DREAM DRILLS - GENERAL

DH404 SERIES

CARBIDE, DREAM DRILLS

STUB

VOLLHARTMETALL DREAM SPIRALBOHRER
Forets DREAM DRILLS carbure, série extra-courte
PUNTE ELICOIDALI IN MD - DREAM DRILLS

EXTRA KURZ
EXTRA-COURTE
EXTRA CORTA

- ▶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 Kunsstoffen
- ▶ 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 6539 | CARBIDE | 30° | h6 | h7 | 140°

P.94-95

$D_1=D_2$

3 × D

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
TiAlN	D_1	L_1	L_2
DH404030	3.0	16	46
DH404031	3.1	18	49
DH404032	3.2	18	49
DH404033	3.3	18	49
DH404034	3.4	20	52
DH404035	3.5	20	52
DH404036	3.6	20	52
DH404037	3.7	20	52
DH404038	3.8	22	55
DH404039	3.9	22	55
DH404040	4.0	22	55
DH404041	4.1	22	55
DH404042	4.2	22	55
DH404043	4.3	24	58
DH404044	4.4	24	58
DH404045	4.5	24	58
DH404046	4.6	24	58
DH404047	4.7	24	58
DH404048	4.8	26	62
DH404049	4.9	26	62
DH404050	5.0	26	62
DH404051	5.1	26	62
DH404052	5.2	26	62
DH404053	5.3	26	62

EDP No.	Drill Diameter	Flute Length	Overall Length
TiAlN	D_1	L_1	L_2
DH404054	5.4	28	66
DH404055	5.5	28	66
DH404056	5.6	28	66
DH404057	5.7	28	66
DH404058	5.8	28	66
DH404059	5.9	28	66
DH404060	6.0	28	66
DH404061	6.1	31	70
DH404062	6.2	31	70
DH404063	6.3	31	70
DH404064	6.4	31	70
DH404065	6.5	31	70
DH404066	6.6	31	70
DH404067	6.7	31	70
DH404068	6.8	34	74
DH404069	6.9	34	74
DH404070	7.0	34	74
DH404071	7.1	34	74
DH404072	7.2	34	74
DH404073	7.3	34	74
DH404074	7.4	34	74
DH404075	7.5	34	74
DH404076	7.6	37	79
DH404077	7.7	37	79

▶ 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	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	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																					

phone:+82-32-526-0909, www.yg1.kr, E-mail:yg1@yg1.kr
YG-1 CO., LTD.

DREAM DRILLS - GENERAL

DH404 SERIES

CARBIDE, DREAM DRILLS

STUB

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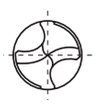

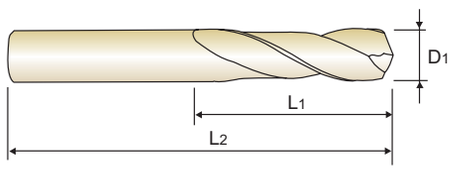

DIN 6539 | CARBIDE | 30° | h6 | h7 | 140° | P.94-95

$D_1=D_2$
3 × D

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
TiAlN	D_1	L_1	L_2
DH404078	7.8	37	79
DH404079	7.9	37	79
DH404080	8.0	37	79
DH404081	8.1	37	79
DH404082	8.2	37	79
DH404083	8.3	37	79
DH404084	8.4	37	79
DH404085	8.5	37	79
DH404086	8.6	40	84
DH404087	8.7	40	84
DH404088	8.8	40	84
DH404089	8.9	40	84
DH404090	9.0	40	84
DH404091	9.1	40	84
DH404092	9.2	40	84
DH404093	9.3	40	84
DH404094	9.4	40	84
DH404095	9.5	40	84
DH404096	9.6	43	89
DH404097	9.7	43	89
DH404098	9.8	43	89
DH404099	9.9	43	89

EDP No.	Drill Diameter	Flute Length	Overall Length
TiAlN	D_1	L_1	L_2
DH404100	10.0	43	89
DH404102	10.2	43	89
DH404105	10.5	43	89
DH404110	11.0	47	95
DH404115	11.5	47	95
DH404120	12.0	51	102
DH404130	13.0	51	102
DH404135	13.5	54	107
DH404140	14.0	54	107
DH404145	14.5	56	111
DH404150	15.0	56	111
DH404155	15.5	58	115
DH404160	16.0	58	115
DH404165	16.5	60	119
DH404170	17.0	60	119
DH404175	17.5	62	123
DH404180	18.0	62	123
DH404185	18.5	64	127
DH404190	19.0	64	127
DH404195	19.5	66	131
DH404200	20.0	66	131

▶ Other shank types are available on your request.

◎ : 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	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																					

DREAM DRILLS - GENERAL

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDPARAMETER

DH404, DH423, DH424 SERIES without COOLANT HOLES

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

ISO	VDI 3323	Material Description	Vc (m/min)	Parameter	Drill Diameter (mm) 1.0	2.0	Vc (m/min)	Parameter	Drill Diameter (mm) 3.0	4.0	5.0
P	1	Non-alloy steel									
	2		70	RPM FEED	22280 0.03-0.05	11140 0.05-0.07	100	RPM FEED	10610 0.06-0.12	7960 0.08-0.14	6370 0.14-0.20
	3		70	RPM FEED	22280 0.03-0.05	11140 0.05-0.07	100	RPM FEED	10610 0.06-0.12	7960 0.08-0.14	6370 0.14-0.20
	4		70	RPM FEED	22280 0.03-0.05	11140 0.05-0.07	100	RPM FEED	10610 0.04-0.10	7960 0.07-0.13	6370 0.10-0.16
	5		60	RPM FEED	19100 0.03-0.05	9550 0.05-0.07	80	RPM FEED	8490 0.04-0.10	6370 0.07-0.13	5090 0.10-0.16
	6	Low alloy steel	70	RPM FEED	22280 0.03-0.05	11140 0.05-0.07	100	RPM FEED	10610 0.06-0.12	7960 0.08-0.14	6370 0.14-0.20
	7		60	RPM FEED	19100 0.03-0.05	9550 0.05-0.07	80	RPM FEED	8490 0.06-0.12	6370 0.08-0.14	5090 0.10-0.20
	8		60	RPM FEED	19100 0.02-0.04	9550 0.03-0.05	80	RPM FEED	8490 0.04-0.10	6370 0.07-0.13	5090 0.10-0.16
	9		30	RPM FEED	9550 0.02-0.04	4770 0.03-0.05	40	RPM FEED	4240 0.03-0.08	3180 0.05-0.11	2550 0.08-0.14
	10	High alloyed steel, and tool steel	50	RPM FEED	15920 0.03-0.05	7960 0.05-0.07	70	RPM FEED	7430 0.04-0.10	5570 0.07-0.13	4460 0.10-0.16
	11		30	RPM FEED	9550 0.02-0.04	4770 0.03-0.05	40	RPM FEED	4240 0.03-0.08	3180 0.05-0.11	2550 0.08-0.14
M	12	Stainless steel	50	RPM FEED	15920 0.03-0.05	7960 0.05-0.07	70	RPM FEED	7430 0.06-0.12	5570 0.08-0.14	4460 0.14-0.20
	13		35	RPM FEED	11140 0.02-0.04	5570 0.03-0.05	45	RPM FEED	4770 0.04-0.10	3580 0.07-0.13	2860 0.10-0.16
	14										
K	15	Grey cast iron	70	RPM FEED	22280 0.04-0.06	11140 0.04-0.06	100	RPM FEED	10610 0.08-0.14	7960 0.12-0.18	6370 0.18-0.24
	16		65	RPM FEED	20690 0.04-0.06	10350 0.04-0.06	80	RPM FEED	8490 0.06-0.12	6370 0.08-0.14	5090 0.14-0.20
	17	Nodular cast iron	70	RPM FEED	22280 0.04-0.06	11140 0.04-0.06	100	RPM FEED	10610 0.08-0.14	7960 0.12-0.18	6370 0.18-0.24
	18		50	RPM FEED	15920 0.04-0.06	7960 0.04-0.06	70	RPM FEED	7430 0.06-0.12	5570 0.08-0.14	4460 0.14-0.20
	19	Malleable cast iron	60	RPM FEED	19100 0.04-0.06	9550 0.04-0.06	80	RPM FEED	8490 0.08-0.14	6370 0.12-0.18	5090 0.18-0.24
	20		50	RPM FEED	15920 0.03-0.05	7960 0.05-0.07	70	RPM FEED	7430 0.06-0.12	5570 0.08-0.14	4460 0.14-0.20
N	21	Aluminum-wrought alloy									
	22										
	23	Aluminum-cast, alloyed									
	24										
	25										
	26	Copper and Copper Alloys (Bronze / Brass)									
	27										
	28										
	29	Non Metallic Materials									
	30										
S	31	Heat Resistant Super Alloys									
	32										
	33										
	34										
	35										
	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% : DH404(3×D), DH423(3×D), DH424(5×D)

SELECTION GUIDE

YG HOLEMAKING TOOLS

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	TiAlN	

SOLID CARBIDE
DREAM DRILLS GENERAL

For General Purpose (HRc30 to HRc45)

Please visit 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		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	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		Ni or Co Based	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	Chilled Cast Iron		Cast	400	42		
	41	Hardened Cast Iron		Hardened	550	55		