



**DREAM DRILLS
- MQL TYPE**

DH510 SERIES

CARBIDE, DREAM DRILLS MQL TYPE with COOLANT HOLES

EXTRA LONG

● VOLLHARTMETALL DREAM SPIRALBOHRER MQL - TYPE mit KÜHLKANAL in GERADZÄHLIGER SCHAFTAUSFÜHRUNG

ÜBERLANG

● Forets DREAM DRILLS carbure Type MQL avec arrosage central, série extra-longue

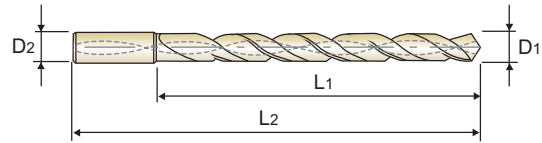
EXTRA-LONGUE

● PUNTE ELICOIDALI IN MD, DREAM DRILLS MQL (con fori di refrigerazione)

EXTRA LUNGA

- ▶ 4-Facet Point for good centering capability
- ▶ Optimized special flutes are ideal for removing chips and for productive drilling
- ▶ Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶ MQL system compatible (Minimum Quantity Lubrication)

- ▶ 4-Facetten-Spitze für gute Zentrierfähigkeit
- ▶ Optimierte Spezialnuten für die ideale Spanabfuhr und zum produktiven Bohren
- ▶ Verbesserte Spanabfuhr durch hochglanzpolierte TiAlN-Nano-Vollbeschichtung
- ▶ MMS geeignet



P.154-155

10 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DH510030	3.0	3	39	90
DH510033	3.3	4	46	97
DH510035	3.5	4	46	97
DH510040	4.0	4	52	103
DH510042	4.2	5	59	112
DH510045	4.5	5	59	112
DH510050	5.0	5	65	118
DH510055	5.5	6	72	127
DH510060	6.0	6	78	133
DH510065	6.5	7	85	141
DH510068	6.8	7	91	147
DH510070	7.0	7	91	147
DH510075	7.5	8	98	155

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DH510080	8.0	8	104	161
DH510085	8.5	9	111	169
DH510090	9.0	9	117	175
DH510095	9.5	10	124	182
DH510100	10.0	10	130	188
DH510105	10.5	11	137	201
DH510110	11.0	11	143	207
DH510115	11.5	12	150	215
DH510120	12.0	12	156	221
DH510125	12.5	13	163	229
DH510130	13.0	13	169	235
DH510135	13.5	14	176	243
DH510140	14.0	14	18	249

◎ : Excellent ○ : Good

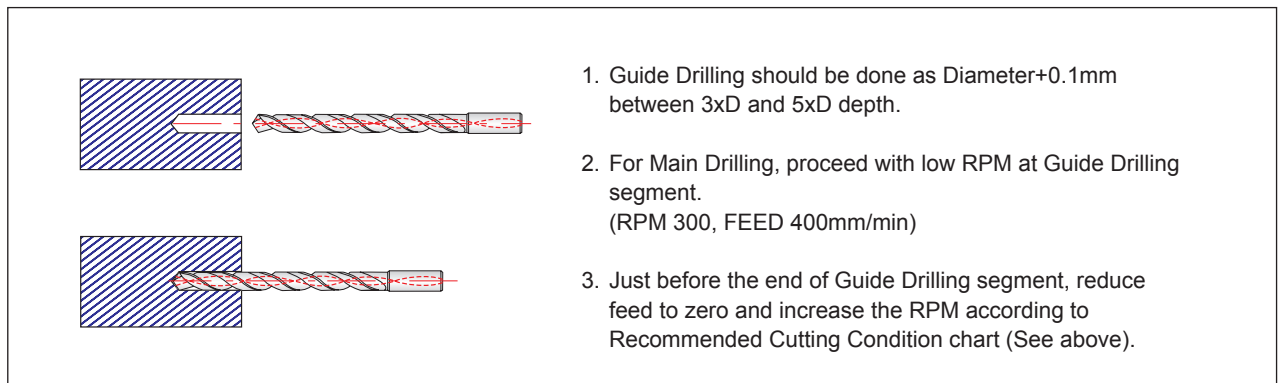
ISO	P										M				K					
Material Description	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc	13	25	28	32	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	○			◎	○	○		○					◎	○	◎	○	◎	○

ISO	N								S							H					
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials	Heat Resistant Super Alloys				Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron			
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
Recommended																					

DH510, DH515, DH520, DHM10, DHM15, DHM20, DHM25, DHM30 SERIES with COOLANT HOLES

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

ISO	VDI 3323	Material Description	Vc(m/min)		Parameter	Drill Diameter (mm)			
			10xD ~ 20xD	25xD ~ 30xD		3.0	4.0	5.0	6.0
P	1	Non-alloy steel	120	100	RPM(10xD-20xD)	12730	9550	7640	6370
					RPM(25xD-30xD)	10610	7960	6370	5310
					FEED	0.08-0.12	0.10-0.14	0.12-0.18	0.14-0.20
					RPM(10xD-20xD)	10610	7960	6370	5310
					RPM(25xD-30xD)	8490	6370	5090	4240
	2	Non-alloy steel	80	65	RPM(10xD-20xD)	8490	6370	5090	4240
					RPM(25xD-30xD)	6900	5170	4140	3450
					FEED	0.06-0.10	0.08-0.12	0.10-0.16	0.12-0.18
	3	Non-alloy steel	80	65	RPM(10xD-20xD)	8490	6370	5090	4240
					RPM(25xD-30xD)	6900	5170	4140	3450
					FEED	0.06-0.10	0.08-0.12	0.10-0.16	0.12-0.18
4	Non-alloy steel	80	65	RPM(10xD-20xD)	8490	6370	5090	4240	
				RPM(25xD-30xD)	6900	5170	4140	3450	
				FEED	0.06-0.10	0.08-0.12	0.10-0.16	0.12-0.18	
5	Non-alloy steel	80	65	RPM(10xD-20xD)	8490	6370	5090	4240	
				RPM(25xD-30xD)	6900	5170	4140	3450	
				FEED	0.06-0.10	0.08-0.12	0.10-0.16	0.12-0.18	
6	Low alloy steel	100	100	RPM(10xD-20xD)	10610	7960	6370	5310	
				RPM(25xD-30xD)	10610	7960	6370	5310	
				FEED	0.08-0.12	0.10-0.14	0.12-0.18	0.14-0.20	
				RPM(10xD-20xD)	7430	5570	4460	3710	
				RPM(25xD-30xD)	6370	4770	3820	3180	
7	Low alloy steel	70	60	RPM(10xD-20xD)	7430	5570	4460	3710	
				RPM(25xD-30xD)	6370	4770	3820	3180	
				FEED	0.06-0.10	0.08-0.12	0.10-0.16	0.12-0.18	
8	Low alloy steel	55	50	RPM(10xD-20xD)	5840	4380	3500	2920	
				RPM(25xD-30xD)	5310	3980	3180	2650	
				FEED	0.06-0.10	0.08-0.12	0.10-0.16	0.12-0.18	
9	Low alloy steel	55	50	RPM(10xD-20xD)	5840	4380	3500	2920	
				RPM(25xD-30xD)	5310	3980	3180	2650	
				FEED	0.06-0.10	0.08-0.12	0.10-0.16	0.12-0.18	
10	High alloyed steel, and tool steel	60	50	RPM(10xD-20xD)	6370	4770	3820	3180	
				RPM(25xD-30xD)	5310	3980	3180	2650	
				FEED	0.05-0.09	0.07-0.11	0.08-0.14	0.10-0.16	
11	High alloyed steel, and tool steel	50	45	RPM(10xD-20xD)	5310	3980	3180	2650	
				RPM(25xD-30xD)	4770	3580	2860	2390	
				FEED	0.04-0.08	0.06-0.10	0.07-0.13	0.08-0.14	
12	Stainless steel	60	50	RPM(10xD-20xD)	6370	4770	3820	3180	
				RPM(25xD-30xD)	5310	3980	3180	2650	
				FEED	0.05-0.09	0.07-0.11	0.08-0.14	0.10-0.16	
13	Stainless steel	60	50	RPM(10xD-20xD)	5310	3980	3180	2650	
				RPM(25xD-30xD)	4770	3580	2860	2390	
				FEED	0.04-0.08	0.06-0.10	0.07-0.13	0.08-0.14	
14	Stainless steel	60	50	RPM(10xD-20xD)	5310	3980	3180	2650	
				RPM(25xD-30xD)	4770	3580	2860	2390	
				FEED	0.04-0.08	0.06-0.10	0.07-0.13	0.08-0.14	
15	Grey cast iron	90	75	RPM(10xD-20xD)	9550	7160	5730	4770	
				RPM(25xD-30xD)	7960	5970	4770	3980	
				FEED	0.10-0.14	0.12-0.16	0.17-0.23	0.19-0.25	
				RPM(10xD-20xD)	7430	5570	4460	3710	
				RPM(25xD-30xD)	6370	4770	3820	3180	
16	Grey cast iron	70	60	RPM(10xD-20xD)	7430	5570	4460	3710	
				RPM(25xD-30xD)	6370	4770	3820	3180	
				FEED	0.10-0.14	0.12-0.16	0.17-0.23	0.19-0.25	
17	Nodular cast iron	100	80	RPM(10xD-20xD)	10610	7960	6370	5310	
				RPM(25xD-30xD)	8490	6370	5090	4240	
				FEED	0.10-0.14	0.12-0.16	0.17-0.23	0.19-0.25	
18	Nodular cast iron	70	60	RPM(10xD-20xD)	7430	5570	4460	3710	
				RPM(25xD-30xD)	6370	4770	3820	3180	
				FEED	0.08-0.12	0.10-0.14	0.12-0.18	0.14-0.20	
19	Malleable cast iron	80	65	RPM(10xD-20xD)	8490	6370	5090	4240	
				RPM(25xD-30xD)	6900	5170	4140	3450	
				FEED	0.10-0.14	0.12-0.16	0.17-0.23	0.19-0.25	
20	Malleable cast iron	70	55	RPM(10xD-20xD)	7430	5570	4460	3710	
				RPM(25xD-30xD)	5840	4380	3500	2920	
				FEED	0.08-0.12	0.10-0.14	0.12-0.18	0.14-0.20	



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	150	151	151

SURFACE TREATMENT

TiAIN

SOLID CARBIDE DREAM DRILLS MQL TYPE

Minimum Quantity Lubrication
Drilling Deep Holes (10×D ~ 30×D)



Please visit
globalyg1.com/mat
for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : P.154

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc			
P	1	Non-alloy steel	About 0.15% C Annealed	125		◎	◎	◎
	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	Cutting Alloys, PB>1%	110			
	27	(Bronze / Brass)	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		Ni or Co Based 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	Chilled Cast Iron	Cast	400	42			
	41	Hardened Cast Iron	Hardened	550	55			