



DREAM DRILLS -MQL TYPE

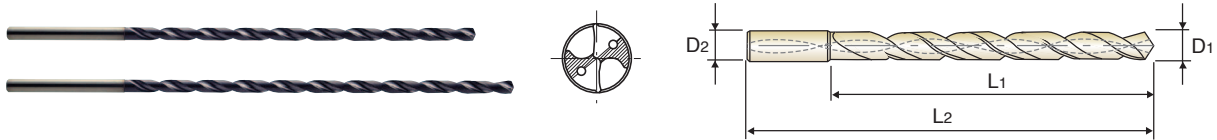
DH515 SERIES

DH520 SERIES

CARBIDE, DREAM DRILLS MQL TYPE with COOLANT HOLES *EXTRA LONG* VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL in GERADZÄHLIGER SCHAFTAUSFÜHRUNG *ÜBERLANG*

- **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.
- **Advantage** : Non step drilling up to 15 times (20 times) of drill diameter.
Available for processing MQL (Minimum Quantity Lubrication).
Excellent positioning
- Bush is not necessary.
Special design
- Good chip removal
Powerful drilling

- **Verwendung** : Zum wirtschaftlichen Bohren von Stahl allgemein, Stahlguß, Hart- und Temperguß, Nichteisen Leichtmetallen, abrasiven Kunststoffen.
- **Vorteile** : Bohren bis zu 15 x D (20 x D) ohne abzusetzen, Geeignet für MQL (minimale Kühlschmierung) Selbstzentrierend
- Keine vorherige Zentrierung notwendig
Kein Verlaufen
- Keine Bohrbuchse notwendig
Spezielle Bohrergeometrie
- Gute Spanabfuhr
Hochleistungsbohren



15 × D (DH515) 20 × D (DH520)

| | | | | | Unit : mm | | | | |
|----------|----------------|----------------|--------------|----------------|-----------|----------------|----------------|--------------|----------------|
| EDP No. | Drill Diameter | Shank Diameter | Flute Length | Overall Length | EDP No. | Drill Diameter | Shank Diameter | Flute Length | Overall Length |
| TiAlN | D1 | D2 | L1 | L2 | TiAlN | D1 | D2 | L1 | L2 |
| DH515030 | 3.0 | 3 | 54 | 105 | DH520030 | 3.0 | 3 | 69 | 120 |
| DH515035 | 3.5 | 4 | 63 | 114 | DH520035 | 3.5 | 4 | 81 | 132 |
| DH515040 | 4.0 | 4 | 72 | 123 | DH520040 | 4.0 | 4 | 92 | 143 |
| DH515045 | 4.5 | 5 | 81 | 134 | DH520045 | 4.5 | 5 | 104 | 157 |
| DH515050 | 5.0 | 5 | 90 | 143 | DH520050 | 5.0 | 5 | 115 | 168 |
| DH515055 | 5.5 | 6 | 99 | 154 | DH520055 | 5.5 | 6 | 127 | 182 |
| DH515060 | 6.0 | 6 | 108 | 163 | DH520060 | 6.0 | 6 | 138 | 193 |
| DH515070 | 7.0 | 7 | 126 | 182 | DH520070 | 7.0 | 7 | 161 | 217 |
| DH515080 | 8.0 | 8 | 144 | 201 | DH520080 | 8.0 | 8 | 184 | 241 |
| DH515090 | 9.0 | 9 | 162 | 220 | DH520090 | 9.0 | 9 | 207 | 265 |
| DH515100 | 10.0 | 10 | 180 | 238 | DH520100 | 10.0 | 10 | 230 | 288 |
| DH515110 | 11.0 | 11 | 198 | 262 | DH520120 | 12.0 | 12 | 276 | 341 |
| DH515120 | 12.0 | 12 | 216 | 281 | | | | | |

| Carbon Steels | Alloy Steels | Prehardened Steels | Hardened Steels | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | Copper | Bronze | CFRP |
|---------------|--------------|--------------------|-----------------|--------|-----------|----------|------------------|----------|-------------|--------|--------|------|
| ~HB225 | HB225~325 | HRC30~45 | HRC45~55 | HRC55~ | | | | | | | | |
| ◎ | ◎ | ○ | | | ○ | | | | ○ | | | |

◎ : Excellent ○ : Good



DREAM DRILLS -MQL TYPE

**RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN**

**CARBIDE, DREAM DRILL MQL TYPE END MILL SHANK WITH COOLANT HOLE, TiAIN COATED
VOLLHARTMETALL DREAM BOHRER MQL-TYPE, TiAIN-BESCHICHTET**

DH510, DH515, DH520, DHM10, DHM15, DHM20 SERIES

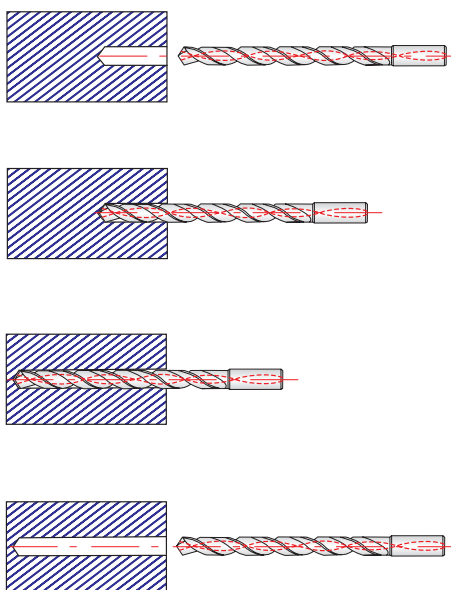
| WORK MATERIAL | CARBON STEELS ALLOY STEELS | | CAST IRON | | DUCTILE CAST IRON | |
|----------------|-------------------------------|-----------|-----------------------------|-----------|-----------------------------|-----------|
| STRENGTH | ~ 1060 N/mm ² | | 250 ~ 350 N/mm ² | | 400 ~ 500 N/mm ² | |
| DRILLING SPEED | 63 ~ 125 m/min | | 63 ~ 125 m/min | | 60 ~ 80 m/min | |
| DIAMETER | N | S | N | S | N | S |
| 3.0 | 7500 | 0.06~0.12 | 7500 | 0.06~0.12 | 7500 | 0.06~0.12 |
| 4.0 | 6400 | 0.08~0.16 | 6400 | 0.08~0.16 | 5600 | 0.08~0.16 |
| 5.0 | 5800 | 0.10~0.20 | 5800 | 0.10~0.20 | 4500 | 0.10~0.20 |
| 6.0 | 4800 | 0.12~0.24 | 4800 | 0.12~0.24 | 3800 | 0.12~0.24 |
| 8.0 | 3600 | 0.16~0.28 | 3600 | 0.16~0.28 | 2800 | 0.16~0.28 |
| 10.0 | 2900 | 0.20~0.35 | 2900 | 0.20~0.35 | 2300 | 0.20~0.35 |
| 12.0 | 2400 | 0.24~0.42 | 2400 | 0.24~0.42 | 1900 | 0.24~0.42 |
| 14.0 | 2050 | 0.28~0.46 | 2050 | 0.28~0.46 | 1600 | 0.28~0.46 |

N = R.P.M
S = Feed per Revolution (mm/rev.)

DHM25, DHM30 SERIES

| WORK MATERIAL | CARBON STEELS ALLOY STEELS | | CAST IRON | | DUCTILE CAST IRON | |
|----------------|-------------------------------|-----------|-----------------------------|-----------|-----------------------------|-----------|
| STRENGTH | ~ 1060 N/mm ² | | 250 ~ 350 N/mm ² | | 400 ~ 500 N/mm ² | |
| DRILLING SPEED | 50 ~ 110 m/min | | 50 ~ 110 m/min | | 40 ~ 70 m/min | |
| DIAMETER | N | S | N | S | N | S |
| 3.0 | 6400 | 0.06~0.12 | 6400 | 0.06~0.12 | 6400 | 0.06~0.12 |
| 4.0 | 5500 | 0.08~0.16 | 5500 | 0.08~0.16 | 4700 | 0.08~0.16 |
| 5.0 | 4900 | 0.10~0.20 | 4900 | 0.10~0.20 | 3800 | 0.10~0.20 |
| 6.0 | 4200 | 0.12~0.24 | 4200 | 0.12~0.24 | 3200 | 0.12~0.24 |
| 8.0 | 3000 | 0.16~0.28 | 3000 | 0.16~0.28 | 2400 | 0.16~0.28 |
| 10.0 | 2500 | 0.20~0.35 | 2500 | 0.20~0.35 | 1900 | 0.20~0.35 |

N = R.P.M
S = Feed per Revolution (mm/rev.)



1. Guide Drilling should be done as Diameter+0.1mm between 3xD and 5xD depth.
2. For Main Drilling, proceed with low RPM at Guide Drilling segment.
(RPM 300, FEED 400mm/min)
3. Just before the end of Guide Drilling segment, reduce feed to zero and increase the RPM according to Recommended Cutting Condition chart (See above).
4. After then, proceed main drilling by increasing feed without step drilling.
5. When coming out from Guide Drilling start point after drilling, RPM should be reduced as 300 and feed should be 1000 mm/min.
6. When coming out from Guide Drilling segment to the outside, the feed should be decreased as 50%.