DREAM DRILLS -MQL TYPE

DHM15 SERIES
DHM10 SERIES
DHM20 SERIES

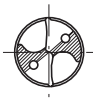
CARBIDE, DREAM DRILL MQL TYPE END MILL SHANK with COOLANT HOLE *EXTRA LONG*
VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL *ÜBERLANG*

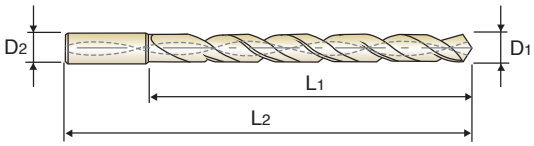
▶ **Application** : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

▶ **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.

▶ **Vorteile** : 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





MG | N ≈ 30° | h6 | h7 | 140° | P.106

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

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	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
TiAlN	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
TiAlN	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, TiAlN-BESCHICHTET

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

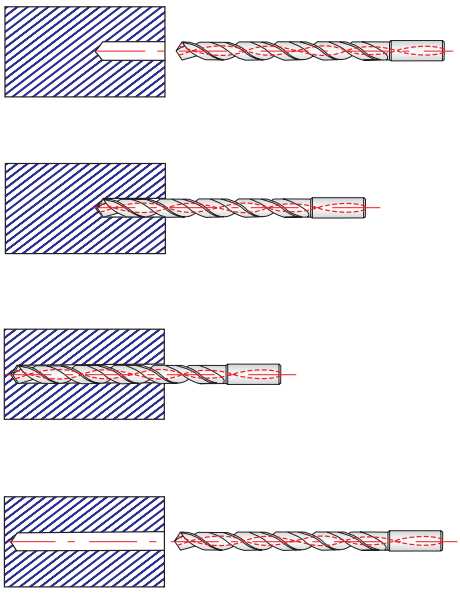
WORK MATERIAL	CARBON STEELS ALLOY STEELS		CAST IRON		DUCTILE CAST IRON	
STRENGTH	~ 1060 N/mm²		250 ~ 350 N/mm²		400 ~ 500 N/mm²	
DRILLING SPEED	63 ~ 125 m/min		63 ~ 125 m/min		60 ~ 80 m/min	
DIAMETER	N	S	N	S	N	S
3.0	7500	0.06~0.12	7500	0.06~0.12	7500	0.06~0.12
4.0	6400	0.08~0.16	6400	0.08~0.16	5600	0.08~0.16
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/mm²		250 ~ 350 N/mm²		400 ~ 500 N/mm²	
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%.