



Leading Through Innovation

SOLID CARBIDE

DREAM DRILLS -MQL TYPE

DREAM DRILLS - MQL TYPE

- Minimum Quantity Lubrication Drilling Deep Holes (10×D ~ 40×D)
- Minimalmengenschmierung Tieflochbohren (10×D ~ 40×D)

SELECTION GUIDE



SERIES	DH510	DH515	DH520
DRILLING DEPTH	10XD	15XD	20XD
LENGTH	EXTRA LONG	EXTRA LONG	EXTRA LONG
SIZE MIN	D3.0	D3.0	D3.0
SIZE MAX	D14.0	D12.0	D12.0
PAGE	A144	A145	

SURFACE TREATMENT

TIAIN

SOLID CARBIDE DREAM DRILLS MQL TYPE

Minimum Quantity Lubrication Drilling Deep Holes (10xD ~ 30xD)



Please visit globalyg1.com/mat for material search

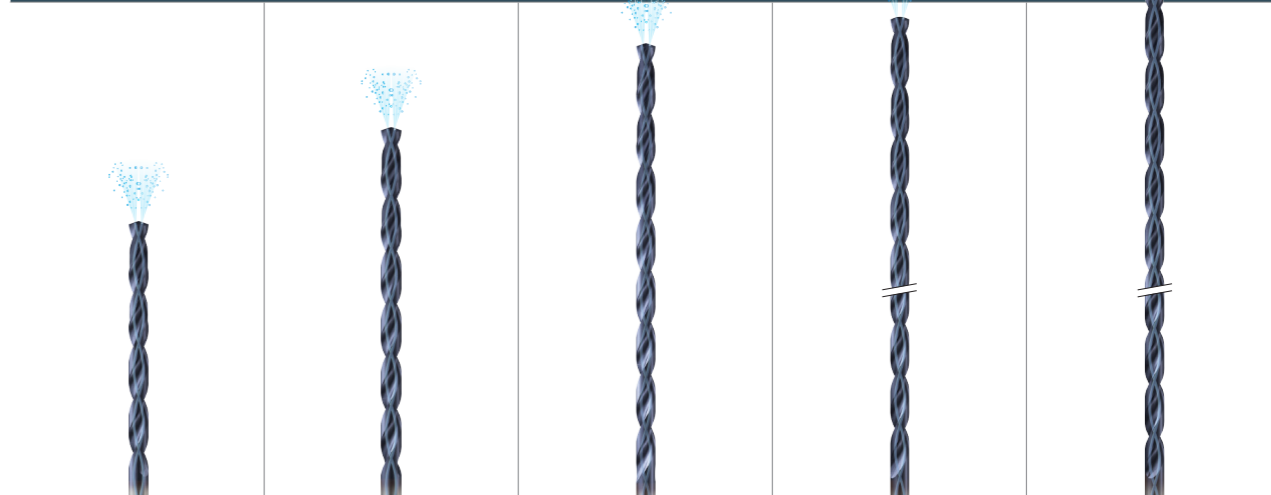
◎ : Excellent ○ : Good

Recommended cutting conditions : p. A148

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	DH510	DH515	DH520
P	1	Non-alloy steel	About 0.15% C Annealed	125	13	◎	◎	◎
	2		About 0.45% C Annealed	190	13	◎	◎	◎
	3		About 0.45% C Quenched & Tempered	250	25	○	○	○
	4		About 0.75% C Annealed	270	28			
	5		About 0.75% C Quenched & Tempered	300	32			
	6	Low alloy steel	Annealed	180	10	◎	◎	◎
	7		Quenched & Tempered	275	29	○	○	○
	8		Quenched & Tempered	300	32	○	○	○
	9		Quenched & Tempered	350	38			
	10		High alloyed steel, and tool steel	Annealed	200	15	○	○
	11		Quenched & Tempered	325	35	○	○	○
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15			
	13		Martensitic Quenched & Tempered	240	23			
	14		Austenitic	180	10			
K	15	Grey cast iron	Pearlitic / ferritic	180	10	◎	◎	◎
	16		Pearlitic (Martensitic)	260	26	○	○	○
	17	Nodular cast iron	Ferritic	160	3	◎	◎	◎
	18		Pearlitic	250	25	○	○	○
	19		Ferritic	130		◎	◎	◎
20	Malleable cast iron	Pearlitic	230	21	○	○	○	
N	21	Aluminum-wrought alloy	Not Curable	60				
	22		Curable Hardened	100				
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75				
	24		≤ 12% Si, Curable Hardened	90				
	25		> 12% Si, Not Curable	130				
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110				
	27		CuZn, CuSnZn (Brass)	90				
	28		CuSn, lead-free copper and electrolytic copper	100				
29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic						
30		Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15			
	32		Cured	280	30			
	33		Annealed	250	25			
	34		Cured	350	38			
	35		Cast	320	34			
	36	Titanium Alloys	Pure Titanium	400 Rm				
	37		Alpha + Beta Alloys Hardened	1050 Rm				
H	38	Hardened steel	Hardened	550	55			
	39		Hardened	630	60			
	40		Cast	400	42			
	41	Hardened Cast Iron	Hardened	550	55			

DHM10	DHM15	DHM20	DHM25	DHM30
10XD	15XD	20XD	25XD	30XD
EXTRA LONG	EXTRA LONG	EXTRA LONG	EXTRA LONG	EXTRA LONG
D3.0	D3.0	D3.0	D3.0	D3.0
D14.0	D12.0	D12.0	D10.0	D8.0
A146			A147	

TIAIN



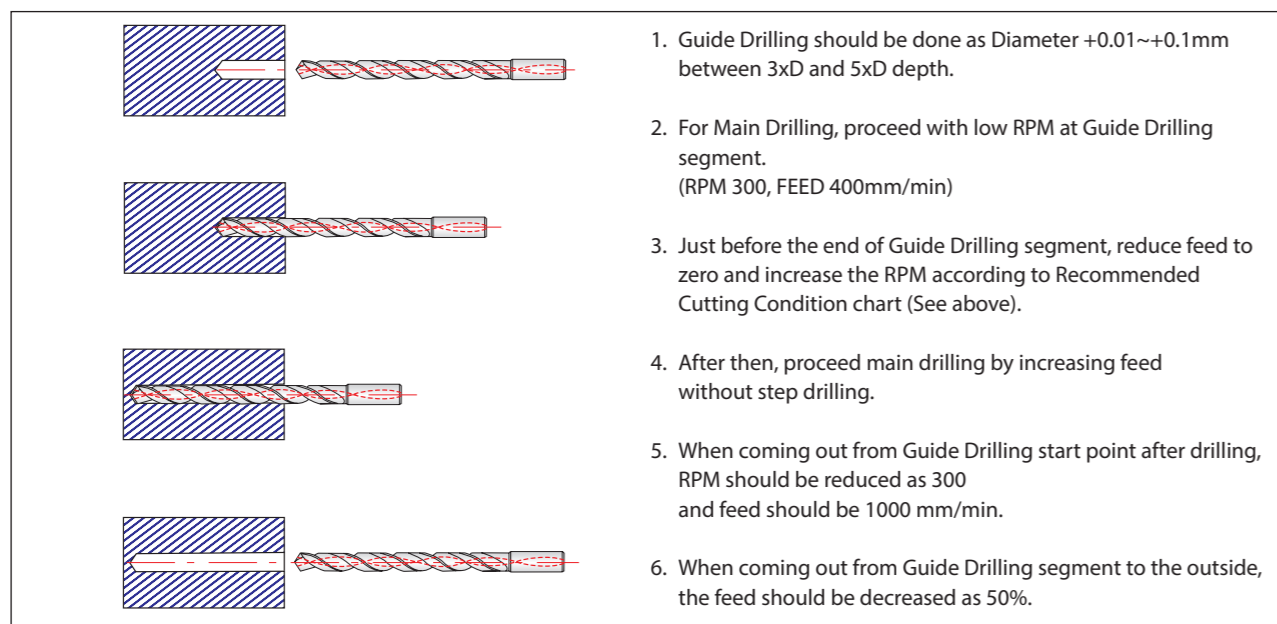
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DH510, DH515, DH520, DHM10, DHM15, DHM20, DHM25, DHM30 SERIES

with COOLANT HOLES

Vc = m/min.
RPM = rev./min.
FEED = mm/rev.

ISO	VDI 3323	Material Description	Vc		Parameter	Drill Diameter (mm)							
			10xD 20xD	25xD 30xD		3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0
P	1	Non-alloy steel	120	100	RPM(10xD-20xD)	12730	9550	7640	6370	4770	3820	3180	2730
					RPM(25xD-30xD)	10610	7960	6370	5310	3980	3180	2650	2270
					FEED	0.08-0.12	0.10-0.14	0.12-0.18	0.14-0.20	0.18-0.24	0.20-0.26	0.22-0.26	0.25-0.31
	2		RPM(10xD-20xD)	10610	7960	6370	5310	3980	3180	2650	2270		
			RPM(25xD-30xD)	8490	6370	5090	4240	3180	2550	2120	1820		
			FEED	0.08-0.12	0.10-0.14	0.12-0.18	0.14-0.20	0.18-0.24	0.20-0.26	0.22-0.26	0.25-0.31		
	3		RPM(10xD-20xD)	8490	6370	5090	4240	3180	2550	2120	1820		
			RPM(25xD-30xD)	6900	5170	4140	3450	2590	2070	1720	1480		
			FEED	0.06-0.10	0.08-0.12	0.10-0.16	0.12-0.18	0.14-0.20	0.16-0.22	0.18-0.24	0.20-0.26		
	6		RPM(10xD-20xD)	10610	7960	6370	5310	3980	3180	2650	2270		
			RPM(25xD-30xD)	10610	7960	6370	5310	3980	3180	2650	2270		
FEED		0.08-0.12	0.10-0.14	0.12-0.18	0.14-0.20	0.18-0.24	0.20-0.26	0.22-0.26	0.25-0.31				
7	RPM(10xD-20xD)	7430	5570	4460	3710	2790	2230	1860	1590				
	RPM(25xD-30xD)	6370	4770	3820	3180	2390	1910	1590	1360				
	FEED	0.06-0.10	0.08-0.12	0.10-0.16	0.12-0.18	0.14-0.20	0.16-0.22	0.18-0.24	0.20-0.26				
8	RPM(10xD-20xD)	5840	4380	3500	2920	2190	1750	1460	1250				
	RPM(25xD-30xD)	5310	3980	3180	2650	1990	1590	1330	1140				
	FEED	0.06-0.10	0.08-0.12	0.10-0.16	0.12-0.18	0.14-0.20	0.16-0.22	0.18-0.24	0.20-0.26				
10	RPM(10xD-20xD)	6370	4770	3820	3180	2390	1910	1590	1360				
	RPM(25xD-30xD)	5310	3980	3180	2650	1990	1590	1330	1140				
	FEED	0.05-0.09	0.07-0.11	0.08-0.14	0.10-0.16	0.12-0.18	0.14-0.20	0.16-0.22	0.18-0.24				
11	RPM(10xD-20xD)	5310	3980	3180	2650	1990	1590	1330	1140				
	RPM(25xD-30xD)	4770	3580	2860	2390	1790	1430	1190	1020				
	FEED	0.04-0.08	0.06-0.10	0.07-0.13	0.08-0.14	0.10-0.16	0.12-0.18	0.13-0.19	0.15-0.21				
15	Grey cast iron	RPM(10xD-20xD)	9550	7160	5730	4770	3580	2860	2390	2050			
		RPM(25xD-30xD)	7960	5970	4770	3980	2980	2390	1990	1710			
		FEED	0.10-0.14	0.12-0.16	0.17-0.23	0.19-0.25	0.22-0.28	0.24-0.30	0.28-0.34	0.30-0.36			
16	RPM(10xD-20xD)	7430	5570	4460	3710	2790	2230	1860	1590				
	RPM(25xD-30xD)	6370	4770	3820	3180	2390	1910	1590	1360				
	FEED	0.10-0.14	0.12-0.16	0.17-0.23	0.19-0.25	0.22-0.28	0.24-0.30	0.28-0.34	0.30-0.36				
17	Nodular cast iron	RPM(10xD-20xD)	10610	7960	6370	5310	3980	3180	2650	2270			
		RPM(25xD-30xD)	8490	6370	5090	4240	3180	2550	2120	1820			
		FEED	0.10-0.14	0.12-0.16	0.17-0.23	0.19-0.25	0.22-0.28	0.24-0.30	0.28-0.34	0.30-0.36			
18	RPM(10xD-20xD)	7430	5570	4460	3710	2790	2230	1860	1590				
	RPM(25xD-30xD)	6370	4770	3820	3180	2390	1910	1590	1360				
	FEED	0.08-0.12	0.10-0.14	0.12-0.18	0.14-0.20	0.18-0.24	0.20-0.26	0.22-0.26	0.25-0.31				
19	Malleable cast iron	RPM(10xD-20xD)	8490	6370	5090	4240	3180	2550	2120	1820			
		RPM(25xD-30xD)	6900	5170	4140	3450	2590	2070	1720	1480			
		FEED	0.10-0.14	0.12-0.16	0.17-0.23	0.19-0.25	0.22-0.28	0.24-0.30	0.28-0.34	0.30-0.36			
20	RPM(10xD-20xD)	7430	5570	4460	3710	2790	2230	1860	1590				
	RPM(25xD-30xD)	5840	4380	3500	2920	2190	1750	1460	1250				
	FEED	0.08-0.12	0.10-0.14	0.12-0.18	0.14-0.20	0.18-0.24	0.20-0.26	0.22-0.26	0.25-0.31				



SOLID CARBIDE

**DREAM DRILLS
for HIGH HARDENED STEELS
DREAM DRILLS - FÜR HOCHGEHÄRTETE STÄHLE**

- For High Hardened Steels (HRc50 to HRc70)
- Für hochgehärtete Stähle (HRc50 bis HRc70)