



Being the best through innovation

# CARBIDE



# DREAM DRILLS -MQL TYPE


## DREAM DRILLS - MQL TYPE

- WITH COOLANT HOLES  
Minimum Quantity Lubrication. Drilling Deep Holes, 10D, 15D & 20D
- Mit Kühlkanälen  
Minimale Mengenschmierung. Tiefloch 10xD, 15xD und 20xD

# SELECTION GUIDE

## SOLID CARBIDE DREAM DRILLS - MQL TYPE (with Coolant Holes)

Minimum Quantity Lubrication. Drilling Deep Holes, 10D, 15D & 20D

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
<b>10XD DH510</b>		CARBIDE, DREAM DRILLS MQL TYPE with COOLANT HOLES VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL <i>EXTRA LONG ÜBERLANG</i>	D3.0	D14.0	<b>76</b>
<b>15XD DH515</b>		CARBIDE, DREAM DRILLS MQL TYPE with COOLANT HOLES VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL <i>EXTRA LONG ÜBERLANG</i>	D3.0	D12.0	<b>77</b>
<b>20XD DH520</b>		CARBIDE, DREAM DRILLS MQL TYPE with COOLANT HOLES VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL <i>EXTRA LONG ÜBERLANG</i>	D3.0	D12.0	<b>77</b>
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN					<b>78</b>

# SOLID CARBIDE DREAM DRILLS-MQL TYPE

◎ : Excellent  
○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Cast Iron	Aluminum	Stainless Steels	Titanium	Mild Steels	Copper	Bronze
			HRc45~55	HRc55~							
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			○				○		
◎	◎	○			○				○		
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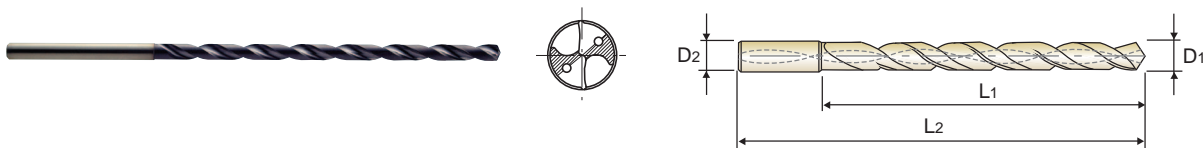
**YG DREAM DRILLS -MQL TYPE**

**DH510 SERIES**

**CARBIDE, DREAM DRILLS MQL TYPE with COOLANT HOLES 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



10 × D

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
DH510030	3.0	3	39	90	DH510080	8.0	8	104	161
DH510033	3.3	4	46	97	DH510085	8.5	9	111	169
DH510035	3.5	4	46	97	DH510090	9.0	9	117	175
DH510040	4.0	4	52	103	DH510095	9.5	10	124	182
DH510042	4.2	5	59	112	DH510100	10.0	10	130	188
DH510045	4.5	5	59	112	DH510105	10.5	11	137	201
DH510050	5.0	5	65	118	DH510110	11.0	11	143	207
DH510055	5.5	6	72	127	DH510115	11.5	12	150	215
DH510060	6.0	6	78	133	DH510120	12.0	12	156	221
DH510065	6.5	7	85	141	DH510125	12.5	13	163	229
DH510068	6.8	7	91	147	DH510130	13.0	13	169	235
DH510070	7.0	7	91	147	DH510135	13.5	14	176	243
DH510075	7.5	8	98	155	DH510140	14.0	14	182	249

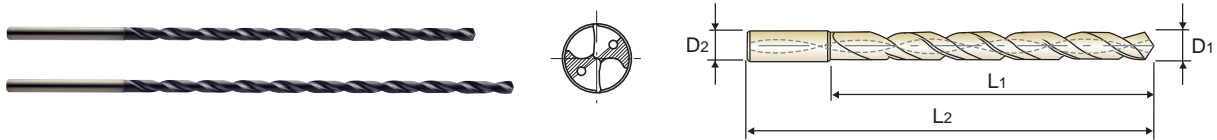
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Cast Iron	Aluminum	Stainless Steels	Titanium	Mild Steels	Copper	Bronze
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			○				○		

◎ : Excellent ○ : Good

**CARBIDE, DREAM DRILLS MQL TYPE with COOLANT HOLES 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 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



					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
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			○				○		



# DREAM DRILLS -MQL TYPE

## RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN

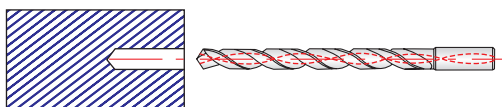
### CARBIDE, DREAM DRILL MQL TYPE with COOLANT HOLES, TiAIN COATED VOLLHARTMETALL DREAM BOHRER MQL-TYPE, TiAIN-BESCHICHTET

#### DH510, DH515, DH520 SERIES

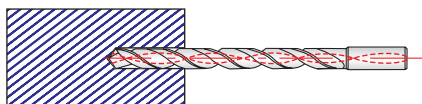
Unit : mm

WORK MATERIAL	CARBON STEELS 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	7500	0.06~0.12	7500	0.06~0.12	7500	0.06~0.12
4	6400	0.08~0.16	6400	0.08~0.16	5600	0.08~0.16
5	5800	0.10~0.20	5800	0.10~0.20	4500	0.10~0.20
6	4800	0.12~0.24	4800	0.12~0.24	3800	0.12~0.24
8	3600	0.16~0.28	3600	0.16~0.28	2800	0.16~0.28
10	2900	0.20~0.35	2900	0.20~0.35	2300	0.20~0.35
12	2400	0.24~0.42	2400	0.24~0.42	1900	0.24~0.42
14	2050	0.28~0.46	2050	0.28~0.46	1600	0.28~0.46

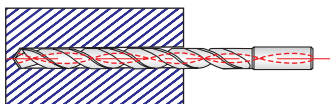
N = R.P.M  
S = Feed per Revolution (mm/rev.)



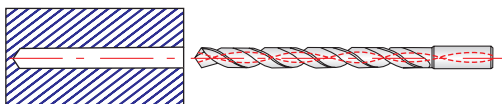
1. Guide Drilling should be done as Diameter+0.1mm between 3xD and 5xD depth.



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%.