

CARBIDE

HSS

i-ONE
DRILLS

i-DREAM
DRILLS

DREAM
DRILLS
-PRO

DREAM
DRILLS
X

DREAM
DRILLS
-GENERAL

DREAM
DRILLS
-HIGH FEED

DREAM
DRILLS
-FLAT BOTTOM

DREAM
DRILLS
-INOX

DREAM
DRILLS
-ALU

DREAM
DRILLS
-MQL

DREAM DRILLS
for HIGH
HARDENED STEELS

GENERAL
CARBIDE
DRILLS

MULTI-1
DRILLS

HPD
DRILLS

GOLD-P
DRILLS

SUPER-GP
DRILLS

STRAIGHT
SHANK
DRILLS

TAPER SHANK
DRILLS

NC-
SPOTTING
DRILLS

CENTER
DRILLS

SPADE
DRILLS

REAMERS

COUNTER
SINKS

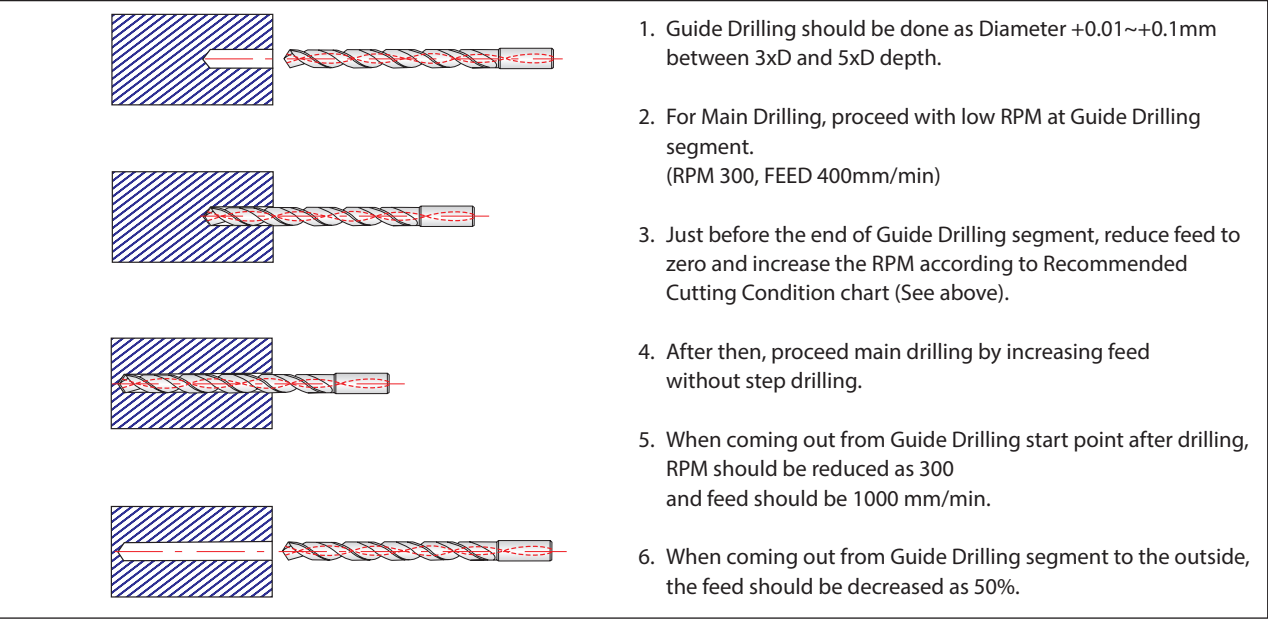
COUNTER
BORES

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		100	80	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		80	65	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	Low alloy steel	100	100	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	70		60	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	55		50	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	High alloyed steel, and tool steel	60	50	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		50	45	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		
K	15	Grey cast iron	90	75	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		70	60	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	100	80	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	70		60	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	80	65	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		70	55	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 hochgehartete Stähle (HRc50 bis HRc70)

SELECTION GUIDE



SERIES
DRILLING DEPTH
LENGTH
SIZE MIN
SIZE MAX
PAGE

DH500
3XD
SHORT
D2.6
D14.0
A167

SURFACE TREATMENT

TiAIN

SOLID CARBIDE
DREAM DRILLS
for HIGH HARDENED STEELS

For High Hardened Steels (HRC50 to HRC70)

Please visit
globalyg1.com/mat
for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : p.A167



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	Malleable cast iron	Ferritic		130	
	20		Pearlitic		230	21
N	21	Aluminum-wrought alloy	Not Curable		60	
	22		Curable		100	
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75	
	24		≤ 12% Si, Curable		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		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
	39.1			Hardened	630	60
	39.3			Hardened		70
	40	Chilled Cast Iron		Cast	400	42
	41	Hardened Cast Iron		Hardened	550	55

DREAM DRILLS
for HIGH HARDENED STEELS

DH500 SERIES

CARBIDE, DREAM DRILLS for HIGH HARDENED STEELS (HRC50 ~ HRC70)

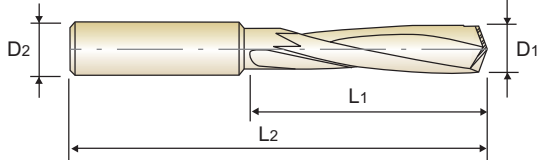
VOLLHARTMETALL DREAM SPIRALBOHRER FÜR HOCHGEHARTETE STAHL
Forets DREAM DRILLS carbure pour Aciers Trempés (50 HRc ~ 70 HRc)
PUNTE ELICOIDALI IN MD, DREAM DRILL - ACCIAI HRC50 - 70

SHORT

KURZ
COURTE
CORTA

- ▶ Drilling for High Hardened Steels; Quenched Steels, Tempered Steels (under HRc70)
- ▶ Special geometry design for Hardened Steels
- ▶ Minimum of cutting load through special thinning
- ▶ Performing good chip removal and powerful drilling

- ▶ Bohren von hoch gehärteten Stählen, Vergütungsstähle, angelassenen Stählen bis HRc70
- ▶ Spezielle Bohrergeometrie für gehärtete Stähle
- ▶ Minimaler Schnedendruck durch spezielle Ausspitzung
- ▶ Gute Spanabfuhr und Hochleistungsbohren



CARBIDE 15° h6 h7 140° TiAIN p.A151

3 × D

						Unit : mm				
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length		EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2		TiAIN	D1	D2	L1	L2
DH500026	2.6	3	14	44		DH500070	7.0	8	45	85
DH500030	3.0	3	16	46		DH500075	7.5	8	45	85
DH500033	3.3	4	18	48		DH500080	8.0	8	50	98
DH500034	3.4	4	20	50		DH500085	8.5	10	50	98
DH500035	3.5	4	20	50		DH500086	8.6	10	57	105
DH500040	4.0	4	22	52		DH500088	8.8	10	57	105
DH500042	4.2	6	25	65		DH500090	9.0	10	57	105
DH500043	4.3	6	28	68		DH500095	9.5	10	57	105
DH500044	4.4	6	28	68		DH500100	10.0	10	63	111
DH500045	4.5	6	28	68		DH500102	10.2	12	63	111
DH500050	5.0	6	32	72		DH500103	10.3	12	63	111
DH500051	5.1	6	32	72		DH500105	10.5	12	63	111
DH500052	5.2	6	32	72		DH500110	11.0	12	71	119
DH500055	5.5	6	35	75		DH500115	11.5	12	71	119
DH500060	6.0	6	35	75		DH500120	12.0	12	71	119
DH500065	6.5	8	40	80		DH500140	14.0	14	77	125
DH500068	6.8	8	45	85						
DH500069	6.9	8	45	85						

Recommended cutting conditions

EMPFOHLENE SCHNEIDPARAMETER

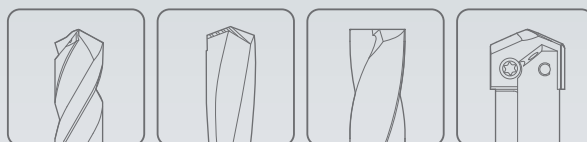
ISO	VDI 3323	Material Description	Vc	Parameter	Drill Diameter (mm)											
					2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0			
H	38	Hardened steel	20	RPM	2550	2120	1590	1270	1060	800	640	530	450			
				FEED	0.01-0.03	0.01-0.03	0.01-0.04	0.01-0.04	0.01-0.05	0.01-0.05	0.01-0.05	0.01-0.06	0.01-0.06			
	39.1		15	RPM	1910	1590	1190	950	800	600	480	400	340			
				FEED	0.01-0.03	0.01-0.03	0.01-0.04	0.01-0.04	0.01-0.05	0.01-0.05	0.01-0.05	0.01-0.06	0.01-0.06			
	39.3		12	RPM	1530	1270	950	760	640	480	380	320	270			
				FEED	0.01-0.03	0.01-0.03	0.01-0.04	0.01-0.04	0.01-0.05	0.01-0.05	0.01-0.05	0.01-0.06	0.01-0.06			

◎ : 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	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	39.1	39.3
HRC											15	30	25	38	34			55	60	70
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400
Recommended																		◎	◎	◎



Global Cutting Tool Leader **YG-1**



HOLEMAKING