



**CARBIDE, DREAM DRILLS with COOLANT HOLES**

**EXTRA LONG**

**VOLLHARTMETALL DREAM SPIRALBOHRER mit KÜHLKANAL**

**ÜBERLANG**

**Forets DREAM DRILLS carbure, avec arrosage central, série extra-longue**

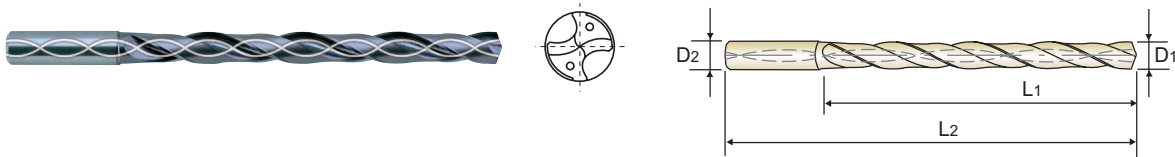
**EXTRA-LONGUE**

**PUNTE ELICOIDALI IN MD - DREAM DRILLS (con fori di refrigerazione)**

**EXTRA LUNGA**

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation

- ▶ Bohren von Stahl, Stahlguss, Gusseisen, Temperguss, Nichteisenmetallen-Leichtmetallen, abrasiven Kunststoffen
- ▶ Selbst zentrierend und guter Spanbruch durch die R-Ausspitzung
- ▶ Wellenform und Neaktivfase auf der Schneide bewirken geringen Schub, stabiles Drehmoment und lange Standzeit
- ▶ Optimierte Nutenform für Hochleistungsbohren und leichte Spanabfuhr



P.96-97

**8 x D**

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DH421030	3.0	6	34	72
DH421031	3.1	6	34	72
DH421032	3.2	6	34	72
DH421033	3.3	6	34	72
DH421034	3.4	6	34	72
DH421035	3.5	6	34	72
DH421036	3.6	6	34	72
DH421037	3.7	6	34	72
DH421038	3.8	6	43	81
DH421039	3.9	6	43	81
DH421040	4.0	6	43	81
DH421041	4.1	6	43	81
DH421042	4.2	6	43	81
DH421043	4.3	6	43	81
DH421044	4.4	6	43	81
DH421045	4.5	6	43	81
DH421046	4.6	6	43	81
DH421047	4.7	6	43	81
DH421048	4.8	6	57	95
DH421049	4.9	6	57	95
DH421050	5.0	6	57	95
DH421051	5.1	6	57	95
DH421052	5.2	6	57	95
DH421053	5.3	6	57	95

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DH421054	5.4	6	57	95
DH421055	5.5	6	57	95
DH421056	5.6	6	57	95
DH421057	5.7	6	57	95
DH421058	5.8	6	57	95
DH421059	5.9	6	57	95
DH421060	6.0	6	57	95
DH421061	6.1	8	76	114
DH421062	6.2	8	76	114
DH421063	6.3	8	76	114
DH421064	6.4	8	76	114
DH421065	6.5	8	76	114
DH421066	6.6	8	76	114
DH421067	6.7	8	76	114
DH421068	6.8	8	76	114
DH421069	6.9	8	76	114
DH421070	7.0	8	76	114
DH421071	7.1	8	76	114
DH421072	7.2	8	76	114
DH421073	7.3	8	76	114
DH421074	7.4	8	76	114
DH421075	7.5	8	76	114
DH421076	7.6	8	76	114
DH421077	7.7	8	76	114

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

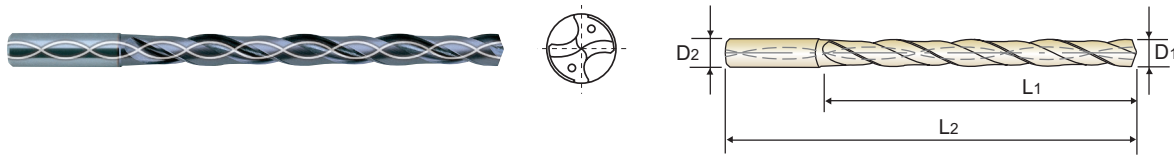
ISO	P										M				K						
Material Description	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRC	13	25	28	32	32	10	29	32	38	15	35	15	23	10	10	26	3	25	21	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	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
HB											15	30	25	38	34			55	60	42	55
Recommended																					

**CARBIDE, DREAM DRILLS with COOLANT HOLES** **EXTRA LONG**

● VOLLHARTMETALL DREAM SPIRALBOHRER mit KÜHLKANAL **ÜBERLANG**  
● Forets DREAM DRILLS carbure, avec arrosage central, série extra-longue **EXTRA-LONGUE**  
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DIN 6537
CARBIDE
30°
h6
m7
140°
20 bar

P.96-97

**8 × D**

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1	D2	L1	L2
TiAlN				
DH421078	7.8	8	76	114
DH421079	7.9	8	76	114
DH421080	8.0	8	76	114
DH421081	8.1	10	95	142
DH421082	8.2	10	95	142
DH421083	8.3	10	95	142
DH421084	8.4	10	95	142
DH421085	8.5	10	95	142
DH421086	8.6	10	95	142
DH421087	8.7	10	95	142
DH421088	8.8	10	95	142
DH421089	8.9	10	95	142
DH421090	9.0	10	95	142
DH421091	9.1	10	95	142
DH421092	9.2	10	95	142
DH421093	9.3	10	95	142
DH421094	9.4	10	95	142
DH421095	9.5	10	95	142
DH421096	9.6	10	95	142
DH421097	9.7	10	95	142
DH421098	9.8	10	95	142
DH421099	9.9	10	95	142
DH421100	10.0	10	95	142
DH421101	10.1	12	114	162

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1	D2	L1	L2
TiAlN				
DH421102	10.2	12	114	162
DH421103	10.3	12	114	162
DH421104	10.4	12	114	162
DH421105	10.5	12	114	162
DH421106	10.6	12	114	162
DH421107	10.7	12	114	162
DH421108	10.8	12	114	162
DH421109	10.9	12	114	162
DH421110	11.0	12	114	162
DH421111	11.1	12	114	162
DH421112	11.2	12	114	162
DH421113	11.3	12	114	162
DH421114	11.4	12	114	162
DH421115	11.5	12	114	162
DH421116	11.6	12	114	162
DH421117	11.7	12	114	162
DH421118	11.8	12	114	162
DH421119	11.9	12	114	162
DH421120	12.0	12	114	162
DH421125	12.5	14	133	178
DH421130	13.0	14	133	178
DH421135	13.5	14	133	178
DH421140	14.0	14	133	178

Unit : mm

▶ Other shank types are available on your request.

ISO	P										M				K					
	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					
	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	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550
HB											15	30	25	38	34			55	60	42	55
Recommended																					

◎ : Excellent ○ : Good



**DH406, DH408, DH421 SERIES with COOLANT HOLES**

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

ISO	VDI 3323	Material Description	Vc (m/min)	Parameter	Drill Diameter (mm)		Vc (m/min)	Parameter	Drill Diameter (mm)		
					1.0	2.0			3.0	4.0	5.0
P	1	Non-alloy steel	80	RPM	25460	12730	110	RPM	11670	8750	7000
	2			FEED	0.03-0.05	0.05-0.07		FEED	0.06-0.12	0.08-0.14	0.14-0.20
	3		RPM	25460	12730	110	RPM	11670	8750	7000	
	4		FEED	0.03-0.05	0.05-0.07	FEED	0.06-0.12	0.08-0.14	0.14-0.20		
	5	Low alloy steel	80	RPM	25460	12730	110	RPM	11670	8750	7000
	6		FEED	0.03-0.05	0.05-0.07	FEED	0.04-0.10	0.07-0.13	0.10-0.16		
	7		RPM	22280	11140	90	RPM	9550	7160	5730	
	8	FEED	0.03-0.05	0.05-0.07	FEED	0.04-0.10	0.07-0.13	0.10-0.16			
	9	High alloyed steel, and tool steel	80	RPM	25460	12730	110	RPM	11670	8750	7000
	10		FEED	0.03-0.05	0.05-0.07	FEED	0.06-0.12	0.08-0.14	0.14-0.20		
	11	RPM	22280	11140	90	RPM	9550	7160	5730		
12	Stainless steel	70	FEED	0.03-0.05	0.05-0.07	FEED	0.06-0.12	0.08-0.14	0.10-0.20		
13		RPM	22280	11140	90	RPM	9550	7160	5730		
14		FEED	0.02-0.04	0.03-0.05	FEED	0.04-0.10	0.07-0.13	0.10-0.16			
K	15	Grey cast iron	60	RPM	19100	9550	80	RPM	8490	6370	5090
	16		FEED	0.03-0.05	0.05-0.07	FEED	0.04-0.10	0.07-0.13	0.10-0.16		
	17	Nodular cast iron	40	RPM	12730	6370	45	RPM	4770	3580	2860
	18		FEED	0.02-0.04	0.03-0.05	FEED	0.03-0.08	0.05-0.11	0.08-0.14		
	19	Malleable cast iron	60	RPM	19100	9550	80	RPM	8490	6370	5090
	20		FEED	0.03-0.05	0.05-0.07	FEED	0.04-0.10	0.07-0.13	0.10-0.16		
N	21	Aluminum-wrought alloy	80	RPM	25460	12730	110	RPM	11670	8750	7000
	22		FEED	0.04-0.06	0.04-0.06	FEED	0.08-0.14	0.12-0.18	0.18-0.24		
	23	Aluminum-cast, alloyed	75	RPM	23870	11940	95	RPM	10080	7560	6050
	24		FEED	0.04-0.06	0.04-0.06	FEED	0.06-0.12	0.08-0.14	0.14-0.2		
	25		RPM	28650	14320	120	RPM	12730	9550	7640	
	26		FEED	0.04-0.06	0.04-0.06	FEED	0.08-0.14	0.12-0.18	0.18-0.24		
	27	Copper and Copper Alloys (Bronze / Brass)	60	RPM	19100	9550	80	RPM	8490	6370	5090
	28		FEED	0.04-0.06	0.04-0.06	FEED	0.06-0.12	0.08-0.14	0.14-0.2		
	29	Non Metallic Materials	70	RPM	22280	11140	90	RPM	9550	7160	5730
	30		FEED	0.04-0.06	0.04-0.06	FEED	0.08-0.14	0.12-0.18	0.18-0.24		
S	31	Heat Resistant Super Alloys	60	RPM	19100	9550	80	RPM	8490	6370	5090
	32		FEED	0.03-0.05	0.05-0.07	FEED	0.06-0.12	0.08-0.14	0.14-0.20		
	33		RPM	19100	9550	80	RPM	8490	6370	5090	
	34		FEED	0.03-0.05	0.05-0.07	FEED	0.06-0.12	0.08-0.14	0.14-0.20		
	35	Titanium Alloys	70	RPM	22280	11140	90	RPM	9550	7160	5730
	36		FEED	0.04-0.06	0.04-0.06	FEED	0.08-0.14	0.12-0.18	0.18-0.24		
	37		RPM	19100	9550	80	RPM	8490	6370	5090	
H	38	Hardened steel	60	RPM	19100	9550	80	RPM	8490	6370	5090
	39		FEED	0.03-0.05	0.05-0.07	FEED	0.06-0.12	0.08-0.14	0.14-0.20		
	40	Chilled Cast Iron	60	RPM	19100	9550	80	RPM	8490	6370	5090
41	Hardened Cast Iron	60	RPM	19100	9550	80	RPM	8490	6370	5090	

► Recommend to reduce the feed rate as following

**Feed 100%** : DH406(3×D), DH408(5×D) **Feed 75%** : DH421(8×D)

SELECTION GUIDE



SERIES

DH404

DH423

DRILLING DEPTH

3XD

3XD

LENGTH

STUB

SHORT

SIZE MIN

D3.0

D3.0

SIZE MAX

D20.0

D20.0

PAGE

78

80

SURFACE TREATMENT

TiAIN

**SOLID CARBIDE  
DREAM DRILLS  
GENERAL**

For General Purpose (HRc30 to HRc45)



Please visit [globalyg1.com/mat](http://globalyg1.com/mat) for material search

◎ : Excellent ○ : Good

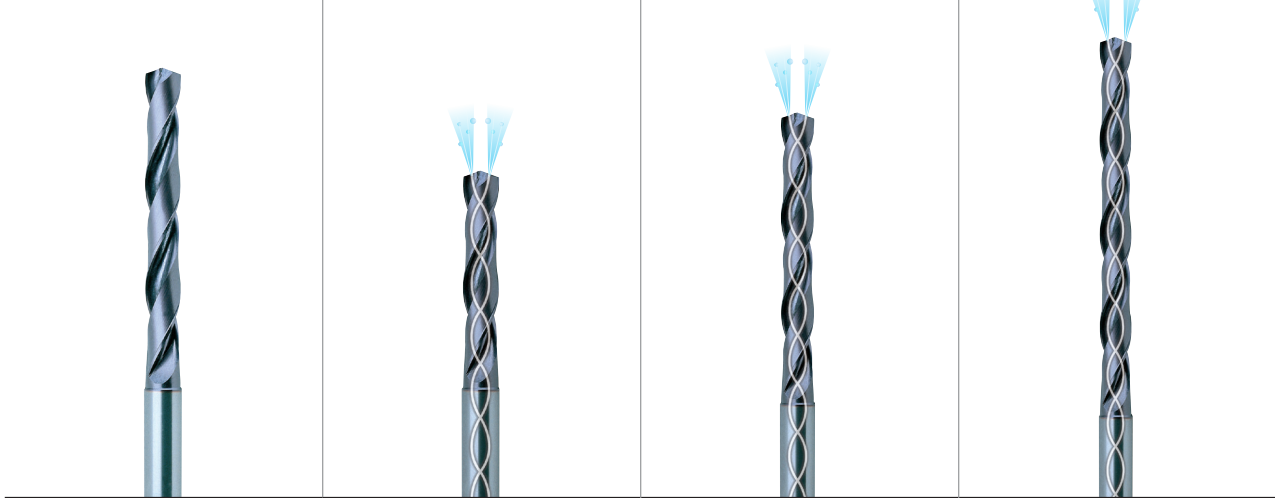
Recommended cutting conditions : P.94

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	Low alloy steel	About 0.75% C	Quenched & Tempered	300	32
	6		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 Cutting Alloys, PB>1%		110	
	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90	
	28		CuSn, lead-free copper and electrolytic copper		100	
	29		Duroplastic, Fiber Reinforced Plastic			
	30	Non Metallic Materials	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		1050 Rm	
H	38	Hardened steel	Hardened		550	55
	39		Hardened		630	60
	40	Hardened Cast Iron	Cast		400	42
	41		Hardened		550	55

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DH424	DH406	DH408	DH421
5XD	3XD	5XD	8XD
LONG	SHORT	LONG	EXTRA LONG
D1.0	D3.0	D1.0	D3.0
D20.0	D20.0	D20.0	D14.0
83	86	89	92

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