



**CARBIDE, DREAM DRILLS with COOLANT HOLES**

**EXTRA LONG**

**VOLLHARTMETALL DREAM SPIRALBOHRER mit KÜHLKANAL**

**ÜBERLANG**

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

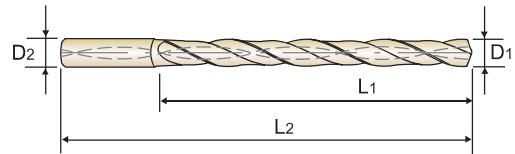
**EXTRA-LONGUE**

**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, Nichtmetallen-Leichtmetallen, abrasiven Kunststoffen
- ▶ Selbst zentrierend und guter Spanbruch durch die R-Ausspitzung
- ▶ Wellenform und Neagtivfase auf der Schneide bewirken geringen Schub, stabiles Drehmoment und lange Standzeit
- ▶ Optimierte Nutenform für Hochleistungsbohren und leichte Spanabfuhr



DIN 6537
CARBIDE
30°
h6
m7
140°
20 bar

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							
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel				Stainless steel				Grey cast iron		Nodular 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	30	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											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

**CARBIDE, DREAM DRILLS with COOLANT HOLES**

**EXTRA LONG**

- **VOLLHARTMETALL DREAM SPIRALBOHRER mit KÜHLKANAL**
- **Forets DREAM DRILLS carbure, avec arrosage central, série extra-longue**
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**ÜBERLANG  
EXTRA-LONGUE  
EXTRA LUNGA**

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P.96-97

**8 x D**

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
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

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
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

▶ Other shank types are available on your request.

ISO Material Description	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	23	25	28	32	10	29	32	38	15	15	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 Material Description	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											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended																					

◎ : Excellent ○ : Good

HSS

i-ONE DRILLS

i-DREAM DRILLS

DREAM DRILLS -GENERAL

DREAM DRILLS -HIGH FEED

DREAM DRILLS -FLAT BOTTOM

DREAM DRILLS -INOX

DREAM DRILLS -ALU

DREAM DRILLS -CFRP

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

TECHNICAL DATA

**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		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	Low alloy steel	80	RPM	25460	12730	110	RPM	11670	8750	7000
	8		FEED	0.03-0.05	0.05-0.07	FEED	0.06-0.12	0.08-0.14	0.14-0.20		
	9		RPM	22280	11140	90	RPM	9550	7160	5730	
	10		FEED	0.03-0.05	0.05-0.07	FEED	0.04-0.10	0.07-0.13	0.10-0.16		
	11	High alloyed steel, and tool steel	40	RPM	12730	6370	50	RPM	5310	3980	3180
12	FEED		0.02-0.04	0.03-0.05	FEED	0.03-0.08	0.05-0.11	0.08-0.14			
M	13	Stainless steel	60	RPM	19100	9550	80	RPM	8490	6370	5090
	14		FEED	0.03-0.05	0.05-0.07	FEED	0.04-0.10	0.07-0.13	0.10-0.16		
	15		RPM	14320	7160	55	RPM	5840	4380	3500	
K	16	Grey cast iron	80	RPM	25460	12730	110	RPM	11670	8750	7000
	17		FEED	0.04-0.06	0.04-0.06	FEED	0.08-0.14	0.12-0.18	0.18-0.24		
	18	Nodular cast iron	75	RPM	23870	11940	95	RPM	10080	7560	6050
	19		FEED	0.04-0.06	0.04-0.06	FEED	0.06-0.12	0.08-0.14	0.14-0.2		
	20	Malleable cast iron	90	RPM	28650	14320	120	RPM	12730	9550	7640
	21		FEED	0.04-0.06	0.04-0.06	FEED	0.08-0.14	0.12-0.18	0.18-0.24		
N	22	Aluminum-wrought alloy	60	RPM	19100	9550	80	RPM	8490	6370	5090
	23		FEED	0.04-0.06	0.04-0.06	FEED	0.06-0.12	0.08-0.14	0.14-0.2		
	24	Aluminum-cast, alloyed	70	RPM	22280	11140	90	RPM	9550	7160	5730
	25		FEED	0.04-0.06	0.04-0.06	FEED	0.08-0.14	0.12-0.18	0.18-0.24		
	26	Copper and Copper Alloys (Bronze / Brass)	60	RPM	19100	9550	80	RPM	8490	6370	5090
	27		FEED	0.04-0.06	0.04-0.06	FEED	0.06-0.12	0.08-0.14	0.14-0.2		
	28	Non Metallic Materials	70	RPM	22280	11140	90	RPM	9550	7160	5730
	29		FEED	0.04-0.06	0.04-0.06	FEED	0.08-0.14	0.12-0.18	0.18-0.24		
	30	Titanium Alloys	60	RPM	19100	9550	80	RPM	8490	6370	5090
	31		FEED	0.03-0.05	0.05-0.07	FEED	0.06-0.12	0.08-0.14	0.14-0.20		
S	32	Heat Resistant Super Alloys									
	33										
	34										
	35										
H	36	Titanium Alloys									
	37										
H	38	Hardened steel									
	39										
	40	Chilled Cast Iron									
	41	Hardened Cast Iron									

► Recommend to reduce the feed rate as following

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

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

VDI 3323	Parameter	Drill Diameter (mm)							
		6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0
1									
2	RPM	5840	4380	3500	2920	2500	2190	1950	1750
	FEED	0.16-0.22	0.18-0.24	0.22-0.28	0.20-0.30	0.22-0.32	0.24-0.34	0.28-0.38	0.30-0.40
3	RPM	5840	4380	3500	2920	2500	2190	1950	1750
	FEED	0.16-0.22	0.18-0.24	0.22-0.28	0.20-0.30	0.22-0.32	0.24-0.34	0.28-0.38	0.30-0.40
4	RPM	5840	4380	3500	2920	2500	2190	1950	1750
	FEED	0.12-0.18	0.14-0.20	0.18-0.24	0.14-0.24	0.16-0.26	0.18-0.28	0.20-0.30	0.22-0.32
5	RPM	4770	3580	2860	2390	2050	1790	1590	1430
	FEED	0.12-0.18	0.14-0.20	0.18-0.24	0.14-0.24	0.16-0.26	0.18-0.28	0.20-0.30	0.22-0.32
6	RPM	5840	4380	3500	2920	2500	2190	1950	1750
	FEED	0.16-0.22	0.18-0.24	0.22-0.28	0.20-0.30	0.22-0.32	0.24-0.34	0.28-0.38	0.30-0.40
7	RPM	4770	3580	2860	2390	2050	1790	1590	1430
	FEED	0.12-0.24	0.16-0.28	0.20-0.30	0.21-0.30	0.22-0.35	0.25-0.36	0.28-0.38	0.30-0.40
8	RPM	4770	3580	2860	2390	2050	1790	1590	1430
	FEED	0.12-0.18	0.14-0.20	0.18-0.24	0.14-0.24	0.16-0.26	0.18-0.28	0.20-0.30	0.22-0.32
9	RPM	2650	1990	1590	1330	1140	990	880	800
	FEED	0.10-0.16	0.12-0.18	0.14-0.20	0.12-0.22	0.13-0.23	0.14-0.24	0.16-0.26	0.18-0.28
10	RPM	4240	3180	2550	2120	1820	1590	1410	1270
	FEED	0.12-0.18	0.14-0.20	0.18-0.24	0.14-0.24	0.16-0.26	0.18-0.28	0.20-0.30	0.22-0.32
11	RPM	2390	1790	1430	1190	1020	900	800	720
	FEED	0.10-0.16	0.12-0.18	0.14-0.20	0.12-0.22	0.13-0.23	0.14-0.24	0.16-0.26	0.18-0.28
12	RPM	4240	3180	2550	2120	1820	1590	1410	1270
	FEED	0.16-0.22	0.18-0.24	0.22-0.28	0.20-0.30	0.22-0.32	0.24-0.34	0.28-0.38	0.30-0.40
13	RPM	2920	2190	1750	1460	1250	1090	970	880
	FEED	0.12-0.18	0.14-0.20	0.18-0.24	0.14-0.24	0.16-0.26	0.18-0.28	0.20-0.30	0.22-0.32
14									
15	RPM	5840	4380	3500	2920	2500	2190	1950	1750
	FEED	0.14-0.26	0.16-0.28	0.24-0.34	0.26-0.36	0.28-0.38	0.3-0.40	0.32-0.42	0.34-0.44
16	RPM	5040	3780	3020	2520	2160	1890	1680	1510
	FEED	0.16-0.22	0.18-0.24	0.22-0.28	0.20-0.30	0.22-0.32	0.24-0.34	0.28-0.38	0.30-0.40
17	RPM	6370	4770	3820	3180	2730	2390	2120	1910
	FEED	0.14-0.26	0.16-0.28	0.24-0.34	0.26-0.36	0.28-0.38	0.30-0.40	0.32-0.42	0.34-0.44
18	RPM	4240	3180	2550	2120	1820	1590	1410	1270
	FEED	0.16-0.22	0.18-0.24	0.22-0.28	0.2-0.3	0.22-0.32	0.24-0.34	0.28-0.38	0.30-0.40
19	RPM	4770	3580	2860	2390	2050	1790	1590	1430
	FEED	0.14-0.26	0.16-0.28	0.24-0.34	0.26-0.36	0.28-0.38	0.30-0.40	0.32-0.42	0.34-0.44
20	RPM	4240	3180	2550	2120	1820	1590	1410	1270
	FEED	0.16-0.22	0.18-0.24	0.22-0.28	0.20-0.30	0.22-0.32	0.24-0.34	0.28-0.38	0.30-0.40
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