



# DREAM DRILLS -MQL TYPE

DHM10 SERIES

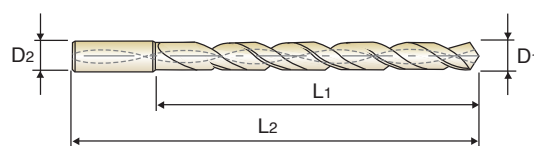
DHM15 SERIES

DHM20 SERIES

## CARBIDE, DREAM DRILL MQL TYPE END MILL SHANK with COOLANT HOLE EXTRA LONG VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL 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 10 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.  
Bohren bis zu 10 x D ohne abzusetzen, Geeignet für MQL (minimale Kühlschmierung) Selbstzentrierend  
- Keine vorherige Zentrierung notwendig  
Kein Verlaufen  
- Keine Bohrbuchse notwendig  
Spezielle Bohrergeometrie  
- Gute Spanabfuhr  
Hochleistungsbohren



P.106

10 × D  
(DHM10)15 × D  
(DHM15)20 × D  
(DHM15)

Unit : mm

| EDP No.  | Drill Diameter | Shank Diameter | Flute Length | Overall Length |
|----------|----------------|----------------|--------------|----------------|
| TiAIN    | D1             | D2             | L1           | L2             |
| DHM10030 | 3.0            | 6              | 40           | 80             |
| DHM10033 | 3.3            | 6              | 47           | 87             |
| DHM10035 | 3.5            | 6              | 47           | 87             |
| DHM10040 | 4.0            | 6              | 53           | 93             |
| DHM10042 | 4.2            | 6              | 60           | 100            |
| DHM10045 | 4.5            | 6              | 60           | 100            |
| DHM10050 | 5.0            | 6              | 66           | 106            |
| DHM10055 | 5.5            | 6              | 73           | 113            |
| DHM10060 | 6.0            | 6              | 79           | 119            |
| DHM10065 | 6.5            | 8              | 86           | 126            |
| DHM10068 | 6.8            | 8              | 92           | 132            |
| DHM10075 | 7.5            | 8              | 99           | 139            |
| DHM10080 | 8.0            | 8              | 105          | 145            |
| DHM10085 | 8.5            | 10             | 112          | 156            |
| DHM10090 | 9.0            | 10             | 118          | 162            |
| DHM10095 | 9.5            | 10             | 126          | 170            |
| DHM10100 | 10.0           | 10             | 132          | 176            |
| DHM10105 | 10.5           | 12             | 139          | 188            |
| DHM10110 | 11.0           | 12             | 145          | 194            |
| DHM10115 | 11.5           | 12             | 152          | 201            |
| DHM10120 | 12.0           | 12             | 158          | 207            |
| DHM10125 | 12.5           | 14             | 165          | 214            |
| DHM10130 | 13.0           | 14             | 171          | 220            |
| DHM10135 | 13.5           | 14             | 178          | 227            |
| DHM10140 | 14.0           | 14             | 184          | 233            |

| EDP No.  | Drill Diameter | Shank Diameter | Flute Length | Overall Length |
|----------|----------------|----------------|--------------|----------------|
| TiAIN    | D1             | D2             | L1           | L2             |
| DHM15030 | 3.0            | 6              | 55           | 95             |
| DHM15035 | 3.5            | 6              | 64           | 104            |
| DHM15040 | 4.0            | 6              | 73           | 113            |
| DHM15045 | 4.5            | 6              | 82           | 122            |
| DHM15050 | 5.0            | 6              | 91           | 131            |
| DHM15055 | 5.5            | 6              | 100          | 140            |
| DHM15060 | 6.0            | 6              | 109          | 149            |
| DHM15070 | 7.0            | 8              | 127          | 167            |
| DHM15080 | 8.0            | 8              | 145          | 185            |
| DHM15090 | 9.0            | 10             | 163          | 207            |
| DHM15100 | 10.0           | 10             | 182          | 226            |
| DHM15110 | 11.0           | 12             | 200          | 249            |
| DHM15120 | 12.0           | 12             | 218          | 267            |

| EDP No.  | Drill Diameter | Shank Diameter | Flute Length | Overall Length |
|----------|----------------|----------------|--------------|----------------|
| TiAIN    | D1             | D2             | L1           | L2             |
| DHM20030 | 3.0            | 6              | 70           | 110            |
| DHM20035 | 3.5            | 6              | 82           | 122            |
| DHM20040 | 4.0            | 6              | 93           | 133            |
| DHM20045 | 4.5            | 6              | 105          | 145            |
| DHM20050 | 5.0            | 6              | 116          | 156            |
| DHM20055 | 5.5            | 6              | 128          | 168            |
| DHM20060 | 6.0            | 6              | 139          | 179            |
| DHM20070 | 7.0            | 8              | 162          | 202            |
| DHM20080 | 8.0            | 8              | 185          | 225            |
| DHM20090 | 9.0            | 10             | 208          | 252            |
| DHM20100 | 10.0           | 10             | 232          | 276            |
| DHM20110 | 11.0           | 12             | 255          | 304            |
| DHM20120 | 12.0           | 12             | 278          | 327            |

© : Excellent ○ : Good

| 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~ |           |          |                  |          |             |        |        |      |
| ◎             | ◎            | ○                  |                 |        | ○         |          |                  |          | ○           |        |        |      |



# 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<br>ALLOY STEELS |           | CAST IRON                   |           | DUCTILE CAST IRON           |           |
|----------------|-------------------------------|-----------|-----------------------------|-----------|-----------------------------|-----------|
| STRENGTH       | ~ 1060 N/mm <sup>2</sup>      |           | 250 ~ 350 N/mm <sup>2</sup> |           | 400 ~ 500 N/mm <sup>2</sup> |           |
| 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

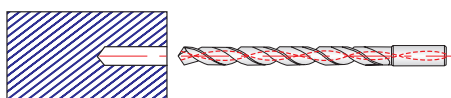
S = Feed per Revolution (mm/rev.)

### DHM25, DHM30 SERIES

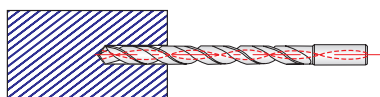
| WORK MATERIAL  | CARBON STEELS<br>ALLOY STEELS |           | CAST IRON                   |           | DUCTILE CAST IRON           |           |
|----------------|-------------------------------|-----------|-----------------------------|-----------|-----------------------------|-----------|
| STRENGTH       | ~ 1060 N/mm <sup>2</sup>      |           | 250 ~ 350 N/mm <sup>2</sup> |           | 400 ~ 500 N/mm <sup>2</sup> |           |
| 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

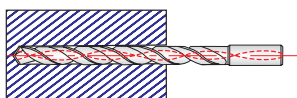
S = Feed per Revolution (mm/rev.)



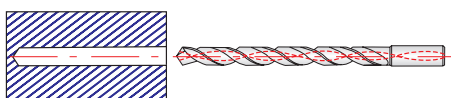
1. Guide Drilling should be done as Diameter+0.1mm between 3xD and 5xD depth.



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%.