | 10700 |
| 10,75                     | 12                         | 118       | 71        | 56       | 45       |  |       | 10750 | 10750 |       |
| 10,80                     | 12                         | 118       | 71        | 56       | 45       |  | 10800 | 10800 | 10800 | 10800 |
| 10,90                     | 12                         | 118       | 71        | 56       | 45       |  | 10900 | 10900 | 10900 | 10900 |
| 11,00                     | 12                         | 118       | 71        | 56       | 45       |  | 11000 | 11000 | 11000 | 11000 |
| 11,10                     | 12                         | 118       | 71        | 56       | 45       |  | 11100 | 11100 | 11100 | 11100 |
| 11,20                     | 12                         | 118       | 71        | 56       | 45       |  | 11200 | 11200 | 11200 | 11200 |
| 11,25                     | 12                         | 118       | 71        | 56       | 45       |  |       | 11250 | 11250 |       |
| 11,30                     | 12                         | 118       | 71        | 56       | 45       |  | 11300 | 11300 | 11300 | 11300 |
| 11,35                     | 12                         | 118       | 71        | 56       | 45       |  |       | 11350 | 11350 |       |
| 11,40                     | 12                         | 118       | 71        | 56       | 45       |  | 11400 | 11400 | 11400 | 11400 |

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| O |   |   |   |   |   |

→ v<sub>c</sub> на стр. 108–118

## WTX – Высокопроизводительное сверло, DIN 6537

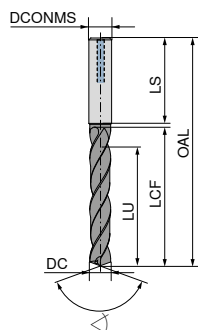
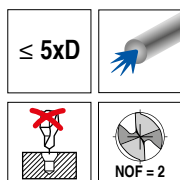


| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  | 10 771 ... | 11 786 ... | 11 787 ... | 11 785 ... | 10 735 ... |
|---------------------------|----------------------------|-----------|-----------|----------|----------|--|------------|------------|------------|------------|------------|
| 11,45                     | 12                         | 118       | 71        | 56       | 45       |  |            | 11450      | 11450      | 11450      |            |
| 11,50                     | 12                         | 118       | 71        | 56       | 45       |  | 11500      | 11500      | 11500      | 11500      | 11500      |
| 11,60                     | 12                         | 118       | 71        | 56       | 45       |  | 11600      | 11600      | 11600      | 11600      | 11600      |
| 11,70                     | 12                         | 118       | 71        | 56       | 45       |  | 11700      | 11700      | 11700      | 11700      | 11700      |
| 11,80                     | 12                         | 118       | 71        | 56       | 45       |  | 11800      | 11800      | 11800      | 11800      | 11800      |
| 11,90                     | 12                         | 118       | 71        | 56       | 45       |  | 11900      | 11900      | 11900      | 11900      | 11900      |
| 12,00                     | 12                         | 118       | 71        | 56       | 45       |  | 12000      | 12000      | 12000      | 12000      | 12000      |
| 12,15                     | 14                         | 124       | 77        | 60       | 45       |  |            | 12150      | 12150      | 12150      |            |
| 12,20                     | 14                         | 124       | 77        | 60       | 45       |  | 12200      |            |            |            |            |
| 12,25                     | 14                         | 124       | 77        | 60       | 45       |  |            | 12250      | 12250      | 12250      |            |
| 12,50                     | 14                         | 124       | 77        | 60       | 45       |  | 12500      | 12500      | 12500      | 12500      | 12500      |
| 12,55                     | 14                         | 124       | 77        | 60       | 45       |  |            | 12550      | 12550      | 12550      |            |
| 12,70                     | 14                         | 124       | 77        | 60       | 45       |  |            | 12700      | 12700      | 12700      |            |
| 12,80                     | 14                         | 124       | 77        | 60       | 45       |  | 12800      | 12800      | 12800      | 12800      | 12800      |
| 12,90                     | 14                         | 124       | 77        | 60       | 45       |  |            | 12900      | 12900      | 12900      |            |
| 13,00                     | 14                         | 124       | 77        | 60       | 45       |  | 13000      | 13000      | 13000      | 13000      | 13000      |
| 13,10                     | 14                         | 124       | 77        | 60       | 45       |  |            | 13100      | 13100      | 13100      |            |
| 13,30                     | 14                         | 124       | 77        | 60       | 45       |  |            | 13300      | 13300      | 13300      |            |
| 13,35                     | 14                         | 124       | 77        | 60       | 45       |  |            | 13350      | 13350      | 13350      |            |
| 13,50                     | 14                         | 124       | 77        | 60       | 45       |  | 13500      | 13500      | 13500      | 13500      | 13500      |
| 13,70                     | 14                         | 124       | 77        | 60       | 45       |  |            | 13700      | 13700      | 13700      |            |
| 13,80                     | 14                         | 124       | 77        | 60       | 45       |  | 13800      | 13800      | 13800      | 13800      | 13800      |
| 14,00                     | 14                         | 124       | 77        | 60       | 45       |  | 14000      | 14000      | 14000      | 14000      | 14000      |
| 14,20                     | 16                         | 133       | 83        | 63       | 48       |  | 14200      | 14200      | 14200      | 14200      |            |
| 14,50                     | 16                         | 133       | 83        | 63       | 48       |  | 14500      | 14500      | 14500      | 14500      | 14500      |
| 14,80                     | 16                         | 133       | 83        | 63       | 48       |  | 14800      | 14800      | 14800      | 14800      | 14800      |
| 15,00                     | 16                         | 133       | 83        | 63       | 48       |  | 15000      | 15000      | 15000      | 15000      | 15000      |
| 15,10                     | 16                         | 133       | 83        | 63       | 48       |  |            | 15100      | 15100      | 15100      |            |
| 15,20                     | 16                         | 133       | 83        | 63       | 48       |  | 15200      |            |            |            |            |
| 15,25                     | 16                         | 133       | 83        | 63       | 48       |  |            | 15250      | 15250      | 15250      |            |
| 15,30                     | 16                         | 133       | 83        | 63       | 48       |  |            | 15300      | 15300      | 15300      |            |
| 15,35                     | 16                         | 133       | 83        | 63       | 48       |  |            | 15350      | 15350      | 15350      |            |
| 15,50                     | 16                         | 133       | 83        | 63       | 48       |  | 15500      | 15500      | 15500      | 15500      | 15500      |
| 15,60                     | 16                         | 133       | 83        | 63       | 48       |  |            | 15600      | 15600      | 15600      |            |
| 15,80                     | 16                         | 133       | 83        | 63       | 48       |  | 15800      | 15800      | 15800      | 15800      | 15800      |

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| S |   |   |   |   |   |
| H |   | ○ | ○ | ○ | ○ |
| O |   |   |   |   |   |

→ v<sub>c</sub> на стр. 108–118Ø DC<sub>m7</sub> для типа UNI и Quattro 4F/ Ø DC<sub>h7</sub> для типа Speed UNI

## WTX – Высокопроизводительное сверло, DIN 6537



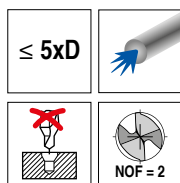
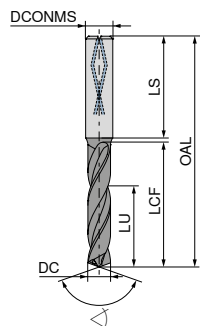
| Speed<br>UNI          | UNI                   | UNI                   | UNI                   | Quattro<br>4F         |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| DPX14S                | DPX74S                | DPX74S                | DPX74S                | DPX74S                |
| DRAGONSKIN            | DRAGONSKIN            | DRAGONSKIN            | DRAGONSKIN            | DRAGONSKIN            |
|                       |                       |                       |                       |                       |
| HA                    | HA                    | HB                    | HE                    | HA                    |
| 145°<br>Твердый сплав | 140°<br>Твердый сплав | 140°<br>Твердый сплав | 140°<br>Твердый сплав | 140°<br>Твердый сплав |
| 10 771 ...            | 11 786 ...            | 11 787 ...            | 11 785 ...            | 10 735 ...            |

| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |       |       |       |       |
|---------------------------|----------------------------|-----------|-----------|----------|----------|--|-------|-------|-------|-------|
| 16,00                     | 16                         | 133       | 83        | 63       | 48       |  | 16000 |       | 16000 |       |
| 16,05                     | 18                         | 143       | 93        | 71       | 48       |  |       | 16050 |       |       |
| 16,50                     | 18                         | 143       | 93        | 71       | 48       |  | 16500 | 16500 | 16500 | 16500 |
| 16,80                     | 18                         | 143       | 93        | 71       | 48       |  | 16800 | 16800 | 16800 | 16800 |
| 16,90                     | 18                         | 143       | 93        | 71       | 48       |  |       | 16900 |       |       |
| 17,00                     | 18                         | 143       | 93        | 71       | 48       |  | 17000 | 17000 | 17000 | 17000 |
| 17,50                     | 18                         | 143       | 93        | 71       | 48       |  | 17500 | 17500 | 17500 | 17500 |
| 17,60                     | 18                         | 143       | 93        | 71       | 48       |  |       | 17600 |       |       |
| 17,80                     | 18                         | 143       | 93        | 71       | 48       |  | 17800 | 17800 | 17800 | 17800 |
| 18,00                     | 18                         | 143       | 93        | 71       | 48       |  | 18000 | 18000 | 18000 | 18000 |
| 18,50                     | 20                         | 153       | 101       | 77       | 50       |  | 18500 | 18500 | 18500 | 18500 |
| 18,80                     | 20                         | 153       | 101       | 77       | 50       |  | 18800 | 18800 | 18800 | 18800 |
| 18,90                     | 20                         | 153       | 101       | 77       | 50       |  |       | 18900 |       |       |
| 19,00                     | 20                         | 153       | 101       | 77       | 50       |  | 19000 | 19000 | 19000 | 19000 |
| 19,35                     | 20                         | 153       | 101       | 77       | 50       |  |       | 19350 |       |       |
| 19,50                     | 20                         | 153       | 101       | 77       | 50       |  | 19500 | 19500 | 19500 | 19500 |
| 19,60                     | 20                         | 153       | 101       | 77       | 50       |  |       | 19600 |       |       |
| 19,80                     | 20                         | 153       | 101       | 77       | 50       |  | 19800 | 19800 | 19800 | 19800 |
| 20,00                     | 20                         | 153       | 101       | 77       | 50       |  | 20000 | 20000 | 20000 | 20000 |
| 20,50                     | 25                         | 200       | 135       | 110      | 56       |  |       | 20500 |       |       |
| 21,00                     | 25                         | 200       | 135       | 110      | 56       |  |       | 21000 |       |       |
| 21,50                     | 25                         | 200       | 135       | 110      | 56       |  |       | 21500 |       |       |
| 22,00                     | 25                         | 200       | 135       | 110      | 56       |  |       | 22000 |       |       |
| 22,50                     | 25                         | 200       | 140       | 120      | 56       |  |       | 22500 |       |       |
| 23,00                     | 25                         | 200       | 140       | 120      | 56       |  |       | 23000 |       |       |
| 23,50                     | 25                         | 200       | 140       | 120      | 56       |  |       | 23500 |       |       |
| 24,00                     | 25                         | 200       | 140       | 120      | 56       |  |       | 24000 |       |       |
| 24,50                     | 25                         | 200       | 140       | 120      | 56       |  |       | 24500 |       |       |
| 25,00                     | 25                         | 200       | 140       | 120      | 56       |  |       | 25000 |       |       |

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| O |   |   |   |   |   |

→ V<sub>c</sub> на стр. 108–118Ø DC<sub>m7</sub> для типа UNI и Quattro 4F/ Ø DC<sub>h7</sub> для типа Speed UNI

## WTX – Высокопроизводительное сверло, DIN 6537

Speed  
VA  
Ti800VA  
Ti700VA  
Ti700GG  
Ti700AL  
DLC  
DRAGONSKINTi  
DPA54  
DRAGONSKIN

Тип GG – с прямыми стружечными канавками



HA  
 $\angle 135^\circ$   
 Твердый сплав  
 10 773 ...

HA  
 $\angle 140^\circ$   
 Твердый сплав  
 10 745 ...

HE  
 $\angle 140^\circ$   
 Твердый сплав  
 10 746 ...

HA  
 $\angle 130^\circ$   
 Твердый сплав  
 10 749 ...

HA  
 $\angle 135^\circ$   
 Твердый сплав  
 10 791 ...

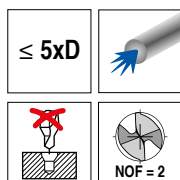
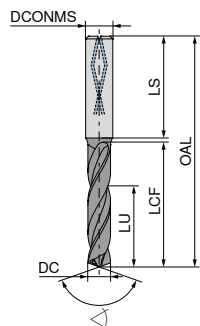
HA  
 $\angle 140^\circ$   
 Твердый сплав  
 10 787 ...

| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |     |  |     |  |       |     |
|---------------------------|----------------------------|-----------|-----------|----------|----------|-----|--|-----|--|-------|-----|
| 2,50                      | 4                          | 57        | 21        | 17       | 28       |     |  |     |  |       |     |
| 2,60                      | 4                          | 57        | 21        | 17       | 28       |     |  |     |  |       |     |
| 2,70                      | 4                          | 57        | 21        | 17       | 28       |     |  |     |  |       |     |
| 2,80                      | 4                          | 57        | 21        | 17       | 28       |     |  |     |  |       |     |
| 2,90                      | 4                          | 57        | 21        | 17       | 28       |     |  |     |  |       |     |
| 3,00                      | 6                          | 66        | 28        | 23       | 36       |     |  |     |  |       |     |
| 3,10                      | 6                          | 66        | 28        | 23       | 36       | 030 |  | 030 |  |       |     |
| 3,15                      | 6                          | 66        | 28        | 23       | 36       | 031 |  | 031 |  |       |     |
| 3,20                      | 6                          | 66        | 28        | 23       | 36       |     |  | 831 |  |       |     |
| 3,22                      | 6                          | 66        | 28        | 23       | 36       | 032 |  | 032 |  |       |     |
| 3,25                      | 6                          | 66        | 28        | 23       | 36       |     |  | 832 |  |       |     |
| 3,30                      | 6                          | 66        | 28        | 23       | 36       |     |  | 890 |  |       |     |
| 3,40                      | 6                          | 66        | 28        | 23       | 36       | 033 |  | 033 |  | 03300 | 033 |
| 3,50                      | 6                          | 66        | 28        | 23       | 36       | 034 |  | 034 |  | 03400 | 034 |
| 3,60                      | 6                          | 66        | 28        | 23       | 36       | 035 |  | 035 |  | 03500 | 035 |
| 3,70                      | 6                          | 66        | 28        | 23       | 36       | 036 |  | 036 |  | 03600 | 036 |
| 3,80                      | 6                          | 74        | 36        | 29       | 36       | 037 |  | 037 |  | 03700 | 037 |
| 3,85                      | 6                          | 74        | 36        | 29       | 36       | 038 |  | 038 |  | 03800 | 038 |
| 3,90                      | 6                          | 74        | 36        | 29       | 36       |     |  | 838 |  |       |     |
| 3,97                      | 6                          | 74        | 36        | 29       | 36       | 039 |  | 039 |  | 03900 | 039 |
| 4,00                      | 6                          | 74        | 36        | 29       | 36       |     |  | 900 |  |       |     |
| 4,10                      | 6                          | 74        | 36        | 29       | 36       | 040 |  | 040 |  | 04000 | 040 |
| 4,20                      | 6                          | 74        | 36        | 29       | 36       | 041 |  | 041 |  | 04100 | 041 |
| 4,23                      | 6                          | 74        | 36        | 29       | 36       | 042 |  | 042 |  | 04200 | 042 |
| 4,30                      | 6                          | 74        | 36        | 29       | 36       |     |  | 901 |  |       |     |
| 4,35                      | 6                          | 74        | 36        | 29       | 36       | 043 |  | 043 |  | 04300 | 043 |
| 4,40                      | 6                          | 74        | 36        | 29       | 36       |     |  | 843 |  |       |     |
| 4,45                      | 6                          | 74        | 36        | 29       | 36       | 044 |  | 044 |  | 04400 | 044 |
| 4,50                      | 6                          | 74        | 36        | 29       | 36       |     |  | 844 |  |       |     |
| 4,60                      | 6                          | 74        | 36        | 29       | 36       | 045 |  | 045 |  | 04500 | 045 |
| 4,65                      | 6                          | 74        | 36        | 29       | 36       | 046 |  | 046 |  | 04600 | 046 |
| 4,70                      | 6                          | 74        | 36        | 29       | 36       | 900 |  | 900 |  |       |     |
| 4,80                      | 6                          | 82        | 44        | 35       | 36       | 047 |  | 047 |  | 04700 | 047 |
| 4,90                      | 6                          | 82        | 44        | 35       | 36       | 048 |  | 048 |  | 04800 | 048 |
| 5,00                      | 6                          | 82        | 44        | 35       | 36       | 049 |  | 049 |  | 04900 | 049 |
| 5,10                      | 6                          | 82        | 44        | 35       | 36       | 050 |  | 050 |  | 05000 | 050 |
| 5,20                      | 6                          | 82        | 44        | 35       | 36       | 051 |  | 051 |  | 05100 | 051 |
| 5,30                      | 6                          | 82        | 44        | 35       | 36       | 052 |  | 052 |  | 05200 | 052 |
|                           |                            |           |           |          |          | 053 |  | 053 |  | 05300 | 053 |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | ● | ○ | ○ |   | ○ |
| M | ● | ● | ● |   | ● |
| K | ● | ○ | ○ | ● |   |
| N | ○ | ○ | ○ | ○ | ● |
| S | ● | ● | ● |   | ● |
| H |   |   |   |   |   |
| O |   |   |   |   |   |

→ V<sub>c</sub> на стр. 114–123Ø DC<sub>m7</sub> для типа VA, Ti и GG / Ø DC<sub>h7</sub> для типа Speed VA и AL

## WTX – Высокопроизводительное сверло, DIN 6537

Speed  
VA  
Ti800VA  
Ti700VA  
Ti700GG  
Ti700AL  
DLC  
DRAGONSKINTi  
DPA54  
DRAGONSKIN

Тип GG – с прямыми стружечными канавками


 $\angle 135^\circ$   
Твердый сплав  
10 773 ...

 $\angle 140^\circ$   
Твердый сплав  
10 745 ...

 $\angle 140^\circ$   
Твердый сплав  
10 746 ...

 $\angle 130^\circ$   
Твердый сплав  
10 749 ...

 $\angle 135^\circ$   
Твердый сплав  
10 791 ...

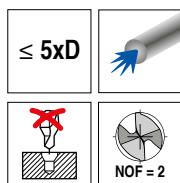
 $\angle 140^\circ$   
Твердый сплав  
10 787 ...

| DC<br>mm | DCONMS<br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm | 10 773 ... | 10 745 ... | 10 746 ... | 10 749 ... | 10 791 ... | 10 787 ... |
|----------|--------------|-----------|-----------|----------|----------|------------|------------|------------|------------|------------|------------|
| 5,40     | 6            | 82        | 44        | 35       | 36       | 054        | 054        | 054        | 054        | 05400      | 054        |
| 5,50     | 6            | 82        | 44        | 35       | 36       | 055        | 055        | 055        | 055        | 05500      | 055        |
| 5,55     | 6            | 82        | 44        | 35       | 36       | 902        |            |            |            |            |            |
| 5,56     | 6            | 82        | 44        | 35       | 36       |            |            |            |            |            | 902        |
| 5,60     | 6            | 82        | 44        | 35       | 36       | 056        | 056        | 056        | 056        | 05600      | 056        |
| 5,70     | 6            | 82        | 44        | 35       | 36       | 057        | 057        | 057        | 057        | 05700      | 057        |
| 5,75     | 6            | 82        | 44        | 35       | 36       |            | 916        |            |            |            |            |
| 5,80     | 6            | 82        | 44        | 35       | 36       | 058        | 058        | 058        | 058        | 05800      | 058        |
| 5,90     | 6            | 82        | 44        | 35       | 36       | 059        | 059        | 059        | 059        | 05900      | 059        |
| 5,95     | 6            | 82        | 44        | 35       | 36       |            | 959        |            |            |            |            |
| 6,00     | 6            | 82        | 44        | 35       | 36       | 060        | 060        | 060        | 060        | 06000      | 060        |
| 6,10     | 8            | 91        | 53        | 43       | 36       | 061        | 061        | 061        | 061        | 06100      | 061        |
| 6,20     | 8            | 91        | 53        | 43       | 36       | 062        | 062        | 062        | 062        | 06200      | 062        |
| 6,30     | 8            | 91        | 53        | 43       | 36       | 063        | 063        | 063        | 063        | 06300      | 063        |
| 6,35     | 8            | 91        | 53        | 43       | 36       |            |            |            |            |            | 903        |
| 6,40     | 8            | 91        | 53        | 43       | 36       | 064        | 064        | 064        | 064        | 06400      | 064        |
| 6,50     | 8            | 91        | 53        | 43       | 36       | 065        | 065        | 065        | 065        | 06500      | 065        |
| 6,60     | 8            | 91        | 53        | 43       | 36       | 066        | 066        | 066        | 066        | 06600      | 066        |
| 6,70     | 8            | 91        | 53        | 43       | 36       | 067        | 067        | 067        | 067        | 06700      | 067        |
| 6,80     | 8            | 91        | 53        | 43       | 36       | 068        | 068        | 068        | 068        | 06800      | 068        |
| 6,90     | 8            | 91        | 53        | 43       | 36       | 069        | 069        | 069        | 069        | 06900      | 069        |
| 7,00     | 8            | 91        | 53        | 43       | 36       | 070        | 070        | 070        | 070        | 07000      | 070        |
| 7,10     | 8            | 91        | 53        | 43       | 36       | 071        | 071        | 071        | 071        | 07100      | 071        |
| 7,20     | 8            | 91        | 53        | 43       | 36       | 072        | 072        | 072        | 072        | 07200      | 072        |
| 7,30     | 8            | 91        | 53        | 43       | 36       | 073        | 073        | 073        | 073        | 07300      | 073        |
| 7,40     | 8            | 91        | 53        | 43       | 36       | 074        | 074        | 074        | 074        | 07400      | 074        |
| 7,45     | 8            | 91        | 53        | 43       | 36       |            | 924        |            |            |            |            |
| 7,50     | 8            | 91        | 53        | 43       | 36       | 075        | 075        | 075        | 075        | 07500      | 075        |
| 7,60     | 8            | 91        | 53        | 43       | 36       | 076        | 076        | 076        | 076        | 07600      | 076        |
| 7,70     | 8            | 91        | 53        | 43       | 36       | 077        | 077        | 077        | 077        | 07700      | 077        |
| 7,80     | 8            | 91        | 53        | 43       | 36       | 078        | 078        | 078        | 078        | 07800      | 078        |
| 7,90     | 8            | 91        | 53        | 43       | 36       | 079        | 079        | 079        | 079        | 07900      | 079        |
| 7,94     | 8            | 91        | 53        | 43       | 36       |            |            |            |            |            | 904        |
| 8,00     | 8            | 91        | 53        | 43       | 36       | 080        | 080        | 080        | 080        | 08000      | 080        |
| 8,10     | 10           | 103       | 61        | 49       | 40       | 081        | 081        | 081        | 081        | 08100      | 081        |
| 8,20     | 10           | 103       | 61        | 49       | 40       | 082        | 082        | 082        | 082        | 08200      | 082        |
| 8,30     | 10           | 103       | 61        | 49       | 40       | 083        | 083        | 083        | 083        | 08300      | 083        |
| 8,40     | 10           | 103       | 61        | 49       | 40       | 084        | 084        | 084        | 084        | 08400      | 084        |

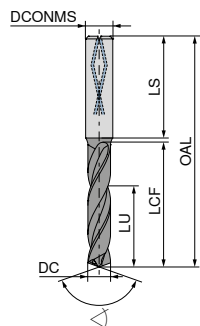
|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | ● | ○ | ○ |   | ○ |
| M | ● | ● | ● |   | ● |
| K | ● | ○ | ○ | ● |   |
| N | ○ | ○ | ○ | ○ | ● |
| S | ● | ● | ● |   | ● |
| H |   |   |   |   |   |
| O |   |   |   |   |   |

→ V<sub>c</sub> на стр. 114–123Ø DC<sub>m7</sub> для типа VA, Ti и GG / Ø DC<sub>n7</sub> для типа Speed VA и AL

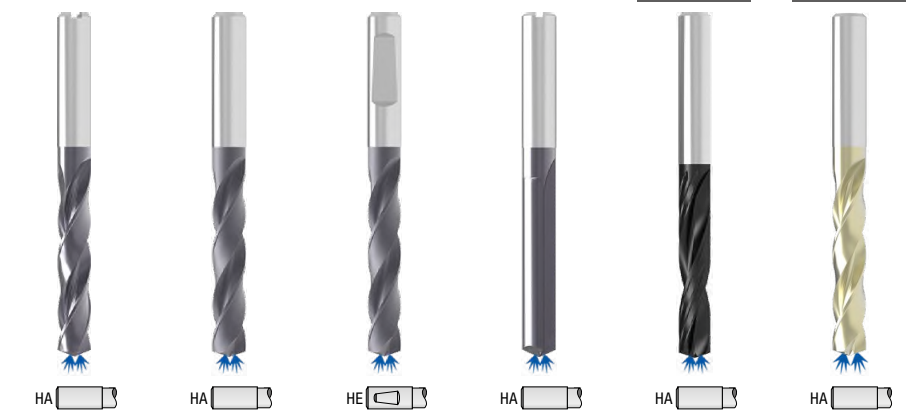
## WTX – Высокопроизводительное сверло, DIN 6537



| Speed VA | VA    | VA    | GG    | AL         | Ti         |
|----------|-------|-------|-------|------------|------------|
| Ti800    | Ti700 | Ti700 | Ti700 | DLC        | DPA54      |
|          |       |       |       | DRAGONSKIN | DRAGONSKIN |



Тип GG = с прямыми стружечными канавками

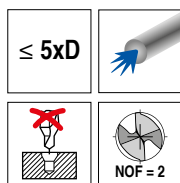


| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm | Твердый сплав<br>10 773 ... | Твердый сплав<br>10 745 ... | Твердый сплав<br>10 746 ... | Твердый сплав<br>10 749 ... | Твердый сплав<br>10 791 ... | Твердый сплав<br>10 787 ... |
|---------------------------|----------------------------|-----------|-----------|----------|----------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 8,50                      | 10                         | 103       | 61        | 49       | 40       | 085                         | 085                         | 085                         | 085                         | 08500                       | 085                         |
| 8,60                      | 10                         | 103       | 61        | 49       | 40       | 086                         | 086                         | 086                         | 086                         | 08600                       | 086                         |
| 8,70                      | 10                         | 103       | 61        | 49       | 40       | 087                         | 087                         | 087                         | 087                         | 08700                       | 087                         |
| 8,80                      | 10                         | 103       | 61        | 49       | 40       | 088                         | 088                         | 088                         | 088                         | 08800                       | 088                         |
| 8,90                      | 10                         | 103       | 61        | 49       | 40       | 089                         | 089                         | 089                         | 089                         | 08900                       | 089                         |
| 9,00                      | 10                         | 103       | 61        | 49       | 40       | 090                         | 090                         | 090                         | 090                         | 09000                       | 090                         |
| 9,10                      | 10                         | 103       | 61        | 49       | 40       | 091                         | 091                         | 091                         | 091                         | 09100                       | 091                         |
| 9,20                      | 10                         | 103       | 61        | 49       | 40       | 092                         | 092                         | 092                         | 092                         | 09200                       | 092                         |
| 9,30                      | 10                         | 103       | 61        | 49       | 40       | 093                         | 093                         | 093                         | 093                         | 09300                       | 093                         |
| 9,35                      | 10                         | 103       | 61        | 49       | 40       |                             | 930                         |                             |                             |                             |                             |
| 9,40                      | 10                         | 103       | 61        | 49       | 40       | 094                         | 094                         | 094                         | 094                         | 09400                       | 094                         |
| 9,45                      | 10                         | 103       | 61        | 49       | 40       |                             | 994                         |                             |                             |                             |                             |
| 9,50                      | 10                         | 103       | 61        | 49       | 40       | 095                         | 095                         | 095                         | 095                         | 09500                       | 095                         |
| 9,53                      | 10                         | 103       | 61        | 49       | 40       |                             |                             |                             |                             |                             | 905                         |
| 9,60                      | 10                         | 103       | 61        | 49       | 40       | 096                         | 096                         | 096                         | 096                         | 09600                       | 096                         |
| 9,70                      | 10                         | 103       | 61        | 49       | 40       | 097                         | 097                         | 097                         | 097                         | 09700                       | 097                         |
| 9,80                      | 10                         | 103       | 61        | 49       | 40       | 098                         | 098                         | 098                         | 098                         | 09800                       | 098                         |
| 9,90                      | 10                         | 103       | 61        | 49       | 40       | 099                         | 099                         | 099                         | 099                         | 09900                       | 099                         |
| 10,00                     | 10                         | 103       | 61        | 49       | 40       | 100                         | 100                         | 100                         | 100                         | 10000                       | 100                         |
| 10,10                     | 12                         | 118       | 71        | 54       | 45       | 101                         | 101                         | 101                         | 101                         | 10100                       | 101                         |
| 10,10                     | 12                         | 118       | 71        | 56       | 45       |                             |                             |                             |                             |                             |                             |
| 10,20                     | 12                         | 118       | 71        | 54       | 45       | 102                         | 102                         | 102                         | 102                         | 10200                       | 102                         |
| 10,20                     | 12                         | 118       | 71        | 56       | 45       |                             |                             |                             |                             |                             |                             |
| 10,30                     | 12                         | 118       | 71        | 54       | 45       | 103                         | 103                         | 103                         | 103                         | 10300                       | 103                         |
| 10,30                     | 12                         | 118       | 71        | 56       | 45       |                             |                             |                             |                             |                             |                             |
| 10,40                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 104                         |
| 10,40                     | 12                         | 118       | 71        | 56       | 45       | 104                         | 104                         | 104                         | 104                         | 10400                       |                             |
| 10,50                     | 12                         | 118       | 71        | 56       | 45       | 105                         | 105                         | 105                         | 105                         | 10500                       |                             |
| 10,50                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 105                         |
| 10,55                     | 12                         | 118       | 71        | 56       | 45       |                             | 932                         |                             |                             |                             |                             |
| 10,60                     | 12                         | 118       | 71        | 56       | 45       | 106                         | 106                         | 106                         | 106                         | 10600                       |                             |
| 10,60                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 106                         |
| 10,70                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 107                         |
| 10,70                     | 12                         | 118       | 71        | 56       | 45       | 107                         | 107                         | 107                         | 107                         | 10700                       |                             |
| 10,80                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 108                         |
| 10,80                     | 12                         | 118       | 71        | 56       | 45       | 108                         | 108                         | 108                         | 108                         | 10800                       |                             |
| 10,90                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 109                         |
| 10,90                     | 12                         | 118       | 71        | 56       | 45       | 109                         | 109                         | 109                         | 109                         |                             |                             |

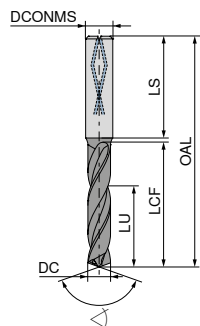
|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | ● | ○ | ○ |   | ○ |
| M | ● | ● | ● |   | ● |
| K | ● | ○ | ○ | ● |   |
| N | ○ | ○ | ○ | ○ | ● |
| S | ● | ● | ● |   | ● |
| H |   |   |   |   |   |
| O |   |   |   |   |   |

→ V<sub>c</sub> на стр. 114-123Ø DC<sub>m7</sub> для типа VA, Ti и GG / Ø DC<sub>h7</sub> для типа Speed VA и AL

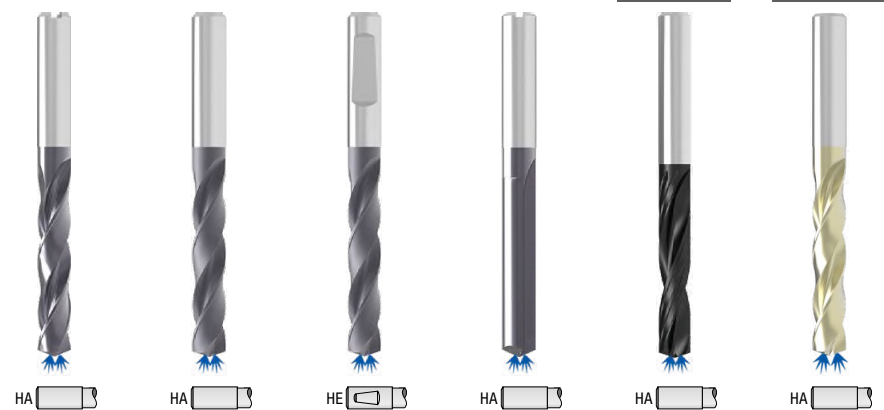
## WTX – Высокопроизводительное сверло, DIN 6537



| Speed VA | VA    | VA    | GG    | AL         | Ti         |
|----------|-------|-------|-------|------------|------------|
| Ti800    | Ti700 | Ti700 | Ti700 | DLC        | DPA54      |
|          |       |       |       | DRAGONSKIN | DRAGONSKIN |



Тип GG – с прямыми стружечными канавками

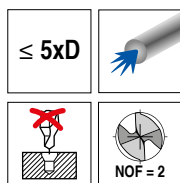
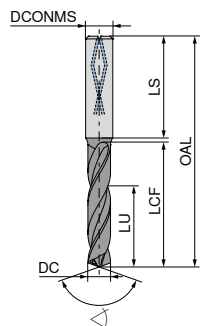


| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm | Твердый сплав<br>10 773 ... | Твердый сплав<br>10 745 ... | Твердый сплав<br>10 746 ... | Твердый сплав<br>10 749 ... | Твердый сплав<br>10 791 ... | Твердый сплав<br>10 787 ... |
|---------------------------|----------------------------|-----------|-----------|----------|----------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 11,00                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 110                         |
| 11,00                     | 12                         | 118       | 71        | 56       | 45       | 110                         | 110                         | 110                         | 110                         | 11000                       | 110                         |
| 11,10                     | 12                         | 118       | 71        | 56       | 45       | 111                         | 111                         | 111                         | 111                         | 11100                       | 111                         |
| 11,10                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 906                         |
| 11,11                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             |                             |
| 11,20                     | 12                         | 118       | 71        | 56       | 45       | 112                         | 112                         | 112                         | 112                         | 11200                       | 112                         |
| 11,20                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             |                             |
| 11,25                     | 12                         | 118       | 71        | 56       | 45       |                             | 912                         |                             |                             |                             |                             |
| 11,30                     | 12                         | 118       | 71        | 56       | 45       | 113                         | 113                         | 113                         | 113                         | 11300                       | 113                         |
| 11,30                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 113                         |
| 11,35                     | 12                         | 118       | 71        | 56       | 45       |                             | 913                         |                             |                             |                             |                             |
| 11,40                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 114                         |
| 11,40                     | 12                         | 118       | 71        | 56       | 45       | 114                         | 114                         | 114                         | 114                         | 11400                       |                             |
| 11,45                     | 12                         | 118       | 71        | 56       | 45       |                             | 914                         |                             |                             |                             |                             |
| 11,50                     | 12                         | 118       | 71        | 56       | 45       | 115                         | 115                         | 115                         | 115                         | 11500                       |                             |
| 11,50                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 115                         |
| 11,60                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 116                         |
| 11,60                     | 12                         | 118       | 71        | 56       | 45       | 116                         | 116                         | 116                         | 116                         |                             |                             |
| 11,70                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 117                         |
| 11,70                     | 12                         | 118       | 71        | 56       | 45       | 117                         | 117                         | 117                         | 117                         | 11700                       |                             |
| 11,80                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 118                         |
| 11,80                     | 12                         | 118       | 71        | 56       | 45       | 118                         | 118                         | 118                         | 118                         | 11800                       |                             |
| 11,90                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 119                         |
| 11,90                     | 12                         | 118       | 71        | 56       | 45       | 119                         | 119                         | 119                         | 119                         |                             |                             |
| 12,00                     | 12                         | 118       | 71        | 54       | 45       |                             |                             |                             |                             |                             | 120                         |
| 12,00                     | 12                         | 118       | 71        | 56       | 45       | 120                         | 120                         | 120                         | 120                         | 12000                       |                             |
| 12,10                     | 14                         | 124       | 77        | 58       | 45       |                             |                             |                             |                             |                             | 121                         |
| 12,15                     | 14                         | 124       | 77        | 60       | 45       |                             | 921                         |                             |                             |                             |                             |
| 12,20                     | 14                         | 124       | 77        | 58       | 45       |                             |                             |                             |                             |                             | 122                         |
| 12,20                     | 14                         | 124       | 77        | 60       | 45       | 12200                       |                             |                             |                             | 12200                       |                             |
| 12,30                     | 14                         | 124       | 77        | 58       | 45       |                             |                             |                             |                             |                             | 123                         |
| 12,40                     | 14                         | 124       | 77        | 58       | 45       |                             |                             |                             |                             |                             | 124                         |
| 12,50                     | 14                         | 124       | 77        | 58       | 45       |                             |                             |                             |                             |                             | 125                         |
| 12,50                     | 14                         | 124       | 77        | 60       | 45       | 125                         | 125                         | 125                         | 125                         | 12500                       |                             |
| 12,55                     | 14                         | 124       | 77        | 60       | 45       |                             | 925                         |                             |                             |                             |                             |
| 12,60                     | 14                         | 124       | 77        | 58       | 45       |                             |                             |                             |                             |                             | 126                         |
| 12,60                     | 14                         | 124       | 77        | 60       | 45       |                             |                             |                             |                             | 12600                       |                             |
| 12,70                     | 14                         | 124       | 77        | 58       | 45       |                             |                             |                             |                             |                             | 907                         |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | ● | ○ | ○ |   | ○ |
| M | ● | ● | ● |   | ● |
| K | ● | ○ | ○ | ● |   |
| N | ○ | ○ | ○ | ○ | ● |
| S | ● | ● | ● |   | ● |
| H |   |   |   |   |   |
| O |   |   |   |   |   |

→ V<sub>c</sub> на стр. 114–123Ø DC<sub>m7</sub> для типа VA, Ti и GG / Ø DC<sub>h7</sub> для типа Speed VA и AL

## WTX – Высокопроизводительное сверло, DIN 6537

Speed  
VA  
Ti800VA  
Ti700VA  
Ti700GG  
Ti700AL  
DLC  
DRAGONSKINTi  
DPA54  
DRAGONSKIN

Тип GG – с прямыми стружечными канавками


 $\angle 135^\circ$   
Твердый сплав  
10 773 ...

 $\angle 140^\circ$   
Твердый сплав  
10 745 ...

 $\angle 140^\circ$   
Твердый сплав  
10 746 ...

 $\angle 130^\circ$   
Твердый сплав  
10 749 ...

 $\angle 135^\circ$   
Твердый сплав  
10 791 ...

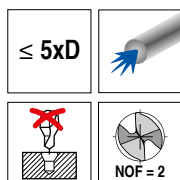
 $\angle 140^\circ$   
Твердый сплав  
10 787 ...

| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm | 10 773 ... | 10 745 ... | 10 746 ... | 10 749 ... | 10 791 ... | 10 787 ... |
|---------------------------|----------------------------|-----------|-----------|----------|----------|------------|------------|------------|------------|------------|------------|
| 12,80                     | 14                         | 124       | 77        | 58       | 45       |            |            |            |            |            | 128        |
| 12,80                     | 14                         | 124       | 77        | 60       | 45       | 128        | 128        |            | 128        | 12800      | 129        |
| 12,90                     | 14                         | 124       | 77        | 58       | 45       |            |            | 128        | 130        |            | 130        |
| 13,00                     | 14                         | 124       | 77        | 60       | 45       | 130        | 130        | 130        | 130        | 13000      | 131        |
| 13,10                     | 14                         | 124       | 77        | 58       | 45       |            |            |            |            |            | 132        |
| 13,20                     | 14                         | 124       | 77        | 58       | 45       |            |            |            |            |            | 133        |
| 13,30                     | 14                         | 124       | 77        | 58       | 45       |            |            |            |            |            | 134        |
| 13,35                     | 14                         | 124       | 77        | 60       | 45       |            | 933        |            |            |            | 135        |
| 13,40                     | 14                         | 124       | 77        | 58       | 45       |            |            | 135        | 135        | 13500      | 136        |
| 13,50                     | 14                         | 124       | 77        | 60       | 45       | 135        | 135        | 135        | 135        |            | 137        |
| 13,50                     | 14                         | 124       | 77        | 58       | 45       |            |            |            |            |            | 138        |
| 13,60                     | 14                         | 124       | 77        | 58       | 45       |            |            |            |            |            | 139        |
| 13,70                     | 14                         | 124       | 77        | 58       | 45       |            |            |            |            |            | 140        |
| 13,80                     | 14                         | 124       | 77        | 60       | 45       | 138        | 138        | 138        | 138        | 13800      | 141        |
| 13,90                     | 14                         | 124       | 77        | 58       | 45       |            |            |            |            |            | 142        |
| 14,00                     | 14                         | 124       | 77        | 60       | 45       | 140        | 140        | 140        | 140        | 14000      | 143        |
| 14,00                     | 14                         | 124       | 77        | 58       | 45       |            |            |            |            |            | 144        |
| 14,10                     | 16                         | 133       | 83        | 61       | 48       |            |            |            |            |            | 145        |
| 14,20                     | 16                         | 133       | 83        | 61       | 48       |            |            |            |            | 14200      | 146        |
| 14,20                     | 16                         | 133       | 83        | 63       | 48       |            |            |            |            |            | 147        |
| 14,30                     | 16                         | 133       | 83        | 61       | 48       |            |            |            |            |            | 148        |
| 14,40                     | 16                         | 133       | 83        | 61       | 48       |            |            |            |            |            | 149        |
| 14,50                     | 16                         | 133       | 83        | 61       | 48       |            |            |            |            |            | 150        |
| 14,50                     | 16                         | 133       | 83        | 63       | 48       | 145        | 145        | 145        | 145        | 14500      | 151        |
| 14,60                     | 16                         | 133       | 83        | 61       | 48       |            |            |            |            |            | 152        |
| 14,70                     | 16                         | 133       | 83        | 61       | 48       |            |            |            |            |            | 153        |
| 14,80                     | 16                         | 133       | 83        | 61       | 48       |            |            |            |            |            |            |
| 14,80                     | 16                         | 133       | 83        | 63       | 48       | 148        | 148        | 148        | 148        | 14800      |            |
| 14,90                     | 16                         | 133       | 83        | 61       | 48       |            |            |            |            |            |            |
| 15,00                     | 16                         | 133       | 83        | 61       | 48       |            |            |            |            |            |            |
| 15,00                     | 16                         | 133       | 83        | 63       | 48       | 150        | 150        | 150        | 150        | 15000      |            |
| 15,10                     | 16                         | 133       | 83        | 61       | 48       |            |            |            |            |            |            |
| 15,20                     | 16                         | 133       | 83        | 61       | 48       |            |            |            |            | 15200      |            |
| 15,20                     | 16                         | 133       | 83        | 63       | 48       |            |            |            |            |            |            |
| 15,30                     | 16                         | 133       | 83        | 61       | 48       |            |            |            |            |            |            |
| 15,35                     | 16                         | 133       | 83        | 63       | 48       |            | 953        |            |            |            |            |

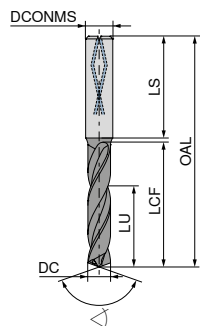
|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | ● | ○ | ○ |   | ○ |
| M | ● | ● | ● |   | ● |
| K | ● | ○ | ○ | ● |   |
| N | ○ | ○ | ○ | ○ | ● |
| S | ● | ● | ● |   | ● |
| H |   |   |   |   |   |
| O |   |   |   |   |   |

→ V<sub>c</sub> на стр. 114–123

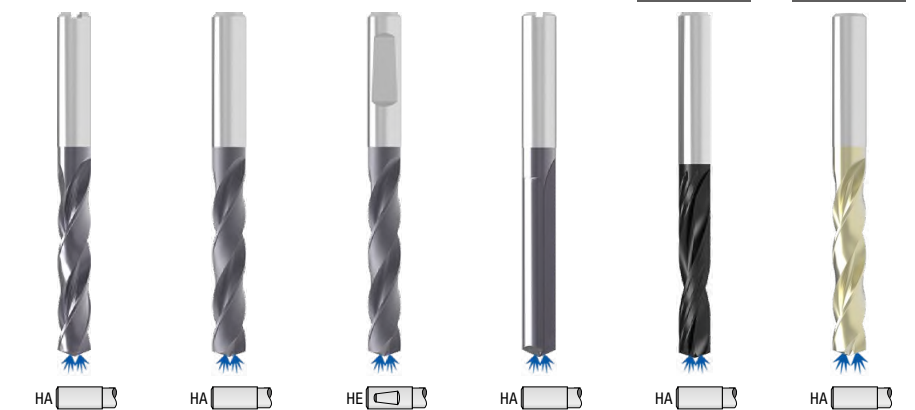
## WTX – Высокопроизводительное сверло, DIN 6537



| Speed VA | VA    | VA    | GG    | AL         | Ti         |
|----------|-------|-------|-------|------------|------------|
| Ti800    | Ti700 | Ti700 | Ti700 | DLC        | DPA54      |
|          |       |       |       | DRAGONSKIN | DRAGONSKIN |



Тип GG – с прямыми стружечными канавками



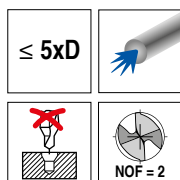
| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm | Твердый сплав<br>10 773 ... | Твердый сплав<br>10 745 ... | Твердый сплав<br>10 746 ... | Твердый сплав<br>10 749 ... | Твердый сплав<br>10 791 ... | Твердый сплав<br>10 787 ... |
|---------------------------|----------------------------|-----------|-----------|----------|----------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 15,40                     | 16                         | 133       | 83        | 61       | 48       |                             |                             |                             |                             |                             | 154                         |
| 15,50                     | 16                         | 133       | 83        | 61       | 48       |                             |                             |                             |                             |                             | 155                         |
| 15,50                     | 16                         | 133       | 83        | 63       | 48       | 155                         | 155                         | 155                         | 155                         | 15500                       | 156                         |
| 15,60                     | 16                         | 133       | 83        | 61       | 48       |                             |                             |                             |                             |                             | 157                         |
| 15,70                     | 16                         | 133       | 83        | 61       | 48       |                             |                             |                             |                             |                             | 158                         |
| 15,80                     | 16                         | 133       | 83        | 61       | 48       |                             |                             |                             |                             |                             | 159                         |
| 15,80                     | 16                         | 133       | 83        | 63       | 48       | 158                         | 158                         | 158                         | 158                         | 15800                       | 160                         |
| 15,90                     | 16                         | 133       | 83        | 61       | 48       |                             |                             |                             |                             |                             | 161                         |
| 16,00                     | 16                         | 133       | 83        | 61       | 48       |                             |                             |                             |                             |                             | 162                         |
| 16,00                     | 16                         | 133       | 83        | 63       | 48       | 160                         | 160                         | 160                         | 160                         | 16000                       | 163                         |
| 16,05                     | 18                         | 143       | 93        | 71       | 48       |                             | 960                         |                             |                             |                             | 164                         |
| 16,10                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             | 165                         |
| 16,20                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             | 166                         |
| 16,30                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             | 167                         |
| 16,40                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             | 168                         |
| 16,50                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             | 169                         |
| 16,50                     | 18                         | 143       | 93        | 71       | 48       | 165                         | 165                         | 165                         | 165                         | 16500                       | 170                         |
| 16,60                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             | 171                         |
| 16,70                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             | 172                         |
| 16,80                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             | 173                         |
| 16,80                     | 18                         | 143       | 93        | 71       | 48       | 168                         | 168                         | 168                         | 168                         | 17000                       | 174                         |
| 16,90                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             | 175                         |
| 17,00                     | 18                         | 143       | 93        | 71       | 48       | 170                         | 170                         | 170                         | 170                         | 17500                       | 176                         |
| 17,00                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             | 177                         |
| 17,10                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             | 178                         |
| 17,20                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             | 179                         |
| 17,30                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             | 180                         |
| 17,40                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             | 181                         |
| 17,50                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             |                             |
| 17,50                     | 18                         | 143       | 93        | 71       | 48       | 175                         | 175                         | 175                         | 175                         | 17500                       |                             |
| 17,60                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             |                             |
| 17,70                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             |                             |
| 17,80                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             |                             |
| 17,80                     | 18                         | 143       | 93        | 71       | 48       | 178                         | 178                         | 178                         | 178                         |                             |                             |
| 17,90                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             |                             |
| 18,00                     | 18                         | 143       | 93        | 69       | 48       |                             |                             |                             |                             |                             |                             |
| 18,00                     | 18                         | 143       | 93        | 71       | 48       | 180                         | 180                         | 180                         | 180                         | 18000                       |                             |
| 18,10                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             |                             |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | ● | ○ | ○ | ○ | ○ |
| M | ● | ● | ● | ● | ● |
| K | ● | ○ | ○ | ○ | ○ |
| N | ○ | ○ | ○ | ○ | ○ |
| S | ● | ● | ● | ● | ● |
| H |   |   |   |   |   |
| O |   |   |   |   |   |

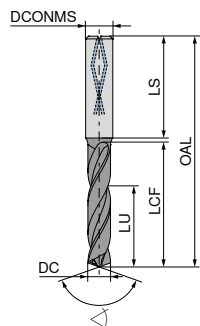
→ V<sub>c</sub> на стр. 114–123

 Ø DC<sub>m7</sub> для типа VA, Ti и GG / Ø DC<sub>h7</sub> для типа Speed VA и AL

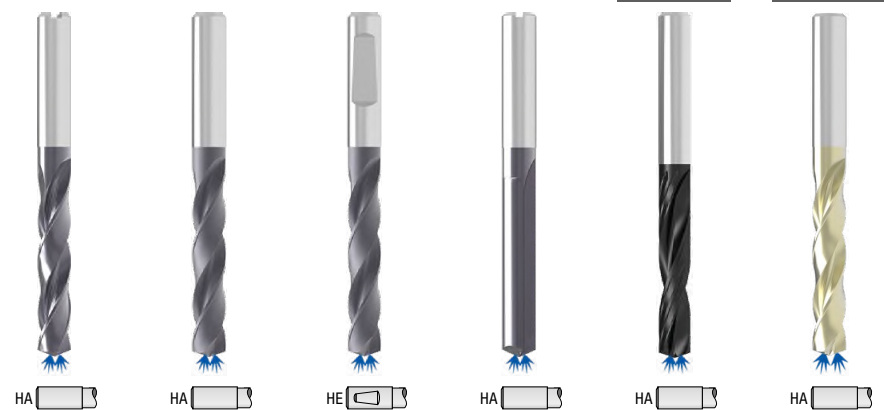
## WTX – Высокопроизводительное сверло, DIN 6537



| Speed<br>VA | VA    | VA    | GG    | AL         | Ti         |
|-------------|-------|-------|-------|------------|------------|
| Ti800       | Ti700 | Ti700 | Ti700 | DLC        | DPA54      |
|             |       |       |       | DRAGONSKIN | DRAGONSKIN |



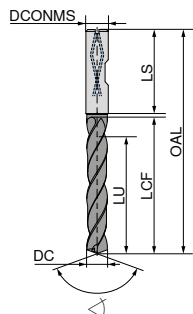
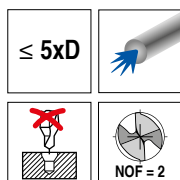
Тип GG – с прямыми стружечными канавками



| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm | Твердый сплав<br>10 773 ... | Твердый сплав<br>10 745 ... | Твердый сплав<br>10 746 ... | Твердый сплав<br>10 749 ... | Твердый сплав<br>10 791 ... | Твердый сплав<br>10 787 ... |
|---------------------------|----------------------------|-----------|-----------|----------|----------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 18,20                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 182                         |
| 18,30                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 183                         |
| 18,40                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 184                         |
| 18,50                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 185                         |
| 18,50                     | 20                         | 153       | 101       | 77       | 50       | 185                         | 185                         | 185                         | 185                         | 18500                       | 186                         |
| 18,60                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 187                         |
| 18,70                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 188                         |
| 18,80                     | 20                         | 153       | 101       | 75       | 50       | 188                         | 188                         | 188                         | 188                         |                             | 189                         |
| 18,80                     | 20                         | 153       | 101       | 77       | 50       |                             |                             |                             |                             |                             | 190                         |
| 18,90                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 191                         |
| 19,00                     | 20                         | 153       | 101       | 75       | 50       | 190                         | 190                         | 190                         | 190                         | 19000                       | 192                         |
| 19,00                     | 20                         | 153       | 101       | 77       | 50       |                             |                             |                             |                             |                             | 193                         |
| 19,10                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 194                         |
| 19,20                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 195                         |
| 19,30                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 196                         |
| 19,35                     | 20                         | 153       | 101       | 77       | 50       |                             | 993                         |                             |                             |                             | 197                         |
| 19,40                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 198                         |
| 19,50                     | 20                         | 153       | 101       | 77       | 50       | 195                         | 195                         | 195                         | 195                         | 19500                       | 199                         |
| 19,50                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 200                         |
| 19,60                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 200                         |
| 19,70                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 200                         |
| 19,80                     | 20                         | 153       | 101       | 77       | 50       | 198                         | 198                         | 198                         | 198                         |                             | 200                         |
| 19,80                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 200                         |
| 19,90                     | 20                         | 153       | 101       | 75       | 50       |                             |                             |                             |                             |                             | 200                         |
| 20,00                     | 20                         | 153       | 101       | 75       | 50       | 200                         | 200                         | 200                         | 200                         | 20000                       | 200                         |
| 20,00                     | 20                         | 153       | 101       | 77       | 50       |                             |                             |                             |                             |                             | 200                         |
| P                         |                            |           |           |          |          | ●                           | ○                           | ○                           |                             |                             | ○                           |
| M                         |                            |           |           |          |          | ●                           | ●                           | ●                           |                             |                             | ●                           |
| K                         |                            |           |           |          |          | ●                           | ○                           | ○                           | ●                           |                             |                             |
| N                         |                            |           |           |          |          | ○                           | ○                           | ○                           | ○                           | ●                           |                             |
| S                         |                            |           |           |          |          | ●                           | ●                           | ●                           |                             |                             | ●                           |
| H                         |                            |           |           |          |          |                             |                             |                             |                             |                             |                             |
| O                         |                            |           |           |          |          |                             |                             |                             |                             |                             |                             |

→ v<sub>c</sub> на стр. 114–123Ø DC<sub>m7</sub> для типа VA, Ti и GG / Ø DC<sub>h7</sub> для типа Speed VA и AL

## WPC – Высокопроизводительное сверло, DIN 6537



Твердый сплав  
11 609 ...

Твердый сплав  
11 610 ...

Твердый сплав  
11 629 ...

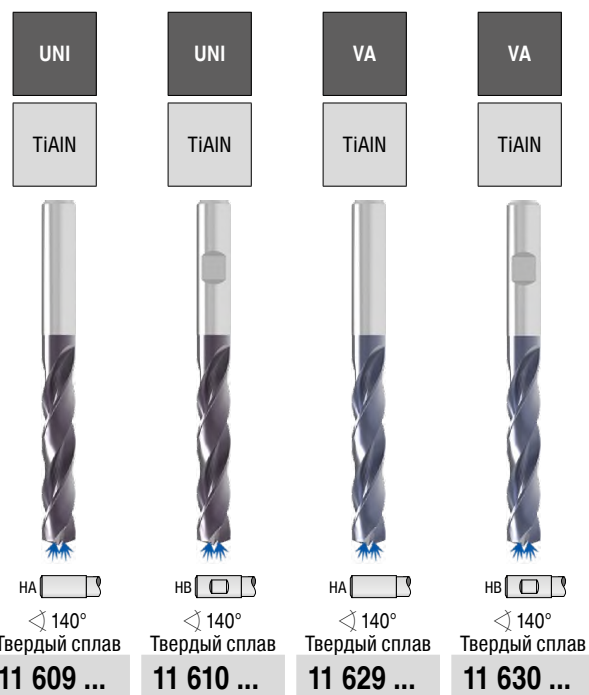
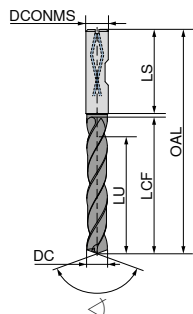
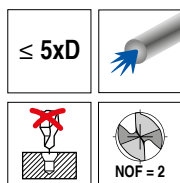
Твердый сплав  
11 630 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |     |     |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|--|-----|-----|-------|
| 1,00                   | 4                          | 45        | 8,0       | 6,5      | 30,0     |  | 010 |     | 010   |
| 1,10                   | 4                          | 45        | 8,8       | 7,2      | 29,0     |  | 011 |     | 011   |
| 1,20                   | 4                          | 45        | 9,6       | 7,8      | 29,0     |  | 012 |     | 012   |
| 1,30                   | 4                          | 45        | 10,4      | 8,5      | 28,5     |  | 013 |     | 013   |
| 1,40                   | 4                          | 45        | 11,2      | 9,1      | 28,0     |  | 014 |     | 014   |
| 1,50                   | 4                          | 50        | 12,0      | 9,8      | 32,0     |  | 015 |     | 015   |
| 1,60                   | 4                          | 50        | 12,8      | 10,4     | 31,0     |  | 016 |     | 016   |
| 1,70                   | 4                          | 50        | 13,6      | 11,1     | 30,5     |  | 017 |     | 017   |
| 1,80                   | 4                          | 50        | 14,4      | 11,7     | 30,0     |  | 018 |     | 018   |
| 1,90                   | 4                          | 50        | 15,2      | 12,4     | 29,5     |  | 019 |     | 019   |
| 2,00                   | 4                          | 50        | 16,0      | 13,0     | 29,0     |  | 020 |     | 020   |
| 2,10                   | 4                          | 55        | 16,8      | 13,7     | 33,0     |  | 021 |     | 021   |
| 2,20                   | 4                          | 55        | 17,6      | 14,3     | 32,5     |  | 022 |     | 022   |
| 2,30                   | 4                          | 55        | 18,4      | 15,0     | 32,0     |  | 023 |     | 023   |
| 2,40                   | 4                          | 55        | 19,2      | 15,6     | 31,5     |  | 024 |     | 024   |
| 2,50                   | 4                          | 55        | 20,0      | 16,3     | 30,5     |  | 025 |     | 025   |
| 2,60                   | 4                          | 55        | 20,8      | 16,9     | 30,0     |  | 026 |     | 026   |
| 2,70                   | 4                          | 55        | 21,6      | 17,6     | 29,0     |  | 027 |     | 027   |
| 2,80                   | 4                          | 55        | 22,4      | 18,2     | 29,0     |  | 028 |     | 028   |
| 2,90                   | 4                          | 55        | 23,2      | 18,9     | 28,5     |  | 029 |     | 029   |
| 3,00                   | 6                          | 66        | 28,0      | 23,0     | 36,0     |  | 030 | 030 | 030   |
| 3,10                   | 6                          | 66        | 28,0      | 23,0     | 36,0     |  | 031 | 031 | 031   |
| 3,20                   | 6                          | 66        | 28,0      | 23,0     | 36,0     |  | 032 | 032 | 032   |
| 3,25                   | 6                          | 66        | 28,0      | 23,0     | 36,0     |  | 890 | 890 | 03250 |
| 3,30                   | 6                          | 66        | 28,0      | 23,0     | 36,0     |  | 033 | 033 | 033   |
| 3,40                   | 6                          | 66        | 28,0      | 23,0     | 36,0     |  | 034 | 034 | 034   |
| 3,50                   | 6                          | 66        | 28,0      | 23,0     | 36,0     |  | 035 | 035 | 035   |
| 3,60                   | 6                          | 66        | 28,0      | 23,0     | 36,0     |  | 036 | 036 | 036   |
| 3,70                   | 6                          | 66        | 28,0      | 23,0     | 36,0     |  | 037 | 037 | 037   |
| 3,80                   | 6                          | 74        | 36,0      | 29,0     | 36,0     |  | 038 | 038 | 038   |
| 3,90                   | 6                          | 74        | 36,0      | 29,0     | 36,0     |  | 039 | 039 | 039   |
| 4,00                   | 6                          | 74        | 36,0      | 29,0     | 36,0     |  | 040 | 040 | 040   |
| 4,10                   | 6                          | 74        | 36,0      | 29,0     | 36,0     |  | 041 | 041 | 041   |
| 4,20                   | 6                          | 74        | 36,0      | 29,0     | 36,0     |  | 042 | 042 | 042   |
| 4,30                   | 6                          | 74        | 36,0      | 29,0     | 36,0     |  | 043 | 043 | 043   |
| 4,40                   | 6                          | 74        | 36,0      | 29,0     | 36,0     |  | 044 | 044 | 044   |
| 4,50                   | 6                          | 74        | 36,0      | 29,0     | 36,0     |  | 045 | 045 | 045   |
| 4,60                   | 6                          | 74        | 36,0      | 29,0     | 36,0     |  | 046 | 046 | 046   |
| 4,65                   | 6                          | 74        | 36,0      | 29,0     | 36,0     |  | 900 | 900 | 900   |
| 4,70                   | 6                          | 74        | 36,0      | 29,0     | 36,0     |  | 047 | 047 | 047   |
| 4,80                   | 6                          | 82        | 44,0      | 35,0     | 36,0     |  | 048 | 048 | 048   |

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→ v<sub>c</sub> на стр. 131+134

## WPC – Высокопроизводительное сверло, DIN 6537

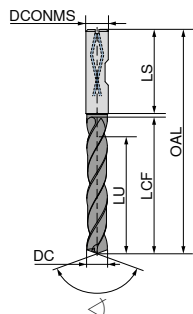
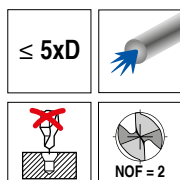


| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |     |     |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|--|-----|-----|-------|
| 4,90                   | 6                          | 82        | 44,0      | 35,0     | 36,0     |  | 049 | 049 | 049   |
| 5,00                   | 6                          | 82        | 44,0      | 35,0     | 36,0     |  | 050 | 050 | 050   |
| 5,10                   | 6                          | 82        | 44,0      | 35,0     | 36,0     |  | 051 | 051 | 051   |
| 5,20                   | 6                          | 82        | 44,0      | 35,0     | 36,0     |  | 052 | 052 | 052   |
| 5,30                   | 6                          | 82        | 44,0      | 35,0     | 36,0     |  | 053 | 053 | 053   |
| 5,40                   | 6                          | 82        | 44,0      | 35,0     | 36,0     |  | 054 | 054 | 054   |
| 5,50                   | 6                          | 82        | 44,0      | 35,0     | 36,0     |  | 055 | 055 | 055   |
| 5,55                   | 6                          | 82        | 44,0      | 35,0     | 36,0     |  | 902 | 902 | 902   |
| 5,60                   | 6                          | 82        | 44,0      | 35,0     | 36,0     |  | 056 | 056 | 056   |
| 5,70                   | 6                          | 82        | 44,0      | 35,0     | 36,0     |  | 057 | 057 | 057   |
| 5,80                   | 6                          | 82        | 44,0      | 35,0     | 36,0     |  | 058 | 058 | 058   |
| 5,90                   | 6                          | 82        | 44,0      | 35,0     | 36,0     |  | 059 | 059 | 059   |
| 6,00                   | 6                          | 82        | 44,0      | 35,0     | 36,0     |  | 060 | 060 | 060   |
| 6,10                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 061 | 061 | 061   |
| 6,20                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 062 | 062 | 062   |
| 6,30                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 063 | 063 | 063   |
| 6,40                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 064 | 064 | 064   |
| 6,50                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 065 | 065 | 065   |
| 6,60                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 066 | 066 | 066   |
| 6,70                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 067 | 067 | 067   |
| 6,80                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 068 | 068 | 068   |
| 6,90                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 069 | 069 | 069   |
| 7,00                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 070 | 070 | 070   |
| 7,10                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 071 | 071 | 071   |
| 7,20                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 072 | 072 | 072   |
| 7,30                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 073 | 073 | 073   |
| 7,40                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 074 | 074 | 074   |
| 7,45                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 924 | 924 | 07450 |
| 7,50                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 075 | 075 | 075   |
| 7,55                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 975 | 975 | 975   |
| 7,60                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 076 | 076 | 076   |
| 7,70                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 077 | 077 | 077   |
| 7,80                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 078 | 078 | 078   |
| 7,90                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 079 | 079 | 079   |
| 8,00                   | 8                          | 91        | 53,0      | 43,0     | 36,0     |  | 080 | 080 | 080   |
| 8,10                   | 10                         | 103       | 61,0      | 49,0     | 40,0     |  | 081 | 081 | 081   |
| 8,20                   | 10                         | 103       | 61,0      | 49,0     | 40,0     |  | 082 | 082 | 082   |
| 8,30                   | 10                         | 103       | 61,0      | 49,0     | 40,0     |  | 083 | 083 | 083   |
| 8,40                   | 10                         | 103       | 61,0      | 49,0     | 40,0     |  | 084 | 084 | 084   |
| 8,50                   | 10                         | 103       | 61,0      | 49,0     | 40,0     |  | 085 | 085 | 085   |
| 8,60                   | 10                         | 103       | 61,0      | 49,0     | 40,0     |  | 086 | 086 | 086   |

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→ v<sub>c</sub> на стр. 131+134

## WPC – Высокопроизводительное сверло, DIN 6537



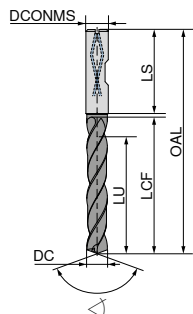
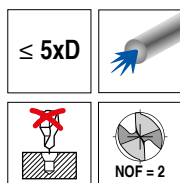
HA HB HA HB  
 $\angle 140^\circ$   $\angle 140^\circ$   $\angle 140^\circ$   $\angle 140^\circ$   
 Твердый сплав Твердый сплав Твердый сплав Твердый сплав  
 11 609 ... 11 610 ... 11 629 ... 11 630 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |     |     |       |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|-----|-----|-------|-----|
| 8,70                   | 10                         | 103       | 61,0      | 49,0     | 40,0     | 087 | 087 | 087   | 087 |
| 8,80                   | 10                         | 103       | 61,0      | 49,0     | 40,0     | 088 | 088 | 088   | 088 |
| 8,90                   | 10                         | 103       | 61,0      | 49,0     | 40,0     | 089 | 089 | 089   | 089 |
| 9,00                   | 10                         | 103       | 61,0      | 49,0     | 40,0     | 090 | 090 | 090   | 090 |
| 9,10                   | 10                         | 103       | 61,0      | 49,0     | 40,0     | 091 | 091 | 091   | 091 |
| 9,20                   | 10                         | 103       | 61,0      | 49,0     | 40,0     | 092 | 092 | 092   | 092 |
| 9,25                   | 10                         | 103       | 61,0      | 49,0     | 40,0     | 925 | 925 | 925   | 925 |
| 9,30                   | 10                         | 103       | 61,0      | 49,0     | 40,0     | 093 | 093 | 093   | 093 |
| 9,35                   | 10                         | 103       | 61,0      | 49,0     | 40,0     | 930 | 930 | 09350 | 093 |
| 9,40                   | 10                         | 103       | 61,0      | 49,0     | 40,0     | 094 | 094 | 094   | 094 |
| 9,50                   | 10                         | 103       | 61,0      | 49,0     | 40,0     | 095 | 095 | 095   | 095 |
| 9,60                   | 10                         | 103       | 61,0      | 49,0     | 40,0     | 096 | 096 | 096   | 096 |
| 9,70                   | 10                         | 103       | 61,0      | 49,0     | 40,0     | 097 | 097 | 097   | 097 |
| 9,80                   | 10                         | 103       | 61,0      | 49,0     | 40,0     | 098 | 098 | 098   | 098 |
| 9,90                   | 10                         | 103       | 61,0      | 49,0     | 40,0     | 099 | 099 | 099   | 099 |
| 10,00                  | 10                         | 103       | 61,0      | 49,0     | 40,0     | 100 | 100 | 100   | 100 |
| 10,10                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 101 | 101 | 101   | 101 |
| 10,20                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 102 | 102 | 102   | 102 |
| 10,30                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 103 | 103 | 103   | 103 |
| 10,40                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 104 | 104 | 104   | 104 |
| 10,50                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 105 | 105 | 105   | 105 |
| 10,60                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 106 | 106 | 106   | 106 |
| 10,70                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 107 | 107 | 107   | 107 |
| 10,75                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 904 | 904 | 10750 |     |
| 10,80                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 108 | 108 | 108   | 108 |
| 10,90                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 109 | 109 | 109   | 109 |
| 11,00                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 110 | 110 | 110   | 110 |
| 11,10                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 111 | 111 | 111   | 111 |
| 11,20                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 112 | 112 | 112   | 112 |
| 11,25                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 912 | 912 | 11250 |     |
| 11,30                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 113 | 113 | 113   | 113 |
| 11,40                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 114 | 114 | 114   | 114 |
| 11,50                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 115 | 115 | 115   | 115 |
| 11,60                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 116 | 116 | 116   | 116 |
| 11,70                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 117 | 117 | 117   | 117 |
| 11,80                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 118 | 118 | 118   | 118 |
| 11,90                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 119 | 119 | 119   | 119 |
| 12,00                  | 12                         | 118       | 71,0      | 56,0     | 45,0     | 120 | 120 | 120   | 120 |
| 12,25                  | 14                         | 124       | 77,0      | 60,0     | 45,0     | 122 | 122 | 12250 |     |
| 12,50                  | 14                         | 124       | 77,0      | 60,0     | 45,0     | 125 | 125 | 125   | 125 |
| 12,70                  | 14                         | 124       | 77,0      | 60,0     | 45,0     | 127 | 127 | 127   | 127 |

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→ v<sub>c</sub> на стр. 131+134

## WPC – Высокопроизводительное сверло, DIN 6537



HA HB HA HB  
 $\angle 140^\circ$   $\angle 140^\circ$   $\angle 140^\circ$   $\angle 140^\circ$   
 Твердый сплав Твердый сплав Твердый сплав Твердый сплав  
 11 609 ... 11 610 ... 11 629 ... 11 630 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |     |     |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|--|-----|-----|-----|
| 12,80                  | 14                         | 124       | 77,0      | 60,0     | 45,0     |  | 128 | 128 |     |
| 12,90                  | 14                         | 124       | 77,0      | 60,0     | 45,0     |  | 129 | 129 |     |
| 13,00                  | 14                         | 124       | 77,0      | 60,0     | 45,0     |  | 130 | 130 | 130 |
| 13,10                  | 14                         | 124       | 77,0      | 60,0     | 45,0     |  | 131 | 131 |     |
| 13,30                  | 14                         | 124       | 77,0      | 60,0     | 45,0     |  | 133 | 133 |     |
| 13,50                  | 14                         | 124       | 77,0      | 60,0     | 45,0     |  | 135 | 135 | 135 |
| 13,70                  | 14                         | 124       | 77,0      | 60,0     | 45,0     |  | 137 | 137 | 137 |
| 13,80                  | 14                         | 124       | 77,0      | 60,0     | 45,0     |  | 138 | 138 |     |
| 14,00                  | 14                         | 124       | 77,0      | 60,0     | 45,0     |  | 140 | 140 | 140 |
| 14,20                  | 16                         | 133       | 83,0      | 63,0     | 48,0     |  | 142 | 142 |     |
| 14,50                  | 16                         | 133       | 83,0      | 63,0     | 48,0     |  | 145 | 145 | 145 |
| 14,70                  | 16                         | 133       | 83,0      | 63,0     | 48,0     |  | 147 | 147 | 147 |
| 14,80                  | 16                         | 133       | 83,0      | 63,0     | 48,0     |  | 148 | 148 |     |
| 15,00                  | 16                         | 133       | 83,0      | 63,0     | 48,0     |  | 150 | 150 | 150 |
| 15,10                  | 16                         | 133       | 83,0      | 63,0     | 48,0     |  | 151 | 151 |     |
| 15,25                  | 16                         | 133       | 83,0      | 63,0     | 48,0     |  | 152 | 152 |     |
| 15,30                  | 16                         | 133       | 83,0      | 63,0     | 48,0     |  | 153 | 153 |     |
| 15,50                  | 16                         | 133       | 83,0      | 63,0     | 48,0     |  | 155 | 155 | 155 |
| 15,60                  | 16                         | 133       | 83,0      | 63,0     | 48,0     |  | 156 | 156 |     |
| 15,70                  | 16                         | 133       | 83,0      | 63,0     | 48,0     |  | 157 | 157 | 157 |
| 15,80                  | 16                         | 133       | 83,0      | 63,0     | 48,0     |  | 158 | 158 |     |
| 16,00                  | 16                         | 133       | 83,0      | 63,0     | 48,0     |  | 160 | 160 | 160 |
| 16,50                  | 18                         | 143       | 93,0      | 71,0     | 48,0     |  | 165 | 165 | 165 |
| 16,80                  | 18                         | 143       | 93,0      | 71,0     | 48,0     |  | 168 | 168 |     |
| 16,90                  | 18                         | 143       | 93,0      | 71,0     | 48,0     |  | 169 | 169 |     |
| 17,00                  | 18                         | 143       | 93,0      | 71,0     | 48,0     |  | 170 | 170 | 170 |
| 17,50                  | 18                         | 143       | 93,0      | 71,0     | 48,0     |  | 175 | 175 | 175 |
| 17,60                  | 18                         | 143       | 93,0      | 71,0     | 48,0     |  | 176 | 176 |     |
| 17,80                  | 18                         | 143       | 93,0      | 71,0     | 48,0     |  | 178 | 178 |     |
| 18,00                  | 18                         | 143       | 93,0      | 71,0     | 48,0     |  | 180 | 180 | 180 |
| 18,50                  | 20                         | 153       | 101,0     | 77,0     | 50,0     |  | 185 | 185 | 185 |
| 18,80                  | 20                         | 153       | 101,0     | 77,0     | 50,0     |  | 188 | 188 |     |
| 18,90                  | 20                         | 153       | 101,0     | 77,0     | 50,0     |  | 189 | 189 |     |
| 19,00                  | 20                         | 153       | 101,0     | 77,0     | 50,0     |  | 190 | 190 | 190 |
| 19,50                  | 20                         | 153       | 101,0     | 77,0     | 50,0     |  | 195 | 195 | 195 |
| 19,60                  | 20                         | 153       | 101,0     | 77,0     | 50,0     |  | 196 | 196 |     |
| 19,80                  | 20                         | 153       | 101,0     | 77,0     | 50,0     |  | 198 | 198 |     |
| 20,00                  | 20                         | 153       | 101,0     | 77,0     | 50,0     |  | 200 | 200 | 200 |

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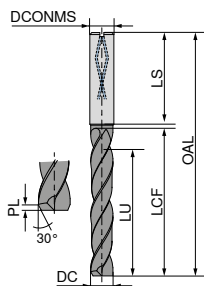
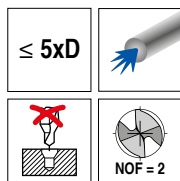
→ v<sub>c</sub> на стр. 131+134

## WTH – Высокопроизводительное сверло, DIN 6537

- ▲ для универсального применения
- ▲ четыре направляющие ленточки

- ▲ полированные стружечные канавки
- ▲ тип ALU 5xD по запросу

- ▲ PL = размер фаски



10 721 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm | PL<br>mm |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|----------|-----|
| 8,20                   | 10                         | 103       | 61        | 49       | 40       | 0,41     | 082 |
| 8,30                   | 10                         | 103       | 61        | 49       | 40       | 0,42     | 083 |
| 8,40                   | 10                         | 103       | 61        | 49       | 40       | 0,42     | 084 |
| 8,50                   | 10                         | 103       | 61        | 49       | 40       | 0,43     | 085 |
| 8,60                   | 10                         | 103       | 61        | 49       | 40       | 0,43     | 086 |
| 8,70                   | 10                         | 103       | 61        | 49       | 40       | 0,44     | 087 |
| 8,80                   | 10                         | 103       | 61        | 49       | 40       | 0,44     | 088 |
| 8,90                   | 10                         | 103       | 61        | 49       | 40       | 0,45     | 089 |
| 9,00                   | 10                         | 103       | 61        | 49       | 40       | 0,45     | 090 |
| 9,10                   | 10                         | 103       | 61        | 49       | 40       | 0,46     | 091 |
| 9,20                   | 10                         | 103       | 61        | 49       | 40       | 0,46     | 092 |
| 9,30                   | 10                         | 103       | 61        | 49       | 40       | 0,47     | 093 |
| 9,40                   | 10                         | 103       | 61        | 49       | 40       | 0,47     | 094 |
| 9,50                   | 10                         | 103       | 61        | 49       | 40       | 0,48     | 095 |
| 9,60                   | 10                         | 103       | 61        | 49       | 40       | 0,48     | 096 |
| 9,70                   | 10                         | 103       | 61        | 49       | 40       | 0,49     | 097 |
| 9,80                   | 10                         | 103       | 61        | 49       | 40       | 0,49     | 098 |
| 9,90                   | 10                         | 103       | 61        | 49       | 40       | 0,50     | 099 |
| 10,00                  | 10                         | 103       | 61        | 49       | 40       | 0,50     | 100 |
| 10,10                  | 12                         | 116       | 69        | 54       | 45       | 0,51     | 101 |
| 10,20                  | 12                         | 116       | 69        | 54       | 45       | 0,51     | 102 |
| 10,30                  | 12                         | 116       | 69        | 54       | 45       | 0,52     | 103 |
| 10,40                  | 12                         | 116       | 69        | 54       | 45       | 0,52     | 104 |
| 10,50                  | 12                         | 116       | 69        | 54       | 45       | 0,53     | 105 |
| 10,60                  | 12                         | 116       | 69        | 54       | 45       | 0,53     | 106 |
| 10,70                  | 12                         | 116       | 69        | 54       | 45       | 0,54     | 107 |
| 10,80                  | 12                         | 116       | 69        | 54       | 45       | 0,54     | 108 |
| 10,90                  | 12                         | 116       | 69        | 54       | 45       | 0,55     | 109 |
| 11,00                  | 12                         | 116       | 69        | 54       | 45       | 0,55     | 110 |
| 11,10                  | 12                         | 116       | 69        | 54       | 45       | 0,56     | 111 |
| 11,20                  | 12                         | 116       | 69        | 54       | 45       | 0,56     | 112 |
| 11,30                  | 12                         | 116       | 69        | 54       | 45       | 0,57     | 113 |
| 11,40                  | 12                         | 116       | 69        | 54       | 45       | 0,57     | 114 |
| 11,50                  | 12                         | 116       | 69        | 54       | 45       | 0,58     | 115 |
| 11,60                  | 12                         | 116       | 69        | 54       | 45       | 0,58     | 116 |
| 11,70                  | 12                         | 116       | 69        | 54       | 45       | 0,59     | 117 |
| 11,80                  | 12                         | 116       | 69        | 54       | 45       | 0,59     | 118 |
| 11,90                  | 12                         | 116       | 69        | 54       | 45       | 0,60     | 119 |
| 12,00                  | 12                         | 116       | 69        | 54       | 45       | 0,60     | 120 |
| 12,50                  | 14                         | 122       | 75        | 58       | 45       | 0,63     | 125 |
| 12,80                  | 14                         | 122       | 75        | 58       | 45       | 0,64     | 128 |
| 13,00                  | 14                         | 122       | 75        | 58       | 45       | 0,65     | 130 |
| 13,50                  | 14                         | 122       | 75        | 58       | 45       | 0,68     | 135 |
| 13,80                  | 14                         | 122       | 75        | 58       | 45       | 0,69     | 138 |
| 14,00                  | 14                         | 122       | 75        | 58       | 45       | 0,70     | 140 |
| 14,50                  | 16                         | 131       | 81        | 61       | 48       | 0,73     | 145 |
| 14,80                  | 16                         | 131       | 81        | 61       | 48       | 0,74     | 148 |
| 15,00                  | 16                         | 131       | 81        | 61       | 48       | 0,75     | 150 |
| 15,50                  | 16                         | 131       | 81        | 61       | 48       | 0,78     | 155 |
| 15,80                  | 16                         | 131       | 81        | 61       | 48       | 0,79     | 158 |
| 16,00                  | 16                         | 131       | 81        | 61       | 48       | 0,80     | 160 |
| 16,50                  | 18                         | 141       | 91        | 69       | 48       | 0,83     | 165 |
| 16,80                  | 18                         | 141       | 91        | 69       | 48       | 0,84     | 168 |
| 17,00                  | 18                         | 141       | 91        | 69       | 48       | 0,85     | 170 |
| 17,50                  | 18                         | 141       | 91        | 69       | 48       | 0,88     | 175 |
| 17,80                  | 18                         | 141       | 91        | 69       | 48       | 0,89     | 178 |
| 18,00                  | 18                         | 141       | 91        | 69       | 48       | 0,90     | 180 |
| 18,50                  | 20                         | 151       | 99        | 75       | 50       | 0,93     | 185 |
| 18,80                  | 20                         | 151       | 99        | 75       | 50       | 0,94     | 188 |
| 19,00                  | 20                         | 151       | 99        | 75       | 50       | 0,95     | 190 |
| 19,50                  | 20                         | 151       | 99        | 75       | 50       | 0,98     | 195 |
| 19,80                  | 20                         | 151       | 99        | 75       | 50       | 0,99     | 198 |
| 20,00                  | 20                         | 151       | 99        | 75       | 50       | 1,00     | 200 |

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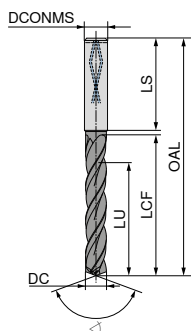
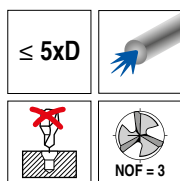
→ v<sub>c</sub> на стр. 127

## WTH – Высокопроизводительное сверло, заводской стандарт

▲ сверло для высокой подачи с тремя режущими кромками

▲ универсальность в применении  
▲ высокая точность позиционирования

▲ предназначено для сложных случаев засверливания



Feed UNI

DPX74S



НА

140°

Твердый сплав

10 789 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 4,00                   | 6                          | 74        | 36        | 29       | 36       | 04000 |
| 4,10                   | 6                          | 74        | 36        | 29       | 36       | 04100 |
| 4,20                   | 6                          | 74        | 36        | 29       | 36       | 04200 |
| 4,30                   | 6                          | 74        | 36        | 29       | 36       | 04300 |
| 4,40                   | 6                          | 74        | 36        | 29       | 36       | 04400 |
| 4,50                   | 6                          | 74        | 36        | 29       | 36       | 04500 |
| 4,60                   | 6                          | 74        | 36        | 29       | 36       | 04600 |
| 4,70                   | 6                          | 74        | 36        | 29       | 36       | 04700 |
| 4,80                   | 6                          | 82        | 44        | 35       | 36       | 04800 |
| 4,90                   | 6                          | 82        | 44        | 35       | 36       | 04900 |
| 5,00                   | 6                          | 82        | 44        | 35       | 36       | 05000 |
| 5,10                   | 6                          | 82        | 44        | 35       | 36       | 05100 |
| 5,20                   | 6                          | 82        | 44        | 35       | 36       | 05200 |
| 5,30                   | 6                          | 82        | 44        | 35       | 36       | 05300 |
| 5,40                   | 6                          | 82        | 44        | 35       | 36       | 05400 |
| 5,50                   | 6                          | 82        | 44        | 35       | 36       | 05500 |
| 5,55                   | 6                          | 82        | 44        | 35       | 36       | 05550 |
| 5,60                   | 6                          | 82        | 44        | 35       | 36       | 05600 |
| 5,70                   | 6                          | 82        | 44        | 35       | 36       | 05700 |
| 5,80                   | 6                          | 82        | 44        | 35       | 36       | 05800 |
| 5,90                   | 6                          | 82        | 44        | 35       | 36       | 05900 |
| 6,00                   | 6                          | 82        | 44        | 35       | 36       | 06000 |
| 6,10                   | 8                          | 91        | 53        | 43       | 36       | 06100 |
| 6,20                   | 8                          | 91        | 53        | 43       | 36       | 06200 |
| 6,30                   | 8                          | 91        | 53        | 43       | 36       | 06300 |
| 6,40                   | 8                          | 91        | 53        | 43       | 36       | 06400 |
| 6,50                   | 8                          | 91        | 53        | 43       | 36       | 06500 |
| 6,60                   | 8                          | 91        | 53        | 43       | 36       | 06600 |
| 6,70                   | 8                          | 91        | 53        | 43       | 36       | 06700 |
| 6,80                   | 8                          | 91        | 53        | 43       | 36       | 06800 |
| 6,90                   | 8                          | 91        | 53        | 43       | 36       | 06900 |
| 7,00                   | 8                          | 91        | 53        | 43       | 36       | 07000 |
| 7,10                   | 8                          | 91        | 53        | 43       | 36       | 07100 |
| 7,20                   | 8                          | 91        | 53        | 43       | 36       | 07200 |
| 7,30                   | 8                          | 91        | 53        | 43       | 36       | 07300 |
| 7,40                   | 8                          | 91        | 53        | 43       | 36       | 07400 |
| 7,50                   | 8                          | 91        | 53        | 43       | 36       | 07500 |
| 7,60                   | 8                          | 91        | 53        | 43       | 36       | 07600 |
| 7,70                   | 8                          | 91        | 53        | 43       | 36       | 07700 |
| 7,80                   | 8                          | 91        | 53        | 43       | 36       | 07800 |
| 7,90                   | 8                          | 91        | 53        | 43       | 36       | 07900 |
| 8,00                   | 8                          | 91        | 53        | 43       | 36       | 08000 |
| 8,10                   | 10                         | 103       | 61        | 49       | 40       | 08100 |
| 8,20                   | 10                         | 103       | 61        | 49       | 40       | 08200 |
| 8,30                   | 10                         | 103       | 61        | 49       | 40       | 08300 |
| 8,40                   | 10                         | 103       | 61        | 49       | 40       | 08400 |
| 8,50                   | 10                         | 103       | 61        | 49       | 40       | 08500 |
| 8,60                   | 10                         | 103       | 61        | 49       | 40       | 08600 |
| 8,70                   | 10                         | 103       | 61        | 49       | 40       | 08700 |
| 8,80                   | 10                         | 103       | 61        | 49       | 40       | 08800 |
| 8,90                   | 10                         | 103       | 61        | 49       | 40       | 08900 |
| 9,00                   | 10                         | 103       | 61        | 49       | 40       | 09000 |
| 9,10                   | 10                         | 103       | 61        | 49       | 40       | 09100 |
| 9,20                   | 10                         | 103       | 61        | 49       | 40       | 09200 |

10 789 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 9,30                   | 10                         | 103       | 61        | 49       | 40       | 09300 |
| 9,40                   | 10                         | 103       | 61        | 49       | 40       | 09400 |
| 9,50                   | 10                         | 103       | 61        | 49       | 40       | 09500 |
| 9,60                   | 10                         | 103       | 61        | 49       | 40       | 09600 |
| 9,70                   | 10                         | 103       | 61        | 49       | 40       | 09700 |
| 9,80                   | 10                         | 103       | 61        | 49       | 40       | 09800 |
| 9,90                   | 10                         | 103       | 61        | 49       | 40       | 09900 |
| 10,00                  | 10                         | 103       | 61        | 49       | 40       | 10000 |
| 10,10                  | 12                         | 118       | 71        | 56       | 45       | 10100 |
| 10,20                  | 12                         | 118       | 71        | 56       | 45       | 10200 |
| 10,30                  | 12                         | 118       | 71        | 56       | 45       | 10300 |
| 10,40                  | 12                         | 118       | 71        | 56       | 45       | 10400 |
| 10,50                  | 12                         | 118       | 71        | 56       | 45       | 10500 |
| 10,60                  | 12                         | 118       | 71        | 56       | 45       | 10600 |
| 10,70                  | 12                         | 118       | 71        | 56       | 45       | 10700 |
| 10,80                  | 12                         | 118       | 71        | 56       | 45       | 10800 |
| 10,90                  | 12                         | 118       | 71        | 56       | 45       | 10900 |
| 11,00                  | 12                         | 118       | 71        | 56       | 45       | 11000 |
| 11,10                  | 12                         | 118       | 71        | 56       | 45       | 11100 |
| 11,20                  | 12                         | 118       | 71        | 56       | 45       | 11200 |
| 11,30                  | 12                         | 118       | 71        | 56       | 45       | 11300 |
| 11,40                  | 12                         | 118       | 71        | 56       | 45       | 11400 |
| 11,50                  | 12                         | 118       | 71        | 56       | 45       | 11500 |
| 11,60                  | 12                         | 118       | 71        | 56       | 45       | 11600 |
| 11,70                  | 12                         | 118       | 71        | 56       | 45       | 11700 |
| 11,80                  | 12                         | 118       | 71        | 56       | 45       | 11800 |
| 11,90                  | 12                         | 118       | 71        | 56       | 45       | 11900 |
| 12,00                  | 12                         | 118       | 71        | 56       | 45       | 12000 |
| 12,20                  | 14                         | 124       | 77        | 60       | 45       | 12200 |
| 12,50                  | 14                         | 124       | 77        | 60       | 45       | 12500 |
| 12,80                  | 14                         | 124       | 77        | 60       | 45       | 12800 |
| 13,00                  | 14                         | 124       | 77        | 60       | 45       | 13000 |
| 13,50                  | 14                         | 124       | 77        | 60       | 45       | 13500 |
| 13,80                  | 14                         | 124       | 77        | 60       | 45       | 13800 |
| 14,00                  | 14                         | 124       | 77        | 60       | 45       | 14000 |
| 14,50                  | 16                         | 133       | 83        | 63       | 48       | 14500 |
| 14,80                  | 16                         | 133       | 83        | 63       | 48       | 14800 |
| 15,00                  | 16                         | 133       | 83        | 63       | 48       | 15000 |
| 15,50                  | 16                         | 133       | 83        | 63       | 48       | 15500 |
| 15,80                  | 16                         | 133       | 83        | 63       | 48       | 15800 |
| 16,00                  | 16                         | 133       | 83        | 63       | 48       | 16000 |
| 16,50                  | 18                         | 143       | 93        | 71       | 48       | 16500 |
| 16,80                  | 18                         | 143       | 93        | 71       | 48       | 16800 |
| 17,00                  | 18                         | 143       | 93        | 71       | 48       | 17000 |
| 17,50                  | 18                         | 143       | 93        | 71       | 48       | 17500 |
| 17,80                  | 18                         | 143       | 93        | 71       | 48       | 17800 |
| 18,00                  | 18                         | 143       | 93        | 71       | 48       | 18000 |
| 18,50                  | 20                         | 153       | 101       | 77       | 50       | 18500 |
| 18,80                  | 20                         | 153       | 101       | 77       | 50       | 18800 |
| 19,00                  | 20                         | 153       | 101       | 77       | 50       | 19000 |
| 19,50                  | 20                         | 153       | 101       | 77       | 50       | 19500 |
| 19,80                  | 20                         | 153       | 101       | 77       | 50       | 19800 |
| 20,00                  | 20                         | 153       | 101       | 77       | 50       | 20000 |

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→ v<sub>c</sub> на стр. 110

# WTH – Высокопроизводительное сверло, DIN 6537

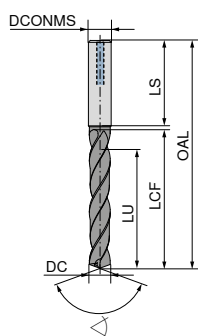
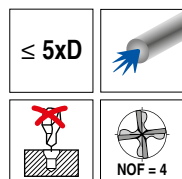
▲ 4-зубое быстропроходное сверло

▲ специализированное решение для обработки стали

▲ имеет 4 спиральных канала охлаждения

▲ новая геометрия режущих кромок гарантирует высокую точность позиционирования

▲ отличное качество выполняемых отверстий с точки зрения допусков, поверхности и позиционирования



NEW

HFDS

DPX14S

DRAGONSKIN



НА

130°

Твердый сплав

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10 798 ...

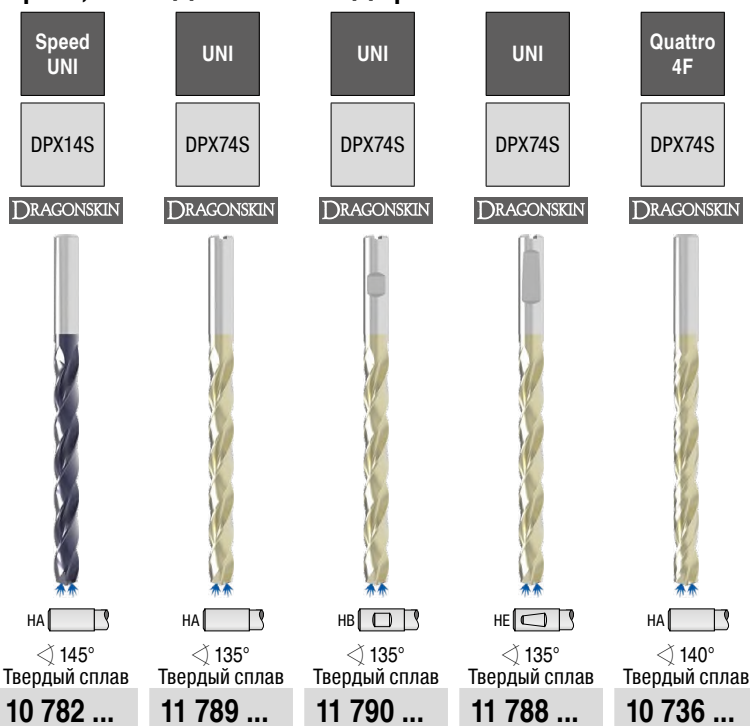
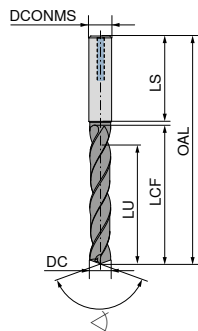
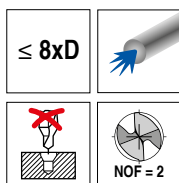
| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 12,5                   | 16                         | 142       | 91        | 73       | 48       | 12500 |
| 13,0                   | 16                         | 142       | 91        | 73       | 48       | 13000 |
| 14,0                   | 16                         | 142       | 91        | 73       | 48       | 14000 |
| 14,3                   | 16                         | 142       | 91        | 73       | 48       | 14300 |
| 14,5                   | 16                         | 142       | 91        | 73       | 48       | 14500 |
| 15,0                   | 18                         | 142       | 91        | 73       | 48       | 15000 |
| 16,0                   | 18                         | 142       | 91        | 73       | 48       | 16000 |

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| S | ○ |
| H | ○ |
| O | ○ |

→ v<sub>c</sub> на стр. 135

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 6,0                    | 8                          | 89        | 51        | 40       | 36       | 06000 |
| 6,1                    | 10                         | 102       | 59        | 47       | 40       | 06100 |
| 6,2                    | 10                         | 102       | 59        | 47       | 40       | 06200 |
| 6,3                    | 10                         | 102       | 59        | 47       | 40       | 06300 |
| 6,4                    | 10                         | 102       | 59        | 47       | 40       | 06400 |
| 6,5                    | 10                         | 102       | 59        | 47       | 40       | 06500 |
| 6,6                    | 10                         | 102       | 59        | 47       | 40       | 06600 |
| 6,7                    | 10                         | 102       | 59        | 47       | 40       | 06700 |
| 6,8                    | 10                         | 102       | 59        | 47       | 40       | 06800 |
| 6,9                    | 10                         | 102       | 59        | 47       | 40       | 06900 |
| 7,0                    | 10                         | 102       | 59        | 47       | 40       | 07000 |
| 7,1                    | 10                         | 102       | 59        | 47       | 40       | 07100 |
| 7,2                    | 10                         | 102       | 59        | 47       | 40       | 07200 |
| 7,3                    | 10                         | 102       | 59        | 47       | 40       | 07300 |
| 7,4                    | 10                         | 102       | 59        | 47       | 40       | 07400 |
| 7,5                    | 10                         | 102       | 59        | 47       | 40       | 07500 |
| 7,6                    | 10                         | 102       | 59        | 47       | 40       | 07600 |
| 7,7                    | 10                         | 102       | 59        | 47       | 40       | 07700 |
| 7,8                    | 10                         | 102       | 59        | 47       | 40       | 07800 |
| 7,9                    | 10                         | 102       | 59        | 47       | 40       | 07900 |
| 8,0                    | 10                         | 102       | 59        | 47       | 40       | 08000 |
| 8,1                    | 12                         | 118       | 70        | 55       | 45       | 08100 |
| 8,2                    | 12                         | 118       | 70        | 55       | 45       | 08200 |
| 8,3                    | 12                         | 118       | 70        | 55       | 45       | 08300 |
| 8,4                    | 12                         | 118       | 70        | 55       | 45       | 08400 |
| 8,5                    | 12                         | 118       | 70        | 55       | 45       | 08500 |
| 8,6                    | 12                         | 118       | 70        | 55       | 45       | 08600 |
| 8,7                    | 12                         | 118       | 70        | 55       | 45       | 08700 |
| 8,8                    | 12                         | 118       | 70        | 55       | 45       | 08800 |
| 8,9                    | 12                         | 118       | 70        | 55       | 45       | 08900 |
| 9,0                    | 12                         | 118       | 70        | 55       | 45       | 09000 |
| 9,1                    | 12                         | 118       | 70        | 55       | 45       | 09100 |
| 9,2                    | 12                         | 118       | 70        | 55       | 45       | 09200 |
| 9,3                    | 12                         | 118       | 70        | 55       | 45       | 09300 |
| 9,4                    | 12                         | 118       | 70        | 55       | 45       | 09400 |
| 9,5                    | 12                         | 118       | 70        | 55       | 45       | 09500 |
| 9,6                    | 12                         | 118       | 70        | 55       | 45       | 09600 |
| 9,7                    | 12                         | 118       | 70        | 55       | 45       | 09700 |
| 9,8                    | 12                         | 118       | 70        | 55       | 45       | 09800 |
| 9,9                    | 12                         | 118       | 70        | 55       | 45       | 09900 |
| 10,0                   | 12                         | 118       | 70        | 55       | 45       | 10000 |
| 10,2                   | 14                         | 124       | 76        | 60       | 45       | 10200 |
| 10,5                   | 14                         | 124       | 76        | 60       | 45       | 10500 |
| 11,0                   | 14                         | 124       | 76        | 60       | 45       | 11000 |
| 11,5                   | 14                         | 124       | 76        | 60       | 45       | 11500 |
| 12,0                   | 14                         | 124       | 76        | 60       | 45       | 12000 |

## WTX – Высокопроизводительное сверло, заводской стандарт

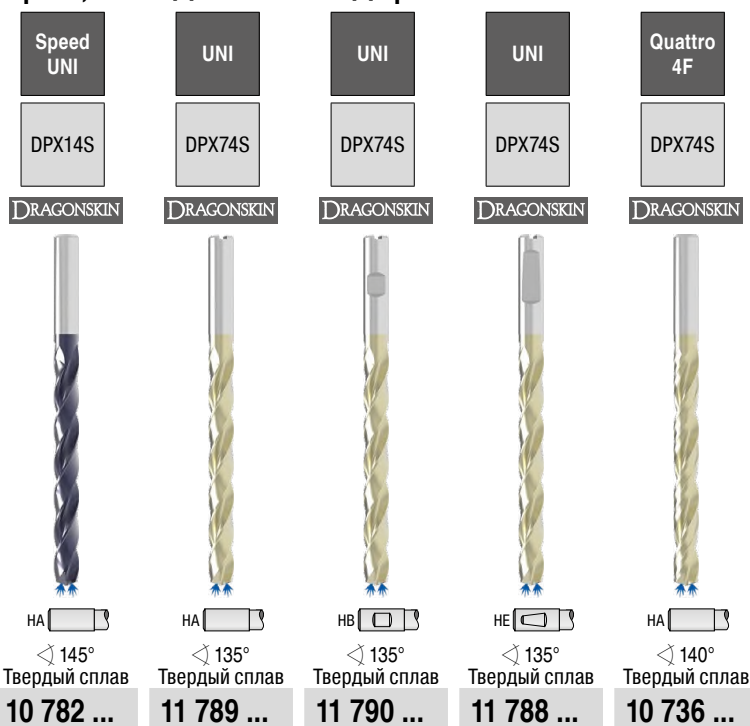
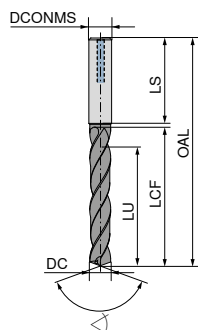
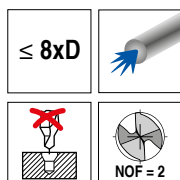


| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |            |       |     |       |
|---------------------------|----------------------------|-----------|-----------|----------|----------|--|------------|-------|-----|-------|
| 3,00                      | 6                          | 72        | 34        | 29       | 36       |  | 10 782 ... | 03000 | 030 | 03000 |
| 3,10                      | 6                          | 72        | 34        | 29       | 36       |  |            | 03100 | 031 | 03100 |
| 3,20                      | 6                          | 72        | 34        | 29       | 36       |  |            | 03200 | 032 | 03200 |
| 3,30                      | 6                          | 72        | 34        | 29       | 36       |  |            | 03300 | 033 | 03300 |
| 3,40                      | 6                          | 72        | 34        | 29       | 36       |  |            | 03400 | 034 | 03400 |
| 3,50                      | 6                          | 72        | 34        | 29       | 36       |  |            | 03500 | 035 | 03500 |
| 3,60                      | 6                          | 72        | 34        | 29       | 36       |  |            | 03600 | 036 | 03600 |
| 3,70                      | 6                          | 72        | 34        | 29       | 36       |  |            | 03700 | 037 | 03700 |
| 3,80                      | 6                          | 81        | 43        | 36       | 36       |  |            | 03800 | 038 | 03800 |
| 3,90                      | 6                          | 81        | 43        | 36       | 36       |  |            | 03900 | 039 | 03900 |
| 4,00                      | 6                          | 81        | 43        | 36       | 36       |  |            | 04000 | 040 | 04000 |
| 4,10                      | 6                          | 81        | 43        | 36       | 36       |  |            | 04100 | 041 | 04100 |
| 4,20                      | 6                          | 81        | 43        | 36       | 36       |  |            | 04200 | 042 | 04200 |
| 4,30                      | 6                          | 81        | 43        | 36       | 36       |  |            | 04300 | 043 | 04300 |
| 4,40                      | 6                          | 81        | 43        | 36       | 36       |  |            | 04400 | 044 | 04400 |
| 4,50                      | 6                          | 81        | 43        | 36       | 36       |  |            | 04500 | 045 | 04500 |
| 4,60                      | 6                          | 81        | 43        | 36       | 36       |  |            | 04600 | 046 | 04600 |
| 4,65                      | 6                          | 81        | 43        | 36       | 36       |  |            | 04650 |     |       |
| 4,70                      | 6                          | 81        | 43        | 36       | 36       |  |            | 04700 | 047 | 04700 |
| 4,80                      | 6                          | 95        | 57        | 48       | 36       |  |            | 04800 | 048 | 04800 |
| 4,90                      | 6                          | 95        | 57        | 48       | 36       |  |            | 04900 | 049 | 04900 |
| 5,00                      | 6                          | 95        | 57        | 48       | 36       |  |            | 05000 | 050 | 05000 |
| 5,10                      | 6                          | 95        | 57        | 48       | 36       |  |            | 05100 | 051 | 05100 |
| 5,20                      | 6                          | 95        | 57        | 48       | 36       |  |            | 05200 | 052 | 05200 |
| 5,30                      | 6                          | 95        | 57        | 48       | 36       |  |            | 05300 | 053 | 05300 |
| 5,40                      | 6                          | 95        | 57        | 48       | 36       |  |            | 05400 | 054 | 05400 |
| 5,50                      | 6                          | 95        | 57        | 48       | 36       |  |            | 05500 | 055 | 05500 |
| 5,55                      | 6                          | 95        | 57        | 48       | 36       |  |            | 05550 |     |       |
| 5,60                      | 6                          | 95        | 57        | 48       | 36       |  |            | 05600 | 056 | 05600 |
| 5,70                      | 6                          | 95        | 57        | 48       | 36       |  |            | 05700 | 057 | 05700 |
| 5,80                      | 6                          | 95        | 57        | 48       | 36       |  |            | 05800 | 058 | 05800 |
| 5,90                      | 6                          | 95        | 57        | 48       | 36       |  |            | 05900 | 059 | 05900 |
| 6,00                      | 6                          | 95        | 57        | 48       | 36       |  |            | 06000 | 060 | 06000 |
| 6,10                      | 8                          | 114       | 76        | 64       | 36       |  |            | 06100 | 061 | 06100 |
| 6,20                      | 8                          | 114       | 76        | 64       | 36       |  |            | 06200 | 062 | 06200 |

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| M | • |   |   |   |   |
| K | • | • | • | • | • |
| N |   |   |   |   |   |
| S |   |   |   |   |   |
| H |   | ○ | ○ | ○ | ○ |
| O |   |   |   |   |   |

→ v<sub>c</sub> на стр. 109-118Ø DC<sub>m7</sub> для типа UNI и Quattro 4F/ Ø DC<sub>h7</sub> для типа Speed UNI

## WTX – Высокопроизводительное сверло, заводской стандарт

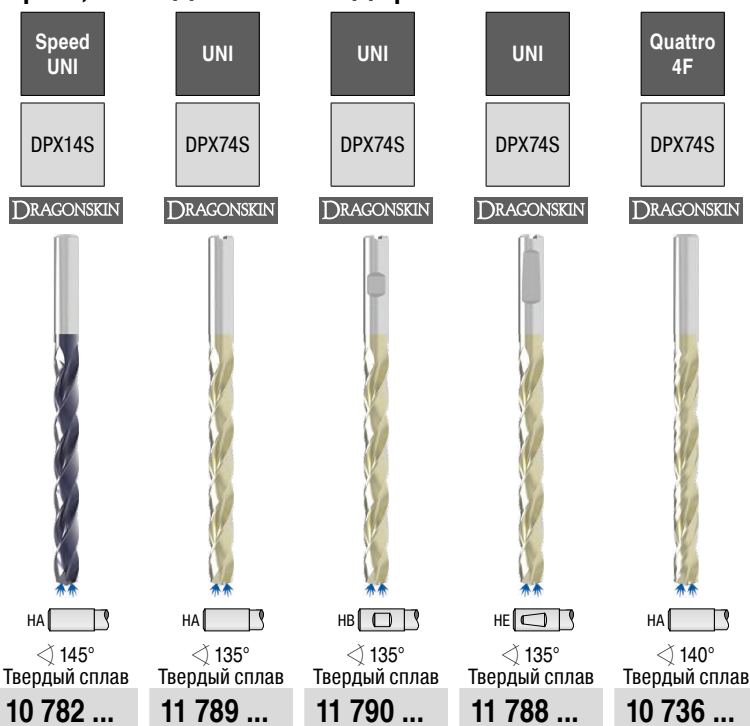
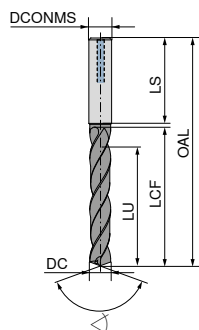
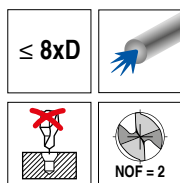


| DC<br>m7/h7<br>mm | DCONMS<br>h6<br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |       |  |     |  |     |       |
|-------------------|--------------------|-----------|-----------|----------|----------|--|-------|--|-----|--|-----|-------|
| 6,30              | 8                  | 114       | 76        | 64       | 36       |  | 06300 |  | 063 |  | 063 | 06300 |
| 6,40              | 8                  | 114       | 76        | 64       | 36       |  | 06400 |  | 064 |  | 064 | 06400 |
| 6,50              | 8                  | 114       | 76        | 64       | 36       |  | 06500 |  | 065 |  | 065 | 06500 |
| 6,60              | 8                  | 114       | 76        | 64       | 36       |  | 06600 |  | 066 |  | 066 | 06600 |
| 6,70              | 8                  | 114       | 76        | 64       | 36       |  | 06700 |  | 067 |  | 067 | 06700 |
| 6,80              | 8                  | 114       | 76        | 64       | 36       |  | 06800 |  | 068 |  | 068 | 06800 |
| 6,90              | 8                  | 114       | 76        | 64       | 36       |  | 06900 |  | 069 |  | 069 | 06900 |
| 7,00              | 8                  | 114       | 76        | 64       | 36       |  | 07000 |  | 070 |  | 070 | 07000 |
| 7,10              | 8                  | 114       | 76        | 64       | 36       |  | 07100 |  | 071 |  | 071 | 07100 |
| 7,20              | 8                  | 114       | 76        | 64       | 36       |  | 07200 |  | 072 |  | 072 | 07200 |
| 7,30              | 8                  | 114       | 76        | 64       | 36       |  | 07300 |  | 073 |  | 073 | 07300 |
| 7,40              | 8                  | 114       | 76        | 64       | 36       |  | 07400 |  | 074 |  | 074 | 07400 |
| 7,50              | 8                  | 114       | 76        | 64       | 36       |  | 07500 |  | 075 |  | 075 | 07500 |
| 7,60              | 8                  | 114       | 76        | 64       | 36       |  | 07600 |  | 076 |  | 076 | 07600 |
| 7,70              | 8                  | 114       | 76        | 64       | 36       |  | 07700 |  | 077 |  | 077 | 07700 |
| 7,80              | 8                  | 114       | 76        | 64       | 36       |  | 07800 |  | 078 |  | 078 | 07800 |
| 7,90              | 8                  | 114       | 76        | 64       | 36       |  | 07900 |  | 079 |  | 079 | 07900 |
| 8,00              | 8                  | 114       | 76        | 64       | 36       |  | 08000 |  | 080 |  | 080 | 08000 |
| 8,10              | 10                 | 142       | 95        | 80       | 40       |  | 08100 |  | 081 |  | 081 | 08100 |
| 8,20              | 10                 | 142       | 95        | 80       | 40       |  | 08200 |  | 082 |  | 082 | 08200 |
| 8,30              | 10                 | 142       | 95        | 80       | 40       |  | 08300 |  | 083 |  | 083 | 08300 |
| 8,40              | 10                 | 142       | 95        | 80       | 40       |  | 08400 |  | 084 |  | 084 | 08400 |
| 8,50              | 10                 | 142       | 95        | 80       | 40       |  | 08500 |  | 085 |  | 085 | 08500 |
| 8,60              | 10                 | 142       | 95        | 80       | 40       |  | 08600 |  | 086 |  | 086 | 08600 |
| 8,70              | 10                 | 142       | 95        | 80       | 40       |  | 08700 |  | 087 |  | 087 | 08700 |
| 8,80              | 10                 | 142       | 95        | 80       | 40       |  | 08800 |  | 088 |  | 088 | 08800 |
| 8,90              | 10                 | 142       | 95        | 80       | 40       |  | 08900 |  | 089 |  | 089 | 08900 |
| 9,00              | 10                 | 142       | 95        | 80       | 40       |  | 09000 |  | 090 |  | 090 | 09000 |
| 9,10              | 10                 | 142       | 95        | 80       | 40       |  | 09100 |  | 091 |  | 091 | 09100 |
| 9,20              | 10                 | 142       | 95        | 80       | 40       |  | 09200 |  | 092 |  | 092 | 09200 |
| 9,30              | 10                 | 142       | 95        | 80       | 40       |  | 09300 |  | 093 |  | 093 | 09300 |
| 9,40              | 10                 | 142       | 95        | 80       | 40       |  | 09400 |  | 094 |  | 094 | 09400 |
| 9,50              | 10                 | 142       | 95        | 80       | 40       |  | 09500 |  | 095 |  | 095 | 09500 |
| 9,60              | 10                 | 142       | 95        | 80       | 40       |  | 09600 |  | 096 |  | 096 | 09600 |
| 9,70              | 10                 | 142       | 95        | 80       | 40       |  | 09700 |  | 097 |  | 097 | 09700 |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | • | • | • | • | • |
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| K | • | • | • | • | • |
| N |   |   |   |   |   |
| S |   |   |   |   |   |
| H |   | ○ | ○ | ○ | ○ |
| O |   |   |   |   |   |

→ v<sub>c</sub> на стр. 109-118Ø DC<sub>m7</sub> для типа UNI и Quattro 4F/ Ø DC<sub>h7</sub> для типа Speed UNI

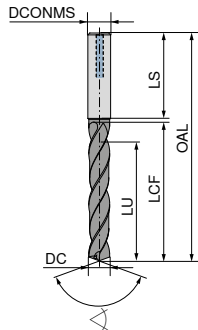
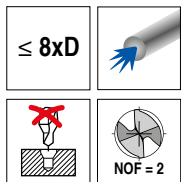
## WTX – Высокопроизводительное сверло, заводской стандарт



| DC <sub>m7/h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm | 10 782 ... | 11 789 ... | 11 790 ... | 11 788 ... | 10 736 ... |
|---------------------------|----------------------------|-----------|-----------|----------|----------|------------|------------|------------|------------|------------|
| 9,80                      | 10                         | 142       | 95        | 80       | 40       | 09800      | 098        | 098        | 098        | 09800      |
| 9,90                      | 10                         | 142       | 95        | 80       | 40       | 09900      | 099        | 099        | 099        | 09900      |
| 10,00                     | 10                         | 142       | 95        | 80       | 40       | 10000      | 100        | 100        | 100        | 10000      |
| 10,10                     | 12                         | 162       | 114       | 96       | 45       | 10100      | 101        | 101        | 101        | 10100      |
| 10,20                     | 12                         | 162       | 114       | 96       | 45       | 10200      | 102        | 102        | 102        | 10200      |
| 10,30                     | 12                         | 162       | 114       | 96       | 45       | 10300      | 103        | 103        | 103        | 10300      |
| 10,40                     | 12                         | 162       | 114       | 96       | 45       | 10400      | 104        | 104        | 104        | 10400      |
| 10,50                     | 12                         | 162       | 114       | 96       | 45       | 10500      | 105        | 105        | 105        | 10500      |
| 10,60                     | 12                         | 162       | 114       | 96       | 45       | 10600      | 106        | 106        | 106        | 10600      |
| 10,70                     | 12                         | 162       | 114       | 96       | 45       | 10700      | 107        | 107        | 107        | 10700      |
| 10,80                     | 12                         | 162       | 114       | 96       | 45       | 10800      | 108        | 108        | 108        | 10800      |
| 10,90                     | 12                         | 162       | 114       | 96       | 45       | 10900      | 109        | 109        | 109        | 10900      |
| 11,00                     | 12                         | 162       | 114       | 96       | 45       | 11000      | 110        | 110        | 110        | 11000      |
| 11,10                     | 12                         | 162       | 114       | 96       | 45       | 11100      | 111        | 111        | 111        | 11100      |
| 11,20                     | 12                         | 162       | 114       | 96       | 45       | 11200      | 112        | 112        | 112        | 11200      |
| 11,30                     | 12                         | 162       | 114       | 96       | 45       | 11300      | 113        | 113        | 113        | 11300      |
| 11,40                     | 12                         | 162       | 114       | 96       | 45       | 11400      | 114        | 114        | 114        | 11400      |
| 11,50                     | 12                         | 162       | 114       | 96       | 45       | 11500      | 115        | 115        | 115        | 11500      |
| 11,60                     | 12                         | 162       | 114       | 96       | 45       | 11600      | 116        | 116        | 116        | 11600      |
| 11,70                     | 12                         | 162       | 114       | 96       | 45       | 11700      | 117        | 117        | 117        | 11700      |
| 11,80                     | 12                         | 162       | 114       | 96       | 45       | 11800      | 118        | 118        | 118        | 11800      |
| 11,90                     | 12                         | 162       | 114       | 96       | 45       | 11900      | 119        | 119        | 119        | 11900      |
| 12,00                     | 12                         | 162       | 114       | 96       | 45       | 12000      | 120        | 120        | 120        | 12000      |
| 12,50                     | 14                         | 178       | 131       | 112      | 45       | 12500      | 125        |            |            | 12500      |
| 12,50                     | 14                         | 178       | 131       | 112      | 43       |            |            | 125        | 125        |            |
| 12,80                     | 14                         | 178       | 131       | 112      | 45       | 12800      | 128        | 128        | 128        | 12800      |
| 13,00                     | 14                         | 178       | 131       | 112      | 45       | 13000      | 130        |            |            | 13000      |
| 13,00                     | 14                         | 178       | 131       | 112      | 43       |            |            | 130        | 130        |            |
| 13,50                     | 14                         | 178       | 131       | 112      | 45       | 13500      | 135        |            |            | 13500      |
| 13,50                     | 14                         | 178       | 131       | 112      | 43       |            |            | 135        | 135        |            |
| 13,80                     | 14                         | 178       | 131       | 112      | 45       | 13800      | 138        |            |            | 13800      |
| 13,80                     | 14                         | 178       | 131       | 112      | 43       |            |            | 138        | 138        |            |
| 14,00                     | 14                         | 178       | 131       | 112      | 45       | 14000      | 140        |            |            | 14000      |
| 14,00                     | 14                         | 178       | 131       | 112      | 43       |            |            | 140        | 140        |            |
| P                         |                            |           |           |          |          | •          | •          | •          | •          | •          |
| M                         |                            |           |           |          |          | •          |            |            |            |            |
| K                         |                            |           |           |          |          | •          | •          | •          | •          | •          |
| N                         |                            |           |           |          |          |            |            |            |            |            |
| S                         |                            |           |           |          |          |            |            |            |            |            |
| H                         |                            |           |           |          |          |            | ○          | ○          | ○          | ○          |
| O                         |                            |           |           |          |          |            |            |            |            |            |

→ v<sub>c</sub> на стр. 109-118

WTX – Высокопроизводительное сверло, заводской стандарт



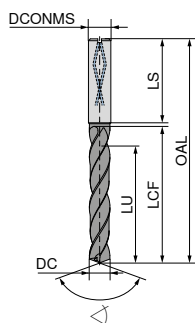
| Speed<br>UNI                                                                         | UNI                                                                                  | UNI                                                                                    | UNI                                                                                    | Quattro<br>4F                                                                          |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| DPX14S                                                                               | DPX74S                                                                               | DPX74S                                                                                 | DPX74S                                                                                 | DPX74S                                                                                 |
| DRAGONSKIN                                                                           | DRAGONSKIN                                                                           | DRAGONSKIN                                                                             | DRAGONSKIN                                                                             | DRAGONSKIN                                                                             |
|     |     |     |     |     |
| HA  | HA  | HB  | HE  | HA  |
| ◁ 145°                                                                               | ◁ 135°                                                                               | ◁ 135°                                                                                 | ◁ 135°                                                                                 | ◁ 140°                                                                                 |
| Твердый сплав                                                                        | Твердый сплав                                                                        | Твердый сплав                                                                          | Твердый сплав                                                                          | Твердый сплав                                                                          |
| 10 782 ...                                                                           | 11 789 ...                                                                           | 11 790 ...                                                                             | 11 788 ...                                                                             | 10 736 ...                                                                             |
| 14500                                                                                | 145                                                                                  | 145                                                                                    | 145                                                                                    | 14500                                                                                  |
| 14800                                                                                | 148                                                                                  | 148                                                                                    | 148                                                                                    | 14800                                                                                  |
| 15000                                                                                | 150                                                                                  | 150                                                                                    | 150                                                                                    | 15000                                                                                  |
| 15500                                                                                | 155                                                                                  | 155                                                                                    | 155                                                                                    | 15500                                                                                  |
| 15800                                                                                | 158                                                                                  | 158                                                                                    | 158                                                                                    | 15800                                                                                  |
| 16000                                                                                | 160                                                                                  | 160                                                                                    | 160                                                                                    | 16000                                                                                  |
| 16500                                                                                | 165                                                                                  | 165                                                                                    | 165                                                                                    | 16500                                                                                  |
| 16800                                                                                | 168                                                                                  | 168                                                                                    | 168                                                                                    | 16800                                                                                  |
| 17000                                                                                | 170                                                                                  | 170                                                                                    | 170                                                                                    | 17000                                                                                  |
| 17500                                                                                | 175                                                                                  | 175                                                                                    | 175                                                                                    | 17500                                                                                  |
| 17800                                                                                | 178                                                                                  | 178                                                                                    | 178                                                                                    | 17800                                                                                  |
| 18000                                                                                | 180                                                                                  | 180                                                                                    | 180                                                                                    | 18000                                                                                  |
| 18500                                                                                | 185                                                                                  | 185                                                                                    | 185                                                                                    | 18500                                                                                  |
| 18800                                                                                | 188                                                                                  | 188                                                                                    | 188                                                                                    | 18800                                                                                  |
| 19000                                                                                | 190                                                                                  | 190                                                                                    | 190                                                                                    | 19000                                                                                  |
| 19500                                                                                | 195                                                                                  | 195                                                                                    | 195                                                                                    | 19500                                                                                  |
| 19800                                                                                | 198                                                                                  | 198                                                                                    | 198                                                                                    | 19800                                                                                  |
| 20000                                                                                | 200                                                                                  | 200                                                                                    | 200                                                                                    | 20000                                                                                  |

|   |   |   |   |   |   |
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| P | • | • | • | • | • |
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| K | • | • | • | • | • |
| N |   |   |   |   |   |
| S |   |   |   |   |   |
| H |   | ○ | ○ | ○ | ○ |
| O |   |   |   |   |   |

→ v<sub>c</sub> на стр. 109–118

1 Ø DC<sub>m7</sub> для типа UNI и Quattro 4F/ Ø DC<sub>h7</sub> для типа Speed UNI

## WPC – Высокоэффективное сверло, заводской стандарт



135°  
Твердый сплав

11 612 ...

| DC <sub>h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|-----|
| 3,0                    | 6                          | 72        | 34        | 29       | 36       | 030 |
| 3,1                    | 6                          | 72        | 34        | 29       | 36       | 031 |
| 3,2                    | 6                          | 72        | 34        | 29       | 36       | 032 |
| 3,3                    | 6                          | 72        | 34        | 29       | 36       | 033 |
| 3,4                    | 6                          | 72        | 34        | 29       | 36       | 034 |
| 3,5                    | 6                          | 72        | 34        | 29       | 36       | 035 |
| 3,6                    | 6                          | 72        | 34        | 29       | 36       | 036 |
| 3,7                    | 6                          | 72        | 34        | 29       | 36       | 037 |
| 3,8                    | 6                          | 81        | 43        | 36       | 36       | 038 |
| 3,9                    | 6                          | 81        | 43        | 36       | 36       | 039 |
| 4,0                    | 6                          | 81        | 43        | 36       | 36       | 040 |
| 4,1                    | 6                          | 81        | 43        | 36       | 36       | 041 |
| 4,2                    | 6                          | 81        | 43        | 36       | 36       | 042 |
| 4,3                    | 6                          | 81        | 43        | 36       | 36       | 043 |
| 4,4                    | 6                          | 81        | 43        | 36       | 36       | 044 |
| 4,5                    | 6                          | 81        | 43        | 36       | 36       | 045 |
| 4,6                    | 6                          | 81        | 43        | 36       | 36       | 046 |
| 4,7                    | 6                          | 81        | 43        | 36       | 36       | 047 |
| 4,8                    | 6                          | 95        | 57        | 48       | 36       | 048 |
| 4,9                    | 6                          | 95        | 57        | 48       | 36       | 049 |
| 5,0                    | 6                          | 95        | 57        | 48       | 36       | 050 |
| 5,1                    | 6                          | 95        | 57        | 48       | 36       | 051 |
| 5,2                    | 6                          | 95        | 57        | 48       | 36       | 052 |
| 5,3                    | 6                          | 95        | 57        | 48       | 36       | 053 |
| 5,5                    | 6                          | 95        | 57        | 48       | 36       | 055 |
| 5,8                    | 6                          | 95        | 57        | 48       | 36       | 058 |
| 5,9                    | 6                          | 95        | 57        | 48       | 36       | 059 |
| 6,0                    | 6                          | 95        | 57        | 48       | 36       | 060 |
| 6,1                    | 8                          | 114       | 76        | 64       | 36       | 061 |
| 6,2                    | 8                          | 114       | 76        | 64       | 36       | 062 |
| 6,3                    | 8                          | 114       | 76        | 64       | 36       | 063 |
| 6,5                    | 8                          | 114       | 76        | 64       | 36       | 065 |
| 6,6                    | 8                          | 114       | 76        | 64       | 36       | 066 |
| 6,8                    | 8                          | 114       | 76        | 64       | 36       | 068 |
| 7,0                    | 8                          | 114       | 76        | 64       | 36       | 070 |
| 7,4                    | 8                          | 114       | 76        | 64       | 36       | 074 |
| 7,5                    | 8                          | 114       | 76        | 64       | 36       | 075 |
| 7,7                    | 8                          | 114       | 76        | 64       | 36       | 077 |
| 7,8                    | 8                          | 114       | 76        | 64       | 36       | 078 |
| 7,9                    | 8                          | 114       | 76        | 64       | 36       | 079 |
| 8,0                    | 8                          | 114       | 76        | 64       | 36       | 080 |
| 8,1                    | 10                         | 142       | 95        | 80       | 40       | 081 |
| 8,2                    | 10                         | 142       | 95        | 80       | 40       | 082 |
| 8,3                    | 10                         | 142       | 95        | 80       | 40       | 083 |
| 8,5                    | 10                         | 142       | 95        | 80       | 40       | 085 |
| 8,6                    | 10                         | 142       | 95        | 80       | 40       | 086 |
| 8,7                    | 10                         | 142       | 95        | 80       | 40       | 087 |
| 8,8                    | 10                         | 142       | 95        | 80       | 40       | 088 |
| 9,0                    | 10                         | 142       | 95        | 80       | 40       | 090 |
| 9,1                    | 10                         | 142       | 95        | 80       | 40       | 091 |
| 9,2                    | 10                         | 142       | 95        | 80       | 40       | 092 |
| 9,3                    | 10                         | 142       | 95        | 80       | 40       | 093 |
| 9,4                    | 10                         | 142       | 95        | 80       | 40       | 094 |

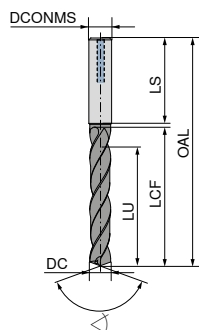
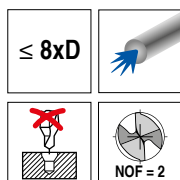
11 612 ...

| DC <sub>h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|-----|
| 9,5                    | 10                         | 142       | 95        | 80       | 40       | 095 |
| 9,7                    | 10                         | 142       | 95        | 80       | 40       | 097 |
| 9,8                    | 10                         | 142       | 95        | 80       | 40       | 098 |
| 9,9                    | 10                         | 142       | 95        | 80       | 40       | 099 |
| 10,0                   | 10                         | 142       | 95        | 80       | 40       | 100 |
| 10,2                   | 12                         | 162       | 114       | 96       | 45       | 102 |
| 10,5                   | 12                         | 162       | 114       | 96       | 45       | 105 |
| 10,8                   | 12                         | 162       | 114       | 96       | 45       | 108 |
| 11,0                   | 12                         | 162       | 114       | 96       | 45       | 110 |
| 11,2                   | 12                         | 162       | 114       | 96       | 45       | 112 |
| 11,5                   | 12                         | 162       | 114       | 96       | 45       | 115 |
| 11,8                   | 12                         | 162       | 114       | 96       | 45       | 118 |
| 12,0                   | 12                         | 162       | 114       | 96       | 45       | 120 |
| 12,5                   | 14                         | 178       | 131       | 112      | 45       | 125 |
| 13,0                   | 14                         | 178       | 131       | 112      | 45       | 130 |
| 13,5                   | 14                         | 178       | 131       | 112      | 45       | 135 |
| 14,0                   | 14                         | 178       | 131       | 112      | 45       | 140 |
| 14,5                   | 16                         | 203       | 152       | 128      | 48       | 145 |
| 15,0                   | 16                         | 203       | 152       | 128      | 48       | 150 |
| 15,5                   | 16                         | 203       | 152       | 128      | 48       | 155 |
| 16,0                   | 16                         | 203       | 152       | 128      | 48       | 160 |
| 16,5                   | 18                         | 222       | 171       | 144      | 48       | 165 |
| 17,0                   | 18                         | 222       | 171       | 144      | 48       | 170 |
| 17,5                   | 18                         | 222       | 171       | 144      | 48       | 175 |
| 18,0                   | 18                         | 222       | 171       | 144      | 48       | 180 |
| 18,5                   | 20                         | 243       | 190       | 160      | 50       | 185 |
| 19,0                   | 20                         | 243       | 190       | 160      | 50       | 190 |
| 20,0                   | 20                         | 243       | 190       | 160      | 50       | 200 |

|   |   |
|---|---|
| P | • |
| M |   |
| K | • |
| N |   |
| S |   |
| H |   |
| O |   |

→ V<sub>c</sub> на стр. 132

## WTX – Высокопроизводительное сверло, заводской стандарт

Тип GG = с прямыми  
стружечными канавками

$\angle 140^\circ$  Твердый сплав  
10 770 ...

$\angle 130^\circ$  Твердый сплав  
10 753 ...

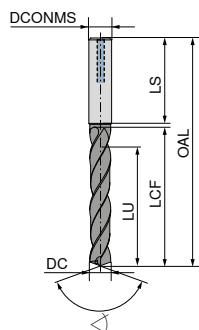
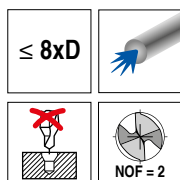
$\angle 135^\circ$  Твердый сплав  
10 792 ...

| DC <sub>n7/m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |     |       |
|---------------------------|----------------------------|-----------|-----------|----------|----------|--|-----|-------|
| 3,0                       | 6                          | 72        | 34        | 29       | 36       |  | 030 | 03000 |
| 3,1                       | 6                          | 72        | 34        | 29       | 36       |  | 031 | 03100 |
| 3,2                       | 6                          | 72        | 34        | 29       | 36       |  | 032 | 03200 |
| 3,3                       | 6                          | 72        | 34        | 29       | 36       |  | 033 | 03300 |
| 3,4                       | 6                          | 72        | 34        | 29       | 36       |  | 034 | 03400 |
| 3,5                       | 6                          | 72        | 34        | 29       | 36       |  | 035 | 03500 |
| 3,6                       | 6                          | 72        | 34        | 29       | 36       |  | 036 | 03600 |
| 3,7                       | 6                          | 72        | 34        | 29       | 36       |  | 037 | 03700 |
| 3,8                       | 6                          | 81        | 43        | 36       | 36       |  | 038 | 03800 |
| 3,9                       | 6                          | 81        | 43        | 36       | 36       |  | 039 | 03900 |
| 4,0                       | 6                          | 81        | 43        | 36       | 36       |  | 040 | 04000 |
| 4,1                       | 6                          | 81        | 43        | 36       | 36       |  | 041 | 04100 |
| 4,2                       | 6                          | 81        | 43        | 36       | 36       |  | 042 | 04200 |
| 4,3                       | 6                          | 81        | 43        | 36       | 36       |  | 043 | 04300 |
| 4,4                       | 6                          | 81        | 43        | 36       | 36       |  | 044 | 04400 |
| 4,5                       | 6                          | 81        | 43        | 36       | 36       |  | 045 | 04500 |
| 4,6                       | 6                          | 81        | 43        | 36       | 36       |  | 046 | 04600 |
| 4,7                       | 6                          | 81        | 43        | 36       | 36       |  | 047 | 04700 |
| 4,8                       | 6                          | 95        | 57        | 48       | 36       |  | 048 | 04800 |
| 4,9                       | 6                          | 95        | 57        | 48       | 36       |  | 049 | 04900 |
| 5,0                       | 6                          | 95        | 57        | 48       | 36       |  | 050 | 05000 |
| 5,1                       | 6                          | 95        | 57        | 48       | 36       |  | 051 | 05100 |
| 5,2                       | 6                          | 95        | 57        | 48       | 36       |  | 052 | 05200 |
| 5,3                       | 6                          | 95        | 57        | 48       | 36       |  | 053 | 05300 |
| 5,4                       | 6                          | 95        | 57        | 48       | 36       |  | 054 | 05400 |
| 5,5                       | 6                          | 95        | 57        | 48       | 36       |  | 055 | 05500 |
| 5,6                       | 6                          | 95        | 57        | 48       | 36       |  | 056 | 05600 |
| 5,7                       | 6                          | 95        | 57        | 48       | 36       |  | 057 | 05700 |
| 5,8                       | 6                          | 95        | 57        | 48       | 36       |  | 058 | 05800 |
| 5,9                       | 6                          | 95        | 57        | 48       | 36       |  | 059 | 05900 |
| 6,0                       | 6                          | 95        | 57        | 48       | 36       |  | 060 | 06000 |
| 6,1                       | 8                          | 114       | 76        | 64       | 36       |  | 061 | 06100 |
| 6,2                       | 8                          | 114       | 76        | 64       | 36       |  | 062 | 06200 |
| 6,3                       | 8                          | 114       | 76        | 64       | 36       |  | 063 | 06300 |
| 6,4                       | 8                          | 114       | 76        | 64       | 36       |  | 064 | 06400 |
| 6,5                       | 8                          | 114       | 76        | 64       | 36       |  | 065 | 06500 |
| 6,6                       | 8                          | 114       | 76        | 64       | 36       |  | 066 | 06600 |
| 6,7                       | 8                          | 114       | 76        | 64       | 36       |  | 067 | 06700 |
| 6,8                       | 8                          | 114       | 76        | 64       | 36       |  | 068 | 06800 |
| 6,9                       | 8                          | 114       | 76        | 64       | 36       |  | 069 | 06900 |
| 7,0                       | 8                          | 114       | 76        | 64       | 36       |  | 070 | 07000 |
| 7,1                       | 8                          | 114       | 76        | 64       | 36       |  | 071 | 07100 |
| 7,2                       | 8                          | 114       | 76        | 64       | 36       |  | 072 | 07200 |
| 7,3                       | 8                          | 114       | 76        | 64       | 36       |  | 073 | 07300 |
| 7,4                       | 8                          | 114       | 76        | 64       | 36       |  | 074 | 07400 |

|   |   |   |   |
|---|---|---|---|
| P | ○ |   |   |
| M | ● |   |   |
| K | ○ | ● |   |
| N | ○ | ○ | ● |
| S | ● |   |   |
| H |   |   |   |
| O |   |   |   |

→ v<sub>c</sub> на стр. 115-121Ø DC<sub>m7</sub> для типа VA и GG / Ø DC<sub>n7</sub> для типа AL

## WTX – Высокопроизводительное сверло, заводской стандарт

Тип GG = с прямыми  
стружечными канавками

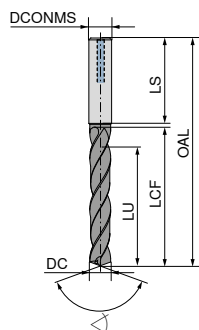
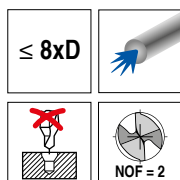
$\angle 140^\circ$  Твёрдый сплав 10 770 ...  
 $\angle 130^\circ$  Твёрдый сплав 10 753 ...  
 $\angle 135^\circ$  Твёрдый сплав 10 792 ...

| DC <sub>n7/m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |     |       |
|---------------------------|----------------------------|-----------|-----------|----------|----------|--|-----|-------|
| 7,5                       | 8                          | 114       | 76        | 64       | 36       |  | 075 | 07500 |
| 7,6                       | 8                          | 114       | 76        | 64       | 36       |  | 076 | 07600 |
| 7,7                       | 8                          | 114       | 76        | 64       | 36       |  | 077 | 07700 |
| 7,8                       | 8                          | 114       | 76        | 64       | 36       |  | 078 | 07800 |
| 7,9                       | 8                          | 114       | 76        | 64       | 36       |  | 079 | 07900 |
| 8,0                       | 8                          | 114       | 76        | 64       | 36       |  | 080 | 08000 |
| 8,1                       | 10                         | 142       | 95        | 80       | 40       |  | 081 | 08100 |
| 8,2                       | 10                         | 142       | 95        | 80       | 40       |  | 082 | 08200 |
| 8,3                       | 10                         | 142       | 95        | 80       | 40       |  | 083 | 08300 |
| 8,4                       | 10                         | 142       | 95        | 80       | 40       |  | 084 | 08400 |
| 8,5                       | 10                         | 142       | 95        | 80       | 40       |  | 085 | 08500 |
| 8,6                       | 10                         | 142       | 95        | 80       | 40       |  | 086 | 08600 |
| 8,7                       | 10                         | 142       | 95        | 80       | 40       |  | 087 | 08700 |
| 8,8                       | 10                         | 142       | 95        | 80       | 40       |  | 088 | 08800 |
| 8,9                       | 10                         | 142       | 95        | 80       | 40       |  | 089 | 08900 |
| 9,0                       | 10                         | 142       | 95        | 80       | 40       |  | 090 | 09000 |
| 9,1                       | 10                         | 142       | 95        | 80       | 40       |  | 091 | 09100 |
| 9,2                       | 10                         | 142       | 95        | 80       | 40       |  | 092 | 09200 |
| 9,3                       | 10                         | 142       | 95        | 80       | 40       |  | 093 | 09300 |
| 9,4                       | 10                         | 142       | 95        | 80       | 40       |  | 094 | 09400 |
| 9,5                       | 10                         | 142       | 95        | 80       | 40       |  | 095 | 09500 |
| 9,6                       | 10                         | 142       | 95        | 80       | 40       |  | 096 | 09600 |
| 9,7                       | 10                         | 142       | 95        | 80       | 40       |  | 097 | 09700 |
| 9,8                       | 10                         | 142       | 95        | 80       | 40       |  | 098 | 09800 |
| 9,9                       | 10                         | 142       | 95        | 80       | 40       |  | 099 | 09900 |
| 10,0                      | 10                         | 142       | 95        | 80       | 40       |  | 100 | 10000 |
| 10,1                      | 12                         | 162       | 114       | 96       | 45       |  | 101 |       |
| 10,2                      | 12                         | 162       | 114       | 96       | 45       |  | 102 | 10200 |
| 10,3                      | 12                         | 162       | 114       | 96       | 45       |  | 103 | 10300 |
| 10,4                      | 12                         | 162       | 114       | 96       | 45       |  | 104 | 10400 |
| 10,5                      | 12                         | 162       | 114       | 96       | 45       |  | 105 | 10500 |
| 10,6                      | 12                         | 162       | 114       | 96       | 45       |  | 106 |       |
| 10,7                      | 12                         | 162       | 114       | 96       | 45       |  | 107 | 10700 |
| 10,8                      | 12                         | 162       | 114       | 96       | 45       |  | 108 | 10800 |
| 10,9                      | 12                         | 162       | 114       | 96       | 45       |  | 109 |       |
| 11,0                      | 12                         | 162       | 114       | 96       | 45       |  | 110 | 11000 |
| 11,1                      | 12                         | 162       | 114       | 96       | 45       |  | 111 |       |
| 11,2                      | 12                         | 162       | 114       | 96       | 45       |  | 112 | 11200 |
| 11,3                      | 12                         | 162       | 114       | 96       | 45       |  | 113 |       |
| 11,4                      | 12                         | 162       | 114       | 96       | 45       |  | 114 |       |
| 11,5                      | 12                         | 162       | 114       | 96       | 45       |  | 115 | 11500 |
| 11,6                      | 12                         | 162       | 114       | 96       | 45       |  | 116 | 11600 |
| 11,7                      | 12                         | 162       | 114       | 96       | 45       |  | 117 |       |
| 11,8                      | 12                         | 162       | 114       | 96       | 45       |  | 118 | 11800 |
| 11,9                      | 12                         | 162       | 114       | 96       | 45       |  | 119 |       |

|   |   |   |   |
|---|---|---|---|
| P | ○ |   |   |
| M | ● |   |   |
| K | ○ | ● |   |
| N | ○ | ○ | ● |
| S | ● |   |   |
| H |   |   |   |
| O |   |   |   |

→ V<sub>c</sub> на стр. 115–121Ø DC<sub>m7</sub> для типа VA и GG / Ø DC<sub>n7</sub> для типа AL

## WTX – Высокопроизводительное сверло, заводской стандарт

Тип GG = с прямыми  
стружечными канавками

Твердый сплав  
10 770 ...

Твердый сплав  
10 753 ...

Твердый сплав  
10 792 ...

| DC <sub>n7/m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |     |       |
|---------------------------|----------------------------|-----------|-----------|----------|----------|--|-----|-------|
| 12,0                      | 12                         | 162       | 114       | 96       | 45       |  | 120 | 12000 |
| 12,2                      | 14                         | 178       | 131       | 112      | 45       |  |     | 12200 |
| 12,5                      | 14                         | 178       | 133       | 112      | 45       |  | 125 | 12500 |
| 12,5                      | 14                         | 178       | 131       | 112      | 45       |  |     | 12800 |
| 12,8                      | 14                         | 178       | 131       | 112      | 45       |  | 128 | 13000 |
| 12,8                      | 14                         | 178       | 133       | 112      | 45       |  |     | 13200 |
| 13,0                      | 14                         | 178       | 131       | 112      | 45       |  | 130 | 13500 |
| 13,0                      | 14                         | 178       | 133       | 112      | 45       |  |     | 13800 |
| 13,2                      | 14                         | 178       | 131       | 112      | 45       |  | 135 |       |
| 13,5                      | 14                         | 178       | 131       | 112      | 45       |  | 138 |       |
| 13,5                      | 14                         | 178       | 133       | 112      | 45       |  | 140 |       |
| 13,8                      | 14                         | 178       | 131       | 112      | 45       |  |     | 14000 |
| 13,8                      | 14                         | 178       | 133       | 112      | 45       |  |     | 14200 |
| 14,0                      | 14                         | 178       | 133       | 112      | 45       |  | 145 | 14500 |
| 14,0                      | 14                         | 178       | 131       | 112      | 45       |  | 148 | 14800 |
| 14,2                      | 16                         | 203       | 152       | 128      | 48       |  | 150 | 15000 |
| 14,5                      | 16                         | 203       | 152       | 128      | 48       |  |     | 15200 |
| 14,8                      | 16                         | 203       | 152       | 128      | 48       |  | 155 | 15500 |
| 15,0                      | 16                         | 203       | 152       | 128      | 48       |  | 158 | 15800 |
| 15,2                      | 16                         | 203       | 152       | 128      | 48       |  | 160 | 16000 |
| 15,5                      | 16                         | 203       | 152       | 128      | 48       |  |     | 16200 |
| 15,8                      | 16                         | 203       | 152       | 128      | 48       |  | 165 | 16500 |
| 16,0                      | 16                         | 203       | 152       | 128      | 48       |  | 168 | 16800 |
| 16,2                      | 18                         | 222       | 171       | 144      | 48       |  | 170 | 17000 |
| 16,5                      | 18                         | 222       | 171       | 144      | 48       |  |     | 17200 |
| 16,8                      | 18                         | 222       | 171       | 144      | 48       |  | 175 | 17500 |
| 17,0                      | 18                         | 222       | 171       | 144      | 48       |  | 178 | 17800 |
| 17,2                      | 18                         | 222       | 171       | 144      | 48       |  | 180 | 18000 |
| 17,5                      | 18                         | 222       | 171       | 144      | 48       |  |     | 18200 |
| 17,8                      | 18                         | 222       | 171       | 144      | 48       |  | 185 | 18500 |
| 18,0                      | 18                         | 222       | 171       | 144      | 48       |  | 188 | 18800 |
| 18,2                      | 20                         | 243       | 190       | 160      | 50       |  | 190 | 19000 |
| 18,5                      | 20                         | 243       | 190       | 160      | 50       |  |     | 19100 |
| 18,8                      | 20                         | 243       | 190       | 160      | 50       |  | 195 | 19200 |
| 19,0                      | 20                         | 243       | 190       | 160      | 50       |  | 198 | 19500 |
| 19,1                      | 20                         | 243       | 190       | 160      | 50       |  | 200 | 19800 |
| 19,2                      | 20                         | 243       | 190       | 160      | 50       |  |     | 20000 |
| 19,5                      | 20                         | 243       | 190       | 160      | 50       |  |     |       |
| 19,8                      | 20                         | 243       | 190       | 160      | 50       |  |     |       |
| 20,0                      | 20                         | 243       | 190       | 160      | 50       |  |     |       |

|   |   |   |   |
|---|---|---|---|
| P | ○ |   |   |
| M | ● |   |   |
| K | ○ | ● |   |
| N | ○ | ○ | ● |
| S | ● |   |   |
| H |   |   |   |
| O |   |   |   |

→ v<sub>c</sub> на стр. 115–121Ø DC<sub>m7</sub> для типа VA и GG / Ø DC<sub>n7</sub> для типа AL

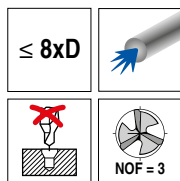
## WTH – Высокопроизводительное сверло, заводской стандарт

▲ сверло для высокой подачи с тремя режущими кромками

▲ универсальность в применении

▲ высокая точность позиционирования

▲ предназначено для сложных случаев засверливания



Feed UNI

DPX74S



НА

135°

Твердый сплав

10 794 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 4,00                   | 6                          | 81        | 43        | 36       | 36       | 04000 |
| 4,10                   | 6                          | 81        | 43        | 36       | 36       | 04100 |
| 4,20                   | 6                          | 81        | 43        | 36       | 36       | 04200 |
| 4,30                   | 6                          | 81        | 43        | 36       | 36       | 04300 |
| 4,40                   | 6                          | 81        | 43        | 36       | 36       | 04400 |
| 4,50                   | 6                          | 81        | 43        | 36       | 36       | 04500 |
| 4,60                   | 6                          | 81        | 43        | 36       | 36       | 04600 |
| 4,70                   | 6                          | 81        | 43        | 36       | 36       | 04700 |
| 4,80                   | 6                          | 95        | 57        | 48       | 36       | 04800 |
| 4,90                   | 6                          | 95        | 57        | 48       | 36       | 04900 |
| 5,00                   | 6                          | 95        | 57        | 48       | 36       | 05000 |
| 5,10                   | 6                          | 95        | 57        | 48       | 36       | 05100 |
| 5,20                   | 6                          | 95        | 57        | 48       | 36       | 05200 |
| 5,30                   | 6                          | 95        | 57        | 48       | 36       | 05300 |
| 5,40                   | 6                          | 95        | 57        | 48       | 36       | 05400 |
| 5,50                   | 6                          | 95        | 57        | 48       | 36       | 05500 |
| 5,55                   | 6                          | 95        | 57        | 48       | 36       | 05550 |
| 5,60                   | 6                          | 95        | 57        | 48       | 36       | 05600 |
| 5,70                   | 6                          | 95        | 57        | 48       | 36       | 05700 |
| 5,80                   | 6                          | 95        | 57        | 48       | 36       | 05800 |
| 5,90                   | 6                          | 95        | 57        | 48       | 36       | 05900 |
| 6,00                   | 6                          | 95        | 57        | 48       | 36       | 06000 |
| 6,10                   | 8                          | 114       | 76        | 64       | 36       | 06100 |
| 6,20                   | 8                          | 114       | 76        | 64       | 36       | 06200 |
| 6,30                   | 8                          | 114       | 76        | 64       | 36       | 06300 |
| 6,40                   | 8                          | 114       | 76        | 64       | 36       | 06400 |
| 6,50                   | 8                          | 114       | 76        | 64       | 36       | 06500 |
| 6,60                   | 8                          | 114       | 76        | 64       | 36       | 06600 |
| 6,70                   | 8                          | 114       | 76        | 64       | 36       | 06700 |
| 6,80                   | 8                          | 114       | 76        | 64       | 36       | 06800 |
| 6,90                   | 8                          | 114       | 76        | 64       | 36       | 06900 |
| 7,00                   | 8                          | 114       | 76        | 64       | 36       | 07000 |
| 7,10                   | 8                          | 114       | 76        | 64       | 36       | 07100 |
| 7,20                   | 8                          | 114       | 76        | 64       | 36       | 07200 |
| 7,30                   | 8                          | 114       | 76        | 64       | 36       | 07300 |
| 7,40                   | 8                          | 114       | 76        | 64       | 36       | 07400 |
| 7,50                   | 8                          | 114       | 76        | 64       | 36       | 07500 |
| 7,60                   | 8                          | 114       | 76        | 64       | 36       | 07600 |
| 7,70                   | 8                          | 114       | 76        | 64       | 36       | 07700 |
| 7,80                   | 8                          | 114       | 76        | 64       | 36       | 07800 |
| 7,90                   | 8                          | 114       | 76        | 64       | 36       | 07900 |
| 8,00                   | 8                          | 114       | 76        | 64       | 36       | 08000 |
| 8,10                   | 10                         | 142       | 95        | 80       | 40       | 08100 |
| 8,20                   | 10                         | 142       | 95        | 80       | 40       | 08200 |
| 8,30                   | 10                         | 142       | 95        | 80       | 40       | 08300 |
| 8,40                   | 10                         | 142       | 95        | 80       | 40       | 08400 |
| 8,50                   | 10                         | 142       | 95        | 80       | 40       | 08500 |
| 8,60                   | 10                         | 142       | 95        | 80       | 40       | 08600 |
| 8,70                   | 10                         | 142       | 95        | 80       | 40       | 08700 |
| 8,80                   | 10                         | 142       | 95        | 80       | 40       | 08800 |
| 8,90                   | 10                         | 142       | 95        | 80       | 40       | 08900 |
| 9,00                   | 10                         | 142       | 95        | 80       | 40       | 09000 |
| 9,10                   | 10                         | 142       | 95        | 80       | 40       | 09100 |
| 9,20                   | 10                         | 142       | 95        | 80       | 40       | 09200 |

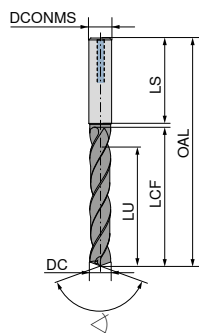
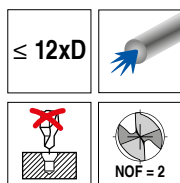
10 794 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 9,30                   | 10                         | 142       | 95        | 80       | 40       | 09300 |
| 9,40                   | 10                         | 142       | 95        | 80       | 40       | 09400 |
| 9,50                   | 10                         | 142       | 95        | 80       | 40       | 09500 |
| 9,60                   | 10                         | 142       | 95        | 80       | 40       | 09600 |
| 9,70                   | 10                         | 142       | 95        | 80       | 40       | 09700 |
| 9,80                   | 10                         | 142       | 95        | 80       | 40       | 09800 |
| 9,90                   | 10                         | 142       | 95        | 80       | 40       | 09900 |
| 10,00                  | 10                         | 142       | 95        | 80       | 40       | 10000 |
| 10,10                  | 12                         | 162       | 114       | 96       | 45       | 10100 |
| 10,20                  | 12                         | 162       | 114       | 96       | 45       | 10200 |
| 10,30                  | 12                         | 162       | 114       | 96       | 45       | 10300 |
| 10,40                  | 12                         | 162       | 114       | 96       | 45       | 10400 |
| 10,50                  | 12                         | 162       | 114       | 96       | 45       | 10500 |
| 10,60                  | 12                         | 162       | 114       | 96       | 45       | 10600 |
| 10,70                  | 12                         | 162       | 114       | 96       | 45       | 10700 |
| 10,80                  | 12                         | 162       | 114       | 96       | 45       | 10800 |
| 10,90                  | 12                         | 162       | 114       | 96       | 45       | 10900 |
| 11,00                  | 12                         | 162       | 114       | 96       | 45       | 11000 |
| 11,10                  | 12                         | 162       | 114       | 96       | 45       | 11100 |
| 11,20                  | 12                         | 162       | 114       | 96       | 45       | 11200 |
| 11,30                  | 12                         | 162       | 114       | 96       | 45       | 11300 |
| 11,40                  | 12                         | 162       | 114       | 96       | 45       | 11400 |
| 11,50                  | 12                         | 162       | 114       | 96       | 45       | 11500 |
| 11,60                  | 12                         | 162       | 114       | 96       | 45       | 11600 |
| 11,70                  | 12                         | 162       | 114       | 96       | 45       | 11700 |
| 11,80                  | 12                         | 162       | 114       | 96       | 45       | 11800 |
| 11,90                  | 12                         | 162       | 114       | 96       | 45       | 11900 |
| 12,00                  | 12                         | 162       | 114       | 96       | 45       | 12000 |
| 12,20                  | 14                         | 178       | 131       | 112      | 45       | 12200 |
| 12,50                  | 14                         | 178       | 131       | 112      | 45       | 12500 |
| 12,80                  | 14                         | 178       | 131       | 112      | 45       | 12800 |
| 13,00                  | 14                         | 178       | 131       | 112      | 45       | 13000 |
| 13,50                  | 14                         | 178       | 131       | 112      | 45       | 13500 |
| 13,80                  | 14                         | 178       | 131       | 112      | 45       | 13800 |
| 14,00                  | 14                         | 178       | 131       | 112      | 45       | 14000 |
| 14,50                  | 16                         | 203       | 152       | 128      | 48       | 14500 |
| 14,80                  | 16                         | 203       | 152       | 128      | 48       | 14800 |
| 15,00                  | 16                         | 203       | 152       | 128      | 48       | 15000 |
| 15,50                  | 16                         | 203       | 152       | 128      | 48       | 15500 |
| 15,80                  | 16                         | 203       | 152       | 128      | 48       | 15800 |
| 16,00                  | 16                         | 203       | 152       | 128      | 48       | 16000 |
| 16,50                  | 18                         | 222       | 171       | 144      | 48       | 16500 |
| 16,80                  | 18                         | 222       | 171       | 144      | 48       | 16800 |
| 17,00                  | 18                         | 222       | 171       | 144      | 48       | 17000 |
| 17,50                  | 18                         | 222       | 171       | 144      | 48       | 17500 |
| 17,80                  | 18                         | 222       | 171       | 144      | 48       | 17800 |
| 18,00                  | 18                         | 222       | 171       | 144      | 48       | 18000 |
| 18,50                  | 20                         | 243       | 190       | 160      | 50       | 18500 |
| 18,80                  | 20                         | 243       | 190       | 160      | 50       | 18800 |
| 19,00                  | 20                         | 243       | 190       | 160      | 50       | 19000 |
| 19,50                  | 20                         | 243       | 190       | 160      | 50       | 19500 |
| 19,80                  | 20                         | 243       | 190       | 160      | 50       | 19800 |
| 20,00                  | 20                         | 243       | 190       | 160      | 50       | 20000 |

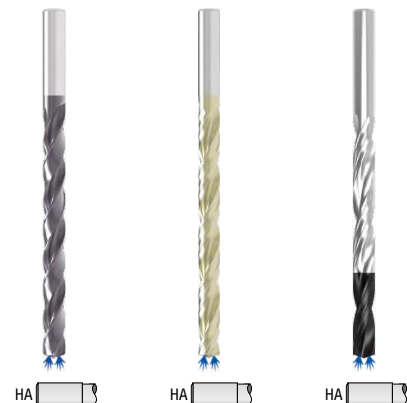
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→ v<sub>c</sub> на стр. 111

## WTX – Высокопроизводительное сверло, заводской стандарт



| NEW         |               |            |
|-------------|---------------|------------|
| Speed<br>VA | Quattro<br>4F | AL         |
| Ti800       | DPX74S        | DLC        |
|             | DRAGONSKIN    | DRAGONSKIN |



$\angle 135^\circ$  Твердый сплав  
10 774 ...

$\angle 140^\circ$  Твердый сплав  
10 737 ...

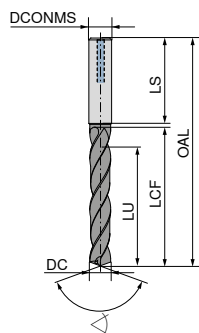
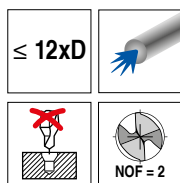
$\angle 135^\circ$  Твердый сплав  
10 793 ...

| DC <sub>h7/m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |       |       |
|---------------------------|----------------------------|-----------|-----------|----------|----------|--|-------|-------|
| 3,0                       | 6                          | 92        | 54        | 48       | 36       |  | 03000 | 03000 |
| 3,1                       | 6                          | 92        | 54        | 48       | 36       |  | 03100 | 03100 |
| 3,2                       | 6                          | 92        | 54        | 48       | 36       |  | 03200 | 03200 |
| 3,3                       | 6                          | 92        | 54        | 48       | 36       |  | 03300 | 03300 |
| 3,4                       | 6                          | 92        | 54        | 48       | 36       |  | 03400 | 03400 |
| 3,5                       | 6                          | 92        | 54        | 48       | 36       |  | 03500 | 03500 |
| 3,6                       | 6                          | 92        | 54        | 48       | 36       |  | 03600 | 03600 |
| 3,7                       | 6                          | 92        | 54        | 48       | 36       |  | 03700 | 03700 |
| 3,8                       | 6                          | 102       | 64        | 58       | 36       |  | 03800 | 03800 |
| 3,9                       | 6                          | 102       | 64        | 58       | 36       |  | 03900 | 03900 |
| 4,0                       | 6                          | 102       | 64        | 58       | 36       |  | 04000 | 04000 |
| 4,1                       | 6                          | 102       | 64        | 58       | 36       |  | 04100 | 04100 |
| 4,2                       | 6                          | 102       | 64        | 58       | 36       |  | 04200 | 04200 |
| 4,3                       | 6                          | 102       | 64        | 58       | 36       |  | 04300 | 04300 |
| 4,4                       | 6                          | 102       | 64        | 58       | 36       |  | 04400 | 04400 |
| 4,5                       | 6                          | 102       | 64        | 58       | 36       |  | 04500 | 04500 |
| 4,6                       | 6                          | 102       | 64        | 58       | 36       |  | 04600 | 04600 |
| 4,7                       | 6                          | 102       | 64        | 58       | 36       |  | 04700 | 04700 |
| 4,8                       | 6                          | 116       | 78        | 70       | 36       |  | 04800 | 04800 |
| 4,9                       | 6                          | 116       | 78        | 70       | 36       |  | 04900 | 04900 |
| 5,0                       | 6                          | 116       | 78        | 70       | 36       |  | 05000 | 05000 |
| 5,1                       | 6                          | 116       | 78        | 70       | 36       |  | 05100 | 05100 |
| 5,2                       | 6                          | 116       | 78        | 70       | 36       |  | 05200 | 05200 |
| 5,3                       | 6                          | 116       | 78        | 70       | 36       |  | 05300 | 05300 |
| 5,4                       | 6                          | 116       | 78        | 70       | 36       |  | 05400 | 05400 |
| 5,5                       | 6                          | 116       | 78        | 70       | 36       |  | 05500 | 05500 |
| 5,6                       | 6                          | 116       | 78        | 70       | 36       |  | 05600 | 05600 |
| 5,7                       | 6                          | 116       | 78        | 70       | 36       |  | 05700 | 05700 |
| 5,8                       | 6                          | 116       | 78        | 70       | 36       |  | 05800 | 05800 |
| 5,9                       | 6                          | 116       | 78        | 70       | 36       |  | 05900 | 05900 |
| 6,0                       | 6                          | 116       | 78        | 70       | 36       |  | 06000 | 06000 |
| 6,1                       | 8                          | 146       | 108       | 94       | 36       |  | 06100 | 06100 |
| 6,2                       | 8                          | 146       | 108       | 94       | 36       |  | 06200 | 06200 |
| 6,3                       | 8                          | 146       | 108       | 94       | 36       |  | 06300 | 06300 |
| 6,4                       | 8                          | 146       | 108       | 94       | 36       |  | 06400 | 06400 |
| 6,5                       | 8                          | 146       | 108       | 94       | 36       |  | 06500 | 06500 |
| 6,6                       | 8                          | 146       | 108       | 94       | 36       |  | 06600 | 06600 |
| 6,7                       | 8                          | 146       | 108       | 94       | 36       |  | 06700 | 06700 |
| 6,8                       | 8                          | 146       | 108       | 94       | 36       |  | 06800 | 06800 |

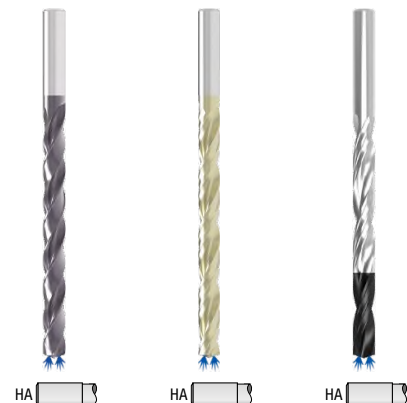
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→ V<sub>c</sub> на стр. 116–122Ø DC<sub>m7</sub> для типа Speed VA и Quattro 4F / Ø DC<sub>h7</sub> для типа AL

## WTX – Высокопроизводительное сверло, заводской стандарт



| NEW         |               |            |
|-------------|---------------|------------|
| Speed<br>VA | Quattro<br>4F | AL         |
| Ti800       | DPX74S        | DLC        |
|             | DRAGONSKIN    | DRAGONSKIN |



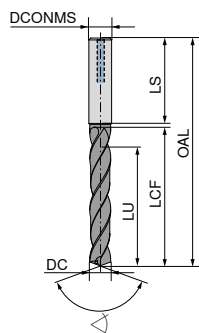
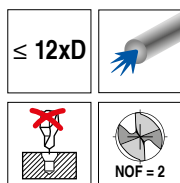
HA HA HA  
 $\angle 135^\circ$  Твердый сплав  $\angle 140^\circ$  Твердый сплав  $\angle 135^\circ$  Твердый сплав  
 10 774 ... 10 737 ... 10 793 ...

| DC <sub>n7/m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |       |       |
|---------------------------|----------------------------|-----------|-----------|----------|----------|--|-------|-------|
| 6,9                       | 8                          | 146       | 108       | 94       | 36       |  | 06900 | 06900 |
| 7,0                       | 8                          | 146       | 108       | 94       | 36       |  | 07000 | 07000 |
| 7,1                       | 8                          | 146       | 108       | 94       | 36       |  | 07100 | 07100 |
| 7,2                       | 8                          | 146       | 108       | 94       | 36       |  | 07200 | 07200 |
| 7,3                       | 8                          | 146       | 108       | 94       | 36       |  | 07300 | 07300 |
| 7,4                       | 8                          | 146       | 108       | 94       | 36       |  | 07400 | 07400 |
| 7,5                       | 8                          | 146       | 108       | 94       | 36       |  | 07500 | 07500 |
| 7,6                       | 8                          | 146       | 108       | 94       | 36       |  | 07600 | 07600 |
| 7,7                       | 8                          | 146       | 108       | 94       | 36       |  | 07700 | 07700 |
| 7,8                       | 8                          | 146       | 108       | 94       | 36       |  | 07800 | 07800 |
| 7,9                       | 8                          | 146       | 108       | 94       | 36       |  | 07900 | 07900 |
| 8,0                       | 8                          | 146       | 108       | 94       | 36       |  | 08000 | 08000 |
| 8,1                       | 10                         | 162       | 120       | 110      | 40       |  | 08100 | 08100 |
| 8,2                       | 10                         | 162       | 120       | 110      | 40       |  | 08200 | 08200 |
| 8,3                       | 10                         | 162       | 120       | 110      | 40       |  | 08300 | 08300 |
| 8,4                       | 10                         | 162       | 120       | 110      | 40       |  | 08400 | 08400 |
| 8,5                       | 10                         | 162       | 120       | 110      | 40       |  | 08500 | 08500 |
| 8,6                       | 10                         | 162       | 120       | 110      | 40       |  | 08600 | 08600 |
| 8,7                       | 10                         | 162       | 120       | 110      | 40       |  | 08700 | 08700 |
| 8,8                       | 10                         | 162       | 120       | 110      | 40       |  | 08800 | 08800 |
| 8,9                       | 10                         | 162       | 120       | 110      | 40       |  | 08900 | 08900 |
| 9,0                       | 10                         | 162       | 120       | 110      | 40       |  | 09000 | 09000 |
| 9,1                       | 10                         | 162       | 120       | 110      | 40       |  | 09100 | 09100 |
| 9,2                       | 10                         | 162       | 120       | 110      | 40       |  | 09200 | 09200 |
| 9,3                       | 10                         | 162       | 120       | 110      | 40       |  | 09300 | 09300 |
| 9,4                       | 10                         | 162       | 120       | 110      | 40       |  | 09400 | 09400 |
| 9,5                       | 10                         | 162       | 120       | 110      | 40       |  | 09500 | 09500 |
| 9,6                       | 10                         | 162       | 120       | 110      | 40       |  | 09600 | 09600 |
| 9,7                       | 10                         | 162       | 120       | 110      | 40       |  | 09700 | 09700 |
| 9,8                       | 10                         | 162       | 120       | 110      | 40       |  | 09800 | 09800 |
| 9,9                       | 10                         | 162       | 120       | 110      | 40       |  | 09900 | 09900 |
| 10,0                      | 10                         | 162       | 120       | 110      | 40       |  | 10000 | 10000 |
| 10,1                      | 12                         | 204       | 156       | 142      | 45       |  | 10100 | 10100 |
| 10,2                      | 12                         | 204       | 156       | 142      | 45       |  | 10200 | 10200 |
| 10,3                      | 12                         | 204       | 156       | 142      | 45       |  | 10300 | 10300 |
| 10,4                      | 12                         | 204       | 156       | 142      | 45       |  | 10400 | 10400 |
| 10,5                      | 12                         | 204       | 156       | 142      | 45       |  | 10500 | 10500 |
| 10,6                      | 12                         | 204       | 156       | 142      | 45       |  | 10600 | 10600 |
| 10,7                      | 12                         | 204       | 156       | 142      | 45       |  | 10700 | 10700 |

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→ V<sub>c</sub> на стр. 116–122Ø DC<sub>m7</sub> для типа Speed VA и Quattro 4F / Ø DC<sub>n7</sub> для типа AL

## WTX – Высокопроизводительное сверло, заводской стандарт



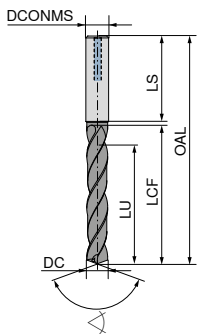
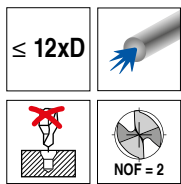
$\angle 135^\circ$  Твердый сплав 10 774 ...  
 $\angle 140^\circ$  Твердый сплав 10 737 ...  
 $\angle 135^\circ$  Твердый сплав 10 793 ...

| DC <sub>n7/m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |  |       |       |
|---------------------------|----------------------------|-----------|-----------|----------|----------|--|-------|-------|
| 10,8                      | 12                         | 204       | 156       | 142      | 45       |  | 10800 | 10800 |
| 10,9                      | 12                         | 204       | 156       | 142      | 45       |  | 10900 | 10900 |
| 11,0                      | 12                         | 204       | 156       | 142      | 45       |  | 11000 | 11000 |
| 11,1                      | 12                         | 204       | 156       | 142      | 45       |  | 11100 | 11100 |
| 11,2                      | 12                         | 204       | 156       | 142      | 45       |  | 11200 | 11200 |
| 11,3                      | 12                         | 204       | 156       | 142      | 45       |  | 11300 | 11300 |
| 11,4                      | 12                         | 204       | 156       | 142      | 45       |  | 11400 | 11400 |
| 11,5                      | 12                         | 204       | 156       | 142      | 45       |  | 11500 | 11500 |
| 11,6                      | 12                         | 204       | 156       | 142      | 45       |  | 11600 | 11600 |
| 11,7                      | 12                         | 204       | 156       | 142      | 45       |  | 11700 | 11700 |
| 11,8                      | 12                         | 204       | 156       | 142      | 45       |  | 11800 | 11800 |
| 11,9                      | 12                         | 204       | 156       | 142      | 45       |  | 11900 | 11900 |
| 12,0                      | 12                         | 204       | 156       | 142      | 45       |  | 12000 | 12000 |
| 12,1                      | 14                         | 230       | 182       | 166      | 45       |  |       | 12000 |
| 12,2                      | 14                         | 230       | 182       | 166      | 45       |  | 12200 | 12200 |
| 12,5                      | 14                         | 230       | 182       | 166      | 45       |  | 12500 | 12500 |
| 12,8                      | 14                         | 230       | 182       | 166      | 45       |  | 12800 | 12800 |
| 13,0                      | 14                         | 230       | 182       | 166      | 45       |  | 13000 | 13000 |
| 13,2                      | 14                         | 230       | 182       | 166      | 45       |  |       | 13200 |
| 13,5                      | 14                         | 230       | 182       | 166      | 45       |  | 13500 | 13500 |
| 13,8                      | 14                         | 230       | 182       | 166      | 45       |  | 13800 | 13800 |
| 14,0                      | 14                         | 230       | 182       | 166      | 45       |  | 14000 | 14000 |
| 14,2                      | 16                         | 260       | 208       | 192      | 48       |  | 14200 | 14200 |
| 14,5                      | 16                         | 260       | 208       | 192      | 48       |  | 14500 | 14500 |
| 14,7                      | 16                         | 260       | 208       | 192      | 48       |  |       | 14700 |
| 14,8                      | 16                         | 260       | 208       | 192      | 48       |  |       | 14800 |
| 15,0                      | 16                         | 260       | 208       | 192      | 48       |  | 15000 | 15000 |
| 15,1                      | 16                         | 260       | 208       | 192      | 48       |  | 15100 |       |
| 15,2                      | 16                         | 260       | 208       | 192      | 48       |  | 15200 | 15200 |
| 15,5                      | 16                         | 260       | 208       | 192      | 48       |  | 15500 | 15500 |
| 15,7                      | 16                         | 260       | 208       | 192      | 48       |  |       | 15700 |
| 15,8                      | 16                         | 260       | 208       | 192      | 48       |  | 15800 | 15800 |
| 16,0                      | 16                         | 260       | 208       | 192      | 48       |  | 16000 | 16000 |
| 16,2                      | 18                         | 285       | 234       | 216      | 48       |  |       | 16200 |
| 16,5                      | 18                         | 285       | 234       | 216      | 48       |  |       | 16500 |
| 16,8                      | 18                         | 285       | 234       | 216      | 48       |  |       | 16800 |
| 17,0                      | 18                         | 285       | 234       | 216      | 48       |  | 17000 | 17000 |
| 17,2                      | 18                         | 285       | 234       | 216      | 48       |  |       | 17200 |
| 17,5                      | 18                         | 285       | 234       | 216      | 48       |  | 17500 | 17500 |

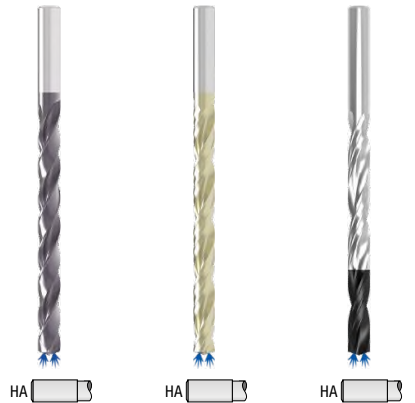
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→ V<sub>c</sub> на стр. 116–122Ø DC<sub>m7</sub> для типа Speed VA и Quattro 4F / Ø DC<sub>n7</sub> для типа AL

# WTX – Высокопроизводительное сверло, заводской стандарт



| NEW      |            |            |
|----------|------------|------------|
| Speed VA | Quattro 4F | AL         |
| Ti800    | DPX74S     | DLC        |
|          | DRAGONSKIN | DRAGONSKIN |



|                                                   |                                                   |                                                   |
|---------------------------------------------------|---------------------------------------------------|---------------------------------------------------|
| $\angle 135^\circ$<br>Твердый сплав<br>10 774 ... | $\angle 140^\circ$<br>Твердый сплав<br>10 737 ... | $\angle 135^\circ$<br>Твердый сплав<br>10 793 ... |
|---------------------------------------------------|---------------------------------------------------|---------------------------------------------------|

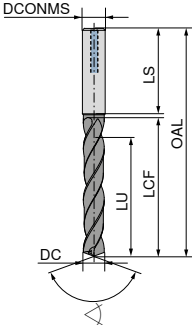
| DC <sub>h7/m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |
|---------------------------|----------------------------|-----------|-----------|----------|----------|
| 17,8                      | 18                         | 285       | 234       | 216      | 48       |
| 18,0                      | 18                         | 285       | 234       | 216      | 48       |
| 18,2                      | 20                         | 310       | 258       | 240      | 50       |
| 18,5                      | 20                         | 310       | 258       | 240      | 50       |
| 18,7                      | 20                         | 310       | 258       | 240      | 50       |
| 18,8                      | 20                         | 310       | 258       | 240      | 50       |
| 19,0                      | 20                         | 310       | 258       | 240      | 50       |
| 19,2                      | 20                         | 310       | 258       | 240      | 50       |
| 19,5                      | 20                         | 310       | 258       | 240      | 50       |
| 19,8                      | 20                         | 310       | 258       | 240      | 50       |
| 20,0                      | 20                         | 310       | 258       | 240      | 50       |

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→ v<sub>c</sub> на стр. 116–122

Ø DC<sub>m7</sub> для типа Speed VA и Quattro 4F / Ø DC<sub>h7</sub> для типа AL

# WPC – Высокопроизводительное сверло, заводской стандарт



Твердый сплав

11 615 ...

| DC <sub>h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|-----|
| 14,0                   | 14                         | 230       | 182       | 166      | 45       | 140 |
| 15,0                   | 16                         | 260       | 208       | 192      | 48       | 150 |
| 16,0                   | 16                         | 260       | 208       | 192      | 48       | 160 |
| 18,0                   | 18                         | 285       | 234       | 216      | 48       | 180 |

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| O |   |

→ v<sub>c</sub> на стр. 132

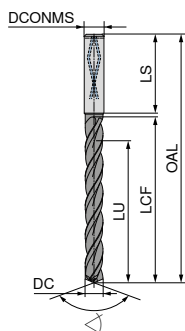
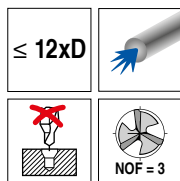
| DC <sub>h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |     |
|------------------------|----------------------------|-----------|-----------|----------|----------|-----|
| 3,0                    | 6                          | 92        | 54        | 48       | 36       | 030 |
| 3,1                    | 6                          | 92        | 54        | 48       | 36       | 031 |
| 3,2                    | 6                          | 92        | 54        | 48       | 36       | 032 |
| 3,3                    | 6                          | 92        | 54        | 48       | 36       | 033 |
| 3,4                    | 6                          | 92        | 54        | 48       | 36       | 034 |
| 3,5                    | 6                          | 92        | 54        | 48       | 36       | 035 |
| 3,6                    | 6                          | 92        | 54        | 48       | 36       | 036 |
| 3,7                    | 6                          | 92        | 54        | 48       | 36       | 037 |
| 3,8                    | 6                          | 102       | 64        | 58       | 36       | 038 |
| 3,9                    | 6                          | 102       | 64        | 58       | 36       | 039 |
| 4,0                    | 6                          | 102       | 64        | 58       | 36       | 040 |
| 4,1                    | 6                          | 102       | 64        | 58       | 36       | 041 |
| 4,2                    | 6                          | 102       | 64        | 58       | 36       | 042 |
| 4,3                    | 6                          | 102       | 64        | 58       | 36       | 043 |
| 4,4                    | 6                          | 102       | 64        | 58       | 36       | 044 |
| 4,5                    | 6                          | 102       | 64        | 58       | 36       | 045 |
| 4,6                    | 6                          | 102       | 64        | 58       | 36       | 046 |
| 4,7                    | 6                          | 102       | 64        | 58       | 36       | 047 |
| 4,8                    | 6                          | 116       | 78        | 70       | 36       | 048 |
| 4,9                    | 6                          | 116       | 78        | 70       | 36       | 049 |
| 5,0                    | 6                          | 116       | 78        | 70       | 36       | 050 |
| 5,5                    | 6                          | 116       | 78        | 70       | 36       | 055 |
| 5,8                    | 6                          | 116       | 78        | 70       | 36       | 058 |
| 6,0                    | 6                          | 116       | 78        | 70       | 36       | 060 |
| 6,3                    | 8                          | 146       | 108       | 94       | 36       | 063 |
| 6,5                    | 8                          | 146       | 108       | 94       | 36       | 065 |
| 6,6                    | 8                          | 146       | 108       | 94       | 36       | 066 |
| 6,8                    | 8                          | 146       | 108       | 94       | 36       | 068 |
| 7,0                    | 8                          | 146       | 108       | 94       | 36       | 070 |
| 7,5                    | 8                          | 146       | 108       | 94       | 36       | 075 |
| 7,8                    | 8                          | 146       | 108       | 94       | 36       | 078 |
| 8,0                    | 8                          | 146       | 108       | 94       | 36       | 080 |
| 8,2                    | 10                         | 162       | 120       | 110      | 40       | 082 |
| 8,5                    | 10                         | 162       | 120       | 110      | 40       | 085 |
| 9,0                    | 10                         | 162       | 120       | 110      | 40       | 090 |
| 9,5                    | 10                         | 162       | 120       | 110      | 40       | 095 |
| 9,8                    | 10                         | 162       | 120       | 110      | 40       | 098 |
| 10,0                   | 10                         | 162       | 120       | 110      | 40       | 100 |
| 10,5                   | 12                         | 204       | 156       | 142      | 45       | 105 |
| 11,0                   | 12                         | 204       | 156       | 142      | 45       | 110 |
| 11,5                   | 12                         | 204       | 156       | 142      | 45       | 115 |
| 12,0                   | 12                         | 204       | 156       | 142      | 45       | 120 |
| 13,0                   | 14                         | 230       | 182       | 166      | 45       | 130 |

# WTH – Высокопроизводительное сверло, заводской стандарт

▲ сверло для высокой подачи с тремя режущими кромками

▲ универсальность в применении  
▲ высокая точность позиционирования

▲ предназначено для сложных случаев засверливания



Feed UNI

DPX74S



НА

135°

Твердый сплав

10 796 ...

| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 4,0                    | 6                          | 102       | 64        | 58       | 36       | 04000 |
| 4,1                    | 6                          | 102       | 64        | 58       | 36       | 04100 |
| 4,2                    | 6                          | 102       | 64        | 58       | 36       | 04200 |
| 4,3                    | 6                          | 102       | 64        | 58       | 36       | 04300 |
| 4,4                    | 6                          | 102       | 64        | 58       | 36       | 04400 |
| 4,5                    | 6                          | 102       | 64        | 58       | 36       | 04500 |
| 4,6                    | 6                          | 102       | 64        | 58       | 36       | 04600 |
| 4,7                    | 6                          | 102       | 64        | 58       | 36       | 04700 |
| 4,8                    | 6                          | 116       | 78        | 70       | 36       | 04800 |
| 4,9                    | 6                          | 116       | 78        | 70       | 36       | 04900 |
| 5,0                    | 6                          | 116       | 78        | 70       | 36       | 05000 |
| 5,1                    | 6                          | 116       | 78        | 70       | 36       | 05100 |
| 5,2                    | 6                          | 116       | 78        | 70       | 36       | 05200 |
| 5,3                    | 6                          | 116       | 78        | 70       | 36       | 05300 |
| 5,4                    | 6                          | 116       | 78        | 70       | 36       | 05400 |
| 5,5                    | 6                          | 116       | 78        | 70       | 36       | 05500 |
| 5,6                    | 6                          | 116       | 78        | 70       | 36       | 05600 |
| 5,7                    | 6                          | 116       | 78        | 70       | 36       | 05700 |
| 5,8                    | 6                          | 116       | 78        | 70       | 36       | 05800 |
| 5,9                    | 6                          | 116       | 78        | 70       | 36       | 05900 |
| 6,0                    | 6                          | 116       | 78        | 70       | 36       | 06000 |
| 6,1                    | 8                          | 146       | 108       | 94       | 36       | 06100 |
| 6,2                    | 8                          | 146       | 108       | 94       | 36       | 06200 |
| 6,3                    | 8                          | 146       | 108       | 94       | 36       | 06300 |
| 6,4                    | 8                          | 146       | 108       | 94       | 36       | 06400 |
| 6,5                    | 8                          | 146       | 108       | 94       | 36       | 06500 |
| 6,6                    | 8                          | 146       | 108       | 94       | 36       | 06600 |
| 6,7                    | 8                          | 146       | 108       | 94       | 36       | 06700 |
| 6,8                    | 8                          | 146       | 108       | 94       | 36       | 06800 |
| 6,9                    | 8                          | 146       | 108       | 94       | 36       | 06900 |
| 7,0                    | 8                          | 146       | 108       | 94       | 36       | 07000 |
| 7,1                    | 8                          | 146       | 108       | 94       | 36       | 07100 |
| 7,2                    | 8                          | 146       | 108       | 94       | 36       | 07200 |
| 7,3                    | 8                          | 146       | 108       | 94       | 36       | 07300 |
| 7,4                    | 8                          | 146       | 108       | 94       | 36       | 07400 |
| 7,5                    | 8                          | 146       | 108       | 94       | 36       | 07500 |
| 7,6                    | 8                          | 146       | 108       | 94       | 36       | 07600 |
| 7,7                    | 8                          | 146       | 108       | 94       | 36       | 07700 |
| 7,8                    | 8                          | 146       | 108       | 94       | 36       | 07800 |
| 7,9                    | 8                          | 146       | 108       | 94       | 36       | 07900 |
| 8,0                    | 8                          | 146       | 108       | 94       | 36       | 08000 |
| 8,1                    | 10                         | 162       | 120       | 110      | 40       | 08100 |
| 8,2                    | 10                         | 162       | 120       | 110      | 40       | 08200 |
| 8,3                    | 10                         | 162       | 120       | 110      | 40       | 08300 |
| 8,4                    | 10                         | 162       | 120       | 110      | 40       | 08400 |
| 8,5                    | 10                         | 162       | 120       | 110      | 40       | 08500 |
| 8,6                    | 10                         | 162       | 120       | 110      | 40       | 08600 |
| 8,7                    | 10                         | 162       | 120       | 110      | 40       | 08700 |
| 8,8                    | 10                         | 162       | 120       | 110      | 40       | 08800 |
| 8,9                    | 10                         | 162       | 120       | 110      | 40       | 08900 |
| 9,0                    | 10                         | 162       | 120       | 110      | 40       | 09000 |
| 9,1                    | 10                         | 162       | 120       | 110      | 40       | 09100 |
| 9,2                    | 10                         | 162       | 120       | 110      | 40       | 09200 |
| 9,3                    | 10                         | 162       | 120       | 110      | 40       | 09300 |

10 796 ...

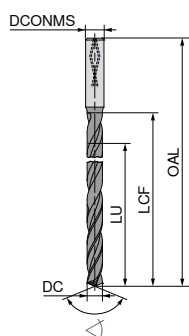
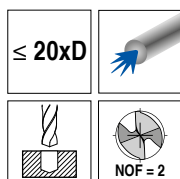
| DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 9,4                    | 10                         | 162       | 120       | 110      | 40       | 09400 |
| 9,5                    | 10                         | 162       | 120       | 110      | 40       | 09500 |
| 9,6                    | 10                         | 162       | 120       | 110      | 40       | 09600 |
| 9,7                    | 10                         | 162       | 120       | 110      | 40       | 09700 |
| 9,8                    | 10                         | 162       | 120       | 110      | 40       | 09800 |
| 9,9                    | 10                         | 162       | 120       | 110      | 40       | 09900 |
| 10,0                   | 10                         | 162       | 120       | 110      | 40       | 10000 |
| 10,1                   | 12                         | 204       | 156       | 142      | 45       | 10100 |
| 10,2                   | 12                         | 204       | 156       | 142      | 45       | 10200 |
| 10,3                   | 12                         | 204       | 156       | 142      | 45       | 10300 |
| 10,4                   | 12                         | 204       | 156       | 142      | 45       | 10400 |
| 10,5                   | 12                         | 204       | 156       | 142      | 45       | 10500 |
| 10,6                   | 12                         | 204       | 156       | 142      | 45       | 10600 |
| 10,7                   | 12                         | 204       | 156       | 142      | 45       | 10700 |
| 10,8                   | 12                         | 204       | 156       | 142      | 45       | 10800 |
| 10,9                   | 12                         | 204       | 156       | 142      | 45       | 10900 |
| 11,0                   | 12                         | 204       | 156       | 142      | 45       | 11000 |
| 11,1                   | 12                         | 204       | 156       | 142      | 45       | 11100 |
| 11,2                   | 12                         | 204       | 156       | 142      | 45       | 11200 |
| 11,3                   | 12                         | 204       | 156       | 142      | 45       | 11300 |
| 11,4                   | 12                         | 204       | 156       | 142      | 45       | 11400 |
| 11,5                   | 12                         | 204       | 156       | 142      | 45       | 11500 |
| 11,6                   | 12                         | 204       | 156       | 142      | 45       | 11600 |
| 11,7                   | 12                         | 204       | 156       | 142      | 45       | 11700 |
| 11,8                   | 12                         | 204       | 156       | 142      | 45       | 11800 |
| 11,9                   | 12                         | 204       | 156       | 142      | 45       | 11900 |
| 12,0                   | 12                         | 204       | 156       | 142      | 45       | 12000 |
| 12,2                   | 14                         | 230       | 182       | 166      | 45       | 12200 |
| 12,5                   | 14                         | 230       | 182       | 166      | 45       | 12500 |
| 12,8                   | 14                         | 230       | 182       | 166      | 45       | 12800 |
| 13,0                   | 14                         | 230       | 182       | 166      | 45       | 13000 |
| 13,5                   | 14                         | 230       | 182       | 166      | 45       | 13500 |
| 13,8                   | 14                         | 230       | 182       | 166      | 45       | 13800 |
| 14,0                   | 14                         | 230       | 182       | 166      | 45       | 14000 |
| 14,5                   | 16                         | 260       | 208       | 192      | 48       | 14500 |
| 14,8                   | 16                         | 260       | 208       | 192      | 48       | 14800 |
| 15,0                   | 16                         | 260       | 208       | 192      | 48       | 15000 |
| 15,5                   | 16                         | 260       | 208       | 192      | 48       | 15500 |
| 15,8                   | 16                         | 260       | 208       | 192      | 48       | 15800 |
| 16,0                   | 16                         | 260       | 208       | 192      | 48       | 16000 |
| 16,5                   | 18                         | 285       | 234       | 216      | 48       | 16500 |
| 16,8                   | 18                         | 285       | 234       | 216      | 48       | 16800 |
| 17,0                   | 18                         | 285       | 234       | 216      | 48       | 17000 |
| 17,5                   | 18                         | 285       | 234       | 216      | 48       | 17500 |
| 17,8                   | 18                         | 285       | 234       | 216      | 48       | 17800 |
| 18,0                   | 18                         | 285       | 234       | 216      | 48       | 18000 |
| 18,5                   | 20                         | 310       | 258       | 240      | 50       | 18500 |
| 18,8                   | 20                         | 310       | 258       | 240      | 50       | 18800 |
| 19,0                   | 20                         | 310       | 258       | 240      | 50       | 19000 |
| 19,5                   | 20                         | 310       | 258       | 240      | 50       | 19500 |
| 19,8                   | 20                         | 310       | 258       | 240      | 50       | 19800 |
| 20,0                   | 20                         | 310       | 258       | 240      | 50       | 20000 |

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→ v<sub>c</sub> на стр. 111

## WTX – Сверло для глубоких отверстий Co-Pilot

- ▲ Допуск j6 оптимален в качестве промежуточного допуска для пилотного сверла и сверла для глубоких отверстий
- ▲ требуется пилотное отверстие
- ▲ до 20xD без необходимости цикла принудительного удаления стружки
- ▲ высочайшая точность соосности
- ▲ надежный отвод стружки



**NEW**  
**CP 20**  
**UNI**  
**TiAlN**



НА

137°

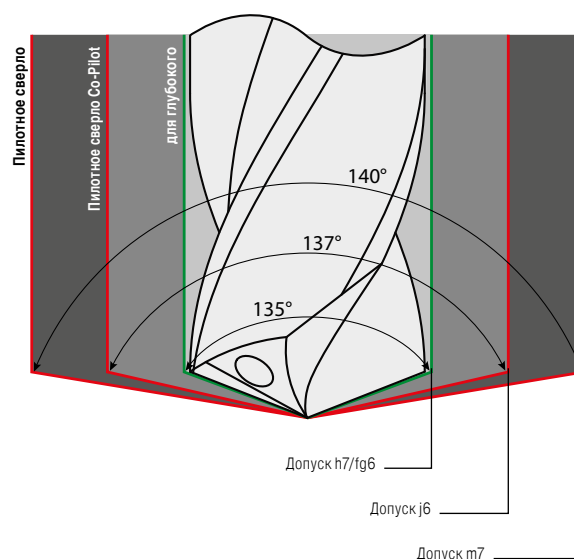
Твердый сплав

**11 018 ...**

| DC j6<br>mm | DCONMS<br>mm | h5<br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |       |
|-------------|--------------|----------|-----------|-----------|----------|-------|
| 3,0         | 6            | 120      | 80        | 60        |          | 03000 |
| 4,0         | 6            | 130      | 90        | 80        |          | 04000 |
| 4,2         | 6            | 160      | 110       | 84        |          | 04200 |
| 4,5         | 6            | 160      | 110       | 90        |          | 04500 |
| 4,8         | 6            | 160      | 120       | 96        |          | 04800 |
| 5,0         | 6            | 160      | 120       | 100       |          | 05000 |
| 5,5         | 6            | 185      | 140       | 110       |          | 05500 |
| 5,8         | 6            | 185      | 140       | 116       |          | 05800 |
| 6,0         | 6            | 185      | 140       | 120       |          | 06000 |
| 6,5         | 8            | 210      | 160       | 130       |          | 06500 |
| 6,8         | 8            | 210      | 160       | 136       |          | 06800 |
| 7,0         | 8            | 210      | 160       | 140       |          | 07000 |
| 7,5         | 8            | 230      | 180       | 150       |          | 07500 |
| 7,8         | 8            | 230      | 180       | 156       |          | 07800 |
| 8,0         | 8            | 230      | 180       | 160       |          | 08000 |
| 8,5         | 10           | 260      | 195       | 170       |          | 08500 |
| 8,8         | 10           | 290      | 230       | 176       |          | 08800 |
| 9,0         | 10           | 290      | 230       | 180       |          | 09000 |

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## Допуски и углы



## Таблица допусков

Допуски по ISO для валов и отверстий

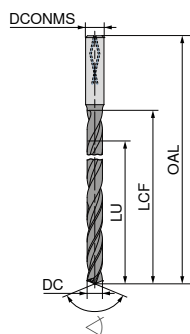
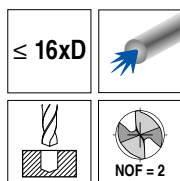
| от Ø           | 3   | 6   | 10  | 18  |                                               |
|----------------|-----|-----|-----|-----|-----------------------------------------------|
| довключительно | 6   | 10  | 18  | 30  |                                               |
| p6             | 20  | 24  | 29  | 35  |                                               |
|                | 12  | 15  | 18  | 22  |                                               |
| h7             | 0   | 0   | 0   | 0   | Сверло для глубоких отверстий от 16xD до 30xD |
|                | -12 | -15 | -18 | -21 |                                               |
| j6             | 6   | 7   | 8   | 9   | Пилотное сверло Co-Pilot                      |
|                | -2  | -2  | -3  | -4  |                                               |
| fg6            | -6  | -8  |     |     | Сверло для глубоких отверстий > 30xD          |
|                | -14 | -17 |     |     |                                               |
| m6             | 12  | 15  | 18  | 21  |                                               |
|                | 4   | 6   | 7   | 8   |                                               |
| m7             | 16  | 21  | 25  | 29  | WTX UNI / WPC                                 |
|                | 4   | 6   | 7   | 8   |                                               |

Обозначение допуска

→ V<sub>c</sub> на стр. 142

## WTX – Высокопроизводительное сверло для глубоких отверстий

- ▲ до 16xD без необходимости цикла принудительного удаления стружки
- ▲ требуется пилотное отверстие
- ▲ высочайшая точность соосности
- ▲ надежный отвод стружки



Твердый сплав

Твердый сплав

11 016 ...

11 017 ...

| DC <sub>h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |
|------------------------|----------------------------|-----------|-----------|----------|
| 2,0                    | 4                          | 84        | 42        | 39       |
| 2,2                    | 4                          | 84        | 42        | 39       |
| 2,3                    | 4                          | 84        | 42        | 39       |
| 2,4                    | 4                          | 96        | 54        | 50       |
| 2,5                    | 4                          | 96        | 54        | 50       |
| 2,7                    | 4                          | 96        | 54        | 50       |
| 2,8                    | 4                          | 96        | 54        | 50       |
| 3,0                    | 6                          | 100       | 60        | 55       |
| 3,2                    | 6                          | 100       | 60        | 55       |
| 3,3                    | 6                          | 100       | 60        | 55       |
| 3,5                    | 6                          | 100       | 60        | 55       |
| 3,8                    | 6                          | 115       | 75        | 69       |
| 4,0                    | 6                          | 115       | 75        | 69       |
| 4,2                    | 6                          | 115       | 75        | 69       |
| 4,5                    | 6                          | 130       | 90        | 83       |
| 4,8                    | 6                          | 130       | 90        | 83       |
| 5,0                    | 6                          | 130       | 90        | 83       |
| 5,5                    | 6                          | 150       | 108       | 99       |
| 5,8                    | 6                          | 150       | 108       | 99       |
| 6,0                    | 6                          | 150       | 108       | 99       |
| 6,5                    | 8                          | 165       | 125       | 115      |
| 6,8                    | 8                          | 165       | 125       | 115      |
| 7,0                    | 8                          | 165       | 125       | 115      |
| 7,5                    | 8                          | 180       | 140       | 128      |
| 7,8                    | 8                          | 180       | 140       | 128      |
| 8,0                    | 8                          | 180       | 140       | 128      |
| 8,5                    | 10                         | 205       | 160       | 147      |
| 8,8                    | 10                         | 205       | 160       | 147      |
| 9,0                    | 10                         | 205       | 160       | 147      |
| 9,8                    | 10                         | 225       | 180       | 165      |
| 10,0                   | 10                         | 225       | 180       | 165      |
| 10,2                   | 12                         | 240       | 190       | 174      |
| 10,8                   | 12                         | 240       | 190       | 174      |
| 11,8                   | 12                         | 265       | 215       | 197      |
| 12,0                   | 12                         | 265       | 215       | 197      |

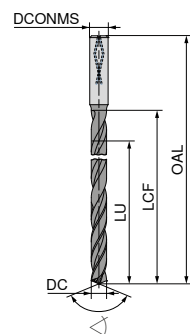
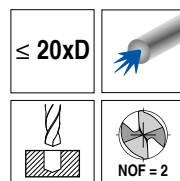
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→ v<sub>c</sub> на стр. 143+146

→ Информация по обработке: стр. 160

## WTX – Высокопроизводительное сверло для глубоких отверстий

- ▲ до 20xD без необходимости цикла принудительного удаления стружки
- ▲ требуется пилотное отверстие
- ▲ высочайшая точность соосности
- ▲ надежный отвод стружки



Твердый сплав

Твердый сплав

11 020 ...

11 021 ...

| DC <sub>h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |
|------------------------|----------------------------|-----------|-----------|----------|
| 2,0                    | 4                          | 92        | 50        | 47       |
| 2,2                    | 4                          | 92        | 50        | 47       |
| 2,3                    | 4                          | 92        | 50        | 47       |
| 2,4                    | 4                          | 112       | 70        | 66       |
| 2,5                    | 4                          | 112       | 70        | 66       |
| 2,7                    | 4                          | 112       | 70        | 66       |
| 2,8                    | 4                          | 112       | 70        | 66       |
| 3,0                    | 6                          | 120       | 80        | 75       |
| 3,2                    | 6                          | 120       | 80        | 75       |
| 3,3                    | 6                          | 120       | 80        | 75       |
| 3,5                    | 6                          | 120       | 80        | 75       |
| 3,8                    | 6                          | 130       | 90        | 84       |
| 4,0                    | 6                          | 130       | 90        | 84       |
| 4,2                    | 6                          | 160       | 110       | 103      |
| 4,5                    | 6                          | 160       | 110       | 103      |
| 4,8                    | 6                          | 160       | 120       | 113      |
| 5,0                    | 6                          | 160       | 120       | 113      |
| 5,5                    | 6                          | 185       | 140       | 131      |
| 5,8                    | 6                          | 185       | 140       | 131      |
| 6,0                    | 6                          | 185       | 140       | 131      |
| 6,5                    | 8                          | 210       | 160       | 150      |
| 6,8                    | 8                          | 210       | 160       | 150      |
| 7,0                    | 8                          | 210       | 160       | 150      |
| 7,5                    | 8                          | 230       | 180       | 168      |
| 7,8                    | 8                          | 230       | 180       | 168      |
| 8,0                    | 8                          | 230       | 180       | 168      |
| 8,5                    | 10                         | 260       | 195       | 182      |
| 8,8                    | 10                         | 290       | 230       | 216      |
| 9,0                    | 10                         | 290       | 230       | 216      |
| 9,8                    | 10                         | 290       | 230       | 216      |
| 10,0                   | 10                         | 290       | 230       | 216      |
| 10,2                   | 12                         | 315       | 268       | 251      |
| 10,8                   | 12                         | 315       | 268       | 251      |
| 11,8                   | 12                         | 315       | 268       | 251      |
| 12,0                   | 12                         | 315       | 268       | 251      |

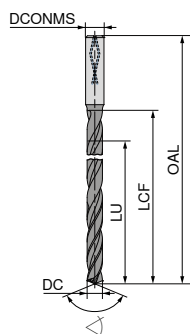
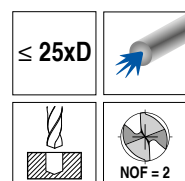
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→ v<sub>c</sub> на стр. 143+146

→ Информация по обработке: стр. 160

## WTX – Высокопроизводительное сверло для глубоких отверстий

- ▲ до 25xD без необходимости принудительного цикла удаления стружки
- ▲ требуется пилотное отверстие
- ▲ высочайшая точность соосности
- ▲ надежный отвод стружки



135°

Твердый сплав

11 025 ...

135°

Твердый сплав

11 026 ...

| DC <sub>h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |
|------------------------|----------------------------|-----------|-----------|----------|
| 2,0                    | 4                          | 104       | 60        | 57       |
| 2,2                    | 4                          | 104       | 60        | 57       |
| 2,3                    | 4                          | 104       | 60        | 57       |
| 2,4                    | 4                          | 125       | 80        | 76       |
| 2,5                    | 4                          | 125       | 80        | 76       |
| 2,7                    | 4                          | 125       | 80        | 76       |
| 2,8                    | 4                          | 125       | 80        | 76       |
| 3,0                    | 6                          | 135       | 98        | 93       |
| 3,2                    | 6                          | 135       | 98        | 93       |
| 3,3                    | 6                          | 150       | 110       | 105      |
| 3,5                    | 6                          | 150       | 110       | 105      |
| 3,8                    | 6                          | 160       | 120       | 114      |
| 4,0                    | 6                          | 160       | 120       | 114      |
| 4,2                    | 6                          | 160       | 120       | 114      |
| 4,5                    | 6                          | 180       | 135       | 128      |
| 4,8                    | 6                          | 180       | 135       | 128      |
| 5,0                    | 6                          | 180       | 135       | 128      |
| 5,5                    | 6                          | 205       | 168       | 159      |
| 5,8                    | 6                          | 205       | 168       | 159      |
| 6,0                    | 6                          | 205       | 168       | 159      |
| 6,5                    | 8                          | 240       | 200       | 190      |
| 6,8                    | 8                          | 240       | 200       | 190      |
| 7,0                    | 8                          | 240       | 200       | 190      |
| 7,5                    | 8                          | 260       | 220       | 208      |
| 7,8                    | 8                          | 260       | 220       | 208      |
| 8,0                    | 8                          | 260       | 220       | 208      |
| 8,5                    | 10                         | 285       | 240       | 227      |
| 8,8                    | 10                         | 310       | 268       | 254      |
| 9,0                    | 10                         | 310       | 268       | 254      |
| 9,8                    | 10                         | 310       | 268       | 254      |
| 10,0                   | 10                         | 310       | 268       | 254      |
| 10,2                   | 12                         | 375       | 325       | 308      |
| 10,8                   | 12                         | 375       | 325       | 308      |
| 11,8                   | 12                         | 375       | 325       | 308      |
| 12,0                   | 12                         | 375       | 325       | 308      |

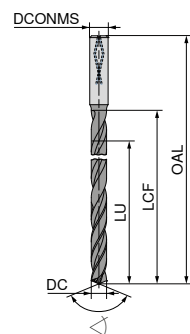
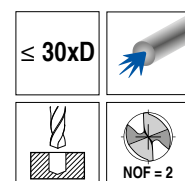
|   |   |
|---|---|
| P | ● |
| M | ● |
| K | ● |
| N | ● |
| S | ○ |
| H |   |
| O |   |

→ v<sub>c</sub> на стр. 144+147

→ Информация по обработке: стр. 160

## WTX – Высокопроизводительное сверло для глубоких отверстий

- ▲ до 30xD без необходимости цикла принудительного удаления стружки
- ▲ требуется пилотное отверстие
- ▲ высочайшая точность соосности
- ▲ надежный отвод стружки



135°

Твердый сплав

11 030 ...

135°

Твердый сплав

11 031 ...

| DC <sub>h7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |
|------------------------|----------------------------|-----------|-----------|----------|
| 2,0                    | 4                          | 115       | 70        | 67       |
| 2,2                    | 4                          | 115       | 70        | 67       |
| 2,3                    | 4                          | 115       | 70        | 67       |
| 2,4                    | 4                          | 138       | 90        | 86       |
| 2,5                    | 4                          | 138       | 90        | 86       |
| 2,7                    | 4                          | 138       | 90        | 86       |
| 2,8                    | 4                          | 138       | 90        | 86       |
| 3,0                    | 6                          | 150       | 105       | 100      |
| 3,2                    | 6                          | 150       | 105       | 100      |
| 3,3                    | 6                          | 185       | 135       | 130      |
| 3,5                    | 6                          | 185       | 135       | 130      |
| 3,8                    | 6                          | 185       | 135       | 130      |
| 4,0                    | 6                          | 185       | 135       | 130      |
| 4,2                    | 6                          | 185       | 135       | 130      |
| 4,5                    | 6                          | 215       | 165       | 158      |
| 4,8                    | 6                          | 215       | 165       | 158      |
| 5,0                    | 6                          | 215       | 165       | 158      |
| 5,5                    | 6                          | 230       | 180       | 171      |
| 5,8                    | 6                          | 230       | 180       | 171      |
| 6,0                    | 6                          | 230       | 180       | 171      |
| 6,5                    | 8                          | 280       | 215       | 205      |
| 6,8                    | 8                          | 280       | 230       | 220      |
| 7,0                    | 8                          | 280       | 230       | 220      |
| 7,5                    | 8                          | 280       | 230       | 220      |
| 7,8                    | 8                          | 315       | 265       | 253      |
| 8,0                    | 8                          | 315       | 265       | 253      |
| 8,5                    | 10                         | 350       | 295       | 282      |
| 8,8                    | 10                         | 380       | 330       | 316      |
| 9,0                    | 10                         | 380       | 330       | 316      |
| 9,8                    | 10                         | 380       | 330       | 316      |
| 10,0                   | 10                         | 380       | 330       | 316      |
| 10,2                   | 12                         | 430       | 380       | 365      |
| 10,8                   | 12                         | 430       | 380       | 365      |
| 11,8                   | 12                         | 430       | 380       | 365      |
| 12,0                   | 12                         | 430       | 380       | 365      |

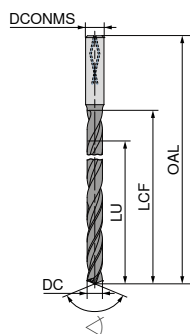
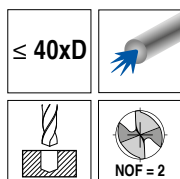
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| M | ● |
| K | ● |
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| S | ○ |
| H |   |
| O |   |

→ v<sub>c</sub> на стр. 144+147

→ Информация по обработке: стр. 160

## WTX – Высокопроизводительное сверло для глубоких отверстий

- ▲ до 40xD без необходимости цикла принудительного удаления стружки
- ▲ требуется пилотное отверстие
- ▲ высочайшая точность соосности
- ▲ надежный отвод стружки



135°

Твердый сплав

11 040 ...

| DC <sub>fg6</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |     |
|-------------------------|----------------------------|-----------|-----------|----------|-----|
| 3,0                     | 6                          | 195       | 150       | 146      | 030 |
| 4,0                     | 6                          | 220       | 175       | 169      | 040 |
| 4,2                     | 6                          | 245       | 200       | 194      | 042 |
| 4,5                     | 6                          | 245       | 200       | 194      | 045 |
| 4,8                     | 6                          | 275       | 230       | 223      | 048 |
| 5,0                     | 6                          | 275       | 230       | 223      | 050 |
| 5,5                     | 6                          | 305       | 260       | 251      | 055 |
| 5,8                     | 6                          | 305       | 260       | 251      | 058 |
| 6,0                     | 6                          | 305       | 260       | 251      | 060 |
| 6,5                     | 8                          | 345       | 300       | 290      | 065 |
| 6,8                     | 8                          | 345       | 300       | 290      | 068 |
| 7,0                     | 8                          | 345       | 300       | 290      | 070 |
| 7,5                     | 8                          | 385       | 340       | 328      | 075 |
| 7,8                     | 8                          | 385       | 340       | 328      | 078 |
| 8,0                     | 8                          | 385       | 340       | 328      | 080 |
| 8,5                     | 10                         | 430       | 380       | 367      | 085 |
| 8,8                     | 10                         | 430       | 380       | 367      | 088 |
| 9,0                     | 10                         | 430       | 380       | 367      | 090 |

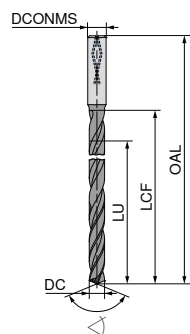
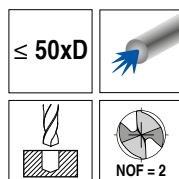
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| K | ● |
| N | ● |
| S | ○ |
| H |   |
| O |   |

→ v<sub>c</sub> на стр. 145

→ Информация по обработке: стр. 160

## WTX – Высокопроизводительное сверло для глубоких отверстий

- ▲ до 50xD без необходимости цикла принудительного удаления стружки
- ▲ требуется пилотное отверстие
- ▲ высочайшая точность соосности
- ▲ надежный отвод стружки



135°

Твердый сплав

11 050 ...

| DC <sub>fg6</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |     |
|-------------------------|----------------------------|-----------|-----------|----------|-----|
| 3,0                     | 6                          | 220       | 175       | 170      | 030 |
| 4,0                     | 6                          | 265       | 220       | 214      | 040 |
| 4,2                     | 6                          | 290       | 245       | 238      | 042 |
| 4,5                     | 6                          | 290       | 245       | 238      | 045 |
| 4,8                     | 6                          | 320       | 275       | 268      | 048 |
| 5,0                     | 6                          | 320       | 275       | 268      | 050 |
| 5,5                     | 6                          | 355       | 310       | 302      | 055 |
| 5,8                     | 6                          | 355       | 315       | 306      | 058 |
| 6,0                     | 6                          | 355       | 315       | 306      | 060 |
| 6,5                     | 8                          | 395       | 350       | 340      | 065 |
| 6,8                     | 8                          | 425       | 380       | 370      | 068 |

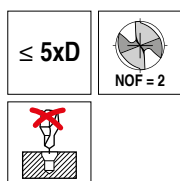
|   |   |
|---|---|
| P | ● |
| M | ● |
| K | ● |
| N | ● |
| S | ○ |
| H |   |
| O |   |

→ v<sub>c</sub> на стр. 145

→ Информация по обработке: стр. 160

# WTH – Высокопроизводительное сверло

▲ Унифицированный хвостовик Ø 3 мм h6 для использования в термопатроне



Твердый сплав

11 770 ...

| DC <sub>+0,004</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |       |
|----------------------------|----------------------------|-----------|-----------|----------|-------|
| 0,10                       | 3                          | 38        | 1,2       | 1,0      | 00100 |
| 0,15                       | 3                          | 38        | 2,0       | 1,7      | 00150 |
| 0,20                       | 3                          | 38        | 3,5       | 3,0      | 00200 |
| 0,25                       | 3                          | 38        | 3,5       | 3,0      | 00250 |
| 0,30                       | 3                          | 38        | 5,5       | 5,0      | 00300 |
| 0,35                       | 3                          | 38        | 5,5       | 5,0      | 00350 |
| 0,40                       | 3                          | 38        | 7,0       | 6,0      | 00400 |
| 0,45                       | 3                          | 38        | 7,0       | 6,0      | 00450 |
| 0,50                       | 3                          | 38        | 7,0       | 6,0      | 00500 |
| 0,55                       | 3                          | 38        | 7,0       | 6,0      | 00550 |
| 0,60                       | 3                          | 38        | 7,0       | 6,0      | 00600 |
| 0,65                       | 3                          | 38        | 7,0       | 6,0      | 00650 |
| 0,70                       | 3                          | 38        | 10,5      | 8,0      | 00700 |
| 0,75                       | 3                          | 38        | 10,5      | 8,0      | 00750 |
| 0,80                       | 3                          | 38        | 10,5      | 8,0      | 00800 |
| 0,85                       | 3                          | 38        | 10,5      | 8,0      | 00850 |
| 0,90                       | 3                          | 38        | 10,5      | 8,0      | 00900 |
| 0,95                       | 3                          | 38        | 10,5      | 8,0      | 00950 |
| 0,97                       | 3                          | 38        | 10,5      | 8,0      | 00970 |
| 0,98                       | 3                          | 38        | 10,5      | 8,0      | 00980 |
| 0,99                       | 3                          | 38        | 10,5      | 8,0      | 00990 |
| 1,00                       | 3                          | 38        | 10,5      | 8,0      | 01000 |
| 1,01                       | 3                          | 38        | 10,5      | 8,0      | 01010 |
| 1,02                       | 3                          | 38        | 10,5      | 8,0      | 01020 |
| 1,03                       | 3                          | 38        | 10,5      | 8,0      | 01030 |
| 1,05                       | 3                          | 38        | 10,5      | 8,0      | 01050 |
| 1,10                       | 3                          | 38        | 10,5      | 8,0      | 01100 |
| 1,15                       | 3                          | 38        | 10,5      | 8,0      | 01150 |
| 1,20                       | 3                          | 38        | 10,5      | 8,0      | 01200 |
| 1,25                       | 3                          | 38        | 10,5      | 8,0      | 01250 |
| 1,30                       | 3                          | 38        | 10,5      | 8,0      | 01300 |
| 1,35                       | 3                          | 38        | 10,5      | 8,0      | 01350 |
| 1,40                       | 3                          | 38        | 10,5      | 8,0      | 01400 |
| 1,45                       | 3                          | 38        | 10,5      | 8,0      | 01450 |
| 1,47                       | 3                          | 38        | 10,5      | 8,0      | 01470 |
| 1,48                       | 3                          | 38        | 10,5      | 8,0      | 01480 |
| 1,49                       | 3                          | 38        | 10,5      | 8,0      | 01490 |
| 1,50                       | 3                          | 38        | 10,5      | 8,0      | 01500 |
| 1,51                       | 3                          | 38        | 10,5      | 8,0      | 01510 |
| 1,52                       | 3                          | 38        | 10,5      | 8,0      | 01520 |
| 1,53                       | 3                          | 38        | 10,5      | 8,0      | 01530 |
| 1,55                       | 3                          | 38        | 10,5      | 8,0      | 01550 |
| 1,60                       | 3                          | 38        | 10,5      | 8,0      | 01600 |
| 1,65                       | 3                          | 38        | 10,5      | 8,0      | 01650 |
| 1,70                       | 3                          | 38        | 10,5      | 8,0      | 01700 |
| 1,75                       | 3                          | 38        | 10,5      | 8,0      | 01750 |

11 770 ...

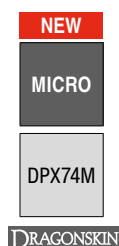
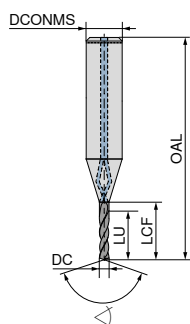
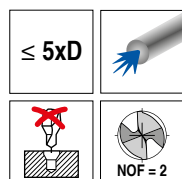
| DC <sub>+0,004</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |       |
|----------------------------|----------------------------|-----------|-----------|----------|-------|
| 1,80                       | 3                          | 38        | 10,5      | 8,0      | 01800 |
| 1,85                       | 3                          | 38        | 12,0      | 8,0      | 01850 |
| 1,90                       | 3                          | 38        | 12,0      | 8,0      | 01900 |
| 1,95                       | 3                          | 38        | 12,0      | 8,0      | 01950 |
| 1,97                       | 3                          | 38        | 12,0      | 8,0      | 01970 |
| 1,98                       | 3                          | 38        | 12,0      | 8,0      | 01980 |
| 1,99                       | 3                          | 38        | 12,0      | 8,0      | 01990 |
| 2,00                       | 3                          | 42        | 13,0      | 9,0      | 02000 |
| 2,01                       | 3                          | 42        | 13,0      | 9,0      | 02010 |
| 2,02                       | 3                          | 42        | 13,0      | 9,0      | 02020 |
| 2,03                       | 3                          | 42        | 13,0      | 9,0      | 02030 |
| 2,05                       | 3                          | 42        | 13,0      | 9,0      | 02050 |
| 2,10                       | 3                          | 42        | 13,0      | 9,0      | 02100 |
| 2,15                       | 3                          | 42        | 13,0      | 9,0      | 02150 |
| 2,20                       | 3                          | 46        | 15,0      | 10,0     | 02200 |
| 2,25                       | 3                          | 46        | 15,0      | 10,0     | 02250 |
| 2,30                       | 3                          | 46        | 15,0      | 10,0     | 02300 |
| 2,35                       | 3                          | 46        | 15,0      | 10,0     | 02350 |
| 2,40                       | 3                          | 46        | 15,0      | 10,0     | 02400 |
| 2,45                       | 3                          | 46        | 15,0      | 10,0     | 02450 |
| 2,47                       | 3                          | 46        | 15,0      | 10,0     | 02470 |
| 2,48                       | 3                          | 46        | 15,0      | 10,0     | 02480 |
| 2,49                       | 3                          | 46        | 15,0      | 10,0     | 02490 |
| 2,50                       | 3                          | 46        | 15,0      | 10,0     | 02500 |
| 2,51                       | 3                          | 46        | 15,0      | 10,0     | 02510 |
| 2,52                       | 3                          | 46        | 15,0      | 10,0     | 02520 |
| 2,53                       | 3                          | 46        | 15,0      | 10,0     | 02530 |
| 2,60                       | 3                          | 46        | 15,0      | 10,0     | 02600 |
| 2,70                       | 3                          | 46        | 15,0      | 10,0     | 02700 |
| 2,80                       | 3                          | 46        | 15,0      | 10,0     | 02800 |
| 2,90                       | 3                          | 46        | 15,0      | 10,0     | 02900 |

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→ v<sub>c</sub> на стр. 136

## WTX – Высокопроизводительное сверло

- ▲ специализированное миниатюрное сверло
- ▲ Универсальное применение
- ▲ Высокая надёжность производственных процессов
- ▲ Сверло WTX-Микро для пилотных отверстий – высокопроизводительное сверло для сверления глубоких отверстий



HA

135°

Твердый сплав  
10 693 ...

| DC <sub>m6</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|-------|
| 0,8                    | 3                          | 39        | 5,6       | 4,0      | 00800 |
| 0,9                    | 3                          | 39        | 6,3       | 4,5      | 00900 |
| 1,0                    | 3                          | 40        | 7,0       | 5,0      | 01000 |
| 1,1                    | 3                          | 41        | 7,7       | 5,5      | 01100 |
| 1,2                    | 3                          | 41        | 8,4       | 6,0      | 01200 |
| 1,3                    | 3                          | 42        | 9,1       | 6,5      | 01300 |
| 1,4                    | 3                          | 42        | 9,8       | 7,0      | 01400 |
| 1,5                    | 3                          | 43        | 10,5      | 7,5      | 01500 |
| 1,6                    | 3                          | 44        | 11,2      | 8,0      | 01600 |
| 1,7                    | 3                          | 44        | 11,9      | 8,5      | 01700 |
| 1,8                    | 3                          | 45        | 12,6      | 9,0      | 01800 |
| 1,9                    | 3                          | 45        | 13,3      | 9,5      | 01900 |
| 2,0                    | 3                          | 46        | 14,0      | 10,0     | 02000 |
| 2,1                    | 3                          | 47        | 14,7      | 10,5     | 02100 |
| 2,2                    | 3                          | 47        | 15,4      | 11,0     | 02200 |
| 2,3                    | 3                          | 48        | 16,1      | 11,5     | 02300 |
| 2,4                    | 3                          | 48        | 16,8      | 12,0     | 02400 |
| 2,5                    | 3                          | 49        | 17,5      | 12,5     | 02500 |
| 2,6                    | 3                          | 50        | 18,2      | 13,0     | 02600 |
| 2,7                    | 3                          | 50        | 18,9      | 13,5     | 02700 |
| 2,8                    | 3                          | 51        | 19,6      | 14,0     | 02800 |
| 2,9                    | 3                          | 51        | 20,3      | 14,5     | 02900 |

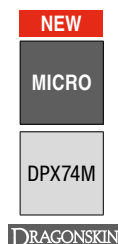
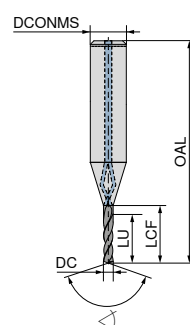
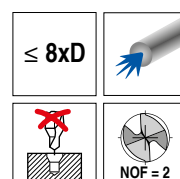
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| P | ● |
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| H |   |
| O |   |

→ v<sub>c</sub> на стр. 137  
→ Информация по обработке: стр. 161

1 Минимальное давление СОЖ: 30 бар

## WTX – Высокопроизводительное сверло

- ▲ специализированное миниатюрное сверло
- ▲ универсальность в применении
- ▲ очень высокая надёжность технологических процессов



HA

128°

Твердый сплав  
10 694 ...

| DC <sub>h6</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|-------|
| 0,8                    | 3                          | 41        | 8         | 6,4      | 00800 |
| 0,9                    | 3                          | 42        | 9         | 7,2      | 00900 |
| 1,0                    | 3                          | 43        | 10        | 8,0      | 01000 |
| 1,1                    | 3                          | 44        | 11        | 8,8      | 01100 |
| 1,2                    | 3                          | 45        | 12        | 9,6      | 01200 |
| 1,3                    | 3                          | 46        | 13        | 10,4     | 01300 |
| 1,4                    | 3                          | 47        | 14        | 11,2     | 01400 |
| 1,5                    | 3                          | 47        | 15        | 12,0     | 01500 |
| 1,6                    | 3                          | 48        | 16        | 12,8     | 01600 |
| 1,7                    | 3                          | 49        | 17        | 13,6     | 01700 |
| 1,8                    | 3                          | 50        | 18        | 14,4     | 01800 |
| 1,9                    | 3                          | 51        | 19        | 15,2     | 01900 |
| 2,0                    | 3                          | 52        | 20        | 16,0     | 02000 |
| 2,1                    | 3                          | 53        | 21        | 16,8     | 02100 |
| 2,2                    | 3                          | 54        | 22        | 17,6     | 02200 |
| 2,3                    | 3                          | 55        | 23        | 18,4     | 02300 |
| 2,4                    | 3                          | 56        | 24        | 19,2     | 02400 |
| 2,5                    | 3                          | 56        | 25        | 20,0     | 02500 |
| 2,6                    | 3                          | 57        | 26        | 20,8     | 02600 |
| 2,7                    | 3                          | 58        | 27        | 21,6     | 02700 |
| 2,8                    | 3                          | 59        | 28        | 22,4     | 02800 |
| 2,9                    | 3                          | 60        | 29        | 23,2     | 02900 |

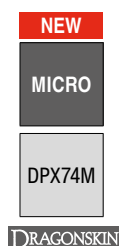
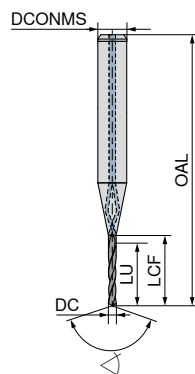
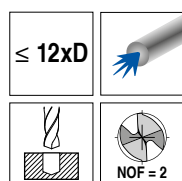
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| K | ● |
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→ v<sub>c</sub> на стр. 138  
→ Информация по обработке: стр. 161

1 Минимальное давление СОЖ: 30 бар

## WTX – Высокопроизводительное сверло

- ▲ специализированное миниатюрное сверло
- ▲ Универсальное применение
- ▲ Высокая надежность производственных процессов
- ▲ Пилотное сверло: Высокопроизводительное 5xD WTX – Micro



10 695 ...

| DC <sub>h6</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|-------|
| 0,8                    | 3                          | 44        | 11,2      | 9,6      | 00800 |
| 0,9                    | 3                          | 46        | 12,6      | 10,8     | 00900 |
| 1,0                    | 3                          | 47        | 14,0      | 12,0     | 01000 |
| 1,1                    | 3                          | 48        | 15,4      | 13,2     | 01100 |
| 1,2                    | 3                          | 50        | 16,8      | 14,4     | 01200 |
| 1,3                    | 3                          | 51        | 18,2      | 15,6     | 01300 |
| 1,4                    | 3                          | 52        | 19,6      | 16,8     | 01400 |
| 1,5                    | 3                          | 53        | 21,0      | 18,0     | 01500 |
| 1,6                    | 3                          | 55        | 22,4      | 19,2     | 01600 |
| 1,7                    | 3                          | 56        | 23,8      | 20,4     | 01700 |
| 1,8                    | 3                          | 57        | 25,2      | 21,6     | 01800 |
| 1,9                    | 3                          | 59        | 26,6      | 22,8     | 01900 |
| 2,0                    | 3                          | 60        | 28,0      | 24,0     | 02000 |
| 2,1                    | 3                          | 61        | 29,4      | 25,2     | 02100 |
| 2,2                    | 3                          | 63        | 30,8      | 26,4     | 02200 |
| 2,3                    | 3                          | 64        | 32,2      | 27,6     | 02300 |
| 2,4                    | 3                          | 65        | 33,6      | 28,8     | 02400 |
| 2,5                    | 3                          | 67        | 35,0      | 30,0     | 02500 |
| 2,6                    | 3                          | 68        | 36,4      | 31,2     | 02600 |
| 2,7                    | 3                          | 69        | 37,8      | 32,4     | 02700 |
| 2,8                    | 3                          | 70        | 39,2      | 33,6     | 02800 |
| 2,9                    | 3                          | 72        | 40,6      | 34,8     | 02900 |

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→ v<sub>c</sub> на стр. 138

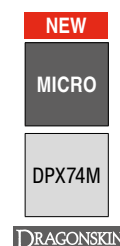
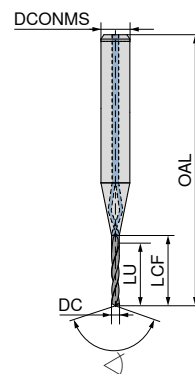
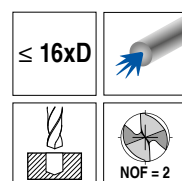
→ Информация по обработке: стр. 161



Минимальное давление СОЖ: 30 бар

## WTX – Высокопроизводительное сверло для глубоких отверстий

- ▲ специализированное миниатюрное сверло
- ▲ Универсальное применение
- ▲ Высокая надежность производственных процессов
- ▲ Пилотное сверло: Высокопроизводительное 5xD WTX – Micro



10 696 ...

| DC <sub>h6</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|-------|
| 0,8                    | 3                          | 48        | 14,4      | 12,8     | 00800 |
| 0,9                    | 3                          | 49        | 16,2      | 14,4     | 00900 |
| 1,0                    | 3                          | 51        | 18,0      | 16,0     | 01000 |
| 1,1                    | 3                          | 53        | 19,8      | 17,6     | 01100 |
| 1,2                    | 3                          | 54        | 21,6      | 19,2     | 01200 |
| 1,3                    | 3                          | 56        | 23,4      | 20,8     | 01300 |
| 1,4                    | 3                          | 58        | 25,2      | 22,4     | 01400 |
| 1,5                    | 3                          | 60        | 27,0      | 24,0     | 01500 |
| 1,6                    | 3                          | 61        | 28,8      | 25,6     | 01600 |
| 1,7                    | 3                          | 63        | 30,6      | 27,2     | 01700 |
| 1,8                    | 3                          | 65        | 32,4      | 28,8     | 01800 |
| 1,9                    | 3                          | 66        | 34,2      | 30,4     | 01900 |
| 2,0                    | 3                          | 68        | 36,0      | 32,0     | 02000 |
| 2,1                    | 3                          | 70        | 37,8      | 33,6     | 02100 |
| 2,2                    | 3                          | 71        | 39,6      | 35,2     | 02200 |
| 2,3                    | 3                          | 73        | 41,4      | 36,8     | 02300 |
| 2,4                    | 3                          | 75        | 43,2      | 38,4     | 02400 |
| 2,5                    | 3                          | 77        | 45,0      | 40,0     | 02500 |
| 2,6                    | 3                          | 78        | 46,8      | 41,6     | 02600 |
| 2,7                    | 3                          | 80        | 48,6      | 43,2     | 02700 |
| 2,8                    | 3                          | 82        | 50,4      | 44,8     | 02800 |
| 2,9                    | 3                          | 83        | 52,2      | 46,4     | 02900 |

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→ v<sub>c</sub> на стр. 139

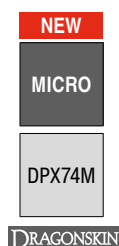
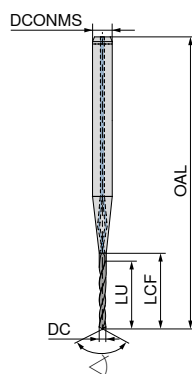
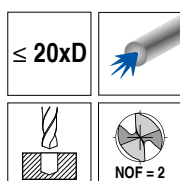
→ Информация по обработке: стр. 161



Минимальное давление СОЖ: 30 бар

## WTX – Высокопроизводительное сверло для глубоких отверстий

- ▲ специализированное миниатюрное сверло
- ▲ Универсальное применение
- ▲ Высокая надежность производственных процессов
- ▲ Пилотное сверло: Высокопроизводительное 5xD WTX – Micro



10 697 ...

| DC <sub>h6</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|-------|
| 0,8                    | 3                          | 51        | 17,6      | 16       | 00800 |
| 0,9                    | 3                          | 53        | 19,8      | 18       | 00900 |
| 1,0                    | 3                          | 55        | 22,0      | 20       | 01000 |
| 1,1                    | 3                          | 57        | 24,2      | 22       | 01100 |
| 1,2                    | 3                          | 59        | 26,4      | 24       | 01200 |
| 1,3                    | 3                          | 61        | 28,6      | 26       | 01300 |
| 1,4                    | 3                          | 63        | 30,8      | 28       | 01400 |
| 1,5                    | 3                          | 66        | 33,0      | 30       | 01500 |
| 1,6                    | 3                          | 68        | 35,2      | 32       | 01600 |
| 1,7                    | 3                          | 70        | 37,4      | 34       | 01700 |
| 1,8                    | 3                          | 72        | 39,6      | 36       | 01800 |
| 1,9                    | 3                          | 74        | 41,8      | 38       | 01900 |
| 2,0                    | 3                          | 76        | 44,0      | 40       | 02000 |
| 2,1                    | 3                          | 78        | 46,2      | 42       | 02100 |
| 2,2                    | 3                          | 80        | 48,4      | 44       | 02200 |
| 2,3                    | 3                          | 82        | 50,6      | 46       | 02300 |
| 2,4                    | 3                          | 85        | 52,8      | 48       | 02400 |
| 2,5                    | 3                          | 87        | 55,0      | 50       | 02500 |
| 2,6                    | 3                          | 89        | 57,2      | 52       | 02600 |
| 2,7                    | 3                          | 91        | 59,4      | 54       | 02700 |
| 2,8                    | 3                          | 93        | 61,6      | 56       | 02800 |
| 2,9                    | 3                          | 95        | 63,8      | 58       | 02900 |

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→ v<sub>c</sub> на стр. 139

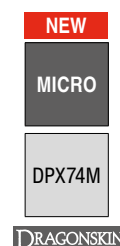
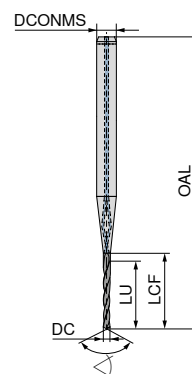
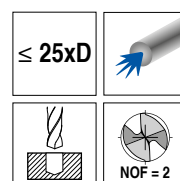
→ Информация по обработке: стр. 161



Минимальное давление СОЖ: 30 бар

## WTX – Высокопроизводительное сверло для глубоких отверстий

- ▲ специализированное миниатюрное сверло
- ▲ Универсальное применение
- ▲ Высокая надежность производственных процессов
- ▲ Пилотное сверло: Высокопроизводительное 5xD WTX – Micro



10 698 ...

| DC <sub>h6</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|-------|
| 1,0                    | 3                          | 60        | 27,0      | 25,0     | 01000 |
| 1,1                    | 3                          | 63        | 29,7      | 27,5     | 01100 |
| 1,2                    | 3                          | 65        | 32,4      | 30,0     | 01200 |
| 1,3                    | 3                          | 68        | 35,1      | 32,5     | 01300 |
| 1,4                    | 3                          | 71        | 37,8      | 35,0     | 01400 |
| 1,5                    | 3                          | 73        | 40,5      | 37,5     | 01500 |
| 1,6                    | 3                          | 76        | 43,2      | 40,0     | 01600 |
| 1,7                    | 3                          | 78        | 45,9      | 42,5     | 01700 |
| 1,8                    | 3                          | 81        | 48,6      | 45,0     | 01800 |
| 1,9                    | 3                          | 84        | 51,3      | 47,5     | 01900 |
| 2,0                    | 3                          | 86        | 54,0      | 50,0     | 02000 |
| 2,1                    | 3                          | 89        | 56,7      | 52,5     | 02100 |
| 2,2                    | 3                          | 91        | 59,4      | 55,0     | 02200 |
| 2,3                    | 3                          | 94        | 62,1      | 57,5     | 02300 |
| 2,4                    | 3                          | 97        | 64,8      | 60,0     | 02400 |
| 2,5                    | 3                          | 99        | 67,5      | 62,5     | 02500 |
| 2,6                    | 3                          | 102       | 70,2      | 65,0     | 02600 |
| 2,7                    | 3                          | 104       | 72,9      | 67,5     | 02700 |
| 2,8                    | 3                          | 107       | 75,6      | 70,0     | 02800 |
| 2,9                    | 3                          | 110       | 78,3      | 72,5     | 02900 |

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→ v<sub>c</sub> на стр. 139

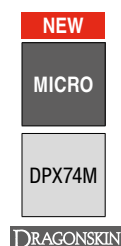
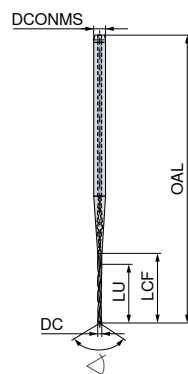
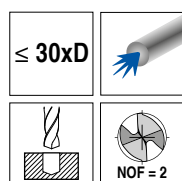
→ Информация по обработке: стр. 161



Минимальное давление СОЖ: 30 бар

## WTX – Высокопроизводительное сверло для глубоких отверстий

- ▲ специализированное миниатюрное сверло
- ▲ Универсальное применение
- ▲ Высокая надежность производственных процессов
- ▲ Пилотное сверло: Высокопроизводительное 5xD WTX – Micro



128°

Твердый сплав

10 699 ...

| DC <sub>h6</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|-------|
| 1,0                    | 3                          | 65        | 32,0      | 30       | 01000 |
| 1,1                    | 3                          | 68        | 35,2      | 33       | 01100 |
| 1,2                    | 3                          | 71        | 38,4      | 36       | 01200 |
| 1,3                    | 3                          | 74        | 41,6      | 39       | 01300 |
| 1,4                    | 3                          | 78        | 44,8      | 42       | 01400 |
| 1,5                    | 3                          | 81        | 48,0      | 45       | 01500 |
| 1,6                    | 3                          | 84        | 51,2      | 48       | 01600 |
| 1,7                    | 3                          | 87        | 54,4      | 51       | 01700 |
| 1,8                    | 3                          | 90        | 57,6      | 54       | 01800 |
| 1,9                    | 3                          | 93        | 60,8      | 57       | 01900 |
| 2,0                    | 3                          | 96        | 64,0      | 60       | 02000 |
| 2,1                    | 3                          | 99        | 67,2      | 63       | 02100 |
| 2,2                    | 3                          | 102       | 70,4      | 66       | 02200 |
| 2,3                    | 3                          | 106       | 73,6      | 69       | 02300 |
| 2,4                    | 3                          | 109       | 76,8      | 72       | 02400 |
| 2,5                    | 3                          | 112       | 80,0      | 75       | 02500 |
| 2,6                    | 3                          | 115       | 83,2      | 78       | 02600 |
| 2,7                    | 3                          | 118       | 86,4      | 81       | 02700 |
| 2,8                    | 3                          | 121       | 89,6      | 84       | 02800 |
| 2,9                    | 3                          | 124       | 92,8      | 87       | 02900 |

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→ v<sub>c</sub> на стр. 139

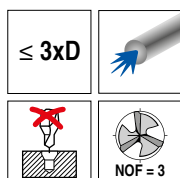
→ Информация по обработке: стр. 161



Минимальное давление СОЖ: 30 бар

# WTHX – Сверло-развертка -1/100

- ▲ Высокоэффективное цельное твердосплавное сверло-развертка
- ▲ сверление и развертывание за один проход
- ▲ 3 режущих кромки для сверления
- ▲ 6 режущих кромок для развертывания
- ▲ высокие подачи
- ▲ высокое качество поверхности
- ▲ для глухих и сквозных отверстий

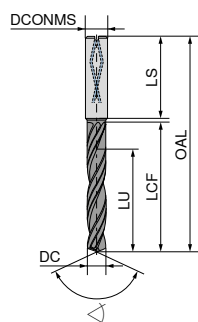


**NEW**

**Feed**  
**BR100**

**DPX14S**

**DRAGONSKIN**



НА

140°

Твердый сплав

**10 707 ...**

| DC <sub>±0,003</sub> | DCONMS <sub>h6</sub> | OAL | LCF | LU | LS |       |
|----------------------|----------------------|-----|-----|----|----|-------|
| mm                   | mm                   | mm  | mm  | mm | mm |       |
| 3,97                 | 6                    | 66  | 24  | 17 | 36 | 03970 |
| 3,98                 | 6                    | 66  | 24  | 17 | 36 | 03980 |
| 3,99                 | 6                    | 66  | 24  | 17 | 36 | 03990 |
| 4,00                 | 6                    | 66  | 24  | 17 | 36 | 04000 |
| 4,01                 | 6                    | 66  | 24  | 17 | 36 | 04010 |
| 4,02                 | 6                    | 66  | 24  | 17 | 36 | 04020 |
| 4,97                 | 6                    | 66  | 28  | 20 | 36 | 04970 |
| 4,98                 | 6                    | 66  | 28  | 20 | 36 | 04980 |
| 4,99                 | 6                    | 66  | 28  | 20 | 36 | 04990 |
| 5,00                 | 6                    | 66  | 28  | 20 | 36 | 05000 |
| 5,01                 | 6                    | 66  | 28  | 20 | 36 | 05010 |
| 5,02                 | 6                    | 66  | 28  | 20 | 36 | 05020 |
| 5,97                 | 6                    | 66  | 28  | 20 | 36 | 05970 |
| 5,98                 | 6                    | 66  | 28  | 20 | 36 | 05980 |
| 5,99                 | 6                    | 66  | 28  | 20 | 36 | 05990 |
| 6,00                 | 6                    | 66  | 28  | 20 | 36 | 06000 |
| 6,01                 | 6                    | 66  | 28  | 20 | 36 | 06010 |
| 6,02                 | 6                    | 66  | 28  | 20 | 36 | 06020 |
| 7,97                 | 8                    | 79  | 41  | 29 | 36 | 07970 |
| 7,98                 | 8                    | 79  | 41  | 29 | 36 | 07980 |
| 7,99                 | 8                    | 79  | 41  | 29 | 36 | 07990 |
| 8,00                 | 8                    | 79  | 41  | 29 | 36 | 08000 |
| 8,01                 | 8                    | 79  | 41  | 29 | 36 | 08010 |
| 8,02                 | 8                    | 79  | 41  | 29 | 36 | 08020 |
| 9,97                 | 10                   | 89  | 47  | 35 | 40 | 09970 |
| 9,98                 | 10                   | 89  | 47  | 35 | 40 | 09980 |
| 9,99                 | 10                   | 89  | 47  | 35 | 40 | 09990 |
| 10,00                | 10                   | 89  | 47  | 35 | 40 | 10000 |
| 10,01                | 10                   | 89  | 47  | 35 | 40 | 10010 |
| 10,02                | 10                   | 89  | 47  | 35 | 40 | 10020 |
| 11,97                | 12                   | 102 | 55  | 40 | 45 | 11970 |
| 11,98                | 12                   | 102 | 55  | 40 | 45 | 11980 |
| 11,99                | 12                   | 102 | 55  | 40 | 45 | 11990 |
| 12,00                | 12                   | 102 | 55  | 40 | 45 | 12000 |
| 12,01                | 12                   | 102 | 55  | 40 | 45 | 12010 |
| 12,02                | 12                   | 102 | 55  | 40 | 45 | 12020 |

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Допуски

например, Ø 8 F7 = 8,02 mm

| Ø    | 3,97  | U7  | X7  |     |     |     |
|------|-------|-----|-----|-----|-----|-----|
| Ø 4  | 3,98  | N10 | N11 | R7  |     |     |
|      | 3,99  | M8  | N7  | N8  | N9  |     |
|      | 4,00  | J7  | J8  | JS7 | JS8 | JS9 |
|      | 4,01  | G7  | H8  |     |     |     |
|      | 4,02  | F8  | H9  |     |     |     |
| Ø 5  | 4,97  | U7  | X7  |     |     |     |
|      | 4,98  | N10 | N11 | R7  |     |     |
|      | 4,99  | M8  | N7  | N8  | N9  |     |
|      | 5,00  | J7  | J8  | JS7 | JS8 | JS9 |
|      | 5,01  | G7  | H8  |     |     |     |
| Ø 6  | 5,02  | F8  | H9  |     |     |     |
|      | 5,97  | U7  | X7  |     |     |     |
|      | 5,98  | N10 | N11 | R7  |     |     |
|      | 5,99  | M8  | N7  | N8  | N9  |     |
|      | 6,00  | J7  | J8  | JS7 | JS8 | JS9 |
| Ø 8  | 6,01  | G7  | H8  |     |     |     |
|      | 6,02  | F8  | H9  |     |     |     |
|      | 7,97  | S7  | U7  |     |     |     |
|      | 7,98  | N8  | N10 | N11 | P7  | R7  |
|      | 7,99  | K8  | M6  | M7  | M8  | N9  |
| Ø 10 | 8,00  | J7  | J8  | JS7 | JS8 | JS9 |
|      | 8,01  | G7  | H8  |     |     |     |
|      | 8,02  | F7  | F8  | H9  |     |     |
|      | 9,97  | S7  | U7  |     |     |     |
|      | 9,98  | N8  | N10 | N11 | P7  | R7  |
| Ø 12 | 9,99  | K8  | M6  | M7  | M8  | N9  |
|      | 10,00 | J7  | J8  | JS7 | JS8 | JS9 |
|      | 10,01 | G7  | H8  |     |     |     |
|      | 10,02 | F7  | F8  | H9  |     |     |
|      | 11,97 | N11 | R7  | S7  |     |     |
| Ø 12 | 11,98 | N8  | N9  | N10 | P7  |     |
|      | 11,99 | K8  | M6  | M7  | M8  | N7  |
|      | 12,00 | J7  | J8  | JS7 | JS8 |     |
|      | 12,01 | G6  | H7  | H8  | JS9 |     |
|      | 12,02 | F7  |     |     |     |     |

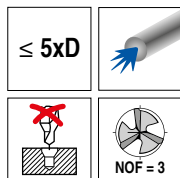


Классы допуска, обозначенные тонким шрифтом, реализуемы, но не оптимальны с точки зрения поля допуска.

→ V<sub>c</sub> на стр. 140

## WTHX – Сверло-развертка -1/100

- ▲ Высокоэффективное цельное твердосплавное сверло-развертка
- ▲ сверление и развертывание за один проход
- ▲ 3 режущих кромки для сверления
- ▲ 6 режущих кромок для развертывания
- ▲ высокие подачи
- ▲ высокое качество поверхности
- ▲ для глухих и сквозных отверстий

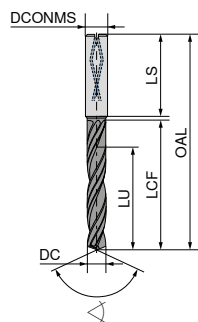


**NEW**

**Feed**  
**BR100**

**DPX14S**

**DRAGONSKIN**



HA

140°

Твердый сплав

10 713 ...

| DC <sub>±0,003</sub> | DCONMS <sub>h6</sub> | OAL | LCF | LU | LS |       |
|----------------------|----------------------|-----|-----|----|----|-------|
| mm                   | mm                   | mm  | mm  | mm | mm |       |
| 3,97                 | 6                    | 74  | 36  | 29 | 36 | 03970 |
| 3,98                 | 6                    | 74  | 36  | 29 | 36 | 03980 |
| 3,99                 | 6                    | 74  | 36  | 29 | 36 | 03990 |
| 4,00                 | 6                    | 74  | 36  | 29 | 36 | 04000 |
| 4,01                 | 6                    | 74  | 36  | 29 | 36 | 04010 |
| 4,02                 | 6                    | 74  | 36  | 29 | 36 | 04020 |
| 4,97                 | 6                    | 82  | 44  | 35 | 36 | 04970 |
| 4,98                 | 6                    | 82  | 44  | 35 | 36 | 04980 |
| 4,99                 | 6                    | 82  | 44  | 35 | 36 | 04990 |
| 5,00                 | 6                    | 82  | 44  | 35 | 36 | 05000 |
| 5,01                 | 6                    | 82  | 44  | 35 | 36 | 05010 |
| 5,02                 | 6                    | 82  | 44  | 35 | 36 | 05020 |
| 5,97                 | 6                    | 82  | 44  | 35 | 36 | 05970 |
| 5,98                 | 6                    | 82  | 44  | 35 | 36 | 05980 |
| 5,99                 | 6                    | 82  | 44  | 35 | 36 | 05990 |
| 6,00                 | 6                    | 82  | 44  | 35 | 36 | 06000 |
| 6,01                 | 6                    | 82  | 44  | 35 | 36 | 06010 |
| 6,02                 | 6                    | 82  | 44  | 35 | 36 | 06020 |
| 7,97                 | 8                    | 91  | 53  | 43 | 36 | 07970 |
| 7,98                 | 8                    | 91  | 53  | 43 | 36 | 07980 |
| 7,99                 | 8                    | 91  | 53  | 43 | 36 | 07990 |
| 8,00                 | 8                    | 91  | 53  | 43 | 36 | 08000 |
| 8,01                 | 8                    | 91  | 53  | 43 | 36 | 08010 |
| 8,02                 | 8                    | 91  | 53  | 43 | 36 | 08020 |
| 9,97                 | 10                   | 103 | 61  | 49 | 40 | 09970 |
| 9,98                 | 10                   | 103 | 61  | 49 | 40 | 09980 |
| 9,99                 | 10                   | 103 | 61  | 49 | 40 | 09990 |
| 10,00                | 10                   | 103 | 61  | 49 | 40 | 10000 |
| 10,01                | 10                   | 103 | 61  | 49 | 40 | 10010 |
| 10,02                | 10                   | 103 | 61  | 49 | 40 | 10020 |
| 11,97                | 12                   | 118 | 71  | 56 | 45 | 11970 |
| 11,98                | 12                   | 118 | 71  | 56 | 45 | 11980 |
| 11,99                | 12                   | 118 | 71  | 56 | 45 | 11990 |
| 12,00                | 12                   | 118 | 71  | 56 | 45 | 12000 |
| 12,01                | 12                   | 118 | 71  | 56 | 45 | 12010 |
| 12,02                | 12                   | 118 | 71  | 56 | 45 | 12020 |

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Допуски

например, Ø 8 F7 = 8,02 mm

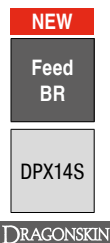
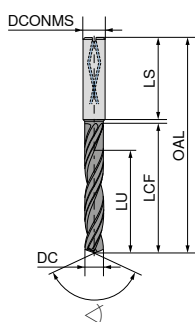
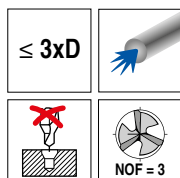
| Ø    | 3,97  | U 7  | X 7  |      |      |      |
|------|-------|------|------|------|------|------|
| Ø 4  | 3,98  | N 10 | N 11 | R 7  |      |      |
|      | 3,99  | M 8  | N 7  | N 8  | N 9  |      |
|      | 4,00  | J 7  | J 8  | JS 7 | JS 8 | JS 9 |
|      | 4,01  | G 7  | H 8  |      |      |      |
|      | 4,02  | F 8  | H 9  |      |      |      |
| Ø 5  | 4,97  | U 7  | X 7  |      |      |      |
|      | 4,98  | N 10 | N 11 | R 7  |      |      |
|      | 4,99  | M 8  | N 7  | N 8  | N 9  |      |
|      | 5,00  | J 7  | J 8  | JS 7 | JS 8 | JS 9 |
|      | 5,01  | G 7  | H 8  |      |      |      |
| Ø 6  | 5,02  | F 8  | H 9  |      |      |      |
|      | 5,97  | U 7  | X 7  |      |      |      |
|      | 5,98  | N 10 | N 11 | R 7  |      |      |
|      | 5,99  | M 8  | N 7  | N 8  | N 9  |      |
|      | 6,00  | J 7  | J 8  | JS 7 | JS 8 | JS 9 |
| Ø 8  | 6,01  | G 7  | H 8  |      |      |      |
|      | 6,02  | F 8  | H 9  |      |      |      |
|      | 7,97  | S 7  | U 7  |      |      |      |
|      | 7,98  | N 8  | N 10 | N 11 | P 7  | R 7  |
|      | 7,99  | K 8  | M 6  | M 7  | M 8  | N 9  |
| Ø 10 | 8,00  | J 7  | J 8  | JS 7 | JS 8 | JS 9 |
|      | 8,01  | G 7  | H 8  |      |      |      |
|      | 8,02  | F 7  | F 8  | H 9  |      |      |
|      | 9,97  | S 7  | U 7  |      |      |      |
|      | 9,98  | N 8  | N 10 | N 11 | P 7  | R 7  |
| Ø 12 | 9,99  | K 8  | M 6  | M 7  | M 8  | N 9  |
|      | 10,00 | J 7  | J 8  | JS 7 | JS 8 | JS 9 |
|      | 10,01 | G 7  | H 8  |      |      |      |
|      | 10,02 | F 7  | F 8  | H 9  |      |      |
|      | 11,97 | N 11 | R 7  | S 7  |      |      |
| Ø 12 | 11,98 | N 8  | N 9  | N 10 | P 7  |      |
|      | 11,99 | K 8  | M 6  | M 7  | M 8  | N 7  |
|      | 12,00 | J 7  | J 8  | JS 7 | JS 8 |      |
|      | 12,01 | G 6  | H 7  | H 8  | JS 9 |      |
|      | 12,02 | F 7  |      |      |      |      |



Классы допуска, обозначенные тонким шрифтом, реализуемы, но не оптимальны с точки зрения поля допуска.

## WTX – Сверло-развертка

- ▲ Высокоэффективное цельное твердосплавное сверло-развертка
- ▲ сверление и развертывание с допуском H7 за один проход
- ▲ 3 режущих кромки для сверления
- ▲ 6 режущих кромок для развертывания
- ▲ высокие подачи
- ▲ высокое качество поверхности
- ▲ для глухих и сквозных отверстий
- ▲ оптимальная круглость / допуск H7



HA   
 $\angle 140^\circ$   
 Твердый сплав  
 10 711 ...

| DC <sub>H7</sub><br>mm | DCONMS <sub>H6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 4                      | 6                          | 66        | 24        | 17       | 36       | 04000 |
| 5                      | 6                          | 66        | 28        | 20       | 36       | 05000 |
| 6                      | 6                          | 66        | 28        | 20       | 36       | 06000 |
| 8                      | 8                          | 79        | 41        | 29       | 36       | 08000 |
| 10                     | 10                         | 89        | 47        | 35       | 40       | 10000 |
| 12                     | 12                         | 102       | 55        | 40       | 45       | 12000 |
| 14                     | 14                         | 107       | 60        | 43       | 45       | 14000 |
| 16                     | 16                         | 115       | 65        | 45       | 48       | 16000 |

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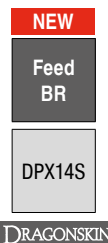
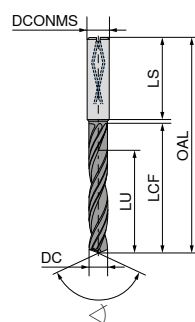
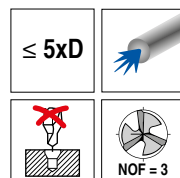
→ v<sub>c</sub> на стр. 140



По запросу доступны специальные размеры

## WTX – Сверло-развертка

- ▲ Высокоэффективное цельное твердосплавное сверло-развертка
- ▲ сверление и развертывание с допуском H7 за один проход
- ▲ 3 режущих кромки для сверления
- ▲ 6 режущих кромок для развертывания
- ▲ высокие подачи
- ▲ высокое качество поверхности
- ▲ для глухих и сквозных отверстий
- ▲ оптимальная круглость / допуск H7



HA   
 $\angle 140^\circ$   
 Твердый сплав  
 10 719 ...

| DC <sub>H7</sub><br>mm | DCONMS <sub>H6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | LS<br>mm |       |
|------------------------|----------------------------|-----------|-----------|----------|----------|-------|
| 4                      | 6                          | 74        | 36        | 29       | 36       | 04000 |
| 5                      | 6                          | 82        | 44        | 35       | 36       | 05000 |
| 6                      | 6                          | 82        | 44        | 35       | 36       | 06000 |
| 8                      | 8                          | 91        | 53        | 43       | 36       | 08000 |
| 10                     | 10                         | 103       | 61        | 49       | 40       | 10000 |
| 12                     | 12                         | 118       | 71        | 56       | 45       | 12000 |
| 14                     | 14                         | 124       | 77        | 60       | 45       | 14000 |
| 16                     | 16                         | 133       | 83        | 63       | 48       | 16000 |
| 18                     | 18                         | 143       | 93        | 71       | 48       | 18000 |
| 20                     | 20                         | 153       | 101       | 77       | 50       | 20000 |

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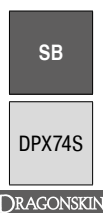
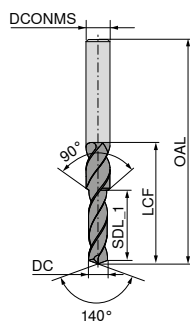
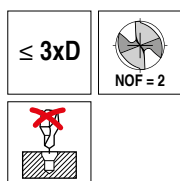
→ v<sub>c</sub> на стр. 141



По запросу доступны специальные размеры

## WTX – Короткое ступенчатое сверло 90°

▲ для сверления и зенкования отверстий под нарезку резьбы



Твердый сплав

10 767 ...

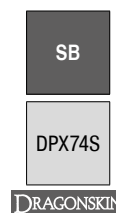
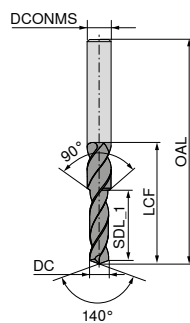
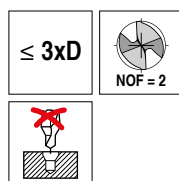
| Для<br>резьбы | DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | SDL_1<br>mm | LCF<br>mm |       |
|---------------|------------------------|----------------------------|-----------|-------------|-----------|-------|
| M3            | 2,5                    | 6                          | 62        | 8,8         | 20        | 02500 |
| M4            | 3,3                    | 6                          | 62        | 11,4        | 24        | 03300 |
| M5            | 4,2                    | 6                          | 66        | 13,6        | 28        | 04200 |
| M6            | 5,0                    | 8                          | 79        | 16,5        | 34        | 05000 |
| M8            | 6,8                    | 10                         | 89        | 21,0        | 47        | 06800 |
| M10           | 8,5                    | 12                         | 102       | 25,5        | 55        | 08500 |
| M12           | 10,2                   | 14                         | 107       | 30,0        | 60        | 10200 |
| M14           | 12,0                   | 16                         | 115       | 34,5        | 65        | 12000 |
| M16           | 14,0                   | 18                         | 123       | 38,5        | 73        | 14000 |

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→ v<sub>c</sub> на стр. 157

## WTX – Короткое ступенчатое сверло 90°

▲ для сверления и зенкования отверстий под накатку резьбы



Твердый сплав

10 772 ...

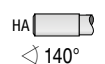
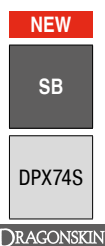
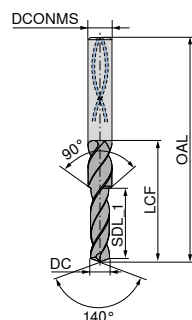
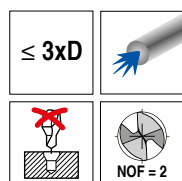
| Для<br>резьбы | DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | SDL_1<br>mm | LCF<br>mm |       |
|---------------|------------------------|----------------------------|-----------|-------------|-----------|-------|
| M3            | 2,80                   | 6                          | 62        | 8,8         | 20        | 02800 |
| M4            | 3,70                   | 6                          | 62        | 11,4        | 24        | 03700 |
| M5            | 4,65                   | 6                          | 66        | 13,6        | 28        | 04650 |
| M6            | 5,55                   | 8                          | 79        | 16,5        | 34        | 05550 |
| M8            | 7,45                   | 10                         | 89        | 21,0        | 47        | 07450 |
| M10           | 9,30                   | 12                         | 102       | 25,5        | 55        | 09300 |
| M12           | 11,20                  | 14                         | 107       | 30,0        | 60        | 11200 |
| M14           | 13,00                  | 16                         | 115       | 34,5        | 65        | 13000 |
| M16           | 15,00                  | 18                         | 123       | 38,5        | 73        | 15000 |

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→ v<sub>c</sub> на стр. 157

## WTX – Короткое ступенчатое сверло 90°

▲ для сверления и зенкования отверстий под нарезку резьбы



Твердый сплав

10 783 ...

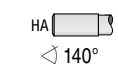
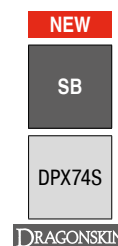
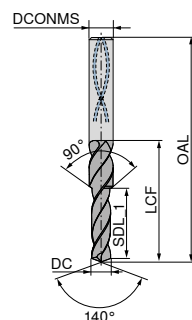
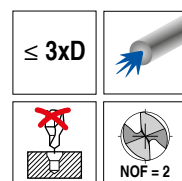
| Для<br>резьбы | DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | SDL_1<br>mm | LCF<br>mm |       |
|---------------|------------------------|----------------------------|-----------|-------------|-----------|-------|
| M4            | 3,3                    | 6                          | 62        | 11,4        | 24        | 03300 |
| M5            | 4,2                    | 6                          | 66        | 13,6        | 28        | 04200 |
| M6            | 5,0                    | 8                          | 79        | 16,5        | 34        | 05000 |
| M8            | 6,8                    | 10                         | 89        | 21,0        | 47        | 06800 |
| M10           | 8,5                    | 12                         | 102       | 25,5        | 55        | 08500 |
| M12           | 10,2                   | 14                         | 107       | 30,0        | 60        | 10200 |
| M14           | 12,0                   | 16                         | 115       | 34,5        | 65        | 12000 |
| M16           | 14,0                   | 18                         | 123       | 38,5        | 73        | 14000 |

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→ v<sub>c</sub> на стр. 157

## WTX – Короткое ступенчатое сверло 90°

▲ для сверления и зенкования отверстий под накатку резьбы



Твердый сплав

10 788 ...

| Для<br>резьбы | DC <sub>m7</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | SDL_1<br>mm | LCF<br>mm |       |
|---------------|------------------------|----------------------------|-----------|-------------|-----------|-------|
| M4            | 3,70                   | 6                          | 62        | 11,4        | 24        | 03700 |
| M5            | 4,65                   | 6                          | 66        | 13,6        | 28        | 04650 |
| M6            | 5,55                   | 8                          | 79        | 16,5        | 34        | 05550 |
| M8            | 7,45                   | 10                         | 89        | 21,0        | 47        | 07450 |
| M10           | 9,30                   | 12                         | 102       | 25,5        | 55        | 09300 |
| M12           | 11,20                  | 14                         | 107       | 30,0        | 60        | 11200 |
| M14           | 13,00                  | 16                         | 115       | 34,5        | 65        | 13000 |
| M16           | 15,00                  | 18                         | 123       | 38,5        | 73        | 15000 |

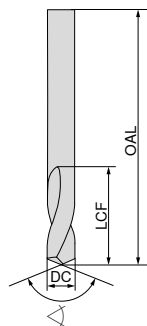
|   |   |
|---|---|
| P | ● |
| M |   |
| K | ● |
| N |   |
| S |   |
| H | ○ |
| O |   |

→ v<sub>c</sub> на стр. 157

## Сверло центровочное NC, заводской стандарт

▲ со спиральными канавками

2



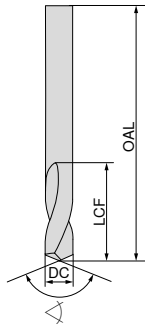
|                        |           |           | NC-A          | NC-A              | NC-A          | NC-A              | NC-A          | NC-A              |
|------------------------|-----------|-----------|---------------|-------------------|---------------|-------------------|---------------|-------------------|
|                        |           |           |               | TiAlN             |               | TiAlN             |               | TiAlN             |
|                        |           |           |               |                   |               |                   |               |                   |
|                        |           |           | HA            | HB                | HA            | HB                | HA            | HB                |
|                        |           |           | ∠ 90°         | ∠ 90°             | ∠ 120°        | ∠ 120°            | ∠ 142°        | ∠ 142°            |
|                        |           |           | Твердый сплав | Твердый сплав     | Твердый сплав | Твердый сплав     | Твердый сплав | Твердый сплав     |
|                        |           |           | 10 702 ...    | 10 716 ...        | 10 703 ...    | 10 717 ...        | 10 704 ...    | 10 718 ...        |
| DC <sub>h5</sub><br>mm | OAL<br>mm | LCF<br>mm |               |                   |               |                   |               |                   |
| 2                      | 32        | 6         | 002           | 002 <sup>1)</sup> | 002           | 002 <sup>1)</sup> | 002           | 002 <sup>1)</sup> |
| 3                      | 32        | 8         | 003           | 003 <sup>1)</sup> | 003           | 003 <sup>1)</sup> | 003           | 003 <sup>1)</sup> |
| 4                      | 40        | 10        | 004           | 004 <sup>1)</sup> | 004           | 004 <sup>1)</sup> | 004           | 004 <sup>1)</sup> |
| 5                      | 50        | 13        | 005           | 005 <sup>1)</sup> | 005           | 005 <sup>1)</sup> | 005           | 005 <sup>1)</sup> |
| 6                      | 50        | 13        | 006           | 006               | 006           | 006               | 006           | 006               |
| 8                      | 60        | 23        | 008           | 008               | 008           | 008               | 008           | 008               |
| 10                     | 70        | 24        | 010           | 010               | 010           | 010               | 010           | 010               |
| 12                     | 70        | 24        | 012           | 012               | 012           | 012               | 012           | 012               |
| 14                     | 75        | 26        | 014           | 014               | 014           | 014               | 014           | 014               |
| 16                     | 75        | 29        | 016           | 016               | 016           | 016               | 016           | 016               |
| 18                     | 100       | 35        | 018           | 018               | 018           | 018               | 018           | 018               |
| 20                     | 100       | 35        | 020           | 020               | 020           | 020               | 020           | 020               |
| P                      |           |           | ○             | ○                 | ○             | ○                 | ○             | ○                 |
| M                      |           |           |               |                   |               |                   |               |                   |
| K                      |           |           | ●             | ●                 | ●             | ●                 | ●             | ●                 |
| N                      |           |           | ●             | ●                 | ●             | ●                 | ●             | ●                 |
| S                      |           |           |               |                   |               |                   |               |                   |
| H                      |           |           |               | ○                 |               | ○                 |               | ○                 |
| O                      |           |           |               |                   |               |                   |               |                   |

1) Исполнение хвостовика DIN 6535 HA

→ v<sub>c</sub> на стр. 149+150

# Сверло центровочное NC, заводской стандарт, длинное

▲ со спиральными канавками



| NC-A                 | NC-A                  | NC-A                  |
|----------------------|-----------------------|-----------------------|
| TiAlN                | TiAlN                 | TiAlN                 |
|                      |                       |                       |
| 90°<br>Твердый сплав | 120°<br>Твердый сплав | 142°<br>Твердый сплав |
| 10 724 ...           | 10 726 ...            | 10 727 ...            |
| 003 <sup>1)</sup>    | 003 <sup>1)</sup>     | 003 <sup>1)</sup>     |
| 004 <sup>1)</sup>    | 004 <sup>1)</sup>     | 004 <sup>1)</sup>     |
| 006                  | 006                   | 006                   |
| 008                  | 008                   | 008                   |
| 010                  | 010                   | 010                   |
| 012                  | 012                   | 012                   |
| 016                  | 016                   | 016                   |
| P                    | ○                     | ○                     |
| M                    | ○                     | ○                     |
| K                    | ●                     | ●                     |
| N                    | ●                     | ●                     |
| S                    | ○                     | ○                     |
| H                    | ○                     | ○                     |
| O                    | ○                     | ○                     |

| DC <sub>h5</sub><br>mm | OAL<br>mm | LCF<br>mm |
|------------------------|-----------|-----------|
| 3                      | 66        | 8         |
| 4                      | 74        | 10        |
| 6                      | 82        | 13        |
| 8                      | 91        | 23        |
| 10                     | 103       | 24        |
| 12                     | 118       | 24        |
| 16                     | 133       | 29        |

|   |   |   |   |
|---|---|---|---|
| P | ○ | ○ | ○ |
| M | ○ | ○ | ○ |
| K | ● | ● | ● |
| N | ● | ● | ● |
| S | ○ | ○ | ○ |
| H | ○ | ○ | ○ |
| O | ○ | ○ | ○ |

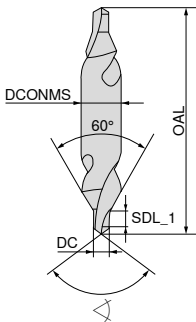
1) Исполнение хвостовика DIN 6535 HA

→ v<sub>c</sub> на стр. 151

# Центровочное сверло, DIN 333, форма А

2

▲ со спиральными канавками



120°

Твердый сплав

10 708 ...

| DC <sub>k13</sub><br>mm | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | SDL_1<br>mm |                   |
|-------------------------|----------------------------|-----------|-------------|-------------------|
| 0,50                    | 3,15                       | 20,0      | 0,76        | 050 <sup>1)</sup> |
| 0,80                    | 3,15                       | 20,0      | 1,07        | 080 <sup>1)</sup> |
| 1,00                    | 3,15                       | 31,5      | 1,31        | 100               |
| 1,25                    | 3,15                       | 31,5      | 1,54        | 125               |
| 1,60                    | 4,00                       | 35,5      | 1,94        | 160               |
| 2,00                    | 5,00                       | 40,0      | 2,32        | 200               |
| 2,50                    | 6,30                       | 45,0      | 2,88        | 250               |
| 3,15                    | 8,00                       | 50,0      | 3,49        | 315               |
| 4,00                    | 10,00                      | 56,0      | 4,45        | 400               |
| 5,00                    | 12,50                      | 63,0      | 5,46        | 500               |
| 6,30                    | 16,00                      | 71,0      | 6,78        | 630               |

|   |   |
|---|---|
| P | ○ |
| M |   |
| K | ● |
| N | ● |
| S |   |
| H |   |
| O |   |

1) исполнение только для  
одностороннего резания

→ v<sub>c</sub> на стр. 148

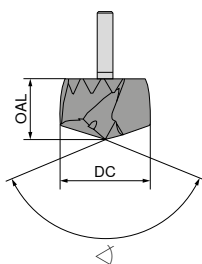
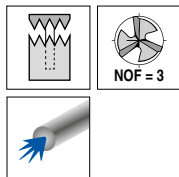
# WTH – Сверлильная головка для свёрл со сменными головками

▲ сверхдлинное исполнение головки

▲ 3 режущие кромки

## Комплект поставки:

Сверлильная головка и дифференциальный винт



Change  
Feed  
UNI

Ti750



140°

Твердый сплав

10 925 ...

| DC <sub>m7</sub><br>mm | OAL<br>mm |     |
|------------------------|-----------|-----|
| 14,0                   | 13,5      | 140 |
| 14,1                   | 13,5      | 141 |
| 14,2                   | 13,5      | 142 |
| 14,3                   | 13,5      | 143 |
| 14,4                   | 13,5      | 144 |
| 14,5                   | 14,0      | 145 |
| 14,6                   | 14,0      | 146 |
| 14,7                   | 14,0      | 147 |
| 14,8                   | 14,0      | 148 |
| 14,9                   | 14,0      | 149 |
| 15,0                   | 14,4      | 150 |
| 15,1                   | 14,4      | 151 |
| 15,2                   | 14,4      | 152 |
| 15,3                   | 14,4      | 153 |
| 15,4                   | 14,4      | 154 |
| 15,5                   | 15,4      | 155 |
| 15,6                   | 15,4      | 156 |
| 15,7                   | 15,4      | 157 |
| 15,8                   | 15,4      | 158 |
| 15,9                   | 15,4      | 159 |
| 16,0                   | 15,4      | 160 |
| 16,1                   | 15,4      | 161 |
| 16,2                   | 15,4      | 162 |
| 16,3                   | 15,4      | 163 |
| 16,4                   | 15,4      | 164 |
| 16,5                   | 16,3      | 165 |
| 16,6                   | 16,3      | 166 |
| 16,7                   | 16,3      | 167 |
| 16,8                   | 16,3      | 168 |
| 16,9                   | 16,3      | 169 |
| 17,0                   | 16,3      | 170 |
| 17,1                   | 16,3      | 171 |
| 17,2                   | 16,3      | 172 |
| 17,3                   | 16,3      | 173 |
| 17,4                   | 16,3      | 174 |
| 17,5                   | 17,2      | 175 |
| 17,6                   | 17,2      | 176 |
| 17,7                   | 17,2      | 177 |
| 17,8                   | 17,2      | 178 |
| 17,9                   | 17,2      | 179 |
| 18,0                   | 17,2      | 180 |
| 18,1                   | 17,2      | 181 |
| 18,2                   | 17,2      | 182 |
| 18,3                   | 17,2      | 183 |
| 18,4                   | 17,2      | 184 |
| 18,5                   | 18,2      | 185 |
| 18,6                   | 18,2      | 186 |
| 18,7                   | 18,2      | 187 |
| 18,8                   | 18,2      | 188 |
| 18,9                   | 18,2      | 189 |

10 925 ...

| DC <sub>m7</sub><br>mm | OAL<br>mm |     |
|------------------------|-----------|-----|
| 19,0                   | 18,2      | 190 |
| 19,1                   | 18,2      | 191 |
| 19,2                   | 18,2      | 192 |
| 19,3                   | 18,2      | 193 |
| 19,4                   | 18,2      | 194 |
| 19,5                   | 19,1      | 195 |
| 19,6                   | 19,1      | 196 |
| 19,7                   | 19,1      | 197 |
| 19,8                   | 19,1      | 198 |
| 19,9                   | 19,1      | 199 |
| 20,0                   | 19,1      | 200 |
| 20,1                   | 19,1      | 201 |
| 20,2                   | 19,1      | 202 |
| 20,3                   | 19,1      | 203 |
| 20,4                   | 19,1      | 204 |
| 20,5                   | 20,0      | 205 |
| 20,6                   | 20,0      | 206 |
| 20,7                   | 20,0      | 207 |
| 20,8                   | 20,0      | 208 |
| 20,9                   | 20,0      | 209 |
| 21,0                   | 20,0      | 210 |
| 21,1                   | 20,0      | 211 |
| 21,2                   | 20,0      | 212 |
| 21,3                   | 20,0      | 213 |
| 21,4                   | 20,0      | 214 |
| 21,5                   | 21,0      | 215 |
| 21,6                   | 21,0      | 216 |
| 21,7                   | 21,0      | 217 |
| 21,8                   | 21,0      | 218 |
| 21,9                   | 21,0      | 219 |
| 22,0                   | 21,0      | 220 |
| 22,1                   | 21,0      | 221 |
| 22,2                   | 21,0      | 222 |
| 22,3                   | 21,0      | 223 |
| 22,4                   | 21,0      | 224 |
| 22,5                   | 21,9      | 225 |
| 22,6                   | 21,9      | 226 |
| 22,7                   | 21,9      | 227 |
| 22,8                   | 21,9      | 228 |
| 22,9                   | 21,9      | 229 |
| 23,0                   | 21,9      | 230 |
| 23,1                   | 21,9      | 231 |
| 23,2                   | 21,9      | 232 |
| 23,3                   | 21,9      | 233 |
| 23,4                   | 21,9      | 234 |
| 23,5                   | 22,8      | 235 |
| 23,6                   | 22,8      | 236 |
| 23,7                   | 22,8      | 237 |
| 23,8                   | 22,8      | 238 |
| 23,9                   | 22,8      | 239 |
| 24,0                   | 22,8      | 240 |
| 24,1                   | 22,8      | 241 |
| 24,2                   | 22,8      | 242 |
| 24,3                   | 22,8      | 243 |
| 24,4                   | 22,8      | 244 |
| 24,5                   | 23,8      | 245 |
| 24,6                   | 23,8      | 246 |
| 24,7                   | 23,8      | 247 |
| 24,8                   | 23,8      | 248 |
| 24,9                   | 23,8      | 249 |
| 25,0                   | 23,8      | 250 |

|   |   |
|---|---|
| P | ● |
| M |   |
| K | ● |
| N |   |
| S |   |
| H |   |
| O |   |

→ v<sub>c</sub> на стр. 156

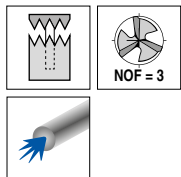
# WTH – Сверлильная головка для свёрл со сменными головками

▲ сверхдлинное исполнение головки

▲ 3 режущие кромки

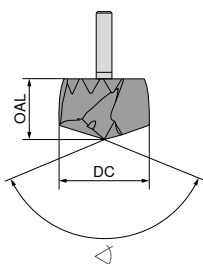
## Комплект поставки:

Сверлильная головка и дифференциальный винт



Change  
Feed  
UNI

Ti750



140°

Твердый сплав

10 925 ...

| DC <sub>m7</sub><br>mm | OAL<br>mm |     |
|------------------------|-----------|-----|
| 25,1                   | 23,8      | 251 |
| 25,2                   | 23,8      | 252 |
| 25,3                   | 23,8      | 253 |
| 25,4                   | 23,8      | 254 |
| 25,5                   | 24,7      | 255 |
| 25,6                   | 24,7      | 256 |
| 25,7                   | 24,7      | 257 |
| 25,8                   | 24,7      | 258 |
| 25,9                   | 24,7      | 259 |
| 26,0                   | 24,7      | 260 |
| 26,1                   | 24,7      | 261 |
| 26,2                   | 24,7      | 262 |
| 26,3                   | 24,7      | 263 |
| 26,4                   | 24,7      | 264 |
| 26,5                   | 25,6      | 265 |
| 26,6                   | 25,6      | 266 |
| 26,7                   | 25,6      | 267 |
| 26,8                   | 25,6      | 268 |
| 26,9                   | 25,6      | 269 |
| 27,0                   | 25,6      | 270 |
| 27,1                   | 25,6      | 271 |
| 27,2                   | 25,6      | 272 |
| 27,3                   | 25,6      | 273 |
| 27,4                   | 25,6      | 274 |
| 27,5                   | 26,6      | 275 |
| 27,6                   | 26,6      | 276 |
| 27,7                   | 26,6      | 277 |
| 27,8                   | 26,6      | 278 |
| 27,9                   | 26,6      | 279 |
| 28,0                   | 26,6      | 280 |
| 28,1                   | 26,6      | 281 |
| 28,2                   | 26,6      | 282 |
| 28,3                   | 26,6      | 283 |
| 28,4                   | 26,6      | 284 |
| 28,5                   | 27,5      | 285 |
| 28,6                   | 27,5      | 286 |
| 28,7                   | 27,5      | 287 |
| 28,8                   | 27,5      | 288 |
| 28,9                   | 27,5      | 289 |
| 29,0                   | 27,5      | 290 |
| 29,1                   | 27,5      | 291 |
| 29,2                   | 27,5      | 292 |
| 29,3                   | 27,5      | 293 |
| 29,4                   | 27,5      | 294 |
| 29,5                   | 28,4      | 295 |
| 29,6                   | 28,4      | 296 |
| 29,7                   | 28,4      | 297 |
| 29,8                   | 28,4      | 298 |
| 29,9                   | 28,4      | 299 |
| 30,0                   | 28,4      | 300 |

10 925 ...

| DC <sub>m7</sub><br>mm | OAL<br>mm |     |
|------------------------|-----------|-----|
| 30,1                   | 28,4      | 301 |
| 30,2                   | 28,4      | 302 |
| 30,3                   | 28,4      | 303 |
| 30,4                   | 28,4      | 304 |
| 30,5                   | 29,3      | 305 |
| 30,6                   | 29,3      | 306 |
| 30,7                   | 29,3      | 307 |
| 30,8                   | 29,3      | 308 |
| 30,9                   | 29,3      | 309 |
| 31,0                   | 29,3      | 310 |
| 31,1                   | 29,3      | 311 |
| 31,2                   | 29,3      | 312 |
| 31,3                   | 29,3      | 313 |
| 31,4                   | 29,3      | 314 |
| 31,5                   | 30,3      | 315 |
| 31,6                   | 30,3      | 316 |
| 31,7                   | 30,3      | 317 |
| 31,8                   | 30,3      | 318 |
| 31,9                   | 30,3      | 319 |
| 32,0                   | 30,3      | 320 |

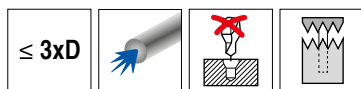
|   |   |
|---|---|
| P | • |
| M |   |
| K | • |
| N |   |
| S |   |
| H |   |
| O |   |

→ v<sub>c</sub> на стр. 156

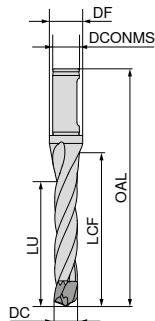
## WTH – Корпус сверла со сменными головками

### Комплект поставки:

Ручка ключа и сменная насадка



Change Feed



HB

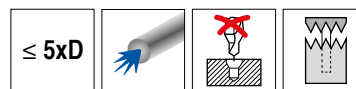
10 914 ...

| DC<br>mm      | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | DF<br>mm | Момент затяжки<br>Nm |     |
|---------------|----------------------------|-----------|-----------|----------|----------|----------------------|-----|
| 14,00 - 14,49 | 16                         | 120       | 72        | 48       | 20       | 0,7                  | 140 |
| 14,50 - 14,99 | 16                         | 122       | 74        | 49       | 20       | 0,7                  | 145 |
| 15,00 - 15,49 | 16                         | 124       | 76        | 51       | 25       | 0,7                  | 150 |
| 15,50 - 16,49 | 20                         | 131       | 81        | 54       | 25       | 0,7                  | 155 |
| 16,50 - 17,49 | 20                         | 135       | 85        | 58       | 25       | 0,7                  | 165 |
| 17,50 - 18,49 | 20                         | 140       | 90        | 61       | 25       | 1,3                  | 175 |
| 18,50 - 19,49 | 25                         | 150       | 94        | 64       | 31       | 1,3                  | 185 |
| 19,50 - 20,49 | 25                         | 155       | 99        | 68       | 31       | 2,0                  | 195 |
| 20,50 - 21,49 | 25                         | 159       | 103       | 71       | 31       | 2,0                  | 205 |
| 21,50 - 22,49 | 25                         | 164       | 108       | 74       | 31       | 2,0                  | 215 |
| 22,50 - 23,49 | 25                         | 168       | 112       | 78       | 31       | 2,0                  | 225 |
| 23,50 - 24,49 | 25                         | 173       | 117       | 81       | 31       | 2,0                  | 235 |
| 24,50 - 25,49 | 32                         | 182       | 122       | 84       | 38       | 3,1                  | 245 |
| 25,50 - 26,49 | 32                         | 186       | 126       | 87       | 38       | 3,1                  | 255 |
| 26,50 - 27,49 | 32                         | 191       | 131       | 91       | 38       | 3,1                  | 265 |
| 27,50 - 28,49 | 32                         | 195       | 135       | 94       | 38       | 3,1                  | 275 |
| 28,50 - 29,49 | 32                         | 200       | 140       | 97       | 38       | 5,6                  | 285 |
| 29,50 - 30,49 | 32                         | 204       | 144       | 101      | 38       | 5,6                  | 295 |
| 30,50 - 31,49 | 32                         | 209       | 149       | 104      | 38       | 5,6                  | 305 |
| 31,50 - 32,49 | 32                         | 213       | 153       | 107      | 38       | 5,6                  | 315 |

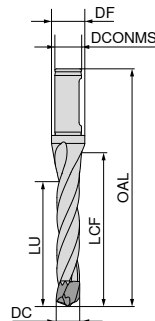
## WTH – Корпус сверла со сменными головками

### Комплект поставки:

Ручка ключа и сменная насадка



Change Feed



HB

10 916 ...

| DC<br>mm      | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | DF<br>mm | Момент затяжки<br>Nm |     |
|---------------|----------------------------|-----------|-----------|----------|----------|----------------------|-----|
| 14,00 - 14,49 | 16                         | 149       | 101       | 77       | 20       | 0,7                  | 140 |
| 14,50 - 14,99 | 16                         | 152       | 104       | 79       | 20       | 0,7                  | 145 |
| 15,00 - 15,49 | 16                         | 155       | 107       | 82       | 25       | 0,7                  | 150 |
| 15,50 - 16,49 | 20                         | 164       | 114       | 87       | 25       | 0,7                  | 155 |
| 16,50 - 17,49 | 20                         | 170       | 120       | 93       | 25       | 0,7                  | 165 |
| 17,50 - 18,49 | 20                         | 177       | 127       | 98       | 25       | 1,3                  | 175 |
| 18,50 - 19,49 | 25                         | 189       | 133       | 103      | 31       | 1,3                  | 185 |
| 19,50 - 20,49 | 25                         | 196       | 140       | 109      | 31       | 2,0                  | 195 |
| 20,50 - 21,49 | 25                         | 202       | 146       | 114      | 31       | 2,0                  | 205 |
| 21,50 - 22,49 | 25                         | 209       | 153       | 119      | 31       | 2,0                  | 215 |
| 22,50 - 23,49 | 25                         | 215       | 159       | 124      | 31       | 2,0                  | 225 |
| 23,50 - 24,49 | 25                         | 222       | 166       | 130      | 31       | 2,0                  | 235 |
| 24,50 - 25,49 | 32                         | 233       | 173       | 135      | 38       | 3,1                  | 245 |
| 25,50 - 26,49 | 32                         | 239       | 179       | 140      | 38       | 3,1                  | 255 |
| 26,50 - 27,49 | 32                         | 246       | 186       | 146      | 38       | 3,1                  | 265 |
| 27,50 - 28,49 | 32                         | 252       | 192       | 151      | 38       | 3,1                  | 275 |
| 28,50 - 29,49 | 32                         | 259       | 199       | 156      | 38       | 5,6                  | 285 |
| 29,50 - 30,49 | 32                         | 265       | 205       | 162      | 38       | 5,6                  | 295 |
| 30,50 - 31,49 | 32                         | 272       | 212       | 167      | 38       | 5,6                  | 305 |
| 31,50 - 32,49 | 32                         | 278       | 218       | 172      | 38       | 5,6                  | 315 |

### Комплектующие DC

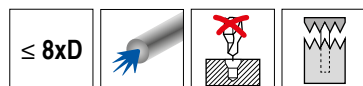
| Комплектующие DC | 80 022 ... | 80 020 ... | 80 023 ... | 10 950 ... |
|------------------|------------|------------|------------|------------|
| 14,00 - 14,49    | 007        | 025        | 012        | 064        |
| 14,50 - 14,99    | 007        | 025        | 012        | 064        |
| 15,00 - 15,49    | 007        | 025        | 012        | 064        |
| 15,50 - 16,49    | 007        | 025        | 012        | 064        |
| 16,50 - 17,49    | 007        | 025        | 012        | 064        |
| 17,50 - 18,49    | 008        | 025        | 060        | 065        |
| 18,50 - 19,49    | 008        | 025        | 060        | 065        |
| 19,50 - 20,49    | 010        | 025        | 060        | 066        |
| 20,50 - 21,49    | 010        | 025        | 060        | 066        |
| 21,50 - 22,49    | 010        | 025        | 060        | 066        |
| 22,50 - 23,49    | 010        | 025        | 060        | 066        |
| 23,50 - 24,49    | 010        | 025        | 060        | 066        |
| 24,50 - 25,49    | 015        | 025        | 060        | 067        |
| 25,50 - 26,49    | 015        | 025        | 060        | 067        |
| 26,50 - 27,49    | 015        | 025        | 060        | 067        |
| 27,50 - 28,49    | 015        | 025        | 060        | 067        |
| 28,50 - 29,49    | 015        | 025        | 060        | 068        |
| 29,50 - 30,49    | 015        | 025        | 060        | 068        |
| 30,50 - 31,49    | 015        | 025        | 060        | 068        |
| 31,50 - 32,49    | 015        | 025        | 060        | 068        |

| Сменная вставка | Ручка      | Динамометрическая рукоятка | Дифференциальный винт |
|-----------------|------------|----------------------------|-----------------------|
| 80 022 ...      | 80 020 ... | 80 023 ...                 | 10 950 ...            |

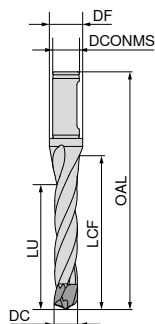
# WTH – Корпус сверла со сменными головками

## Комплект поставки:

Ручка ключа и сменная насадка



Change  
Feed



HB

10 917 ...

| DC<br>mm      | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | DF<br>mm | Момент затяжки<br>Nm |       |
|---------------|----------------------------|-----------|-----------|----------|----------|----------------------|-------|
| 14,00 - 14,49 | 16                         | 192       | 121       | 116      | 20       | 0,7                  | 14000 |
| 14,50 - 14,99 | 16                         | 197       | 125       | 120      | 20       | 0,7                  | 14500 |
| 15,00 - 15,49 | 16                         | 202       | 129       | 124      | 25       | 0,7                  | 15000 |
| 15,50 - 16,49 | 20                         | 213       | 137       | 132      | 25       | 0,7                  | 15500 |
| 16,50 - 17,49 | 20                         | 223       | 146       | 140      | 25       | 0,7                  | 16500 |
| 17,50 - 18,49 | 20                         | 232       | 154       | 148      | 25       | 1,3                  | 17500 |
| 18,50 - 19,49 | 25                         | 248       | 162       | 156      | 31       | 1,3                  | 18500 |
| 19,50 - 20,49 | 25                         | 257       | 171       | 164      | 31       | 2,0                  | 19500 |
| 20,50 - 21,49 | 25                         | 267       | 179       | 172      | 31       | 2,0                  | 20500 |
| 21,50 - 22,49 | 25                         | 276       | 187       | 180      | 31       | 2,0                  | 21500 |
| 22,50 - 23,49 | 25                         | 286       | 195       | 188      | 31       | 2,0                  | 22500 |
| 23,50 - 24,49 | 25                         | 295       | 204       | 196      | 31       | 2,0                  | 23500 |
| 24,50 - 25,49 | 32                         | 309       | 212       | 204      | 38       | 3,1                  | 24500 |
| 25,50 - 26,49 | 32                         | 319       | 220       | 212      | 38       | 3,1                  | 25500 |
| 26,50 - 27,49 | 32                         | 328       | 229       | 220      | 38       | 3,1                  | 26500 |
| 27,50 - 28,49 | 32                         | 338       | 237       | 228      | 38       | 3,1                  | 27500 |
| 28,50 - 29,49 | 32                         | 342       | 245       | 236      | 38       | 5,6                  | 28500 |
| 29,50 - 30,49 | 32                         | 352       | 254       | 244      | 38       | 5,6                  | 29500 |
| 30,50 - 31,49 | 32                         | 361       | 262       | 252      | 38       | 5,6                  | 30500 |
| 31,50 - 32,49 | 32                         | 371       | 270       | 260      | 38       | 5,6                  | 31500 |

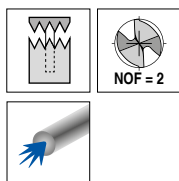
## Комплектующие DC

| Комплектующие<br>DC | 80 022 ... | 80 020 ... | 80 023 ... | 10 950 ... |
|---------------------|------------|------------|------------|------------|
| 14,00 - 14,49       | 007        | 025        | 012        | 064        |
| 14,50 - 14,99       | 007        | 025        | 012        | 064        |
| 15,00 - 15,49       | 007        | 025        | 012        | 064        |
| 15,50 - 16,49       | 007        | 025        | 012        | 064        |
| 16,50 - 17,49       | 007        | 025        | 012        | 064        |
| 17,50 - 18,49       | 008        | 025        | 060        | 065        |
| 18,50 - 19,49       | 008        | 025        | 060        | 065        |
| 19,50 - 20,49       | 010        | 025        | 060        | 066        |
| 20,50 - 21,49       | 010        | 025        | 060        | 066        |
| 21,50 - 22,49       | 010        | 025        | 060        | 066        |
| 22,50 - 23,49       | 010        | 025        | 060        | 066        |
| 23,50 - 24,49       | 010        | 025        | 060        | 066        |
| 24,50 - 25,49       | 015        | 025        | 060        | 067        |
| 25,50 - 26,49       | 015        | 025        | 060        | 067        |
| 26,50 - 27,49       | 015        | 025        | 060        | 067        |
| 27,50 - 28,49       | 015        | 025        | 060        | 067        |
| 28,50 - 29,49       | 015        | 025        | 060        | 068        |
| 29,50 - 30,49       | 015        | 025        | 060        | 068        |
| 30,50 - 31,49       | 015        | 025        | 060        | 068        |
| 31,50 - 32,49       | 015        | 025        | 060        | 068        |

| Сменная вставка | Ручка      | Динамометрическая<br>рукоятка | Дифференциальный<br>винт |
|-----------------|------------|-------------------------------|--------------------------|
| 80 022 ...      | 80 020 ... | 80 023 ...                    | 10 950 ...               |
| 007             | 025        | 012                           | 064                      |
| 007             | 025        | 012                           | 064                      |
| 007             | 025        | 012                           | 064                      |
| 007             | 025        | 012                           | 064                      |
| 007             | 025        | 012                           | 064                      |
| 008             | 025        | 060                           | 065                      |
| 008             | 025        | 060                           | 065                      |
| 010             | 025        | 060                           | 066                      |
| 010             | 025        | 060                           | 066                      |
| 010             | 025        | 060                           | 066                      |
| 010             | 025        | 060                           | 066                      |
| 010             | 025        | 060                           | 066                      |
| 015             | 025        | 060                           | 067                      |
| 015             | 025        | 060                           | 067                      |
| 015             | 025        | 060                           | 067                      |
| 015             | 025        | 060                           | 067                      |
| 015             | 025        | 060                           | 067                      |
| 015             | 025        | 060                           | 068                      |
| 015             | 025        | 060                           | 068                      |
| 015             | 025        | 060                           | 068                      |
| 015             | 025        | 060                           | 068                      |

# WTX – Сверлильная головка для свёрл со сменными головками

▲ удлиненное исполнение головки



Change  
UNI

DPX74S

Change  
P

Ti750

Change  
VA

Ti700

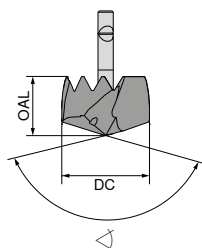
Change  
GG

TiSi

Change  
AL

TiB

DRAGONSKIN



| DC<br>mm | OAL<br>mm | 140°<br>Твердый сплав<br>10 919 ... | 138°<br>Твердый сплав<br>10 923 ... | 138°<br>Твердый сплав<br>10 921 ... | 140°<br>Твердый сплав<br>10 924 ... | 140°<br>Твердый сплав<br>10 922 ... |
|----------|-----------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
|          |           |                                     |                                     |                                     |                                     |                                     |
| 12,0     | 10,7      | 12000                               | 120                                 | 120                                 | 120                                 | 120                                 |
| 12,1     | 10,7      | 12100                               | 121                                 | 121                                 | 121                                 | 121                                 |
| 12,2     | 10,7      | 12200                               | 122                                 | 122                                 | 122                                 | 122                                 |
| 12,3     | 10,7      | 12300                               | 123                                 | 123                                 | 123                                 | 123                                 |
| 12,4     | 10,7      | 12400                               | 124                                 | 124                                 | 124                                 | 124                                 |
| 12,5     | 10,7      | 12500                               | 125                                 | 125                                 | 125                                 | 125                                 |
| 12,6     | 10,7      | 12600                               | 126                                 | 126                                 | 126                                 | 126                                 |
| 12,7     | 10,7      | 12700                               | 127                                 | 127                                 | 127                                 | 127                                 |
| 12,8     | 10,7      | 12800                               | 128                                 | 128                                 | 128                                 | 128                                 |
| 12,9     | 10,7      | 12900                               | 129                                 | 129                                 | 129                                 | 129                                 |
| 13,0     | 10,7      | 13000                               | 130                                 | 130                                 | 130                                 | 130                                 |
| 13,1     | 10,7      | 13100                               | 131                                 | 131                                 | 131                                 | 131                                 |
| 13,2     | 10,7      | 13200                               | 132                                 | 132                                 | 132                                 | 132                                 |
| 13,3     | 10,7      | 13300                               | 133                                 | 133                                 | 133                                 | 133                                 |
| 13,4     | 10,7      | 13400                               | 134                                 | 134                                 | 134                                 | 134                                 |
| 13,5     | 11,3      | 13500                               | 135                                 | 135                                 | 135                                 | 135                                 |
| 13,6     | 11,3      | 13600                               | 136                                 | 136                                 | 136                                 | 136                                 |
| 13,7     | 11,3      | 13700                               | 137                                 | 137                                 | 137                                 | 137                                 |
| 13,8     | 11,3      | 13800                               | 138                                 | 138                                 | 138                                 | 138                                 |
| 13,9     | 11,3      | 13900                               | 139                                 | 139                                 | 139                                 | 139                                 |
| 14,0     | 11,3      | 14000                               | 140                                 | 140                                 | 140                                 | 140                                 |
| 14,1     | 11,3      | 14100                               | 141                                 | 141                                 | 141                                 | 141                                 |
| 14,2     | 11,3      | 14200                               | 142                                 | 142                                 | 142                                 | 142                                 |
| 14,3     | 11,3      | 14300                               | 143                                 | 143                                 | 143                                 | 143                                 |
| 14,4     | 11,3      | 14400                               | 144                                 | 144                                 | 144                                 | 144                                 |
| 14,5     | 11,3      | 14500                               | 145                                 | 145                                 | 145                                 | 145                                 |
| 14,6     | 11,3      | 14600                               | 146                                 | 146                                 | 146                                 | 146                                 |
| 14,7     | 11,3      | 14700                               | 147                                 | 147                                 | 147                                 | 147                                 |
| 14,8     | 11,3      | 14800                               | 148                                 | 148                                 | 148                                 | 148                                 |
| 14,9     | 11,3      | 14900                               | 149                                 | 149                                 | 149                                 | 149                                 |
| 15,0     | 11,3      | 15000                               | 150                                 | 150                                 | 150                                 | 150                                 |
| 15,1     | 11,3      | 15100                               | 151                                 | 151                                 | 151                                 | 151                                 |
| 15,2     | 11,3      | 15200                               | 152                                 | 152                                 | 152                                 | 152                                 |
| 15,3     | 11,3      | 15300                               | 153                                 | 153                                 | 153                                 | 153                                 |
| 15,4     | 11,3      | 15400                               | 154                                 | 154                                 | 154                                 | 154                                 |
| 15,5     | 11,9      | 15500                               | 155                                 | 155                                 | 155                                 | 155                                 |
| 15,6     | 11,9      | 15600                               | 156                                 | 156                                 | 156                                 | 156                                 |
| 15,7     | 11,9      | 15700                               | 157                                 | 157                                 | 157                                 | 157                                 |
| 15,8     | 11,9      | 15800                               | 158                                 | 158                                 | 158                                 | 158                                 |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | • | • | ○ |   |   |
| M |   |   | • |   |   |
| K | • | • | • | • |   |
| N |   |   |   |   | • |
| S |   |   | • |   |   |
| H |   |   |   |   |   |
| O |   |   |   |   |   |

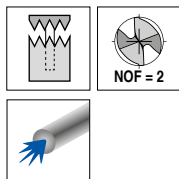
→ v<sub>c</sub> на стр. 152-155



Ø DC<sub>m7</sub> для типов UNI, P, GG и AL / Ø DC<sub>m7</sub> для типа VA

## WTX – Сверлильная головка для свёрл со сменными головками

▲ удлиненное исполнение головки

Change  
UNI

DPX74S

Change  
P

Ti750

Change  
VA

Ti700

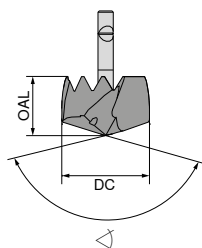
Change  
GG

TiSi

Change  
AL

TiB

DRAGONSKIN



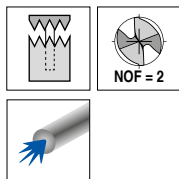
| DC<br>mm | OAL<br>mm | 140°<br>Твердый сплав<br>10 919 ... | 138°<br>Твердый сплав<br>10 923 ... | 138°<br>Твердый сплав<br>10 921 ... | 140°<br>Твердый сплав<br>10 924 ... | 140°<br>Твердый сплав<br>10 922 ... |
|----------|-----------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
|          |           |                                     |                                     |                                     |                                     |                                     |
| 15,9     | 11,9      | 15900                               | 159                                 | 159                                 | 159                                 | 159                                 |
| 16,0     | 11,9      | 16000                               | 160                                 | 160                                 | 160                                 | 160                                 |
| 16,1     | 11,9      | 16100                               | 161                                 | 161                                 | 161                                 | 161                                 |
| 16,2     | 11,9      | 16200                               | 162                                 | 162                                 | 162                                 | 162                                 |
| 16,3     | 11,9      | 16300                               | 163                                 | 163                                 | 163                                 | 163                                 |
| 16,4     | 11,9      | 16400                               | 164                                 | 164                                 | 164                                 | 164                                 |
| 16,5     | 13,4      | 16500                               | 165                                 | 165                                 | 165                                 | 165                                 |
| 16,6     | 13,4      | 16600                               | 166                                 | 166                                 | 166                                 | 166                                 |
| 16,7     | 13,4      | 16700                               | 167                                 | 167                                 | 167                                 | 167                                 |
| 16,8     | 13,4      | 16800                               | 168                                 | 168                                 | 168                                 | 168                                 |
| 16,9     | 13,4      | 16900                               | 169                                 | 169                                 | 169                                 | 169                                 |
| 17,0     | 13,4      | 17000                               | 170                                 | 170                                 | 170                                 | 170                                 |
| 17,1     | 13,4      | 17100                               | 171                                 | 171                                 | 171                                 | 171                                 |
| 17,2     | 13,4      | 17200                               | 172                                 | 172                                 | 172                                 | 172                                 |
| 17,3     | 13,4      | 17300                               | 173                                 | 173                                 | 173                                 | 173                                 |
| 17,4     | 13,4      | 17400                               | 174                                 | 174                                 | 174                                 | 174                                 |
| 17,5     | 13,4      | 17500                               | 175                                 | 175                                 | 175                                 | 175                                 |
| 17,6     | 13,4      | 17600                               | 176                                 | 176                                 | 176                                 | 176                                 |
| 17,7     | 13,4      | 17700                               | 177                                 | 177                                 | 177                                 | 177                                 |
| 17,8     | 13,4      | 17800                               | 178                                 | 178                                 | 178                                 | 178                                 |
| 17,9     | 13,4      | 17900                               | 179                                 | 179                                 | 179                                 | 179                                 |
| 18,0     | 13,4      | 18000                               | 180                                 | 180                                 | 180                                 | 180                                 |
| 18,1     | 13,4      | 18100                               | 181                                 | 181                                 | 181                                 | 181                                 |
| 18,2     | 13,4      | 18200                               | 182                                 | 182                                 | 182                                 | 182                                 |
| 18,3     | 13,4      | 18300                               | 183                                 | 183                                 | 183                                 | 183                                 |
| 18,4     | 13,4      | 18400                               | 184                                 | 184                                 | 184                                 | 184                                 |
| 18,5     | 13,4      | 18500                               | 185                                 | 185                                 | 185                                 | 185                                 |
| 18,6     | 13,4      | 18600                               | 186                                 | 186                                 | 186                                 | 186                                 |
| 18,7     | 13,4      | 18700                               | 187                                 | 187                                 | 187                                 | 187                                 |
| 18,8     | 13,4      | 18800                               | 188                                 | 188                                 | 188                                 | 188                                 |
| 18,9     | 13,4      | 18900                               | 189                                 | 189                                 | 189                                 | 189                                 |
| 19,0     | 13,4      | 19000                               | 190                                 | 190                                 | 190                                 | 190                                 |
| 19,1     | 13,4      | 19100                               | 191                                 | 191                                 | 191                                 | 191                                 |
| 19,2     | 13,4      | 19200                               | 192                                 | 192                                 | 192                                 | 192                                 |
| 19,3     | 13,4      | 19300                               | 193                                 | 193                                 | 193                                 | 193                                 |
| 19,4     | 13,4      | 19400                               | 194                                 | 194                                 | 194                                 | 194                                 |
| 19,5     | 13,4      | 19500                               | 195                                 | 195                                 | 195                                 | 195                                 |
| 19,6     | 13,4      | 19600                               | 196                                 | 196                                 | 196                                 | 196                                 |
| 19,7     | 13,4      | 19700                               | 197                                 | 197                                 | 197                                 | 197                                 |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | • | • | ○ |   |   |
| M |   |   | • |   |   |
| K | • | • | • | • |   |
| N |   |   |   |   | • |
| S |   |   | • |   |   |
| H |   |   |   |   |   |
| O |   |   |   |   |   |

→ v<sub>c</sub> на стр. 152-155Ø DC<sub>m7</sub> для типов UNI, P, GG и AL / Ø DC<sub>H7</sub> для типа VA

# WTX – Сверлильная головка для свёрл со сменными головками

▲ удлиненное исполнение головки



Change  
UNI

DPX74S

Change  
P

Ti750

Change  
VA

Ti700

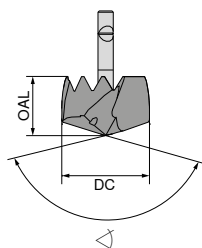
Change  
GG

TiSi

Change  
AL

TiB

DRAGONSKIN



| DC<br>mm | OAL<br>mm | 140°<br>Твердый сплав<br>10 919 ... |     | 138°<br>Твердый сплав<br>10 923 ... |     | 138°<br>Твердый сплав<br>10 921 ... |     | 140°<br>Твердый сплав<br>10 924 ... |     | 140°<br>Твердый сплав<br>10 922 ... |     |
|----------|-----------|-------------------------------------|-----|-------------------------------------|-----|-------------------------------------|-----|-------------------------------------|-----|-------------------------------------|-----|
|          |           |                                     |     |                                     |     |                                     |     |                                     |     |                                     |     |
| 19,8     | 13,4      | 19800                               | 198 | 198                                 | 198 | 198                                 | 198 | 198                                 | 198 | 198                                 | 198 |
| 19,9     | 13,4      | 19900                               | 199 | 199                                 | 199 | 199                                 | 199 | 199                                 | 199 | 199                                 | 199 |
| 20,0     | 13,4      | 20000                               | 200 | 200                                 | 200 | 200                                 | 200 | 200                                 | 200 | 200                                 | 200 |
| 20,1     | 13,4      | 20100                               | 201 | 201                                 | 201 | 201                                 | 201 | 201                                 | 201 | 201                                 | 201 |
| 20,2     | 13,4      | 20200                               | 202 | 202                                 | 202 | 202                                 | 202 | 202                                 | 202 | 202                                 | 202 |
| 20,3     | 13,4      | 20300                               | 203 | 203                                 | 203 | 203                                 | 203 | 203                                 | 203 | 203                                 | 203 |
| 20,4     | 13,4      | 20400                               | 204 | 204                                 | 204 | 204                                 | 204 | 204                                 | 204 | 204                                 | 204 |
| 20,5     | 15,4      | 20500                               | 205 | 205                                 | 205 | 205                                 | 205 | 205                                 | 205 | 205                                 | 205 |
| 20,6     | 15,4      | 20600                               | 206 | 206                                 | 206 | 206                                 | 206 | 206                                 | 206 | 206                                 | 206 |
| 20,7     | 15,4      | 20700                               | 207 | 207                                 | 207 | 207                                 | 207 | 207                                 | 207 | 207                                 | 207 |
| 20,8     | 15,4      | 20800                               | 208 | 208                                 | 208 | 208                                 | 208 | 208                                 | 208 | 208                                 | 208 |
| 20,9     | 15,4      | 20900                               | 209 | 209                                 | 209 | 209                                 | 209 | 209                                 | 209 | 209                                 | 209 |
| 21,0     | 15,4      | 21000                               | 210 | 210                                 | 210 | 210                                 | 210 | 210                                 | 210 | 210                                 | 210 |
| 21,1     | 15,4      | 21100                               | 211 | 211                                 | 211 | 211                                 | 211 | 211                                 | 211 | 211                                 | 211 |
| 21,2     | 15,4      | 21200                               | 212 | 212                                 | 212 | 212                                 | 212 | 212                                 | 212 | 212                                 | 212 |
| 21,3     | 15,4      | 21300                               | 213 | 213                                 | 213 | 213                                 | 213 | 213                                 | 213 | 213                                 | 213 |
| 21,4     | 15,4      | 21400                               | 214 | 214                                 | 214 | 214                                 | 214 | 214                                 | 214 | 214                                 | 214 |
| 21,5     | 15,4      | 21500                               | 215 | 215                                 | 215 | 215                                 | 215 | 215                                 | 215 | 215                                 | 215 |
| 21,6     | 15,4      | 21600                               | 216 | 216                                 | 216 | 216                                 | 216 | 216                                 | 216 | 216                                 | 216 |
| 21,7     | 15,4      | 21700                               | 217 | 217                                 | 217 | 217                                 | 217 | 217                                 | 217 | 217                                 | 217 |
| 21,8     | 15,4      | 21800                               | 218 | 218                                 | 218 | 218                                 | 218 | 218                                 | 218 | 218                                 | 218 |
| 21,9     | 15,4      | 21900                               | 219 | 219                                 | 219 | 219                                 | 219 | 219                                 | 219 | 219                                 | 219 |
| 22,0     | 15,4      | 22000                               | 220 | 220                                 | 220 | 220                                 | 220 | 220                                 | 220 | 220                                 | 220 |
| 22,1     | 15,4      | 22100                               | 221 | 221                                 | 221 | 221                                 | 221 | 221                                 | 221 | 221                                 | 221 |
| 22,2     | 15,4      | 22200                               | 222 | 222                                 | 222 | 222                                 | 222 | 222                                 | 222 | 222                                 | 222 |
| 22,3     | 15,4      | 22300                               | 223 | 223                                 | 223 | 223                                 | 223 | 223                                 | 223 | 223                                 | 223 |
| 22,4     | 15,4      | 22400                               | 224 | 224                                 | 224 | 224                                 | 224 | 224                                 | 224 | 224                                 | 224 |
| 22,5     | 15,4      | 22500                               | 225 | 225                                 | 225 | 225                                 | 225 | 225                                 | 225 | 225                                 | 225 |
| 22,6     | 15,4      | 22600                               | 226 | 226                                 | 226 | 226                                 | 226 | 226                                 | 226 | 226                                 | 226 |
| 22,7     | 15,4      | 22700                               | 227 | 227                                 | 227 | 227                                 | 227 | 227                                 | 227 | 227                                 | 227 |
| 22,8     | 15,4      | 22800                               | 228 | 228                                 | 228 | 228                                 | 228 | 228                                 | 228 | 228                                 | 228 |
| 22,9     | 15,4      | 22900                               | 229 | 229                                 | 229 | 229                                 | 229 | 229                                 | 229 | 229                                 | 229 |
| 23,0     | 15,4      | 23000                               | 230 | 230                                 | 230 | 230                                 | 230 | 230                                 | 230 | 230                                 | 230 |
| 23,1     | 15,4      | 23100                               | 231 | 231                                 | 231 | 231                                 | 231 | 231                                 | 231 | 231                                 | 231 |
| 23,2     | 15,4      | 23200                               | 232 | 232                                 | 232 | 232                                 | 232 | 232                                 | 232 | 232                                 | 232 |
| 23,3     | 15,4      | 23300                               | 233 | 233                                 | 233 | 233                                 | 233 | 233                                 | 233 | 233                                 | 233 |
| 23,4     | 15,4      | 23400                               | 234 | 234                                 | 234 | 234                                 | 234 | 234                                 | 234 | 234                                 | 234 |
| 23,5     | 15,4      | 23500                               | 235 | 235                                 | 235 | 235                                 | 235 | 235                                 | 235 | 235                                 | 235 |
| 23,6     | 15,4      | 23600                               | 236 | 236                                 | 236 | 236                                 | 236 | 236                                 | 236 | 236                                 | 236 |
| P        |           | •                                   | •   | •                                   | •   | •                                   | •   | •                                   | •   | •                                   | •   |
| M        |           |                                     |     |                                     |     |                                     |     |                                     |     |                                     |     |
| K        |           | •                                   | •   | •                                   | •   | •                                   | •   | •                                   | •   | •                                   | •   |
| N        |           |                                     |     |                                     |     |                                     |     |                                     |     |                                     | •   |
| S        |           |                                     |     |                                     |     |                                     |     |                                     |     |                                     |     |
| H        |           |                                     |     |                                     |     |                                     |     |                                     |     |                                     |     |
| O        |           |                                     |     |                                     |     |                                     |     |                                     |     |                                     |     |

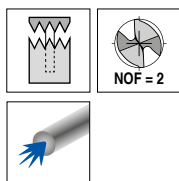
→ v<sub>c</sub> на стр. 152-155



Ø DC<sub>m7</sub> для типов UNI, P, GG и AL / Ø DC<sub>m7</sub> для типа VA

## WTX – Сверлильная головка для свёрл со сменными головками

▲ удлиненное исполнение головки

Change  
UNI

DPX74S

Change  
P

Ti750

Change  
VA

Ti700

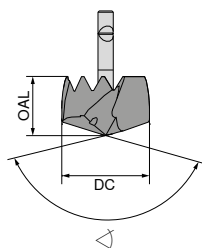
Change  
GG

TiSi

Change  
AL

TiB

DRAGONSKIN



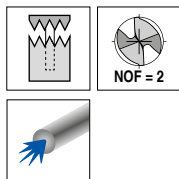
| DC<br>mm | OAL<br>mm | 140°<br>Твердый сплав<br>10 919 ... | 138°<br>Твердый сплав<br>10 923 ... | 138°<br>Твердый сплав<br>10 921 ... | 140°<br>Твердый сплав<br>10 924 ... | 140°<br>Твердый сплав<br>10 922 ... |
|----------|-----------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
|          |           |                                     |                                     |                                     |                                     |                                     |
| 23,7     | 15,4      | 23700                               | 237                                 | 237                                 | 237                                 | 237                                 |
| 23,8     | 15,4      | 23800                               | 238                                 | 238                                 | 238                                 | 238                                 |
| 23,9     | 15,4      | 23900                               | 239                                 | 239                                 | 239                                 | 239                                 |
| 24,0     | 15,4      | 24000                               | 240                                 | 240                                 | 240                                 | 240                                 |
| 24,1     | 15,4      | 24100                               | 241                                 | 241                                 | 241                                 | 241                                 |
| 24,2     | 15,4      | 24200                               | 242                                 | 242                                 | 242                                 | 242                                 |
| 24,3     | 15,4      | 24300                               | 243                                 | 243                                 | 243                                 | 243                                 |
| 24,4     | 15,4      | 24400                               | 244                                 | 244                                 | 244                                 | 244                                 |
| 24,5     | 17,4      | 24500                               | 245                                 | 245                                 | 245                                 | 245                                 |
| 24,6     | 17,4      | 24600                               | 246                                 | 246                                 | 246                                 | 246                                 |
| 24,7     | 17,4      | 24700                               | 247                                 | 247                                 | 247                                 | 247                                 |
| 24,8     | 17,4      | 24800                               | 248                                 | 248                                 | 248                                 | 248                                 |
| 24,9     | 17,4      | 24900                               | 249                                 | 249                                 | 249                                 | 249                                 |
| 25,0     | 17,4      | 25000                               | 250                                 | 250                                 | 250                                 | 250                                 |
| 25,1     | 17,4      | 25100                               | 251                                 | 251                                 | 251                                 | 251                                 |
| 25,2     | 17,4      | 25200                               | 252                                 | 252                                 | 252                                 | 252                                 |
| 25,3     | 17,4      | 25300                               | 253                                 | 253                                 | 253                                 | 253                                 |
| 25,4     | 17,4      | 25400                               | 254                                 | 254                                 | 254                                 | 254                                 |
| 25,5     | 17,4      | 25500                               | 255                                 | 255                                 | 255                                 | 255                                 |
| 25,6     | 17,4      | 25600                               | 256                                 | 256                                 | 256                                 | 256                                 |
| 25,7     | 17,4      | 25700                               | 257                                 | 257                                 | 257                                 | 257                                 |
| 25,8     | 17,4      | 25800                               | 258                                 | 258                                 | 258                                 | 258                                 |
| 25,9     | 17,4      | 25900                               | 259                                 | 259                                 | 259                                 | 259                                 |
| 26,0     | 17,4      | 26000                               | 260                                 | 260                                 | 260                                 | 260                                 |
| 26,1     | 17,4      | 26100                               | 261                                 | 261                                 | 261                                 | 261                                 |
| 26,2     | 17,4      | 26200                               | 262                                 | 262                                 | 262                                 | 262                                 |
| 26,3     | 17,4      | 26300                               | 263                                 | 263                                 | 263                                 | 263                                 |
| 26,4     | 17,4      | 26400                               | 264                                 | 264                                 | 264                                 | 264                                 |
| 26,5     | 17,4      | 26500                               | 265                                 | 265                                 | 265                                 | 265                                 |
| 26,6     | 17,4      | 26600                               | 266                                 | 266                                 | 266                                 | 266                                 |
| 26,7     | 17,4      | 26700                               | 267                                 | 267                                 | 267                                 | 267                                 |
| 26,8     | 17,4      | 26800                               | 268                                 | 268                                 | 268                                 | 268                                 |
| 26,9     | 17,4      | 26900                               | 269                                 | 269                                 | 269                                 | 269                                 |
| 27,0     | 17,4      | 27000                               | 270                                 | 270                                 | 270                                 | 270                                 |
| 27,1     | 17,4      | 27100                               | 271                                 | 271                                 | 271                                 | 271                                 |
| 27,2     | 17,4      | 27200                               | 272                                 | 272                                 | 272                                 | 272                                 |
| 27,3     | 17,4      | 27300                               | 273                                 | 273                                 | 273                                 | 273                                 |
| 27,4     | 17,4      | 27400                               | 274                                 | 274                                 | 274                                 | 274                                 |
| 27,5     | 17,4      | 27500                               | 275                                 | 275                                 | 275                                 | 275                                 |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | • | • | ○ |   |   |
| M |   |   | • |   |   |
| K | • | • | • | • |   |
| N |   |   |   |   | • |
| S |   |   | • |   |   |
| H |   |   |   |   |   |
| O |   |   |   |   |   |

→ v<sub>c</sub> на стр. 152-155Ø DC<sub>m7</sub> для типов UNI, P, GG и AL / Ø DC<sub>h7</sub> для типа VA

# WTX – Сверлильная головка для свёрл со сменными головками

▲ удлиненное исполнение головки



Change  
UNI

DPX74S

Change  
P

Ti750

Change  
VA

Ti700

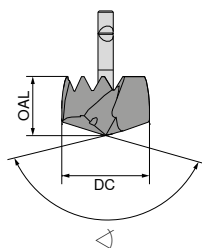
Change  
GG

TiSi

Change  
AL

TiB

DRAGONSKIN



| DC<br>mm | h7/m7<br>mm | OAL<br>mm | 140°<br>Твердый сплав<br>10 919 ... |     | 138°<br>Твердый сплав<br>10 923 ... |     | 138°<br>Твердый сплав<br>10 921 ... |     | 140°<br>Твердый сплав<br>10 924 ... |     | 140°<br>Твердый сплав<br>10 922 ... |     |
|----------|-------------|-----------|-------------------------------------|-----|-------------------------------------|-----|-------------------------------------|-----|-------------------------------------|-----|-------------------------------------|-----|
|          |             |           |                                     |     |                                     |     |                                     |     |                                     |     |                                     |     |
| 27,6     |             | 17,4      | 27600                               | 276 | 276                                 | 276 | 276                                 | 276 | 276                                 | 276 | 276                                 | 276 |
| 27,7     |             | 17,4      | 27700                               | 277 | 277                                 | 277 | 277                                 | 277 | 277                                 | 277 | 277                                 | 277 |
| 27,8     |             | 17,4      | 27800                               | 278 | 278                                 | 278 | 278                                 | 278 | 278                                 | 278 | 278                                 | 278 |
| 27,9     |             | 17,4      | 27900                               | 279 | 279                                 | 279 | 279                                 | 279 | 279                                 | 279 | 279                                 | 279 |
| 28,0     |             | 17,4      | 28000                               | 280 | 280                                 | 280 | 280                                 | 280 | 280                                 | 280 | 280                                 | 280 |
| 28,1     |             | 17,4      | 28100                               | 281 | 281                                 | 281 | 281                                 | 281 | 281                                 | 281 | 281                                 | 281 |
| 28,2     |             | 17,4      | 28200                               | 282 | 282                                 | 282 | 282                                 | 282 | 282                                 | 282 | 282                                 | 282 |
| 28,3     |             | 17,4      | 28300                               | 283 | 283                                 | 283 | 283                                 | 283 | 283                                 | 283 | 283                                 | 283 |
| 28,4     |             | 17,4      | 28400                               | 284 | 284                                 | 284 | 284                                 | 284 | 284                                 | 284 | 284                                 | 284 |
| 28,5     |             | 18,4      | 28500                               | 285 | 285                                 | 285 | 285                                 | 285 | 285                                 | 285 | 285                                 | 285 |
| 28,6     |             | 18,4      | 28600                               | 286 | 286                                 | 286 | 286                                 | 286 | 286                                 | 286 | 286                                 | 286 |
| 28,7     |             | 18,4      | 28700                               | 287 | 287                                 | 287 | 287                                 | 287 | 287                                 | 287 | 287                                 | 287 |
| 28,8     |             | 18,4      | 28800                               | 288 | 288                                 | 288 | 288                                 | 288 | 288                                 | 288 | 288                                 | 288 |
| 28,9     |             | 18,4      | 28900                               | 289 | 289                                 | 289 | 289                                 | 289 | 289                                 | 289 | 289                                 | 289 |
| 29,0     |             | 18,4      | 29000                               | 290 | 290                                 | 290 | 290                                 | 290 | 290                                 | 290 | 290                                 | 290 |
| 29,1     |             | 18,4      | 29100                               | 291 | 291                                 | 291 | 291                                 | 291 | 291                                 | 291 | 291                                 | 291 |
| 29,2     |             | 18,4      | 29200                               | 292 | 292                                 | 292 | 292                                 | 292 | 292                                 | 292 | 292                                 | 292 |
| 29,3     |             | 18,4      | 29300                               | 293 | 293                                 | 293 | 293                                 | 293 | 293                                 | 293 | 293                                 | 293 |
| 29,4     |             | 18,4      | 29400                               | 294 | 294                                 | 294 | 294                                 | 294 | 294                                 | 294 | 294                                 | 294 |
| 29,5     |             | 18,4      | 29500                               | 295 | 295                                 | 295 | 295                                 | 295 | 295                                 | 295 | 295                                 | 295 |
| 29,6     |             | 18,4      | 29600                               | 296 | 296                                 | 296 | 296                                 | 296 | 296                                 | 296 | 296                                 | 296 |
| 29,7     |             | 18,4      | 29700                               | 297 | 297                                 | 297 | 297                                 | 297 | 297                                 | 297 | 297                                 | 297 |
| 29,8     |             | 18,4      | 29800                               | 298 | 298                                 | 298 | 298                                 | 298 | 298                                 | 298 | 298                                 | 298 |
| 29,9     |             | 18,4      | 29900                               | 299 | 299                                 | 299 | 299                                 | 299 | 299                                 | 299 | 299                                 | 299 |
| 30,0     |             | 18,4      | 30000                               | 300 | 300                                 | 300 | 300                                 | 300 | 300                                 | 300 | 300                                 | 300 |
| 30,1     |             | 18,4      | 30100                               | 301 | 301                                 | 301 | 301                                 | 301 | 301                                 | 301 | 301                                 | 301 |
| 30,2     |             | 18,4      | 30200                               | 302 | 302                                 | 302 | 302                                 | 302 | 302                                 | 302 | 302                                 | 302 |
| 30,3     |             | 18,4      | 30300                               | 303 | 303                                 | 303 | 303                                 | 303 | 303                                 | 303 | 303                                 | 303 |
| 30,4     |             | 18,4      | 30400                               | 304 | 304                                 | 304 | 304                                 | 304 | 304                                 | 304 | 304                                 | 304 |
| 30,5     |             | 18,4      | 30500                               | 305 | 305                                 | 305 | 305                                 | 305 | 305                                 | 305 | 305                                 | 305 |
| 30,6     |             | 18,4      | 30600                               | 306 | 306                                 | 306 | 306                                 | 306 | 306                                 | 306 | 306                                 | 306 |
| 30,7     |             | 18,4      | 30700                               | 307 | 307                                 | 307 | 307                                 | 307 | 307                                 | 307 | 307                                 | 307 |
| 30,8     |             | 18,4      | 30800                               | 308 | 308                                 | 308 | 308                                 | 308 | 308                                 | 308 | 308                                 | 308 |
| 30,9     |             | 18,4      | 30900                               | 309 | 309                                 | 309 | 309                                 | 309 | 309                                 | 309 | 309                                 | 309 |
| 31,0     |             | 18,4      | 31000                               | 310 | 310                                 | 310 | 310                                 | 310 | 310                                 | 310 | 310                                 | 310 |
| 31,1     |             | 18,4      | 31100                               | 311 | 311                                 | 311 | 311                                 | 311 | 311                                 | 311 | 311                                 | 311 |
| 31,2     |             | 18,4      | 31200                               | 312 | 312                                 | 312 | 312                                 | 312 | 312                                 | 312 | 312                                 | 312 |
| 31,3     |             | 18,4      | 31300                               | 313 | 313                                 | 313 | 313                                 | 313 | 313                                 | 313 | 313                                 | 313 |
| 31,4     |             | 18,4      | 31400                               | 314 | 314                                 | 314 | 314                                 | 314 | 314                                 | 314 | 314                                 | 314 |
| P        |             |           | ●                                   | ●   | ○                                   |     |                                     |     |                                     |     |                                     |     |
| M        |             |           |                                     |     |                                     | ●   |                                     |     |                                     |     |                                     |     |
| K        |             |           | ●                                   | ●   | ●                                   | ●   | ●                                   | ●   | ●                                   | ●   | ●                                   | ●   |
| N        |             |           |                                     |     |                                     |     |                                     |     |                                     |     | ●                                   |     |
| S        |             |           |                                     |     |                                     | ●   |                                     |     |                                     |     |                                     |     |
| H        |             |           |                                     |     |                                     |     |                                     |     |                                     |     |                                     |     |
| O        |             |           |                                     |     |                                     |     |                                     |     |                                     |     |                                     |     |

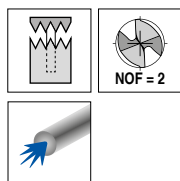
→ v<sub>c</sub> на стр. 152-155



Ø DC<sub>m7</sub> для типов UNI, P, GG и AL / Ø DC<sub>m7</sub> для типа VA

# WTH – Сверлильная головка для свёрл со сменными головками

▲ удлиненное исполнение головки



Change  
UNI

DPX74S

DRAGONSKIN

Change  
P

Ti750

Change  
VA

Ti700

Change  
GG

TiSi

Change  
AL

TiB



|                           | 140°<br>Твердый сплав | 138°<br>Твердый сплав | 138°<br>Твердый сплав | 140°<br>Твердый сплав | 140°<br>Твердый сплав |
|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                           | 10 919 ...            | 10 923 ...            | 10 921 ...            | 10 924 ...            | 10 922 ...            |
| DC <sub>h7/m7</sub><br>mm |                       |                       |                       |                       |                       |
| OAL<br>mm                 |                       |                       |                       |                       |                       |
| 31,5                      | 18,4                  | 31500                 | 315                   | 315                   | 315                   |
| 31,6                      | 18,4                  | 31600                 | 316                   | 316                   | 316                   |
| 31,7                      | 18,4                  | 31700                 | 317                   | 317                   | 317                   |
| 31,8                      | 18,4                  | 31800                 | 318                   | 318                   | 318                   |
| 31,9                      | 18,4                  | 31900                 | 319                   | 319                   | 319                   |
| 32,0                      | 18,4                  | 32000                 | 320                   | 320                   | 320                   |
| 32,5                      | 24,3                  | 32500                 | 325                   |                       |                       |
| 33,0                      | 24,3                  | 33000                 | 330                   |                       |                       |
| 33,5                      | 24,3                  | 33500                 | 335                   |                       |                       |
| 34,0                      | 24,3                  | 34000                 | 340                   |                       |                       |
| 34,5                      | 24,3                  | 34500                 | 345                   |                       |                       |
| 35,0                      | 24,3                  | 35000                 | 350                   |                       |                       |
| 35,5                      | 26,3                  | 35500                 | 355                   |                       |                       |
| 36,0                      | 26,3                  | 36000                 | 360                   |                       |                       |
| 36,5                      | 26,3                  | 36500                 | 365                   |                       |                       |
| 37,0                      | 26,3                  | 37000                 | 370                   |                       |                       |
| 37,5                      | 26,3                  | 37500                 | 375                   |                       |                       |
| 38,0                      | 26,3                  | 38000                 | 380                   |                       |                       |
| 38,5                      | 26,3                  | 38500                 | 385                   |                       |                       |
| 39,0                      | 26,3                  | 39000                 | 390                   |                       |                       |
| 39,5                      | 26,3                  | 39500                 | 395                   |                       |                       |
| 40,0                      | 26,3                  | 40000                 | 400                   |                       |                       |
| 40,5                      | 26,3                  | 40500                 | 405                   |                       |                       |
| 41,0                      | 26,3                  | 41000                 | 410                   |                       |                       |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| P | • | • | ○ |   |   |
| M |   |   | • |   |   |
| K | • | • | • | • |   |
| N |   |   |   |   | • |
| S |   |   | • |   |   |
| H |   |   |   |   |   |
| O |   |   |   |   |   |

→ v<sub>c</sub> на стр. 152-155



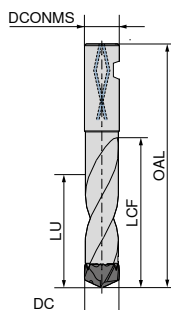
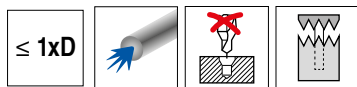
Ø DC<sub>m7</sub> для типов UNI, P, GG и AL / Ø DC<sub>h7</sub> для типа VA

## WTH – Корпус сверла со сменными головками

▲ с радиальными зубьями

Комплект поставки:

Флажковый ключ



Change

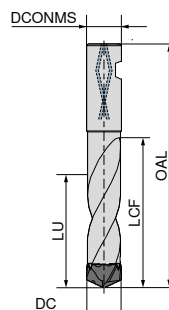
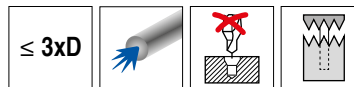


## WTH – Корпус сверла со сменными головками

▲ с радиальными зубьями

Комплект поставки:

Флажковый ключ



Change



HB

10 911 ...

| DC<br>mm      | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | Момент затяжки<br>Nm |     |
|---------------|----------------------------|-----------|-----------|----------|----------------------|-----|
| 12,00 - 12,49 | 14                         | 81        | 29        | 12,5     | 1,0                  | 120 |
| 12,50 - 12,99 | 14                         | 81        | 29        | 13,0     | 1,0                  | 125 |
| 13,00 - 13,49 | 14                         | 81        | 31        | 13,5     | 1,0                  | 130 |
| 13,50 - 13,99 | 16                         | 86        | 32        | 14,0     | 1,3                  | 135 |
| 14,00 - 14,49 | 16                         | 86        | 33        | 14,5     | 1,3                  | 140 |
| 14,50 - 14,99 | 16                         | 91        | 34        | 15,0     | 1,3                  | 145 |
| 15,00 - 15,49 | 16                         | 91        | 36        | 15,5     | 1,3                  | 150 |
| 15,50 - 16,49 | 20                         | 97        | 38        | 16,5     | 1,3                  | 161 |
| 15,50 - 16,49 | 18                         | 92        | 38        | 16,5     | 1,3                  | 160 |
| 16,50 - 17,49 | 18                         | 94        | 40        | 17,5     | 3,5                  | 165 |
| 16,50 - 17,49 | 20                         | 99        | 40        | 17,5     | 3,5                  | 166 |
| 17,50 - 18,49 | 20                         | 104       | 43        | 18,5     | 3,5                  | 176 |
| 17,50 - 18,49 | 18                         | 99        | 43        | 18,5     | 3,5                  | 175 |
| 18,50 - 19,49 | 20                         | 99        | 45        | 19,5     | 3,5                  | 185 |
| 19,50 - 20,49 | 20                         | 104       | 47        | 20,5     | 3,5                  | 195 |
| 20,50 - 21,49 | 25                         | 111       | 49        | 21,5     | 3,5                  | 205 |
| 21,50 - 22,49 | 25                         | 116       | 52        | 22,5     | 3,5                  | 215 |
| 22,50 - 23,49 | 25                         | 116       | 54        | 23,5     | 3,5                  | 225 |
| 23,50 - 24,49 | 25                         | 121       | 56        | 24,5     | 4,0                  | 235 |
| 24,50 - 25,49 | 25                         | 123       | 59        | 25,5     | 4,0                  | 245 |
| 25,50 - 26,49 | 25                         | 123       | 61        | 26,5     | 4,0                  | 255 |
| 26,50 - 27,49 | 25                         | 128       | 63        | 27,5     | 4,0                  | 265 |
| 27,50 - 28,49 | 25                         | 128       | 66        | 28,5     | 4,0                  | 275 |
| 28,50 - 29,49 | 32                         | 134       | 68        | 29,5     | 4,0                  | 285 |
| 29,50 - 30,49 | 32                         | 139       | 70        | 30,5     | 4,0                  | 295 |
| 30,50 - 31,49 | 32                         | 139       | 75        | 31,5     | 4,0                  | 305 |
| 31,50 - 32,49 | 32                         | 139       | 75        | 32,5     | 4,0                  | 315 |
| 32,50 - 33,49 | 32                         | 150       | 78        | 33,5     | 6,0                  | 325 |
| 33,50 - 34,49 | 32                         | 150       | 79        | 34,5     | 6,0                  | 335 |
| 34,50 - 35,49 | 32                         | 150       | 82        | 35,5     | 6,0                  | 345 |
| 35,50 - 37,49 | 32                         | 152       | 86        | 37,5     | 6,0                  | 355 |
| 37,50 - 39,49 | 32                         | 157       | 91        | 39,5     | 6,0                  | 375 |
| 39,50 - 41,00 | 32                         | 167       | 95        | 41,5     | 6,0                  | 395 |

HB

10 913 ...

| DC<br>mm      | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | Момент затяжки<br>Nm |     |
|---------------|----------------------------|-----------|-----------|----------|----------------------|-----|
| 12,00 - 12,49 | 14                         | 100       | 53        | 38,0     | 1,0                  | 120 |
| 12,50 - 12,99 | 14                         | 105       | 55        | 39,0     | 1,0                  | 125 |
| 13,00 - 13,49 | 14                         | 105       | 57        | 40,0     | 1,0                  | 130 |
| 13,50 - 13,99 | 16                         | 110       | 59        | 42,0     | 1,3                  | 135 |
| 14,00 - 14,49 | 16                         | 115       | 61        | 43,0     | 1,3                  | 140 |
| 14,50 - 14,99 | 16                         | 115       | 63        | 45,0     | 1,3                  | 145 |
| 15,00 - 15,49 | 16                         | 115       | 65        | 46,0     | 1,3                  | 150 |
| 15,50 - 16,49 | 18                         | 120       | 70        | 50,0     | 1,3                  | 160 |
| 15,50 - 16,49 | 20                         | 125       | 70        | 50,0     | 1,3                  | 161 |
| 16,50 - 17,49 | 18                         | 125       | 74        | 53,0     | 3,5                  | 165 |
| 16,50 - 17,49 | 20                         | 130       | 74        | 50,0     | 3,5                  | 166 |
| 17,50 - 18,49 | 18                         | 130       | 78        | 55,0     | 3,5                  | 175 |
| 17,50 - 18,49 | 20                         | 135       | 78        | 50,0     | 3,5                  | 176 |
| 18,50 - 19,49 | 20                         | 135       | 82        | 58,0     | 3,5                  | 185 |
| 19,50 - 20,49 | 20                         | 140       | 87        | 62,0     | 3,5                  | 195 |
| 20,50 - 21,49 | 25                         | 150       | 91        | 65,0     | 3,5                  | 205 |
| 21,50 - 22,49 | 25                         | 155       | 95        | 67,0     | 3,5                  | 215 |
| 22,50 - 23,49 | 25                         | 160       | 99        | 70,0     | 3,5                  | 225 |
| 23,50 - 24,49 | 25                         | 165       | 103       | 73,0     | 3,5                  | 235 |
| 24,50 - 25,49 | 25                         | 165       | 108       | 77,0     | 4,0                  | 245 |
| 25,50 - 26,49 | 25                         | 175       | 112       | 80,0     | 4,0                  | 255 |
| 26,50 - 27,49 | 25                         | 175       | 116       | 82,0     | 4,0                  | 265 |
| 27,50 - 28,49 | 25                         | 180       | 120       | 85,0     | 4,0                  | 275 |
| 28,50 - 29,49 | 32                         | 190       | 124       | 88,0     | 4,0                  | 285 |
| 29,50 - 30,49 | 32                         | 195       | 129       | 92,0     | 4,0                  | 295 |
| 30,50 - 31,49 | 32                         | 195       | 133       | 94,0     | 4,0                  | 305 |
| 31,50 - 32,49 | 32                         | 200       | 137       | 97,0     | 4,0                  | 315 |
| 32,50 - 33,49 | 32                         | 210       | 144       | 100,5    | 6,0                  | 325 |
| 33,50 - 34,49 | 32                         | 215       | 148       | 103,5    | 6,0                  | 335 |
| 34,50 - 35,49 | 32                         | 220       | 153       | 106,5    | 6,0                  | 345 |
| 35,50 - 37,49 | 32                         | 227       | 161       | 112,5    | 6,0                  | 355 |
| 37,50 - 39,49 | 32                         | 237       | 170       | 118,5    | 6,0                  | 375 |
| 39,50 - 41,00 | 32                         | 247       | 178       | 124,5    | 6,0                  | 395 |



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Резьбовой штифт

10 950 ...

### Комплектующие

для диаметра сверла со сменной головкой

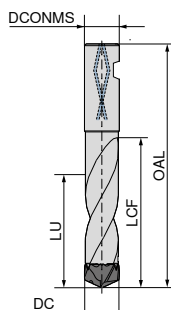
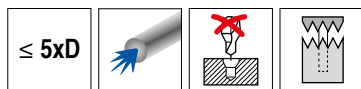
|               |        |     |                 |     |
|---------------|--------|-----|-----------------|-----|
| 12,00 - 12,49 | SW 1,3 | 132 | M2,5 x 0,45 x 5 | 025 |
| 12,50 - 13,49 | SW 1,3 | 132 | M2,5 x 0,45 x 6 | 026 |
| 13,50 - 14,49 |        |     | M3 x 0,5 x 6    | 031 |
| 14,50 - 16,49 | SW 1,5 | 133 | M3 x 0,5 x 7    | 030 |
| 16,50 - 20,49 | SW 2   | 134 | M4 x 0,5 x 7,5  | 040 |
| 20,50 - 24,49 | SW 2   | 134 | M4 x 0,5 x 10   | 041 |
| 24,50 - 28,49 | SW 2,5 | 135 | M5 x 0,5 x 11   | 050 |
| 28,50 - 32,49 | SW 2,5 | 135 | M5 x 0,5 x 14   | 051 |
| 32,50 - 35,49 | SW 3   | 136 | M6 x 0,5 x 16   | 060 |
| 35,50 - 39,49 | SW 3   | 136 | M6 x 0,5 x 18   | 061 |
| 39,50 - 41,00 | SW 3   | 136 | M6 x 0,5 x 20   | 062 |

## WTH – Корпус сверла со сменными головками

▲ с радиальными зубьями

Комплект поставки:

Флажковый ключ



Change



10 915 ...

| DC<br>mm      | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | Момент затяжки<br>Nm |     |
|---------------|----------------------------|-----------|-----------|----------|----------------------|-----|
| 12,00 - 12,49 | 14                         | 125       | 78        | 62,0     | 1,0                  | 120 |
| 12,50 - 12,99 | 14                         | 130       | 81        | 65,0     | 1,0                  | 125 |
| 13,00 - 13,49 | 14                         | 130       | 84        | 67,0     | 1,0                  | 130 |
| 13,50 - 13,99 | 16                         | 140       | 88        | 70,0     | 1,3                  | 135 |
| 14,00 - 14,49 | 16                         | 140       | 90        | 72,0     | 1,3                  | 140 |
| 14,50 - 14,99 | 16                         | 145       | 94        | 75,0     | 1,3                  | 145 |
| 15,00 - 15,49 | 16                         | 145       | 96        | 77,0     | 1,3                  | 150 |
| 15,50 - 16,49 | 18                         | 155       | 103       | 82,0     | 1,3                  | 160 |
| 15,50 - 16,49 | 20                         | 160       | 103       | 82,0     | 1,3                  | 161 |
| 16,50 - 17,49 | 18                         | 160       | 109       | 87,0     | 3,5                  | 165 |
| 16,50 - 17,49 | 20                         | 165       | 109       | 87,0     | 3,5                  | 166 |
| 17,50 - 18,49 | 18                         | 165       | 115       | 92,0     | 3,5                  | 175 |
| 17,50 - 18,49 | 20                         | 170       | 115       | 92,0     | 3,5                  | 176 |
| 18,50 - 19,49 | 20                         | 175       | 121       | 97,0     | 3,5                  | 185 |
| 19,50 - 20,49 | 20                         | 180       | 128       | 102,0    | 3,5                  | 195 |
| 20,50 - 21,49 | 25                         | 195       | 134       | 107,0    | 3,5                  | 205 |
| 21,50 - 22,49 | 25                         | 200       | 140       | 112,0    | 3,5                  | 215 |
| 22,50 - 23,49 | 25                         | 205       | 146       | 117,0    | 3,5                  | 225 |
| 23,50 - 24,49 | 25                         | 210       | 152       | 122,0    | 3,5                  | 235 |
| 24,50 - 25,49 | 25                         | 220       | 159       | 127,0    | 4,0                  | 245 |
| 25,50 - 26,49 | 25                         | 225       | 165       | 132,0    | 4,0                  | 255 |
| 26,50 - 27,49 | 25                         | 230       | 171       | 137,0    | 4,0                  | 265 |
| 27,50 - 28,49 | 25                         | 240       | 177       | 142,0    | 4,0                  | 275 |
| 28,50 - 29,49 | 32                         | 250       | 183       | 146,0    | 4,0                  | 285 |
| 29,50 - 30,49 | 32                         | 255       | 190       | 152,0    | 4,0                  | 295 |
| 30,50 - 31,49 | 32                         | 260       | 196       | 157,0    | 4,0                  | 305 |
| 31,50 - 32,49 | 32                         | 265       | 202       | 162,0    | 4,0                  | 315 |
| 32,50 - 33,49 | 32                         | 275       | 210       | 167,5    | 6,0                  | 325 |
| 33,50 - 34,49 | 32                         | 285       | 217       | 172,5    | 6,0                  | 335 |
| 34,50 - 35,49 | 32                         | 290       | 224       | 177,5    | 6,0                  | 345 |
| 35,50 - 37,49 | 32                         | 302       | 236       | 187,5    | 6,0                  | 355 |
| 37,50 - 39,49 | 32                         | 317       | 249       | 197,5    | 6,0                  | 375 |
| 39,50 - 41,00 | 32                         | 327       | 261       | 207,5    | 6,0                  | 395 |

### Комплектующие

для диаметра сверла со сменной головкой

|               |        |
|---------------|--------|
| 12,00 - 12,49 | SW 1,3 |
| 12,50 - 13,49 | SW 1,3 |
| 13,50 - 14,49 |        |
| 14,50 - 16,49 |        |
| 16,50 - 20,49 |        |
| 20,50 - 24,49 |        |
| 24,50 - 28,49 |        |
| 28,50 - 32,49 |        |
| 32,50 - 35,49 |        |
| 35,50 - 39,49 |        |
| 39,50 - 41,00 |        |



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Резьбовой штифт

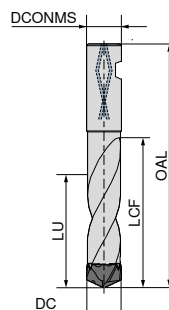
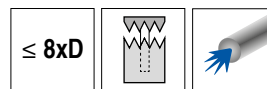
10 950 ...

## WTH – Корпус сверла со сменными головками

▲ с радиальными зубьями

Комплект поставки:

Флажковый ключ



Change



10 918 ...

| DC<br>mm      | DCONMS <sub>h6</sub><br>mm | OAL<br>mm | LCF<br>mm | LU<br>mm | Момент затяжки<br>Nm |     |
|---------------|----------------------------|-----------|-----------|----------|----------------------|-----|
| 12,00 - 12,49 | 14                         | 165       | 116       | 100      | 1,0                  | 120 |
| 12,50 - 12,99 | 14                         | 170       | 121       | 104      | 1,0                  | 125 |
| 13,00 - 13,49 | 14                         | 175       | 126       | 108      | 1,0                  | 130 |
| 13,50 - 13,99 | 16                         | 180       | 129       | 111      | 1,3                  | 135 |
| 14,00 - 14,49 | 16                         | 185       | 134       | 115      | 1,3                  | 140 |
| 14,50 - 14,99 | 16                         | 190       | 139       | 120      | 1,3                  | 145 |
| 15,00 - 15,49 | 16                         | 195       | 144       | 124      | 1,3                  | 150 |
| 15,50 - 16,49 | 18                         | 205       | 152       | 131      | 1,3                  | 160 |
| 15,50 - 16,49 | 20                         | 210       | 152       | 131      | 1,3                  | 161 |
| 16,50 - 17,49 | 18                         | 215       | 161       | 138      | 3,5                  | 165 |
| 16,50 - 17,49 | 20                         | 220       | 161       | 138      | 3,5                  | 166 |
| 17,50 - 18,49 | 18                         | 220       | 171       | 147      | 3,5                  | 175 |
| 17,50 - 18,49 | 20                         | 225       | 171       | 147      | 3,5                  | 176 |
| 18,50 - 19,49 | 20                         | 235       | 180       | 155      | 3,5                  | 185 |
| 19,50 - 20,49 | 20                         | 240       | 189       | 163      | 3,5                  | 195 |
| 20,50 - 21,49 | 25                         | 260       | 198       | 170      | 3,5                  | 205 |
| 21,50 - 22,49 | 25                         | 270       | 207       | 178      | 3,5                  | 215 |
| 22,50 - 23,49 | 25                         | 275       | 217       | 187      | 3,5                  | 225 |
| 23,50 - 24,49 | 25                         | 285       | 226       | 194      | 3,5                  | 235 |
| 24,50 - 25,49 | 25                         | 295       | 235       | 202      | 4,0                  | 245 |
| 25,50 - 26,49 | 25                         | 305       | 244       | 210      | 4,0                  | 255 |
| 26,50 - 27,49 | 25                         | 315       | 253       | 218      | 4,0                  | 265 |
| 27,50 - 28,49 | 25                         | 325       | 263       | 226      | 4,0                  | 275 |
| 28,50 - 29,49 | 32                         | 340       | 272       | 234      | 4,0                  | 285 |
| 29,50 - 30,49 | 32                         | 345       | 281       | 242      | 4,0                  | 295 |
| 30,50 - 31,49 | 32                         | 355       | 290       | 249      | 4,0                  | 305 |
| 31,50 - 32,00 | 32                         | 360       | 299       | 257      | 4,0                  | 315 |

SW 1,5

SW 1,5

SW 2

SW 2

SW 2,5

SW 2,5

SW 3

SW 3

SW 3

133

133

134

134

135

135

136

136

136

M2,5 x 0,45 x 5

M2,5 x 0,45 x 6

M3 x 0,5 x 6

M3 x 0,5 x 7

M4 x 0,5 x 7,5

M4 x 0,5 x 10

M5 x 0,5 x 11

M5 x 0,5 x 14

M6 x 0,5 x 16

M6 x 0,5 x 18

M6 x 0,5 x 20

025

026

031

030

040

041

050

051

060

061

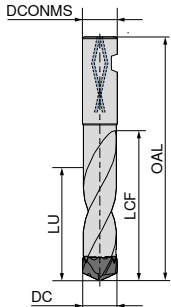
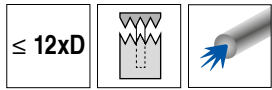
062

# WTH – Корпус сверла со сменными головками

▲ с радиальными зубьями

Комплект поставки:

Флажковый ключ



Change



10 912 ...

| DC<br>mm      | DCONMS<br>mm | h <sub>6</sub> | OAL<br>mm | LCF<br>mm | LU<br>mm | Момент затяжки<br>Nm |       |
|---------------|--------------|----------------|-----------|-----------|----------|----------------------|-------|
| 12,00 - 12,49 | 14           |                | 210       | 162       | 150      | 1,0                  | 12000 |
| 12,50 - 12,99 | 14           |                | 216       | 168       | 156      | 1,0                  | 12500 |
| 13,00 - 13,49 | 14           |                | 223       | 175       | 162      | 1,0                  | 13000 |
| 13,50 - 13,99 | 16           |                | 235       | 182       | 168      | 1,3                  | 13500 |
| 14,00 - 14,49 | 16           |                | 242       | 189       | 174      | 1,3                  | 14000 |
| 14,50 - 14,99 | 16           |                | 248       | 195       | 180      | 1,3                  | 14500 |
| 15,00 - 15,49 | 16           |                | 255       | 202       | 186      | 1,3                  | 15000 |
| 15,50 - 16,49 | 18           |                | 262       | 209       | 198      | 1,3                  | 15500 |
| 16,50 - 17,49 | 18           |                | 275       | 222       | 210      | 3,5                  | 16500 |
| 17,50 - 18,49 | 18           |                | 289       | 236       | 222      | 3,5                  | 17500 |
| 18,50 - 19,49 | 20           |                | 304       | 249       | 234      | 3,5                  | 18500 |
| 19,50 - 20,49 | 20           |                | 318       | 263       | 246      | 3,5                  | 19500 |
| 20,50 - 21,49 | 25           |                | 337       | 276       | 258      | 3,5                  | 20500 |
| 21,50 - 22,49 | 25           |                | 351       | 290       | 270      | 3,5                  | 21500 |
| 22,50 - 23,49 | 25           |                | 364       | 303       | 282      | 3,5                  | 22500 |
| 23,50 - 24,49 | 25           |                | 378       | 317       | 294      | 3,5                  | 23500 |
| 24,50 - 25,49 | 25           |                | 391       | 330       | 306      | 4,0                  | 24500 |
| 25,50 - 26,49 | 25           |                | 405       | 344       | 318      | 4,0                  | 25500 |
| 26,50 - 27,49 | 25           |                | 418       | 357       | 330      | 4,0                  | 26500 |
| 27,50 - 28,49 | 25           |                | 432       | 371       | 342      | 4,0                  | 27500 |
| 28,50 - 29,49 | 32           |                | 449       | 384       | 354      | 4,0                  | 28500 |
| 29,50 - 30,49 | 32           |                | 463       | 398       | 366      | 4,0                  | 29500 |
| 30,50 - 31,49 | 32           |                | 476       | 411       | 378      | 4,0                  | 30500 |
| 31,50 - 32,00 | 32           |                | 490       | 425       | 390      | 4,0                  | 31500 |



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Резьбовой штифт

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## Комплектующие

для диаметра сверла со сменной головкой

|               |        |     |        |     |                 |     |
|---------------|--------|-----|--------|-----|-----------------|-----|
| 12,00 - 12,49 | SW 1,3 | 132 |        |     | M2,5 x 0,45 x 5 | 025 |
| 12,50 - 13,49 | SW 1,3 |     |        |     | M2,5 x 0,45 x 6 | 026 |
| 13,50 - 14,49 |        |     | SW 1,5 | 133 | M3 x 0,5 x 6    | 031 |
| 14,50 - 16,49 |        |     | SW 1,5 | 133 | M3 x 0,5 x 7    | 030 |
| 16,50 - 20,49 |        |     | SW 2   | 134 | M4 x 0,5 x 7,5  | 040 |
| 20,50 - 24,49 |        |     | SW 2   | 134 | M4 x 0,5 x 10   | 041 |
| 24,50 - 28,49 |        |     | SW 2,5 | 135 | M5 x 0,5 x 11   | 050 |
| 28,50 - 32,49 |        |     | SW 2,5 | 135 | M5 x 0,5 x 14   | 051 |
| 32,50 - 35,49 |        |     | SW 3   | 136 | M6 x 0,5 x 16   | 060 |
| 35,50 - 39,49 |        |     | SW 3   | 136 | M6 x 0,5 x 18   | 061 |
| 39,50 - 41,00 |        |     | SW 3   | 136 | M6 x 0,5 x 20   | 062 |

## MultiChange – Обзор программы

Стабильная система сменных головок MultiChange обеспечивает быструю смену инструмента. Благодаря ориентированной на высокую стабильность конструкции и высокой точности по радиальному биению, данная система режущих головок является самой надежной и точной на рынке. В следующих разделах представлены различные режущие головки, среди которых найдется оптимальный вариант почти под каждый случай применения.

### Развертки и зенкеры

- ▲ Развертка для сквозных отверстий  
Ø 8–30,2 мм, вкл. специальный диаметр / ZEFP\* 4–6
- ▲ Развертка для глухих отверстий  
Ø 12,2–30,2 мм, вкл. специальный диаметр / ZEFP\* 6

→ раздел 4 «Развертки и зенкеры»



\*ZEFP = количество зубьев

### Твердосплавные фрезы

- ▲ Твердосплавная фреза  
тип N, PCR-UNI, PCR-ALU / Ø 8, 10, 12, 16, 20 мм / ZEFP\* 3+4
- ▲ Твердосплавная фреза для черновой и чистовой обработки  
Ø 8, 10, 12, 16, 20 мм / ZEFP\* 4–6
- ▲ Твердосплавная чистовая фреза  
Ø 8, 10, 12, 16, 20 мм / ZEFP\* 6
- ▲ Твердосплавная фреза для высоких подач  
Ø 8, 10, 12, 16, 20 мм / ZEFP\* 6
- ▲ Твердосплавная радиусная фреза  
Ø 10, 12, 16, 20 мм / ZEFP\* 4
- ▲ Твердосплавная тороидальная фреза  
Ø 8, 10, 12, 16, 20 мм / ZEFP\* 3+4
- ▲ Твердосплавная фреза с вогнутым профилем  
Ø 8, 10, 12, 16, 20 мм
- ▲ Твердосплавная фреза для удаления заусенцев  
Ø 10, 12, 16, 20 мм / ZEFP\* 4+6



\*ZEFP = количество зубьев

→ раздел 14 «Твердосплавные фрезы»

### Державки



- ▲ Державка из стали, сверхкороткая  
цил./конич. 87°  
Длина 60–90 мм  
для соединения KLG: 8, 10, 12, 16, 20 мм



- ▲ Державка из стали/твердого сплава, короткая  
цилиндрическая  
Длина 85–120 мм  
для соединения KLG: 8, 10, 12, 16, 20 мм



- ▲ Державка из стали/твердого сплава, короткая  
коническая 87°  
Длина 85–120 мм  
для соединения KLG: 8, 10, 12, 16, 20 мм



- ▲ Державка из твердого сплава, средней длины  
цил./конич. 87°  
Длина 110–150 мм  
для соединения KLG: 8, 10, 12, 16, 20 мм



- ▲ Державка из стали/твердого сплава, длинная  
цилиндрическая  
Длина 150–200 мм  
для соединения KLG: 8, 10, 12, 16, 20 мм



- ▲ Державка из стали/твердого сплава, длинная  
коническая 87°  
Длина 150–200 мм  
для соединения KLG: 8, 10, 12, 16, 20 мм

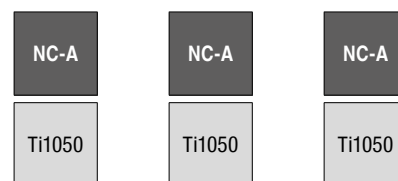
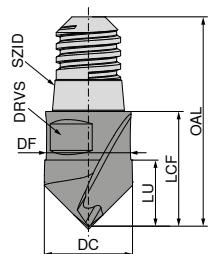


- ▲ Державка из стали/твердого сплава, сверхдлинная  
цилиндрическая  
Длина 200–250 мм  
для соединения KLG: 16 и 20 мм

→ Каталог «Зажимные приспособления», гл. «Инструментальная оснастка»

## MultiChange – Сверло для центрования NC

- ▲ SZID = типоразмер  
▲ TQX = момент затяжки  
▲ NOF = количество зубьев



| DC<br>mm | SZID | LU<br>mm | DF<br>mm | LCF<br>mm | OAL<br>mm | NOF | DRVS<br>mm | TQX<br>Nm | a <sub>p</sub> макс.<br>mm | Твердый сплав<br>10 709 ... | Твердый сплав<br>10 712 ... | Твердый сплав<br>10 714 ... |
|----------|------|----------|----------|-----------|-----------|-----|------------|-----------|----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 8        | 06   | 6,0      | 7,8      | 11        | 20,4      | 2   | 6          | 5,0       | 4                          | 080                         | 080                         | 080                         |
| 10       | 08   | 7,5      | 9,8      | 13        | 26,9      | 2   | 8          | 12,5      | 5                          | 100                         | 100                         | 100                         |
| 12       | 10   | 9,0      | 11,8     | 16        | 30,1      | 2   | 10         | 15,0      | 6                          | 120                         | 120                         | 120                         |
| 16       | 12   | 12,0     | 15,8     | 20        | 37,3      | 2   | 13         | 20,0      | 8                          | 160                         | 160                         | 160                         |
| 20       | 16   | 15,0     | 19,8     | 25        | 47,2      | 2   | 16         | 25,0      | 10                         | 200                         | 200                         | 200                         |
| P        |      |          |          |           |           |     |            |           |                            | ●                           | ●                           | ●                           |
| M        |      |          |          |           |           |     |            |           |                            | ●                           | ●                           | ●                           |
| K        |      |          |          |           |           |     |            |           |                            | ●                           | ●                           | ●                           |
| N        |      |          |          |           |           |     |            |           |                            | ●                           | ●                           | ●                           |
| S        |      |          |          |           |           |     |            |           |                            |                             |                             |                             |
| H        |      |          |          |           |           |     |            |           |                            |                             |                             |                             |
| O        |      |          |          |           |           |     |            |           |                            |                             |                             |                             |

→ v<sub>c</sub> на стр. 148

Для размеров соединения 06 и 08 обязательно во время монтажа использовать динамометрический ключ.  
При нестабильных условиях применения необходимо снизить режимы резания.

# Примеры материалов к таблицам режимов резания

2

|   | Подгруппа материалов                                                 | Индекс | Состав / микроструктура / термическая обработка   |                         | Прочность<br>Н/мм <sup>2</sup> / HB / HRC | Номер<br>материала | Обозначение<br>материала   | Номер<br>материала | Обозначение<br>материала |
|---|----------------------------------------------------------------------|--------|---------------------------------------------------|-------------------------|-------------------------------------------|--------------------|----------------------------|--------------------|--------------------------|
| P | Нелегированная сталь                                                 | P.1.1  | < 0,15 % C                                        | отожженная              | 420 N/mm <sup>2</sup> / 125 HB            | 1.0401             | C15                        | 1.1141             | Ck15                     |
|   |                                                                      | P.1.2  | < 0,45 % C                                        | отожженная              | 640 N/mm <sup>2</sup> / 190 HB            | 1.1191             | C45E                       | 1.0718             | 9SMnPb28                 |
|   |                                                                      | P.1.3  |                                                   | термоулучшенная         | 840 N/mm <sup>2</sup> / 250 HB            | 1.1191             | C45E                       | 1.0535             | C55                      |
|   |                                                                      | P.1.4  | < 0,75 % C                                        | отожженная              | 910 N/mm <sup>2</sup> / 270 HB            | 1.1223             | C60R                       | 1.0535             | C55                      |
|   |                                                                      | P.1.5  |                                                   | термоулучшенная         | 1010 N/mm <sup>2</sup> / 300 HB           | 1.1223             | C60R                       | 1.0727             | 45S20                    |
|   | Низколегированная сталь                                              | P.2.1  |                                                   | отожженная              | 610 N/mm <sup>2</sup> / 180 HB            | 1.7131             | 16MnCr5                    | 1.6587             | 17CrNiMo6                |
|   |                                                                      | P.2.2  |                                                   | термоулучшенная         | 930 N/mm <sup>2</sup> / 275 HB            | 1.7131             | 16MnCr5                    | 1.6587             | 17CrNiMo6                |
|   |                                                                      | P.2.3  |                                                   | термоулучшенная         | 1010 N/mm <sup>2</sup> / 300 HB           | 1.7225             | 42CrMo4                    | 1.3505             | 100Cr6                   |
|   |                                                                      | P.2.4  |                                                   | термоулучшенная         | 1200 N/mm <sup>2</sup> / 375 HB           | 1.7225             | 42CrMo4                    | 1.3505             | 100Cr6                   |
|   | Высоколегированная сталь и высоколегированная инструментальная сталь | P.3.1  |                                                   | отожженная              | 680 N/mm <sup>2</sup> / 200 HB            | 1.4021             | X20Cr13                    | 1.4034             | X46Cr13                  |
|   |                                                                      | P.3.2  |                                                   | закаленная и отпущенная | 1100 N/mm <sup>2</sup> / 300 HB           | 1.2343             | X38CrMoV5-1                | 1.4034             | X46Cr13                  |
|   |                                                                      | P.3.3  |                                                   | закаленная и отпущенная | 1300 N/mm <sup>2</sup> / 400 HB           | 1.2343             | X38CrMoV5-1                | 1.4034             | X46Cr13                  |
|   | Нержавеющая сталь                                                    | P.4.1  | ферритная/мартенситная                            | отожженная              | 680 N/mm <sup>2</sup> / 200 HB            | 1.4016             | X6Cr17                     | 1.2316             | X36CrMo16                |
|   |                                                                      | P.4.2  | мартенситная                                      | термоулучшенная         | 1010 N/mm <sup>2</sup> / 300 HB           | 1.4112             | X90CrMoV18                 | 1.2316             | X36CrMo16                |
| M | Нержавеющая сталь                                                    | M.1.1  | аустенитная / аустенитно-ферритная                | резко охлажденная       | 610 N/mm <sup>2</sup> / 180 HB            | 1.4301             | X5CrNi18-10                | 1.4571             | X6CrNiMoTi17-12-2        |
|   |                                                                      | M.2.1  | аустенитная                                       | термоулучшенная         | 300 HB                                    | 1.4841             | X15CrNiSi25-21             | 1.4539             | X1NiCrMoCu25-20-5        |
|   |                                                                      | M.3.1  | аустенитная / ферритная (дуплекс)                 |                         | 780 N/mm <sup>2</sup> / 230 HB            | 1.4462             | X2CrNiMoN22-5-3            | 1.4501             | X2CrNiMoCuWN25-7-4       |
| K | Серый чугун                                                          | K.1.1  | перлитный/ферритный                               |                         | 350 N/mm <sup>2</sup> / 180 HB            | 0.6010             | GG-10                      | 0.6025             | GG-25                    |
|   |                                                                      | K.1.2  | перлитный (мартенситный)                          |                         | 500 N/mm <sup>2</sup> / 260 HB            | 0.6030             | GG-30                      | 0.6045             | GG-45                    |
|   | Чугун с шаровидным графитом                                          | K.2.1  | ферритный                                         |                         | 540 N/mm <sup>2</sup> / 160 HB            | 0.7040             | GGG-40                     | 0.7060             | GGG-60                   |
|   |                                                                      | K.2.2  | перлитный                                         |                         | 845 N/mm <sup>2</sup> / 250 HB            | 0.7070             | GGG-70                     | 0.7080             | GGG-80                   |
|   | Ковкий чугун                                                         | K.3.1  | ферритный                                         |                         | 440 N/mm <sup>2</sup> / 130 HB            | 0.8035             | GTW-35-04                  | 0.8045             | GTW-45                   |
|   |                                                                      | K.3.2  | перлитный                                         |                         | 780 N/mm <sup>2</sup> / 230 HB            | 0.8165             | GTS-65-02                  | 0.8170             | GTS-70-02                |
| N | Алюминий — деформируемый сплав                                       | N.1.1  | не поддающийся упрочнению                         |                         | 60 HB                                     | 3.0255             | Al99,5                     | 3.3315             | AlMg1                    |
|   |                                                                      | N.1.2  | упрочняемый                                       | упрочненный             | 340 N/mm <sup>2</sup> / 100 HB            | 3.1355             | AlCuMg2                    | 3.2315             | AlMgSi1                  |
|   | Алюминий — литейный сплав                                            | N.2.1  | ≤ 12 % Si, не поддающийся упрочнению              |                         | 250 N/mm <sup>2</sup> / 75 HB             | 3.2581             | G-AlSi12                   | 3.2163             | G-AlSi9Cu3               |
|   |                                                                      | N.2.2  | ≤ 12 % Si, упрочняемый                            | упрочненный             | 300 N/mm <sup>2</sup> / 90 HB             | 3.2134             | G-AlSi5Cu1Mg               | 3.2373             | G-AlSi9Mg                |
|   |                                                                      | N.2.3  | > 12 % Si, не поддающийся упрочнению              |                         | 440 N/mm <sup>2</sup> / 130 HB            |                    | G-AlSi17Cu4Mg              |                    | G-AlSi18CuNiMg           |
|   | Медь и ее сплавы (бронза/латуны)                                     | N.3.1  | автоматные сплавы, PB > 1 %                       |                         | 375 N/mm <sup>2</sup> / 110 HB            | 2.0380             | CuZn39Pb2 (Ms58)           | 2.0410             | CuZn44Pb2                |
|   |                                                                      | N.3.2  | CuZn, CuSnZn                                      |                         | 300 N/mm <sup>2</sup> / 90 HB             | 2.0331             | CuZn15                     | 2.4070             | CuZn28Sn1As              |
|   |                                                                      | N.3.3  | CuSn, бессвинцовая медь и электролитическая медь  |                         | 340 N/mm <sup>2</sup> / 100 HB            | 2.0060             | E-Cu57                     | 2.0590             | CuZn40Fe                 |
|   | Сплавы магния                                                        | N.4.1  | магний и его сплавы                               |                         | 70 HB                                     | 3.5612             | MgAl6Zn                    | 3.5312             | MgAl3Zn                  |
| S | Жаропрочные сплавы                                                   | S.1.1  | на основе железа                                  | отожженная              | 680 N/mm <sup>2</sup> / 200 HB            | 1.4864             | X12NiCrSi 36-16            | 1.4865             | G-X40NiCrSi38-18         |
|   |                                                                      | S.1.2  |                                                   | упрочненный             | 950 N/mm <sup>2</sup> / 280 HB            | 1.4980             | X6NiCrTiMoVB25-15-2        | 1.4876             | X10NiCrAlTi32-20         |
|   |                                                                      | S.2.1  | на основе никеля или кобальта                     | отожженная              | 840 N/mm <sup>2</sup> / 250 HB            | 2.4631             | NiCr20TiAl (Nimonic80A)    | 3.4856             | NiCr22Mo9Nb              |
|   |                                                                      | S.2.2  |                                                   | упрочненный             | 1180 N/mm <sup>2</sup> / 350 HB           | 2.4668             | NiCr19Nb5Mo3 (Inconel 718) | 2.4955             | NiFe25Cr20NbTi           |
|   |                                                                      | S.2.3  |                                                   | литые                   | 1080 N/mm <sup>2</sup> / 320 HB           | 2.4765             | CoCr20W15Ni                | 1.3401             | G-X120Mn12               |
|   | Титановые сплавы                                                     | S.3.1  | чистый титан                                      |                         | 400 N/mm <sup>2</sup>                     | 3.7025             | Ti99,8                     | 3.7034             | Ti99,7                   |
|   |                                                                      | S.3.2  | альфа-бета-сплавы                                 | упрочненный             | 1050 N/mm <sup>2</sup> / 320 HB           | 3.7165             | TiAl6V4                    | Ti-6246            | Ti-6Al-2Sn-4Zr-6Mo       |
|   |                                                                      | S.3.3  | бета-сплавы                                       |                         | 1400 N/mm <sup>2</sup> / 410 HB           | Ti555.3            | Ti-5Al-5V-5Mo-3Cr          | R56410             | Ti-10V-2Fe-3Al           |
| H | Закаленная сталь                                                     | H.1.1  |                                                   | закаленная и отпущенная | 46–55 HRC                                 |                    |                            |                    |                          |
|   |                                                                      | H.1.2  |                                                   | закаленная и отпущенная | 56–60 HRC                                 |                    |                            |                    |                          |
|   |                                                                      | H.1.3  |                                                   | закаленная и отпущенная | 61–65 HRC                                 |                    |                            |                    |                          |
|   |                                                                      | H.1.4  |                                                   | закаленная и отпущенная | 66–70 HRC                                 |                    |                            |                    |                          |
|   | Отбеленный чугун                                                     | H.2.1  |                                                   | литой                   | 400 HB                                    |                    |                            |                    |                          |
|   | Закаленный чугун                                                     | H.3.1  |                                                   | закаленная и отпущенная | 55 HRC                                    |                    |                            |                    |                          |
| O | Неметаллические материалы                                            | O.1.1  | термореактивные полимеры                          |                         | ≤ 150 N/mm <sup>2</sup>                   |                    |                            |                    |                          |
|   |                                                                      | O.1.2  | термопластичные полимеры                          |                         | ≤ 100 N/mm <sup>2</sup>                   |                    |                            |                    |                          |
|   |                                                                      | O.2.1  | армированные арамидным волокном                   |                         | ≤ 1000 N/mm <sup>2</sup>                  |                    |                            |                    |                          |
|   |                                                                      | O.2.2  | армированные углеродным волокном / стекловолокном |                         | ≤ 1000 N/mm <sup>2</sup>                  |                    |                            |                    |                          |
|   |                                                                      | O.3.1  | графит                                            |                         |                                           |                    |                            |                    |                          |

\* Прочность на растяжение

## Стандартные режимы резания — WTX – Speed

| Индекс | Глубина сверления 3xD<br>Speed UNI<br>10 781 ... |                      |                      |                       |                        |                        | Глубина сверления 5xD<br>Speed UNI<br>10 771 ... |                      |                      |                       |                        |                        |  |
|--------|--------------------------------------------------|----------------------|----------------------|-----------------------|------------------------|------------------------|--------------------------------------------------|----------------------|----------------------|-----------------------|------------------------|------------------------|--|
|        | $v_c$ m/min                                      | $\emptyset$ 3-5<br>f | $\emptyset$ 5-8<br>f | $\emptyset$ 8-12<br>f | $\emptyset$ 12-16<br>f | $\emptyset$ 16-20<br>f | $v_c$ m/min                                      | $\emptyset$ 3-5<br>f | $\emptyset$ 5-8<br>f | $\emptyset$ 8-12<br>f | $\emptyset$ 12-16<br>f | $\emptyset$ 16-20<br>f |  |
|        | с внутр. СОЖ                                     | мм/об                | мм/об                | мм/об                 | мм/об                  | мм/об                  | с внутр. СОЖ                                     | мм/об                | мм/об                | мм/об                 | мм/об                  | мм/об                  |  |
| P.1.1  | 185                                              | 0,17                 | 0,24                 | 0,33                  | 0,40                   | 0,45                   | 185                                              | 0,17                 | 0,24                 | 0,33                  | 0,40                   | 0,45                   |  |
| P.1.2  | 180                                              | 0,16                 | 0,23                 | 0,31                  | 0,38                   | 0,43                   | 180                                              | 0,16                 | 0,23                 | 0,31                  | 0,38                   | 0,43                   |  |
| P.1.3  | 170                                              | 0,16                 | 0,22                 | 0,30                  | 0,36                   | 0,41                   | 170                                              | 0,16                 | 0,22                 | 0,30                  | 0,36                   | 0,41                   |  |
| P.1.4  | 160                                              | 0,15                 | 0,21                 | 0,28                  | 0,35                   | 0,39                   | 160                                              | 0,15                 | 0,21                 | 0,28                  | 0,35                   | 0,39                   |  |
| P.1.5  | 155                                              | 0,14                 | 0,20                 | 0,27                  | 0,33                   | 0,37                   | 155                                              | 0,14                 | 0,20                 | 0,27                  | 0,33                   | 0,37                   |  |
| P.2.1  | 185                                              | 0,20                 | 0,29                 | 0,39                  | 0,47                   | 0,53                   | 185                                              | 0,20                 | 0,29                 | 0,39                  | 0,47                   | 0,53                   |  |
| P.2.2  | 170                                              | 0,18                 | 0,26                 | 0,35                  | 0,43                   | 0,49                   | 170                                              | 0,18                 | 0,26                 | 0,35                  | 0,43                   | 0,49                   |  |
| P.2.3  | 155                                              | 0,17                 | 0,24                 | 0,32                  | 0,39                   | 0,44                   | 155                                              | 0,17                 | 0,24                 | 0,32                  | 0,39                   | 0,44                   |  |
| P.2.4  | 120                                              | 0,16                 | 0,21                 | 0,28                  | 0,34                   | 0,38                   | 120                                              | 0,16                 | 0,21                 | 0,28                  | 0,34                   | 0,38                   |  |
| P.3.1  | 130                                              | 0,16                 | 0,23                 | 0,32                  | 0,39                   | 0,44                   | 130                                              | 0,16                 | 0,23                 | 0,32                  | 0,39                   | 0,44                   |  |
| P.3.2  | 100                                              | 0,14                 | 0,20                 | 0,26                  | 0,32                   | 0,36                   | 100                                              | 0,14                 | 0,20                 | 0,26                  | 0,32                   | 0,36                   |  |
| P.3.3  | 100                                              | 0,12                 | 0,16                 | 0,20                  | 0,25                   | 0,28                   | 100                                              | 0,12                 | 0,16                 | 0,20                  | 0,25                   | 0,28                   |  |
| P.4.1  | 100                                              | 0,11                 | 0,16                 | 0,21                  | 0,25                   | 0,29                   | 100                                              | 0,11                 | 0,16                 | 0,21                  | 0,25                   | 0,29                   |  |
| P.4.2  | 100                                              | 0,11                 | 0,16                 | 0,21                  | 0,25                   | 0,29                   | 100                                              | 0,11                 | 0,16                 | 0,21                  | 0,25                   | 0,29                   |  |
| M.1.1  | 65                                               | 0,08                 | 0,12                 | 0,16                  | 0,19                   | 0,22                   | 65                                               | 0,08                 | 0,12                 | 0,16                  | 0,19                   | 0,22                   |  |
| M.2.1  | 60                                               | 0,07                 | 0,10                 | 0,14                  | 0,17                   | 0,19                   | 60                                               | 0,07                 | 0,10                 | 0,14                  | 0,17                   | 0,19                   |  |
| M.3.1  | 60                                               | 0,07                 | 0,10                 | 0,14                  | 0,17                   | 0,19                   | 60                                               | 0,07                 | 0,10                 | 0,14                  | 0,17                   | 0,19                   |  |
| K.1.1  | 150                                              | 0,18                 | 0,28                 | 0,40                  | 0,49                   | 0,56                   | 150                                              | 0,18                 | 0,28                 | 0,40                  | 0,49                   | 0,56                   |  |
| K.1.2  | 125                                              | 0,16                 | 0,24                 | 0,32                  | 0,39                   | 0,45                   | 125                                              | 0,16                 | 0,24                 | 0,32                  | 0,39                   | 0,45                   |  |
| K.2.1  | 200                                              | 0,18                 | 0,27                 | 0,37                  | 0,46                   | 0,52                   | 200                                              | 0,18                 | 0,27                 | 0,37                  | 0,46                   | 0,52                   |  |
| K.2.2  | 125                                              | 0,16                 | 0,24                 | 0,32                  | 0,39                   | 0,45                   | 125                                              | 0,16                 | 0,24                 | 0,32                  | 0,39                   | 0,45                   |  |
| K.3.1  | 115                                              | 0,18                 | 0,25                 | 0,34                  | 0,42                   | 0,48                   | 115                                              | 0,18                 | 0,25                 | 0,34                  | 0,42                   | 0,48                   |  |
| K.3.2  | 100                                              | 0,15                 | 0,21                 | 0,28                  | 0,34                   | 0,38                   | 100                                              | 0,15                 | 0,21                 | 0,28                  | 0,34                   | 0,38                   |  |
| N.1.1  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| N.1.2  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| N.2.1  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| N.2.2  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| N.2.3  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| N.3.1  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| N.3.2  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| N.3.3  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| N.4.1  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| S.1.1  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| S.1.2  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| S.2.1  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| S.2.2  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| S.2.3  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| S.3.1  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| S.3.2  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| S.3.3  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| H.1.1  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| H.1.2  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| H.1.3  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| H.1.4  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| H.2.1  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| H.3.1  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| O.1.1  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| O.1.2  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| O.2.1  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| O.2.2  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |
| O.3.1  |                                                  |                      |                      |                       |                        |                        |                                                  |                      |                      |                       |                        |                        |  |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

|  |        | Глубина сверления 8xD<br>Speed UNI<br>10 782 ... |                               |                               |                                |                                 |                                 |
|--|--------|--------------------------------------------------|-------------------------------|-------------------------------|--------------------------------|---------------------------------|---------------------------------|
|  | Индекс | $v_c$ m/min<br>с внутр. СОЖ                      | $\emptyset$ 3-5<br>f<br>мм/об | $\emptyset$ 5-8<br>f<br>мм/об | $\emptyset$ 8-12<br>f<br>мм/об | $\emptyset$ 12-16<br>f<br>мм/об | $\emptyset$ 16-20<br>f<br>мм/об |
|  |        |                                                  |                               |                               |                                |                                 |                                 |
|  | P.1.1  | 185                                              | 0,17                          | 0,24                          | 0,33                           | 0,40                            | 0,45                            |
|  | P.1.2  | 180                                              | 0,16                          | 0,23                          | 0,31                           | 0,38                            | 0,43                            |
|  | P.1.3  | 170                                              | 0,16                          | 0,22                          | 0,30                           | 0,36                            | 0,41                            |
|  | P.1.4  | 160                                              | 0,15                          | 0,21                          | 0,28                           | 0,35                            | 0,39                            |
|  | P.1.5  | 155                                              | 0,14                          | 0,20                          | 0,27                           | 0,33                            | 0,37                            |
|  | P.2.1  | 185                                              | 0,20                          | 0,29                          | 0,39                           | 0,47                            | 0,53                            |
|  | P.2.2  | 170                                              | 0,18                          | 0,26                          | 0,35                           | 0,43                            | 0,49                            |
|  | P.2.3  | 155                                              | 0,17                          | 0,24                          | 0,32                           | 0,39                            | 0,44                            |
|  | P.2.4  | 120                                              | 0,16                          | 0,21                          | 0,28                           | 0,34                            | 0,38                            |
|  | P.3.1  | 130                                              | 0,16                          | 0,23                          | 0,32                           | 0,39                            | 0,44                            |
|  | P.3.2  | 100                                              | 0,14                          | 0,20                          | 0,26                           | 0,32                            | 0,36                            |
|  | P.3.3  | 100                                              | 0,12                          | 0,16                          | 0,20                           | 0,25                            | 0,28                            |
|  | P.4.1  | 100                                              | 0,11                          | 0,16                          | 0,21                           | 0,25                            | 0,29                            |
|  | P.4.2  | 100                                              | 0,11                          | 0,16                          | 0,21                           | 0,25                            | 0,29                            |
|  | M.1.1  | 65                                               | 0,08                          | 0,12                          | 0,16                           | 0,19                            | 0,22                            |
|  | M.2.1  | 60                                               | 0,07                          | 0,10                          | 0,14                           | 0,17                            | 0,19                            |
|  | M.3.1  | 60                                               | 0,07                          | 0,10                          | 0,14                           | 0,17                            | 0,19                            |
|  | K.1.1  | 150                                              | 0,18                          | 0,28                          | 0,40                           | 0,49                            | 0,56                            |
|  | K.1.2  | 125                                              | 0,16                          | 0,24                          | 0,32                           | 0,39                            | 0,45                            |
|  | K.2.1  | 200                                              | 0,18                          | 0,27                          | 0,37                           | 0,46                            | 0,52                            |
|  | K.2.2  | 125                                              | 0,16                          | 0,24                          | 0,32                           | 0,39                            | 0,45                            |
|  | K.3.1  | 115                                              | 0,18                          | 0,25                          | 0,34                           | 0,42                            | 0,48                            |
|  | K.3.2  | 100                                              | 0,15                          | 0,21                          | 0,28                           | 0,34                            | 0,38                            |
|  | N.1.1  |                                                  |                               |                               |                                |                                 |                                 |
|  | N.1.2  |                                                  |                               |                               |                                |                                 |                                 |
|  | N.2.1  |                                                  |                               |                               |                                |                                 |                                 |
|  | N.2.2  |                                                  |                               |                               |                                |                                 |                                 |
|  | N.2.3  |                                                  |                               |                               |                                |                                 |                                 |
|  | N.3.1  |                                                  |                               |                               |                                |                                 |                                 |
|  | N.3.2  |                                                  |                               |                               |                                |                                 |                                 |
|  | N.3.3  |                                                  |                               |                               |                                |                                 |                                 |
|  | N.4.1  |                                                  |                               |                               |                                |                                 |                                 |
|  | S.1.1  |                                                  |                               |                               |                                |                                 |                                 |
|  | S.1.2  |                                                  |                               |                               |                                |                                 |                                 |
|  | S.2.1  |                                                  |                               |                               |                                |                                 |                                 |
|  | S.2.2  |                                                  |                               |                               |                                |                                 |                                 |
|  | S.2.3  |                                                  |                               |                               |                                |                                 |                                 |
|  | S.3.1  |                                                  |                               |                               |                                |                                 |                                 |
|  | S.3.2  |                                                  |                               |                               |                                |                                 |                                 |
|  | S.3.3  |                                                  |                               |                               |                                |                                 |                                 |
|  | H.1.1  |                                                  |                               |                               |                                |                                 |                                 |
|  | H.1.2  |                                                  |                               |                               |                                |                                 |                                 |
|  | H.1.3  |                                                  |                               |                               |                                |                                 |                                 |
|  | H.1.4  |                                                  |                               |                               |                                |                                 |                                 |
|  | H.2.1  |                                                  |                               |                               |                                |                                 |                                 |
|  | H.3.1  |                                                  |                               |                               |                                |                                 |                                 |
|  | O.1.1  |                                                  |                               |                               |                                |                                 |                                 |
|  | O.1.2  |                                                  |                               |                               |                                |                                 |                                 |
|  | O.2.1  |                                                  |                               |                               |                                |                                 |                                 |
|  | O.2.2  |                                                  |                               |                               |                                |                                 |                                 |
|  | O.3.1  |                                                  |                               |                               |                                |                                 |                                 |

## Стандартные режимы резания — WTX – Feed

| Индекс | Глубина сверления 5xD<br>Feed UNI<br>10 789 ... |            |            |            |            |            |            |            |            |  |
|--------|-------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
|        | $V_c$<br>м/мин                                  | Ø 4-6      | Ø 6-7      | Ø 7-8      | Ø 8-10     | Ø 10-12    | Ø 12-15    | Ø 15-17    | Ø 17-20    |  |
|        | свнутр. СОЖ                                     | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |  |
| P.1.1  | 125                                             | 0,28       | 0,34       | 0,37       | 0,42       | 0,48       | 0,54       | 0,59       | 0,63       |  |
| P.1.2  | 120                                             | 0,27       | 0,32       | 0,35       | 0,40       | 0,46       | 0,52       | 0,56       | 0,60       |  |
| P.1.3  | 115                                             | 0,25       | 0,31       | 0,34       | 0,38       | 0,44       | 0,49       | 0,54       | 0,57       |  |
| P.1.4  | 110                                             | 0,24       | 0,29       | 0,32       | 0,36       | 0,41       | 0,47       | 0,51       | 0,54       |  |
| P.1.5  | 105                                             | 0,23       | 0,27       | 0,30       | 0,34       | 0,39       | 0,44       | 0,48       | 0,52       |  |
| P.2.1  | 125                                             | 0,33       | 0,40       | 0,44       | 0,50       | 0,57       | 0,64       | 0,70       | 0,75       |  |
| P.2.2  | 115                                             | 0,30       | 0,36       | 0,40       | 0,45       | 0,51       | 0,58       | 0,63       | 0,68       |  |
| P.2.3  | 105                                             | 0,27       | 0,32       | 0,36       | 0,41       | 0,46       | 0,52       | 0,57       | 0,61       |  |
| P.2.4  | 80                                              | 0,25       | 0,29       | 0,32       | 0,36       | 0,41       | 0,46       | 0,50       | 0,54       |  |
| P.3.1  | 85                                              | 0,27       | 0,32       | 0,36       | 0,41       | 0,46       | 0,52       | 0,57       | 0,61       |  |
| P.3.2  | 70                                              | 0,23       | 0,27       | 0,30       | 0,33       | 0,38       | 0,43       | 0,47       | 0,50       |  |
| P.3.3  | 70                                              | 0,18       | 0,22       | 0,24       | 0,26       | 0,30       | 0,33       | 0,36       | 0,38       |  |
| P.4.1  | 70                                              | 0,18       | 0,21       | 0,24       | 0,27       | 0,30       | 0,34       | 0,38       | 0,40       |  |
| P.4.2  | 70                                              | 0,18       | 0,21       | 0,24       | 0,27       | 0,30       | 0,34       | 0,38       | 0,40       |  |
| M.1.1  | 55                                              | 0,13       | 0,16       | 0,18       | 0,20       | 0,23       | 0,26       | 0,28       | 0,30       |  |
| M.2.1  | 50                                              | 0,11       | 0,14       | 0,15       | 0,17       | 0,20       | 0,22       | 0,24       | 0,26       |  |
| M.3.1  | 50                                              | 0,11       | 0,14       | 0,15       | 0,17       | 0,20       | 0,22       | 0,24       | 0,26       |  |
| K.1.1  | 140                                             | 0,38       | 0,47       | 0,53       | 0,61       | 0,70       | 0,80       | 0,89       | 0,95       |  |
| K.1.2  | 115                                             | 0,32       | 0,39       | 0,44       | 0,50       | 0,57       | 0,64       | 0,70       | 0,75       |  |
| K.2.1  | 185                                             | 0,37       | 0,45       | 0,50       | 0,57       | 0,66       | 0,75       | 0,82       | 0,88       |  |
| K.2.2  | 115                                             | 0,32       | 0,39       | 0,44       | 0,50       | 0,57       | 0,64       | 0,70       | 0,75       |  |
| K.3.1  | 105                                             | 0,35       | 0,42       | 0,47       | 0,53       | 0,61       | 0,69       | 0,76       | 0,81       |  |
| K.3.2  | 90                                              | 0,29       | 0,35       | 0,38       | 0,43       | 0,49       | 0,55       | 0,60       | 0,64       |  |
| N.1.1  | 380                                             | 0,28       | 0,34       | 0,37       | 0,42       | 0,48       | 0,54       | 0,59       | 0,63       |  |
| N.1.2  | 345                                             | 0,25       | 0,31       | 0,34       | 0,38       | 0,44       | 0,49       | 0,54       | 0,57       |  |
| N.2.1  | 290                                             | 0,32       | 0,39       | 0,44       | 0,50       | 0,57       | 0,64       | 0,70       | 0,75       |  |
| N.2.2  | 255                                             | 0,32       | 0,39       | 0,44       | 0,50       | 0,57       | 0,64       | 0,70       | 0,75       |  |
| N.2.3  | 205                                             | 0,32       | 0,39       | 0,44       | 0,50       | 0,57       | 0,64       | 0,70       | 0,75       |  |
| N.3.1  | 230                                             | 0,38       | 0,47       | 0,53       | 0,61       | 0,70       | 0,80       | 0,89       | 0,95       |  |
| N.3.2  | 140                                             | 0,24       | 0,29       | 0,33       | 0,37       | 0,43       | 0,48       | 0,53       | 0,57       |  |
| N.3.3  |                                                 |            |            |            |            |            |            |            |            |  |
| N.4.1  |                                                 |            |            |            |            |            |            |            |            |  |
| S.1.1  |                                                 |            |            |            |            |            |            |            |            |  |
| S.1.2  |                                                 |            |            |            |            |            |            |            |            |  |
| S.2.1  |                                                 |            |            |            |            |            |            |            |            |  |
| S.2.2  |                                                 |            |            |            |            |            |            |            |            |  |
| S.2.3  |                                                 |            |            |            |            |            |            |            |            |  |
| S.3.1  |                                                 |            |            |            |            |            |            |            |            |  |
| S.3.2  |                                                 |            |            |            |            |            |            |            |            |  |
| S.3.3  |                                                 |            |            |            |            |            |            |            |            |  |
| H.1.1  |                                                 |            |            |            |            |            |            |            |            |  |
| H.1.2  |                                                 |            |            |            |            |            |            |            |            |  |
| H.1.3  |                                                 |            |            |            |            |            |            |            |            |  |
| H.1.4  |                                                 |            |            |            |            |            |            |            |            |  |
| H.2.1  |                                                 |            |            |            |            |            |            |            |            |  |
| H.3.1  |                                                 |            |            |            |            |            |            |            |            |  |
| O.1.1  |                                                 |            |            |            |            |            |            |            |            |  |
| O.1.2  |                                                 |            |            |            |            |            |            |            |            |  |
| O.2.1  |                                                 |            |            |            |            |            |            |            |            |  |
| O.2.2  |                                                 |            |            |            |            |            |            |            |            |  |
| O.3.1  |                                                 |            |            |            |            |            |            |            |            |  |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

|  |        | Глубина сверления 8xD и 12xD<br>Feed UNI<br>10 794 ..., 10 796 ... |            |            |            |            |            |            |            |            |
|--|--------|--------------------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|  | Индекс | $V_c$<br>, м/мин                                                   | Ø 4-6      | Ø 6-7      | Ø 7-8      | Ø 8-10     | Ø 10-12    | Ø 12-15    | Ø 15-17    | Ø 17-20    |
|  |        | с внутр. СОЖ                                                       | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
|  | P.1.1  | 125                                                                | 0,28       | 0,34       | 0,37       | 0,42       | 0,48       | 0,54       | 0,59       | 0,63       |
|  | P.1.2  | 120                                                                | 0,27       | 0,32       | 0,35       | 0,40       | 0,46       | 0,52       | 0,56       | 0,60       |
|  | P.1.3  | 115                                                                | 0,25       | 0,31       | 0,34       | 0,38       | 0,44       | 0,49       | 0,54       | 0,57       |
|  | P.1.4  | 110                                                                | 0,24       | 0,29       | 0,32       | 0,36       | 0,41       | 0,47       | 0,51       | 0,54       |
|  | P.1.5  | 105                                                                | 0,23       | 0,27       | 0,30       | 0,34       | 0,39       | 0,44       | 0,48       | 0,52       |
|  | P.2.1  | 125                                                                | 0,33       | 0,40       | 0,44       | 0,50       | 0,57       | 0,64       | 0,70       | 0,75       |
|  | P.2.2  | 115                                                                | 0,30       | 0,36       | 0,40       | 0,45       | 0,51       | 0,58       | 0,63       | 0,68       |
|  | P.2.3  | 105                                                                | 0,27       | 0,32       | 0,36       | 0,41       | 0,46       | 0,52       | 0,57       | 0,61       |
|  | P.2.4  | 80                                                                 | 0,25       | 0,29       | 0,32       | 0,36       | 0,41       | 0,46       | 0,50       | 0,54       |
|  | P.3.1  | 85                                                                 | 0,27       | 0,32       | 0,36       | 0,41       | 0,46       | 0,52       | 0,57       | 0,61       |
|  | P.3.2  | 70                                                                 | 0,23       | 0,27       | 0,30       | 0,33       | 0,38       | 0,43       | 0,47       | 0,50       |
|  | P.3.3  | 70                                                                 | 0,18       | 0,22       | 0,24       | 0,26       | 0,30       | 0,33       | 0,36       | 0,38       |
|  | P.4.1  | 70                                                                 | 0,18       | 0,21       | 0,24       | 0,27       | 0,30       | 0,34       | 0,38       | 0,40       |
|  | P.4.2  | 70                                                                 | 0,18       | 0,21       | 0,24       | 0,27       | 0,30       | 0,34       | 0,38       | 0,40       |
|  | M.1.1  | 55                                                                 | 0,13       | 0,16       | 0,18       | 0,20       | 0,23       | 0,26       | 0,28       | 0,30       |
|  | M.2.1  | 50                                                                 | 0,11       | 0,14       | 0,15       | 0,17       | 0,20       | 0,22       | 0,24       | 0,26       |
|  | M.3.1  | 50                                                                 | 0,11       | 0,14       | 0,15       | 0,17       | 0,20       | 0,22       | 0,24       | 0,26       |
|  | K.1.1  | 140                                                                | 0,38       | 0,47       | 0,53       | 0,61       | 0,70       | 0,80       | 0,89       | 0,95       |
|  | K.1.2  | 115                                                                | 0,32       | 0,39       | 0,44       | 0,50       | 0,57       | 0,64       | 0,70       | 0,75       |
|  | K.2.1  | 185                                                                | 0,37       | 0,45       | 0,50       | 0,57       | 0,66       | 0,75       | 0,82       | 0,88       |
|  | K.2.2  | 115                                                                | 0,32       | 0,39       | 0,44       | 0,50       | 0,57       | 0,64       | 0,70       | 0,75       |
|  | K.3.1  | 105                                                                | 0,35       | 0,42       | 0,47       | 0,53       | 0,61       | 0,69       | 0,76       | 0,81       |
|  | K.3.2  | 90                                                                 | 0,29       | 0,35       | 0,38       | 0,43       | 0,49       | 0,55       | 0,60       | 0,64       |
|  | N.1.1  | 380                                                                | 0,28       | 0,34       | 0,37       | 0,42       | 0,48       | 0,54       | 0,59       | 0,63       |
|  | N.1.2  | 345                                                                | 0,25       | 0,31       | 0,34       | 0,38       | 0,44       | 0,49       | 0,54       | 0,57       |
|  | N.2.1  | 290                                                                | 0,32       | 0,39       | 0,44       | 0,50       | 0,57       | 0,64       | 0,70       | 0,75       |
|  | N.2.2  | 255                                                                | 0,32       | 0,39       | 0,44       | 0,50       | 0,57       | 0,64       | 0,70       | 0,75       |
|  | N.2.3  | 205                                                                | 0,32       | 0,39       | 0,44       | 0,50       | 0,57       | 0,64       | 0,70       | 0,75       |
|  | N.3.1  | 230                                                                | 0,38       | 0,47       | 0,53       | 0,61       | 0,70       | 0,80       | 0,89       | 0,95       |
|  | N.3.2  | 140                                                                | 0,24       | 0,29       | 0,33       | 0,37       | 0,43       | 0,48       | 0,53       | 0,57       |
|  | N.3.3  |                                                                    |            |            |            |            |            |            |            |            |
|  | N.4.1  |                                                                    |            |            |            |            |            |            |            |            |
|  | S.1.1  |                                                                    |            |            |            |            |            |            |            |            |
|  | S.1.2  |                                                                    |            |            |            |            |            |            |            |            |
|  | S.2.1  |                                                                    |            |            |            |            |            |            |            |            |
|  | S.2.2  |                                                                    |            |            |            |            |            |            |            |            |
|  | S.2.3  |                                                                    |            |            |            |            |            |            |            |            |
|  | S.3.1  |                                                                    |            |            |            |            |            |            |            |            |
|  | S.3.2  |                                                                    |            |            |            |            |            |            |            |            |
|  | S.3.3  |                                                                    |            |            |            |            |            |            |            |            |
|  | H.1.1  |                                                                    |            |            |            |            |            |            |            |            |
|  | H.1.2  |                                                                    |            |            |            |            |            |            |            |            |
|  | H.1.3  |                                                                    |            |            |            |            |            |            |            |            |
|  | H.1.4  |                                                                    |            |            |            |            |            |            |            |            |
|  | H.2.1  |                                                                    |            |            |            |            |            |            |            |            |
|  | H.3.1  |                                                                    |            |            |            |            |            |            |            |            |
|  | O.1.1  |                                                                    |            |            |            |            |            |            |            |            |
|  | O.1.2  |                                                                    |            |            |            |            |            |            |            |            |
|  | O.2.1  |                                                                    |            |            |            |            |            |            |            |            |
|  | O.2.2  |                                                                    |            |            |            |            |            |            |            |            |
|  | O.3.1  |                                                                    |            |            |            |            |            |            |            |            |

## Стандартные режимы резания — WTX – UNI

| Индекс | Глубина сверления 3xD<br>UNI<br>11 776 ..., 11 777 ..., 11 778 ..., 11 779 ..., 11 780 ..., 11 781 ... |                                   |       |       |        |         |         |         |
|--------|--------------------------------------------------------------------------------------------------------|-----------------------------------|-------|-------|--------|---------|---------|---------|
|        | $V_c$<br>м/мин<br>без внутр.<br>охл.                                                                   | $V_c$<br>м/мин<br>с внутр.<br>СОЖ | Ø 3-5 | Ø 5-8 | Ø 8-12 | Ø 12-16 | Ø 16-20 | Ø 20-25 |
|        |                                                                                                        |                                   | f     | f     | f      | f       | f       | f       |
|        |                                                                                                        |                                   | мм/об | мм/об | мм/об  | мм/об   | мм/об   | мм/об   |
| P.1.1  | 110                                                                                                    | 120                               | 0,13  | 0,18  | 0,25   | 0,30    | 0,34    | 0,37    |
| P.1.2  | 105                                                                                                    | 115                               | 0,12  | 0,18  | 0,24   | 0,29    | 0,33    | 0,36    |
| P.1.3  | 100                                                                                                    | 110                               | 0,12  | 0,17  | 0,23   | 0,28    | 0,31    | 0,34    |
| P.1.4  | 95                                                                                                     | 105                               | 0,11  | 0,16  | 0,21   | 0,26    | 0,30    | 0,32    |
| P.1.5  | 90                                                                                                     | 100                               | 0,11  | 0,15  | 0,20   | 0,25    | 0,28    | 0,30    |
| P.2.1  | 105                                                                                                    | 120                               | 0,15  | 0,22  | 0,29   | 0,36    | 0,41    | 0,44    |
| P.2.2  | 95                                                                                                     | 110                               | 0,14  | 0,20  | 0,27   | 0,33    | 0,37    | 0,40    |
| P.2.3  | 85                                                                                                     | 100                               | 0,13  | 0,18  | 0,24   | 0,29    | 0,33    | 0,36    |
| P.2.4  | 65                                                                                                     | 75                                | 0,12  | 0,16  | 0,21   | 0,26    | 0,29    | 0,32    |
| P.3.1  | 70                                                                                                     | 85                                | 0,12  | 0,18  | 0,24   | 0,29    | 0,33    | 0,36    |
| P.3.2  | 60                                                                                                     | 65                                | 0,11  | 0,15  | 0,20   | 0,24    | 0,27    | 0,29    |
| P.3.3  | 50                                                                                                     | 65                                | 0,09  | 0,12  | 0,15   | 0,19    | 0,21    | 0,23    |
| P.4.1  | 50                                                                                                     | 65                                | 0,08  | 0,12  | 0,16   | 0,19    | 0,22    | 0,24    |
| P.4.2  | 50                                                                                                     | 65                                | 0,08  | 0,12  | 0,16   | 0,19    | 0,22    | 0,24    |
| M.1.1  |                                                                                                        |                                   |       |       |        |         |         |         |
| M.2.1  |                                                                                                        |                                   |       |       |        |         |         |         |
| M.3.1  |                                                                                                        |                                   |       |       |        |         |         |         |
| K.1.1  | 85                                                                                                     | 120                               | 0,17  | 0,26  | 0,36   | 0,45    | 0,52    | 0,56    |
| K.1.2  | 75                                                                                                     | 100                               | 0,15  | 0,22  | 0,29   | 0,36    | 0,41    | 0,45    |
| K.2.1  | 100                                                                                                    | 160                               | 0,17  | 0,25  | 0,34   | 0,42    | 0,48    | 0,52    |
| K.2.2  | 75                                                                                                     | 100                               | 0,15  | 0,22  | 0,29   | 0,36    | 0,41    | 0,45    |
| K.3.1  | 80                                                                                                     | 90                                | 0,16  | 0,23  | 0,32   | 0,39    | 0,44    | 0,48    |
| K.3.2  | 70                                                                                                     | 80                                | 0,14  | 0,19  | 0,25   | 0,31    | 0,35    | 0,38    |
| N.1.1  |                                                                                                        |                                   |       |       |        |         |         |         |
| N.1.2  |                                                                                                        |                                   |       |       |        |         |         |         |
| N.2.1  |                                                                                                        |                                   |       |       |        |         |         |         |
| N.2.2  |                                                                                                        |                                   |       |       |        |         |         |         |
| N.2.3  |                                                                                                        |                                   |       |       |        |         |         |         |
| N.3.1  |                                                                                                        |                                   |       |       |        |         |         |         |
| N.3.2  |                                                                                                        |                                   |       |       |        |         |         |         |
| N.3.3  |                                                                                                        |                                   |       |       |        |         |         |         |
| N.4.1  |                                                                                                        |                                   |       |       |        |         |         |         |
| S.1.1  |                                                                                                        |                                   |       |       |        |         |         |         |
| S.1.2  |                                                                                                        |                                   |       |       |        |         |         |         |
| S.2.1  |                                                                                                        |                                   |       |       |        |         |         |         |
| S.2.2  |                                                                                                        |                                   |       |       |        |         |         |         |
| S.2.3  |                                                                                                        |                                   |       |       |        |         |         |         |
| S.3.1  |                                                                                                        |                                   |       |       |        |         |         |         |
| S.3.2  |                                                                                                        |                                   |       |       |        |         |         |         |
| S.3.3  |                                                                                                        |                                   |       |       |        |         |         |         |
| H.1.1  | 25                                                                                                     | 25                                | 0,06  | 0,08  | 0,11   | 0,14    | 0,15    | 0,17    |
| H.1.2  |                                                                                                        |                                   |       |       |        |         |         |         |
| H.1.3  |                                                                                                        |                                   |       |       |        |         |         |         |
| H.1.4  |                                                                                                        |                                   |       |       |        |         |         |         |
| H.2.1  | 35                                                                                                     | 35                                | 0,08  | 0,11  | 0,14   | 0,18    | 0,20    | 0,22    |
| H.3.1  |                                                                                                        |                                   |       |       |        |         |         |         |
| O.1.1  |                                                                                                        |                                   |       |       |        |         |         |         |
| O.1.2  |                                                                                                        |                                   |       |       |        |         |         |         |
| O.2.1  |                                                                                                        |                                   |       |       |        |         |         |         |
| O.2.2  |                                                                                                        |                                   |       |       |        |         |         |         |
| O.3.1  |                                                                                                        |                                   |       |       |        |         |         |         |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

| Индекс | Глубина сверления 5xD                                                  |                                            |       |       |        |         |         |         |                                            | Глубина сверления 8xD              |       |        |         |         |  |
|--------|------------------------------------------------------------------------|--------------------------------------------|-------|-------|--------|---------|---------|---------|--------------------------------------------|------------------------------------|-------|--------|---------|---------|--|
|        | UNI                                                                    |                                            |       |       |        |         |         |         |                                            | UNI                                |       |        |         |         |  |
|        | 11 782 ..., 11 783 ..., 11 784 ..., 11 785 ..., 11 786 ..., 11 787 ... |                                            |       |       |        |         |         |         |                                            | 11 788 ..., 11 789 ..., 11 790 ... |       |        |         |         |  |
|        | V <sub>c</sub><br>м/мин<br>без внутр.<br>охл.                          | V <sub>c</sub><br>м/мин<br>с внутр.<br>СОЖ | Ø 3-5 | Ø 5-8 | Ø 8-12 | Ø 12-16 | Ø 16-20 | Ø 20-25 | V <sub>c</sub><br>м/мин<br>с внутр.<br>СОЖ | Ø 3-5                              | Ø 5-8 | Ø 8-12 | Ø 12-16 | Ø 16-20 |  |
|        | f                                                                      | f                                          | f     | f     | f      | f       | f       | f       | f                                          | f                                  | f     | f      | f       | f       |  |
|        | мм/об                                                                  | мм/об                                      | мм/об | мм/об | мм/об  | мм/об   | мм/об   | мм/об   | мм/об                                      | мм/об                              | мм/об | мм/об  | мм/об   | мм/об   |  |
| P.1.1  | 110                                                                    | 120                                        | 0,13  | 0,18  | 0,25   | 0,30    | 0,34    | 0,37    | 110                                        | 0,13                               | 0,18  | 0,25   | 0,30    | 0,34    |  |
| P.1.2  | 105                                                                    | 115                                        | 0,12  | 0,18  | 0,24   | 0,29    | 0,33    | 0,36    | 105                                        | 0,12                               | 0,18  | 0,24   | 0,29    | 0,33    |  |
| P.1.3  | 100                                                                    | 110                                        | 0,12  | 0,17  | 0,23   | 0,28    | 0,31    | 0,34    | 100                                        | 0,12                               | 0,17  | 0,23   | 0,28    | 0,31    |  |
| P.1.4  | 95                                                                     | 105                                        | 0,11  | 0,16  | 0,21   | 0,26    | 0,30    | 0,32    | 95                                         | 0,11                               | 0,16  | 0,21   | 0,26    | 0,30    |  |
| P.1.5  | 90                                                                     | 100                                        | 0,11  | 0,15  | 0,20   | 0,25    | 0,28    | 0,30    | 90                                         | 0,11                               | 0,15  | 0,20   | 0,25    | 0,28    |  |
| P.2.1  | 105                                                                    | 120                                        | 0,15  | 0,22  | 0,29   | 0,36    | 0,41    | 0,44    | 105                                        | 0,15                               | 0,22  | 0,29   | 0,36    | 0,41    |  |
| P.2.2  | 95                                                                     | 110                                        | 0,14  | 0,20  | 0,27   | 0,33    | 0,37    | 0,40    | 95                                         | 0,14                               | 0,20  | 0,27   | 0,33    | 0,37    |  |
| P.2.3  | 85                                                                     | 100                                        | 0,13  | 0,18  | 0,24   | 0,29    | 0,33    | 0,36    | 85                                         | 0,13                               | 0,18  | 0,24   | 0,29    | 0,33    |  |
| P.2.4  | 65                                                                     | 75                                         | 0,12  | 0,16  | 0,21   | 0,26    | 0,29    | 0,32    | 65                                         | 0,12                               | 0,16  | 0,21   | 0,26    | 0,29    |  |
| P.3.1  | 70                                                                     | 85                                         | 0,12  | 0,18  | 0,24   | 0,29    | 0,33    | 0,36    | 70                                         | 0,12                               | 0,18  | 0,24   | 0,29    | 0,33    |  |
| P.3.2  | 60                                                                     | 65                                         | 0,11  | 0,15  | 0,20   | 0,24    | 0,27    | 0,29    | 60                                         | 0,11                               | 0,15  | 0,20   | 0,24    | 0,27    |  |
| P.3.3  | 50                                                                     | 65                                         | 0,09  | 0,12  | 0,15   | 0,19    | 0,21    | 0,23    | 50                                         | 0,09                               | 0,12  | 0,15   | 0,19    | 0,21    |  |
| P.4.1  | 50                                                                     | 65                                         | 0,08  | 0,12  | 0,16   | 0,19    | 0,22    | 0,24    | 50                                         | 0,08                               | 0,12  | 0,16   | 0,19    | 0,22    |  |
| P.4.2  | 50                                                                     | 65                                         | 0,08  | 0,12  | 0,16   | 0,19    | 0,22    | 0,24    | 50                                         | 0,08                               | 0,12  | 0,16   | 0,19    | 0,22    |  |
| M.1.1  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| M.2.1  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| M.3.1  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| K.1.1  | 85                                                                     | 120                                        | 0,17  | 0,26  | 0,36   | 0,45    | 0,52    | 0,56    | 85                                         | 0,17                               | 0,26  | 0,36   | 0,45    | 0,52    |  |
| K.1.2  | 75                                                                     | 100                                        | 0,15  | 0,22  | 0,29   | 0,36    | 0,41    | 0,45    | 75                                         | 0,15                               | 0,22  | 0,29   | 0,36    | 0,41    |  |
| K.2.1  | 100                                                                    | 160                                        | 0,17  | 0,25  | 0,34   | 0,42    | 0,48    | 0,52    | 100                                        | 0,17                               | 0,25  | 0,34   | 0,42    | 0,48    |  |
| K.2.2  | 75                                                                     | 100                                        | 0,15  | 0,22  | 0,29   | 0,36    | 0,41    | 0,45    | 75                                         | 0,15                               | 0,22  | 0,29   | 0,36    | 0,41    |  |
| K.3.1  | 80                                                                     | 90                                         | 0,16  | 0,23  | 0,32   | 0,39    | 0,44    | 0,48    | 80                                         | 0,16                               | 0,23  | 0,32   | 0,39    | 0,44    |  |
| K.3.2  | 70                                                                     | 80                                         | 0,14  | 0,19  | 0,25   | 0,31    | 0,35    | 0,38    | 70                                         | 0,14                               | 0,19  | 0,25   | 0,31    | 0,35    |  |
| N.1.1  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| N.1.2  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| N.2.1  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| N.2.2  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| N.2.3  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| N.3.1  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| N.3.2  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| N.3.3  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| N.4.1  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| S.1.1  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| S.1.2  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| S.2.1  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| S.2.2  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| S.2.3  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| S.3.1  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| S.3.2  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| S.3.3  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| H.1.1  | 25                                                                     | 25                                         | 0,06  | 0,08  | 0,11   | 0,14    | 0,15    | 0,17    | 25                                         | 0,06                               | 0,08  | 0,11   | 0,14    | 0,15    |  |
| H.1.2  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| H.1.3  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| H.1.4  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| H.2.1  | 35                                                                     | 35                                         | 0,08  | 0,11  | 0,14   | 0,18    | 0,20    | 0,22    | 35                                         | 0,08                               | 0,11  | 0,14   | 0,18    | 0,20    |  |
| H.3.1  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| O.1.1  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| O.1.2  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| O.2.1  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| O.2.2  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |
| O.3.1  |                                                                        |                                            |       |       |        |         |         |         |                                            |                                    |       |        |         |         |  |

## Стандартные режимы резания — WTX – VA

|        | Глубина сверления 3xD<br>VA<br>10 731 ..., 10 732 ..., 10 733 ..., 10 734 ... |                           |            |            |            |            |            | Глубина сверления 5xD<br>VA<br>10 740 ..., 10 741 ..., 10 745 ..., 10 746 ... |                           |            |            |            |            |            |
|--------|-------------------------------------------------------------------------------|---------------------------|------------|------------|------------|------------|------------|-------------------------------------------------------------------------------|---------------------------|------------|------------|------------|------------|------------|
| Индекс | V <sub>c</sub><br>, м/мин                                                     | V <sub>c</sub><br>, м/мин | Ø 2–5      | Ø 5–8      | Ø 8–12     | Ø 12–16    | Ø 16–20    | V <sub>c</sub><br>, м/мин                                                     | V <sub>c</sub><br>, м/мин | Ø 2–5      | Ø 5–8      | Ø 8–12     | Ø 12–16    | Ø 16–20    |
|        | без внутр. охл. с внутр. СОЖ                                                  |                           | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | без внутр. охл. с внутр. СОЖ                                                  |                           | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
|        |                                                                               |                           |            |            |            |            |            |                                                                               |                           |            |            |            |            |            |
| P.1.1  | 100                                                                           | 110                       | 0,09       | 0,13       | 0,18       | 0,22       | 0,25       | 100                                                                           | 110                       | 0,09       | 0,13       | 0,18       | 0,22       | 0,25       |
| P.1.2  | 95                                                                            | 105                       | 0,09       | 0,13       | 0,17       | 0,21       | 0,24       | 95                                                                            | 105                       | 0,09       | 0,13       | 0,17       | 0,21       | 0,24       |
| P.1.3  | 90                                                                            | 100                       | 0,09       | 0,12       | 0,16       | 0,20       | 0,23       | 90                                                                            | 100                       | 0,09       | 0,12       | 0,16       | 0,20       | 0,23       |
| P.1.4  | 85                                                                            | 95                        | 0,08       | 0,12       | 0,16       | 0,19       | 0,22       | 85                                                                            | 95                        | 0,08       | 0,12       | 0,16       | 0,19       | 0,22       |
| P.1.5  | 80                                                                            | 90                        | 0,08       | 0,11       | 0,15       | 0,18       | 0,20       | 80                                                                            | 90                        | 0,08       | 0,11       | 0,15       | 0,18       | 0,20       |
| P.2.1  | 95                                                                            | 110                       | 0,11       | 0,16       | 0,21       | 0,26       | 0,29       | 95                                                                            | 110                       | 0,11       | 0,16       | 0,21       | 0,26       | 0,29       |
| P.2.2  | 85                                                                            | 100                       | 0,10       | 0,14       | 0,19       | 0,24       | 0,27       | 85                                                                            | 100                       | 0,10       | 0,14       | 0,19       | 0,24       | 0,27       |
| P.2.3  | 75                                                                            | 90                        | 0,09       | 0,13       | 0,17       | 0,21       | 0,24       | 75                                                                            | 90                        | 0,09       | 0,13       | 0,17       | 0,21       | 0,24       |
| P.2.4  | 60                                                                            | 70                        | 0,09       | 0,12       | 0,16       | 0,19       | 0,21       | 60                                                                            | 70                        | 0,09       | 0,12       | 0,16       | 0,19       | 0,21       |
| P.3.1  | 65                                                                            | 75                        | 0,09       | 0,13       | 0,17       | 0,21       | 0,24       | 65                                                                            | 75                        | 0,09       | 0,13       | 0,17       | 0,21       | 0,24       |
| P.3.2  | 55                                                                            | 60                        | 0,08       | 0,11       | 0,14       | 0,17       | 0,20       | 55                                                                            | 60                        | 0,08       | 0,11       | 0,14       | 0,17       | 0,20       |
| P.3.3  | 45                                                                            | 60                        | 0,06       | 0,09       | 0,11       | 0,14       | 0,15       | 45                                                                            | 60                        | 0,06       | 0,09       | 0,11       | 0,14       | 0,15       |
| P.4.1  | 45                                                                            | 60                        | 0,06       | 0,09       | 0,11       | 0,14       | 0,16       | 45                                                                            | 60                        | 0,06       | 0,09       | 0,11       | 0,14       | 0,16       |
| P.4.2  | 45                                                                            | 60                        | 0,06       | 0,09       | 0,11       | 0,14       | 0,16       | 45                                                                            | 60                        | 0,06       | 0,09       | 0,11       | 0,14       | 0,16       |
| M.1.1  | 35                                                                            | 55                        | 0,08       | 0,11       | 0,14       | 0,18       | 0,20       | 35                                                                            | 55                        | 0,08       | 0,11       | 0,14       | 0,18       | 0,20       |
| M.2.1  | 30                                                                            | 50                        | 0,06       | 0,09       | 0,12       | 0,15       | 0,17       | 30                                                                            | 50                        | 0,06       | 0,09       | 0,12       | 0,15       | 0,17       |
| M.3.1  | 30                                                                            | 50                        | 0,06       | 0,09       | 0,12       | 0,15       | 0,17       | 30                                                                            | 50                        | 0,06       | 0,09       | 0,12       | 0,15       | 0,17       |
| K.1.1  | 85                                                                            | 120                       | 0,15       | 0,24       | 0,33       | 0,41       | 0,47       | 85                                                                            | 120                       | 0,15       | 0,24       | 0,33       | 0,41       | 0,47       |
| K.1.2  | 75                                                                            | 100                       | 0,14       | 0,20       | 0,27       | 0,33       | 0,37       | 75                                                                            | 100                       | 0,14       | 0,20       | 0,27       | 0,33       | 0,37       |
| K.2.1  | 100                                                                           | 160                       | 0,15       | 0,22       | 0,31       | 0,38       | 0,43       | 100                                                                           | 160                       | 0,15       | 0,22       | 0,31       | 0,38       | 0,43       |
| K.2.2  | 75                                                                            | 100                       | 0,14       | 0,20       | 0,27       | 0,33       | 0,37       | 75                                                                            | 100                       | 0,14       | 0,20       | 0,27       | 0,33       | 0,37       |
| K.3.1  | 80                                                                            | 90                        | 0,15       | 0,21       | 0,29       | 0,35       | 0,40       | 80                                                                            | 90                        | 0,15       | 0,21       | 0,29       | 0,35       | 0,40       |
| K.3.2  | 70                                                                            | 80                        | 0,12       | 0,17       | 0,23       | 0,28       | 0,32       | 70                                                                            | 80                        | 0,12       | 0,17       | 0,23       | 0,28       | 0,32       |
| N.1.1  | 220                                                                           | 330                       | 0,10       | 0,16       | 0,22       | 0,30       | 0,33       | 220                                                                           | 330                       | 0,10       | 0,16       | 0,22       | 0,30       | 0,33       |
| N.1.2  | 200                                                                           | 300                       | 0,09       | 0,12       | 0,20       | 0,25       | 0,30       | 200                                                                           | 300                       | 0,09       | 0,12       | 0,20       | 0,25       | 0,30       |
| N.2.1  | 180                                                                           | 250                       | 0,11       | 0,15       | 0,26       | 0,33       | 0,39       | 180                                                                           | 250                       | 0,11       | 0,15       | 0,26       | 0,33       | 0,39       |
| N.2.2  | 150                                                                           | 220                       | 0,11       | 0,15       | 0,26       | 0,33       | 0,39       | 150                                                                           | 220                       | 0,11       | 0,15       | 0,26       | 0,33       | 0,39       |
| N.2.3  | 120                                                                           | 180                       | 0,11       | 0,15       | 0,26       | 0,33       | 0,39       | 120                                                                           | 180                       | 0,11       | 0,15       | 0,26       | 0,33       | 0,39       |
| N.3.1  | 160                                                                           | 200                       | 0,15       | 0,24       | 0,33       | 0,41       | 0,47       | 160                                                                           | 200                       | 0,15       | 0,24       | 0,33       | 0,41       | 0,47       |
| N.3.2  | 90                                                                            | 120                       | 0,14       | 0,20       | 0,27       | 0,33       | 0,37       | 90                                                                            | 120                       | 0,14       | 0,20       | 0,27       | 0,33       | 0,37       |
| N.3.3  |                                                                               |                           |            |            |            |            |            |                                                                               |                           |            |            |            |            |            |
| N.4.1  |                                                                               |                           |            |            |            |            |            |                                                                               |                           |            |            |            |            |            |
| S.1.1  | 20                                                                            | 30                        | 0,06       | 0,09       | 0,11       | 0,14       | 0,16       | 20                                                                            | 30                        | 0,06       | 0,09       | 0,11       | 0,14       | 0,16       |
| S.1.2  | 15                                                                            | 20                        | 0,04       | 0,06       | 0,08       | 0,10       | 0,11       | 15                                                                            | 20                        | 0,04       | 0,06       | 0,08       | 0,10       | 0,11       |
| S.2.1  | 15                                                                            | 20                        | 0,04       | 0,06       | 0,08       | 0,10       | 0,11       | 15                                                                            | 20                        | 0,04       | 0,06       | 0,08       | 0,10       | 0,11       |
| S.2.2  | 10                                                                            | 15                        | 0,05       | 0,08       | 0,10       | 0,13       | 0,14       | 10                                                                            | 15                        | 0,05       | 0,08       | 0,10       | 0,13       | 0,14       |
| S.2.3  | 10                                                                            | 15                        | 0,04       | 0,06       | 0,08       | 0,10       | 0,11       | 10                                                                            | 15                        | 0,04       | 0,06       | 0,08       | 0,10       | 0,11       |
| S.3.1  |                                                                               |                           |            |            |            |            |            |                                                                               |                           |            |            |            |            |            |
| S.3.2  | 20                                                                            | 30                        | 0,06       | 0,09       | 0,12       | 0,15       | 0,17       | 20                                                                            | 30                        | 0,06       | 0,09       | 0,12       | 0,15       | 0,17       |
| S.3.3  | 15                                                                            | 25                        | 0,05       | 0,08       | 0,10       | 0,13       | 0,14       | 15                                                                            | 25                        | 0,05       | 0,08       | 0,10       | 0,13       | 0,14       |
| H.1.1  |                                                                               |                           |            |            |            |            |            |                                                                               |                           |            |            |            |            |            |
| H.1.2  |                                                                               |                           |            |            |            |            |            |                                                                               |                           |            |            |            |            |            |
| H.1.3  |                                                                               |                           |            |            |            |            |            |                                                                               |                           |            |            |            |            |            |
| H.1.4  |                                                                               |                           |            |            |            |            |            |                                                                               |                           |            |            |            |            |            |
| H.2.1  |                                                                               |                           |            |            |            |            |            |                                                                               |                           |            |            |            |            |            |
| H.3.1  |                                                                               |                           |            |            |            |            |            |                                                                               |                           |            |            |            |            |            |
| O.1.1  |                                                                               |                           |            |            |            |            |            |                                                                               |                           |            |            |            |            |            |
| O.1.2  |                                                                               |                           |            |            |            |            |            |                                                                               |                           |            |            |            |            |            |
| O.2.1  |                                                                               |                           |            |            |            |            |            |                                                                               |                           |            |            |            |            |            |
| O.2.2  |                                                                               |                           |            |            |            |            |            |                                                                               |                           |            |            |            |            |            |
| O.3.1  |                                                                               |                           |            |            |            |            |            |                                                                               |                           |            |            |            |            |            |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

|        |                                           | Глубина сверления 8xD |            |            |            |            |      |
|--------|-------------------------------------------|-----------------------|------------|------------|------------|------------|------|
|        |                                           | VA                    |            |            |            |            |      |
|        |                                           | 10 770 ...            |            |            |            |            |      |
| Индекс | V <sub>c</sub><br>, м/мин<br>с внутр. СОЖ | Ø 3-5                 | Ø 5-8      | Ø 8-12     | Ø 12-16    | Ø 16-20    |      |
|        |                                           | f<br>мм/об            | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |      |
|        | P.1.1                                     | 110                   | 0,09       | 0,13       | 0,18       | 0,22       | 0,25 |
|        | P.1.2                                     | 105                   | 0,09       | 0,13       | 0,17       | 0,21       | 0,24 |
|        | P.1.3                                     | 100                   | 0,09       | 0,12       | 0,16       | 0,20       | 0,23 |
|        | P.1.4                                     | 95                    | 0,08       | 0,12       | 0,16       | 0,19       | 0,22 |
|        | P.1.5                                     | 90                    | 0,08       | 0,11       | 0,15       | 0,18       | 0,20 |
|        | P.2.1                                     | 110                   | 0,11       | 0,16       | 0,21       | 0,26       | 0,29 |
|        | P.2.2                                     | 100                   | 0,10       | 0,14       | 0,19       | 0,24       | 0,27 |
|        | P.2.3                                     | 90                    | 0,09       | 0,13       | 0,17       | 0,21       | 0,24 |
|        | P.2.4                                     | 70                    | 0,09       | 0,12       | 0,16       | 0,19       | 0,21 |
|        | P.3.1                                     | 75                    | 0,09       | 0,13       | 0,17       | 0,21       | 0,24 |
|        | P.3.2                                     | 60                    | 0,08       | 0,11       | 0,14       | 0,17       | 0,20 |
|        | P.3.3                                     | 60                    | 0,06       | 0,09       | 0,11       | 0,14       | 0,15 |
|        | P.4.1                                     | 60                    | 0,06       | 0,09       | 0,11       | 0,14       | 0,16 |
|        | P.4.2                                     | 60                    | 0,06       | 0,09       | 0,11       | 0,14       | 0,16 |
|        | M.1.1                                     | 55                    | 0,08       | 0,11       | 0,14       | 0,18       | 0,20 |
|        | M.2.1                                     | 50                    | 0,06       | 0,09       | 0,12       | 0,15       | 0,17 |
|        | M.3.1                                     | 50                    | 0,06       | 0,09       | 0,12       | 0,15       | 0,17 |
|        | K.1.1                                     | 120                   | 0,15       | 0,24       | 0,33       | 0,41       | 0,47 |
|        | K.1.2                                     | 100                   | 0,14       | 0,20       | 0,27       | 0,33       | 0,37 |
|        | K.2.1                                     | 160                   | 0,15       | 0,22       | 0,31       | 0,38       | 0,43 |
|        | K.2.2                                     | 100                   | 0,14       | 0,20       | 0,27       | 0,33       | 0,37 |
|        | K.3.1                                     | 90                    | 0,15       | 0,21       | 0,29       | 0,35       | 0,40 |
|        | K.3.2                                     | 80                    | 0,12       | 0,17       | 0,23       | 0,28       | 0,32 |
|        | N.1.1                                     | 330                   | 0,10       | 0,16       | 0,22       | 0,30       | 0,33 |
|        | N.1.2                                     | 300                   | 0,09       | 0,12       | 0,20       | 0,25       | 0,30 |
|        | N.2.1                                     | 250                   | 0,11       | 0,15       | 0,26       | 0,33       | 0,39 |
|        | N.2.2                                     | 220                   | 0,11       | 0,15       | 0,26       | 0,33       | 0,39 |
|        | N.2.3                                     | 180                   | 0,11       | 0,15       | 0,26       | 0,33       | 0,39 |
|        | N.3.1                                     | 200                   | 0,15       | 0,24       | 0,33       | 0,41       | 0,47 |
|        | N.3.2                                     | 120                   | 0,14       | 0,20       | 0,27       | 0,33       | 0,37 |
|        | N.3.3                                     |                       |            |            |            |            |      |
|        | N.4.1                                     |                       |            |            |            |            |      |
|        | S.1.1                                     | 30                    | 0,06       | 0,09       | 0,11       | 0,14       | 0,16 |
|        | S.1.2                                     | 20                    | 0,04       | 0,06       | 0,08       | 0,10       | 0,11 |
|        | S.2.1                                     | 20                    | 0,04       | 0,06       | 0,08       | 0,10       | 0,11 |
|        | S.2.2                                     | 15                    | 0,05       | 0,08       | 0,10       | 0,13       | 0,14 |
|        | S.2.3                                     | 15                    | 0,04       | 0,06       | 0,08       | 0,10       | 0,11 |
|        | S.3.1                                     |                       |            |            |            |            |      |
|        | S.3.2                                     | 30                    | 0,06       | 0,09       | 0,12       | 0,15       | 0,17 |
|        | S.3.3                                     | 25                    | 0,05       | 0,08       | 0,10       | 0,13       | 0,14 |
|        | H.1.1                                     |                       |            |            |            |            |      |
|        | H.1.2                                     |                       |            |            |            |            |      |
|        | H.1.3                                     |                       |            |            |            |            |      |
|        | H.1.4                                     |                       |            |            |            |            |      |
|        | H.2.1                                     |                       |            |            |            |            |      |
|        | H.3.1                                     |                       |            |            |            |            |      |
|        | O.1.1                                     |                       |            |            |            |            |      |
|        | O.1.2                                     |                       |            |            |            |            |      |
|        | O.2.1                                     |                       |            |            |            |            |      |
|        | O.2.2                                     |                       |            |            |            |            |      |
|        | O.3.1                                     |                       |            |            |            |            |      |

## Стандартные режимы резания – WTX – Speed VA

| Индекс | Глубина сверления 5xD<br>Speed VA<br>10 773 ... |            |            |             |              |              | Глубина сверления 12xD<br>Speed VA<br>10 774 ... |            |            |             |              |              |
|--------|-------------------------------------------------|------------|------------|-------------|--------------|--------------|--------------------------------------------------|------------|------------|-------------|--------------|--------------|
|        | $V_c$<br>, м/мин<br>с внутр. СОЖ                | $\phi$ 3-5 | $\phi$ 5-8 | $\phi$ 8-12 | $\phi$ 12-16 | $\phi$ 16-20 | $V_c$<br>, м/мин<br>с внутр. СОЖ                 | $\phi$ 3-5 | $\phi$ 5-8 | $\phi$ 8-12 | $\phi$ 12-16 | $\phi$ 16-20 |
|        |                                                 | f<br>мм/об | f<br>мм/об | f<br>мм/об  | f<br>мм/об   | f<br>мм/об   |                                                  | f<br>мм/об | f<br>мм/об | f<br>мм/об  | f<br>мм/об   | f<br>мм/об   |
| P.1.1  | 165                                             | 0,12       | 0,17       | 0,23        | 0,28         | 0,31         | 110                                              | 0,09       | 0,13       | 0,18        | 0,22         | 0,25         |
| P.1.2  | 160                                             | 0,11       | 0,16       | 0,22        | 0,26         | 0,30         | 105                                              | 0,09       | 0,13       | 0,17        | 0,21         | 0,24         |
| P.1.3  | 150                                             | 0,11       | 0,15       | 0,20        | 0,25         | 0,28         | 100                                              | 0,09       | 0,12       | 0,16        | 0,20         | 0,23         |
| P.1.4  | 145                                             | 0,10       | 0,15       | 0,19        | 0,24         | 0,27         | 95                                               | 0,08       | 0,12       | 0,16        | 0,19         | 0,22         |
| P.1.5  | 135                                             | 0,10       | 0,14       | 0,18        | 0,23         | 0,26         | 90                                               | 0,08       | 0,11       | 0,15        | 0,18         | 0,20         |
| P.2.1  | 165                                             | 0,14       | 0,20       | 0,27        | 0,33         | 0,37         | 110                                              | 0,11       | 0,16       | 0,21        | 0,26         | 0,29         |
| P.2.2  | 150                                             | 0,13       | 0,18       | 0,24        | 0,30         | 0,34         | 100                                              | 0,10       | 0,14       | 0,19        | 0,24         | 0,27         |
| P.2.3  | 135                                             | 0,11       | 0,16       | 0,22        | 0,27         | 0,30         | 90                                               | 0,09       | 0,13       | 0,17        | 0,21         | 0,24         |
| P.2.4  | 105                                             | 0,11       | 0,15       | 0,19        | 0,24         | 0,27         | 70                                               | 0,09       | 0,12       | 0,16        | 0,19         | 0,21         |
| P.3.1  | 115                                             | 0,11       | 0,16       | 0,22        | 0,27         | 0,30         | 75                                               | 0,09       | 0,13       | 0,17        | 0,21         | 0,24         |
| P.3.2  | 90                                              | 0,10       | 0,13       | 0,18        | 0,22         | 0,25         | 60                                               | 0,08       | 0,11       | 0,14        | 0,17         | 0,20         |
| P.3.3  | 90                                              | 0,08       | 0,11       | 0,14        | 0,17         | 0,19         | 60                                               | 0,06       | 0,09       | 0,11        | 0,14         | 0,15         |
| P.4.1  | 70                                              | 0,08       | 0,11       | 0,14        | 0,18         | 0,20         | 60                                               | 0,06       | 0,09       | 0,11        | 0,14         | 0,16         |
| P.4.2  | 70                                              | 0,08       | 0,11       | 0,14        | 0,18         | 0,20         | 60                                               | 0,06       | 0,09       | 0,11        | 0,14         | 0,16         |
| M.1.1  | 80                                              | 0,09       | 0,13       | 0,18        | 0,22         | 0,25         | 55                                               | 0,08       | 0,11       | 0,14        | 0,18         | 0,20         |
| M.2.1  | 75                                              | 0,08       | 0,11       | 0,15        | 0,19         | 0,21         | 50                                               | 0,06       | 0,09       | 0,12        | 0,15         | 0,17         |
| M.3.1  | 75                                              | 0,08       | 0,11       | 0,15        | 0,19         | 0,21         | 50                                               | 0,06       | 0,09       | 0,12        | 0,15         | 0,17         |
| K.1.1  | 150                                             | 0,15       | 0,24       | 0,33        | 0,41         | 0,47         | 120                                              | 0,15       | 0,24       | 0,33        | 0,41         | 0,47         |
| K.1.2  | 125                                             | 0,14       | 0,20       | 0,27        | 0,33         | 0,37         | 100                                              | 0,14       | 0,20       | 0,27        | 0,33         | 0,37         |
| K.2.1  | 200                                             | 0,15       | 0,22       | 0,31        | 0,38         | 0,43         | 160                                              | 0,15       | 0,22       | 0,31        | 0,38         | 0,43         |
| K.2.2  | 125                                             | 0,14       | 0,20       | 0,27        | 0,33         | 0,37         | 100                                              | 0,14       | 0,20       | 0,27        | 0,33         | 0,37         |
| K.3.1  | 115                                             | 0,15       | 0,21       | 0,29        | 0,35         | 0,40         | 90                                               | 0,15       | 0,21       | 0,29        | 0,35         | 0,40         |
| K.3.2  | 100                                             | 0,12       | 0,17       | 0,23        | 0,28         | 0,32         | 80                                               | 0,12       | 0,17       | 0,23        | 0,28         | 0,32         |
| N.1.1  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| N.1.2  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| N.2.1  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| N.2.2  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| N.2.3  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| N.3.1  |                                                 |            |            |             |              |              | 200                                              | 0,15       | 0,24       | 0,33        | 0,41         | 0,47         |
| N.3.2  | 145                                             | 0,14       | 0,20       | 0,27        | 0,33         | 0,37         | 120                                              | 0,14       | 0,20       | 0,27        | 0,33         | 0,37         |
| N.3.3  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| N.4.1  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| S.1.1  | 35                                              | 0,07       | 0,10       | 0,14        | 0,17         | 0,19         | 30                                               | 0,06       | 0,09       | 0,11        | 0,14         | 0,16         |
| S.1.2  | 25                                              | 0,05       | 0,07       | 0,10        | 0,12         | 0,14         | 20                                               | 0,04       | 0,06       | 0,08        | 0,10         | 0,11         |
| S.2.1  | 25                                              | 0,05       | 0,07       | 0,10        | 0,12         | 0,14         | 20                                               | 0,04       | 0,06       | 0,08        | 0,10         | 0,11         |
| S.2.2  | 20                                              | 0,06       | 0,09       | 0,12        | 0,15         | 0,17         | 15                                               | 0,05       | 0,08       | 0,10        | 0,13         | 0,14         |
| S.2.3  | 20                                              | 0,05       | 0,07       | 0,10        | 0,12         | 0,14         | 15                                               | 0,04       | 0,06       | 0,08        | 0,10         | 0,11         |
| S.3.1  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| S.3.2  | 35                                              | 0,08       | 0,11       | 0,15        | 0,18         | 0,20         | 30                                               | 0,06       | 0,09       | 0,12        | 0,15         | 0,17         |
| S.3.3  | 30                                              | 0,06       | 0,09       | 0,12        | 0,15         | 0,17         | 25                                               | 0,05       | 0,08       | 0,10        | 0,13         | 0,14         |
| H.1.1  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| H.1.2  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| H.1.3  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| H.1.4  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| H.2.1  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| H.3.1  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| O.1.1  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| O.1.2  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| O.2.1  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| O.2.2  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |
| O.3.1  |                                                 |            |            |             |              |              |                                                  |            |            |             |              |              |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

## Стандартные режимы резания — WTX — GG

2

| Индекс | Глубина сверления 5xD<br>GG<br>10 749 ... |            |            |            |            |            | Глубина сверления 8xD<br>GG<br>10 753 ... |            |            |            |            |            |
|--------|-------------------------------------------|------------|------------|------------|------------|------------|-------------------------------------------|------------|------------|------------|------------|------------|
|        | $V_c$<br>, м/мин                          | Ø 3-5      | Ø 5-8      | Ø 8-12     | Ø 12-16    | Ø 16-20    | $V_c$<br>, м/мин                          | Ø 3-5      | Ø 5-8      | Ø 8-12     | Ø 12-16    | Ø 16-20    |
|        | с внутр. СОЖ                              | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | с внутр. СОЖ                              | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
| P.1.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| P.1.2  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| P.1.3  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| P.1.4  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| P.1.5  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| P.2.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| P.2.2  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| P.2.3  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| P.2.4  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| P.3.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| P.3.2  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| P.3.3  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| P.4.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| P.4.2  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| M.1.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| M.2.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| M.3.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| K.1.1  | 145                                       | 0,12       | 0,19       | 0,26       | 0,33       | 0,38       | 145                                       | 0,12       | 0,19       | 0,26       | 0,33       | 0,38       |
| K.1.2  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| K.2.1  | 190                                       | 0,12       | 0,18       | 0,25       | 0,30       | 0,35       | 190                                       | 0,12       | 0,18       | 0,25       | 0,30       | 0,35       |
| K.2.2  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| K.3.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| K.3.2  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| N.1.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| N.1.2  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| N.2.1  | 300                                       | 0,11       | 0,16       | 0,21       | 0,26       | 0,30       | 300                                       | 0,11       | 0,16       | 0,21       | 0,26       | 0,30       |
| N.2.2  | 265                                       | 0,11       | 0,16       | 0,21       | 0,26       | 0,30       | 265                                       | 0,11       | 0,16       | 0,21       | 0,26       | 0,30       |
| N.2.3  | 215                                       | 0,11       | 0,16       | 0,21       | 0,26       | 0,30       | 215                                       | 0,11       | 0,16       | 0,21       | 0,26       | 0,30       |
| N.3.1  | 240                                       | 0,12       | 0,19       | 0,26       | 0,33       | 0,38       | 240                                       | 0,12       | 0,19       | 0,26       | 0,33       | 0,38       |
| N.3.2  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| N.3.3  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| N.4.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| S.1.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| S.1.2  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| S.2.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| S.2.2  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| S.2.3  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| S.3.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| S.3.2  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| S.3.3  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| H.1.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| H.1.2  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| H.1.3  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| H.1.4  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| H.2.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| H.3.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| O.1.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| O.1.2  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| O.2.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| O.2.2  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |
| O.3.1  |                                           |            |            |            |            |            |                                           |            |            |            |            |            |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

## Стандартные режимы резания — WTX – Quattro 4F

| Индекс | Глубина сверления 5xD<br>Quattro 4F<br>10 730 ..., 10 735... |                                  |                     |                     |                      |                       |                       | Глубина сверления 8xD<br>Quattro 4F<br>10 736 ... |                     |                     |                      |                       |                       |  |
|--------|--------------------------------------------------------------|----------------------------------|---------------------|---------------------|----------------------|-----------------------|-----------------------|---------------------------------------------------|---------------------|---------------------|----------------------|-----------------------|-----------------------|--|
|        | $V_c$<br>, м/мин<br>без внутр. охл. с внутр. СОЖ             | $V_c$<br>, м/мин<br>с внутр. СОЖ | $\phi$ 3-5<br>мм/об | $\phi$ 5-8<br>мм/об | $\phi$ 8-12<br>мм/об | $\phi$ 12-16<br>мм/об | $\phi$ 16-20<br>мм/об | $V_c$<br>, м/мин<br>с внутр. СОЖ                  | $\phi$ 3-5<br>мм/об | $\phi$ 5-8<br>мм/об | $\phi$ 8-12<br>мм/об | $\phi$ 12-16<br>мм/об | $\phi$ 16-20<br>мм/об |  |
|        |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| P.1.1  | 100                                                          | 110                              | 0,12                | 0,17                | 0,23                 | 0,28                  | 0,31                  | 110                                               | 0,12                | 0,17                | 0,23                 | 0,28                  | 0,31                  |  |
| P.1.2  | 95                                                           | 105                              | 0,11                | 0,16                | 0,22                 | 0,26                  | 0,30                  | 105                                               | 0,11                | 0,16                | 0,22                 | 0,26                  | 0,30                  |  |
| P.1.3  | 90                                                           | 100                              | 0,11                | 0,15                | 0,20                 | 0,25                  | 0,28                  | 100                                               | 0,11                | 0,15                | 0,20                 | 0,25                  | 0,28                  |  |
| P.1.4  | 85                                                           | 95                               | 0,10                | 0,15                | 0,19                 | 0,24                  | 0,27                  | 95                                                | 0,10                | 0,15                | 0,19                 | 0,24                  | 0,27                  |  |
| P.1.5  | 80                                                           | 90                               | 0,10                | 0,14                | 0,18                 | 0,23                  | 0,26                  | 90                                                | 0,10                | 0,14                | 0,18                 | 0,23                  | 0,26                  |  |
| P.2.1  | 95                                                           | 110                              | 0,14                | 0,20                | 0,27                 | 0,33                  | 0,37                  | 110                                               | 0,14                | 0,20                | 0,27                 | 0,33                  | 0,37                  |  |
| P.2.2  | 85                                                           | 100                              | 0,13                | 0,18                | 0,24                 | 0,30                  | 0,34                  | 100                                               | 0,13                | 0,18                | 0,24                 | 0,30                  | 0,34                  |  |
| P.2.3  | 75                                                           | 90                               | 0,11                | 0,16                | 0,22                 | 0,27                  | 0,30                  | 90                                                | 0,11                | 0,16                | 0,22                 | 0,27                  | 0,30                  |  |
| P.2.4  | 60                                                           | 70                               | 0,11                | 0,15                | 0,19                 | 0,24                  | 0,27                  | 70                                                | 0,11                | 0,15                | 0,19                 | 0,24                  | 0,27                  |  |
| P.3.1  | 65                                                           | 75                               | 0,11                | 0,16                | 0,22                 | 0,27                  | 0,30                  | 75                                                | 0,11                | 0,16                | 0,22                 | 0,27                  | 0,30                  |  |
| P.3.2  | 55                                                           | 60                               | 0,10                | 0,13                | 0,18                 | 0,22                  | 0,25                  | 60                                                | 0,10                | 0,13                | 0,18                 | 0,22                  | 0,25                  |  |
| P.3.3  | 45                                                           | 60                               | 0,08                | 0,11                | 0,14                 | 0,17                  | 0,19                  | 60                                                | 0,08                | 0,11                | 0,14                 | 0,17                  | 0,19                  |  |
| P.4.1  | 45                                                           | 60                               | 0,08                | 0,11                | 0,14                 | 0,18                  | 0,20                  | 60                                                | 0,08                | 0,11                | 0,14                 | 0,18                  | 0,20                  |  |
| P.4.2  | 45                                                           | 60                               | 0,08                | 0,11                | 0,14                 | 0,18                  | 0,20                  | 60                                                | 0,08                | 0,11                | 0,14                 | 0,18                  | 0,20                  |  |
| M.1.1  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| M.2.1  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| M.3.1  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| K.1.1  | 85                                                           | 120                              | 0,15                | 0,24                | 0,33                 | 0,41                  | 0,47                  | 120                                               | 0,15                | 0,24                | 0,33                 | 0,41                  | 0,47                  |  |
| K.1.2  | 75                                                           | 100                              | 0,14                | 0,20                | 0,27                 | 0,33                  | 0,37                  | 100                                               | 0,14                | 0,20                | 0,27                 | 0,33                  | 0,37                  |  |
| K.2.1  | 100                                                          | 160                              | 0,15                | 0,22                | 0,31                 | 0,38                  | 0,43                  | 160                                               | 0,15                | 0,22                | 0,31                 | 0,38                  | 0,43                  |  |
| K.2.2  | 75                                                           | 100                              | 0,14                | 0,20                | 0,27                 | 0,33                  | 0,37                  | 100                                               | 0,14                | 0,20                | 0,27                 | 0,33                  | 0,37                  |  |
| K.3.1  | 80                                                           | 90                               | 0,15                | 0,21                | 0,29                 | 0,35                  | 0,40                  | 90                                                | 0,15                | 0,21                | 0,29                 | 0,35                  | 0,40                  |  |
| K.3.2  | 70                                                           | 80                               | 0,12                | 0,17                | 0,23                 | 0,28                  | 0,32                  | 80                                                | 0,12                | 0,17                | 0,23                 | 0,28                  | 0,32                  |  |
| N.1.1  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| N.1.2  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| N.2.1  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| N.2.2  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| N.2.3  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| N.3.1  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| N.3.2  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| N.3.3  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| N.4.1  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| S.1.1  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| S.1.2  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| S.2.1  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| S.2.2  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| S.2.3  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| S.3.1  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| S.3.2  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| S.3.3  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| H.1.1  | 25                                                           | 25                               | 0,05                | 0,07                | 0,09                 | 0,12                  | 0,13                  | 25                                                | 0,052               | 0,073               | 0,098                | 0,120                 | 0,136                 |  |
| H.1.2  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| H.1.3  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| H.1.4  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| H.2.1  | 30                                                           | 30                               | 0,06                | 0,09                | 0,12                 | 0,15                  | 0,17                  | 30                                                | 0,067               | 0,095               | 0,128                | 0,156                 | 0,177                 |  |
| H.3.1  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| O.1.1  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| O.1.2  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| O.2.1  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| O.2.2  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |
| O.3.1  |                                                              |                                  |                     |                     |                      |                       |                       |                                                   |                     |                     |                      |                       |                       |  |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

|  |        | Глубина сверления 12xD<br>Quattro 4F<br>10 737 ... |            |            |            |            |            |
|--|--------|----------------------------------------------------|------------|------------|------------|------------|------------|
|  | Индекс | V <sub>c</sub><br>, м/мин<br>с внутр. СОЖ          | Ø 3-5      | Ø 5-8      | Ø 8-12     | Ø 12-16    | Ø 16-20    |
|  |        |                                                    | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
|  | P.1.1  | 110                                                | 0,12       | 0,17       | 0,23       | 0,28       | 0,31       |
|  | P.1.2  | 105                                                | 0,11       | 0,16       | 0,22       | 0,26       | 0,30       |
|  | P.1.3  | 100                                                | 0,11       | 0,15       | 0,20       | 0,25       | 0,28       |
|  | P.1.4  | 95                                                 | 0,10       | 0,15       | 0,19       | 0,24       | 0,27       |
|  | P.1.5  | 90                                                 | 0,10       | 0,14       | 0,18       | 0,23       | 0,26       |
|  | P.2.1  | 110                                                | 0,14       | 0,20       | 0,27       | 0,33       | 0,37       |
|  | P.2.2  | 100                                                | 0,13       | 0,18       | 0,24       | 0,30       | 0,34       |
|  | P.2.3  | 90                                                 | 0,11       | 0,16       | 0,22       | 0,27       | 0,30       |
|  | P.2.4  | 70                                                 | 0,11       | 0,15       | 0,19       | 0,24       | 0,27       |
|  | P.3.1  | 75                                                 | 0,11       | 0,16       | 0,22       | 0,27       | 0,30       |
|  | P.3.2  | 60                                                 | 0,10       | 0,13       | 0,18       | 0,22       | 0,25       |
|  | P.3.3  | 60                                                 | 0,08       | 0,11       | 0,14       | 0,17       | 0,19       |
|  | P.4.1  | 60                                                 | 0,08       | 0,11       | 0,14       | 0,18       | 0,20       |
|  | P.4.2  | 60                                                 | 0,08       | 0,11       | 0,14       | 0,18       | 0,20       |
|  | M.1.1  |                                                    |            |            |            |            |            |
|  | M.2.1  |                                                    |            |            |            |            |            |
|  | M.3.1  |                                                    |            |            |            |            |            |
|  | K.1.1  | 120                                                | 0,15       | 0,24       | 0,33       | 0,41       | 0,47       |
|  | K.1.2  | 100                                                | 0,14       | 0,20       | 0,27       | 0,33       | 0,37       |
|  | K.2.1  | 160                                                | 0,15       | 0,22       | 0,31       | 0,38       | 0,43       |
|  | K.2.2  | 100                                                | 0,14       | 0,20       | 0,27       | 0,33       | 0,37       |
|  | K.3.1  | 90                                                 | 0,15       | 0,21       | 0,29       | 0,35       | 0,40       |
|  | K.3.2  | 80                                                 | 0,12       | 0,17       | 0,23       | 0,28       | 0,32       |
|  | N.1.1  |                                                    |            |            |            |            |            |
|  | N.1.2  |                                                    |            |            |            |            |            |
|  | N.2.1  |                                                    |            |            |            |            |            |
|  | N.2.2  |                                                    |            |            |            |            |            |
|  | N.2.3  |                                                    |            |            |            |            |            |
|  | N.3.1  |                                                    |            |            |            |            |            |
|  | N.3.2  |                                                    |            |            |            |            |            |
|  | N.3.3  |                                                    |            |            |            |            |            |
|  | N.4.1  |                                                    |            |            |            |            |            |
|  | S.1.1  |                                                    |            |            |            |            |            |
|  | S.1.2  |                                                    |            |            |            |            |            |
|  | S.2.1  |                                                    |            |            |            |            |            |
|  | S.2.2  |                                                    |            |            |            |            |            |
|  | S.2.3  |                                                    |            |            |            |            |            |
|  | S.3.1  |                                                    |            |            |            |            |            |
|  | S.3.2  |                                                    |            |            |            |            |            |
|  | S.3.3  |                                                    |            |            |            |            |            |
|  | H.1.1  | 25                                                 | 0,052      | 0,073      | 0,098      | 0,120      | 0,136      |
|  | H.1.2  |                                                    |            |            |            |            |            |
|  | H.1.3  |                                                    |            |            |            |            |            |
|  | H.1.4  |                                                    |            |            |            |            |            |
|  | H.2.1  | 30                                                 | 0,067      | 0,095      | 0,128      | 0,156      | 0,177      |
|  | H.3.1  |                                                    |            |            |            |            |            |
|  | O.1.1  |                                                    |            |            |            |            |            |
|  | O.1.2  |                                                    |            |            |            |            |            |
|  | O.2.1  |                                                    |            |            |            |            |            |
|  | O.2.2  |                                                    |            |            |            |            |            |
|  | O.3.1  |                                                    |            |            |            |            |            |

## Стандартные режимы резания — WTX – AL

| Индекс | Глубина сверления 5xD<br>AL<br>10 791 ... |            |            |            |            |            |            |            |            |            |            |            |
|--------|-------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|        | $V_c$<br>м/мин                            | Ø 2-3      | Ø 3-4      | Ø 4-5      | Ø 5-6      | Ø 6-8      | Ø 8-10     | Ø 10-12    | Ø 12-14    | Ø 14-16    | Ø 16-18    | Ø 18-20    |
|        | с внутр.<br>СОЖ                           | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
| P.1.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.1.2  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.1.3  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.1.4  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.1.5  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.2.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.2.2  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.2.3  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.2.4  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.3.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.3.2  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.3.3  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.4.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.4.2  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| M.1.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| M.2.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| M.3.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| K.1.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| K.1.2  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| K.2.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| K.2.2  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| K.3.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| K.3.2  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| N.1.1  | 360                                       | 0,15       | 0,20       | 0,23       | 0,25       | 0,29       | 0,32       | 0,35       | 0,40       | 0,45       | 0,50       | 0,55       |
| N.1.2  | 400                                       | 0,15       | 0,20       | 0,23       | 0,25       | 0,29       | 0,32       | 0,35       | 0,40       | 0,45       | 0,50       | 0,55       |
| N.2.1  | 360                                       | 0,20       | 0,23       | 0,25       | 0,28       | 0,32       | 0,35       | 0,38       | 0,45       | 0,50       | 0,55       | 0,60       |
| N.2.2  | 400                                       | 0,20       | 0,23       | 0,25       | 0,28       | 0,32       | 0,35       | 0,38       | 0,45       | 0,50       | 0,55       | 0,60       |
| N.2.3  | 350                                       | 0,15       | 0,20       | 0,23       | 0,25       | 0,29       | 0,32       | 0,35       | 0,40       | 0,45       | 0,50       | 0,55       |
| N.3.1  | 200                                       | 0,08       | 0,11       | 0,13       | 0,15       | 0,19       | 0,23       | 0,26       | 0,30       | 0,34       | 0,38       | 0,42       |
| N.3.2  | 200                                       | 0,08       | 0,11       | 0,13       | 0,15       | 0,19       | 0,23       | 0,26       | 0,30       | 0,34       | 0,38       | 0,42       |
| N.3.3  | 160                                       | 0,08       | 0,11       | 0,13       | 0,15       | 0,19       | 0,23       | 0,26       | 0,30       | 0,34       | 0,38       | 0,42       |
| N.4.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.1.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.1.2  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.2.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.2.2  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.2.3  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.3.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.3.2  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.3.3  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| H.1.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| H.1.2  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| H.1.3  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| H.1.4  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| H.2.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| H.3.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| O.1.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| O.1.2  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| O.2.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| O.2.2  |                                           |            |            |            |            |            |            |            |            |            |            |            |
| O.3.1  |                                           |            |            |            |            |            |            |            |            |            |            |            |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

|        |       | Глубина сверления 8xD               |            |            |            |            |            |            |            |            |            |            |
|--------|-------|-------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|        |       | AL<br>10 792 ...                    |            |            |            |            |            |            |            |            |            |            |
| Индекс |       | $V_c$<br>, м/мин<br>с внутр.<br>СОЖ | Ø 3-4      | Ø 4-5      | Ø 5-6      | Ø 6-8      | Ø 8-10     | Ø 10-12    | Ø 12-14    | Ø 14-16    | Ø 16-18    | Ø 18-20    |
|        |       | f<br>мм/об                          | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
|        | P.1.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | P.1.2 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | P.1.3 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | P.1.4 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | P.1.5 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | P.2.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | P.2.2 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | P.2.3 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | P.2.4 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | P.3.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | P.3.2 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | P.3.3 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | P.4.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | P.4.2 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | M.1.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | M.2.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | M.3.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | K.1.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | K.1.2 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | K.2.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | K.2.2 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | K.3.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | K.3.2 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | N.1.1 | 320                                 | 0,20       | 0,23       | 0,25       | 0,29       | 0,32       | 0,35       | 0,40       | 0,45       | 0,50       | 0,55       |
|        | N.1.2 | 360                                 | 0,20       | 0,23       | 0,25       | 0,29       | 0,32       | 0,35       | 0,40       | 0,45       | 0,50       | 0,55       |
|        | N.2.1 | 320                                 | 0,23       | 0,25       | 0,28       | 0,32       | 0,35       | 0,38       | 0,45       | 0,50       | 0,55       | 0,60       |
|        | N.2.2 | 360                                 | 0,23       | 0,25       | 0,28       | 0,32       | 0,35       | 0,38       | 0,45       | 0,50       | 0,55       | 0,60       |
|        | N.2.3 | 310                                 | 0,20       | 0,23       | 0,25       | 0,29       | 0,32       | 0,35       | 0,40       | 0,45       | 0,50       | 0,55       |
|        | N.3.1 | 160                                 | 0,11       | 0,13       | 0,15       | 0,19       | 0,23       | 0,26       | 0,30       | 0,34       | 0,38       | 0,42       |
|        | N.3.2 | 160                                 | 0,11       | 0,13       | 0,15       | 0,19       | 0,23       | 0,26       | 0,30       | 0,34       | 0,38       | 0,42       |
|        | N.3.3 | 140                                 | 0,11       | 0,13       | 0,15       | 0,19       | 0,23       | 0,26       | 0,30       | 0,34       | 0,38       | 0,42       |
|        | N.4.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | S.1.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | S.1.2 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | S.2.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | S.2.2 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | S.2.3 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | S.3.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | S.3.2 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | S.3.3 |                                     |            |            |            |            |            |            |            |            |            |            |
|        |       | H.1.1                               |            |            |            |            |            |            |            |            |            |            |
| H.1.2  |       |                                     |            |            |            |            |            |            |            |            |            |            |
| H.1.3  |       |                                     |            |            |            |            |            |            |            |            |            |            |
| H.1.4  |       |                                     |            |            |            |            |            |            |            |            |            |            |
| H.2.1  |       |                                     |            |            |            |            |            |            |            |            |            |            |
| H.3.1  |       |                                     |            |            |            |            |            |            |            |            |            |            |
|        | O.1.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | O.1.2 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | O.2.1 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | O.2.2 |                                     |            |            |            |            |            |            |            |            |            |            |
|        | O.3.1 |                                     |            |            |            |            |            |            |            |            |            |            |

## Стандартные режимы резания — WTX – AL

| Индекс | Глубина сверления 12xD<br>AL<br>10 793 ... |            |            |            |            |            |            |            |            |            |            |
|--------|--------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|        | $V_c$<br>м/мин<br>с внутр.<br>СОЖ          | Ø 3-4      | Ø 4-5      | Ø 5-6      | Ø 6-8      | Ø 8-10     | Ø 10-12    | Ø 12-14    | Ø 14-16    | Ø 16-18    | Ø 18-20    |
|        |                                            | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
| P.1.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| P.1.2  |                                            |            |            |            |            |            |            |            |            |            |            |
| P.1.3  |                                            |            |            |            |            |            |            |            |            |            |            |
| P.1.4  |                                            |            |            |            |            |            |            |            |            |            |            |
| P.1.5  |                                            |            |            |            |            |            |            |            |            |            |            |
| P.2.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| P.2.2  |                                            |            |            |            |            |            |            |            |            |            |            |
| P.2.3  |                                            |            |            |            |            |            |            |            |            |            |            |
| P.2.4  |                                            |            |            |            |            |            |            |            |            |            |            |
| P.3.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| P.3.2  |                                            |            |            |            |            |            |            |            |            |            |            |
| P.3.3  |                                            |            |            |            |            |            |            |            |            |            |            |
| P.4.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| P.4.2  |                                            |            |            |            |            |            |            |            |            |            |            |
| M.1.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| M.2.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| M.3.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| K.1.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| K.1.2  |                                            |            |            |            |            |            |            |            |            |            |            |
| K.2.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| K.2.2  |                                            |            |            |            |            |            |            |            |            |            |            |
| K.3.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| K.3.2  |                                            |            |            |            |            |            |            |            |            |            |            |
| N.1.1  | 250                                        | 0,20       | 0,22       | 0,25       | 0,29       | 0,32       | 0,35       | 0,40       | 0,45       | 0,50       | 0,55       |
| N.1.2  | 280                                        | 0,20       | 0,22       | 0,25       | 0,29       | 0,32       | 0,35       | 0,40       | 0,45       | 0,50       | 0,55       |
| N.2.1  | 250                                        | 0,20       | 0,22       | 0,28       | 0,32       | 0,35       | 0,38       | 0,45       | 0,50       | 0,55       | 0,60       |
| N.2.2  | 280                                        | 0,20       | 0,22       | 0,28       | 0,32       | 0,35       | 0,38       | 0,45       | 0,50       | 0,55       | 0,60       |
| N.2.3  | 245                                        | 0,20       | 0,22       | 0,25       | 0,29       | 0,32       | 0,35       | 0,40       | 0,45       | 0,50       | 0,55       |
| N.3.1  | 150                                        | 0,11       | 0,13       | 0,15       | 0,19       | 0,23       | 0,26       | 0,30       | 0,34       | 0,38       | 0,04       |
| N.3.2  | 150                                        | 0,11       | 0,13       | 0,15       | 0,19       | 0,23       | 0,26       | 0,30       | 0,34       | 0,38       | 0,04       |
| N.3.3  | 120                                        | 0,11       | 0,13       | 0,15       | 0,19       | 0,23       | 0,26       | 0,30       | 0,34       | 0,38       | 0,04       |
| N.4.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| S.1.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| S.1.2  |                                            |            |            |            |            |            |            |            |            |            |            |
| S.2.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| S.2.2  |                                            |            |            |            |            |            |            |            |            |            |            |
| S.2.3  |                                            |            |            |            |            |            |            |            |            |            |            |
| S.3.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| S.3.2  |                                            |            |            |            |            |            |            |            |            |            |            |
| S.3.3  |                                            |            |            |            |            |            |            |            |            |            |            |
| H.1.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| H.1.2  |                                            |            |            |            |            |            |            |            |            |            |            |
| H.1.3  |                                            |            |            |            |            |            |            |            |            |            |            |
| H.1.4  |                                            |            |            |            |            |            |            |            |            |            |            |
| H.2.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| H.3.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| O.1.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| O.1.2  |                                            |            |            |            |            |            |            |            |            |            |            |
| O.2.1  |                                            |            |            |            |            |            |            |            |            |            |            |
| O.2.2  |                                            |            |            |            |            |            |            |            |            |            |            |
| O.3.1  |                                            |            |            |            |            |            |            |            |            |            |            |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

## Стандартные режимы резания — WTX – Ti

2

| Индекс | Глубина сверления 3xD / 5xD      |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
|--------|----------------------------------|---------------------|---------------------|---------------------|---------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|        | Ti                               |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
|        | 10 786 ..., 10 787 ...           |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
|        | $V_c$<br>, м/мин<br>с внутр. СОЖ | Ø 3-4<br>f<br>мм/об | Ø 4-5<br>f<br>мм/об | Ø 5-6<br>f<br>мм/об | Ø 6-8<br>f<br>мм/об | Ø 8-10<br>f<br>мм/об | Ø 10-12<br>f<br>мм/об | Ø 12-14<br>f<br>мм/об | Ø 14-16<br>f<br>мм/об | Ø 16-18<br>f<br>мм/об | Ø 18-20<br>f<br>мм/об |
| P.1.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| P.1.2  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| P.1.3  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| P.1.4  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| P.1.5  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| P.2.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| P.2.2  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| P.2.3  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| P.2.4  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| P.3.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| P.3.2  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| P.3.3  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| P.4.1  | 75                               | 0,03                | 0,04                | 0,05                | 0,06                | 0,08                 | 0,10                  | 0,12                  | 0,14                  | 0,15                  | 0,18                  |
| P.4.2  | 65                               | 0,03                | 0,04                | 0,05                | 0,06                | 0,08                 | 0,10                  | 0,12                  | 0,14                  | 0,15                  | 0,18                  |
| M.1.1  | 70                               | 0,03                | 0,04                | 0,05                | 0,06                | 0,08                 | 0,10                  | 0,12                  | 0,14                  | 0,15                  | 0,18                  |
| M.2.1  | 70                               | 0,03                | 0,04                | 0,05                | 0,06                | 0,08                 | 0,10                  | 0,12                  | 0,14                  | 0,15                  | 0,18                  |
| M.3.1  | 70                               | 0,03                | 0,04                | 0,05                | 0,06                | 0,08                 | 0,10                  | 0,12                  | 0,14                  | 0,15                  | 0,18                  |
| K.1.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| K.1.2  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| K.2.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| K.2.2  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| K.3.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| K.3.2  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| N.1.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| N.1.2  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| N.2.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| N.2.2  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| N.2.3  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| N.3.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| N.3.2  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| N.3.3  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| N.4.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| S.1.1  | 45                               | 0,02                | 0,02                | 0,02                | 0,04                | 0,05                 | 0,07                  | 0,09                  | 0,11                  | 0,13                  | 0,16                  |
| S.1.2  | 45                               | 0,02                | 0,02                | 0,02                | 0,04                | 0,05                 | 0,07                  | 0,09                  | 0,11                  | 0,13                  | 0,16                  |
| S.2.1  | 40                               | 0,02                | 0,02                | 0,02                | 0,04                | 0,05                 | 0,07                  | 0,09                  | 0,11                  | 0,13                  | 0,16                  |
| S.2.2  | 40                               | 0,02                | 0,02                | 0,02                | 0,04                | 0,05                 | 0,07                  | 0,09                  | 0,11                  | 0,13                  | 0,16                  |
| S.2.3  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| S.3.1  | 55                               | 0,02                | 0,02                | 0,02                | 0,04                | 0,05                 | 0,07                  | 0,09                  | 0,11                  | 0,13                  | 0,16                  |
| S.3.2  | 45                               | 0,02                | 0,02                | 0,02                | 0,04                | 0,05                 | 0,07                  | 0,09                  | 0,11                  | 0,13                  | 0,16                  |
| S.3.3  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| H.1.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| H.1.2  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| H.1.3  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| H.1.4  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| H.2.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| H.3.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| O.1.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| O.1.2  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| O.2.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| O.2.2  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |
| O.3.1  |                                  |                     |                     |                     |                     |                      |                       |                       |                       |                       |                       |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

## Стандартные режимы резания — WTX – Н

| Индекс | Глубина сверления 3xD<br>Н<br>10 776 ... |                    |                    |                    |                    |                    |                     |                      |                      |
|--------|------------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|----------------------|----------------------|
|        | $v_c$<br>, м/мин                         | $\emptyset$<br>2-3 | $\emptyset$<br>3-4 | $\emptyset$<br>4-5 | $\emptyset$<br>5-6 | $\emptyset$<br>6-8 | $\emptyset$<br>8-10 | $\emptyset$<br>10-12 | $\emptyset$<br>12-14 |
|        | с внутр. СОЖ                             | f                  | f                  | f                  | f                  | f                  | f                   | f                    | f                    |
|        |                                          | мм/об              | мм/об              | мм/об              | мм/об              | мм/об              | мм/об               | мм/об                | мм/об                |
| P.1.1  | 120                                      | 0,05               | 0,07               | 0,08               | 0,10               | 0,14               | 0,18                | 0,21                 | 0,24                 |
| P.1.2  | 110                                      | 0,05               | 0,06               | 0,08               | 0,09               | 0,13               | 0,16                | 0,19                 | 0,22                 |
| P.1.3  | 100                                      | 0,04               | 0,05               | 0,07               | 0,08               | 0,12               | 0,15                | 0,18                 | 0,21                 |
| P.1.4  | 100                                      | 0,04               | 0,05               | 0,07               | 0,08               | 0,12               | 0,15                | 0,18                 | 0,21                 |
| P.1.5  | 120                                      | 0,05               | 0,07               | 0,08               | 0,10               | 0,14               | 0,18                | 0,21                 | 0,24                 |
| P.2.1  | 110                                      | 0,05               | 0,07               | 0,08               | 0,10               | 0,14               | 0,18                | 0,21                 | 0,24                 |
| P.2.2  | 100                                      | 0,05               | 0,06               | 0,08               | 0,09               | 0,13               | 0,16                | 0,19                 | 0,22                 |
| P.2.3  | 100                                      | 0,05               | 0,06               | 0,08               | 0,09               | 0,13               | 0,16                | 0,19                 | 0,22                 |
| P.2.4  | 100                                      | 0,04               | 0,05               | 0,07               | 0,08               | 0,12               | 0,15                | 0,18                 | 0,21                 |
| P.3.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| P.3.2  | 80                                       | 0,04               | 0,05               | 0,07               | 0,08               | 0,12               | 0,15                | 0,18                 | 0,21                 |
| P.3.3  | 80                                       | 0,04               | 0,05               | 0,07               | 0,08               | 0,12               | 0,15                | 0,18                 | 0,21                 |
| P.4.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| P.4.2  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| M.1.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| M.2.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| M.3.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| K.1.1  | 115                                      | 0,08               | 0,10               | 0,13               | 0,15               | 0,19               | 0,23                | 0,27                 | 0,34                 |
| K.1.2  | 95                                       | 0,08               | 0,10               | 0,13               | 0,15               | 0,19               | 0,23                | 0,27                 | 0,34                 |
| K.2.1  | 95                                       | 0,06               | 0,08               | 0,10               | 0,13               | 0,16               | 0,18                | 0,22                 | 0,25                 |
| K.2.2  | 90                                       | 0,06               | 0,08               | 0,10               | 0,13               | 0,16               | 0,18                | 0,22                 | 0,25                 |
| K.3.1  | 95                                       | 0,06               | 0,08               | 0,10               | 0,13               | 0,16               | 0,18                | 0,22                 | 0,25                 |
| K.3.2  | 90                                       | 0,06               | 0,08               | 0,10               | 0,13               | 0,16               | 0,18                | 0,22                 | 0,25                 |
| N.1.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| N.1.2  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| N.2.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| N.2.2  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| N.2.3  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| N.3.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| N.3.2  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| N.3.3  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| N.4.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| S.1.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| S.1.2  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| S.2.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| S.2.2  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| S.2.3  | 80                                       | 0,04               | 0,05               | 0,07               | 0,08               | 0,12               | 0,15                | 0,18                 | 0,21                 |
| S.3.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| S.3.2  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| S.3.3  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| H.1.1  | 30                                       | 0,01               | 0,01               | 0,02               | 0,02               | 0,03               | 0,04                | 0,06                 | 0,08                 |
| H.1.2  | 15                                       | 0,01               | 0,02               | 0,02               | 0,03               | 0,04               | 0,06                | 0,08                 | 0,10                 |
| H.1.3  | 10                                       | 0,01               | 0,02               | 0,02               | 0,03               | 0,03               | 0,04                | 0,05                 | 0,06                 |
| H.1.4  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| H.2.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| H.3.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| O.1.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| O.1.2  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| O.2.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| O.2.2  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |
| O.3.1  |                                          |                    |                    |                    |                    |                    |                     |                      |                      |



Параметры резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

| Глубина сверления 3xD<br>H<br>10 777 ...                                                                                   |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|----------------------------------------------------------------------------------------------------------------------------|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|----------------------|----------------------|
| Индекс                                                                                                                     | $v_c$<br>, м/мин | $\emptyset$<br>2-3 | $\emptyset$<br>3-4 | $\emptyset$<br>4-5 | $\emptyset$<br>5-6 | $\emptyset$<br>6-8 | $\emptyset$<br>8-10 | $\emptyset$<br>10-12 | $\emptyset$<br>12-14 |
|                                                                                                                            | без внутр. охл.  | f<br>мм/об         | f<br>мм/об         | f<br>мм/об         | f<br>мм/об         | f<br>мм/об         | f<br>мм/об          | f<br>мм/об           | f<br>мм/об           |
| P.1.1<br>P.1.2<br>P.1.3<br>P.1.4<br>P.1.5<br>P.2.1<br>P.2.2<br>P.2.3<br>P.2.4<br>P.3.1<br>P.3.2<br>P.3.3<br>P.4.1<br>P.4.2 | 80               | 0,05               | 0,07               | 0,08               | 0,10               | 0,14               | 0,18                | 0,21                 | 0,24                 |
|                                                                                                                            | 70               | 0,04               | 0,05               | 0,06               | 0,08               | 0,12               | 0,15                | 0,18                 | 0,21                 |
|                                                                                                                            | 70               | 0,04               | 0,05               | 0,06               | 0,08               | 0,12               | 0,15                | 0,18                 | 0,21                 |
|                                                                                                                            | 70               | 0,04               | 0,05               | 0,06               | 0,08               | 0,12               | 0,15                | 0,18                 | 0,21                 |
|                                                                                                                            | 80               | 0,05               | 0,07               | 0,08               | 0,10               | 0,14               | 0,18                | 0,21                 | 0,24                 |
|                                                                                                                            | 75               | 0,05               | 0,07               | 0,08               | 0,10               | 0,14               | 0,18                | 0,21                 | 0,24                 |
|                                                                                                                            | 70               | 0,04               | 0,06               | 0,08               | 0,09               | 0,13               | 0,16                | 0,19                 | 0,22                 |
|                                                                                                                            | 70               | 0,04               | 0,05               | 0,06               | 0,08               | 0,12               | 0,15                | 0,18                 | 0,21                 |
|                                                                                                                            | 70               | 0,04               | 0,05               | 0,06               | 0,08               | 0,12               | 0,15                | 0,18                 | 0,21                 |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
| M.1.1<br>M.2.1<br>M.3.1                                                                                                    |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
| K.1.1<br>K.1.2<br>K.2.1<br>K.2.2<br>K.3.1<br>K.3.2                                                                         | 85               | 0,10               | 0,10               | 0,10               | 0,20               | 0,20               | 0,20                | 0,30                 | 0,30                 |
|                                                                                                                            | 80               | 0,10               | 0,10               | 0,10               | 0,20               | 0,20               | 0,20                | 0,30                 | 0,30                 |
|                                                                                                                            | 85               | 0,10               | 0,10               | 0,10               | 0,10               | 0,20               | 0,20                | 0,20                 | 0,30                 |
|                                                                                                                            | 80               | 0,10               | 0,10               | 0,10               | 0,10               | 0,20               | 0,20                | 0,20                 | 0,30                 |
|                                                                                                                            | 85               | 0,10               | 0,10               | 0,10               | 0,10               | 0,20               | 0,20                | 0,20                 | 0,30                 |
|                                                                                                                            | 80               | 0,10               | 0,10               | 0,10               | 0,10               | 0,20               | 0,20                | 0,20                 | 0,30                 |
| N.1.1<br>N.1.2<br>N.2.1<br>N.2.2<br>N.2.3<br>N.3.1<br>N.3.2<br>N.3.3<br>N.4.1                                              |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
| S.1.1<br>S.1.2<br>S.2.1<br>S.2.2<br>S.2.3<br>S.3.1<br>S.3.2<br>S.3.3                                                       |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
| H.1.1<br>H.1.2<br>H.1.3<br>H.1.4<br>H.2.1<br>H.3.1                                                                         | 30               | 0,04               | 0,05               | 0,05               | 0,06               | 0,07               | 0,08                | 0,09                 | 0,10                 |
|                                                                                                                            | 15               | 0,04               | 0,05               | 0,05               | 0,06               | 0,07               | 0,08                | 0,09                 | 0,10                 |
|                                                                                                                            | 10               | 0,03               | 0,04               | 0,04               | 0,05               | 0,06               | 0,06                | 0,07                 | 0,07                 |
|                                                                                                                            | 10               | 0,03               | 0,04               | 0,04               | 0,05               | 0,06               | 0,06                | 0,07                 | 0,07                 |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
| O.1.1<br>O.1.2<br>O.2.1<br>O.2.2<br>O.3.1                                                                                  |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |
|                                                                                                                            |                  |                    |                    |                    |                    |                    |                     |                      |                      |

## Стандартные режимы резания — WTX – 180

| Индекс | Глубина сверления 3xD<br>Тип 180<br>10 720 ... |            |            |            |            |            |            |  |
|--------|------------------------------------------------|------------|------------|------------|------------|------------|------------|--|
|        | V <sub>c</sub><br>, м/мин<br>с внутр. СОЖ      | Ø 3-5      | Ø 5-8      | Ø 8-12     | Ø 12-16    | Ø 16-20    | Ø 20-25    |  |
|        |                                                | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |  |
| P.1.1  | 90                                             | 0,09       | 0,13       | 0,18       | 0,22       | 0,25       | 0,27       |  |
| P.1.2  | 85                                             | 0,09       | 0,13       | 0,17       | 0,21       | 0,24       | 0,26       |  |
| P.1.3  | 80                                             | 0,09       | 0,12       | 0,16       | 0,20       | 0,23       | 0,25       |  |
| P.1.4  | 75                                             | 0,08       | 0,12       | 0,16       | 0,19       | 0,22       | 0,23       |  |
| P.1.5  | 70                                             | 0,08       | 0,11       | 0,15       | 0,18       | 0,20       | 0,22       |  |
| P.2.1  | 90                                             | 0,11       | 0,16       | 0,21       | 0,26       | 0,29       | 0,32       |  |
| P.2.2  | 80                                             | 0,10       | 0,14       | 0,19       | 0,24       | 0,27       | 0,29       |  |
| P.2.3  | 70                                             | 0,09       | 0,13       | 0,17       | 0,21       | 0,24       | 0,26       |  |
| P.2.4  | 55                                             | 0,09       | 0,12       | 0,16       | 0,19       | 0,21       | 0,23       |  |
| P.3.1  | 60                                             | 0,09       | 0,13       | 0,17       | 0,21       | 0,24       | 0,26       |  |
| P.3.2  | 50                                             | 0,08       | 0,11       | 0,14       | 0,17       | 0,20       | 0,21       |  |
| P.3.3  | 50                                             | 0,06       | 0,09       | 0,11       | 0,14       | 0,15       | 0,16       |  |
| P.4.1  | 50                                             | 0,06       | 0,09       | 0,11       | 0,14       | 0,16       | 0,17       |  |
| P.4.2  | 50                                             | 0,06       | 0,09       | 0,11       | 0,14       | 0,16       | 0,17       |  |
| M.1.1  | 45                                             | 0,06       | 0,09       | 0,11       | 0,14       | 0,16       | 0,17       |  |
| M.2.1  | 40                                             | 0,05       | 0,07       | 0,10       | 0,12       | 0,14       | 0,15       |  |
| M.3.1  | 40                                             | 0,05       | 0,07       | 0,10       | 0,12       | 0,14       | 0,15       |  |
| K.1.1  | 95                                             | 0,12       | 0,19       | 0,26       | 0,33       | 0,38       | 0,41       |  |
| K.1.2  | 80                                             | 0,11       | 0,16       | 0,21       | 0,26       | 0,30       | 0,32       |  |
| K.2.1  | 130                                            | 0,12       | 0,18       | 0,25       | 0,30       | 0,35       | 0,38       |  |
| K.2.2  | 80                                             | 0,11       | 0,16       | 0,21       | 0,26       | 0,30       | 0,32       |  |
| K.3.1  | 70                                             | 0,12       | 0,17       | 0,23       | 0,28       | 0,32       | 0,35       |  |
| K.3.2  | 65                                             | 0,10       | 0,14       | 0,18       | 0,22       | 0,25       | 0,28       |  |
| N.1.1  |                                                |            |            |            |            |            |            |  |
| N.1.2  |                                                |            |            |            |            |            |            |  |
| N.2.1  |                                                |            |            |            |            |            |            |  |
| N.2.2  |                                                |            |            |            |            |            |            |  |
| N.2.3  |                                                |            |            |            |            |            |            |  |
| N.3.1  |                                                |            |            |            |            |            |            |  |
| N.3.2  |                                                |            |            |            |            |            |            |  |
| N.3.3  |                                                |            |            |            |            |            |            |  |
| N.4.1  |                                                |            |            |            |            |            |            |  |
| S.1.1  |                                                |            |            |            |            |            |            |  |
| S.1.2  |                                                |            |            |            |            |            |            |  |
| S.2.1  |                                                |            |            |            |            |            |            |  |
| S.2.2  |                                                |            |            |            |            |            |            |  |
| S.2.3  |                                                |            |            |            |            |            |            |  |
| S.3.1  |                                                |            |            |            |            |            |            |  |
| S.3.2  |                                                |            |            |            |            |            |            |  |
| S.3.3  |                                                |            |            |            |            |            |            |  |
| H.1.1  |                                                |            |            |            |            |            |            |  |
| H.1.2  |                                                |            |            |            |            |            |            |  |
| H.1.3  |                                                |            |            |            |            |            |            |  |
| H.1.4  |                                                |            |            |            |            |            |            |  |
| H.2.1  |                                                |            |            |            |            |            |            |  |
| H.3.1  |                                                |            |            |            |            |            |            |  |
| O.1.1  |                                                |            |            |            |            |            |            |  |
| O.1.2  |                                                |            |            |            |            |            |            |  |
| O.2.1  |                                                |            |            |            |            |            |            |  |
| O.2.2  |                                                |            |            |            |            |            |            |  |
| O.3.1  |                                                |            |            |            |            |            |            |  |

|        |     | Глубина сверления 5xD<br>Тип 180<br>10 721 ... |            |            |            |            |            |
|--------|-----|------------------------------------------------|------------|------------|------------|------------|------------|
| Индекс |     | V <sub>c</sub><br>, м/мин<br>с внутр. СОЖ      | Ø 3-5      | Ø 5-8      | Ø 8-12     | Ø 12-16    | Ø 16-20    |
|        |     |                                                | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
| P.1.1  | 90  | 0,09                                           | 0,13       | 0,18       | 0,22       | 0,25       |            |
| P.1.2  | 85  | 0,09                                           | 0,13       | 0,17       | 0,21       | 0,24       |            |
| P.1.3  | 80  | 0,09                                           | 0,12       | 0,16       | 0,20       | 0,23       |            |
| P.1.4  | 75  | 0,08                                           | 0,12       | 0,16       | 0,19       | 0,22       |            |
| P.1.5  | 70  | 0,08                                           | 0,11       | 0,15       | 0,18       | 0,20       |            |
| P.2.1  | 90  | 0,11                                           | 0,16       | 0,21       | 0,26       | 0,29       |            |
| P.2.2  | 80  | 0,10                                           | 0,14       | 0,19       | 0,24       | 0,27       |            |
| P.2.3  | 70  | 0,09                                           | 0,13       | 0,17       | 0,21       | 0,24       |            |
| P.2.4  | 55  | 0,09                                           | 0,12       | 0,16       | 0,19       | 0,21       |            |
| P.3.1  | 60  | 0,09                                           | 0,13       | 0,17       | 0,21       | 0,24       |            |
| P.3.2  | 50  | 0,08                                           | 0,11       | 0,14       | 0,17       | 0,20       |            |
| P.3.3  | 50  | 0,06                                           | 0,09       | 0,11       | 0,14       | 0,15       |            |
| P.4.1  | 50  | 0,06                                           | 0,09       | 0,11       | 0,14       | 0,16       |            |
| P.4.2  | 50  | 0,06                                           | 0,09       | 0,11       | 0,14       | 0,16       |            |
| M.1.1  | 45  | 0,06                                           | 0,09       | 0,11       | 0,14       | 0,16       |            |
| M.2.1  | 40  | 0,05                                           | 0,07       | 0,10       | 0,12       | 0,14       |            |
| M.3.1  | 40  | 0,05                                           | 0,07       | 0,10       | 0,12       | 0,14       |            |
| K.1.1  | 95  | 0,12                                           | 0,19       | 0,26       | 0,33       | 0,38       |            |
| K.1.2  | 80  | 0,11                                           | 0,16       | 0,21       | 0,26       | 0,30       |            |
| K.2.1  | 130 | 0,12                                           | 0,18       | 0,25       | 0,30       | 0,35       |            |
| K.2.2  | 80  | 0,11                                           | 0,16       | 0,21       | 0,26       | 0,30       |            |
| K.3.1  | 70  | 0,12                                           | 0,17       | 0,23       | 0,28       | 0,32       |            |
| K.3.2  | 65  | 0,10                                           | 0,14       | 0,18       | 0,22       | 0,25       |            |
| N.1.1  |     |                                                |            |            |            |            |            |
| N.1.2  |     |                                                |            |            |            |            |            |
| N.2.1  |     |                                                |            |            |            |            |            |
| N.2.2  |     |                                                |            |            |            |            |            |
| N.2.3  |     |                                                |            |            |            |            |            |
| N.3.1  |     |                                                |            |            |            |            |            |
| N.3.2  |     |                                                |            |            |            |            |            |
| N.3.3  |     |                                                |            |            |            |            |            |
| N.4.1  |     |                                                |            |            |            |            |            |
| S.1.1  |     |                                                |            |            |            |            |            |
| S.1.2  |     |                                                |            |            |            |            |            |
| S.2.1  |     |                                                |            |            |            |            |            |
| S.2.2  |     |                                                |            |            |            |            |            |
| S.2.3  |     |                                                |            |            |            |            |            |
| S.3.1  |     |                                                |            |            |            |            |            |
| S.3.2  |     |                                                |            |            |            |            |            |
| S.3.3  |     |                                                |            |            |            |            |            |
| H.1.1  |     |                                                |            |            |            |            |            |
| H.1.2  |     |                                                |            |            |            |            |            |
| H.1.3  |     |                                                |            |            |            |            |            |
| H.1.4  |     |                                                |            |            |            |            |            |
| H.2.1  |     |                                                |            |            |            |            |            |
| H.3.1  |     |                                                |            |            |            |            |            |
| O.1.1  |     |                                                |            |            |            |            |            |
| O.1.2  |     |                                                |            |            |            |            |            |
| O.2.1  |     |                                                |            |            |            |            |            |
| O.2.2  |     |                                                |            |            |            |            |            |
| O.3.1  |     |                                                |            |            |            |            |            |



### Рекомендации по применению

#### Засверливание с уменьшением подачи

1. Умножить подачу  $f$  в мм/об на коэффициент коррекции  $A_k$ .
2. Засверливание с уменьшенной подачей до погружения инструментом на глубину  $0,25xD$  полным диаметром.
3. Вывести сверло из отверстия с удвоенной подачей  $f$  в мм/об — только для наклонных поверхностей в детали.  
  
Данный рабочий процесс необходим, чтобы обеспечить максимальную производительность сверла!
4. Просверлить отверстие при подаче  $f$  в мм/об без цикла удаления стружки.

#### Коэффициенты коррекции $A_k$ для $f$ в мм/об при засверливании

| Наклон<br>поверхности детали | $A_k$ при 3xD (10 720 ...) | $A_k$ при 5xD (10 721 ...) |
|------------------------------|----------------------------|----------------------------|
| 15°                          | 0,5                        | 0,25                       |
| 30°                          | 0,4                        | не рекомендуется           |
| 45°                          | 0,25                       | не рекомендуется           |



Для сверления отверстий с плоским дном сверлом WTX — 180 5xD рекомендуется использовать пилотное сверло (WTX — UNI 3xD).

## Стандартные режимы резания — тип N — спиральные сверла

| Индекс | V <sub>c</sub><br>, м/мин<br>без внутр. охл. | Глубина сверления 3xD<br>Тип N (подобно DIN 1897)<br>10 700 ... |            |            |            |            |            |            |            |            |            |            |            |            |
|--------|----------------------------------------------|-----------------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|        |                                              | Ø 0,5–1,5                                                       | Ø 1,5–2    | Ø 2–3      | Ø 3–4      | Ø 4–5      | Ø 5–6      | Ø 6–8      | Ø 8–10     | Ø 10–12    | Ø 12–14    | Ø 14–16    | Ø 16–18    | Ø 18–20    |
|        |                                              | f<br>мм/об                                                      | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
| P.1.1  | 75                                           | 0,03                                                            | 0,04       | 0,05       | 0,07       | 0,08       | 0,1        | 0,12       | 0,14       | 0,16       | 0,2        | 0,02       | 0,02       | 0,3        |
| P.1.2  | 65                                           | 0,03                                                            | 0,04       | 0,05       | 0,07       | 0,08       | 0,1        | 0,12       | 0,14       | 0,16       | 0,2        | 0,02       | 0,02       | 0,3        |
| P.1.3  | 65                                           | 0,03                                                            | 0,04       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,13       | 0,15       | 0,02       | 0,02       | 0,23       |
| P.1.4  | 65                                           | 0,03                                                            | 0,04       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,13       | 0,15       | 0,02       | 0,02       | 0,23       |
| P.1.5  | 70                                           | 0,03                                                            | 0,04       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,13       | 0,15       | 0,02       | 0,02       | 0,23       |
| P.2.1  | 70                                           | 0,03                                                            | 0,04       | 0,05       | 0,07       | 0,08       | 0,1        | 0,12       | 0,14       | 0,16       | 0,2        | 0,02       | 0,02       | 0,3        |
| P.2.2  | 65                                           | 0,03                                                            | 0,04       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,13       | 0,15       | 0,02       | 0,02       | 0,23       |
| P.2.3  | 65                                           | 0,03                                                            | 0,04       | 0,05       | 0,07       | 0,08       | 0,1        | 0,12       | 0,14       | 0,16       | 0,2        | 0,02       | 0,02       | 0,3        |
| P.2.4  | 65                                           | 0,03                                                            | 0,04       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,13       | 0,15       | 0,02       | 0,02       | 0,23       |
| P.3.1  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| P.3.2  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| P.3.3  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| P.4.1  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| P.4.2  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| M.1.1  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| M.2.1  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| M.3.1  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| K.1.1  | 70                                           | 0,02                                                            | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,12       | 0,14       | 0,17       | 0,2        | 0,2        | 0,3        |
| K.1.2  | 70                                           | 0,02                                                            | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,12       | 0,15       | 0,18       | 0,2        | 0,23       |
| K.2.1  | 70                                           | 0,02                                                            | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,12       | 0,15       | 0,18       | 0,2        | 0,23       |
| K.2.2  | 70                                           | 0,02                                                            | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,12       | 0,15       | 0,18       | 0,2        | 0,23       |
| K.3.1  | 70                                           | 0,02                                                            | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,12       | 0,15       | 0,18       | 0,2        | 0,23       |
| K.3.2  | 70                                           | 0,02                                                            | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,12       | 0,15       | 0,18       | 0,2        | 0,23       |
| N.1.1  | 200                                          | 0,007                                                           | 0,01       | 0,01       | 0,013      | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
| N.1.2  | 200                                          | 0,007                                                           | 0,01       | 0,01       | 0,013      | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
| N.2.1  | 160                                          | 0,007                                                           | 0,01       | 0,01       | 0,013      | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
| N.2.2  | 180                                          | 0,007                                                           | 0,01       | 0,01       | 0,013      | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
| N.2.3  | 130                                          | 0,007                                                           | 0,01       | 0,01       | 0,013      | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
| N.3.1  | 160                                          | 0,003                                                           | 0,004      | 0,005      | 0,007      | 0,01       | 0,01       | 0,02       | 0,03       | 0,04       | 0,06       | 0,09       | 0,11       | 0,13       |
| N.3.2  | 160                                          | 0,003                                                           | 0,004      | 0,005      | 0,007      | 0,01       | 0,01       | 0,02       | 0,03       | 0,04       | 0,06       | 0,09       | 0,11       | 0,13       |
| N.3.3  | 100                                          | 0,003                                                           | 0,004      | 0,005      | 0,007      | 0,01       | 0,01       | 0,02       | 0,03       | 0,04       | 0,06       | 0,09       | 0,11       | 0,13       |
| N.4.1  | 200                                          | 0,007                                                           | 0,008      | 0,01       | 0,013      | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
| S.1.1  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| S.1.2  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| S.2.1  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| S.2.2  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| S.2.3  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| S.3.1  | 30                                           | 0,002                                                           | 0,002      | 0,003      | 0,003      | 0,004      | 0,005      | 0,01       | 0,02       | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       |
| S.3.2  | 20                                           | 0,002                                                           | 0,002      | 0,003      | 0,003      | 0,004      | 0,005      | 0,01       | 0,02       | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       |
| S.3.3  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| H.1.1  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| H.1.2  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| H.1.3  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| H.1.4  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| H.2.1  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| H.3.1  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| O.1.1  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| O.1.2  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| O.2.1  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| O.2.2  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |
| O.3.1  |                                              |                                                                 |            |            |            |            |            |            |            |            |            |            |            |            |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

| Глубина сверления 5xD<br>Тип N (подобно DIN 338)<br>10 710 ...                                                             |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Индекс                                                                                                                     | V <sub>c</sub><br>, м/мин<br>без внутр. охл. | Ø 0,5-1,5  | Ø 1,5-2    | Ø 2-3      | Ø 3-4      | Ø 4-5      | Ø 5-6      | Ø 6-8      | Ø 8-10     | Ø 10-12    | Ø 12-14    | Ø 14-16    | Ø 16-18    | Ø 18-20    |
|                                                                                                                            |                                              | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
| P.1.1<br>P.1.2<br>P.1.3<br>P.1.4<br>P.1.5<br>P.2.1<br>P.2.2<br>P.2.3<br>P.2.4<br>P.3.1<br>P.3.2<br>P.3.3<br>P.4.1<br>P.4.2 | 75                                           | 0,03       | 0,04       | 0,05       | 0,07       | 0,08       | 0,1        | 0,12       | 0,14       | 0,16       | 0,2        | 0,02       | 0,02       | 0,3        |
|                                                                                                                            | 65                                           | 0,03       | 0,04       | 0,05       | 0,07       | 0,08       | 0,1        | 0,12       | 0,14       | 0,16       | 0,2        | 0,02       | 0,02       | 0,3        |
|                                                                                                                            | 65                                           | 0,03       | 0,04       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,13       | 0,15       | 0,02       | 0,02       | 0,23       |
|                                                                                                                            | 65                                           | 0,03       | 0,04       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,13       | 0,15       | 0,02       | 0,02       | 0,23       |
|                                                                                                                            | 70                                           | 0,03       | 0,04       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,13       | 0,15       | 0,02       | 0,02       | 0,23       |
|                                                                                                                            | 70                                           | 0,03       | 0,04       | 0,05       | 0,07       | 0,08       | 0,1        | 0,12       | 0,14       | 0,16       | 0,2        | 0,02       | 0,02       | 0,3        |
|                                                                                                                            | 65                                           | 0,03       | 0,04       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,13       | 0,15       | 0,02       | 0,02       | 0,23       |
|                                                                                                                            | 65                                           | 0,03       | 0,04       | 0,05       | 0,07       | 0,08       | 0,1        | 0,12       | 0,14       | 0,16       | 0,2        | 0,02       | 0,02       | 0,3        |
|                                                                                                                            | 65                                           | 0,03       | 0,04       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,13       | 0,15       | 0,02       | 0,02       | 0,23       |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
| M.1.1<br>M.2.1<br>M.3.1                                                                                                    |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
| K.1.1<br>K.1.2<br>K.2.1<br>K.2.2<br>K.3.1<br>K.3.2                                                                         | 70                                           | 0,02       | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,12       | 0,14       | 0,17       | 0,2        | 0,2        | 0,3        |
|                                                                                                                            | 70                                           | 0,02       | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,12       | 0,15       | 0,18       | 0,2        | 0,23       |
|                                                                                                                            | 70                                           | 0,02       | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,12       | 0,15       | 0,18       | 0,2        | 0,23       |
|                                                                                                                            | 70                                           | 0,02       | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,12       | 0,15       | 0,18       | 0,2        | 0,23       |
|                                                                                                                            | 70                                           | 0,02       | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,12       | 0,15       | 0,18       | 0,2        | 0,23       |
|                                                                                                                            | 70                                           | 0,02       | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       | 0,1        | 0,11       | 0,12       | 0,15       | 0,18       | 0,2        | 0,23       |
| N.1.1<br>N.1.2<br>N.2.1<br>N.2.2<br>N.2.3<br>N.3.1<br>N.3.2<br>N.3.3<br>N.4.1                                              | 200                                          | 0,007      | 0,01       | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
|                                                                                                                            | 200                                          | 0,007      | 0,01       | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
|                                                                                                                            | 160                                          | 0,007      | 0,01       | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
|                                                                                                                            | 180                                          | 0,007      | 0,01       | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
|                                                                                                                            | 130                                          | 0,007      | 0,01       | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
|                                                                                                                            | 160                                          | 0,003      | 0,004      | 0,005      | 0,007      | 0,01       | 0,01       | 0,02       | 0,03       | 0,04       | 0,06       | 0,09       | 0,11       | 0,13       |
|                                                                                                                            | 160                                          | 0,003      | 0,004      | 0,005      | 0,007      | 0,01       | 0,01       | 0,02       | 0,03       | 0,04       | 0,06       | 0,09       | 0,11       | 0,13       |
|                                                                                                                            | 100                                          | 0,003      | 0,004      | 0,005      | 0,007      | 0,01       | 0,01       | 0,02       | 0,03       | 0,04       | 0,06       | 0,09       | 0,11       | 0,13       |
|                                                                                                                            | 200                                          | 0,007      | 0,008      | 0,010      | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
| S.1.1<br>S.1.2<br>S.2.1<br>S.2.2<br>S.2.3<br>S.3.1<br>S.3.2<br>S.3.3                                                       |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            | 30                                           | 0,002      | 0,002      | 0,003      | 0,003      | 0,004      | 0,005      | 0,01       | 0,02       | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       |
|                                                                                                                            | 20                                           | 0,002      | 0,002      | 0,003      | 0,003      | 0,004      | 0,005      | 0,01       | 0,02       | 0,03       | 0,04       | 0,05       | 0,06       | 0,07       |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
| H.1.1<br>H.1.2<br>H.1.3<br>H.1.4<br>H.2.1<br>H.3.1                                                                         |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
| O.1.1<br>O.1.2<br>O.2.1<br>O.2.2<br>O.3.1                                                                                  |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |
|                                                                                                                            |                                              |            |            |            |            |            |            |            |            |            |            |            |            |            |

## Стандартные режимы резания — WPC — UNI

| Индекс | Глубина сверления 3xD<br>UNI<br>11 600 ..., 11 601 ..., 11 603 ..., 11 604 ... |                  |                   |                   |                 |                 |                 |                  |                   |                   |
|--------|--------------------------------------------------------------------------------|------------------|-------------------|-------------------|-----------------|-----------------|-----------------|------------------|-------------------|-------------------|
|        | $V_c$<br>, м/мин                                                               | $V_c$<br>, м/мин | $\emptyset$ 1-1,5 | $\emptyset$ 1,5-2 | $\emptyset$ 2-3 | $\emptyset$ 3-5 | $\emptyset$ 5-8 | $\emptyset$ 8-12 | $\emptyset$ 12-16 | $\emptyset$ 16-20 |
|        | без внутр. окл. с внутр. СОЖ                                                   |                  | f<br>мм/об        | f<br>мм/об        | f<br>мм/об      | f<br>мм/об      | f<br>мм/об      | f<br>мм/об       | f<br>мм/об        | f<br>мм/об        |
| P.1.1  | 75                                                                             | 85               | 0,05              | 0,06              | 0,08            | 0,11            | 0,15            | 0,20             | 0,25              | 0,28              |
| P.1.2  | 70                                                                             | 80               | 0,05              | 0,05              | 0,07            | 0,10            | 0,14            | 0,19             | 0,24              | 0,27              |
| P.1.3  | 70                                                                             | 75               | 0,05              | 0,05              | 0,07            | 0,10            | 0,14            | 0,18             | 0,23              | 0,26              |
| P.1.4  | 65                                                                             | 70               | 0,04              | 0,05              | 0,07            | 0,09            | 0,13            | 0,18             | 0,21              | 0,24              |
| P.1.5  | 60                                                                             | 70               | 0,04              | 0,05              | 0,06            | 0,09            | 0,12            | 0,17             | 0,20              | 0,23              |
| P.2.1  | 70                                                                             | 85               | 0,06              | 0,07              | 0,09            | 0,13            | 0,18            | 0,24             | 0,29              | 0,33              |
| P.2.2  | 65                                                                             | 75               | 0,05              | 0,06              | 0,08            | 0,11            | 0,16            | 0,22             | 0,27              | 0,30              |
| P.2.3  | 55                                                                             | 70               | 0,05              | 0,06              | 0,07            | 0,10            | 0,15            | 0,20             | 0,24              | 0,27              |
| P.2.4  | 45                                                                             | 55               | 0,05              | 0,06              | 0,07            | 0,10            | 0,13            | 0,17             | 0,21              | 0,24              |
| P.3.1  | 50                                                                             | 55               | 0,05              | 0,05              | 0,07            | 0,10            | 0,15            | 0,20             | 0,24              | 0,27              |
| P.3.2  | 40                                                                             | 45               | 0,04              | 0,05              | 0,06            | 0,09            | 0,12            | 0,16             | 0,20              | 0,22              |
| P.3.3  | 35                                                                             | 45               | 0,04              | 0,04              | 0,06            | 0,07            | 0,10            | 0,13             | 0,15              | 0,17              |
| P.4.1  | 35                                                                             | 45               | 0,03              | 0,04              | 0,05            | 0,07            | 0,10            | 0,13             | 0,16              | 0,18              |
| P.4.2  | 35                                                                             | 45               | 0,03              | 0,04              | 0,05            | 0,07            | 0,10            | 0,13             | 0,16              | 0,18              |
| M.1.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| M.2.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| M.3.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| K.1.1  | 60                                                                             | 80               | 0,04              | 0,06              | 0,09            | 0,14            | 0,21            | 0,30             | 0,37              | 0,42              |
| K.1.2  | 50                                                                             | 70               | 0,05              | 0,06              | 0,09            | 0,12            | 0,18            | 0,24             | 0,30              | 0,34              |
| K.2.1  | 70                                                                             | 110              | 0,05              | 0,07              | 0,09            | 0,14            | 0,20            | 0,28             | 0,34              | 0,39              |
| K.2.2  | 50                                                                             | 70               | 0,05              | 0,06              | 0,09            | 0,12            | 0,18            | 0,24             | 0,30              | 0,34              |
| K.3.1  | 55                                                                             | 60               | 0,06              | 0,07              | 0,09            | 0,13            | 0,19            | 0,26             | 0,32              | 0,36              |
| K.3.2  | 50                                                                             | 55               | 0,05              | 0,06              | 0,08            | 0,11            | 0,16            | 0,21             | 0,25              | 0,29              |
| N.1.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| N.1.2  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| N.2.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| N.2.2  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| N.2.3  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| N.3.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| N.3.2  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| N.3.3  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| N.4.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| S.1.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| S.1.2  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| S.2.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| S.2.2  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| S.2.3  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| S.3.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| S.3.2  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| S.3.3  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| H.1.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| H.1.2  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| H.1.3  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| H.1.4  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| H.2.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| H.3.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| O.1.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| O.1.2  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| O.2.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| O.2.2  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |
| O.3.1  |                                                                                |                  |                   |                   |                 |                 |                 |                  |                   |                   |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

| Глубина сверления 5xD                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
|------------------------------------------------|------------------------------|----------------|-------------------|-------------------|-----------------|-----------------|-----------------|------------------|-------------------|-------------------|--|
| UNI                                            |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| 11 606 ..., 11 607 ..., 11 609 ..., 11 610 ... |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| Индекс                                         | $V_c$<br>м/мин               | $V_c$<br>м/мин | $\emptyset$ 1-1,5 | $\emptyset$ 1,5-2 | $\emptyset$ 2-3 | $\emptyset$ 3-5 | $\emptyset$ 5-8 | $\emptyset$ 8-12 | $\emptyset$ 12-16 | $\emptyset$ 16-20 |  |
|                                                | без внутр. окл. с внутр. СОЖ |                | f<br>мм/об        | f<br>мм/об        | f<br>мм/об      | f<br>мм/об      | f<br>мм/об      | f<br>мм/об       | f<br>мм/об        | f<br>мм/об        |  |
| P.1.1                                          | 75                           | 85             | 0,05              | 0,06              | 0,08            | 0,11            | 0,15            | 0,20             | 0,25              | 0,28              |  |
| P.1.2                                          | 70                           | 80             | 0,05              | 0,05              | 0,07            | 0,10            | 0,14            | 0,19             | 0,24              | 0,27              |  |
| P.1.3                                          | 70                           | 75             | 0,05              | 0,05              | 0,07            | 0,10            | 0,14            | 0,18             | 0,23              | 0,26              |  |
| P.1.4                                          | 65                           | 70             | 0,04              | 0,05              | 0,07            | 0,09            | 0,13            | 0,18             | 0,21              | 0,24              |  |
| P.1.5                                          | 60                           | 70             | 0,04              | 0,05              | 0,06            | 0,09            | 0,12            | 0,17             | 0,20              | 0,23              |  |
| P.2.1                                          | 70                           | 85             | 0,06              | 0,07              | 0,09            | 0,13            | 0,18            | 0,24             | 0,29              | 0,33              |  |
| P.2.2                                          | 65                           | 75             | 0,05              | 0,06              | 0,08            | 0,11            | 0,16            | 0,22             | 0,27              | 0,30              |  |
| P.2.3                                          | 55                           | 70             | 0,05              | 0,06              | 0,07            | 0,10            | 0,15            | 0,20             | 0,24              | 0,27              |  |
| P.2.4                                          | 45                           | 55             | 0,05              | 0,06              | 0,07            | 0,10            | 0,13            | 0,17             | 0,21              | 0,24              |  |
| P.3.1                                          | 50                           | 55             | 0,05              | 0,05              | 0,07            | 0,10            | 0,15            | 0,20             | 0,24              | 0,27              |  |
| P.3.2                                          | 40                           | 45             | 0,04              | 0,05              | 0,06            | 0,09            | 0,12            | 0,16             | 0,20              | 0,22              |  |
| P.3.3                                          | 35                           | 45             | 0,04              | 0,04              | 0,06            | 0,07            | 0,10            | 0,13             | 0,15              | 0,17              |  |
| P.4.1                                          | 35                           | 45             | 0,03              | 0,04              | 0,05            | 0,07            | 0,10            | 0,13             | 0,16              | 0,18              |  |
| P.4.2                                          | 35                           | 45             | 0,03              | 0,04              | 0,05            | 0,07            | 0,10            | 0,13             | 0,16              | 0,18              |  |
| M.1.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| M.2.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| M.3.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| K.1.1                                          | 60                           | 80             | 0,04              | 0,06              | 0,09            | 0,14            | 0,21            | 0,30             | 0,37              | 0,42              |  |
| K.1.2                                          | 50                           | 70             | 0,05              | 0,06              | 0,09            | 0,12            | 0,18            | 0,24             | 0,30              | 0,34              |  |
| K.2.1                                          | 70                           | 110            | 0,05              | 0,07              | 0,09            | 0,14            | 0,20            | 0,28             | 0,34              | 0,39              |  |
| K.2.2                                          | 50                           | 70             | 0,05              | 0,06              | 0,09            | 0,12            | 0,18            | 0,24             | 0,30              | 0,34              |  |
| K.3.1                                          | 55                           | 60             | 0,06              | 0,07              | 0,09            | 0,13            | 0,19            | 0,26             | 0,32              | 0,36              |  |
| K.3.2                                          | 50                           | 55             | 0,05              | 0,06              | 0,08            | 0,11            | 0,16            | 0,21             | 0,25              | 0,29              |  |
| N.1.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| N.1.2                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| N.2.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| N.2.2                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| N.2.3                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| N.3.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| N.3.2                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| N.3.3                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| N.4.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| S.1.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| S.1.2                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| S.2.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| S.2.2                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| S.2.3                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| S.3.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| S.3.2                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| S.3.3                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| H.1.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| H.1.2                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| H.1.3                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| H.1.4                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| H.2.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| H.3.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| O.1.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| O.1.2                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| O.2.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| O.2.2                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |
| O.3.1                                          |                              |                |                   |                   |                 |                 |                 |                  |                   |                   |  |

## Стандартные режимы резания — WPC — UNI

| Индекс | Глубина сверления 8xD<br>UNI<br>11 612 ...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |            |             |              |              | Глубина сверления 12xD<br>UNI<br>11 615 ... |            |            |             |              |              |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-------------|--------------|--------------|---------------------------------------------|------------|------------|-------------|--------------|--------------|
|        | $V_c$<br>, м/мин                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | $\phi$ 3-5 | $\phi$ 5-8 | $\phi$ 8-12 | $\phi$ 12-16 | $\phi$ 16-20 | $V_c$<br>, м/мин                            | $\phi$ 3-5 | $\phi$ 5-8 | $\phi$ 8-12 | $\phi$ 12-16 | $\phi$ 16-18 |
|        | с внутр. СОЖ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | f<br>мм/об | f<br>мм/об | f<br>мм/об  | f<br>мм/об   | f<br>мм/об   | с внутр. СОЖ                                | f<br>мм/об | f<br>мм/об | f<br>мм/об  | f<br>мм/об   | f<br>мм/об   |
| P.1.1  | 85                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,11       | 0,15       | 0,20        | 0,25         | 0,28         | 85                                          | 0,11       | 0,15       | 0,20        | 0,25         | 0,28         |
| P.1.2  | 80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,10       | 0,14       | 0,19        | 0,24         | 0,27         | 80                                          | 0,10       | 0,14       | 0,19        | 0,24         | 0,27         |
| P.1.3  | 75                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,10       | 0,14       | 0,18        | 0,23         | 0,26         | 75                                          | 0,10       | 0,14       | 0,18        | 0,23         | 0,26         |
| P.1.4  | 70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,09       | 0,13       | 0,18        | 0,21         | 0,24         | 70                                          | 0,09       | 0,13       | 0,18        | 0,21         | 0,24         |
| P.1.5  | 70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,09       | 0,12       | 0,17        | 0,20         | 0,23         | 70                                          | 0,09       | 0,12       | 0,17        | 0,20         | 0,23         |
| P.2.1  | 85                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,13       | 0,18       | 0,24        | 0,29         | 0,33         | 85                                          | 0,13       | 0,18       | 0,24        | 0,29         | 0,33         |
| P.2.2  | 75                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,11       | 0,16       | 0,22        | 0,27         | 0,30         | 75                                          | 0,11       | 0,16       | 0,22        | 0,27         | 0,30         |
| P.2.3  | 70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,10       | 0,15       | 0,20        | 0,24         | 0,27         | 70                                          | 0,10       | 0,15       | 0,20        | 0,24         | 0,27         |
| P.2.4  | 55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,10       | 0,13       | 0,17        | 0,21         | 0,24         | 55                                          | 0,10       | 0,13       | 0,17        | 0,21         | 0,24         |
| P.3.1  | 55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,10       | 0,15       | 0,20        | 0,24         | 0,27         | 55                                          | 0,10       | 0,15       | 0,20        | 0,24         | 0,27         |
| P.3.2  | 45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,09       | 0,12       | 0,16        | 0,20         | 0,22         | 45                                          | 0,09       | 0,12       | 0,16        | 0,20         | 0,22         |
| P.3.3  | 45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,07       | 0,10       | 0,13        | 0,15         | 0,17         | 45                                          | 0,07       | 0,10       | 0,13        | 0,15         | 0,17         |
| P.4.1  | 45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,07       | 0,10       | 0,13        | 0,16         | 0,18         | 45                                          | 0,07       | 0,10       | 0,13        | 0,16         | 0,18         |
| P.4.2  | 45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,07       | 0,10       | 0,13        | 0,16         | 0,18         | 45                                          | 0,07       | 0,10       | 0,13        | 0,16         | 0,18         |
| M.1.1  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| M.2.1  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| M.3.1  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| K.1.1  | 80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,14       | 0,21       | 0,30        | 0,37         | 0,42         | 80                                          | 0,14       | 0,21       | 0,30        | 0,37         | 0,42         |
| K.1.2  | 70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,12       | 0,18       | 0,24        | 0,30         | 0,34         | 70                                          | 0,12       | 0,18       | 0,24        | 0,30         | 0,34         |
| K.2.1  | 110                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0,14       | 0,20       | 0,28        | 0,34         | 0,39         | 110                                         | 0,14       | 0,20       | 0,28        | 0,34         | 0,39         |
| K.2.2  | 70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,12       | 0,18       | 0,24        | 0,30         | 0,34         | 70                                          | 0,12       | 0,18       | 0,24        | 0,30         | 0,34         |
| K.3.1  | 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,13       | 0,19       | 0,26        | 0,32         | 0,36         | 60                                          | 0,13       | 0,19       | 0,26        | 0,32         | 0,36         |
| K.3.2  | 55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,11       | 0,16       | 0,21        | 0,25         | 0,29         | 55                                          | 0,11       | 0,16       | 0,21        | 0,25         | 0,29         |
| N.1.1  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| N.1.2  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| N.2.1  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| N.2.2  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| N.2.3  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| N.3.1  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| N.3.2  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| N.3.3  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| N.4.1  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| S.1.1  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| S.1.2  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| S.2.1  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| S.2.2  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| S.2.3  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| S.3.1  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| S.3.2  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| S.3.3  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| H.1.1  | <div>  <b>Рекомендации по применению WPC 8xD и 12xD</b> </div> <p>Для получения оптимальных результатов обработки необходимо следовать следующим рекомендациям:</p> <ol style="list-style-type: none"> <li>1. Для инструментов 8xD и 12xD рекомендуется сверление пилотного отверстия. Его можно выполнить с помощью сверла WPC 3xD. Диаметр сверла 3xD (m7) должен быть соответственно подобран к диаметру сверла 8xD и 12xD (h7).</li> <li>2. В качестве альтернативы можно выполнять засверливание при 50 %-ной скорости резания и 50 %-ной подаче с помощью сверла исве 8xD и 12xD на глубину до 1xD. Затем продолжать сверление при нормальных значениях подачи и частоты вращения. Внимание! При ускорении до нормальной частоты вращения шпиндель не должен останавливаться для смены ступени передачи оборотов!</li> <li>3. Режимы резания очень сильно зависят от условий, таких как жесткость закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!</li> </ol> |            |            |             |              |              |                                             |            |            |             |              |              |
| H.1.2  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| H.1.3  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| H.1.4  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| H.2.1  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| H.3.1  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| O.1.1  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| O.1.2  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| O.2.1  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| O.2.2  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |
| O.3.1  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |            |             |              |              |                                             |            |            |             |              |              |

## Стандартные режимы резания — WPC — VA

2

| Индекс | Глубина сверления 3xD<br>VA<br>11 620 ..., 11 621 ..., 11 623 ..., 11 624 ... |                                              |         |         |       |       |       |        |         |         |
|--------|-------------------------------------------------------------------------------|----------------------------------------------|---------|---------|-------|-------|-------|--------|---------|---------|
|        | V <sub>c</sub><br>, м/мин<br>без внутр.<br>охл.                               | V <sub>c</sub><br>, м/мин<br>с внутр.<br>СОЖ | Ø 1-1,5 | Ø 1,5-2 | Ø 2-3 | Ø 3-5 | Ø 5-8 | Ø 8-12 | Ø 12-16 | Ø 16-20 |
|        |                                                                               |                                              | f       | f       | f     | f     | f     | f      | f       | f       |
|        |                                                                               |                                              | мм/об   | мм/об   | мм/об | мм/об | мм/об | мм/об  | мм/об   | мм/об   |
| P.1.1  | 75                                                                            | 85                                           | 0,04    | 0,05    | 0,06  | 0,09  | 0,12  | 0,16   | 0,20    | 0,22    |
| P.1.2  | 70                                                                            | 80                                           | 0,04    | 0,04    | 0,06  | 0,08  | 0,12  | 0,15   | 0,19    | 0,21    |
| P.1.3  | 70                                                                            | 75                                           | 0,04    | 0,04    | 0,06  | 0,08  | 0,11  | 0,15   | 0,18    | 0,20    |
| P.1.4  | 65                                                                            | 70                                           | 0,03    | 0,04    | 0,05  | 0,07  | 0,10  | 0,14   | 0,17    | 0,19    |
| P.1.5  | 60                                                                            | 70                                           | 0,03    | 0,04    | 0,05  | 0,07  | 0,10  | 0,13   | 0,16    | 0,18    |
| P.2.1  | 70                                                                            | 85                                           | 0,05    | 0,05    | 0,07  | 0,10  | 0,14  | 0,19   | 0,23    | 0,27    |
| P.2.2  | 65                                                                            | 75                                           | 0,04    | 0,05    | 0,07  | 0,09  | 0,13  | 0,17   | 0,21    | 0,24    |
| P.2.3  | 55                                                                            | 70                                           | 0,04    | 0,04    | 0,06  | 0,08  | 0,12  | 0,16   | 0,19    | 0,22    |
| P.2.4  | 45                                                                            | 55                                           | 0,04    | 0,04    | 0,06  | 0,08  | 0,11  | 0,14   | 0,17    | 0,19    |
| P.3.1  | 50                                                                            | 55                                           | 0,04    | 0,04    | 0,06  | 0,08  | 0,12  | 0,16   | 0,19    | 0,22    |
| P.3.2  | 40                                                                            | 45                                           | 0,03    | 0,04    | 0,05  | 0,07  | 0,10  | 0,13   | 0,16    | 0,18    |
| P.3.3  | 35                                                                            | 45                                           | 0,03    | 0,04    | 0,04  | 0,06  | 0,08  | 0,10   | 0,12    | 0,14    |
| P.4.1  | 35                                                                            | 45                                           | 0,03    | 0,03    | 0,04  | 0,05  | 0,08  | 0,10   | 0,13    | 0,14    |
| P.4.2  | 35                                                                            | 45                                           | 0,03    | 0,03    | 0,04  | 0,05  | 0,08  | 0,10   | 0,13    | 0,14    |
| M.1.1  | 30                                                                            | 45                                           | 0,03    | 0,04    | 0,05  | 0,07  | 0,10  | 0,13   | 0,16    | 0,18    |
| M.2.1  | 25                                                                            | 45                                           | 0,03    | 0,03    | 0,04  | 0,06  | 0,08  | 0,11   | 0,14    | 0,15    |
| M.3.1  | 25                                                                            | 45                                           | 0,03    | 0,03    | 0,04  | 0,06  | 0,08  | 0,11   | 0,14    | 0,15    |
| K.1.1  | 65                                                                            | 90                                           | 0,04    | 0,06    | 0,09  | 0,14  | 0,21  | 0,30   | 0,37    | 0,42    |
| K.1.2  | 55                                                                            | 75                                           | 0,05    | 0,06    | 0,09  | 0,12  | 0,18  | 0,24   | 0,30    | 0,34    |
| K.2.1  | 75                                                                            | 120                                          | 0,05    | 0,07    | 0,09  | 0,14  | 0,20  | 0,28   | 0,34    | 0,39    |
| K.2.2  | 55                                                                            | 75                                           | 0,05    | 0,06    | 0,09  | 0,12  | 0,18  | 0,24   | 0,30    | 0,34    |
| K.3.1  | 60                                                                            | 70                                           | 0,06    | 0,07    | 0,09  | 0,13  | 0,19  | 0,26   | 0,32    | 0,36    |
| K.3.2  | 55                                                                            | 60                                           | 0,05    | 0,06    | 0,08  | 0,11  | 0,16  | 0,21   | 0,25    | 0,29    |
| N.1.1  | 185                                                                           | 280                                          | 0,05    | 0,06    | 0,08  | 0,11  | 0,15  | 0,20   | 0,25    | 0,28    |
| N.1.2  | 170                                                                           | 255                                          | 0,05    | 0,05    | 0,07  | 0,10  | 0,14  | 0,18   | 0,23    | 0,26    |
| N.2.1  | 155                                                                           | 215                                          | 0,05    | 0,06    | 0,09  | 0,12  | 0,18  | 0,24   | 0,30    | 0,34    |
| N.2.2  | 130                                                                           | 185                                          | 0,05    | 0,06    | 0,09  | 0,12  | 0,18  | 0,24   | 0,30    | 0,34    |
| N.2.3  | 100                                                                           | 155                                          | 0,05    | 0,06    | 0,09  | 0,12  | 0,18  | 0,24   | 0,30    | 0,34    |
| N.3.1  | 135                                                                           | 170                                          | 0,04    | 0,06    | 0,09  | 0,14  | 0,21  | 0,30   | 0,37    | 0,42    |
| N.3.2  | 75                                                                            | 100                                          | 0,05    | 0,06    | 0,09  | 0,12  | 0,18  | 0,24   | 0,30    | 0,34    |
| N.3.3  | 85                                                                            | 120                                          | 0,05    | 0,05    | 0,07  | 0,10  | 0,14  | 0,18   | 0,23    | 0,26    |
| N.4.1  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| S.1.1  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| S.1.2  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| S.2.1  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| S.2.2  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| S.2.3  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| S.3.1  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| S.3.2  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| S.3.3  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| H.1.1  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| H.1.2  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| H.1.3  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| H.1.4  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| H.2.1  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| H.3.1  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| O.1.1  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| O.1.2  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| O.2.1  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| O.2.2  |                                                                               |                                              |         |         |       |       |       |        |         |         |
| O.3.1  |                                                                               |                                              |         |         |       |       |       |        |         |         |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

## Стандартные режимы резания — WPC – VA

| Индекс | Глубина сверления 5xD<br>VA<br>11 629 ..., 11 630 ... |            |            |            |            |            |            |            |            |
|--------|-------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|        | V <sub>c</sub><br>, м/мин<br>с внутр. СОЖ             | Ø 1-1,5    | Ø 1,5-2    | Ø 2-3      | Ø 3-5      | Ø 5-8      | Ø 8-12     | Ø 12-16    | Ø 16-20    |
|        |                                                       | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
| P.1.1  | 85                                                    | 0,04       | 0,05       | 0,06       | 0,09       | 0,12       | 0,16       | 0,20       | 0,22       |
| P.1.2  | 80                                                    | 0,04       | 0,04       | 0,06       | 0,08       | 0,12       | 0,15       | 0,19       | 0,21       |
| P.1.3  | 75                                                    | 0,04       | 0,04       | 0,06       | 0,08       | 0,11       | 0,15       | 0,18       | 0,20       |
| P.1.4  | 70                                                    | 0,03       | 0,04       | 0,05       | 0,07       | 0,10       | 0,14       | 0,17       | 0,19       |
| P.1.5  | 70                                                    | 0,03       | 0,04       | 0,05       | 0,07       | 0,10       | 0,13       | 0,16       | 0,18       |
| P.2.1  | 85                                                    | 0,05       | 0,05       | 0,07       | 0,10       | 0,14       | 0,19       | 0,23       | 0,27       |
| P.2.2  | 75                                                    | 0,04       | 0,05       | 0,07       | 0,09       | 0,13       | 0,17       | 0,21       | 0,24       |
| P.2.3  | 70                                                    | 0,04       | 0,04       | 0,06       | 0,08       | 0,12       | 0,16       | 0,19       | 0,22       |
| P.2.4  | 55                                                    | 0,04       | 0,04       | 0,06       | 0,08       | 0,11       | 0,14       | 0,17       | 0,19       |
| P.3.1  | 55                                                    | 0,04       | 0,04       | 0,06       | 0,08       | 0,12       | 0,16       | 0,19       | 0,22       |
| P.3.2  | 45                                                    | 0,03       | 0,04       | 0,05       | 0,07       | 0,10       | 0,13       | 0,16       | 0,18       |
| P.3.3  | 45                                                    | 0,03       | 0,04       | 0,04       | 0,06       | 0,08       | 0,10       | 0,12       | 0,14       |
| P.4.1  | 45                                                    | 0,03       | 0,03       | 0,04       | 0,05       | 0,08       | 0,10       | 0,13       | 0,14       |
| P.4.2  | 45                                                    | 0,03       | 0,03       | 0,04       | 0,05       | 0,08       | 0,10       | 0,13       | 0,14       |
| M.1.1  | 45                                                    | 0,03       | 0,04       | 0,05       | 0,07       | 0,10       | 0,13       | 0,16       | 0,18       |
| M.2.1  | 45                                                    | 0,03       | 0,03       | 0,04       | 0,06       | 0,08       | 0,11       | 0,14       | 0,15       |
| M.3.1  | 45                                                    | 0,03       | 0,03       | 0,04       | 0,06       | 0,08       | 0,11       | 0,14       | 0,15       |
| K.1.1  | 90                                                    | 0,04       | 0,06       | 0,09       | 0,14       | 0,21       | 0,30       | 0,37       | 0,42       |
| K.1.2  | 75                                                    | 0,05       | 0,06       | 0,09       | 0,12       | 0,18       | 0,24       | 0,30       | 0,34       |
| K.2.1  | 120                                                   | 0,05       | 0,07       | 0,09       | 0,14       | 0,20       | 0,28       | 0,34       | 0,39       |
| K.2.2  | 75                                                    | 0,05       | 0,06       | 0,09       | 0,12       | 0,18       | 0,24       | 0,30       | 0,34       |
| K.3.1  | 70                                                    | 0,06       | 0,07       | 0,09       | 0,13       | 0,19       | 0,26       | 0,32       | 0,36       |
| K.3.2  | 60                                                    | 0,05       | 0,06       | 0,08       | 0,11       | 0,16       | 0,21       | 0,25       | 0,29       |
| N.1.1  | 280                                                   | 0,05       | 0,06       | 0,08       | 0,11       | 0,15       | 0,20       | 0,25       | 0,28       |
| N.1.2  | 255                                                   | 0,05       | 0,05       | 0,07       | 0,10       | 0,14       | 0,18       | 0,23       | 0,26       |
| N.2.1  | 215                                                   | 0,05       | 0,06       | 0,09       | 0,12       | 0,18       | 0,24       | 0,30       | 0,34       |
| N.2.2  | 185                                                   | 0,05       | 0,06       | 0,09       | 0,12       | 0,18       | 0,24       | 0,30       | 0,34       |
| N.2.3  | 155                                                   | 0,05       | 0,06       | 0,09       | 0,12       | 0,18       | 0,24       | 0,30       | 0,34       |
| N.3.1  | 170                                                   | 0,04       | 0,06       | 0,09       | 0,14       | 0,21       | 0,30       | 0,37       | 0,42       |
| N.3.2  | 100                                                   | 0,05       | 0,06       | 0,09       | 0,12       | 0,18       | 0,24       | 0,30       | 0,34       |
| N.3.3  | 120                                                   | 0,05       | 0,05       | 0,07       | 0,10       | 0,14       | 0,18       | 0,23       | 0,26       |
| N.4.1  |                                                       |            |            |            |            |            |            |            |            |
| S.1.1  |                                                       |            |            |            |            |            |            |            |            |
| S.1.2  |                                                       |            |            |            |            |            |            |            |            |
| S.2.1  |                                                       |            |            |            |            |            |            |            |            |
| S.2.2  |                                                       |            |            |            |            |            |            |            |            |
| S.2.3  |                                                       |            |            |            |            |            |            |            |            |
| S.3.1  |                                                       |            |            |            |            |            |            |            |            |
| S.3.2  |                                                       |            |            |            |            |            |            |            |            |
| S.3.3  |                                                       |            |            |            |            |            |            |            |            |
| H.1.1  |                                                       |            |            |            |            |            |            |            |            |
| H.1.2  |                                                       |            |            |            |            |            |            |            |            |
| H.1.3  |                                                       |            |            |            |            |            |            |            |            |
| H.1.4  |                                                       |            |            |            |            |            |            |            |            |
| H.2.1  |                                                       |            |            |            |            |            |            |            |            |
| H.3.1  |                                                       |            |            |            |            |            |            |            |            |
| O.1.1  |                                                       |            |            |            |            |            |            |            |            |
| O.1.2  |                                                       |            |            |            |            |            |            |            |            |
| O.2.1  |                                                       |            |            |            |            |            |            |            |            |
| O.2.2  |                                                       |            |            |            |            |            |            |            |            |
| O.3.1  |                                                       |            |            |            |            |            |            |            |            |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

## Стандартные режимы резания – WTX – HFDS – сверло с большой подачей

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| Индекс | Глубина сверления 3xD<br>HFDS<br>10 797 ... |            |             |              |              |              | Глубина сверления 5xD<br>HFDS<br>10 798 ... |            |             |              |              |              |
|--------|---------------------------------------------|------------|-------------|--------------|--------------|--------------|---------------------------------------------|------------|-------------|--------------|--------------|--------------|
|        | $V_c$<br>, м/мин                            | $\phi$ 6-8 | $\phi$ 8-10 | $\phi$ 10-12 | $\phi$ 12-14 | $\phi$ 14-16 | $V_c$<br>, м/мин                            | $\phi$ 6-8 | $\phi$ 8-10 | $\phi$ 10-12 | $\phi$ 12-14 | $\phi$ 14-16 |
|        | с внутр. СОЖ                                | f<br>мм/об | f<br>мм/об  | f<br>мм/об   | f<br>мм/об   | f<br>мм/об   | с внутр. СОЖ                                | f<br>мм/об | f<br>мм/об  | f<br>мм/об   | f<br>мм/об   | f<br>мм/об   |
| P.1.1  | 100                                         | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      | 100                                         | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      |
| P.1.2  | 100                                         | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      | 100                                         | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      |
| P.1.3  | 100                                         | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      | 100                                         | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      |
| P.1.4  | 100                                         | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      | 100                                         | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      |
| P.1.5  | 100                                         | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      | 100                                         | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      |
| P.2.1  | 100                                         | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      | 100                                         | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      |
| P.2.2  | 100                                         | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      | 100                                         | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      |
| P.2.3  | 90                                          | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      | 90                                          | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      |
| P.2.4  | 90                                          | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      | 90                                          | 0,3-0,4    | 0,5-0,6     | 0,7-0,8      | 0,8-0,9      | 0,8-0,9      |
| P.3.1  | 85                                          | 0,2-0,3    | 0,3-0,4     | 0,5-0,6      | 0,6-0,7      | 0,6-0,7      | 85                                          | 0,2-0,3    | 0,3-0,4     | 0,5-0,6      | 0,6-0,7      | 0,6-0,7      |
| P.3.2  | 70                                          | 0,2-0,3    | 0,3-0,4     | 0,5-0,6      | 0,6-0,7      | 0,6-0,7      | 70                                          | 0,2-0,3    | 0,3-0,4     | 0,5-0,6      | 0,6-0,7      | 0,6-0,7      |
| P.3.3  | 70                                          | 0,2-0,3    | 0,3-0,4     | 0,5-0,6      | 0,6-0,7      | 0,6-0,7      | 70                                          | 0,2-0,3    | 0,3-0,4     | 0,5-0,6      | 0,6-0,7      | 0,6-0,7      |
| P.4.1  | 65                                          | 0,2-0,3    | 0,3-0,4     | 0,5-0,6      | 0,6-0,7      | 0,6-0,7      | 65                                          | 0,2-0,3    | 0,3-0,4     | 0,5-0,6      | 0,6-0,7      | 0,6-0,7      |
| P.4.2  | 65                                          | 0,2-0,3    | 0,3-0,4     | 0,5-0,6      | 0,6-0,7      | 0,6-0,7      | 65                                          | 0,2-0,3    | 0,3-0,4     | 0,5-0,6      | 0,6-0,7      | 0,6-0,7      |
| M.1.1  | 65                                          | 0,2-0,25   | 0,3-0,4     | 0,5-0,6      | 0,6-0,6      | 0,6-0,6      | 65                                          | 0,2-0,25   | 0,3-0,4     | 0,5-0,6      | 0,6-0,6      | 0,6-0,6      |
| M.2.1  | 65                                          | 0,2-0,25   | 0,3-0,4     | 0,5-0,6      | 0,6-0,6      | 0,6-0,6      | 65                                          | 0,2-0,25   | 0,3-0,4     | 0,5-0,6      | 0,6-0,6      | 0,6-0,6      |
| M.3.1  | 55                                          | 0,2-0,25   | 0,3-0,4     | 0,5-0,6      | 0,6-0,6      | 0,6-0,6      | 55                                          | 0,2-0,25   | 0,3-0,4     | 0,5-0,6      | 0,6-0,6      | 0,6-0,6      |
| K.1.1  | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      |
| K.1.2  | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      |
| K.2.1  | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      |
| K.2.2  | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      |
| K.3.1  | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      |
| K.3.2  | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      |
| N.1.1  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| N.1.2  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| N.2.1  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| N.2.2  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| N.2.3  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| N.3.1  | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      |
| N.3.2  | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      |
| N.3.3  | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      |
| N.4.1  | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      | 130                                         | 0,4-0,6    | 0,5-0,7     | 0,6-0,8      | 0,7-0,9      | 0,7-0,9      |
| S.1.1  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| S.1.2  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| S.2.1  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| S.2.2  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| S.2.3  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| S.3.1  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| S.3.2  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| S.3.3  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| H.1.1  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| H.1.2  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| H.1.3  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| H.1.4  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| H.2.1  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| H.3.1  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| O.1.1  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| O.1.2  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| O.2.1  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| O.2.2  |                                             |            |             |              |              |              |                                             |            |             |              |              |              |
| O.3.1  | 110                                         | 0,6        | 0,6         | 0,8          | 0,9          | 1,0          | 110                                         | 0,6        | 0,6         | 0,8          | 0,9          | 1,0          |



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## Стандартные режимы резания — WTX – Mini

| Индекс | Глубина сверления 5xD<br>Mini<br>11 770 ... |            |             |             |             |
|--------|---------------------------------------------|------------|-------------|-------------|-------------|
|        | $V_c$<br>, м/мин                            | < Ø 1,0    | > Ø 1,0-1,5 | > Ø 1,5-2,0 | > Ø 2,0-2,9 |
|        | без внутр. охл.                             | f<br>мм/об | f<br>мм/об  | f<br>мм/об  | f<br>мм/об  |
| P.1.1  | 75                                          | 0,01       | 0,01        | 0,0125      | 0,015       |
| P.1.2  | 65                                          | 0,02       | 0,02        | 0,025       | 0,03        |
| P.1.3  | 65                                          | 0,01       | 0,01        | 0,0125      | 0,015       |
| P.1.4  | 65                                          | 0,01       | 0,01        | 0,0125      | 0,015       |
| P.1.5  | 70                                          | 0,01       | 0,01        | 0,0125      | 0,015       |
| P.2.1  | 70                                          | 0,01       | 0,01        | 0,0125      | 0,015       |
| P.2.2  | 65                                          | 0,01       | 0,01        | 0,0125      | 0,015       |
| P.2.3  | 65                                          | 0,02       | 0,02        | 0,025       | 0,03        |
| P.2.4  | 65                                          | 0,01       | 0,01        | 0,0125      | 0,015       |
| P.3.1  |                                             |            |             |             |             |
| P.3.2  |                                             |            |             |             |             |
| P.3.3  |                                             |            |             |             |             |
| P.4.1  |                                             |            |             |             |             |
| P.4.2  |                                             |            |             |             |             |
| M.1.1  |                                             |            |             |             |             |
| M.2.1  |                                             |            |             |             |             |
| M.3.1  |                                             |            |             |             |             |
| K.1.1  | 70                                          | 0,01       | 0,01        | 0,0125      | 0,015       |
| K.1.2  | 70                                          | 0,01       | 0,01        | 0,0125      | 0,015       |
| K.2.1  | 70                                          | 0,01       | 0,01        | 0,0125      | 0,015       |
| K.2.2  | 70                                          | 0,01       | 0,01        | 0,0125      | 0,015       |
| K.3.1  | 70                                          | 0,01       | 0,01        | 0,0125      | 0,015       |
| K.3.2  | 70                                          | 0,01       | 0,01        | 0,0125      | 0,015       |
| N.1.1  | 200                                         | 0,01       | 0,01        | 0,0125      | 0,015       |
| N.1.2  | 200                                         | 0,01       | 0,01        | 0,0125      | 0,015       |
| N.2.1  | 160                                         | 0,01       | 0,01        | 0,0125      | 0,015       |
| N.2.2  | 180                                         | 0,01       | 0,01        | 0,0125      | 0,015       |
| N.2.3  | 130                                         | 0,01       | 0,01        | 0,0125      | 0,015       |
| N.3.1  | 160                                         | 0,01       | 0,01        | 0,0125      | 0,015       |
| N.3.2  | 160                                         | 0,01       | 0,01        | 0,0125      | 0,015       |
| N.3.3  | 100                                         | 0,01       | 0,01        | 0,0125      | 0,015       |
| N.4.1  | 200                                         | 0,01       | 0,01        | 0,0125      | 0,015       |
| S.1.1  |                                             |            |             |             |             |
| S.1.2  |                                             |            |             |             |             |
| S.2.1  |                                             |            |             |             |             |
| S.2.2  |                                             |            |             |             |             |
| S.2.3  |                                             |            |             |             |             |
| S.3.1  | 30                                          | 0,01       | 0,01        | 0,0125      | 0,015       |
| S.3.2  | 20                                          | 0,01       | 0,01        | 0,0125      | 0,015       |
| S.3.3  |                                             |            |             |             |             |
| H.1.1  |                                             |            |             |             |             |
| H.1.2  |                                             |            |             |             |             |
| H.1.3  |                                             |            |             |             |             |
| H.1.4  |                                             |            |             |             |             |
| H.2.1  |                                             |            |             |             |             |
| H.3.1  |                                             |            |             |             |             |
| O.1.1  |                                             |            |             |             |             |
| O.1.2  |                                             |            |             |             |             |
| O.2.1  |                                             |            |             |             |             |
| O.2.2  |                                             |            |             |             |             |
| O.3.1  |                                             |            |             |             |             |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

## Стандартные режимы резания — WTX – Micro

2

| Индекс | Глубина сверления 5xD<br>Micro<br>10 693 ... |                  |            |              |              |             |             |             |
|--------|----------------------------------------------|------------------|------------|--------------|--------------|-------------|-------------|-------------|
|        | $V_c$<br>, м/мин                             | $V_c$<br>, м/мин | < Ø 1,0    | > Ø 1,0–1,25 | > Ø 1,25–1,5 | > Ø 1,5–2,0 | > Ø 2,0–2,5 | > Ø 2,5–3,0 |
|        | с внутр. СОЖ                                 | MMS              | f<br>мм/об | f<br>мм/об   | f<br>мм/об   | f<br>мм/об  | f<br>мм/об  | f<br>мм/об  |
| P.1.1  | 60                                           | 50               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.1.2  | 50                                           | 45               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.1.3  | 50                                           | 45               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.1.4  | 50                                           | 45               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.1.5  | 50                                           | 45               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.2.1  | 60                                           | 50               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.2.2  | 50                                           | 45               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.2.3  | 50                                           | 45               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.2.4  |                                              |                  |            |              |              |             |             |             |
| P.3.1  | 50                                           | 45               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.3.2  | 40                                           | 35               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.3.3  |                                              |                  |            |              |              |             |             |             |
| P.4.1  | 40                                           |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| P.4.2  | 25                                           |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| M.1.1  | 30                                           |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| M.2.1  | 30                                           |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| M.3.1  | 30                                           |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| K.1.1  | 60                                           | 50               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| K.1.2  | 60                                           | 50               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| K.2.1  | 60                                           | 50               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| K.2.2  | 60                                           | 50               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| K.3.1  | 60                                           | 50               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| K.3.2  | 60                                           | 50               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| N.1.1  |                                              |                  |            |              |              |             |             |             |
| N.1.2  |                                              |                  |            |              |              |             |             |             |
| N.2.1  |                                              |                  |            |              |              |             |             |             |
| N.2.2  |                                              |                  |            |              |              |             |             |             |
| N.2.3  |                                              |                  |            |              |              |             |             |             |
| N.3.1  |                                              |                  |            |              |              |             |             |             |
| N.3.2  |                                              |                  |            |              |              |             |             |             |
| N.3.3  |                                              |                  |            |              |              |             |             |             |
| N.4.1  |                                              |                  |            |              |              |             |             |             |
| S.1.1  | 15                                           |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| S.1.2  | 15                                           |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| S.2.1  | 10                                           |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| S.2.2  | 10                                           |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| S.2.3  |                                              |                  |            |              |              |             |             |             |
| S.3.1  | 20                                           |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| S.3.2  | 10                                           |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| S.3.3  |                                              |                  |            |              |              |             |             |             |
| H.1.1  |                                              |                  |            |              |              |             |             |             |
| H.1.2  |                                              |                  |            |              |              |             |             |             |
| H.1.3  |                                              |                  |            |              |              |             |             |             |
| H.1.4  |                                              |                  |            |              |              |             |             |             |
| H.2.1  |                                              |                  |            |              |              |             |             |             |
| H.3.1  |                                              |                  |            |              |              |             |             |             |
| O.1.1  |                                              |                  |            |              |              |             |             |             |
| O.1.2  |                                              |                  |            |              |              |             |             |             |
| O.2.1  |                                              |                  |            |              |              |             |             |             |
| O.2.2  |                                              |                  |            |              |              |             |             |             |
| O.3.1  |                                              |                  |            |              |              |             |             |             |

## Стандартные режимы резания — WTX – Micro

| Индекс | Глубина сверления 8xD / 12xD<br>Micro<br>10 694 ..., 10 695 ... |                  |            |              |              |             |             |             |
|--------|-----------------------------------------------------------------|------------------|------------|--------------|--------------|-------------|-------------|-------------|
|        | $V_c$<br>, м/мин                                                | $V_c$<br>, м/мин | < Ø 1,0    | > Ø 1,0–1,25 | > Ø 1,25–1,5 | > Ø 1,5–2,0 | > Ø 2,0–2,5 | > Ø 2,5–3,0 |
|        | с внутр. СОЖ                                                    | MMS              | f<br>мм/об | f<br>мм/об   | f<br>мм/об   | f<br>мм/об  | f<br>мм/об  | f<br>мм/об  |
|        |                                                                 |                  |            |              |              |             |             |             |
| P.1.1  | 60                                                              | 50               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.1.2  | 50                                                              | 45               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.1.3  | 50                                                              | 45               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.1.4  | 50                                                              | 45               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.1.5  | 50                                                              | 45               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.2.1  | 60                                                              | 50               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.2.2  | 50                                                              | 45               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.2.3  | 50                                                              | 45               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.2.4  |                                                                 |                  |            |              |              |             |             |             |
| P.3.1  | 50                                                              | 45               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.3.2  | 40                                                              | 35               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| P.3.3  |                                                                 |                  |            |              |              |             |             |             |
| P.4.1  | 40                                                              |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| P.4.2  | 25                                                              |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| M.1.1  | 30                                                              |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| M.2.1  | 30                                                              |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| M.3.1  | 30                                                              |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| K.1.1  | 60                                                              | 50               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| K.1.2  | 60                                                              | 50               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| K.2.1  | 60                                                              | 05               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| K.2.2  | 60                                                              | 50               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| K.3.1  | 60                                                              | 50               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| K.3.2  | 60                                                              | 50               | 0,024      | 0,028        | 0,034        | 0,05        | 0,07        | 0,095       |
| N.1.1  |                                                                 |                  |            |              |              |             |             |             |
| N.1.2  |                                                                 |                  |            |              |              |             |             |             |
| N.2.1  |                                                                 |                  |            |              |              |             |             |             |
| N.2.2  |                                                                 |                  |            |              |              |             |             |             |
| N.2.3  |                                                                 |                  |            |              |              |             |             |             |
| N.3.1  |                                                                 |                  |            |              |              |             |             |             |
| N.3.2  |                                                                 |                  |            |              |              |             |             |             |
| N.3.3  |                                                                 |                  |            |              |              |             |             |             |
| N.4.1  |                                                                 |                  |            |              |              |             |             |             |
| S.1.1  | 15                                                              |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| S.1.2  | 15                                                              |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| S.2.1  | 10                                                              |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| S.2.2  | 10                                                              |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| S.2.3  |                                                                 |                  |            |              |              |             |             |             |
| S.3.1  | 20                                                              |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| S.3.2  | 10                                                              |                  | 0,012      | 0,015        | 0,018        | 0,028       | 0,04        | 0,06        |
| S.3.3  |                                                                 |                  |            |              |              |             |             |             |
| H.1.1  |                                                                 |                  |            |              |              |             |             |             |
| H.1.2  |                                                                 |                  |            |              |              |             |             |             |
| H.1.3  |                                                                 |                  |            |              |              |             |             |             |
| H.1.4  |                                                                 |                  |            |              |              |             |             |             |
| H.2.1  |                                                                 |                  |            |              |              |             |             |             |
| H.3.1  |                                                                 |                  |            |              |              |             |             |             |
| O.1.1  |                                                                 |                  |            |              |              |             |             |             |
| O.1.2  |                                                                 |                  |            |              |              |             |             |             |
| O.2.1  |                                                                 |                  |            |              |              |             |             |             |
| O.2.2  |                                                                 |                  |            |              |              |             |             |             |
| O.3.1  |                                                                 |                  |            |              |              |             |             |             |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

|        |                                           | Глубина сверления 16xD / 20xD / 25xD / 30xD    |              |              |             |             |             |       |
|--------|-------------------------------------------|------------------------------------------------|--------------|--------------|-------------|-------------|-------------|-------|
|        |                                           | Micro                                          |              |              |             |             |             |       |
|        |                                           | 10 696 ..., 10 697 ..., 10 698 ..., 10 699 ... |              |              |             |             |             |       |
| Индекс | V <sub>c</sub><br>, м/мин<br>с внутр. СОЖ | < Ø 1,0                                        | > Ø 1,0–1,25 | > Ø 1,25–1,5 | > Ø 1,5–2,0 | > Ø 2,0–2,5 | > Ø 2,5–3,0 |       |
|        |                                           | f<br>мм/об                                     | f<br>мм/об   | f<br>мм/об   | f<br>мм/об  | f<br>мм/об  | f<br>мм/об  |       |
|        | P.1.1                                     | 50                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | P.1.2                                     | 40                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | P.1.3                                     | 40                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | P.1.4                                     | 40                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | P.1.5                                     | 40                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | P.2.1                                     | 50                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | P.2.2                                     | 40                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | P.2.3                                     | 40                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | P.2.4                                     |                                                |              |              |             |             |             |       |
|        | P.3.1                                     | 40                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | P.3.2                                     | 30                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | P.3.3                                     |                                                |              |              |             |             |             |       |
|        | P.4.1                                     | 30                                             | 0,012        | 0,015        | 0,018       | 0,028       | 0,04        | 0,06  |
|        | P.4.2                                     | 20                                             | 0,012        | 0,015        | 0,018       | 0,028       | 0,04        | 0,06  |
|        | M.1.1                                     | 25                                             | 0,012        | 0,015        | 0,018       | 0,028       | 0,04        | 0,06  |
|        | M.2.1                                     | 25                                             | 0,012        | 0,015        | 0,018       | 0,028       | 0,04        | 0,06  |
|        | M.3.1                                     | 25                                             | 0,012        | 0,015        | 0,018       | 0,028       | 0,04        | 0,06  |
|        | K.1.1                                     | 50                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | K.1.2                                     | 50                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | K.2.1                                     | 50                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | K.2.2                                     | 50                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | K.3.1                                     | 50                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | K.3.2                                     | 50                                             | 0,024        | 0,028        | 0,034       | 0,05        | 0,07        | 0,095 |
|        | N.1.1                                     |                                                |              |              |             |             |             |       |
|        | N.1.2                                     |                                                |              |              |             |             |             |       |
|        | N.2.1                                     |                                                |              |              |             |             |             |       |
|        | N.2.2                                     |                                                |              |              |             |             |             |       |
|        | N.2.3                                     |                                                |              |              |             |             |             |       |
|        | N.3.1                                     |                                                |              |              |             |             |             |       |
|        | N.3.2                                     |                                                |              |              |             |             |             |       |
|        | N.3.3                                     |                                                |              |              |             |             |             |       |
|        | N.4.1                                     |                                                |              |              |             |             |             |       |
|        | S.1.1                                     |                                                |              |              |             |             |             |       |
|        | S.1.2                                     |                                                |              |              |             |             |             |       |
|        | S.2.1                                     |                                                |              |              |             |             |             |       |
|        | S.2.2                                     |                                                |              |              |             |             |             |       |
|        | S.2.3                                     |                                                |              |              |             |             |             |       |
|        | S.3.1                                     |                                                |              |              |             |             |             |       |
|        | S.3.2                                     |                                                |              |              |             |             |             |       |
|        | S.3.3                                     |                                                |              |              |             |             |             |       |
|        |                                           | H.1.1                                          |              |              |             |             |             |       |
| H.1.2  |                                           |                                                |              |              |             |             |             |       |
| H.1.3  |                                           |                                                |              |              |             |             |             |       |
| H.1.4  |                                           |                                                |              |              |             |             |             |       |
| H.2.1  |                                           |                                                |              |              |             |             |             |       |
| H.3.1  |                                           |                                                |              |              |             |             |             |       |
|        | O.1.1                                     |                                                |              |              |             |             |             |       |
|        | O.1.2                                     |                                                |              |              |             |             |             |       |
|        | O.2.1                                     |                                                |              |              |             |             |             |       |
|        | O.2.2                                     |                                                |              |              |             |             |             |       |
|        | O.3.1                                     |                                                |              |              |             |             |             |       |

## Стандартные режимы резания — WTX – Feed BR

| Индекс | Глубина сверления 3xD<br>Feed BR<br>10 707 ..., 10 711 ... |                                              |                         |            |            |            |            |            |            |            |            |  |
|--------|------------------------------------------------------------|----------------------------------------------|-------------------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
|        | $V_c$<br>, м/мин<br>с внутр. СОЖ                           | $V_c$<br>, м/мин<br>с внешним<br>охлаждением | $V_c$<br>, м/мин<br>MMS | Ø 4        | Ø 5        | Ø 6        | Ø 8        | Ø 10       | Ø 12       | Ø 14       | Ø 16       |  |
|        |                                                            |                                              |                         | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |  |
| P.1.1  | 75                                                         | 70                                           | 70                      | 0,19       | 0,22       | 0,25       | 0,31       | 0,36       | 0,40       | 0,44       | 0,47       |  |
| P.1.2  | 75                                                         | 65                                           | 65                      | 0,18       | 0,21       | 0,24       | 0,30       | 0,34       | 0,39       | 0,42       | 0,45       |  |
| P.1.3  | 70                                                         | 65                                           | 65                      | 0,17       | 0,20       | 0,23       | 0,28       | 0,33       | 0,37       | 0,40       | 0,43       |  |
| P.1.4  | 65                                                         | 60                                           | 60                      | 0,16       | 0,19       | 0,22       | 0,27       | 0,31       | 0,35       | 0,38       | 0,41       |  |
| P.1.5  | 65                                                         | 55                                           | 55                      | 0,16       | 0,18       | 0,21       | 0,25       | 0,29       | 0,33       | 0,36       | 0,39       |  |
| P.2.1  | 75                                                         | 65                                           | 65                      | 0,22       | 0,26       | 0,30       | 0,37       | 0,43       | 0,48       | 0,52       | 0,56       |  |
| P.2.2  | 70                                                         | 60                                           | 60                      | 0,20       | 0,24       | 0,27       | 0,33       | 0,39       | 0,43       | 0,47       | 0,51       |  |
| P.2.3  | 65                                                         | 55                                           | 55                      | 0,18       | 0,22       | 0,25       | 0,30       | 0,35       | 0,39       | 0,43       | 0,46       |  |
| P.2.4  | 50                                                         | 40                                           | 40                      | 0,17       | 0,20       | 0,22       | 0,27       | 0,31       | 0,35       | 0,38       | 0,40       |  |
| P.3.1  | 55                                                         | 45                                           | 45                      | 0,18       | 0,21       | 0,24       | 0,30       | 0,35       | 0,39       | 0,43       | 0,46       |  |
| P.3.2  | 40                                                         | 40                                           | 40                      | 0,15       | 0,18       | 0,20       | 0,25       | 0,29       | 0,32       | 0,35       | 0,37       |  |
| P.3.3  | 40                                                         | 30                                           | 35                      | 0,13       | 0,15       | 0,16       | 0,20       | 0,23       | 0,25       | 0,27       | 0,29       |  |
| P.4.1  | 40                                                         | 30                                           | 35                      | 0,12       | 0,14       | 0,16       | 0,20       | 0,23       | 0,26       | 0,28       | 0,30       |  |
| P.4.2  | 40                                                         | 30                                           | 35                      | 0,12       | 0,14       | 0,16       | 0,20       | 0,23       | 0,26       | 0,28       | 0,30       |  |
| M.1.1  | 40                                                         | 25                                           | 25                      | 0,09       | 0,11       | 0,12       | 0,15       | 0,17       | 0,19       | 0,21       | 0,23       |  |
| M.2.1  | 35                                                         | 20                                           | 20                      | 0,08       | 0,09       | 0,10       | 0,13       | 0,15       | 0,17       | 0,18       | 0,19       |  |
| M.3.1  | 35                                                         | 20                                           | 20                      | 0,08       | 0,09       | 0,10       | 0,13       | 0,15       | 0,17       | 0,18       | 0,19       |  |
| K.1.1  | 100                                                        | 70                                           | 70                      | 0,25       | 0,30       | 0,35       | 0,45       | 0,53       | 0,60       | 0,66       | 0,71       |  |
| K.1.2  | 85                                                         | 65                                           | 65                      | 0,22       | 0,26       | 0,30       | 0,37       | 0,43       | 0,48       | 0,53       | 0,56       |  |
| K.2.1  | 135                                                        | 85                                           | 100                     | 0,24       | 0,29       | 0,34       | 0,42       | 0,49       | 0,56       | 0,61       | 0,66       |  |
| K.2.2  | 85                                                         | 65                                           | 65                      | 0,22       | 0,26       | 0,30       | 0,37       | 0,43       | 0,48       | 0,53       | 0,56       |  |
| K.3.1  | 75                                                         | 70                                           | 70                      | 0,23       | 0,28       | 0,32       | 0,39       | 0,46       | 0,52       | 0,57       | 0,61       |  |
| K.3.2  | 70                                                         | 60                                           | 60                      | 0,20       | 0,23       | 0,26       | 0,32       | 0,37       | 0,41       | 0,45       | 0,48       |  |
| N.1.1  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| N.1.2  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| N.2.1  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| N.2.2  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| N.2.3  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| N.3.1  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| N.3.2  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| N.3.3  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| N.4.1  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| S.1.1  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| S.1.2  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| S.2.1  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| S.2.2  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| S.2.3  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| S.3.1  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| S.3.2  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| S.3.3  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| H.1.1  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| H.1.2  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| H.1.3  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| H.1.4  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| H.2.1  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| H.3.1  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| O.1.1  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| O.1.2  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| O.2.1  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| O.2.2  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |
| O.3.1  |                                                            |                                              |                         |            |            |            |            |            |            |            |            |  |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

|        |       | Глубина сверления 5xD<br>Feed BR<br>10 713 ..., 10 719 ... |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|--------|-------|------------------------------------------------------------|-------------------------------------------------------|----------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Индекс |       | V <sub>c</sub><br>, м/мин<br>с внутр. СОЖ                  | V <sub>c</sub><br>, м/мин<br>с внешним<br>охлаждением | V <sub>c</sub><br>, м/мин<br>MMS | Ø 4        | Ø 5        | Ø 6        | Ø 8        | Ø 10       | Ø 12       | Ø 14       | Ø 16       | Ø 18       | Ø 20       |
|        |       |                                                            |                                                       |                                  | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
|        | P.1.1 | 75                                                         | 70                                                    | 70                               | 0,19       | 0,22       | 0,25       | 0,31       | 0,36       | 0,40       | 0,44       | 0,47       | 0,50       | 0,52       |
|        | P.1.2 | 75                                                         | 65                                                    | 65                               | 0,18       | 0,21       | 0,24       | 0,30       | 0,34       | 0,39       | 0,42       | 0,45       | 0,48       | 0,50       |
|        | P.1.3 | 70                                                         | 65                                                    | 65                               | 0,17       | 0,20       | 0,23       | 0,28       | 0,33       | 0,37       | 0,40       | 0,43       | 0,45       | 0,47       |
|        | P.1.4 | 65                                                         | 60                                                    | 60                               | 0,16       | 0,19       | 0,22       | 0,27       | 0,31       | 0,35       | 0,38       | 0,41       | 0,43       | 0,45       |
|        | P.1.5 | 65                                                         | 55                                                    | 55                               | 0,16       | 0,18       | 0,21       | 0,25       | 0,29       | 0,33       | 0,36       | 0,39       | 0,41       | 0,43       |
|        | P.2.1 | 75                                                         | 65                                                    | 65                               | 0,22       | 0,26       | 0,30       | 0,37       | 0,43       | 0,48       | 0,52       | 0,56       | 0,59       | 0,62       |
|        | P.2.2 | 70                                                         | 60                                                    | 60                               | 0,20       | 0,24       | 0,27       | 0,33       | 0,39       | 0,43       | 0,47       | 0,51       | 0,54       | 0,56       |
|        | P.2.3 | 65                                                         | 55                                                    | 55                               | 0,18       | 0,22       | 0,25       | 0,30       | 0,35       | 0,39       | 0,43       | 0,46       | 0,48       | 0,50       |
|        | P.2.4 | 50                                                         | 40                                                    | 40                               | 0,17       | 0,20       | 0,22       | 0,27       | 0,31       | 0,35       | 0,38       | 0,40       | 0,42       | 0,44       |
|        | P.3.1 | 55                                                         | 45                                                    | 45                               | 0,18       | 0,21       | 0,24       | 0,30       | 0,35       | 0,39       | 0,43       | 0,46       | 0,48       | 0,50       |
|        | P.3.2 | 40                                                         | 40                                                    | 40                               | 0,15       | 0,18       | 0,20       | 0,25       | 0,29       | 0,32       | 0,35       | 0,37       | 0,39       | 0,41       |
|        | P.3.3 | 40                                                         | 30                                                    | 35                               | 0,13       | 0,15       | 0,16       | 0,20       | 0,23       | 0,25       | 0,27       | 0,29       | 0,30       | 0,32       |
|        | P.4.1 | 40                                                         | 30                                                    | 35                               | 0,12       | 0,14       | 0,16       | 0,20       | 0,23       | 0,26       | 0,28       | 0,30       | 0,32       | 0,33       |
|        | P.4.2 | 40                                                         | 30                                                    | 35                               | 0,12       | 0,14       | 0,16       | 0,20       | 0,23       | 0,26       | 0,28       | 0,30       | 0,32       | 0,33       |
|        | M.1.1 | 40                                                         | 25                                                    | 25                               | 0,09       | 0,11       | 0,12       | 0,15       | 0,17       | 0,19       | 0,21       | 0,23       | 0,24       | 0,25       |
|        | M.2.1 | 35                                                         | 20                                                    | 20                               | 0,08       | 0,09       | 0,10       | 0,13       | 0,15       | 0,17       | 0,18       | 0,19       | 0,20       | 0,21       |
|        | M.3.1 | 35                                                         | 20                                                    | 20                               | 0,08       | 0,09       | 0,10       | 0,13       | 0,15       | 0,17       | 0,18       | 0,19       | 0,20       | 0,21       |
|        | K.1.1 | 100                                                        | 70                                                    | 70                               | 0,25       | 0,30       | 0,35       | 0,45       | 0,53       | 0,60       | 0,66       | 0,71       | 0,75       | 0,79       |
|        | K.1.2 | 85                                                         | 65                                                    | 65                               | 0,22       | 0,26       | 0,30       | 0,37       | 0,43       | 0,48       | 0,53       | 0,56       | 0,60       | 0,62       |
|        | K.2.1 | 135                                                        | 85                                                    | 100                              | 0,24       | 0,29       | 0,34       | 0,42       | 0,49       | 0,56       | 0,61       | 0,66       | 0,69       | 0,72       |
|        | K.2.2 | 85                                                         | 65                                                    | 65                               | 0,22       | 0,26       | 0,30       | 0,37       | 0,43       | 0,48       | 0,53       | 0,56       | 0,60       | 0,62       |
|        | K.3.1 | 75                                                         | 70                                                    | 70                               | 0,23       | 0,28       | 0,32       | 0,39       | 0,46       | 0,52       | 0,57       | 0,61       | 0,64       | 0,67       |
|        | K.3.2 | 70                                                         | 60                                                    | 60                               | 0,20       | 0,23       | 0,26       | 0,32       | 0,37       | 0,41       | 0,45       | 0,48       | 0,51       | 0,53       |
|        | N.1.1 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | N.1.2 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | N.2.1 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | N.2.2 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | N.2.3 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | N.3.1 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | N.3.2 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | N.3.3 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | N.4.1 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | S.1.1 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | S.1.2 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | S.2.1 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | S.2.2 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | S.2.3 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | S.3.1 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | S.3.2 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | S.3.3 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | H.1.1 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | H.1.2 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | H.1.3 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | H.1.4 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | H.2.1 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | H.3.1 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | O.1.1 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | O.1.2 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | O.2.1 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | O.2.2 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |
|        | O.3.1 |                                                            |                                                       |                                  |            |            |            |            |            |            |            |            |            |            |

## Стандартные режимы резания — WTX – свёрла для глубоких отверстий Co-Pilot

| Индекс | Глубина сверления 20xD<br>CP 20 UNI<br>11 018 ... |                     |                     |                     |                   |                    |
|--------|---------------------------------------------------|---------------------|---------------------|---------------------|-------------------|--------------------|
|        | $v_c$<br>, м/мин                                  | $\varnothing > 3-4$ | $\varnothing > 4-5$ | $\varnothing > 5-6$ | $\varnothing 6-8$ | $\varnothing 8-10$ |
|        |                                                   | $f$<br>мм/об        | $f$<br>мм/об        | $f$<br>мм/об        | $f$<br>мм/об      | $f$<br>мм/об       |
| P.1.1  | 100                                               | 0,07                | 0,08                | 0,10                | 0,12              | 0,14               |
| P.1.2  | 90                                                | 0,07                | 0,08                | 0,10                | 0,12              | 0,14               |
| P.1.3  | 90                                                | 0,05                | 0,06                | 0,08                | 0,10              | 0,11               |
| P.1.4  | 90                                                | 0,05                | 0,06                | 0,08                | 0,10              | 0,11               |
| P.1.5  | 95                                                | 0,05                | 0,06                | 0,08                | 0,10              | 0,11               |
| P.2.1  | 95                                                | 0,07                | 0,08                | 0,10                | 0,12              | 0,14               |
| P.2.2  | 90                                                | 0,05                | 0,06                | 0,08                | 0,10              | 0,11               |
| P.2.3  | 90                                                | 0,07                | 0,08                | 0,10                | 0,12              | 0,14               |
| P.2.4  | 90                                                | 0,05                | 0,06                | 0,08                | 0,10              | 0,11               |
| P.3.1  | 45                                                | 0,03                | 0,04                | 0,05                | 0,06              | 0,08               |
| P.3.2  | 70                                                | 0,05                | 0,06                | 0,08                | 0,10              | 0,11               |
| P.3.3  | 70                                                | 0,05                | 0,06                | 0,08                | 0,10              | 0,11               |
| P.4.1  | 70                                                | 0,03                | 0,04                | 0,05                | 0,06              | 0,08               |
| P.4.2  | 45                                                | 0,03                | 0,04                | 0,05                | 0,06              | 0,08               |
| M.1.1  | 50                                                | 0,03                | 0,04                | 0,05                | 0,06              | 0,08               |
| M.2.1  | 50                                                | 0,03                | 0,04                | 0,05                | 0,06              | 0,08               |
| M.3.1  | 50                                                | 0,03                | 0,04                | 0,05                | 0,06              | 0,08               |
| K.1.1  | 100                                               | 0,10                | 0,13                | 0,15                | 0,19              | 0,23               |
| K.1.2  | 95                                                | 0,10                | 0,13                | 0,15                | 0,19              | 0,23               |
| K.2.1  | 100                                               | 0,08                | 0,10                | 0,13                | 0,16              | 0,18               |
| K.2.2  | 95                                                | 0,08                | 0,10                | 0,13                | 0,16              | 0,18               |
| K.3.1  | 100                                               | 0,08                | 0,10                | 0,13                | 0,16              | 0,18               |
| K.3.2  | 95                                                | 0,08                | 0,10                | 0,13                | 0,16              | 0,18               |
| N.1.1  |                                                   |                     |                     |                     |                   |                    |
| N.1.2  |                                                   |                     |                     |                     |                   |                    |
| N.2.1  |                                                   |                     |                     |                     |                   |                    |
| N.2.2  |                                                   |                     |                     |                     |                   |                    |
| N.2.3  |                                                   |                     |                     |                     |                   |                    |
| N.3.1  |                                                   |                     |                     |                     |                   |                    |
| N.3.2  |                                                   |                     |                     |                     |                   |                    |
| N.3.3  |                                                   |                     |                     |                     |                   |                    |
| N.4.1  |                                                   |                     |                     |                     |                   |                    |
| S.1.1  |                                                   |                     |                     |                     |                   |                    |
| S.1.2  |                                                   |                     |                     |                     |                   |                    |
| S.2.1  |                                                   |                     |                     |                     |                   |                    |
| S.2.2  |                                                   |                     |                     |                     |                   |                    |
| S.2.3  | 70                                                | 0,05                | 0,06                | 0,08                | 0,10              | 0,11               |
| S.3.1  | 30                                                | 0,01                | 0,02                | 0,02                | 0,03              | 0,04               |
| S.3.2  | 20                                                | 0,01                | 0,02                | 0,02                | 0,03              | 0,04               |
| S.3.3  |                                                   |                     |                     |                     |                   |                    |
| H.1.1  |                                                   |                     |                     |                     |                   |                    |
| H.1.2  |                                                   |                     |                     |                     |                   |                    |
| H.1.3  |                                                   |                     |                     |                     |                   |                    |
| H.1.4  |                                                   |                     |                     |                     |                   |                    |
| H.2.1  |                                                   |                     |                     |                     |                   |                    |
| H.3.1  |                                                   |                     |                     |                     |                   |                    |
| O.1.1  |                                                   |                     |                     |                     |                   |                    |
| O.1.2  |                                                   |                     |                     |                     |                   |                    |
| O.2.1  |                                                   |                     |                     |                     |                   |                    |
| O.2.2  |                                                   |                     |                     |                     |                   |                    |
| O.3.1  |                                                   |                     |                     |                     |                   |                    |



Режимы в значительной степени зависят от условий обработки, материала и станка.

Указанные значения являются базовыми; в зависимости от условий применения может потребоваться коррекция в большую или меньшую сторону.

## Стандартные режимы резания — WTX – TB UNI

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| Индекс | Глубина сверления 16xD<br>TB UNI<br>11 016 ... |            |            |            |            |            |            |            | Глубина сверления 20xD<br>TB UNI<br>11 020 ... |            |            |            |            |            |            |            |
|--------|------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|
|        | V <sub>c</sub><br>, м/мин                      | Ø 2-3      | Ø > 3-4    | Ø > 4-5    | Ø > 5-6    | Ø 6-8      | Ø 8-10     | Ø 10-12    | V <sub>c</sub><br>, м/мин                      | Ø 2-3      | Ø > 3-4    | Ø > 4-5    | Ø > 5-6    | Ø 6-8      | Ø 8-10     | Ø 10-12    |
|        |                                                | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |                                                | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
| P.1.1  | 105                                            | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 100                                            | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       |
| P.1.2  | 95                                             | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 90                                             | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       |
| P.1.3  | 95                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 90                                             | 0,038      | 0,05       | 0,06       | 0,075      | 0,10       | 0,11       | 0,13       |
| P.1.4  | 95                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 90                                             | 0,038      | 0,05       | 0,06       | 0,075      | 0,10       | 0,11       | 0,13       |
| P.1.5  | 100                                            | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 95                                             | 0,038      | 0,05       | 0,06       | 0,075      | 0,10       | 0,11       | 0,13       |
| P.2.1  | 100                                            | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 95                                             | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       |
| P.2.2  | 95                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 90                                             | 0,038      | 0,05       | 0,06       | 0,075      | 0,10       | 0,11       | 0,13       |
| P.2.3  | 95                                             | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 90                                             | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       |
| P.2.4  | 95                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 90                                             | 0,038      | 0,05       | 0,06       | 0,075      | 0,10       | 0,11       | 0,13       |
| P.3.1  | 50                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 45                                             | 0,025      | 0,03       | 0,04       | 0,045      | 0,06       | 0,08       | 0,10       |
| P.3.2  | 75                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 70                                             | 0,038      | 0,05       | 0,06       | 0,075      | 0,10       | 0,11       | 0,13       |
| P.3.3  | 75                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 70                                             | 0,038      | 0,05       | 0,06       | 0,075      | 0,10       | 0,11       | 0,13       |
| P.4.1  | 75                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 70                                             | 0,025      | 0,03       | 0,04       | 0,045      | 0,06       | 0,08       | 0,10       |
| P.4.2  | 50                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 45                                             | 0,025      | 0,03       | 0,04       | 0,045      | 0,06       | 0,08       | 0,10       |
| M.1.1  | 55                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 50                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       |
| M.2.1  | 55                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 50                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       |
| M.3.1  | 55                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 50                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       |
| K.1.1  | 105                                            | 0,08       | 0,10       | 0,13       | 0,15       | 0,19       | 0,23       | 0,27       | 100                                            | 0,08       | 0,10       | 0,13       | 0,15       | 0,19       | 0,23       | 0,27       |
| K.1.2  | 100                                            | 0,08       | 0,10       | 0,13       | 0,15       | 0,19       | 0,23       | 0,27       | 95                                             | 0,08       | 0,10       | 0,13       | 0,15       | 0,19       | 0,23       | 0,27       |
| K.2.1  | 105                                            | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       | 100                                            | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       |
| K.2.2  | 100                                            | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       | 95                                             | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       |
| K.3.1  | 105                                            | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       | 100                                            | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       |
| K.3.2  | 100                                            | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       | 95                                             | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       |
| N.1.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.1.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.2.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.2.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.2.3  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.3.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.3.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.3.3  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.4.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.1.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.1.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.2.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.2.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.2.3  | 75                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 70                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       |
| S.3.1  | 35                                             | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 30                                             | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       |
| S.3.2  | 25                                             | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 20                                             | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       |
| S.3.3  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.1.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.1.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.1.3  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.1.4  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.2.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.3.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| O.1.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| O.1.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| O.2.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| O.2.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| O.3.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |



Для всех твердосплавных сверл для глубоких отверстий WTX необходимо предварительно просверлить пилотное отверстие. Ни в коем случае нельзя допускать перемещения на высокой скорости вращения до врезания в заготовку. Соблюдайте стратегию обработки глубоких отверстий, см. **стр. 160**.

## Стандартные режимы резания — WTX – ТВ UNI

| Индекс | Глубина сверления 25xD<br>ТВ UNI<br>11 025 ... |            |            |            |            |            |            |            | Глубина сверления 30xD<br>ТВ UNI<br>11 030 ... |            |            |            |            |            |            |            |
|--------|------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|
|        | V <sub>c</sub><br>, м/мин                      | Ø 2-3      | Ø > 3-4    | Ø > 4-5    | Ø > 5-6    | Ø 6-8      | Ø 8-10     | Ø 10-12    | V <sub>c</sub><br>, м/мин                      | Ø 2-3      | Ø > 3-4    | Ø > 4-5    | Ø > 5-6    | Ø 6-8      | Ø 8-10     | Ø 10-12    |
|        |                                                | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |                                                | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
| P.1.1  | 90                                             | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 85                                             | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       |
| P.1.2  | 80                                             | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 75                                             | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       |
| P.1.3  | 80                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 75                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       |
| P.1.4  | 80                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 75                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       |
| P.1.5  | 85                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 80                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       |
| P.2.1  | 85                                             | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 80                                             | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       |
| P.2.2  | 80                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 75                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       |
| P.2.3  | 80                                             | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 75                                             | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       |
| P.2.4  | 80                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 75                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       |
| P.3.1  | 45                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 40                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       |
| P.3.2  | 65                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 60                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       |
| P.3.3  | 65                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 60                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       |
| P.4.1  | 65                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 60                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       |
| P.4.2  | 45                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 40                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       |
| M.1.1  | 50                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 45                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       |
| M.2.1  | 50                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 45                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       |
| M.3.1  | 50                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 45                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       |
| K.1.1  | 90                                             | 0,08       | 0,10       | 0,13       | 0,15       | 0,19       | 0,23       | 0,27       | 85                                             | 0,08       | 0,10       | 0,13       | 0,15       | 0,19       | 0,23       | 0,27       |
| K.1.2  | 85                                             | 0,08       | 0,10       | 0,13       | 0,15       | 0,19       | 0,23       | 0,27       | 80                                             | 0,08       | 0,10       | 0,13       | 0,15       | 0,19       | 0,23       | 0,27       |
| K.2.1  | 90                                             | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       | 85                                             | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       |
| K.2.2  | 85                                             | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       | 80                                             | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       |
| K.3.1  | 90                                             | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       | 85                                             | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       |
| K.3.2  | 85                                             | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       | 80                                             | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       |
| N.1.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.1.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.2.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.2.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.2.3  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.3.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.3.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.3.3  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.4.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.1.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.1.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.2.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.2.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.2.3  | 65                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 60                                             | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       |
| S.3.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.3.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.3.3  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.1.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.1.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.1.3  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.1.4  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.2.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.3.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| O.1.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| O.1.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| O.2.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| O.2.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| O.3.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |



Режимы в значительной степени зависят от условий обработки, материала и станка.

Указанные значения являются базовыми; в зависимости от условий применения может потребоваться коррекция в большую или меньшую сторону.

|        |       | Глубина сверления 40xD<br>ТВ UNI<br>11 040 ... |            |            |            |            |            | Глубина сверления 50xD<br>ТВ UNI<br>11 050 ... |            |            |            |            |            |
|--------|-------|------------------------------------------------|------------|------------|------------|------------|------------|------------------------------------------------|------------|------------|------------|------------|------------|
| Индекс |       | V <sub>c</sub><br>, м/мин                      | Ø > 3–4    | Ø > 4–5    | Ø > 5–6    | Ø 6–8      | Ø 8–10     | V <sub>c</sub><br>, м/мин                      | Ø > 3–4    | Ø > 4–5    | Ø > 5–6    | Ø 6–8      |            |
|        |       |                                                | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |                                                | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
|        | P.1.1 | 70                                             | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 70                                             | 0,05       | 0,06       | 0,08       | 0,10       |            |
|        | P.1.2 | 60                                             | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 60                                             | 0,05       | 0,06       | 0,08       | 0,10       |            |
|        | P.1.3 | 60                                             | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 60                                             | 0,03       | 0,04       | 0,05       | 0,06       |            |
|        | P.1.4 | 60                                             | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 60                                             | 0,03       | 0,04       | 0,05       | 0,06       |            |
|        | P.1.5 | 65                                             | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 65                                             | 0,03       | 0,04       | 0,05       | 0,06       |            |
|        | P.2.1 | 65                                             | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 65                                             | 0,05       | 0,06       | 0,08       | 0,10       |            |
|        | P.2.2 | 60                                             | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 60                                             | 0,03       | 0,04       | 0,05       | 0,06       |            |
|        | P.2.3 | 60                                             | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 60                                             | 0,05       | 0,06       | 0,08       | 0,10       |            |
|        | P.2.4 | 60                                             | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 60                                             | 0,03       | 0,04       | 0,05       | 0,06       |            |
|        | P.3.1 | 35                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 35                                             | 0,03       | 0,03       | 0,04       | 0,05       |            |
|        | P.3.2 | 50                                             | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 50                                             | 0,03       | 0,04       | 0,05       | 0,06       |            |
|        | P.3.3 | 50                                             | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 50                                             | 0,03       | 0,04       | 0,05       | 0,06       |            |
|        | P.4.1 | 50                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 50                                             | 0,03       | 0,03       | 0,04       | 0,05       |            |
|        | P.4.2 | 35                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 35                                             | 0,03       | 0,03       | 0,04       | 0,05       |            |
|        | M.1.1 | 40                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 40                                             | 0,03       | 0,03       | 0,04       | 0,05       |            |
|        | M.2.1 | 40                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 40                                             | 0,03       | 0,03       | 0,04       | 0,05       |            |
|        | M.3.1 | 40                                             | 0,03       | 0,03       | 0,04       | 0,05       | 0,06       | 40                                             | 0,03       | 0,03       | 0,04       | 0,05       |            |
|        | K.1.1 | 70                                             | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 70                                             | 0,08       | 0,10       | 0,13       | 0,16       |            |
|        | K.1.2 | 65                                             | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 65                                             | 0,08       | 0,10       | 0,13       | 0,16       |            |
|        | K.2.1 | 70                                             | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 70                                             | 0,07       | 0,08       | 0,10       | 0,12       |            |
|        | K.2.2 | 65                                             | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 65                                             | 0,07       | 0,08       | 0,10       | 0,12       |            |
|        | K.3.1 | 70                                             | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 70                                             | 0,07       | 0,08       | 0,10       | 0,12       |            |
|        | K.3.2 | 65                                             | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 65                                             | 0,07       | 0,08       | 0,10       | 0,12       |            |
|        | N.1.1 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | N.1.2 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | N.2.1 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | N.2.2 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | N.2.3 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | N.3.1 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | N.3.2 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | N.3.3 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | N.4.1 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | S.1.1 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | S.1.2 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | S.2.1 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | S.2.2 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | S.2.3 | 50                                             | 0,03       | 0,04       | 0,05       | 0,06       | 0,08       | 50                                             | 0,03       | 0,04       | 0,05       | 0,06       |            |
|        | S.3.1 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | S.3.2 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | S.3.3 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | H.1.1 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | H.1.2 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | H.1.3 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | H.1.4 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | H.2.1 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | H.3.1 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | O.1.1 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | O.1.2 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | O.2.1 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | O.2.2 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |
|        | O.3.1 |                                                |            |            |            |            |            |                                                |            |            |            |            |            |



Для всех твердосплавных сверл для глубоких отверстий WTX необходимо предварительно просверлить пилотное отверстие. Ни в коем случае нельзя допускать перемещения на высокой скорости вращения до врезания в заготовку. Соблюдайте стратегию обработки глубоких отверстий, см. **стр. 160**.

## Стандартные режимы резания — WTX — TB ALU

| Индекс | Глубина сверления 16xD<br>TB ALU<br>11 017 ... |       |         |         |         |       |        |         | Глубина сверления 20xD<br>TB ALU<br>11 021 ... |       |         |         |         |       |        |         |
|--------|------------------------------------------------|-------|---------|---------|---------|-------|--------|---------|------------------------------------------------|-------|---------|---------|---------|-------|--------|---------|
|        | V <sub>c</sub><br>, м/мин                      | Ø 2-3 | Ø > 3-4 | Ø > 4-5 | Ø > 5-6 | Ø 6-8 | Ø 8-10 | Ø 10-12 | V <sub>c</sub><br>, м/мин                      | Ø 2-3 | Ø > 3-4 | Ø > 4-5 | Ø > 5-6 | Ø 6-8 | Ø 8-10 | Ø 10-12 |
|        |                                                | f     | f       | f       | f       | f     | f      | f       |                                                | f     | f       | f       | f       | f     | f      | f       |
|        |                                                | мм/об | мм/об   | мм/об   | мм/об   | мм/об | мм/об  | мм/об   |                                                | мм/об | мм/об   | мм/об   | мм/об   | мм/об | мм/об  | мм/об   |
| P.1.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| P.1.2  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| P.1.3  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| P.1.4  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| P.1.5  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| P.2.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| P.2.2  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| P.2.3  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| P.2.4  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| P.3.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| P.3.2  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| P.3.3  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| P.4.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| P.4.2  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| M.1.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| M.2.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| M.3.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| K.1.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| K.1.2  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| K.2.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| K.2.2  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| K.3.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| K.3.2  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| N.1.1  | 160                                            | 0,06  | 0,08    | 0,10    | 0,13    | 0,16  | 0,18   | 0,22    | 150                                            | 0,06  | 0,08    | 0,10    | 0,13    | 0,16  | 0,18   | 0,22    |
| N.1.2  | 180                                            | 0,06  | 0,08    | 0,10    | 0,13    | 0,16  | 0,18   | 0,22    | 170                                            | 0,06  | 0,08    | 0,10    | 0,13    | 0,16  | 0,18   | 0,22    |
| N.2.1  | 160                                            | 0,08  | 0,11    | 0,13    | 0,15    | 0,19  | 0,23   | 0,26    | 150                                            | 0,08  | 0,11    | 0,13    | 0,15    | 0,19  | 0,23   | 0,26    |
| N.2.2  | 190                                            | 0,08  | 0,11    | 0,13    | 0,15    | 0,19  | 0,23   | 0,26    | 180                                            | 0,08  | 0,11    | 0,13    | 0,15    | 0,19  | 0,23   | 0,26    |
| N.2.3  | 140                                            | 0,06  | 0,08    | 0,10    | 0,13    | 0,16  | 0,18   | 0,22    | 130                                            | 0,06  | 0,08    | 0,10    | 0,13    | 0,16  | 0,18   | 0,22    |
| N.3.1  | 115                                            | 0,06  | 0,08    | 0,10    | 0,13    | 0,16  | 0,18   | 0,22    | 100                                            | 0,06  | 0,08    | 0,10    | 0,13    | 0,16  | 0,18   | 0,22    |
| N.3.2  | 115                                            | 0,06  | 0,08    | 0,10    | 0,13    | 0,16  | 0,18   | 0,22    | 100                                            | 0,06  | 0,08    | 0,10    | 0,13    | 0,16  | 0,18   | 0,22    |
| N.3.3  | 90                                             | 0,06  | 0,08    | 0,10    | 0,13    | 0,16  | 0,18   | 0,22    | 80                                             | 0,06  | 0,08    | 0,10    | 0,13    | 0,16  | 0,18   | 0,22    |
| N.4.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| S.1.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| S.1.2  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| S.2.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| S.2.2  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| S.2.3  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| S.3.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| S.3.2  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| S.3.3  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| H.1.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| H.1.2  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| H.1.3  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| H.1.4  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| H.2.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| H.3.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| O.1.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| O.1.2  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| O.2.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| O.2.2  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |
| O.3.1  |                                                |       |         |         |         |       |        |         |                                                |       |         |         |         |       |        |         |



Режимы в значительной степени зависят от условий обработки, материала и станка. Указанные значения являются базовыми; в зависимости от условий применения может потребоваться коррекция в большую или меньшую сторону.

| Индекс | Глубина сверления 25xD<br>ТВ ALU<br>11 026 ... |            |            |            |            |            |            |            | Глубина сверления 30xD<br>ТВ ALU<br>11 031 ... |            |            |            |            |            |            |            |
|--------|------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|
|        | V <sub>c</sub><br>, м/мин                      | Ø 2-3      | Ø > 3-4    | Ø > 4-5    | Ø > 5-6    | Ø 6-8      | Ø 8-10     | Ø 10-12    | V <sub>c</sub><br>, м/мин                      | Ø 2-3      | Ø > 3-4    | Ø > 4-5    | Ø > 5-6    | Ø 6-8      | Ø 8-10     | Ø 10-12    |
|        |                                                | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |                                                | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
| P.1.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| P.1.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| P.1.3  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| P.1.4  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| P.1.5  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| P.2.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| P.2.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| P.2.3  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| P.2.4  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| P.3.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| P.3.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| P.3.3  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| P.4.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| P.4.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| M.1.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| M.2.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| M.3.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| K.1.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| K.1.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| K.2.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| K.2.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| K.3.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| K.3.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| N.1.1  | 130                                            | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       | 120                                            | 0,04       | 0,05       | 0,07       | 0,08       | 0,12       | 0,15       | 0,18       |
| N.1.2  | 150                                            | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       | 140                                            | 0,04       | 0,05       | 0,07       | 0,08       | 0,12       | 0,15       | 0,18       |
| N.2.1  | 130                                            | 0,08       | 0,11       | 0,13       | 0,15       | 0,19       | 0,23       | 0,26       | 120                                            | 0,08       | 0,11       | 0,13       | 0,15       | 0,19       | 0,23       | 0,26       |
| N.2.2  | 160                                            | 0,08       | 0,11       | 0,13       | 0,15       | 0,19       | 0,23       | 0,26       | 150                                            | 0,08       | 0,11       | 0,13       | 0,15       | 0,19       | 0,23       | 0,26       |
| N.2.3  | 120                                            | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       | 110                                            | 0,04       | 0,05       | 0,07       | 0,08       | 0,12       | 0,15       | 0,18       |
| N.3.1  | 90                                             | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       | 80                                             | 0,04       | 0,05       | 0,07       | 0,08       | 0,12       | 0,15       | 0,18       |
| N.3.2  | 90                                             | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       | 80                                             | 0,04       | 0,05       | 0,07       | 0,08       | 0,12       | 0,15       | 0,18       |
| N.3.3  | 75                                             | 0,06       | 0,08       | 0,10       | 0,13       | 0,16       | 0,18       | 0,22       | 70                                             | 0,04       | 0,05       | 0,07       | 0,08       | 0,12       | 0,15       | 0,18       |
| N.4.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.1.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.1.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.2.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.2.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.2.3  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.3.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.3.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| S.3.3  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.1.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.1.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.1.3  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.1.4  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.2.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| H.3.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| O.1.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| O.1.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| O.2.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| O.2.2  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |
| O.3.1  |                                                |            |            |            |            |            |            |            |                                                |            |            |            |            |            |            |            |



Для всех твердосплавных сверл для глубоких отверстий WTX необходимо предварительно просверлить пилотное отверстие. Ни в коем случае нельзя допускать перемещения на высокой скорости вращения до врезания в заготовку. Соблюдайте стратегию обработки глубоких отверстий, см. **стр. 160**.

## Стандартные режимы резания — твердосплавные центровочные сверла NC

|        | Твердосплавное центровочное сверло NC<br>MultiChange<br>10 709 ..., 10 712 ..., 10 714 ... |            |            |            |            |            |
|--------|--------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|
| Индекс | V <sub>c</sub><br>, м/мин                                                                  | Ø 8        | Ø 10       | Ø 12       | Ø 16       | Ø 20       |
|        |                                                                                            | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
| P.1.1  | 160                                                                                        | 0,08       | 0,10       | 0,11       | 0,14       | 0,16       |
| P.1.2  | 160                                                                                        | 0,08       | 0,10       | 0,11       | 0,14       | 0,16       |
| P.1.3  | 160                                                                                        | 0,08       | 0,10       | 0,11       | 0,14       | 0,16       |
| P.1.4  | 160                                                                                        | 0,08       | 0,10       | 0,11       | 0,14       | 0,16       |
| P.1.5  | 130                                                                                        | 0,08       | 0,09       | 0,11       | 0,13       | 0,15       |
| P.2.1  | 145                                                                                        | 0,08       | 0,10       | 0,11       | 0,14       | 0,16       |
| P.2.2  | 100                                                                                        | 0,07       | 0,08       | 0,09       | 0,12       | 0,14       |
| P.2.3  | 80                                                                                         | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       |
| P.2.4  | 80                                                                                         | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       |
| P.3.1  | 95                                                                                         | 0,08       | 0,09       | 0,11       | 0,13       | 0,16       |
| P.3.2  | 95                                                                                         | 0,08       | 0,09       | 0,11       | 0,13       | 0,16       |
| P.3.3  | 95                                                                                         | 0,08       | 0,09       | 0,11       | 0,13       | 0,16       |
| P.4.1  | 65                                                                                         | 0,04       | 0,05       | 0,05       | 0,07       | 0,08       |
| P.4.2  | 65                                                                                         | 0,04       | 0,05       | 0,05       | 0,07       | 0,08       |
| M.1.1  | 45                                                                                         | 0,05       | 0,06       | 0,07       | 0,08       | 0,10       |
| M.2.1  | 45                                                                                         | 0,05       | 0,06       | 0,07       | 0,08       | 0,10       |
| M.3.1  | 40                                                                                         | 0,04       | 0,05       | 0,06       | 0,07       | 0,08       |
| K.1.1  | 175                                                                                        | 0,13       | 0,16       | 0,19       | 0,24       | 0,27       |
| K.1.2  | 160                                                                                        | 0,11       | 0,14       | 0,16       | 0,2        | 0,23       |
| K.2.1  | 130                                                                                        | 0,09       | 0,11       | 0,13       | 0,17       | 0,19       |
| K.2.2  | 130                                                                                        | 0,09       | 0,11       | 0,13       | 0,17       | 0,19       |
| K.3.1  | 160                                                                                        | 0,11       | 0,14       | 0,16       | 0,20       | 0,23       |
| K.3.2  | 130                                                                                        | 0,09       | 0,11       | 0,13       | 0,17       | 0,19       |
| N.1.1  | 600                                                                                        | 0,13       | 0,16       | 0,19       | 0,24       | 0,27       |
| N.1.2  | 400                                                                                        | 0,14       | 0,17       | 0,11       | 0,25       | 0,29       |
| N.2.1  | 320                                                                                        | 0,15       | 0,18       | 0,28       | 0,26       | 0,30       |
| N.2.2  | 320                                                                                        | 0,15       | 0,18       | 0,28       | 0,26       | 0,30       |
| N.2.3  | 230                                                                                        | 0,16       | 0,19       | 0,23       | 0,28       | 0,33       |
| N.3.1  | 175                                                                                        | 0,11       | 0,13       | 0,15       | 0,19       | 0,22       |
| N.3.2  | 230                                                                                        | 0,11       | 0,13       | 0,15       | 0,19       | 0,22       |
| N.3.3  | 175                                                                                        | 0,11       | 0,13       | 0,15       | 0,19       | 0,22       |
| N.4.1  | 290                                                                                        | 0,07       | 0,08       | 0,09       | 0,12       | 0,14       |
| S.1.1  |                                                                                            |            |            |            |            |            |
| S.1.2  |                                                                                            |            |            |            |            |            |
| S.2.1  |                                                                                            |            |            |            |            |            |
| S.2.2  |                                                                                            |            |            |            |            |            |
| S.2.3  |                                                                                            |            |            |            |            |            |
| S.3.1  |                                                                                            |            |            |            |            |            |
| S.3.2  |                                                                                            |            |            |            |            |            |
| S.3.3  |                                                                                            |            |            |            |            |            |
| H.1.1  |                                                                                            |            |            |            |            |            |
| H.1.2  |                                                                                            |            |            |            |            |            |
| H.1.3  |                                                                                            |            |            |            |            |            |
| H.1.4  |                                                                                            |            |            |            |            |            |
| H.2.1  |                                                                                            |            |            |            |            |            |
| H.3.1  |                                                                                            |            |            |            |            |            |
| O.1.1  |                                                                                            |            |            |            |            |            |
| O.1.2  |                                                                                            |            |            |            |            |            |
| O.2.1  |                                                                                            |            |            |            |            |            |
| O.2.2  |                                                                                            |            |            |            |            |            |
| O.3.1  |                                                                                            |            |            |            |            |            |

[illegible]

Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

|        |                                              | Твердосплавное центровочное сверло NC |            |            |            |            |            |            |            |            |            |            |            |
|--------|----------------------------------------------|---------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|        |                                              | NC-A                                  |            |            |            |            |            |            |            |            |            |            |            |
|        |                                              | 10 702 ..., 10 703 ..., 10 704 ...    |            |            |            |            |            |            |            |            |            |            |            |
| Индекс | V <sub>c</sub><br>, м/МИН<br>без внутр. охл. | Ø 2-3                                 | Ø 3-4      | Ø 4-5      | Ø 5-6      | Ø 6-8      | Ø 8-10     | Ø 10-12    | Ø 12-14    | Ø 14-16    | Ø 16-18    | Ø 18-20    |            |
|        |                                              | f<br>мм/об                            | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
|        | P.1.1                                        | 75                                    | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 0,20       | 0,24       | 0,28       | 0,31       |
|        | P.1.2                                        | 65                                    | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 0,20       | 0,24       | 0,28       | 0,31       |
|        | P.1.3                                        | 65                                    | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
|        | P.1.4                                        | 65                                    | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
|        | P.1.5                                        | 70                                    | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
|        | P.2.1                                        | 70                                    | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 0,20       | 0,24       | 0,28       | 0,31       |
|        | P.2.2                                        | 65                                    | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
|        | P.2.3                                        | 65                                    | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 0,20       | 0,24       | 0,28       | 0,31       |
|        | P.2.4                                        | 65                                    | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
|        | P.3.1                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | P.3.2                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | P.3.3                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | P.4.1                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | P.4.2                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | M.1.1                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | M.2.1                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | M.3.1                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | K.1.1                                        | 70                                    | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       | 0,26       |
|        | K.1.2                                        | 70                                    | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
|        | K.2.1                                        | 70                                    | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
|        | K.2.2                                        | 70                                    | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
|        | K.3.1                                        | 70                                    | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
|        | K.3.2                                        | 70                                    | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
|        | N.1.1                                        | 200                                   | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
|        | N.1.2                                        | 200                                   | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
|        | N.2.1                                        | 160                                   | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
|        | N.2.2                                        | 180                                   | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
|        | N.2.3                                        | 130                                   | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
|        | N.3.1                                        | 160                                   | 0,01       | 0,01       | 0,01       | 0,01       | 0,02       | 0,03       | 0,04       | 0,06       | 0,09       | 0,11       | 0,14       |
|        | N.3.2                                        | 160                                   | 0,01       | 0,01       | 0,01       | 0,01       | 0,02       | 0,03       | 0,04       | 0,06       | 0,09       | 0,11       | 0,14       |
|        | N.3.3                                        | 100                                   | 0,01       | 0,01       | 0,01       | 0,01       | 0,02       | 0,03       | 0,04       | 0,06       | 0,09       | 0,11       | 0,14       |
|        | N.4.1                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | S.1.1                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | S.1.2                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | S.2.1                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | S.2.2                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | S.2.3                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | S.3.1                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | S.3.2                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | S.3.3                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | H.1.1                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | H.1.2                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | H.1.3                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | H.1.4                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | H.2.1                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | H.3.1                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | O.1.1                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | O.1.2                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | O.2.1                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | O.2.2                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |
|        | O.3.1                                        |                                       |            |            |            |            |            |            |            |            |            |            |            |

## Стандартные режимы резания — VHM NC-A TiAlN

| Индекс | Твердосплавное центровочное сверло NC<br>NC-A TiAlN<br>10 716 ..., 10 717 ..., 10 718 ... |            |            |            |            |            |            |            |            |            |            |            |
|--------|-------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|        | $V_c$ , м/мин                                                                             | Ø 2-3      | Ø 3-4      | Ø 4-5      | Ø 5-6      | Ø 6-8      | Ø 8-10     | Ø 10-12    | Ø 12-14    | Ø 14-16    | Ø 16-18    | Ø 18-20    |
|        | без внутр. охл.                                                                           | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
| P.1.1  | 75                                                                                        | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 0,20       | 0,24       | 0,28       | 0,31       |
| P.1.2  | 65                                                                                        | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 0,20       | 0,24       | 0,28       | 0,31       |
| P.1.3  | 65                                                                                        | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
| P.1.4  | 65                                                                                        | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
| P.1.5  | 70                                                                                        | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
| P.2.1  | 70                                                                                        | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 0,20       | 0,24       | 0,28       | 0,31       |
| P.2.2  | 65                                                                                        | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
| P.2.3  | 65                                                                                        | 0,05       | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 0,20       | 0,24       | 0,28       | 0,31       |
| P.2.4  | 65                                                                                        | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
| P.3.1  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.3.2  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.3.3  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.4.1  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| P.4.2  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| M.1.1  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| M.2.1  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| M.3.1  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| K.1.1  | 70                                                                                        | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       | 0,26       |
| K.1.2  | 70                                                                                        | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
| K.2.1  | 70                                                                                        | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
| K.2.2  | 70                                                                                        | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
| K.3.1  | 70                                                                                        | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
| K.3.2  | 70                                                                                        | 0,04       | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       | 0,20       | 0,23       |
| N.1.1  | 200                                                                                       | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
| N.1.2  | 200                                                                                       | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
| N.2.1  | 160                                                                                       | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
| N.2.2  | 180                                                                                       | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
| N.2.3  | 130                                                                                       | 0,01       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       | 0,11       | 0,13       |
| N.3.1  | 160                                                                                       | 0,01       | 0,01       | 0,01       | 0,01       | 0,02       | 0,03       | 0,04       | 0,06       | 0,09       | 0,11       | 0,14       |
| N.3.2  | 160                                                                                       | 0,01       | 0,01       | 0,01       | 0,01       | 0,02       | 0,03       | 0,04       | 0,06       | 0,09       | 0,11       | 0,14       |
| N.3.3  | 100                                                                                       | 0,01       | 0,01       | 0,01       | 0,01       | 0,02       | 0,03       | 0,04       | 0,06       | 0,09       | 0,11       | 0,14       |
| N.4.1  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.1.1  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.1.2  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.2.1  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.2.2  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.2.3  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.3.1  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.3.2  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| S.3.3  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| H.1.1  | 28                                                                                        | 0,02       | 0,03       | 0,04       | 0,04       | 0,05       | 0,06       | 0,06       | 0,07       | 0,07       | 0,08       | 0,08       |
| H.1.2  | 16                                                                                        | 0,02       | 0,03       | 0,04       | 0,04       | 0,05       | 0,06       | 0,06       | 0,07       | 0,07       | 0,08       | 0,08       |
| H.1.3  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| H.1.4  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| H.2.1  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| H.3.1  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| O.1.1  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| O.1.2  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| O.2.1  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| O.2.2  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |
| O.3.1  |                                                                                           |            |            |            |            |            |            |            |            |            |            |            |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

| Твердосплавное центровочное сверло NC, длинное<br>NC-A TiAlN<br>10 724 ..., 10 726 ..., 10 727 ... |                                           |            |            |            |            |            |            |            |            |  |
|----------------------------------------------------------------------------------------------------|-------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
| Индекс                                                                                             | V <sub>c</sub> , м/мин<br>без внутр. охл. | Ø 3-4      | Ø 4-5      | Ø 5-6      | Ø 6-8      | Ø 8-10     | Ø 10-12    | Ø 12-14    | Ø 14-16    |  |
|                                                                                                    |                                           | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |  |
| P.1.1                                                                                              | 75                                        | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 0,20       | 0,24       |  |
| P.1.2                                                                                              | 65                                        | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 0,20       | 0,24       |  |
| P.1.3                                                                                              | 65                                        | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       |  |
| P.1.4                                                                                              | 65                                        | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       |  |
| P.1.5                                                                                              | 70                                        | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       |  |
| P.2.1                                                                                              | 70                                        | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 0,20       | 0,24       |  |
| P.2.2                                                                                              | 65                                        | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       |  |
| P.2.3                                                                                              | 65                                        | 0,07       | 0,08       | 0,10       | 0,12       | 0,14       | 0,16       | 0,20       | 0,24       |  |
| P.2.4                                                                                              | 65                                        | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       |  |
| P.3.1                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| P.3.2                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| P.3.3                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| P.4.1                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| P.4.2                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| M.1.1                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| M.2.1                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| M.3.1                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| K.1.1                                                                                              | 70                                        | 0,05       | 0,06       | 0,08       | 0,10       | 0,13       | 0,15       | 0,18       | 0,20       |  |
| K.1.2                                                                                              | 70                                        | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       |  |
| K.2.1                                                                                              | 70                                        | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       |  |
| K.2.2                                                                                              | 70                                        | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       |  |
| K.3.1                                                                                              | 70                                        | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       |  |
| K.3.2                                                                                              | 70                                        | 0,05       | 0,06       | 0,08       | 0,10       | 0,11       | 0,13       | 0,15       | 0,18       |  |
| N.1.1                                                                                              | 200                                       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       |  |
| N.1.2                                                                                              | 200                                       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       |  |
| N.2.1                                                                                              | 160                                       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       |  |
| N.2.2                                                                                              | 180                                       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       |  |
| N.2.3                                                                                              | 130                                       | 0,01       | 0,02       | 0,02       | 0,03       | 0,04       | 0,05       | 0,07       | 0,09       |  |
| N.3.1                                                                                              | 160                                       | 0,01       | 0,01       | 0,01       | 0,02       | 0,03       | 0,04       | 0,06       | 0,09       |  |
| N.3.2                                                                                              | 160                                       | 0,01       | 0,01       | 0,01       | 0,02       | 0,03       | 0,04       | 0,06       | 0,09       |  |
| N.3.3                                                                                              | 100                                       | 0,01       | 0,01       | 0,01       | 0,02       | 0,03       | 0,04       | 0,06       | 0,09       |  |
| N.4.1                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| S.1.1                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| S.1.2                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| S.2.1                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| S.2.2                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| S.2.3                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| S.3.1                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| S.3.2                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| S.3.3                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| H.1.1                                                                                              | 30                                        | 0,03       | 0,04       | 0,04       | 0,05       | 0,06       | 0,06       | 0,07       | 0,07       |  |
| H.1.2                                                                                              | 15                                        | 0,03       | 0,04       | 0,04       | 0,05       | 0,06       | 0,06       | 0,07       | 0,07       |  |
| H.1.3                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| H.1.4                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| H.2.1                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| H.3.1                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| O.1.1                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| O.1.2                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| O.2.1                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| O.2.2                                                                                              |                                           |            |            |            |            |            |            |            |            |  |
| O.3.1                                                                                              |                                           |            |            |            |            |            |            |            |            |  |

## Стандартные режимы резания — WTX — Change

| Индекс | Change<br>UNI<br>10 919 ... |             |             |            |            |            |
|--------|-----------------------------|-------------|-------------|------------|------------|------------|
|        | $V_c$<br>, м/мин            | > Ø 12-15,7 | > Ø 15,7-20 | > Ø 20-25  | > Ø 25-32  | > Ø 32-41  |
|        |                             | f<br>мм/об  | f<br>мм/об  | f<br>мм/об | f<br>мм/об | f<br>мм/об |
| P.1.1  | 120                         | 0,27        | 0,31        | 0,34       | 0,36       | 0,36       |
| P.1.2  | 115                         | 0,26        | 0,30        | 0,32       | 0,34       | 0,35       |
| P.1.3  | 110                         | 0,25        | 0,28        | 0,31       | 0,32       | 0,33       |
| P.1.4  | 105                         | 0,24        | 0,27        | 0,29       | 0,31       | 0,31       |
| P.1.5  | 100                         | 0,22        | 0,25        | 0,28       | 0,29       | 0,30       |
| P.2.1  | 120                         | 0,32        | 0,37        | 0,40       | 0,42       | 0,43       |
| P.2.2  | 110                         | 0,29        | 0,33        | 0,36       | 0,38       | 0,39       |
| P.2.3  | 100                         | 0,26        | 0,30        | 0,33       | 0,35       | 0,35       |
| P.2.4  | 75                          | 0,23        | 0,26        | 0,29       | 0,30       | 0,31       |
| P.3.1  | 85                          | 0,26        | 0,30        | 0,33       | 0,35       | 0,35       |
| P.3.2  | 65                          | 0,22        | 0,25        | 0,27       | 0,28       | 0,29       |
| P.3.3  | 65                          | 0,17        | 0,19        | 0,21       | 0,22       | 0,22       |
| P.4.1  | 65                          | 0,17        | 0,20        | 0,22       | 0,23       | 0,23       |
| P.4.2  | 65                          | 0,17        | 0,20        | 0,22       | 0,23       | 0,23       |
| M.1.1  |                             |             |             |            |            |            |
| M.2.1  |                             |             |             |            |            |            |
| M.3.1  |                             |             |             |            |            |            |
| K.1.1  | 110                         | 0,37        | 0,42        | 0,46       | 0,49       | 0,50       |
| K.1.2  | 90                          | 0,29        | 0,33        | 0,36       | 0,38       | 0,39       |
| K.2.1  | 145                         | 0,34        | 0,39        | 0,42       | 0,45       | 0,46       |
| K.2.2  | 90                          | 0,29        | 0,33        | 0,36       | 0,38       | 0,39       |
| K.3.1  | 80                          | 0,35        | 0,40        | 0,44       | 0,46       | 0,47       |
| K.3.2  | 70                          | 0,28        | 0,32        | 0,34       | 0,36       | 0,37       |
| N.1.1  |                             |             |             |            |            |            |
| N.1.2  |                             |             |             |            |            |            |
| N.2.1  |                             |             |             |            |            |            |
| N.2.2  |                             |             |             |            |            |            |
| N.2.3  |                             |             |             |            |            |            |
| N.3.1  |                             |             |             |            |            |            |
| N.3.2  |                             |             |             |            |            |            |
| N.3.3  |                             |             |             |            |            |            |
| N.4.1  |                             |             |             |            |            |            |
| S.1.1  |                             |             |             |            |            |            |
| S.1.2  |                             |             |             |            |            |            |
| S.2.1  |                             |             |             |            |            |            |
| S.2.2  |                             |             |             |            |            |            |
| S.2.3  |                             |             |             |            |            |            |
| S.3.1  |                             |             |             |            |            |            |
| S.3.2  |                             |             |             |            |            |            |
| S.3.3  |                             |             |             |            |            |            |
| H.1.1  |                             |             |             |            |            |            |
| H.1.2  |                             |             |             |            |            |            |
| H.1.3  |                             |             |             |            |            |            |
| H.1.4  |                             |             |             |            |            |            |
| H.2.1  |                             |             |             |            |            |            |
| H.3.1  |                             |             |             |            |            |            |
| O.1.1  |                             |             |             |            |            |            |
| O.1.2  |                             |             |             |            |            |            |
| O.2.1  |                             |             |             |            |            |            |
| O.2.2  |                             |             |             |            |            |            |
| O.3.1  |                             |             |             |            |            |            |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

|        |                           | Change<br>P<br>10 923 ... |             |            |            |            |
|--------|---------------------------|---------------------------|-------------|------------|------------|------------|
| Индекс | V <sub>c</sub><br>, м/мин | > Ø 12-15,7               | > Ø 15,7-20 | > Ø 20-25  | > Ø 25-32  | > Ø 32-41  |
|        |                           | f<br>мм/об                | f<br>мм/об  | f<br>мм/об | f<br>мм/об | f<br>мм/об |
| P.1.1  | 120                       | 0,32                      | 0,36        | 0,39       | 0,41       | 0,42       |
| P.1.2  | 115                       | 0,30                      | 0,34        | 0,37       | 0,39       | 0,40       |
| P.1.3  | 110                       | 0,29                      | 0,32        | 0,35       | 0,37       | 0,38       |
| P.1.4  | 105                       | 0,27                      | 0,31        | 0,34       | 0,35       | 0,36       |
| P.1.5  | 100                       | 0,26                      | 0,29        | 0,32       | 0,34       | 0,34       |
| P.2.1  | 120                       | 0,37                      | 0,42        | 0,46       | 0,49       | 0,49       |
| P.2.2  | 110                       | 0,34                      | 0,38        | 0,42       | 0,44       | 0,45       |
| P.2.3  | 100                       | 0,30                      | 0,35        | 0,38       | 0,40       | 0,40       |
| P.2.4  | 75                        | 0,27                      | 0,30        | 0,33       | 0,35       | 0,35       |
| P.3.1  | 85                        | 0,30                      | 0,35        | 0,38       | 0,40       | 0,40       |
| P.3.2  | 65                        | 0,25                      | 0,28        | 0,31       | 0,32       | 0,33       |
| P.3.3  | 65                        | 0,19                      | 0,22        | 0,24       | 0,25       | 0,25       |
| P.4.1  | 65                        | 0,20                      | 0,23        | 0,25       | 0,26       | 0,27       |
| P.4.2  | 65                        | 0,20                      | 0,23        | 0,25       | 0,26       | 0,27       |
| M.1.1  |                           |                           |             |            |            |            |
| M.2.1  |                           |                           |             |            |            |            |
| M.3.1  |                           |                           |             |            |            |            |
| K.1.1  | 110                       | 0,41                      | 0,47        | 0,51       | 0,54       | 0,55       |
| K.1.2  | 90                        | 0,33                      | 0,37        | 0,41       | 0,43       | 0,43       |
| K.2.1  | 145                       | 0,38                      | 0,43        | 0,47       | 0,50       | 0,51       |
| K.2.2  | 90                        | 0,33                      | 0,37        | 0,41       | 0,43       | 0,43       |
| K.3.1  | 80                        | 0,35                      | 0,40        | 0,44       | 0,46       | 0,47       |
| K.3.2  | 70                        | 0,28                      | 0,32        | 0,34       | 0,36       | 0,37       |
| N.1.1  |                           |                           |             |            |            |            |
| N.1.2  |                           |                           |             |            |            |            |
| N.2.1  |                           |                           |             |            |            |            |
| N.2.2  |                           |                           |             |            |            |            |
| N.2.3  |                           |                           |             |            |            |            |
| N.3.1  |                           |                           |             |            |            |            |
| N.3.2  |                           |                           |             |            |            |            |
| N.3.3  |                           |                           |             |            |            |            |
| N.4.1  |                           |                           |             |            |            |            |
| S.1.1  |                           |                           |             |            |            |            |
| S.1.2  |                           |                           |             |            |            |            |
| S.2.1  |                           |                           |             |            |            |            |
| S.2.2  |                           |                           |             |            |            |            |
| S.2.3  |                           |                           |             |            |            |            |
| S.3.1  |                           |                           |             |            |            |            |
| S.3.2  |                           |                           |             |            |            |            |
| S.3.3  |                           |                           |             |            |            |            |
| H.1.1  |                           |                           |             |            |            |            |
| H.1.2  |                           |                           |             |            |            |            |
| H.1.3  |                           |                           |             |            |            |            |
| H.1.4  |                           |                           |             |            |            |            |
| H.2.1  |                           |                           |             |            |            |            |
| H.3.1  |                           |                           |             |            |            |            |
| O.1.1  |                           |                           |             |            |            |            |
| O.1.2  |                           |                           |             |            |            |            |
| O.2.1  |                           |                           |             |            |            |            |
| O.2.2  |                           |                           |             |            |            |            |
| O.3.1  |                           |                           |             |            |            |            |



Для сверления сквозных отверстий необходимо уменьшить подачу при выходе сверла ~ на 30 %! Для более высокой точности позиционировать выполнить предварительную центровку с помощью центровочного сверла NC 142°. Для типов VA 5xD и 8xD дополнительно выполнить засверливание с уменьшенной подачей, 0,05–0,06 мм/об.

## Стандартные режимы резания — WTX — Change

| Индекс | Change<br>VA<br>10 921 ... |                           |                           |                         |                         | Change<br>GG<br>10 924 ... |                           |                           |                         |                         |
|--------|----------------------------|---------------------------|---------------------------|-------------------------|-------------------------|----------------------------|---------------------------|---------------------------|-------------------------|-------------------------|
|        | $V_c$<br>, м/мин           | > Ø 12-15,7<br>f<br>мм/об | > Ø 15,7-20<br>f<br>мм/об | > Ø 20-25<br>f<br>мм/об | > Ø 25-32<br>f<br>мм/об | $V_c$<br>, м/мин           | > Ø 12-15,7<br>f<br>мм/об | > Ø 15,7-20<br>f<br>мм/об | > Ø 20-25<br>f<br>мм/об | > Ø 25-32<br>f<br>мм/об |
|        |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| P.1.1  | 110                        | 0,25                      | 0,28                      | 0,30                    | 0,32                    |                            |                           |                           |                         |                         |
| P.1.2  | 105                        | 0,24                      | 0,27                      | 0,29                    | 0,31                    |                            |                           |                           |                         |                         |
| P.1.3  | 100                        | 0,22                      | 0,25                      | 0,28                    | 0,29                    |                            |                           |                           |                         |                         |
| P.1.4  | 95                         | 0,21                      | 0,24                      | 0,26                    | 0,28                    |                            |                           |                           |                         |                         |
| P.1.5  | 90                         | 0,20                      | 0,23                      | 0,25                    | 0,26                    |                            |                           |                           |                         |                         |
| P.2.1  | 110                        | 0,29                      | 0,33                      | 0,36                    | 0,38                    |                            |                           |                           |                         |                         |
| P.2.2  | 100                        | 0,26                      | 0,30                      | 0,33                    | 0,35                    |                            |                           |                           |                         |                         |
| P.2.3  | 90                         | 0,24                      | 0,27                      | 0,29                    | 0,31                    |                            |                           |                           |                         |                         |
| P.2.4  | 70                         | 0,21                      | 0,24                      | 0,26                    | 0,27                    |                            |                           |                           |                         |                         |
| P.3.1  | 75                         | 0,24                      | 0,27                      | 0,30                    | 0,31                    |                            |                           |                           |                         |                         |
| P.3.2  | 60                         | 0,19                      | 0,22                      | 0,24                    | 0,25                    |                            |                           |                           |                         |                         |
| P.3.3  | 60                         | 0,15                      | 0,17                      | 0,18                    | 0,19                    |                            |                           |                           |                         |                         |
| P.4.1  | 60                         | 0,16                      | 0,18                      | 0,19                    | 0,20                    |                            |                           |                           |                         |                         |
| P.4.2  | 60                         | 0,16                      | 0,18                      | 0,19                    | 0,20                    |                            |                           |                           |                         |                         |
| M.1.1  | 55                         | 0,20                      | 0,23                      | 0,25                    | 0,26                    |                            |                           |                           |                         |                         |
| M.2.1  | 50                         | 0,17                      | 0,19                      | 0,21                    | 0,22                    |                            |                           |                           |                         |                         |
| M.3.1  | 50                         | 0,17                      | 0,19                      | 0,21                    | 0,22                    |                            |                           |                           |                         |                         |
| K.1.1  | 95                         | 0,37                      | 0,42                      | 0,46                    | 0,49                    | 120                        | 0,49                      | 0,56                      | 0,62                    | 0,65                    |
| K.1.2  | 80                         | 0,29                      | 0,33                      | 0,36                    | 0,38                    | 100                        | 0,39                      | 0,45                      | 0,49                    | 0,51                    |
| K.2.1  | 130                        | 0,34                      | 0,39                      | 0,42                    | 0,45                    | 160                        | 0,45                      | 0,52                      | 0,57                    | 0,60                    |
| K.2.2  | 80                         | 0,29                      | 0,33                      | 0,36                    | 0,38                    | 100                        | 0,39                      | 0,45                      | 0,49                    | 0,51                    |
| K.3.1  | 70                         | 0,32                      | 0,36                      | 0,39                    | 0,41                    | 90                         | 0,42                      | 0,48                      | 0,52                    | 0,55                    |
| K.3.2  | 65                         | 0,25                      | 0,28                      | 0,31                    | 0,33                    | 80                         | 0,34                      | 0,38                      | 0,41                    | 0,44                    |
| N.1.1  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| N.1.2  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| N.2.1  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| N.2.2  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| N.2.3  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| N.3.1  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| N.3.2  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| N.3.3  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| N.4.1  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| S.1.1  | 30                         | 0,14                      | 0,16                      | 0,17                    | 0,18                    |                            |                           |                           |                         |                         |
| S.1.2  | 20                         | 0,10                      | 0,11                      | 0,12                    | 0,13                    |                            |                           |                           |                         |                         |
| S.2.1  | 20                         | 0,10                      | 0,11                      | 0,12                    | 0,13                    |                            |                           |                           |                         |                         |
| S.2.2  | 15                         | 0,12                      | 0,14                      | 0,15                    | 0,16                    |                            |                           |                           |                         |                         |
| S.2.3  | 15                         | 0,10                      | 0,11                      | 0,12                    | 0,13                    |                            |                           |                           |                         |                         |
| S.3.1  | 40                         | 0,17                      | 0,20                      | 0,22                    | 0,23                    |                            |                           |                           |                         |                         |
| S.3.2  | 30                         | 0,15                      | 0,17                      | 0,18                    | 0,19                    |                            |                           |                           |                         |                         |
| S.3.3  | 25                         | 0,12                      | 0,14                      | 0,15                    | 0,16                    |                            |                           |                           |                         |                         |
| H.1.1  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| H.1.2  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| H.1.3  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| H.1.4  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| H.2.1  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| H.3.1  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| O.1.1  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| O.1.2  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| O.2.1  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| O.2.2  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |
| O.3.1  |                            |                           |                           |                         |                         |                            |                           |                           |                         |                         |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

| Индекс | V <sub>c</sub><br>, м/мин | Change<br>AL<br>10 922 ... |             |            |            |
|--------|---------------------------|----------------------------|-------------|------------|------------|
|        |                           | > Ø 12-15,7                | > Ø 15,7-20 | > Ø 20-25  | > Ø 25-32  |
|        |                           | f<br>мм/об                 | f<br>мм/об  | f<br>мм/об | f<br>мм/об |
| P.1.1  |                           |                            |             |            |            |
| P.1.2  |                           |                            |             |            |            |
| P.1.3  |                           |                            |             |            |            |
| P.1.4  |                           |                            |             |            |            |
| P.1.5  |                           |                            |             |            |            |
| P.2.1  |                           |                            |             |            |            |
| P.2.2  |                           |                            |             |            |            |
| P.2.3  |                           |                            |             |            |            |
| P.2.4  |                           |                            |             |            |            |
| P.3.1  |                           |                            |             |            |            |
| P.3.2  |                           |                            |             |            |            |
| P.3.3  |                           |                            |             |            |            |
| P.4.1  |                           |                            |             |            |            |
| P.4.2  |                           |                            |             |            |            |
| M.1.1  |                           |                            |             |            |            |
| M.2.1  |                           |                            |             |            |            |
| M.3.1  |                           |                            |             |            |            |
| K.1.1  |                           |                            |             |            |            |
| K.1.2  |                           |                            |             |            |            |
| K.2.1  |                           |                            |             |            |            |
| K.2.2  |                           |                            |             |            |            |
| K.3.1  |                           |                            |             |            |            |
| K.3.2  |                           |                            |             |            |            |
| N.1.1  | 330                       | 0,27                       | 0,31        | 0,34       | 0,36       |
| N.1.2  | 300                       | 0,25                       | 0,28        | 0,31       | 0,32       |
| N.2.1  | 250                       | 0,33                       | 0,37        | 0,41       | 0,43       |
| N.2.2  | 220                       | 0,33                       | 0,37        | 0,41       | 0,43       |
| N.2.3  | 180                       | 0,33                       | 0,37        | 0,41       | 0,43       |
| N.3.1  | 200                       | 0,41                       | 0,47        | 0,51       | 0,54       |
| N.3.2  | 120                       | 0,33                       | 0,37        | 0,41       | 0,43       |
| N.3.3  | 140                       | 0,25                       | 0,28        | 0,31       | 0,32       |
| N.4.1  |                           |                            |             |            |            |
| S.1.1  |                           |                            |             |            |            |
| S.1.2  |                           |                            |             |            |            |
| S.2.1  |                           |                            |             |            |            |
| S.2.2  |                           |                            |             |            |            |
| S.2.3  |                           |                            |             |            |            |
| S.3.1  |                           |                            |             |            |            |
| S.3.2  |                           |                            |             |            |            |
| S.3.3  |                           |                            |             |            |            |
| H.1.1  |                           |                            |             |            |            |
| H.1.2  |                           |                            |             |            |            |
| H.1.3  |                           |                            |             |            |            |
| H.1.4  |                           |                            |             |            |            |
| H.2.1  |                           |                            |             |            |            |
| H.3.1  |                           |                            |             |            |            |
| O.1.1  |                           |                            |             |            |            |
| O.1.2  |                           |                            |             |            |            |
| O.2.1  |                           |                            |             |            |            |
| O.2.2  |                           |                            |             |            |            |
| O.3.1  |                           |                            |             |            |            |



Для сверления сквозных отверстий необходимо уменьшить подачу при выходе сверла ~ на 30 %! Для более высокой точности позиционировать сверло с помощью центровочного сверла NC 142°. Для типов VA 5xD и 8xD дополнительно выполнить засверливание с уменьшенной подачей, 0,05–0,06 мм/об.

## Стандартные режимы резания — WTX — Change Feed

| Индекс | Change Feed<br>UNI<br>10 925 ... |                                              |                         |            |            |            |            |            |
|--------|----------------------------------|----------------------------------------------|-------------------------|------------|------------|------------|------------|------------|
|        | $V_c$<br>, м/мин<br>с внутр. СОЖ | $V_c$<br>, м/мин<br>с внешним<br>охлаждением | $V_c$<br>, м/мин<br>MMS | > Ø 14,0   | > Ø 17,5   | > Ø 21,5   | > Ø 26,0   | Ø 32,0     |
|        |                                  |                                              |                         | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об | f<br>мм/об |
| P.1.1  | 100                              | 90                                           | 90                      | 0,45       | 0,51       | 0,55       | 0,58       | 0,60       |
| P.1.2  | 95                               | 85                                           | 85                      | 0,43       | 0,48       | 0,53       | 0,55       | 0,57       |
| P.1.3  | 90                               | 80                                           | 80                      | 0,41       | 0,46       | 0,50       | 0,53       | 0,54       |
| P.1.4  | 85                               | 75                                           | 75                      | 0,39       | 0,44       | 0,48       | 0,50       | 0,51       |
| P.1.5  | 80                               | 75                                           | 75                      | 0,37       | 0,42       | 0,45       | 0,47       | 0,49       |
| P.2.1  | 100                              | 85                                           | 85                      | 0,54       | 0,60       | 0,65       | 0,69       | 0,71       |
| P.2.2  | 90                               | 75                                           | 75                      | 0,49       | 0,55       | 0,59       | 0,62       | 0,64       |
| P.2.3  | 80                               | 70                                           | 70                      | 0,44       | 0,49       | 0,53       | 0,56       | 0,58       |
| P.2.4  | 65                               | 55                                           | 55                      | 0,39       | 0,43       | 0,47       | 0,49       | 0,51       |
| P.3.1  | 70                               | 60                                           | 60                      | 0,44       | 0,49       | 0,53       | 0,56       | 0,58       |
| P.3.2  | 55                               | 50                                           | 50                      | 0,36       | 0,40       | 0,43       | 0,46       | 0,47       |
| P.3.3  | 55                               | 40                                           | 45                      | 0,28       | 0,31       | 0,33       | 0,35       | 0,36       |
| P.4.1  | 55                               | 40                                           | 45                      | 0,29       | 0,32       | 0,35       | 0,37       | 0,38       |
| P.4.2  | 55                               | 40                                           | 45                      | 0,29       | 0,32       | 0,35       | 0,37       | 0,38       |
| M.1.1  |                                  |                                              |                         |            |            |            |            |            |
| M.2.1  |                                  |                                              |                         |            |            |            |            |            |
| M.3.1  |                                  |                                              |                         |            |            |            |            |            |
| K.1.1  | 110                              | 75                                           | 75                      | 0,68       | 0,77       | 0,83       | 0,88       | 0,90       |
| K.1.2  | 90                               | 70                                           | 70                      | 0,54       | 0,61       | 0,66       | 0,69       | 0,71       |
| K.2.1  | 145                              | 90                                           | 110                     | 0,63       | 0,71       | 0,77       | 0,81       | 0,83       |
| K.2.2  | 90                               | 70                                           | 70                      | 0,54       | 0,61       | 0,66       | 0,69       | 0,71       |
| K.3.1  | 80                               | 70                                           | 70                      | 0,58       | 0,65       | 0,71       | 0,75       | 0,77       |
| K.3.2  | 70                               | 65                                           | 65                      | 0,46       | 0,52       | 0,56       | 0,59       | 0,61       |
| N.1.1  |                                  |                                              |                         |            |            |            |            |            |
| N.1.2  |                                  |                                              |                         |            |            |            |            |            |
| N.2.1  |                                  |                                              |                         |            |            |            |            |            |
| N.2.2  |                                  |                                              |                         |            |            |            |            |            |
| N.2.3  |                                  |                                              |                         |            |            |            |            |            |
| N.3.1  |                                  |                                              |                         |            |            |            |            |            |
| N.3.2  |                                  |                                              |                         |            |            |            |            |            |
| N.3.3  |                                  |                                              |                         |            |            |            |            |            |
| N.4.1  |                                  |                                              |                         |            |            |            |            |            |
| S.1.1  |                                  |                                              |                         |            |            |            |            |            |
| S.1.2  |                                  |                                              |                         |            |            |            |            |            |
| S.2.1  |                                  |                                              |                         |            |            |            |            |            |
| S.2.2  |                                  |                                              |                         |            |            |            |            |            |
| S.2.3  |                                  |                                              |                         |            |            |            |            |            |
| S.3.1  |                                  |                                              |                         |            |            |            |            |            |
| S.3.2  |                                  |                                              |                         |            |            |            |            |            |
| S.3.3  |                                  |                                              |                         |            |            |            |            |            |
| H.1.1  |                                  |                                              |                         |            |            |            |            |            |
| H.1.2  |                                  |                                              |                         |            |            |            |            |            |
| H.1.3  |                                  |                                              |                         |            |            |            |            |            |
| H.1.4  |                                  |                                              |                         |            |            |            |            |            |
| H.2.1  |                                  |                                              |                         |            |            |            |            |            |
| H.3.1  |                                  |                                              |                         |            |            |            |            |            |
| O.1.1  |                                  |                                              |                         |            |            |            |            |            |
| O.1.2  |                                  |                                              |                         |            |            |            |            |            |
| O.2.1  |                                  |                                              |                         |            |            |            |            |            |
| O.2.2  |                                  |                                              |                         |            |            |            |            |            |
| O.3.1  |                                  |                                              |                         |            |            |            |            |            |



Режимы резания очень сильно зависят от внешних условий, таких как стабильность закрепления инструмента и заготовки, материал и тип станка! Указанные значения являются ориентировочными и в зависимости от конкретных условий могут требовать корректировки как в меньшую, так и в большую сторону!

## Стандартные режимы резания — WTX — SB

2

| Индекс | Глубина сверления 3xD<br>SB<br>10 767 ..., 10 772 ..., 10 783 ..., 10 788 ... |                  |                 |                 |                  |                   |
|--------|-------------------------------------------------------------------------------|------------------|-----------------|-----------------|------------------|-------------------|
|        | $V_c$<br>, м/мин                                                              | $V_c$<br>, м/мин | $\emptyset$ 2-5 | $\emptyset$ 5-8 | $\emptyset$ 8-12 | $\emptyset$ 12-16 |
|        | без внутр. охл.                                                               | с внутр. СОЖ     | f<br>мм/об      | f<br>мм/об      | f<br>мм/об       | f<br>мм/об        |
| P.1.1  | 110                                                                           | 120              | 0,13            | 0,18            | 0,25             | 0,30              |
| P.1.2  | 105                                                                           | 115              | 0,12            | 0,18            | 0,24             | 0,29              |
| P.1.3  | 100                                                                           | 110              | 0,12            | 0,17            | 0,23             | 0,28              |
| P.1.4  | 95                                                                            | 105              | 0,11            | 0,16            | 0,21             | 0,26              |
| P.1.5  | 90                                                                            | 100              | 0,11            | 0,15            | 0,20             | 0,25              |
| P.2.1  | 105                                                                           | 120              | 0,15            | 0,22            | 0,29             | 0,36              |
| P.2.2  | 95                                                                            | 110              | 0,14            | 0,20            | 0,27             | 0,33              |
| P.2.3  | 85                                                                            | 100              | 0,13            | 0,18            | 0,24             | 0,29              |
| P.2.4  | 65                                                                            | 75               | 0,12            | 0,16            | 0,21             | 0,26              |
| P.3.1  | 70                                                                            | 85               | 0,12            | 0,18            | 0,24             | 0,29              |
| P.3.2  | 60                                                                            | 65               | 0,11            | 0,15            | 0,20             | 0,24              |
| P.3.3  | 50                                                                            | 65               | 0,09            | 0,12            | 0,15             | 0,19              |
| P.4.1  | 50                                                                            | 65               | 0,08            | 0,12            | 0,16             | 0,19              |
| P.4.2  | 50                                                                            | 65               | 0,08            | 0,12            | 0,16             | 0,19              |
| M.1.1  |                                                                               |                  |                 |                 |                  |                   |
| M.2.1  |                                                                               |                  |                 |                 |                  |                   |
| M.3.1  |                                                                               |                  |                 |                 |                  |                   |
| K.1.1  | 85                                                                            | 120              | 0,17            | 0,26            | 0,36             | 0,45              |
| K.1.2  | 75                                                                            | 100              | 0,15            | 0,22            | 0,29             | 0,36              |
| K.2.1  | 100                                                                           | 160              | 0,17            | 0,25            | 0,34             | 0,42              |
| K.2.2  | 75                                                                            | 100              | 0,15            | 0,22            | 0,29             | 0,36              |
| K.3.1  | 80                                                                            | 90               | 0,16            | 0,23            | 0,32             | 0,39              |
| K.3.2  | 70                                                                            | 80               | 0,14            | 0,19            | 0,25             | 0,31              |
| N.1.1  |                                                                               |                  |                 |                 |                  |                   |
| N.1.2  |                                                                               |                  |                 |                 |                  |                   |
| N.2.1  |                                                                               |                  |                 |                 |                  |                   |
| N.2.2  |                                                                               |                  |                 |                 |                  |                   |
| N.2.3  |                                                                               |                  |                 |                 |                  |                   |
| N.3.1  |                                                                               |                  |                 |                 |                  |                   |
| N.3.2  |                                                                               |                  |                 |                 |                  |                   |
| N.3.3  |                                                                               |                  |                 |                 |                  |                   |
| N.4.1  |                                                                               |                  |                 |                 |                  |                   |
| S.1.1  |                                                                               |                  |                 |                 |                  |                   |
| S.1.2  |                                                                               |                  |                 |                 |                  |                   |
| S.2.1  |                                                                               |                  |                 |                 |                  |                   |
| S.2.2  |                                                                               |                  |                 |                 |                  |                   |
| S.2.3  |                                                                               |                  |                 |                 |                  |                   |
| S.3.1  |                                                                               |                  |                 |                 |                  |                   |
| S.3.2  |                                                                               |                  |                 |                 |                  |                   |
| S.3.3  |                                                                               |                  |                 |                 |                  |                   |
| H.1.1  | 25                                                                            | 25               | 0,06            | 0,08            | 0,11             | 0,14              |
| H.1.2  |                                                                               |                  |                 |                 |                  |                   |
| H.1.3  |                                                                               |                  |                 |                 |                  |                   |
| H.1.4  |                                                                               |                  |                 |                 |                  |                   |
| H.2.1  | 35                                                                            | 35               | 0,08            | 0,11            | 0,14             | 0,18              |
| H.3.1  |                                                                               |                  |                 |                 |                  |                   |
| O.1.1  |                                                                               |                  |                 |                 |                  |                   |
| O.1.2  |                                                                               |                  |                 |                 |                  |                   |
| O.2.1  |                                                                               |                  |                 |                 |                  |                   |
| O.2.2  |                                                                               |                  |                 |                 |                  |                   |
| O.3.1  |                                                                               |                  |                 |                 |                  |                   |



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## Обзор типов — высокопроизводительные свёрла WTX

- ▲ хорошее самоцентрирование
- ▲ оптимальное стружкообразование
- ▲ высокая точность по радиальному биению
- ▲ высокая точность соосности
- ▲ превосходное качество поверхности
- ▲ узкие допуски отверстий
- ▲ незначительное отвердевание периферийных зон материала
- ▲ отличный выход стружки даже при большой глубине сверления

1 Для продукции, отмеченной значком видео, есть соответствующий видеоролик, который можно посмотреть по ссылке [cutting.tools/int/en/type-overview-wtx](https://cutting.tools/int/en/type-overview-wtx).



|             |                                                                                     |                                                                                                                                                                                       |            |                                                                                       |
|-------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------------------------------------------------------------------------------|
| UNI         |    | ▲ высокопроизводительное твердосплавное сверло для обработки любых материалов до 1200 Н/мм <sup>2</sup>                                                                               | DRAGONSKIN |    |
| Feed UNI    |    | ▲ твердосплавное сверло с 3 режущими кромками для высокой подачи<br>▲ высокая точность позиционирования                                                                               | DRAGONSKIN |    |
| Speed UNI   |    | ▲ для удвоенной скорости резания<br>▲ асимметричная геометрия торцевой части обеспечивает увеличение производительности при обработке сверлением стали и чугуна вплоть до 60 %        | DRAGONSKIN |    |
| Quattro 4F  |    | ▲ с дополнительными ленточками для оптимальной прямолинейности, соосности и точности позиционирования                                                                                 | DRAGONSKIN |                                                                                       |
| 180         |    | ▲ для наклонных плоскостей до 45° и ровного дна отверстия                                                                                                                             |            |                                                                                       |
| TB          |    | ▲ твердосплавное сверло для глубоких отверстий, до 50xD без цикла удаления стружки<br>▲ головка с 4 или 6 фасками для непревзойденной точности соосности                              |            |                                                                                       |
| CP          |   | ▲ обеспечивает еще большую надежность процесса глубокого сверления<br>▲ для оптимального направления сверла для глубоких отверстий при глубине > 30xD                                 |            |                                                                                       |
| VA          |  | ▲ оптимальный выбор для обработки коррозионностойких и кислотостойких материалов<br>▲ подходит для серийного производства                                                             |            |                                                                                       |
| AL          |  | ▲ высокопроизводительное твердосплавное сверло, предназначенное для обработки алюминия, меди и латуни<br>▲ 6 ленточек для высочайшего качества сверления                              |            |                                                                                       |
| GG          |  | ▲ для обработки литых материалов до 250 HB<br>▲ с прямыми канавками                                                                                                                   |            |                                                                                       |
| Ti          |  | ▲ специализированное сверло для экономичной обработки титана, титановых и жаропрочных сплавов                                                                                         | DRAGONSKIN |                                                                                       |
| H           |  | ▲ высокопроизводительное сверло для обработки закаленных сталей 45–70 HRC                                                                                                             | DRAGONSKIN |  |
| HFDS        |  | ▲ сверло для большой подачи, четыре режущие кромки<br>▲ разработано специально для обработки стали<br>▲ инновационная режущая геометрия гарантирует высокую точность позиционирования | DRAGONSKIN |  |
| MINI        |  | ▲ твердосплавное миниатюрное сверло для точного сверления отверстий диаметром 0,1–2,9 мм                                                                                              |            |                                                                                       |
| MICRO       |  | ▲ универсальное высокопроизводительное сверло малого диаметра<br>▲ специальная геометрия и покрытие<br>▲ пилотное сверло для глубоких отверстий WTX Micro                             | DRAGONSKIN |  |
| Change      |  | ▲ сверло со сменными головками, сопоставимое по качеству обработки с цельным твердосплавным сверлом, Ø 12,0–41,0 мм                                                                   |            |  |
| Change Feed |  | ▲ сверло со сменными головками, имеющее три режущие кромки для еще большей производительности, Ø 14,0–32,0 мм                                                                         |            |  |
| Feed BR     |  | ▲ цельное твердосплавное сверло-развертка повышенной эффективности<br>▲ сверление и развертывание за один проход<br>▲ 3 режущие кромки сверла и 6 режущих кромок развертки            | DRAGONSKIN |                                                                                       |
| SB          |  | ▲ для сверления и зенкования отверстий под нарезку и формирования резьбы                                                                                                              | DRAGONSKIN |                                                                                       |

## Важные аспекты применения сверл WTX

### Осевое смещение

Осевое смещение между вращающейся деталью и неподвижным инструментом может составлять макс. 0,04 мм. При большем осевом смещении снижается стойкость режущего инструмента, и качество сверления, а также может произойти поломка инструмента.

### Радиальное биение

Для вращающихся инструментов радиальное биение не должно быть больше 0,015 мм.

### Система подачи СОЖ

Для инструментов с внутренним охлаждением давление должно составлять мин. 20 бар (см. график внизу справа).

Рекомендуется использовать высококачественные полусинтетические или эмульсионные СОЖ с долей масла мин. 10 % и антизадирными присадками. Это увеличивает стойкость инструмента и позволяет добиться более высокой точности допусков и лучшего качества поверхности. Рекомендуется использовать систему тонкой фильтрации в целях предотвращения возможной закупорки каналов охлаждения.

### Сверление в сплошном материале

Ввиду особой геометрии наши твердосплавные сверла предназначены для сверления в сплошном материале. С помощью твердосплавных сверл  $\leq 12xD$  можно делать отверстия в сплошном материале без сверления пилотных отверстий.

### Выход канавки

Между деталью и выходом канавки должно быть соблюдено безопасное расстояние мин.  $1-1,5xD$  для обеспечения оптимального отвода стружки, чтобы исключить ее скопление и поломку инструмента.

### Сверление с циклом удаления стружки

От этой операции следует отказаться ввиду риска поломки инструмента из-за оставшейся или смытой в отверстие стружки.

### Последующие инструменты

При меньшем диаметре в том же отверстии последующим инструментом необходим меньший угол при вершине сверла, чем у предыдущего инструмента, для обеспечения самоцентрирования.

### Прерывистое резание

При сколах на входе и выходе или поперечных отверстиях подача должна быть снижена.

### Выходное отверстие

Во избежание сильного образования заусенцев сократить значения  $v_c$  и  $f$ .

### Закрепление заготовок

Во избежание излома инструмента необходимо закреплять заготовку надлежащим образом, не допуская колебаний или прогибов.

### Инструментальная оснастка

Оптимальное закрепление инструмента обеспечивает высокую точность соосности и допусков исполнительных размеров (IT7-8). Благодаря получаемому высокому качеству обработки поверхности зачастую можно отказаться от операции развертывания.

### Требования к оборудованию

Соблюдать значения из графика производительности (внизу слева).

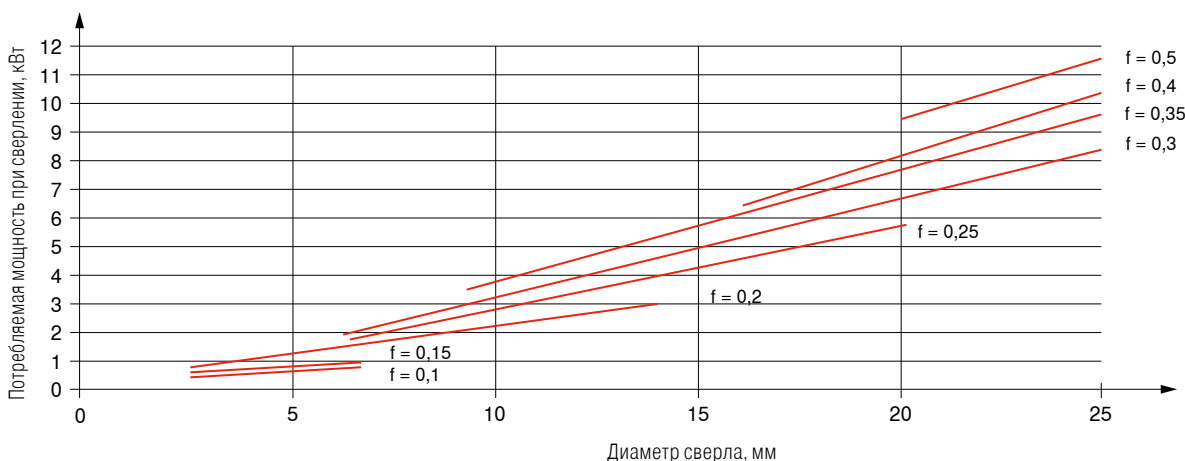
### Таблица режимов резания

Для поддержания контролируемого образования стружки (стружка в форме запятой) значения подачи не должны опускаться ниже минимальных.

### Подача $f$ в мм/об

Требуемая мощность при сверлении в зависимости от диаметра:  $v_c = 80$  м/мин

Прочность материала на растяжение =  $600 \text{ Н/мм}^2$



## Стратегия по обработке глубоких отверстий твердосплавными сверлами WTX.

### 1 Сверление пилотного отверстия



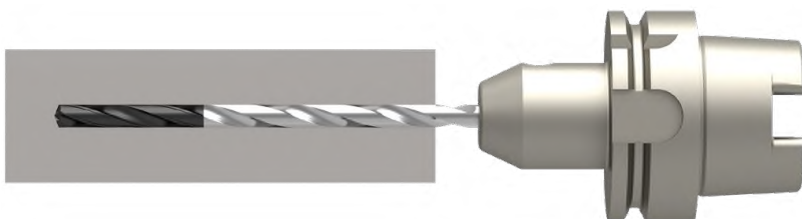
- ▲ Для пилотного отверстия мы рекомендуем использовать сверло WTX 3xD/ 5xD того же номинального диаметра.
- ▲ Пилотное отверстие должно быть на 0,01–0,03 мм больше в диаметре и глубиной минимум 3xD.
- ▲ Необходимо обязательно следить, чтобы угол при вершине пилотного сверла был больше, чем у сверла для глубоких отверстий.
- ▲ Для отверстий глубиной более 40xD, мы рекомендуем изготавливать пилотное отверстие нашими сверлами для глубоких отверстий серии Co-Pilot CP 20 UNI.

### 2 Ввод сверла для глубоких отверстий в пилотное отверстие



- ▲ Ввести в пилотное отверстие сверло для глубоких отверстий WTX без давления СОЖ на низких значениях частоты вращения ( $n = 200\text{--}300$  об/мин) при подаче  $v_f = 1000$  мм/мин.
- ▲ Примерно за 2 мм до дна пилотного отверстия остановить подачу, включить подвод СОЖ и немного подождать, пока будет достигнуто рекомендуемое давление. Затем по возможности плавно повысить частоту вращения до рекомендуемого значения.

### 3 Сверление на желаемую глубину, без цикла удаления стружки



- ▲ Снизить подачу при сверлении пересекающихся отверстий и при выходе из отверстия на 50 %.

### 4 Вывод сверла



- ▲ Вывести сверло примерно до глубины направляющего отверстия.
- ▲ Постепенно снижать частоту вращения до низких значений ( $n = 200\text{--}300$  об/мин).
- ▲ Использовать нормальную ускоренную подачу ( $v_f = 3000$  мм/мин) при выводе сверла из отверстия.



При горизонтальных операциях глубокого сверления от 40xD вводить сверло для глубоких отверстий в отверстие с частотой вращения 200 об/мин против часовой стрелки. Это позволит предотвратить прогиб сверла для глубоких отверстий.



Ни в коем случае нельзя допускать, чтобы сверло для глубоких отверстий свободно перемещалось в рабочей зоне станка на полной частоте вращения!

# WTX – Micro – рекомендации по применению

## Общие рекомендации

- ▲ При вертикальной обработке, засверливании в ровные и плоские поверхности начиная с диаметра 1,0 мм глубиной до 12xD можно отказаться от пилотных отверстий в из-за хорошего самоцентрирования. При горизонтальной обработке, засверливании в прерывистые и наклонные поверхности необходимо использовать пилотное сверло. Рекомендуемый инструмент – WTX Micro 5xD.
- ▲ Чтобы гарантировать бесперебойный ввод сверла для глубоких отверстий в направляющее отверстие, при горизонтальной обработке рекомендуется зенкерование под углом 90° с помощью подходящего зенкера NC.
- ▲ При вертикальной обработке сверла диаметром от 1,0 мм и длиной до 12xD могут использоваться также без снижения скорости вращения вне направляющего отверстия.
- ▲ При сквозном сверлении необходимо снизить подачу на оборот на 50 % перед выходом сверла из заготовки.
- ▲ При обработке материалов, образующих длинную стружку, начиная с глубины сверления 10xD, может потребоваться операция удаления стружки через каждые 3xD. Скользящее перемещение для удаления стружки (возвратное перемещение) должно выполняться на глубину направляющего отверстия.
- ▲ Поскольку микросверла имеют маленький диаметр каналов внутреннего охлаждения, эффективная фильтрация СОЖ чрезвычайно важна.  
Сверла < Ø 2,0 мм; фильтр < Ø 0,010 мм  
Сверла < Ø 3,0 мм; фильтр ≤ 0,020 мм
- ▲ Частицы взвеси и мельчайшие частицы в СОЖ по мере старения эмульсии препятствуют эффективному потоку СОЖ. Поэтому рекомендуется регулярная замена СОЖ.
- ▲ Для надежного, с точки зрения технологических процессов производства, требуется подходящая оправка с высочайшими точностью по радиальному биению и качеством балансировки.  
Точность по радиальному биению ≤ 0,003 мм  
Пригодность к высокому диапазону частоты вращения
- ▲ Чтобы гарантировать надежное, с точки зрения технологических процессов сверление, необходимо обеспечить минимальное давление в 30 бар.

### 1 Сверление пилотного отверстия



- ▲ Глубина пилотного отверстия: мин. 3xD
- ▲ Необходимо следить, чтобы пилотное отверстие было свободно от стружки во избежание закусывания режущих кромок миниатюрного сверла

### 2 Ввод сверла для глубоких отверстий в пилотное отверстие



- ▲ Частота вращения 300 об/мин (возможно частичное вращение против часовой стрелки)
- ▲ Скорость при входе сверла ~ 1000 мм/мин
- ▲ Включить подачу СОЖ
- ▲ Повышение параметров 0,5–1,0 мм до достижения дна направляющего отверстия

### 3 Глубокое сверление



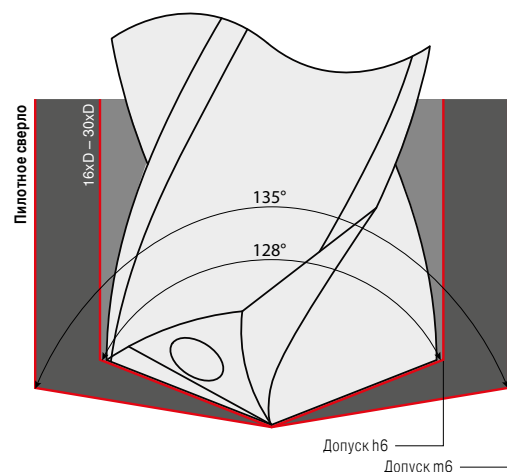
- ▲ На глубину сверления без удаления стружки

### 4 Вывод сверла

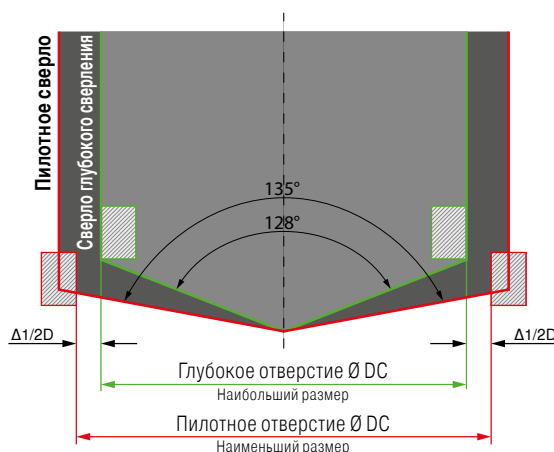


- ▲ Отвести сверло назад ~ на 1xD
- ▲ Снизить частоту вращения до 300 об/мин
- ▲ Скорость при выходе сверла ~ 1000 мм/мин
- ▲ Перед выводом сверла из отверстия отключить подачу эмульсии

## Допуски и углы



Чтобы использовать пилотное и сверло для глубоких отверстий одно за другим без сколов, должно быть выполнено условие:  
 $\Delta D = \varnothing D (\text{направляющее отверстие}) - \varnothing D (\text{глубокое отверстие}) > 0$



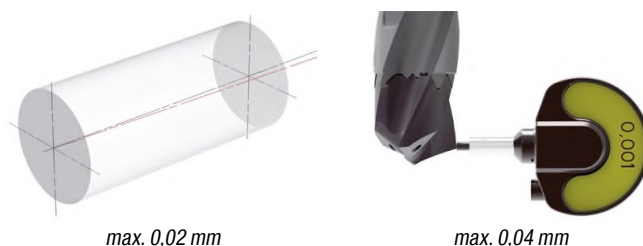
## Рекомендации по применению сверл со сменными головками WTX – Change Feed и WTX – Change

## Условия подачи СОЖ

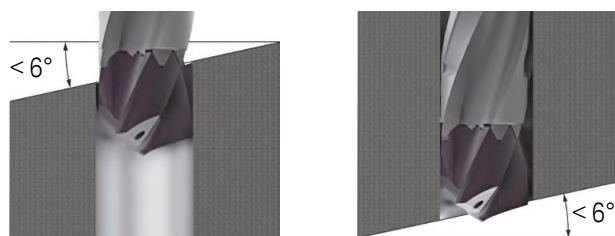
Давление СОЖ зависит от глубины сверления:

|              | с внешним охлаждением | без подачи СОЖ |                              |
|--------------|-----------------------|----------------|------------------------------|
| 1xD: 8 bar   | ✓                     | ✓              |                              |
| 3xD: 8 bar   | ✓                     | ✓              |                              |
| 5xD: 12 bar  | ✓                     | ✗              |                              |
| 8xD: 25 bar  | ✓                     | ✗              |                              |
| 12xD: 25 bar | ✓                     | ✗              |                              |
|              |                       |                | макс. глубина сверления: 3xD |

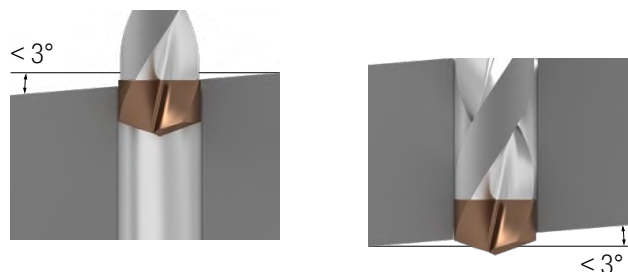
## Точность по радиальному биению



## Макс. угол входа и выхода WTX – Change Feed

При засверливании и выходе сверла через наклонные поверхности снизить  $v_f$  на 50 %.

## Макс. угол входа и выхода WTX – Change

При засверливании и выходе сверла через наклонные поверхности снизить  $v_f$  на 50 %.

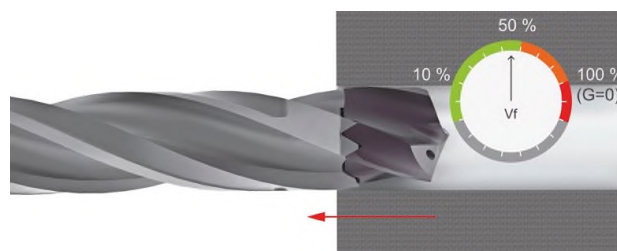
## Выход при сквозном сверлении

▲ WTX – Change Feed и WTX – Change



## Без ускоренной подачи при возвратном перемещении

Для ускоренного возвратного перемещения рекомендуется применять 5-кратное значение скорости подачи.



## Частные случаи обработки



Отверстие не по центру; центральная перемычка находится в зацеплении

WTX – Change Feed ✓  
WTX – Change ✓

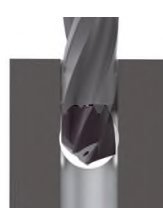
Отверстие не по центру; центральная перемычка не в зацеплении

WTX – Change Feed ✗  
WTX – Change ✗

Сверление встречного отверстия

WTX – Change Feed ✓  
WTX – Change ✗

Отверстие по центру и меньше по диаметру

WTX – Change Feed ✓  
WTX – Change ✓

Отверстие по центру и равно по диаметру

WTX – Change Feed ✗  
WTX – Change ✗

Отверстие по центру и больше по диаметру

WTX – Change Feed ✗  
WTX – Change ✗

## Рекомендации по применению твердосплавных сверл

### Причины дефектов:

### Решения:

#### ... нарост на режущей кромке

значение  $v_c$  слишком низкое  
снятие материала главной режущей кромкой слишком велико  
режущая кромка без покрытия

повышение  $v_c$   
уменьшить подачу  
покрытие

#### ... выкрашивание угла

нестабильные условия  
слишком большое радиальное биение  
прерывистое резание

изменение закрепления  
оптимизация радиального биения  
снизить подачу

#### ... сильный износ задней поверхности

значение  $v_c$  слишком высокое  
подача слишком низкая  
задний угол слишком мал

уменьшить  $v_c$   
повышение подачи  
увеличение заднего угла

#### ... затертости на поверхности инструмента

нестабильные условия  
слишком большое радиальное биение  
прерывистое резание  
абразивосодержащий материал

изменение закрепления  
коррекция радиального биения  
уменьшить подачу  
выбор более жирной эмульсии или масла

#### ... износ круглых фасок

нестабильные условия  
слишком большое радиальное биение  
слишком маленький обратный конус  
неверный выбор типа или плотности эмульсии

более стабильное закрепление  
контроль радиального биения  
увеличить обратный конус  
выбор более жирной эмульсии или масла

#### ... выкрашивание главной режущей кромки

нестабильные условия  
прерывистое резание  
неверный тип инструмента  
превышена макс. ширина износа

более стабильное закрепление  
уменьшить подачу  
выбрать другой инструмент  
более ранняя смена инструмента

#### ... сильный износ центральной перемычки

значение  $v_c$  слишком низкое  
подача слишком велика  
снятие материала главной режущей кромкой слишком велико

повысить  $v_c$   
уменьшить подачу  
оптимизация режущей кромки

#### ... выкрашивание на переходе, вершине сверла, главной режущей кромке

слишком маленький задний угол  
снятие материала главной режущей кромкой слишком велико  
неверный инструмент

увеличение заднего угла  
оптимизация режущей кромки  
выбор другого инструмента

#### ... пластичная деформация угла режущей кромки

значение  $v_c$  слишком высокое  
недостаточно эмульсии  
неправильная угловая фаска или отсутствует

снизить  $v_c$   
увеличить охлаждение  
коррекция угловой фаски

#### ... некачественная поверхность

слишком большое радиальное биение  
недостаточное охлаждение  
нестабильные условия

контроль радиального биения  
подача большего количества эмульсии  
изменение закрепления

#### ... сильные заусенцы на выходе из отверстия

подача слишком велика  
снятие материала главной режущей кромкой слишком велико

уменьшение подачи  
уменьшение режущей кромки

## Покрyтия

Ti800

- ▲ Нанопокрyтие AlTiN
- ▲ Максимальная температура применения: 1100 °C

TiAlN

- ▲ Многослойное покpытие TiAlN
- ▲ Максимальная температура применения: 900 °C

TiSi

- ▲ Многослойное покpытие TiSi
- ▲ Максимальная температура применения: 800 °C

Ti750

- ▲ Нанопокpытие TiAlN
- ▲ Максимальная температура применения: 1000 °C

DPX74S

DRAGONSKIN

- ▲ Специальное нанопокpытие TiAlN
- ▲ Максимальная температура применения: 1000 °C

DPX64S

DRAGONSKIN

- ▲ Однослойное покpытие TiAlN
- ▲ Идеально подходит для закаленных материалов
- ▲ Оптимизированная структура покpытия и поверхности
- ▲ Максимальная температура применения: 800 °C

DPX64U

DRAGONSKIN

- ▲ Специальное однослойное покpытие TiAlN
- ▲ Идеально подходит для закаленных материалов
- ▲ Оптимизированная структура покpытия и поверхности
- ▲ Максимальная температура применения: 800 °C

Ti700

- ▲ Многослойное покpытие TiAlN
- ▲ Максимальная температура применения: 1100 °C

TiB

- ▲ Однослойное покpытие TiB
- ▲ Предназначено специально для обработки алюминия
- ▲ Максимальная температура применения: 900 °C

Ti1050

- ▲ Многослойное покpытие Ti
- ▲ HV0,005 = 3300
- ▲ Коэффициент трения (относительно стали) = 0,3–0,5
- ▲ Максимальная температура применения: 900 °C

DLC

DRAGONSKIN

- ▲ Алмазоподобное углеродное покpытие
- ▲ Предназначено специально для обработки резанием цветных металлов
- ▲ Максимальная температура применения: 400 °C

DPA54

DRAGONSKIN

- ▲ Специальное многослойное покpытие
- ▲ Высокая твердость и термостойкость
- ▲ Максимальная температура применения: 800 °C

DPX14S

DRAGONSKIN

- ▲ Нанопокpытие TiAlN
- ▲ Коэффициент трения (в сухом виде относительно стали) = 0,35
- ▲ Максимальная температура применения: 1000 °C

DPX74M

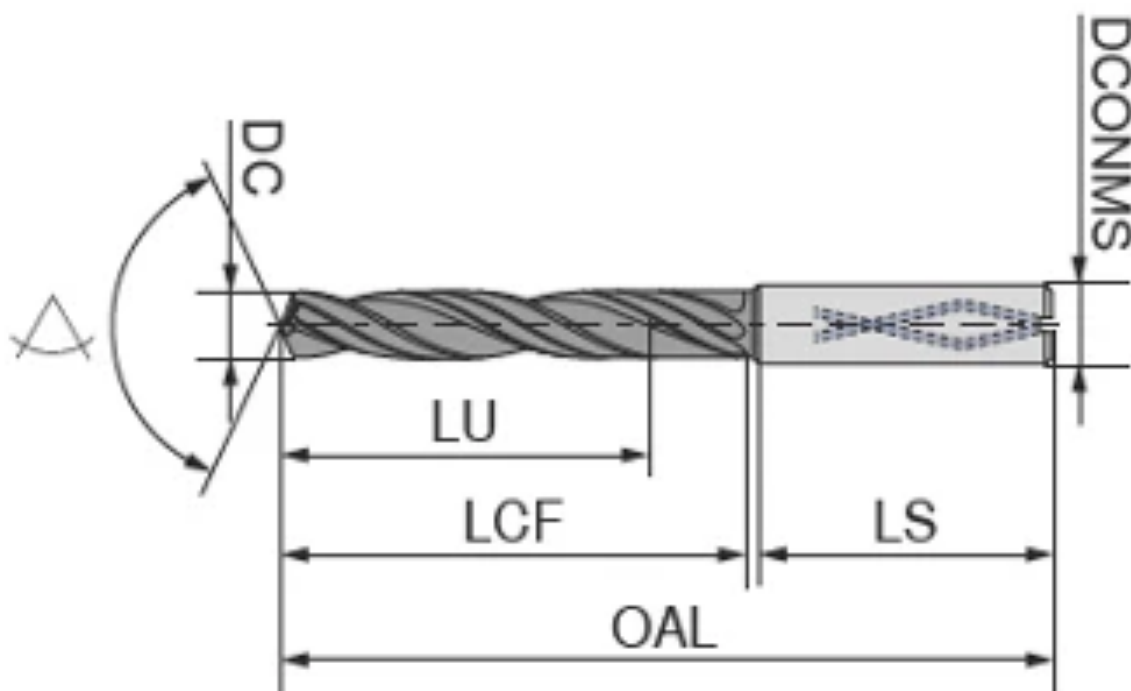
DRAGONSKIN

- ▲ Разработанное для микроинструментов универсальное однослойное покpытие на основе AlCrN
- ▲ Высокая стойкость к окислению, высокой температуре и износу
- ▲ Максимальная температура применения: 1100 °C

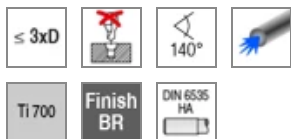
Артикул: 10760...

## WTX – Сверло-развёртка

WNT \ Performance



Краткие характеристики:



Применимость по материалам:



### Описание

#### Описание:

- Цельное твердосплавное сверло-развертка повышенной эффективности
- сверление и развертывание до качества H7 за один проход
- 2 режущих кромки для сверления
- 4 режущих кромки для развертывания
- высокие подачи
- высокое качество поверхности
- для глухих и сквозных отверстий
- оптимальная круглость / допуск H7

Технические характеристики

Кол-во режущих кромок NOF

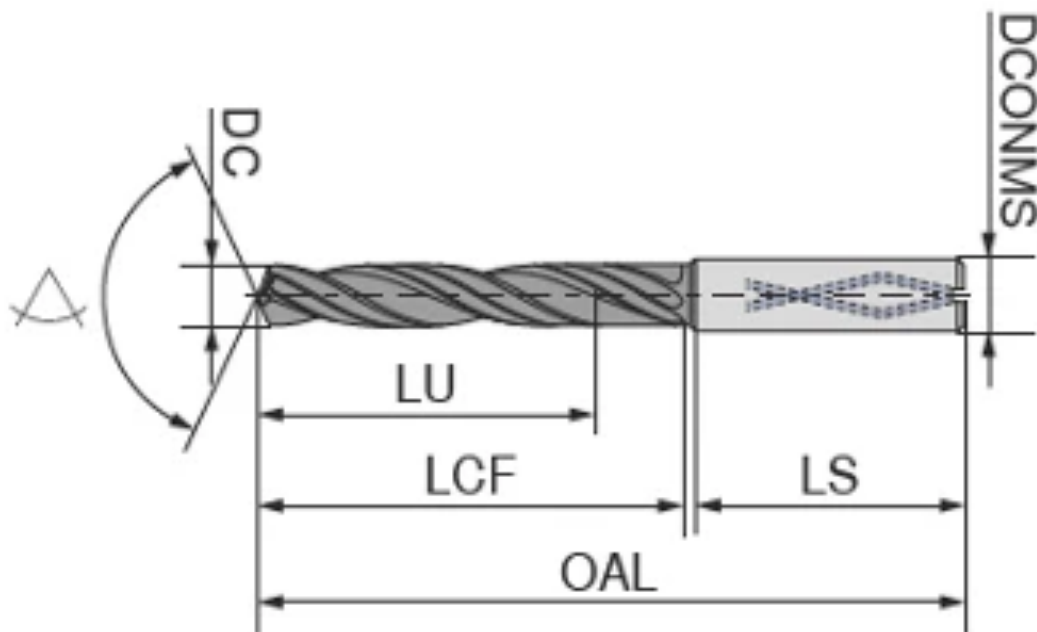
2

| d <sub>1</sub> H7<br>DC<br>(mm) | l <sub>1</sub><br>OAL<br>(mm) | l <sub>2</sub><br>LCF<br>(mm) | d <sub>2</sub> h6<br>DCONMS<br>(mm) | l <sub>4</sub><br>LS<br>(mm) | l <sub>3</sub><br>LU<br>(mm) |
|---------------------------------|-------------------------------|-------------------------------|-------------------------------------|------------------------------|------------------------------|
| Артикул: 10760040               |                               |                               |                                     |                              |                              |
| 4                               | 66                            | 24                            | 6                                   | 36                           | 17                           |
| Артикул: 10760050               |                               |                               |                                     |                              |                              |
| 5                               | 79                            | 34                            | 6                                   | 36                           | 24                           |
| Артикул: 10760060               |                               |                               |                                     |                              |                              |
| 6                               | 79                            | 34                            | 6                                   | 36                           | 24                           |
| Артикул: 10760080               |                               |                               |                                     |                              |                              |
| 8                               | 79                            | 34                            | 8                                   | 36                           | 24                           |
| Артикул: 10760100               |                               |                               |                                     |                              |                              |
| 10                              | 89                            | 47                            | 10                                  | 40                           | 35                           |
| Артикул: 10760120               |                               |                               |                                     |                              |                              |
| 12                              | 102                           | 55                            | 12                                  | 45                           | 40                           |
| Артикул: 10760140               |                               |                               |                                     |                              |                              |
| 14                              | 107                           | 60                            | 14                                  | 45                           | 43                           |
| Артикул: 10760160               |                               |                               |                                     |                              |                              |
| 16                              | 115                           | 65                            | 16                                  | 48                           | 45                           |

Артикул: 10761...

## WTX – Сверло-развёртка -1/100

WNT \ Performance



Краткие характеристики:



Применимость по материалам:



### Описание

#### Описание:

- Цельное твердосплавное сверло-развертка повышенной эффективности
- сверление и развертывание за один проход
- 2 режущих кромки для сверления
- 4 режущих кромки для развертывания
- высокие подачи
- высокое качество поверхности
- для глухих и сквозных отверстий

### Технические характеристики

Кол-во режущих кромок NOF

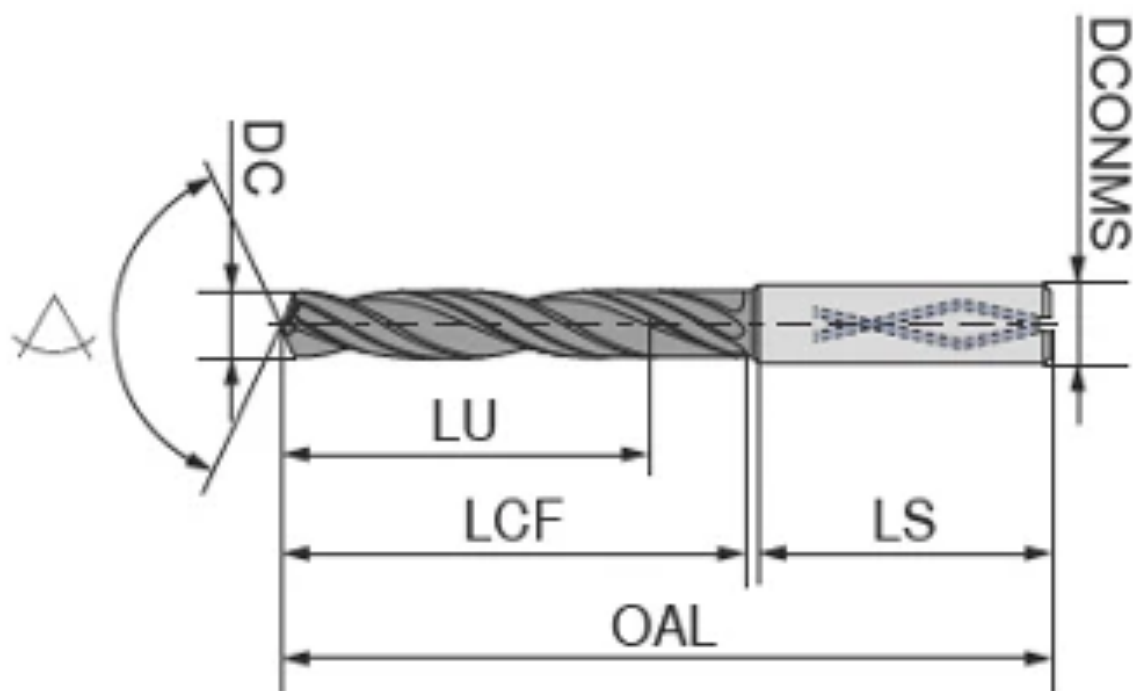
2

|                      | $d_{\text{LIGO}}$<br>DC<br>(mm) | $L_{\text{OAL}}$<br>(mm) | $L_{\text{LZF}}$<br>(mm) | $d_{\text{LIGO}}$<br>LCONRAD<br>(mm) | $L_{\text{LS}}$<br>(mm) | $L_{\text{LU}}$<br>(mm) | $d_{\text{L}}$<br>DC |
|----------------------|---------------------------------|--------------------------|--------------------------|--------------------------------------|-------------------------|-------------------------|----------------------|
| Applwayt: 1076103670 | 3,97                            | 66                       | 24                       | 6                                    | 36                      | 17                      |                      |
| Applwayt: 1076103980 | 3,98                            | 66                       | 24                       | 6                                    | 36                      | 17                      |                      |
| Applwayt: 1076103990 | 3,99                            | 66                       | 24                       | 6                                    | 36                      | 17                      |                      |
| Applwayt: 1076104000 | 4                               | 66                       | 24                       | 6                                    | 36                      | 17                      |                      |
| Applwayt: 1076104010 | 4,01                            | 66                       | 24                       | 6                                    | 36                      | 17                      |                      |
| Applwayt: 1076104020 | 4,02                            | 66                       | 24                       | 6                                    | 36                      | 17                      |                      |
| Applwayt: 1076104070 | 4,97                            | 66                       | 24                       | 6                                    | 36                      | 17                      |                      |
| Applwayt: 1076104080 | 4,98                            | 66                       | 24                       | 6                                    | 36                      | 17                      |                      |
| Applwayt: 1076104090 | 4,99                            | 66                       | 24                       | 6                                    | 36                      | 17                      |                      |
| Applwayt: 1076105000 | 5                               | 79                       | 34                       | 6                                    | 36                      | 24                      |                      |
| Applwayt: 1076105010 | 5,01                            | 79                       | 34                       | 6                                    | 36                      | 24                      |                      |
| Applwayt: 1076105020 | 5,02                            | 79                       | 34                       | 6                                    | 36                      | 24                      |                      |
| Applwayt: 1076105970 | 5,97                            | 79                       | 34                       | 6                                    | 36                      | 24                      |                      |
| Applwayt: 1076105980 | 5,98                            | 79                       | 34                       | 6                                    | 36                      | 24                      |                      |
| Applwayt: 1076105990 | 5,99                            | 79                       | 34                       | 6                                    | 36                      | 24                      |                      |
| Applwayt: 1076106000 | 6                               | 79                       | 34                       | 6                                    | 36                      | 24                      |                      |
| Applwayt: 1076106010 | 6,01                            | 79                       | 34                       | 6                                    | 36                      | 24                      |                      |
| Applwayt: 1076106020 | 6,02                            | 79                       | 34                       | 6                                    | 36                      | 24                      |                      |
| Applwayt: 1076107070 | 7,97                            | 79                       | 34                       | 8                                    | 36                      | 24                      |                      |
| Applwayt: 1076107080 | 7,98                            | 79                       | 34                       | 8                                    | 36                      | 24                      |                      |
| Applwayt: 1076107090 | 7,99                            | 79                       | 34                       | 8                                    | 36                      | 24                      |                      |
| Applwayt: 1076108000 | 8                               | 79                       | 34                       | 8                                    | 36                      | 24                      |                      |
| Applwayt: 1076108010 | 8,01                            | 79                       | 34                       | 8                                    | 36                      | 24                      |                      |
| Applwayt: 1076108020 | 8,02                            | 79                       | 34                       | 8                                    | 36                      | 24                      |                      |
| Applwayt: 1076109070 | 9,97                            | 89                       | 47                       | 10                                   | 40                      | 35                      |                      |
| Applwayt: 1076109080 | 9,98                            | 89                       | 47                       | 10                                   | 40                      | 35                      |                      |
| Applwayt: 1076109090 | 9,99                            | 89                       | 47                       | 10                                   | 40                      | 35                      |                      |
| Applwayt: 1076110000 | 10                              | 89                       | 47                       | 10                                   | 40                      | 35                      |                      |
| Applwayt: 1076110010 | 10,01                           | 89                       | 47                       | 10                                   | 40                      | 35                      |                      |
| Applwayt: 1076110020 | 10,02                           | 89                       | 47                       | 10                                   | 40                      | 35                      |                      |
| Applwayt: 1076111070 | 11,97                           | 102                      | 55                       | 12                                   | 45                      | 40                      |                      |
| Applwayt: 1076111080 | 11,98                           | 102                      | 55                       | 12                                   | 45                      | 40                      |                      |
| Applwayt: 1076111090 | 11,99                           | 102                      | 55                       | 12                                   | 45                      | 40                      |                      |
| Applwayt: 1076112000 | 12                              | 102                      | 55                       | 12                                   | 45                      | 40                      |                      |
| Applwayt: 1076112010 | 12,01                           | 102                      | 55                       | 12                                   | 45                      | 40                      |                      |
| Applwayt: 1076112020 | 12,02                           | 102                      | 55                       | 12                                   | 45                      | 40                      |                      |

Артикул: 10762...

## WTX – Сверло-развёртка

WNT \ Performance



Краткие характеристики:



Применимость по материалам:



### Описание

#### Описание:

- Цельное твердосплавное сверло-развертка повышенной эффективности
- сверление и развертывание до качества H7 за один проход
- 2 режущих кромки для сверления
- 4 режущих кромки для развертывания
- высокие подачи
- высокое качество поверхности

- для глухих и сквозных отверстий
- оптимальная круглость / допуск H7

Технические характеристики

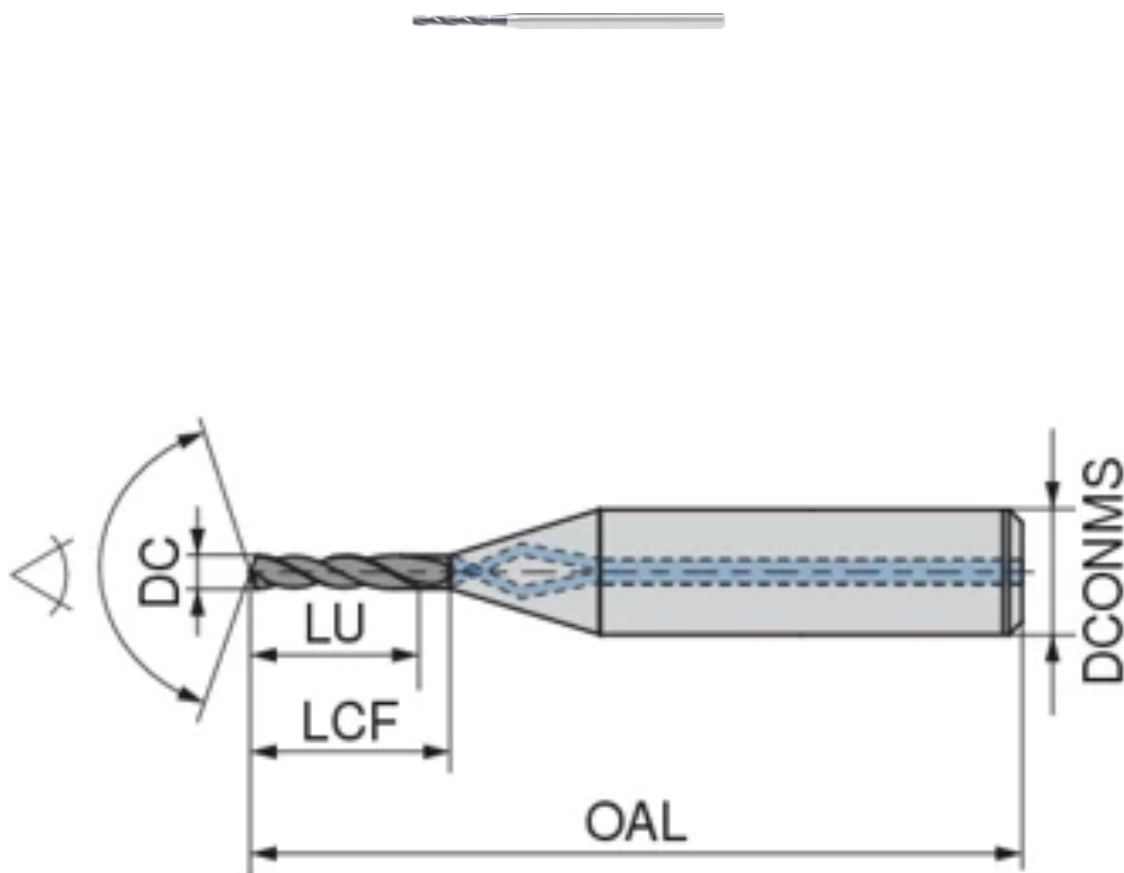
Кол-во режущих кромок NOF2

| d <sub>1</sub> H7<br>DC<br>(mm) | l <sub>1</sub><br>OAL<br>(mm) | l <sub>2</sub><br>LCF<br>(mm) | d <sub>2</sub> h6<br>DCONMS<br>(mm) | l <sub>4</sub><br>LS<br>(mm) | l <sub>3</sub><br>LU<br>(mm) |
|---------------------------------|-------------------------------|-------------------------------|-------------------------------------|------------------------------|------------------------------|
| Артикул: 10762040               |                               |                               |                                     |                              |                              |
| 4                               | 74                            | 36                            | 6                                   | 36                           | 29                           |
| Артикул: 10762050               |                               |                               |                                     |                              |                              |
| 5                               | 91                            | 53                            | 6                                   | 36                           | 43                           |
| Артикул: 10762060               |                               |                               |                                     |                              |                              |
| 6                               | 91                            | 53                            | 6                                   | 36                           | 43                           |
| Артикул: 10762080               |                               |                               |                                     |                              |                              |
| 8                               | 91                            | 53                            | 8                                   | 36                           | 43                           |
| Артикул: 10762100               |                               |                               |                                     |                              |                              |
| 10                              | 103                           | 61                            | 10                                  | 40                           | 49                           |
| Артикул: 10762120               |                               |                               |                                     |                              |                              |
| 12                              | 118                           | 71                            | 12                                  | 45                           | 56                           |
| Артикул: 10762140               |                               |                               |                                     |                              |                              |
| 14                              | 124                           | 77                            | 14                                  | 45                           | 60                           |
| Артикул: 10762160               |                               |                               |                                     |                              |                              |
| 16                              | 133                           | 83                            | 16                                  | 48                           | 63                           |
| Артикул: 10762180               |                               |                               |                                     |                              |                              |
| 18                              | 143                           | 93                            | 18                                  | 48                           | 71                           |
| Артикул: 10762200               |                               |                               |                                     |                              |                              |
| 20                              | 153                           | 101                           | 20                                  | 50                           | 77                           |

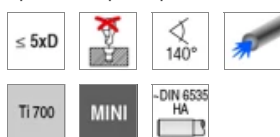
Артикул: 10775...

## WTX – Высокопроизводительное сверло, заводской стандарт

WNT \ Performance



Краткие характеристики:



Применимость по материалам:



### Описание

#### Описание:

- геометрия стружечной канавки WTX, способствующая оптимальному формированию стружки и ее наилучшему отводу
- для всех диаметров унифицированный хвостовик 3 мм

### Технические характеристики

Кол-во режущих кромок NOF

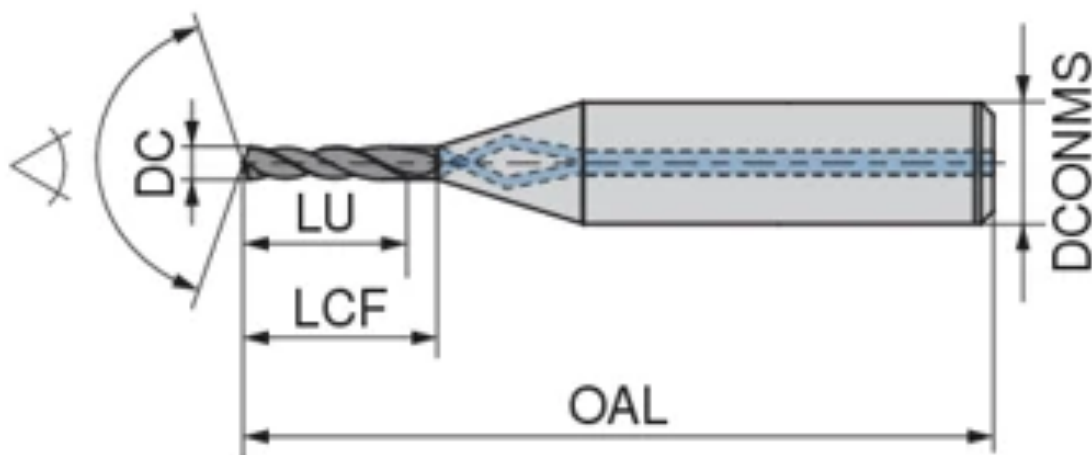
2

| d <sub>1</sub> ±0,004<br>DC<br>(mm) | l <sub>1</sub><br>OAL<br>(mm) | l <sub>2</sub><br>LCF<br>(mm) | d <sub>2</sub> -0,002/+0,005<br>DCONMS<br>(mm) | l <sub>4</sub><br>LS<br>(mm) | l <sub>3</sub><br>LU<br>(mm) |
|-------------------------------------|-------------------------------|-------------------------------|------------------------------------------------|------------------------------|------------------------------|
| Артикул: 10775010                   |                               |                               |                                                |                              |                              |
| 1                                   | 55                            | 8                             | 3                                              | 43,5                         | 5                            |
| Артикул: 10775011                   |                               |                               |                                                |                              |                              |
| 1,1                                 | 55                            | 12                            | 3                                              | 39,7                         | 8                            |
| Артикул: 10775012                   |                               |                               |                                                |                              |                              |
| 1,2                                 | 55                            | 12                            | 3                                              | 39,9                         | 8                            |
| Артикул: 10775013                   |                               |                               |                                                |                              |                              |
| 1,3                                 | 55                            | 12                            | 3                                              | 40,1                         | 8                            |
| Артикул: 10775014                   |                               |                               |                                                |                              |                              |
| 1,4                                 | 55                            | 12                            | 3                                              | 40,2                         | 8                            |
| Артикул: 10775015                   |                               |                               |                                                |                              |                              |
| 1,5                                 | 55                            | 12                            | 3                                              | 40,4                         | 8                            |
| Артикул: 10775016                   |                               |                               |                                                |                              |                              |
| 1,6                                 | 68                            | 16                            | 3                                              | 49,6                         | 11                           |
| Артикул: 10775017                   |                               |                               |                                                |                              |                              |
| 1,7                                 | 68                            | 16                            | 3                                              | 49,7                         | 11                           |
| Артикул: 10775018                   |                               |                               |                                                |                              |                              |
| 1,8                                 | 68                            | 16                            | 3                                              | 49,9                         | 11                           |
| Артикул: 10775019                   |                               |                               |                                                |                              |                              |
| 1,9                                 | 68                            | 16                            | 3                                              | 50,1                         | 11                           |
| Артикул: 10775020                   |                               |                               |                                                |                              |                              |
| 2                                   | 68                            | 16                            | 3                                              | 50,3                         | 11                           |
| Артикул: 10775021                   |                               |                               |                                                |                              |                              |
| 2,1                                 | 74                            | 20                            | 3                                              | 52,4                         | 14                           |
| Артикул: 10775022                   |                               |                               |                                                |                              |                              |
| 2,2                                 | 74                            | 20                            | 3                                              | 52,6                         | 14                           |
| Артикул: 10775023                   |                               |                               |                                                |                              |                              |
| 2,3                                 | 74                            | 20                            | 3                                              | 52,8                         | 14                           |
| Артикул: 10775024                   |                               |                               |                                                |                              |                              |
| 2,4                                 | 74                            | 20                            | 3                                              | 53                           | 14                           |
| Артикул: 10775025                   |                               |                               |                                                |                              |                              |
| 2,5                                 | 74                            | 20                            | 3                                              | 53,1                         | 14                           |
| Артикул: 10775026                   |                               |                               |                                                |                              |                              |
| 2,6                                 | 81                            | 23                            | 3                                              | 57,3                         | 16                           |
| Артикул: 10775027                   |                               |                               |                                                |                              |                              |
| 2,7                                 | 81                            | 23                            | 3                                              | 57,5                         | 16                           |
| Артикул: 10775028                   |                               |                               |                                                |                              |                              |
| 2,8                                 | 81                            | 23                            | 3                                              | 57,7                         | 16                           |
| Артикул: 10775029                   |                               |                               |                                                |                              |                              |
| 2,9                                 | 81                            | 23                            | 3                                              | 57,8                         | 16                           |

Артикул: 10778...

## WTX – Высокопроизводительное сверло, заводской стандарт

WNT \ Performance



Краткие характеристики:



Применимость по материалам:



### Описание

#### Описание:

- геометрия стружечной канавки WTX, способствующая оптимальному формированию стружки и ее наилучшему отводу
- для всех диаметров унифицированный хвостовик 3 мм

### Технические характеристики

Кол-во режущих кромок NOF

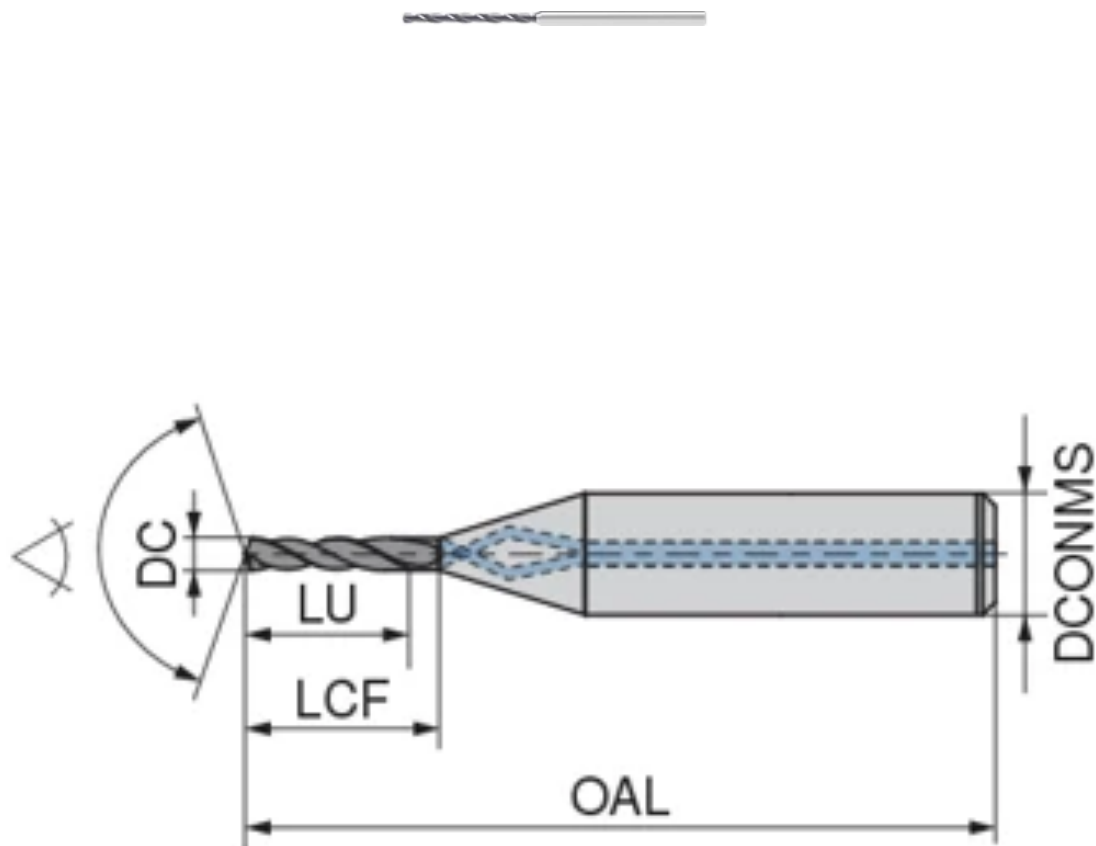
2

| d <sub>1</sub><br>DC<br>(mm) | l <sub>1</sub><br>OAL<br>(mm) | l <sub>2</sub><br>LCF<br>(mm) | d <sub>2</sub><br>DCONMS<br>(mm) | l <sub>4</sub><br>LS<br>(mm) | l <sub>3</sub><br>LU<br>(mm) | d <sub>1</sub> ±0,004<br>DC |
|------------------------------|-------------------------------|-------------------------------|----------------------------------|------------------------------|------------------------------|-----------------------------|
| Артикул: 10778010            |                               |                               |                                  |                              |                              |                             |
| 1                            | 55                            | 11                            | 3                                |                              | 40,5                         | 8                           |
| Артикул: 10778011            |                               |                               |                                  |                              |                              |                             |
| 1,1                          | 55                            | 17                            | 3                                |                              | 34,7                         | 13                          |
| Артикул: 10778012            |                               |                               |                                  |                              |                              |                             |
| 1,2                          | 55                            | 17                            | 3                                |                              | 34,9                         | 13                          |
| Артикул: 10778013            |                               |                               |                                  |                              |                              |                             |
| 1,3                          | 55                            | 17                            | 3                                |                              | 35,1                         | 13                          |
| Артикул: 10778014            |                               |                               |                                  |                              |                              |                             |
| 1,4                          | 55                            | 17                            | 3                                |                              | 35,2                         | 13                          |
| Артикул: 10778015            |                               |                               |                                  |                              |                              |                             |
| 1,5                          | 55                            | 17                            | 3                                |                              | 35,4                         | 13                          |
| Артикул: 10778016            |                               |                               |                                  |                              |                              |                             |
| 1,6                          | 68                            | 22                            | 3                                |                              | 43,6                         | 17                          |
| Артикул: 10778017            |                               |                               |                                  |                              |                              |                             |
| 1,7                          | 68                            | 22                            | 3                                |                              | 43,7                         | 17                          |
| Артикул: 10778018            |                               |                               |                                  |                              |                              |                             |
| 1,8                          | 68                            | 22                            | 3                                |                              | 43,9                         | 17                          |
| Артикул: 10778019            |                               |                               |                                  |                              |                              |                             |
| 1,9                          | 68                            | 22                            | 3                                |                              | 44,1                         | 17                          |
| Артикул: 10778020            |                               |                               |                                  |                              |                              |                             |
| 2                            | 68                            | 22                            | 3                                |                              | 44,3                         | 17                          |
| Артикул: 10778021            |                               |                               |                                  |                              |                              |                             |
| 2,1                          | 74                            | 28                            | 3                                |                              | 44,4                         | 22                          |
| Артикул: 10778022            |                               |                               |                                  |                              |                              |                             |
| 2,2                          | 74                            | 28                            | 3                                | 44,6                         | 22                           |                             |
| Артикул: 10778023            |                               |                               |                                  |                              |                              |                             |
| 2,3                          | 74                            | 28                            | 3                                | 44,8                         | 22                           |                             |
| Артикул: 10778024            |                               |                               |                                  |                              |                              |                             |
| 2,4                          | 74                            | 28                            | 3                                | 45                           | 22                           |                             |
| Артикул: 10778025            |                               |                               |                                  |                              |                              |                             |
| 2,5                          | 74                            | 28                            | 3                                | 45,1                         | 22                           |                             |
| Артикул: 10778026            |                               |                               |                                  |                              |                              |                             |
| 2,6                          | 81                            | 32                            | 3                                | 48,3                         | 25                           |                             |
| Артикул: 10778027            |                               |                               |                                  |                              |                              |                             |
| 2,7                          | 81                            | 32                            | 3                                | 48,5                         | 25                           |                             |
| Артикул: 10778028            |                               |                               |                                  |                              |                              |                             |
| 2,8                          | 81                            | 32                            | 3                                | 48,7                         | 25                           |                             |
| Артикул: 10778029            |                               |                               |                                  |                              |                              |                             |
| 2,9                          | 81                            | 32                            | 3                                | 48,8                         | 25                           |                             |

Артикул: 10779...

## WTX – Высокопроизводительное сверло, заводской стандарт

WNT \ Performance



Краткие характеристики:



Применимость по материалам:



### Описание

#### Описание:

- геометрия стружечной канавки WTX, способствующая оптимальному формированию стружки и ее наилучшему отводу
- для всех диаметров унифицированный хвостовик 3 мм

### Технические характеристики

Кол-во режущих кромок NOF

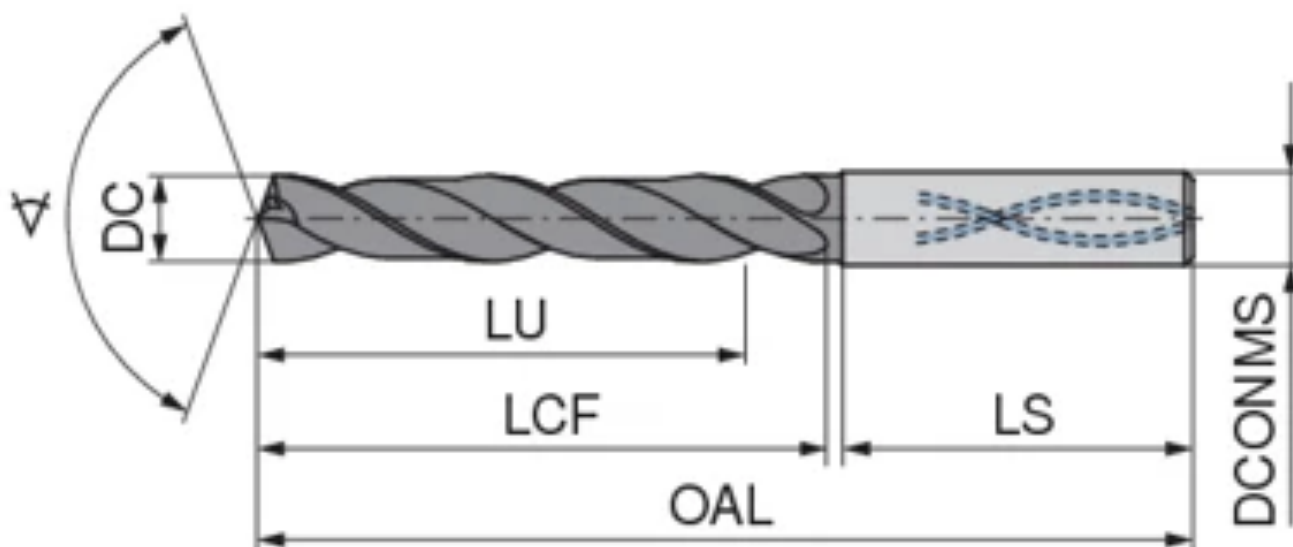
2

| $d_1 \pm 0,004$<br>DC<br>(mm) | $l_1$<br>OAL<br>(mm) | $l_2$<br>LCF<br>(mm) | $d_2 \pm 0,002 / \pm 0,005$<br>DC/NMS<br>(mm) | $l_4$<br>LS<br>(mm) | $l_3$<br>LU<br>(mm) |
|-------------------------------|----------------------|----------------------|-----------------------------------------------|---------------------|---------------------|
| Артикул: 10779010             |                      |                      |                                               |                     |                     |
| 1                             | 55                   | 15                   | 3                                             | 28                  | 12                  |
| Артикул: 10779011             |                      |                      |                                               |                     |                     |
| 1,1                           | 55                   | 23                   | 3                                             | 28                  | 19                  |
| Артикул: 10779012             |                      |                      |                                               |                     |                     |
| 1,2                           | 55                   | 23                   | 3                                             | 29                  | 19                  |
| Артикул: 10779013             |                      |                      |                                               |                     |                     |
| 1,3                           | 55                   | 23                   | 3                                             | 29                  | 19                  |
| Артикул: 10779014             |                      |                      |                                               |                     |                     |
| 1,4                           | 55                   | 23                   | 3                                             | 29                  | 19                  |
| Артикул: 10779015             |                      |                      |                                               |                     |                     |
| 1,5                           | 55                   | 23                   | 3                                             | 29                  | 19                  |
| Артикул: 10779016             |                      |                      |                                               |                     |                     |
| 1,6                           | 68                   | 30                   | 3                                             | 35                  | 25                  |
| Артикул: 10779017             |                      |                      |                                               |                     |                     |
| 1,7                           | 68                   | 30                   | 3                                             | 36                  | 25                  |
| Артикул: 10779018             |                      |                      |                                               |                     |                     |
| 1,8                           | 68                   | 30                   | 3                                             | 36                  | 25                  |
| Артикул: 10779019             |                      |                      |                                               |                     |                     |
| 1,9                           | 68                   | 30                   | 3                                             | 36                  | 25                  |
| Артикул: 10779020             |                      |                      |                                               |                     |                     |
| 2                             | 68                   | 30                   | 3                                             | 36                  | 25                  |
| Артикул: 10779021             |                      |                      |                                               |                     |                     |
| 2,1                           | 74                   | 38                   | 3                                             | 34                  | 32                  |
| Артикул: 10779022             |                      |                      |                                               |                     |                     |
| 2,2                           | 74                   | 38                   | 3                                             | 35                  | 32                  |
| Артикул: 10779023             |                      |                      |                                               |                     |                     |
| 2,3                           | 74                   | 38                   | 3                                             | 35                  | 32                  |
| Артикул: 10779024             |                      |                      |                                               |                     |                     |
| 2,4                           | 74                   | 38                   | 3                                             | 35                  | 32                  |
| Артикул: 10779025             |                      |                      |                                               |                     |                     |
| 2,5                           | 74                   | 38                   | 3                                             | 35                  | 32                  |
| Артикул: 10779026             |                      |                      |                                               |                     |                     |
| 2,6                           | 81                   | 44                   | 3                                             | 36                  | 37                  |
| Артикул: 10779027             |                      |                      |                                               |                     |                     |
| 2,7                           | 81                   | 44                   | 3                                             | 36                  | 37                  |
| Артикул: 10779028             |                      |                      |                                               |                     |                     |
| 2,8                           | 81                   | 44                   | 3                                             | 36                  | 37                  |
| Артикул: 10779029             |                      |                      |                                               |                     |                     |
| 2,9                           | 81                   | 44                   | 3                                             | 36                  | 37                  |

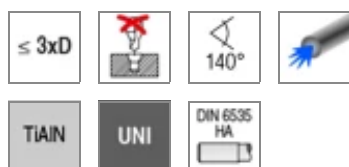
Артикул: 11700...

## Высокопроизводительное сверло, DIN 6537

WNT \ Standard



Краткие характеристики:



Применимость по материалам:



### Технические характеристики

Кол-во режущих кромок NOF

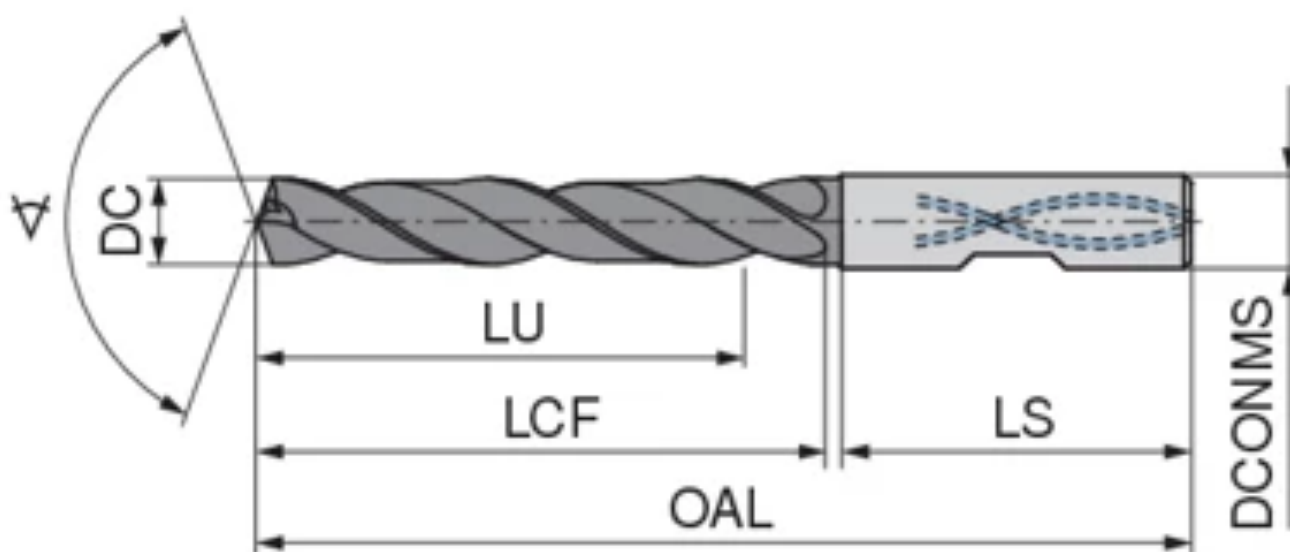
2

|                   | $\frac{F_{\text{eff}}}{F_{\text{ref}}}$<br>(mm) | $\frac{F_{\text{eff}}}{F_{\text{ref}}}$<br>(mm) | $\frac{F_{\text{eff}}}{F_{\text{ref}}}$<br>(mm) | $\frac{F_{\text{eff}}}{F_{\text{ref}}}$<br>(mm) | $\frac{F_{\text{eff}}}{F_{\text{ref}}}$<br>(mm) | $\frac{F_{\text{eff}}}{F_{\text{ref}}}$<br>(mm) |
|-------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| Aluway 1175001000 | 1                                               | 45                                              | 7                                               | 4                                               | 28                                              | 5.9                                             |
| Aluway 1175001000 | 1.1                                             | 45                                              | 7                                               | 4                                               | 28                                              | 5.95                                            |
| Aluway 1175001000 | 1.2                                             | 45                                              | 7                                               | 4                                               | 28                                              | 6                                               |
| Aluway 1175001000 | 1.3                                             | 45                                              | 7                                               | 4                                               | 28                                              | 6.05                                            |
| Aluway 1175001000 | 1.4                                             | 45                                              | 7                                               | 4                                               | 28                                              | 6.1                                             |
| Aluway 1175001000 | 1.5                                             | 55                                              | 14                                              | 4                                               | 28                                              | 11.75                                           |
| Aluway 1175001000 | 1.6                                             | 55                                              | 14                                              | 4                                               | 28                                              | 11.8                                            |
| Aluway 1175001000 | 1.7                                             | 55                                              | 14                                              | 4                                               | 28                                              | 11.85                                           |
| Aluway 1175001000 | 1.8                                             | 55                                              | 14                                              | 4                                               | 28                                              | 11.9                                            |
| Aluway 1175001000 | 1.9                                             | 55                                              | 14                                              | 4                                               | 28                                              | 11.95                                           |
| Aluway 1175002000 | 2                                               | 55                                              | 20                                              | 4                                               | 28                                              | 17                                              |
| Aluway 1175002000 | 2.1                                             | 55                                              | 20                                              | 4                                               | 28                                              | 18.85                                           |
| Aluway 1175002000 | 2.2                                             | 55                                              | 20                                              | 4                                               | 28                                              | 18.7                                            |
| Aluway 1175002000 | 2.3                                             | 55                                              | 20                                              | 4                                               | 28                                              | 18.55                                           |
| Aluway 1175002000 | 2.4                                             | 55                                              | 20                                              | 4                                               | 28                                              | 18.4                                            |
| Aluway 1175002000 | 2.5                                             | 55                                              | 20                                              | 4                                               | 28                                              | 18.25                                           |
| Aluway 1175002000 | 2.6                                             | 55                                              | 20                                              | 4                                               | 28                                              | 18.1                                            |
| Aluway 1175002000 | 2.7                                             | 55                                              | 20                                              | 4                                               | 28                                              | 18.95                                           |
| Aluway 1175002000 | 2.8                                             | 55                                              | 20                                              | 4                                               | 28                                              | 18.8                                            |
| Aluway 1175002000 | 2.9                                             | 55                                              | 20                                              | 4                                               | 28                                              | 18.65                                           |
| Aluway 1175003000 | 3                                               | 62                                              | 20                                              | 6                                               | 36                                              | 18.5                                            |
| Aluway 1175003000 | 3.1                                             | 62                                              | 20                                              | 6                                               | 36                                              | 18.35                                           |
| Aluway 1175003000 | 3.2                                             | 62                                              | 20                                              | 6                                               | 36                                              | 18.2                                            |
| Aluway 1175003000 | 3.25                                            | 62                                              | 20                                              | 6                                               | 36                                              | 18.13                                           |
| Aluway 1175003000 | 3.3                                             | 62                                              | 20                                              | 6                                               | 36                                              | 18.05                                           |
| Aluway 1175003000 | 3.4                                             | 62                                              | 20                                              | 6                                               | 36                                              | 14.9                                            |
| Aluway 1175003000 | 3.5                                             | 62                                              | 20                                              | 6                                               | 36                                              | 14.75                                           |
| Aluway 1175003000 | 3.6                                             | 62                                              | 20                                              | 6                                               | 36                                              | 14.6                                            |
| Aluway 1175003000 | 3.7                                             | 62                                              | 20                                              | 6                                               | 36                                              | 14.45                                           |
| Aluway 1175004000 | 3.8                                             | 66                                              | 24                                              | 6                                               | 36                                              | 18.3                                            |
| Aluway 1175004000 | 3.9                                             | 66                                              | 24                                              | 6                                               | 36                                              | 18.15                                           |
| Aluway 1175004000 | 4                                               | 66                                              | 24                                              | 6                                               | 36                                              | 18                                              |
| Aluway 1175004000 | 4.1                                             | 66                                              | 24                                              | 6                                               | 36                                              | 17.85                                           |
| Aluway 1175004000 | 4.2                                             | 66                                              | 24                                              | 6                                               | 36                                              | 17.7                                            |
| Aluway 1175004000 | 4.3                                             | 66                                              | 24                                              | 6                                               | 36                                              | 17.55                                           |
| Aluway 1175004000 | 4.4                                             | 66                                              | 24                                              | 6                                               | 36                                              | 17.4                                            |
| Aluway 1175004000 | 4.5                                             | 66                                              | 24                                              | 6                                               | 36                                              | 17.25                                           |
| Aluway 1175004000 | 4.6                                             | 66                                              | 24                                              | 6                                               | 36                                              | 17.1                                            |
| Aluway 1175004000 | 4.65                                            | 66                                              | 24                                              | 6                                               | 36                                              | 17.03                                           |
| Aluway 1175004000 | 4.7                                             | 66                                              | 24                                              | 6                                               | 36                                              | 16.95                                           |
| Aluway 1175004000 | 4.8                                             | 66                                              | 28                                              | 6                                               | 36                                              | 20.8                                            |
| Aluway 1175004000 | 4.9                                             | 66                                              | 28                                              | 6                                               | 36                                              | 20.65                                           |
| Aluway 1175004000 | 5                                               | 66                                              | 28                                              | 6                                               | 36                                              | 20.5                                            |
| Aluway 1175004000 | 5.1                                             | 66                                              | 28                                              | 6                                               | 36                                              | 20.35                                           |
| Aluway 1175004000 | 5.2                                             | 66                                              | 28                                              | 6                                               | 36                                              | 20.2                                            |
| Aluway 1175004000 | 5.3                                             | 66                                              | 28                                              | 6                                               | 36                                              | 20.05                                           |
| Aluway 1175004000 | 5.4                                             | 66                                              | 28                                              | 6                                               | 36                                              | 19.9                                            |
| Aluway 1175004000 | 5.5                                             | 66                                              | 28                                              | 6                                               | 36                                              | 19.75                                           |
| Aluway 1175004000 | 5.55                                            | 66                                              | 28                                              | 6                                               | 36                                              | 19.68                                           |
| Aluway 1175004000 | 5.6                                             | 66                                              | 28                                              | 6                                               | 36                                              | 19.6                                            |
| Aluway 1175004000 | 5.65                                            | 66                                              | 28                                              | 6                                               | 36                                              | 19.53                                           |
| Aluway 1175004000 | 5.7                                             | 66                                              | 28                                              | 6                                               | 36                                              | 19.45                                           |
| Aluway 1175004000 | 5.8                                             | 66                                              | 28                                              | 6                                               | 36                                              | 19.3                                            |
| Aluway 1175004000 | 5.9                                             | 66                                              | 28                                              | 6                                               | 36                                              | 19.15                                           |

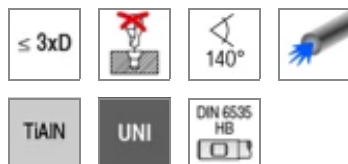
Артикул: 11701...

## Высокопроизводительное сверло, DIN 6537

WNT \ Standard



Краткие характеристики:



Применимость по материалам:

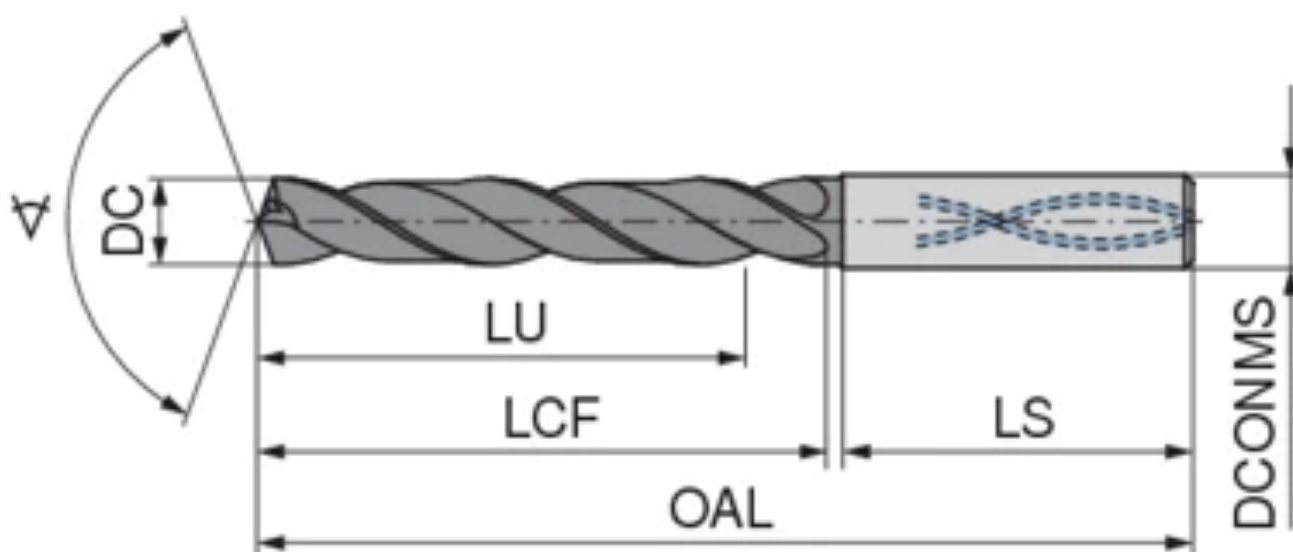


|                  | $\frac{R_{eff}}{R_{eff0}}$<br>(mm) | $\frac{L_0}{L_00}$<br>(mm) | $\frac{L_1}{L_00}$<br>(mm) | $\frac{L_{eff}}{L_{eff0}}$<br>(mm) | $\frac{L_2}{L_00}$<br>(mm) | $\frac{L_3}{L_00}$<br>(mm) |
|------------------|------------------------------------|----------------------------|----------------------------|------------------------------------|----------------------------|----------------------------|
| Almagr 117510000 |                                    | 82                         | 20                         |                                    | 26                         | 155                        |
| Almagr 117510000 |                                    | 82                         | 20                         |                                    | 26                         | 1535                       |
| Almagr 117510000 |                                    | 82                         | 20                         |                                    | 26                         | 152                        |
| Almagr 117510000 |                                    | 82                         | 20                         |                                    | 26                         | 1515                       |
| Almagr 117510000 |                                    | 82                         | 20                         |                                    | 26                         | 1505                       |
| Almagr 117510000 |                                    | 82                         | 20                         |                                    | 26                         | 149                        |
| Almagr 117510000 | 3.5                                | 82                         | 20                         | 6                                  | 26                         | 1475                       |
| Almagr 117510000 |                                    | 82                         | 20                         |                                    | 26                         | 146                        |
| Almagr 117510000 |                                    | 82                         | 20                         |                                    | 26                         | 1445                       |
| Almagr 117510000 |                                    | 86                         | 24                         |                                    | 26                         | 182                        |
| Almagr 117510000 | 3.9                                | 86                         | 24                         | 6                                  | 26                         | 1815                       |
| Almagr 117510000 |                                    | 86                         | 24                         |                                    | 26                         | 18                         |
| Almagr 117510000 | 4.1                                | 86                         | 24                         | 6                                  | 26                         | 1785                       |
| Almagr 117510000 | 4.2                                | 86                         | 24                         | 6                                  | 26                         | 177                        |
| Almagr 117510000 | 4.3                                | 86                         | 24                         | 6                                  | 26                         | 1755                       |
| Almagr 117510000 | 4.4                                | 86                         | 24                         | 6                                  | 26                         | 174                        |
| Almagr 117510000 | 4.5                                | 86                         | 24                         | 6                                  | 26                         | 1725                       |
| Almagr 117510000 | 4.6                                | 86                         | 24                         | 6                                  | 26                         | 171                        |
| Almagr 117510000 | 4.65                               | 86                         | 24                         | 6                                  | 26                         | 1705                       |
| Almagr 117510000 | 4.7                                | 86                         | 24                         | 6                                  | 26                         | 1695                       |
| Almagr 117510000 | 4.8                                | 86                         | 28                         | 6                                  | 26                         | 208                        |
| Almagr 117510000 | 4.9                                | 86                         | 28                         | 6                                  | 26                         | 2065                       |
| Almagr 117510000 | 5                                  | 86                         | 28                         | 6                                  | 26                         | 205                        |
| Almagr 117510000 | 5.1                                | 86                         | 28                         | 6                                  | 26                         | 2035                       |
| Almagr 117510000 | 5.2                                | 86                         | 28                         | 6                                  | 26                         | 202                        |
| Almagr 117510000 | 5.3                                | 86                         | 28                         | 6                                  | 26                         | 2005                       |
| Almagr 117510000 | 5.4                                | 86                         | 28                         | 6                                  | 26                         | 199                        |
| Almagr 117510000 | 5.5                                | 86                         | 28                         | 6                                  | 26                         | 1975                       |
| Almagr 117510000 | 5.55                               | 86                         | 28                         | 6                                  | 26                         | 1968                       |
| Almagr 117510000 | 5.6                                | 86                         | 28                         | 6                                  | 26                         | 196                        |
| Almagr 117510000 | 5.65                               | 86                         | 28                         | 6                                  | 26                         | 1955                       |
| Almagr 117510000 | 5.7                                | 86                         | 28                         | 6                                  | 26                         | 1945                       |
| Almagr 117510000 | 5.8                                | 86                         | 28                         | 6                                  | 26                         | 193                        |
| Almagr 117510000 | 5.9                                | 86                         | 28                         | 6                                  | 26                         | 1915                       |
| Almagr 117510000 | 6                                  | 86                         | 28                         | 6                                  | 26                         | 19                         |
| Almagr 117510000 | 6.1                                | 79                         | 24                         | 8                                  | 26                         | 2485                       |
| Almagr 117510000 | 6.2                                | 79                         | 24                         | 8                                  | 26                         | 247                        |
| Almagr 117510000 | 6.3                                | 79                         | 24                         | 8                                  | 26                         | 2455                       |
| Almagr 117510000 | 6.4                                | 79                         | 24                         | 8                                  | 26                         | 244                        |
| Almagr 117510000 | 6.5                                | 79                         | 24                         | 8                                  | 26                         | 2425                       |
| Almagr 117510000 | 6.6                                | 79                         | 24                         | 8                                  | 26                         | 241                        |
| Almagr 117510000 | 6.7                                | 79                         | 24                         | 8                                  | 26                         | 2395                       |
| Almagr 117510000 | 6.8                                | 79                         | 24                         | 8                                  | 26                         | 238                        |
| Almagr 117510000 | 6.9                                | 79                         | 24                         | 8                                  | 26                         | 2365                       |
| Almagr 117510000 | 7                                  | 79                         | 24                         | 8                                  | 26                         | 235                        |
| Almagr 117510000 | 7.1                                | 79                         | 41                         | 8                                  | 26                         | 2635                       |
| Almagr 117510000 | 7.2                                | 79                         | 41                         | 8                                  | 26                         | 262                        |
| Almagr 117510000 | 7.3                                | 79                         | 41                         | 8                                  | 26                         | 2605                       |
| Almagr 117510000 | 7.4                                | 79                         | 41                         | 8                                  | 26                         | 259                        |
| Almagr 117510000 | 7.5                                | 79                         | 41                         | 8                                  | 26                         | 2575                       |
| Almagr 117510000 | 7.55                               | 79                         | 41                         | 8                                  | 26                         | 2568                       |
| Almagr 117510000 | 7.6                                | 79                         | 41                         | 8                                  | 26                         | 256                        |
| Almagr 117510000 | 7.65                               | 79                         | 41                         | 8                                  | 26                         | 2555                       |
| Almagr 117510000 | 7.7                                | 79                         | 41                         | 8                                  | 26                         | 2545                       |

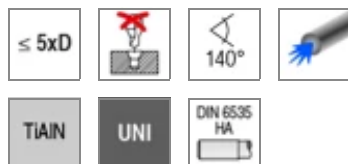
Артикул: 11702...

## Высокопроизводительное сверло, DIN 6537

WNT \ Standard



Краткие характеристики:



Применимость по материалам:

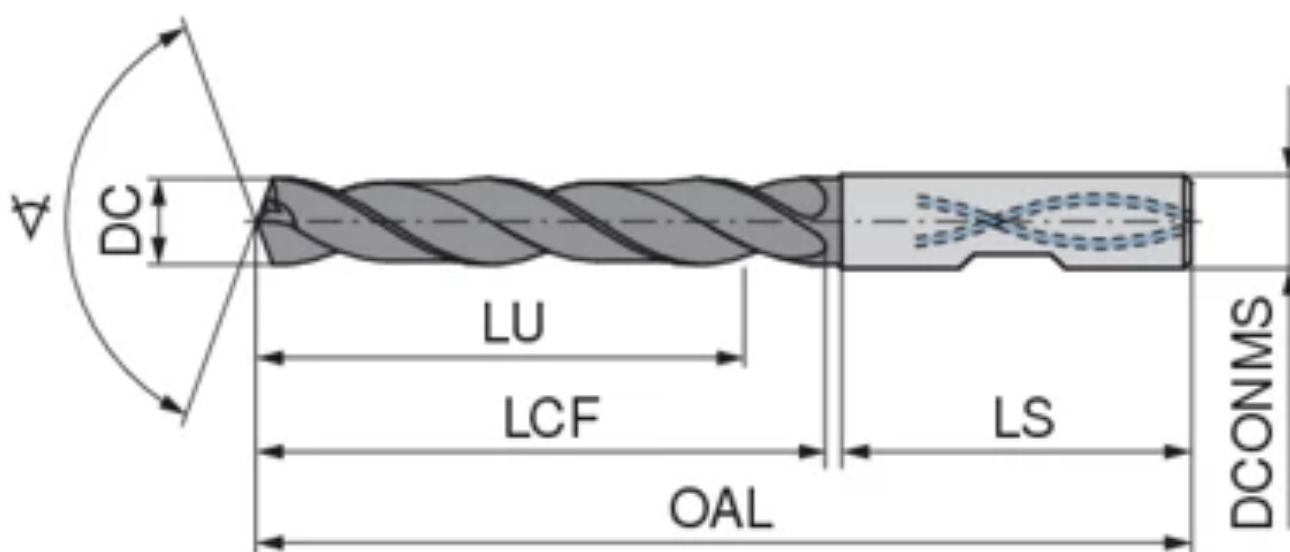


|                   | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(mm) | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(mm) | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(mm) | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(mm) | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(mm) | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(mm) |
|-------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| Almagr 1175201000 | 1                                               | 55                                              | 8                                               | 4                                               | 28                                              | 6.5                                             |
| Almagr 1175201000 | 1.1                                             | 55                                              | 12                                              | 4                                               | 28                                              | 10.35                                           |
| Almagr 1175201000 | 1.2                                             | 55                                              | 12                                              | 4                                               | 28                                              | 10.2                                            |
| Almagr 1175201000 | 1.3                                             | 55                                              | 12                                              | 4                                               | 28                                              | 10.05                                           |
| Almagr 1175201000 | 1.4                                             | 55                                              | 12                                              | 4                                               | 28                                              | 9.9                                             |
| Almagr 1175201000 | 1.5                                             | 55                                              | 12                                              | 4                                               | 28                                              | 9.75                                            |
| Almagr 1175201000 | 1.6                                             | 55                                              | 16                                              | 4                                               | 28                                              | 12.6                                            |
| Almagr 1175201000 | 1.7                                             | 55                                              | 16                                              | 4                                               | 28                                              | 12.45                                           |
| Almagr 1175201000 | 1.8                                             | 55                                              | 16                                              | 4                                               | 28                                              | 12.3                                            |
| Almagr 1175201000 | 1.9                                             | 55                                              | 16                                              | 4                                               | 28                                              | 12.15                                           |
| Almagr 1175202000 | 2                                               | 57                                              | 21                                              | 4                                               | 28                                              | 18                                              |
| Almagr 1175202000 | 2.1                                             | 57                                              | 21                                              | 4                                               | 28                                              | 17.85                                           |
| Almagr 1175202000 | 2.2                                             | 57                                              | 21                                              | 4                                               | 28                                              | 17.7                                            |
| Almagr 1175202000 | 2.3                                             | 57                                              | 21                                              | 4                                               | 28                                              | 17.55                                           |
| Almagr 1175202000 | 2.4                                             | 57                                              | 21                                              | 4                                               | 28                                              | 17.4                                            |
| Almagr 1175202000 | 2.5                                             | 57                                              | 21                                              | 4                                               | 28                                              | 17.25                                           |
| Almagr 1175202000 | 2.6                                             | 57                                              | 21                                              | 4                                               | 28                                              | 17.1                                            |
| Almagr 1175202000 | 2.7                                             | 57                                              | 21                                              | 4                                               | 28                                              | 16.95                                           |
| Almagr 1175202000 | 2.8                                             | 57                                              | 21                                              | 4                                               | 28                                              | 16.8                                            |
| Almagr 1175202000 | 2.9                                             | 57                                              | 21                                              | 4                                               | 28                                              | 16.65                                           |
| Almagr 1175203000 | 3                                               | 65                                              | 28                                              | 5                                               | 36                                              | 23.5                                            |
| Almagr 1175203000 | 3.1                                             | 65                                              | 28                                              | 5                                               | 36                                              | 23.35                                           |
| Almagr 1175203000 | 3.2                                             | 65                                              | 28                                              | 5                                               | 36                                              | 23.2                                            |
| Almagr 1175203000 | 3.25                                            | 65                                              | 28                                              | 5                                               | 36                                              | 23.13                                           |
| Almagr 1175203000 | 3.3                                             | 65                                              | 28                                              | 5                                               | 36                                              | 23.05                                           |
| Almagr 1175203000 | 3.4                                             | 65                                              | 28                                              | 5                                               | 36                                              | 22.9                                            |
| Almagr 1175203000 | 3.5                                             | 65                                              | 28                                              | 5                                               | 36                                              | 22.75                                           |
| Almagr 1175203000 | 3.6                                             | 65                                              | 28                                              | 5                                               | 36                                              | 22.6                                            |
| Almagr 1175203000 | 3.7                                             | 65                                              | 28                                              | 5                                               | 36                                              | 22.45                                           |
| Almagr 1175204000 | 3.8                                             | 74                                              | 35                                              | 5                                               | 36                                              | 30.3                                            |
| Almagr 1175204000 | 3.85                                            | 74                                              | 35                                              | 5                                               | 36                                              | 30.23                                           |
| Almagr 1175204000 | 3.9                                             | 74                                              | 35                                              | 5                                               | 36                                              | 30.15                                           |
| Almagr 1175204000 | 4                                               | 74                                              | 35                                              | 5                                               | 36                                              | 30                                              |
| Almagr 1175204000 | 4.1                                             | 74                                              | 35                                              | 5                                               | 36                                              | 29.85                                           |
| Almagr 1175204000 | 4.2                                             | 74                                              | 35                                              | 5                                               | 36                                              | 29.7                                            |
| Almagr 1175204000 | 4.3                                             | 74                                              | 35                                              | 5                                               | 36                                              | 29.55                                           |
| Almagr 1175204000 | 4.4                                             | 74                                              | 35                                              | 5                                               | 36                                              | 29.4                                            |
| Almagr 1175204000 | 4.5                                             | 74                                              | 35                                              | 5                                               | 36                                              | 29.25                                           |
| Almagr 1175204000 | 4.6                                             | 74                                              | 35                                              | 5                                               | 36                                              | 29.1                                            |
| Almagr 1175204000 | 4.65                                            | 74                                              | 35                                              | 5                                               | 36                                              | 29.03                                           |
| Almagr 1175204000 | 4.7                                             | 74                                              | 35                                              | 5                                               | 36                                              | 28.95                                           |
| Almagr 1175204000 | 4.8                                             | 82                                              | 44                                              | 5                                               | 36                                              | 36.8                                            |
| Almagr 1175204000 | 4.9                                             | 82                                              | 44                                              | 5                                               | 36                                              | 36.65                                           |
| Almagr 1175204000 | 5                                               | 82                                              | 44                                              | 5                                               | 36                                              | 36.5                                            |
| Almagr 1175205000 | 5.1                                             | 82                                              | 44                                              | 5                                               | 36                                              | 36.35                                           |
| Almagr 1175205000 | 5.2                                             | 82                                              | 44                                              | 5                                               | 36                                              | 36.2                                            |
| Almagr 1175205000 | 5.3                                             | 82                                              | 44                                              | 5                                               | 36                                              | 36.05                                           |
| Almagr 1175205000 | 5.4                                             | 82                                              | 44                                              | 5                                               | 36                                              | 35.9                                            |
| Almagr 1175205000 | 5.5                                             | 82                                              | 44                                              | 5                                               | 36                                              | 35.75                                           |
| Almagr 1175205000 | 5.55                                            | 82                                              | 44                                              | 5                                               | 36                                              | 35.68                                           |
| Almagr 1175205000 | 5.6                                             | 82                                              | 44                                              | 5                                               | 36                                              | 35.6                                            |
| Almagr 1175205000 | 5.65                                            | 82                                              | 44                                              | 5                                               | 36                                              | 35.53                                           |
| Almagr 1175205000 | 5.7                                             | 82                                              | 44                                              | 5                                               | 36                                              | 35.45                                           |
| Almagr 1175205000 | 5.8                                             | 82                                              | 44                                              | 5                                               | 36                                              | 35.3                                            |

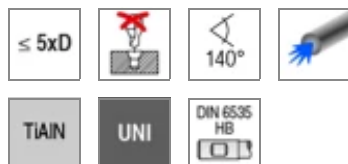
Артикул: 11703...

## Высокопроизводительное сверло, DIN 6537

WNT \ Standard



Краткие характеристики:



Применимость по материалам:

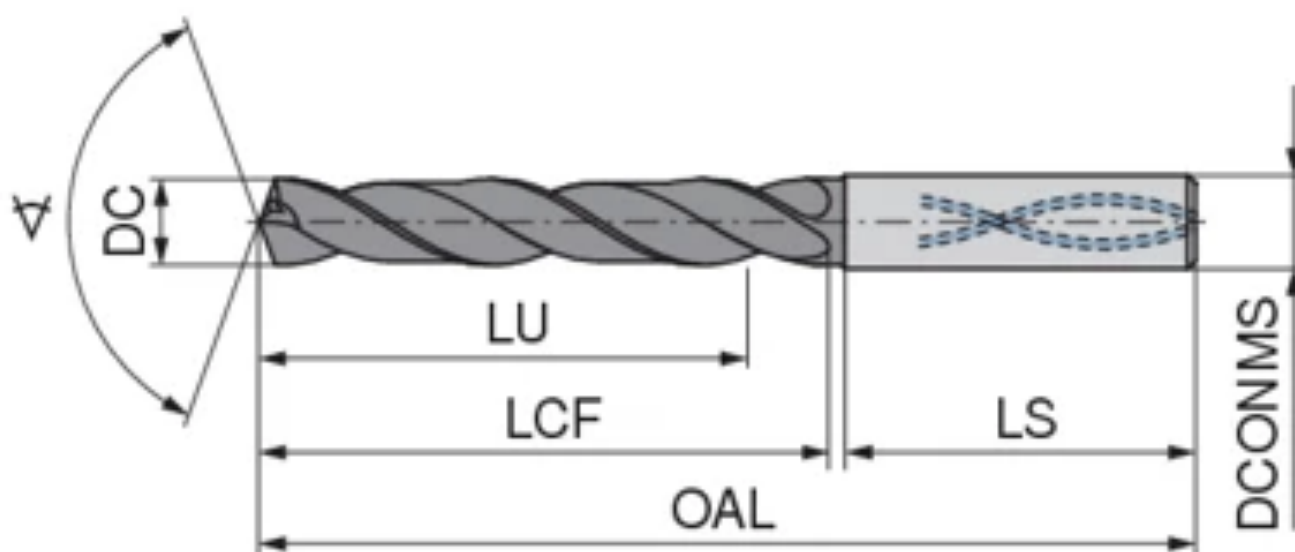


|                    | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(mm) | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(mm) | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(mm) | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(mm) | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(mm) | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(mm) |
|--------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| Allegro 1175000000 | 3                                               | 66                                              | 28                                              | 6                                               | 26                                              | 23.5                                            |
| Allegro 1175000000 | 3.1                                             | 66                                              | 28                                              | 6                                               | 26                                              | 23.55                                           |
| Allegro 1175000000 | 3.2                                             | 66                                              | 28                                              | 6                                               | 26                                              | 23.7                                            |
| Allegro 1175000000 | 3.25                                            | 66                                              | 28                                              | 6                                               | 26                                              | 23.75                                           |
| Allegro 1175000000 | 3.3                                             | 66                                              | 28                                              | 6                                               | 26                                              | 23.85                                           |
| Allegro 1175000000 | 3.4                                             | 66                                              | 28                                              | 6                                               | 26                                              | 23.9                                            |
| Allegro 1175000000 | 3.5                                             | 66                                              | 28                                              | 6                                               | 26                                              | 22.75                                           |
| Allegro 1175000000 | 3.6                                             | 66                                              | 28                                              | 6                                               | 26                                              | 22.6                                            |
| Allegro 1175000000 | 3.7                                             | 66                                              | 28                                              | 6                                               | 26                                              | 22.45                                           |
| Allegro 1175000000 | 3.8                                             | 74                                              | 26                                              | 6                                               | 26                                              | 20.2                                            |
| Allegro 1175000000 | 3.85                                            | 74                                              | 26                                              | 6                                               | 26                                              | 20.25                                           |
| Allegro 1175000000 | 3.9                                             | 74                                              | 26                                              | 6                                               | 26                                              | 20.15                                           |
| Allegro 1175000000 | 4                                               | 74                                              | 26                                              | 6                                               | 26                                              | 20                                              |
| Allegro 1175000000 | 4.1                                             | 74                                              | 26                                              | 6                                               | 26                                              | 19.85                                           |
| Allegro 1175000000 | 4.2                                             | 74                                              | 26                                              | 6                                               | 26                                              | 19.7                                            |
| Allegro 1175000000 | 4.3                                             | 74                                              | 26                                              | 6                                               | 26                                              | 19.55                                           |
| Allegro 1175000000 | 4.4                                             | 74                                              | 26                                              | 6                                               | 26                                              | 19.4                                            |
| Allegro 1175000000 | 4.5                                             | 74                                              | 26                                              | 6                                               | 26                                              | 19.25                                           |
| Allegro 1175000000 | 4.6                                             | 74                                              | 26                                              | 6                                               | 26                                              | 19.1                                            |
| Allegro 1175000000 | 4.65                                            | 74                                              | 26                                              | 6                                               | 26                                              | 19.05                                           |
| Allegro 1175000000 | 4.7                                             | 74                                              | 26                                              | 6                                               | 26                                              | 18.95                                           |
| Allegro 1175000000 | 4.8                                             | 82                                              | 44                                              | 6                                               | 26                                              | 16.8                                            |
| Allegro 1175000000 | 4.9                                             | 82                                              | 44                                              | 6                                               | 26                                              | 16.65                                           |
| Allegro 1175000000 | 5                                               | 82                                              | 44                                              | 6                                               | 26                                              | 16.5                                            |
| Allegro 1175000000 | 5.1                                             | 82                                              | 44                                              | 6                                               | 26                                              | 16.35                                           |
| Allegro 1175000000 | 5.2                                             | 82                                              | 44                                              | 6                                               | 26                                              | 16.2                                            |
| Allegro 1175000000 | 5.3                                             | 82                                              | 44                                              | 6                                               | 26                                              | 16.05                                           |
| Allegro 1175000000 | 5.4                                             | 82                                              | 44                                              | 6                                               | 26                                              | 15.9                                            |
| Allegro 1175000000 | 5.5                                             | 82                                              | 44                                              | 6                                               | 26                                              | 15.75                                           |
| Allegro 1175000000 | 5.55                                            | 82                                              | 44                                              | 6                                               | 26                                              | 15.68                                           |
| Allegro 1175000000 | 5.6                                             | 82                                              | 44                                              | 6                                               | 26                                              | 15.6                                            |
| Allegro 1175000000 | 5.65                                            | 82                                              | 44                                              | 6                                               | 26                                              | 15.55                                           |
| Allegro 1175000000 | 5.7                                             | 82                                              | 44                                              | 6                                               | 26                                              | 15.45                                           |
| Allegro 1175000000 | 5.8                                             | 82                                              | 44                                              | 6                                               | 26                                              | 15.3                                            |
| Allegro 1175000000 | 5.9                                             | 82                                              | 44                                              | 6                                               | 26                                              | 15.15                                           |
| Allegro 1175000000 | 6                                               | 82                                              | 44                                              | 6                                               | 26                                              | 15                                              |
| Allegro 1175000000 | 6.1                                             | 91                                              | 53                                              | 8                                               | 26                                              | 42.85                                           |
| Allegro 1175000000 | 6.2                                             | 91                                              | 53                                              | 8                                               | 26                                              | 42.7                                            |
| Allegro 1175000000 | 6.3                                             | 91                                              | 53                                              | 8                                               | 26                                              | 42.55                                           |
| Allegro 1175000000 | 6.4                                             | 91                                              | 53                                              | 8                                               | 26                                              | 42.4                                            |
| Allegro 1175000000 | 6.5                                             | 91                                              | 53                                              | 8                                               | 26                                              | 42.25                                           |
| Allegro 1175000000 | 6.6                                             | 91                                              | 53                                              | 8                                               | 26                                              | 42.1                                            |
| Allegro 1175000000 | 6.7                                             | 91                                              | 53                                              | 8                                               | 26                                              | 41.95                                           |
| Allegro 1175000000 | 6.8                                             | 91                                              | 53                                              | 8                                               | 26                                              | 41.8                                            |
| Allegro 1175000000 | 6.9                                             | 91                                              | 53                                              | 8                                               | 26                                              | 41.65                                           |
| Allegro 1175007000 | 7                                               | 91                                              | 53                                              | 8                                               | 26                                              | 41.5                                            |
| Allegro 1175007000 | 7.1                                             | 91                                              | 53                                              | 8                                               | 26                                              | 41.35                                           |
| Allegro 1175007000 | 7.2                                             | 91                                              | 53                                              | 8                                               | 26                                              | 41.2                                            |
| Allegro 1175007000 | 7.3                                             | 91                                              | 53                                              | 8                                               | 26                                              | 41.05                                           |
| Allegro 1175007000 | 7.4                                             | 91                                              | 53                                              | 8                                               | 26                                              | 41.9                                            |
| Allegro 1175007000 | 7.5                                             | 91                                              | 53                                              | 8                                               | 26                                              | 41.75                                           |
| Allegro 1175007000 | 7.55                                            | 91                                              | 53                                              | 8                                               | 26                                              | 41.68                                           |
| Allegro 1175007000 | 7.6                                             | 91                                              | 53                                              | 8                                               | 26                                              | 41.6                                            |
| Allegro 1175007000 | 7.65                                            | 91                                              | 53                                              | 8                                               | 26                                              | 41.55                                           |

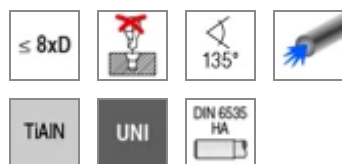
Артикул: 11704...

## Высокопроизводительное сверло, заводской стандарт

WNT \ Standard



Краткие характеристики:



Применимость по материалам:



### Технические характеристики

Кол-во режущих кромок NOF

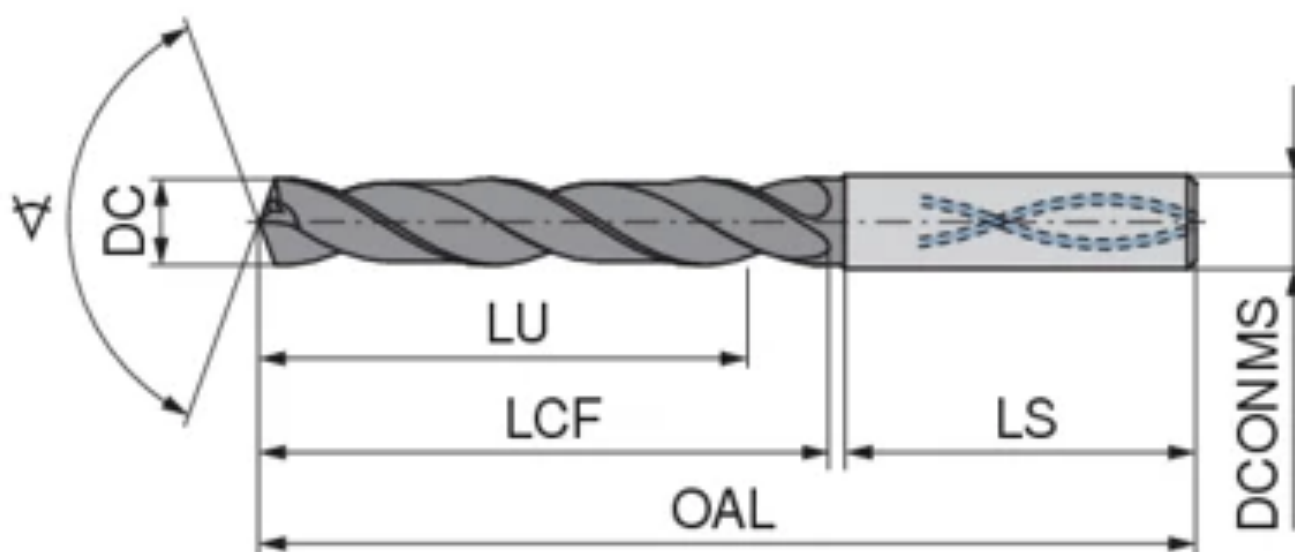
2

|                  | $\frac{R_{12}}{R_{11}}$<br>(mm) | $\frac{L_1}{R_{11}}$<br>(mm) | $\frac{L_2}{R_{11}}$<br>(mm) | $\frac{L_{1+2}}{R_{11}}$<br>(mm) | $\frac{L_1}{R_{11}}$<br>(mm) | $\frac{L_2}{R_{11}}$<br>(mm) |
|------------------|---------------------------------|------------------------------|------------------------------|----------------------------------|------------------------------|------------------------------|
| Almagr 117560000 | 3                               | 72                           | 34                           | 6                                | 36                           | 293                          |
| Almagr 117560000 | 3.1                             | 72                           | 34                           | 6                                | 36                           | 293.5                        |
| Almagr 117560000 | 3.2                             | 72                           | 34                           | 6                                | 36                           | 292                          |
| Almagr 117560000 | 3.3                             | 72                           | 34                           | 6                                | 36                           | 292.5                        |
| Almagr 117560000 | 3.4                             | 72                           | 34                           | 6                                | 36                           | 289                          |
| Almagr 117560000 | 3.5                             | 72                           | 34                           | 6                                | 36                           | 287.5                        |
| Almagr 117560000 | 3.6                             | 72                           | 34                           | 6                                | 36                           | 288                          |
| Almagr 117560000 | 3.7                             | 72                           | 34                           | 6                                | 36                           | 284.5                        |
| Almagr 117560000 | 3.8                             | 81                           | 43                           | 6                                | 36                           | 373                          |
| Almagr 117560000 | 3.9                             | 81                           | 43                           | 6                                | 36                           | 371.5                        |
| Almagr 117560000 | 4                               | 81                           | 43                           | 6                                | 36                           | 37                           |
| Almagr 117560000 | 4.1                             | 81                           | 43                           | 6                                | 36                           | 36.85                        |
| Almagr 117560000 | 4.2                             | 81                           | 43                           | 6                                | 36                           | 36.7                         |
| Almagr 117560000 | 4.3                             | 81                           | 43                           | 6                                | 36                           | 36.55                        |
| Almagr 117560000 | 4.4                             | 81                           | 43                           | 6                                | 36                           | 36.4                         |
| Almagr 117560000 | 4.5                             | 81                           | 43                           | 6                                | 36                           | 36.25                        |
| Almagr 117560000 | 4.6                             | 81                           | 43                           | 6                                | 36                           | 36.1                         |
| Almagr 117560000 | 4.7                             | 81                           | 43                           | 6                                | 36                           | 35.95                        |
| Almagr 117560000 | 4.8                             | 95                           | 57                           | 6                                | 36                           | 49.8                         |
| Almagr 117560000 | 4.9                             | 95                           | 57                           | 6                                | 36                           | 49.85                        |
| Almagr 117560000 | 5                               | 95                           | 57                           | 6                                | 36                           | 49.5                         |
| Almagr 117560000 | 5.1                             | 95                           | 57                           | 6                                | 36                           | 49.35                        |
| Almagr 117560000 | 5.2                             | 95                           | 57                           | 6                                | 36                           | 49.2                         |
| Almagr 117560000 | 5.3                             | 95                           | 57                           | 6                                | 36                           | 49.05                        |
| Almagr 117560000 | 5.4                             | 95                           | 57                           | 6                                | 36                           | 48.9                         |
| Almagr 117560000 | 5.5                             | 95                           | 57                           | 6                                | 36                           | 48.75                        |
| Almagr 117560000 | 5.6                             | 95                           | 57                           | 6                                | 36                           | 48.6                         |
| Almagr 117560000 | 5.7                             | 95                           | 57                           | 6                                | 36                           | 48.45                        |
| Almagr 117560000 | 5.8                             | 95                           | 57                           | 6                                | 36                           | 48.3                         |
| Almagr 117560000 | 5.9                             | 95                           | 57                           | 6                                | 36                           | 48.15                        |
| Almagr 117560000 | 6                               | 95                           | 57                           | 6                                | 36                           | 48                           |
| Almagr 117560000 | 6.1                             | 114                          | 76                           | 8                                | 36                           | 66.85                        |
| Almagr 117560000 | 6.2                             | 114                          | 76                           | 8                                | 36                           | 66.7                         |
| Almagr 117560000 | 6.3                             | 114                          | 76                           | 8                                | 36                           | 66.55                        |
| Almagr 117560000 | 6.4                             | 114                          | 76                           | 8                                | 36                           | 66.4                         |
| Almagr 117560000 | 6.5                             | 114                          | 76                           | 8                                | 36                           | 66.25                        |
| Almagr 117560000 | 6.6                             | 114                          | 76                           | 8                                | 36                           | 66.1                         |
| Almagr 117560000 | 6.7                             | 114                          | 76                           | 8                                | 36                           | 65.95                        |
| Almagr 117560000 | 6.8                             | 114                          | 76                           | 8                                | 36                           | 65.8                         |
| Almagr 117560000 | 6.9                             | 114                          | 76                           | 8                                | 36                           | 65.65                        |
| Almagr 117560700 | 7                               | 114                          | 76                           | 8                                | 36                           | 65.5                         |
| Almagr 117560700 | 7.1                             | 114                          | 76                           | 8                                | 36                           | 65.35                        |
| Almagr 117560700 | 7.2                             | 114                          | 76                           | 8                                | 36                           | 65.2                         |
| Almagr 117560700 | 7.3                             | 114                          | 76                           | 8                                | 36                           | 65.05                        |
| Almagr 117560700 | 7.4                             | 114                          | 76                           | 8                                | 36                           | 64.9                         |
| Almagr 117560700 | 7.5                             | 114                          | 76                           | 8                                | 36                           | 64.75                        |
| Almagr 117560700 | 7.6                             | 114                          | 76                           | 8                                | 36                           | 64.6                         |
| Almagr 117560700 | 7.7                             | 114                          | 76                           | 8                                | 36                           | 64.45                        |
| Almagr 117560700 | 7.8                             | 114                          | 76                           | 8                                | 36                           | 64.3                         |
| Almagr 117560700 | 7.9                             | 114                          | 76                           | 8                                | 36                           | 64.15                        |
| Almagr 117560000 | 8                               | 114                          | 76                           | 8                                | 36                           | 64                           |
| Almagr 117560000 | 8.1                             | 142                          | 95                           | 10                               | 40                           | 82.85                        |
| Almagr 117560000 | 8.2                             | 142                          | 95                           | 10                               | 40                           | 82.7                         |
| Almagr 117560000 | 8.3                             | 142                          | 95                           | 10                               | 40                           | 82.55                        |

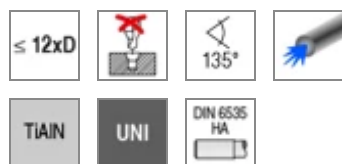
Артикул: 11705...

## Высокопроизводительное сверло, заводской стандарт

WNT \ Standard



Краткие характеристики:



Применимость по материалам:



### Технические характеристики

Кол-во режущих кромок NOF

2

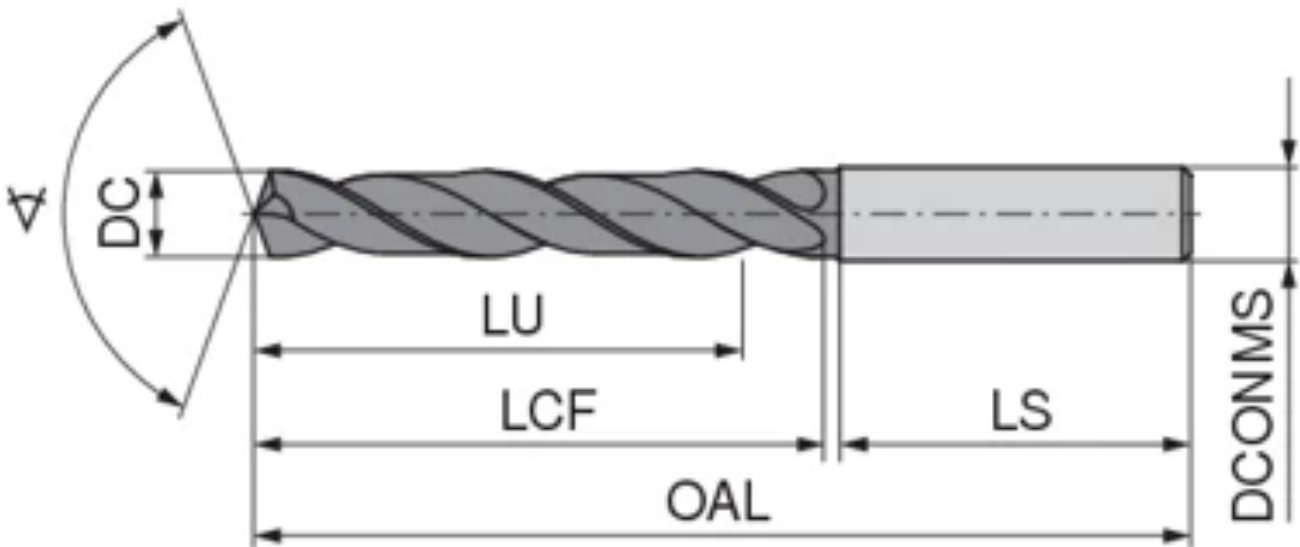
|                    | $\frac{R_{\text{eff}}}{\text{mm}}$ | $\frac{L_{\text{eff}}}{\text{mm}}$ | $\frac{L_{\text{eff}}}{\text{mm}}$ | $\frac{L_{\text{eff}}}{\text{mm}}$ | $\frac{L_{\text{eff}}}{\text{mm}}$ | $\frac{L_{\text{eff}}}{\text{mm}}$ | $\frac{L_{\text{eff}}}{\text{mm}}$ |
|--------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Allegro 1175600000 | 3                                  | 92                                 | 56                                 | 6                                  | 36                                 | 49.5                               |                                    |
| Allegro 1175600000 | 3.1                                | 92                                 | 56                                 | 6                                  | 36                                 | 49.35                              |                                    |
| Allegro 1175600000 | 3.2                                | 92                                 | 56                                 | 6                                  | 36                                 | 49.2                               |                                    |
| Allegro 1175600000 |                                    | 92                                 | 56                                 |                                    | 36                                 | 49.05                              | 5.3                                |
| Allegro 1175600000 |                                    | 92                                 | 56                                 |                                    | 36                                 | 48.9                               | 5.4                                |
| Allegro 1175600000 | 3.5                                | 92                                 | 56                                 | 6                                  | 36                                 | 48.75                              |                                    |
| Allegro 1175600000 |                                    | 92                                 | 56                                 |                                    | 36                                 | 48.6                               | 5.6                                |
| Allegro 1175600000 |                                    | 92                                 | 56                                 |                                    | 36                                 | 48.45                              | 5.7                                |
| Allegro 1175600000 | 3.8                                | 102                                | 64                                 | 6                                  | 36                                 | 58.3                               |                                    |
| Allegro 1175600000 | 3.9                                | 102                                | 64                                 | 6                                  | 36                                 | 58.15                              |                                    |
| Allegro 1175600000 |                                    | 102                                | 64                                 |                                    | 36                                 | 58                                 | 6                                  |
| Allegro 1175600000 |                                    | 102                                | 64                                 |                                    | 36                                 | 57.85                              | 6.1                                |
| Allegro 1175600000 | 4.2                                | 102                                | 64                                 | 6                                  | 36                                 | 57.7                               |                                    |
| Allegro 1175600000 | 4.3                                | 102                                | 64                                 | 6                                  | 36                                 | 57.55                              |                                    |
| Allegro 1175600000 | 4.4                                | 102                                | 64                                 | 6                                  | 36                                 | 57.4                               |                                    |
| Allegro 1175600000 | 4.5                                | 102                                | 64                                 | 6                                  | 36                                 | 57.25                              |                                    |
| Allegro 1175600000 | 4.6                                | 102                                | 64                                 | 6                                  | 36                                 | 57.1                               |                                    |
| Allegro 1175600000 | 4.7                                | 102                                | 64                                 | 6                                  | 36                                 | 56.95                              |                                    |
| Allegro 1175600000 | 4.8                                | 116                                | 78                                 | 6                                  | 36                                 | 70.8                               |                                    |
| Allegro 1175600000 | 4.9                                | 116                                | 78                                 | 6                                  | 36                                 | 70.65                              |                                    |
| Allegro 1175600000 | 5                                  | 116                                | 78                                 | 6                                  | 36                                 | 70.5                               |                                    |
| Allegro 1175600000 | 5.1                                | 116                                | 78                                 | 6                                  | 36                                 | 70.35                              |                                    |
| Allegro 1175600000 | 5.2                                | 116                                | 78                                 | 6                                  | 36                                 | 70.2                               |                                    |
| Allegro 1175600000 | 5.3                                | 116                                | 78                                 | 6                                  | 36                                 | 70.05                              |                                    |
| Allegro 1175600000 | 5.4                                | 116                                | 78                                 | 6                                  | 36                                 | 69.9                               |                                    |
| Allegro 1175600000 | 5.5                                | 116                                | 78                                 | 6                                  | 36                                 | 69.75                              |                                    |
| Allegro 1175600000 | 5.6                                | 116                                | 78                                 | 6                                  | 36                                 | 69.6                               |                                    |
| Allegro 1175600000 | 5.7                                | 116                                | 78                                 | 6                                  | 36                                 | 69.45                              |                                    |
| Allegro 1175600000 | 5.8                                | 116                                | 78                                 | 6                                  | 36                                 | 69.3                               |                                    |
| Allegro 1175600000 | 5.9                                | 116                                | 78                                 | 6                                  | 36                                 | 69.15                              |                                    |
| Allegro 1175600000 | 6                                  | 116                                | 78                                 | 6                                  | 36                                 | 69                                 |                                    |
| Allegro 1175600000 | 6.1                                | 146                                | 108                                | 8                                  | 36                                 | 98.85                              |                                    |
| Allegro 1175600000 | 6.2                                | 146                                | 108                                | 8                                  | 36                                 | 98.7                               |                                    |
| Allegro 1175600000 | 6.3                                | 146                                | 108                                | 8                                  | 36                                 | 98.55                              |                                    |
| Allegro 1175600000 | 6.4                                | 146                                | 108                                | 8                                  | 36                                 | 98.4                               |                                    |
| Allegro 1175600000 | 6.5                                | 146                                | 108                                | 8                                  | 36                                 | 98.25                              |                                    |
| Allegro 1175600000 | 6.6                                | 146                                | 108                                | 8                                  | 36                                 | 98.1                               |                                    |
| Allegro 1175600000 | 6.7                                | 146                                | 108                                | 8                                  | 36                                 | 97.95                              |                                    |
| Allegro 1175600000 | 6.8                                | 146                                | 108                                | 8                                  | 36                                 | 97.8                               |                                    |
| Allegro 1175600000 | 6.9                                | 146                                | 108                                | 8                                  | 36                                 | 97.65                              |                                    |
| Allegro 1175600000 | 7                                  | 146                                | 108                                | 8                                  | 36                                 | 97.5                               |                                    |
| Allegro 1175600000 | 7.1                                | 146                                | 108                                | 8                                  | 36                                 | 97.35                              |                                    |
| Allegro 1175600000 | 7.2                                | 146                                | 108                                | 8                                  | 36                                 | 97.2                               |                                    |
| Allegro 1175600000 | 7.3                                | 146                                | 108                                | 8                                  | 36                                 | 97.05                              |                                    |
| Allegro 1175600000 | 7.4                                | 146                                | 108                                | 8                                  | 36                                 | 96.9                               |                                    |
| Allegro 1175600000 | 7.5                                | 146                                | 108                                | 8                                  | 36                                 | 96.75                              |                                    |
| Allegro 1175600000 | 7.6                                | 146                                | 108                                | 8                                  | 36                                 | 96.6                               |                                    |
| Allegro 1175600000 | 7.7                                | 146                                | 108                                | 8                                  | 36                                 | 96.45                              |                                    |
| Allegro 1175600000 | 7.8                                | 146                                | 108                                | 8                                  | 36                                 | 96.3                               |                                    |
| Allegro 1175600000 | 7.9                                | 146                                | 108                                | 8                                  | 36                                 | 96.15                              |                                    |
| Allegro 1175600000 | 8                                  | 146                                | 108                                | 8                                  | 36                                 | 96                                 |                                    |
| Allegro 1175600000 | 8.1                                | 162                                | 120                                | 10                                 | 40                                 | 107.85                             |                                    |
| Allegro 1175600000 | 8.2                                | 162                                | 120                                | 10                                 | 40                                 | 107.7                              |                                    |
| Allegro 1175600000 | 8.3                                | 162                                | 120                                | 10                                 | 40                                 | 107.55                             |                                    |

Артикул: 11706...

NEW

Высокопроизводительное твердосплавное сверло, DIN 6537

WNT \ Standard



Краткие характеристики:

Применимость по материалам:

Технические характеристики

Кол-во режущих кромок NOF

2

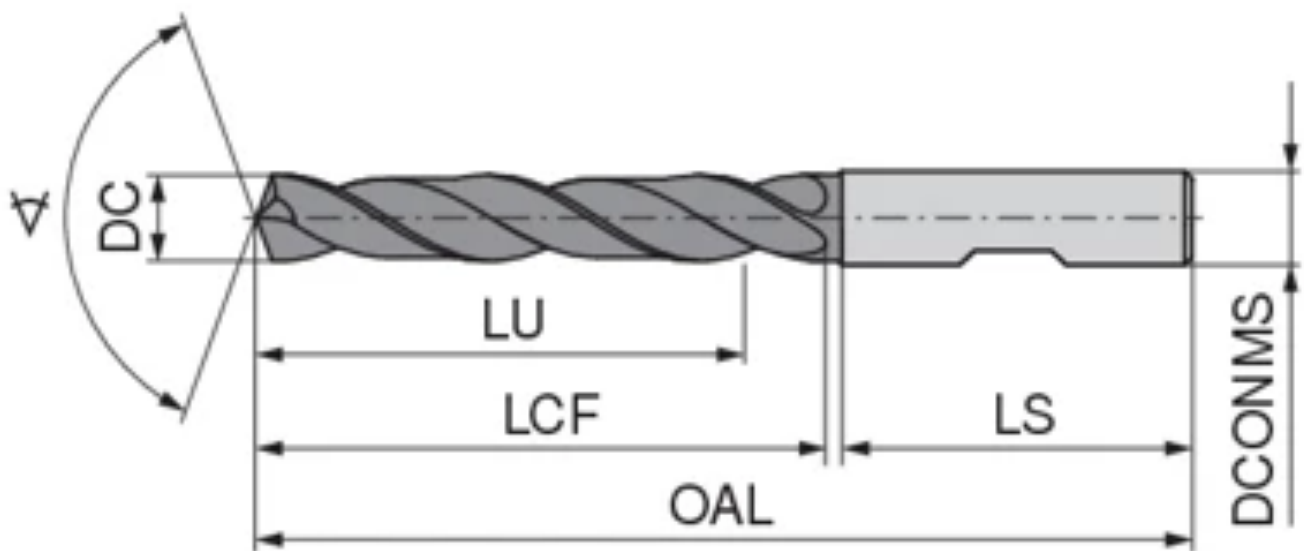
|                    | $\frac{F_{\text{max}}}{F_{\text{min}}}$<br>(mm) | $\frac{L_{\text{max}}}{L_{\text{min}}}$<br>(mm) | $\frac{D_{\text{max}}}{D_{\text{min}}}$<br>(mm) | $\frac{H_{\text{max}}}{H_{\text{min}}}$<br>(mm) | $\frac{W_{\text{max}}}{W_{\text{min}}}$<br>(mm) | $\frac{V_{\text{max}}}{V_{\text{min}}}$<br>(mm) | $\frac{A_{\text{max}}}{A_{\text{min}}}$ |
|--------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-----------------------------------------|
| Allegro 1175647000 | 1                                               | 45                                              | 7                                               | 4                                               | 28                                              | 5.5                                             |                                         |
| Allegro 1175647000 | 1.1                                             | 45                                              | 7                                               | 4                                               | 28                                              | 5.55                                            |                                         |
| Allegro 1175647000 | 1.2                                             | 45                                              | 7                                               | 4                                               | 28                                              | 5.7                                             |                                         |
| Allegro 1175647000 | 1.3                                             | 45                                              | 7                                               | 4                                               | 28                                              | 5.85                                            |                                         |
| Allegro 1175647000 | 1.4                                             | 45                                              | 7                                               | 4                                               | 28                                              | 5.9                                             |                                         |
| Allegro 1175647000 | 1.5                                             | 55                                              | 14                                              | 4                                               | 28                                              | 11.75                                           |                                         |
| Allegro 1175647000 | 1.6                                             | 55                                              | 14                                              | 4                                               | 28                                              | 11.8                                            |                                         |
| Allegro 1175647000 | 1.7                                             | 55                                              | 14                                              | 4                                               | 28                                              | 11.45                                           |                                         |
| Allegro 1175647000 | 1.8                                             | 55                                              | 14                                              | 4                                               | 28                                              | 11.3                                            |                                         |
| Allegro 1175647000 | 1.9                                             | 55                                              | 14                                              | 4                                               | 28                                              | 11.15                                           |                                         |
| Allegro 1175648000 | 2                                               | 55                                              | 20                                              | 4                                               | 28                                              | 17                                              |                                         |
| Allegro 1175648000 | 2.1                                             | 55                                              | 20                                              | 4                                               | 28                                              | 16.85                                           |                                         |
| Allegro 1175649000 | 2.2                                             | 55                                              | 20                                              | 4                                               | 28                                              | 16.7                                            |                                         |
| Allegro 1175649000 | 2.3                                             | 55                                              | 20                                              | 4                                               | 28                                              | 16.55                                           |                                         |
| Allegro 1175649000 | 2.4                                             | 55                                              | 20                                              | 4                                               | 28                                              | 16.4                                            |                                         |
| Allegro 1175649000 | 2.5                                             | 55                                              | 20                                              | 4                                               | 28                                              | 16.25                                           |                                         |
| Allegro 1175649000 | 2.6                                             | 55                                              | 20                                              | 4                                               | 28                                              | 16.1                                            |                                         |
| Allegro 1175649000 | 2.7                                             | 55                                              | 20                                              | 4                                               | 28                                              | 15.95                                           |                                         |
| Allegro 1175649000 | 2.8                                             | 55                                              | 20                                              | 4                                               | 28                                              | 15.8                                            |                                         |
| Allegro 1175649000 | 2.9                                             | 55                                              | 20                                              | 4                                               | 28                                              | 15.65                                           |                                         |
| Allegro 1175649000 | 3                                               | 62                                              | 20                                              | 6                                               | 36                                              | 15.5                                            |                                         |
| Allegro 1175649000 | 3.1                                             | 62                                              | 20                                              | 6                                               | 36                                              | 15.35                                           |                                         |
| Allegro 1175649000 | 3.2                                             | 62                                              | 20                                              | 6                                               | 36                                              | 15.2                                            |                                         |
| Allegro 1175649000 | 3.25                                            | 62                                              | 20                                              | 6                                               | 36                                              | 15.13                                           |                                         |
| Allegro 1175649000 | 3.3                                             | 62                                              | 20                                              | 6                                               | 36                                              | 15.05                                           |                                         |
| Allegro 1175649000 | 3.4                                             | 62                                              | 20                                              | 6                                               | 36                                              | 14.9                                            |                                         |
| Allegro 1175649000 | 3.5                                             | 62                                              | 20                                              | 6                                               | 36                                              | 14.75                                           |                                         |
| Allegro 1175649000 | 3.6                                             | 62                                              | 20                                              | 6                                               | 36                                              | 14.6                                            |                                         |
| Allegro 1175649000 | 3.7                                             | 62                                              | 20                                              | 6                                               | 36                                              | 14.45                                           |                                         |
| Allegro 1175649000 | 3.8                                             | 66                                              | 24                                              | 6                                               | 36                                              | 14.3                                            |                                         |
| Allegro 1175649000 | 3.9                                             | 66                                              | 24                                              | 6                                               | 36                                              | 14.15                                           |                                         |
| Allegro 1175649000 | 4                                               | 66                                              | 24                                              | 6                                               | 36                                              | 14                                              |                                         |
| Allegro 1175649000 | 4.1                                             | 66                                              | 24                                              | 6                                               | 36                                              | 13.85                                           |                                         |
| Allegro 1175649000 | 4.2                                             | 66                                              | 24                                              | 6                                               | 36                                              | 13.7                                            |                                         |
| Allegro 1175649000 | 4.3                                             | 66                                              | 24                                              | 6                                               | 36                                              | 13.55                                           |                                         |
| Allegro 1175649000 | 4.4                                             | 66                                              | 24                                              | 6                                               | 36                                              | 13.4                                            |                                         |
| Allegro 1175649000 | 4.5                                             | 66                                              | 24                                              | 6                                               | 36                                              | 13.25                                           |                                         |
| Allegro 1175649000 | 4.6                                             | 66                                              | 24                                              | 6                                               | 36                                              | 13.1                                            |                                         |
| Allegro 1175649000 | 4.65                                            | 66                                              | 24                                              | 6                                               | 36                                              | 13.03                                           |                                         |
| Allegro 1175649000 | 4.7                                             | 66                                              | 24                                              | 6                                               | 36                                              | 12.95                                           |                                         |
| Allegro 1175649000 | 4.8                                             | 66                                              | 28                                              | 6                                               | 36                                              | 12.8                                            |                                         |
| Allegro 1175649000 | 4.9                                             | 66                                              | 28                                              | 6                                               | 36                                              | 12.65                                           |                                         |
| Allegro 1175649000 | 5                                               | 66                                              | 28                                              | 6                                               | 36                                              | 12.5                                            |                                         |
| Allegro 1175649000 | 5.1                                             | 66                                              | 28                                              | 6                                               | 36                                              | 12.35                                           |                                         |
| Allegro 1175649000 | 5.2                                             | 66                                              | 28                                              | 6                                               | 36                                              | 12.2                                            |                                         |
| Allegro 1175649000 | 5.3                                             | 66                                              | 28                                              | 6                                               | 36                                              | 12.05                                           |                                         |
| Allegro 1175649000 | 5.4                                             | 66                                              | 28                                              | 6                                               | 36                                              | 11.9                                            |                                         |
| Allegro 1175649000 | 5.5                                             | 66                                              | 28                                              | 6                                               | 36                                              | 11.75                                           |                                         |
| Allegro 1175649000 | 5.55                                            | 66                                              | 28                                              | 6                                               | 36                                              | 11.68                                           |                                         |
| Allegro 1175649000 | 5.6                                             | 66                                              | 28                                              | 6                                               | 36                                              | 11.6                                            |                                         |
| Allegro 1175649000 | 5.65                                            | 66                                              | 28                                              | 6                                               | 36                                              | 11.53                                           |                                         |
| Allegro 1175649000 | 5.7                                             | 66                                              | 28                                              | 6                                               | 36                                              | 11.45                                           |                                         |
| Allegro 1175649000 | 5.8                                             | 66                                              | 28                                              | 6                                               | 36                                              | 11.3                                            |                                         |
| Allegro 1175649000 | 5.9                                             | 66                                              | 28                                              | 6                                               | 36                                              | 11.15                                           |                                         |

Артикул: 11707...

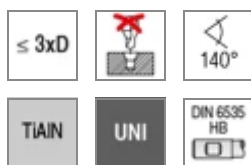
NEW

## Высокопроизводительное твердосплавное сверло, DIN 6537

WNT \ Standard



Краткие характеристики:



Применимость по материалам:



### Технические характеристики

Кол-во режущих кромок NOF

2

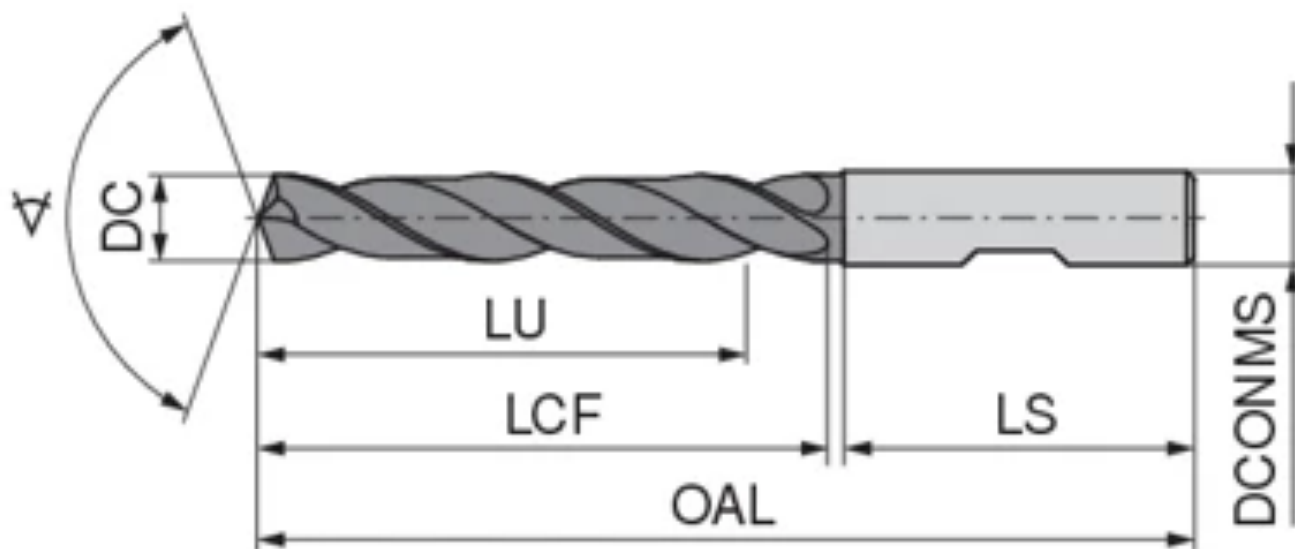
|                      | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(gms) | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(gms) | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(gms) | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(gms) | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(gms) | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(gms) |
|----------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
| Allegory: 11/15/2020 | 3                                                | 62                                               | 20                                               | 6                                                | 26                                               | 15.5                                             |
| Allegory: 11/15/2020 | 3.1                                              | 62                                               | 20                                               | 6                                                | 26                                               | 15.55                                            |
| Allegory: 11/15/2020 | 3.2                                              | 62                                               | 20                                               | 6                                                | 26                                               | 15.6                                             |
| Allegory: 11/15/2020 | 3.25                                             | 62                                               | 20                                               | 6                                                | 26                                               | 15.65                                            |
| Allegory: 11/15/2020 | 3.3                                              | 62                                               | 20                                               | 6                                                | 26                                               | 15.68                                            |
| Allegory: 11/15/2020 | 3.4                                              | 62                                               | 20                                               | 6                                                | 26                                               | 15.7                                             |
| Allegory: 11/15/2020 | 3.5                                              | 62                                               | 20                                               | 6                                                | 26                                               | 15.75                                            |
| Allegory: 11/15/2020 | 3.6                                              | 62                                               | 20                                               | 6                                                | 26                                               | 15.8                                             |
| Allegory: 11/15/2020 | 3.7                                              | 62                                               | 20                                               | 6                                                | 26                                               | 15.85                                            |
| Allegory: 11/15/2020 | 3.8                                              | 65                                               | 24                                               | 6                                                | 26                                               | 16.2                                             |
| Allegory: 11/15/2020 | 3.9                                              | 65                                               | 24                                               | 6                                                | 26                                               | 16.15                                            |
| Allegory: 11/15/2020 | 4                                                | 65                                               | 24                                               | 6                                                | 26                                               | 16                                               |
| Allegory: 11/15/2020 | 4.1                                              | 65                                               | 24                                               | 6                                                | 26                                               | 17.55                                            |
| Allegory: 11/15/2020 | 4.2                                              | 65                                               | 24                                               | 6                                                | 26                                               | 17.7                                             |
| Allegory: 11/15/2020 | 4.3                                              | 65                                               | 24                                               | 6                                                | 26                                               | 17.55                                            |
| Allegory: 11/15/2020 | 4.4                                              | 65                                               | 24                                               | 6                                                | 26                                               | 17.4                                             |
| Allegory: 11/15/2020 | 4.5                                              | 65                                               | 24                                               | 6                                                | 26                                               | 17.25                                            |
| Allegory: 11/15/2020 | 4.6                                              | 65                                               | 24                                               | 6                                                | 26                                               | 17.1                                             |
| Allegory: 11/15/2020 | 4.65                                             | 65                                               | 24                                               | 6                                                | 26                                               | 17.05                                            |
| Allegory: 11/15/2020 | 4.7                                              | 65                                               | 24                                               | 6                                                | 26                                               | 16.95                                            |
| Allegory: 11/15/2020 | 4.8                                              | 65                                               | 28                                               | 6                                                | 26                                               | 20.8                                             |
| Allegory: 11/15/2020 | 4.9                                              | 65                                               | 28                                               | 6                                                | 26                                               | 20.65                                            |
| Allegory: 11/15/2020 | 5                                                | 65                                               | 28                                               | 6                                                | 26                                               | 20.5                                             |
| Allegory: 11/15/2020 | 5.1                                              | 65                                               | 28                                               | 6                                                | 26                                               | 20.35                                            |
| Allegory: 11/15/2020 | 5.2                                              | 65                                               | 28                                               | 6                                                | 26                                               | 20.2                                             |
| Allegory: 11/15/2020 | 5.3                                              | 65                                               | 28                                               | 6                                                | 26                                               | 20.05                                            |
| Allegory: 11/15/2020 | 5.4                                              | 65                                               | 28                                               | 6                                                | 26                                               | 19.9                                             |
| Allegory: 11/15/2020 | 5.5                                              | 65                                               | 28                                               | 6                                                | 26                                               | 19.75                                            |
| Allegory: 11/15/2020 | 5.55                                             | 65                                               | 28                                               | 6                                                | 26                                               | 19.68                                            |
| Allegory: 11/15/2020 | 5.6                                              | 65                                               | 28                                               | 6                                                | 26                                               | 19.6                                             |
| Allegory: 11/15/2020 | 5.65                                             | 65                                               | 28                                               | 6                                                | 26                                               | 19.55                                            |
| Allegory: 11/15/2020 | 5.7                                              | 65                                               | 28                                               | 6                                                | 26                                               | 19.45                                            |
| Allegory: 11/15/2020 | 5.8                                              | 65                                               | 28                                               | 6                                                | 26                                               | 19.3                                             |
| Allegory: 11/15/2020 | 5.9                                              | 65                                               | 28                                               | 6                                                | 26                                               | 19.15                                            |
| Allegory: 11/15/2020 | 6                                                | 65                                               | 28                                               | 6                                                | 26                                               | 19                                               |
| Allegory: 11/15/2020 | 6.1                                              | 79                                               | 24                                               | 8                                                | 26                                               | 24.85                                            |
| Allegory: 11/15/2020 | 6.2                                              | 79                                               | 24                                               | 8                                                | 26                                               | 24.7                                             |
| Allegory: 11/15/2020 | 6.3                                              | 79                                               | 24                                               | 8                                                | 26                                               | 24.55                                            |
| Allegory: 11/15/2020 | 6.4                                              | 79                                               | 24                                               | 8                                                | 26                                               | 24.4                                             |
| Allegory: 11/15/2020 | 6.5                                              | 79                                               | 24                                               | 8                                                | 26                                               | 24.25                                            |
| Allegory: 11/15/2020 | 6.6                                              | 79                                               | 24                                               | 8                                                | 26                                               | 24.1                                             |
| Allegory: 11/15/2020 | 6.7                                              | 79                                               | 24                                               | 8                                                | 26                                               | 23.95                                            |
| Allegory: 11/15/2020 | 6.8                                              | 79                                               | 24                                               | 8                                                | 26                                               | 23.8                                             |
| Allegory: 11/15/2020 | 6.9                                              | 79                                               | 24                                               | 8                                                | 26                                               | 23.65                                            |
| Allegory: 11/15/2020 | 7                                                | 79                                               | 24                                               | 8                                                | 26                                               | 23.5                                             |
| Allegory: 11/15/2020 | 7.1                                              | 79                                               | 41                                               | 8                                                | 26                                               | 26.35                                            |
| Allegory: 11/15/2020 | 7.2                                              | 79                                               | 41                                               | 8                                                | 26                                               | 26.2                                             |
| Allegory: 11/15/2020 | 7.3                                              | 79                                               | 41                                               | 8                                                | 26                                               | 26.05                                            |
| Allegory: 11/15/2020 | 7.4                                              | 79                                               | 41                                               | 8                                                | 26                                               | 25.9                                             |
| Allegory: 11/15/2020 | 7.5                                              | 79                                               | 41                                               | 8                                                | 26                                               | 25.75                                            |
| Allegory: 11/15/2020 | 7.55                                             | 79                                               | 41                                               | 8                                                | 26                                               | 25.68                                            |
| Allegory: 11/15/2020 | 7.6                                              | 79                                               | 41                                               | 8                                                | 26                                               | 25.6                                             |
| Allegory: 11/15/2020 | 7.65                                             | 79                                               | 41                                               | 8                                                | 26                                               | 25.55                                            |
| Allegory: 11/15/2020 | 7.7                                              | 79                                               | 41                                               | 8                                                | 26                                               | 25.45                                            |

Артикул: 11709...

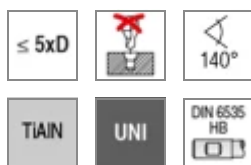
NEW

## Высокопроизводительное твердосплавное сверло, DIN 6537

WNT \ Standard



Краткие характеристики:



Применимость по материалам:



### Технические характеристики

Кол-во режущих кромок NOF

2

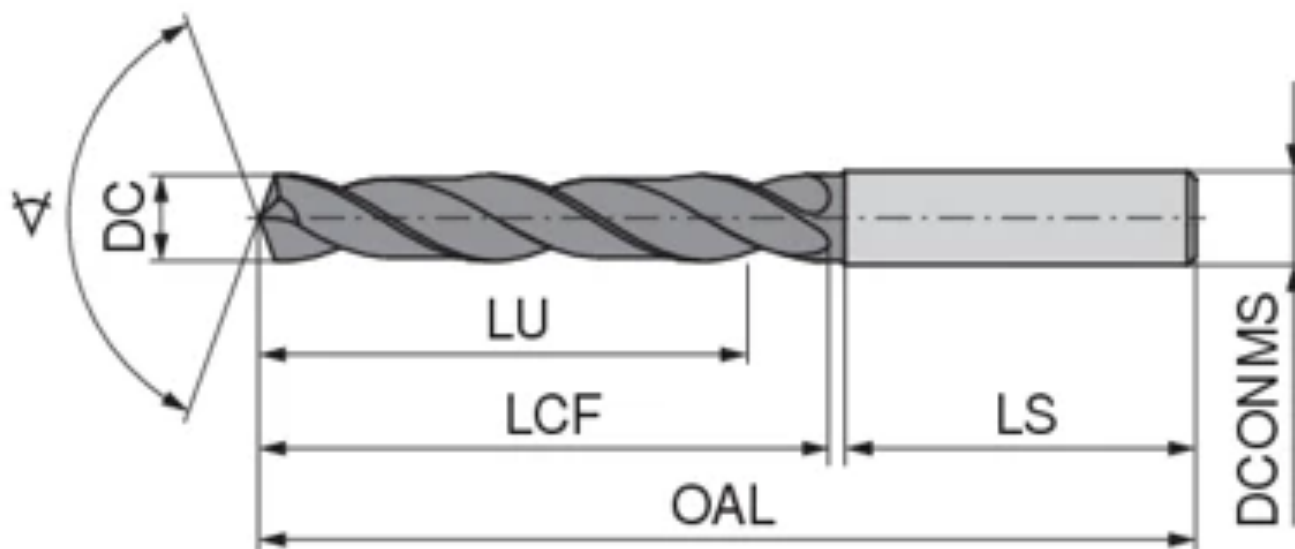
|                   | $\frac{L_1}{L_0}$<br>(mm) | $\frac{L_2}{L_0}$<br>(mm) | $\frac{L_3}{L_0}$<br>(mm) | $\frac{L_4}{L_0}$<br>(mm) | $\frac{L_5}{L_0}$<br>(mm) | $\frac{L_6}{L_0}$<br>(mm) | $\frac{L_7}{L_0}$<br>(mm) |
|-------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Allegro 1175M0000 | 3                         | 66                        | 28                        | 6                         | 36                        | 23.5                      |                           |
| Allegro 1175M0000 | 3.1                       | 66                        | 28                        | 6                         | 36                        | 23.35                     |                           |
| Allegro 1175M0000 | 3.2                       | 66                        | 28                        | 6                         | 36                        | 23.2                      |                           |
| Allegro 1175M0000 | 3.25                      | 66                        | 28                        | 6                         | 36                        | 23.15                     |                           |
| Allegro 1175M0000 | 3.3                       | 66                        | 28                        | 6                         | 36                        | 23.05                     |                           |
| Allegro 1175M0000 | 3.4                       | 66                        | 28                        | 6                         | 36                        | 22.9                      |                           |
| Allegro 1175M0000 | 3.5                       | 66                        | 28                        | 6                         | 36                        | 22.75                     |                           |
| Allegro 1175M0000 | 3.6                       | 66                        | 28                        | 6                         | 36                        | 22.6                      |                           |
| Allegro 1175M0000 | 3.7                       | 66                        | 28                        | 6                         | 36                        | 22.45                     |                           |
| Allegro 1175M0000 | 3.8                       | 74                        | 36                        | 6                         | 36                        | 20.3                      |                           |
| Allegro 1175M0000 | 3.9                       | 74                        | 36                        | 6                         | 36                        | 20.15                     |                           |
| Allegro 1175M0000 | 4                         | 74                        | 36                        | 6                         | 36                        | 20                        |                           |
| Allegro 1175M0000 | 4.1                       | 74                        | 36                        | 6                         | 36                        | 19.85                     |                           |
| Allegro 1175M0000 | 4.2                       | 74                        | 36                        | 6                         | 36                        | 19.7                      |                           |
| Allegro 1175M0000 | 4.3                       | 74                        | 36                        | 6                         | 36                        | 19.55                     |                           |
| Allegro 1175M0000 | 4.4                       | 74                        | 36                        | 6                         | 36                        | 19.4                      |                           |
| Allegro 1175M0000 | 4.5                       | 74                        | 36                        | 6                         | 36                        | 19.25                     |                           |
| Allegro 1175M0000 | 4.6                       | 74                        | 36                        | 6                         | 36                        | 19.1                      |                           |
| Allegro 1175M0000 | 4.65                      | 74                        | 36                        | 6                         | 36                        | 19.03                     |                           |
| Allegro 1175M0000 | 4.7                       | 74                        | 36                        | 6                         | 36                        | 18.95                     |                           |
| Allegro 1175M0000 | 4.8                       | 82                        | 44                        | 6                         | 36                        | 16.8                      |                           |
| Allegro 1175M0000 | 4.9                       | 82                        | 44                        | 6                         | 36                        | 16.65                     |                           |
| Allegro 1175M0000 | 5                         | 82                        | 44                        | 6                         | 36                        | 16.5                      |                           |
| Allegro 1175M0000 | 5.1                       | 82                        | 44                        | 6                         | 36                        | 16.35                     |                           |
| Allegro 1175M0000 | 5.2                       | 82                        | 44                        | 6                         | 36                        | 16.2                      |                           |
| Allegro 1175M0000 | 5.3                       | 82                        | 44                        | 6                         | 36                        | 16.05                     |                           |
| Allegro 1175M0000 | 5.4                       | 82                        | 44                        | 6                         | 36                        | 15.9                      |                           |
| Allegro 1175M0000 | 5.5                       | 82                        | 44                        | 6                         | 36                        | 15.75                     |                           |
| Allegro 1175M0000 | 5.55                      | 82                        | 44                        | 6                         | 36                        | 15.68                     |                           |
| Allegro 1175M0000 | 5.6                       | 82                        | 44                        | 6                         | 36                        | 15.6                      |                           |
| Allegro 1175M0000 | 5.65                      | 82                        | 44                        | 6                         | 36                        | 15.53                     |                           |
| Allegro 1175M0000 | 5.7                       | 82                        | 44                        | 6                         | 36                        | 15.45                     |                           |
| Allegro 1175M0000 | 5.8                       | 82                        | 44                        | 6                         | 36                        | 15.3                      |                           |
| Allegro 1175M0000 | 5.9                       | 82                        | 44                        | 6                         | 36                        | 15.15                     |                           |
| Allegro 1175M0000 | 6                         | 82                        | 44                        | 6                         | 36                        | 15                        |                           |
| Allegro 1175M0000 | 6.1                       | 91                        | 53                        | 8                         | 36                        | 42.05                     |                           |
| Allegro 1175M0000 | 6.2                       | 91                        | 53                        | 8                         | 36                        | 42.7                      |                           |
| Allegro 1175M0000 | 6.3                       | 91                        | 53                        | 8                         | 36                        | 42.55                     |                           |
| Allegro 1175M0000 | 6.4                       | 91                        | 53                        | 8                         | 36                        | 42.4                      |                           |
| Allegro 1175M0000 | 6.5                       | 91                        | 53                        | 8                         | 36                        | 42.25                     |                           |
| Allegro 1175M0000 | 6.6                       | 91                        | 53                        | 8                         | 36                        | 42.1                      |                           |
| Allegro 1175M0000 | 6.7                       | 91                        | 53                        | 8                         | 36                        | 42.05                     |                           |
| Allegro 1175M0000 | 6.8                       | 91                        | 53                        | 8                         | 36                        | 42.0                      |                           |
| Allegro 1175M0000 | 6.9                       | 91                        | 53                        | 8                         | 36                        | 42.05                     |                           |
| Allegro 1175M0000 | 7                         | 91                        | 53                        | 8                         | 36                        | 42.5                      |                           |
| Allegro 1175M0000 | 7.1                       | 91                        | 53                        | 8                         | 36                        | 42.35                     |                           |
| Allegro 1175M0000 | 7.2                       | 91                        | 53                        | 8                         | 36                        | 42.2                      |                           |
| Allegro 1175M0000 | 7.3                       | 91                        | 53                        | 8                         | 36                        | 42.05                     |                           |
| Allegro 1175M0000 | 7.4                       | 91                        | 53                        | 8                         | 36                        | 41.9                      |                           |
| Allegro 1175M0000 | 7.5                       | 91                        | 53                        | 8                         | 36                        | 41.75                     |                           |
| Allegro 1175M0000 | 7.55                      | 91                        | 53                        | 8                         | 36                        | 41.68                     |                           |
| Allegro 1175M0000 | 7.6                       | 91                        | 53                        | 8                         | 36                        | 41.6                      |                           |
| Allegro 1175M0000 | 7.65                      | 91                        | 53                        | 8                         | 36                        | 41.53                     |                           |
| Allegro 1175M0000 | 7.7                       | 91                        | 53                        | 8                         | 36                        | 41.45                     |                           |

Артикул: 11710...

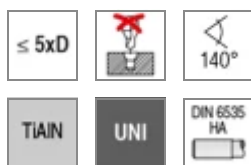
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## Высокопроизводительное твердосплавное сверло, DIN 6537

WNT \ Standard



Краткие характеристики:



Применимость по материалам:



### Технические характеристики

Кол-во режущих кромок NOF

2

|                   | $\frac{F_{\text{eff}}}{F_{\text{max}}}$<br>(gms) | $\frac{F_x}{F_{\text{max}}}$<br>(gms) | $\frac{F_y}{F_{\text{max}}}$<br>(gms) | $\frac{F_{\text{avg}}}{F_{\text{max}}}$<br>(gms) | $\frac{F_{\text{avg}}}{F_{\text{max}}}$<br>(gms) | $\frac{F_{\text{avg}}}{F_{\text{max}}}$<br>(gms) |
|-------------------|--------------------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
| Allegro 107500000 | 3                                                | 66                                    | 28                                    | 6                                                | 36                                               | 23.5                                             |
| Allegro 107500000 | 3.1                                              | 66                                    | 28                                    | 6                                                | 36                                               | 23.35                                            |
| Allegro 107500000 | 3.2                                              | 66                                    | 28                                    | 6                                                | 36                                               | 23.2                                             |
| Allegro 107500000 | 3.25                                             | 66                                    | 28                                    | 6                                                | 36                                               | 23.15                                            |
| Allegro 107500000 | 3.3                                              | 66                                    | 28                                    | 6                                                | 36                                               | 23.05                                            |
| Allegro 107500000 | 3.4                                              | 66                                    | 28                                    | 6                                                | 36                                               | 22.9                                             |
| Allegro 107500000 | 3.5                                              | 66                                    | 28                                    | 6                                                | 36                                               | 22.75                                            |
| Allegro 107500000 | 3.6                                              | 66                                    | 28                                    | 6                                                | 36                                               | 22.6                                             |
| Allegro 107500000 | 3.7                                              | 66                                    | 28                                    | 6                                                | 36                                               | 22.45                                            |
| Allegro 107500000 | 3.8                                              | 74                                    | 36                                    | 8                                                | 36                                               | 20.3                                             |
| Allegro 107500000 | 3.9                                              | 74                                    | 36                                    | 6                                                | 36                                               | 20.15                                            |
| Allegro 107500000 | 4                                                | 74                                    | 36                                    | 6                                                | 36                                               | 20                                               |
| Allegro 107500000 | 4.1                                              | 74                                    | 36                                    | 6                                                | 36                                               | 19.85                                            |
| Allegro 107500000 | 4.2                                              | 74                                    | 36                                    | 6                                                | 36                                               | 19.7                                             |
| Allegro 107500000 | 4.3                                              | 74                                    | 36                                    | 6                                                | 36                                               | 19.55                                            |
| Allegro 107500000 | 4.4                                              | 74                                    | 36                                    | 6                                                | 36                                               | 19.4                                             |
| Allegro 107500000 | 4.5                                              | 74                                    | 36                                    | 6                                                | 36                                               | 19.25                                            |
| Allegro 107500000 | 4.6                                              | 74                                    | 36                                    | 6                                                | 36                                               | 19.1                                             |
| Allegro 107500000 | 4.65                                             | 74                                    | 36                                    | 6                                                | 36                                               | 19.03                                            |
| Allegro 107500000 | 4.7                                              | 74                                    | 36                                    | 6                                                | 36                                               | 18.95                                            |
| Allegro 107500000 | 4.8                                              | 82                                    | 44                                    | 6                                                | 36                                               | 16.8                                             |
| Allegro 107500000 | 4.9                                              | 82                                    | 44                                    | 6                                                | 36                                               | 16.65                                            |
| Allegro 107500000 | 5                                                | 82                                    | 44                                    | 6                                                | 36                                               | 16.5                                             |
| Allegro 107500000 | 5.1                                              | 82                                    | 44                                    | 6                                                | 36                                               | 16.35                                            |
| Allegro 107500000 | 5.2                                              | 82                                    | 44                                    | 6                                                | 36                                               | 16.2                                             |
| Allegro 107500000 | 5.3                                              | 82                                    | 44                                    | 6                                                | 36                                               | 16.05                                            |
| Allegro 107500000 | 5.4                                              | 82                                    | 44                                    | 6                                                | 36                                               | 15.9                                             |
| Allegro 107500000 | 5.5                                              | 82                                    | 44                                    | 6                                                | 36                                               | 15.75                                            |
| Allegro 107500000 | 5.55                                             | 82                                    | 44                                    | 6                                                | 36                                               | 15.68                                            |
| Allegro 107500000 | 5.6                                              | 82                                    | 44                                    | 6                                                | 36                                               | 15.6                                             |
| Allegro 107500000 | 5.65                                             | 82                                    | 44                                    | 6                                                | 36                                               | 15.53                                            |
| Allegro 107500000 | 5.7                                              | 82                                    | 44                                    | 6                                                | 36                                               | 15.45                                            |
| Allegro 107500000 | 5.8                                              | 82                                    | 44                                    | 6                                                | 36                                               | 15.3                                             |
| Allegro 107500000 | 5.9                                              | 82                                    | 44                                    | 6                                                | 36                                               | 15.15                                            |
| Allegro 107500000 | 6                                                | 82                                    | 44                                    | 6                                                | 36                                               | 15                                               |
| Allegro 107500000 | 6.1                                              | 91                                    | 53                                    | 8                                                | 36                                               | 12.85                                            |
| Allegro 107500000 | 6.2                                              | 91                                    | 53                                    | 8                                                | 36                                               | 12.7                                             |
| Allegro 107500000 | 6.3                                              | 91                                    | 53                                    | 8                                                | 36                                               | 12.55                                            |
| Allegro 107500000 | 6.4                                              | 91                                    | 53                                    | 8                                                | 36                                               | 12.4                                             |
| Allegro 107500000 | 6.5                                              | 91                                    | 53                                    | 8                                                | 36                                               | 12.25                                            |
| Allegro 107500000 | 6.6                                              | 91                                    | 53                                    | 8                                                | 36                                               | 12.1                                             |
| Allegro 107500000 | 6.7                                              | 91                                    | 53                                    | 8                                                | 36                                               | 11.95                                            |
| Allegro 107500000 | 6.8                                              | 91                                    | 53                                    | 8                                                | 36                                               | 11.8                                             |
| Allegro 107500000 | 6.9                                              | 91                                    | 53                                    | 8                                                | 36                                               | 11.65                                            |
| Allegro 107500000 | 7                                                | 91                                    | 53                                    | 8                                                | 36                                               | 11.5                                             |
| Allegro 107500000 | 7.1                                              | 91                                    | 53                                    | 8                                                | 36                                               | 11.35                                            |
| Allegro 107500000 | 7.2                                              | 91                                    | 53                                    | 8                                                | 36                                               | 11.2                                             |
| Allegro 107500000 | 7.3                                              | 91                                    | 53                                    | 8                                                | 36                                               | 11.05                                            |
| Allegro 107500000 | 7.4                                              | 91                                    | 53                                    | 8                                                | 36                                               | 10.9                                             |
| Allegro 107500000 | 7.5                                              | 91                                    | 53                                    | 8                                                | 36                                               | 10.75                                            |
| Allegro 107500000 | 7.55                                             | 91                                    | 53                                    | 8                                                | 36                                               | 10.68                                            |
| Allegro 107500000 | 7.6                                              | 91                                    | 53                                    | 8                                                | 36                                               | 10.6                                             |
| Allegro 107500000 | 7.65                                             | 91                                    | 53                                    | 8                                                | 36                                               | 10.53                                            |
| Allegro 107500000 | 7.7                                              | 91                                    | 53                                    | 8                                                | 36                                               | 10.45                                            |

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