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SELECTION GUIDE

HOLEMAKING TOOLS

SOLID CARBIDE
DREAM DRILLS

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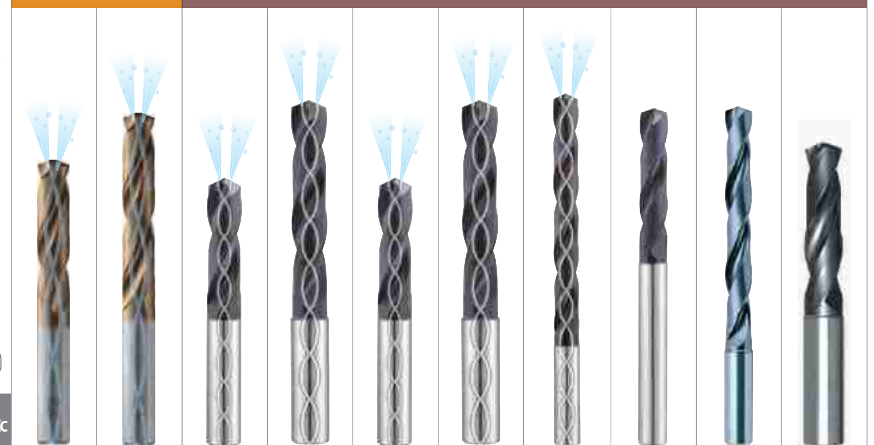
◎ : Excellent ○ : Good

TECHNICAL DATA : P 97



ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	DGN506	DGN508	DH416 DH711	DH418 DH712	DH406	DH408	DH421	DH414	DH722	DH404
						PRO (NEW)	PRO (NEW)	GENERAL	GENERAL	GENERAL	GENERAL	GENERAL	GENERAL	GENERAL	GENERAL
			DRILLING DEPTH / STANDARD			3XD	5XD	3xD	5xD	3xD	5xD	8xD	3xD	5xD	3xD
			LENGTH			SHORT	LONG	SHORT	LONG	SHORT	LONG	EXTRA LONG	STUB	LONG	STUB
			SIZE MIN			D3.0	D1.0	D1/8	D13/64	D3.0	D1.0	D3.0	D1/8	D13/64	D3.0
			SIZE MAX			D20.0	D20.0	D5/8	D1/2	D20.0	D20.0	D20.0	D5/8	D1/2	D20.0
			PAGE			8	12	22	24	25	29	33	37	38	39
			SURFACE TREATMENT			Z-Coating	Z-Coating	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN
P	1	Non-alloy steel	About 0.15% C Annealed	125											
P	2	Non-alloy steel	About 0.45% C Annealed	190	13	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	3	Non-alloy steel	About 0.45% C Quenched & Tempered	250	25	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	4	Non-alloy steel	About 0.75% C Annealed	270	28	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	5	Non-alloy steel	About 0.75% C Quenched & Tempered	300	32	○	○	○	○	○	○	○	○	○	○
P	6	Low alloy steel	Annealed	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	7	Low alloy steel	Quenched & Tempered	275	29	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	8	Low alloy steel	Quenched & Tempered	300	32	○	○	○	○	○	○	○	○	○	○
P	9	Low alloy steel	Quenched & Tempered	350	38	○	○	○	○	○	○	○	○	○	○
P	10	High alloyed steel, and tool steel	Annealed	200	15	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
P	11	High alloyed steel, and tool steel	Quenched & Tempered	325	35	○	○	○	○	○	○	○	○	○	○
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15	○	○	○	○	○	○	○	○	○	○
M	13	Stainless steel	Martensitic Quenched & Tempered	240	23	○	○	○	○	○	○	○	○	○	○
M	14	Stainless steel	Austenitic	180	10										
K	15	Grey cast iron	Pearlitic / ferritic	180	10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	16	Grey cast iron	Pearlitic (Martensitic)	260	26	○	○	○	○	○	○	○	○	○	○
K	17	Nodular cast iron	Ferritic	160	3	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	18	Nodular cast iron	Pearlitic	250	25	○	○	○	○	○	○	○	○	○	○
K	19	Malleable cast iron	Ferritic	130		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
K	20	Malleable cast iron	Pearlitic	230	21	○	○	○	○	○	○	○	○	○	○
N	21	Aluminum-wrought alloy	Not Curable	60											
N	22	Aluminum-wrought alloy	Curable Hardened	100											
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75											
N	24	Aluminum-cast, alloyed	≤ 12% Si, Curable Hardened	90											
N	25	Aluminum-cast, alloyed	> 12% Si, Not Curable	130											
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110											
N	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)	90											
N	28	Copper and Copper Alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper	100											
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic												
N	30	Non Metallic Materials	Rubber, Wood, etc.												
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15										
S	32	Heat Resistant Super Alloys	Fe Based Cured	280	30										
S	33	Heat Resistant Super Alloys	Ni or Co Based Annealed	250	25										
S	34	Heat Resistant Super Alloys	Ni or Co Based Cured	350	38										
S	35	Heat Resistant Super Alloys	Ni or Co Based Cast	320	34										
S	36	Titanium Alloys	Pure Titanium	400Rm											
S	37	Titanium Alloys	Alpha + Beta Alloys Hardened	1050Rm											
H	38	Hardened steel	Hardened	550	55	○	○	○	○	○	○	○	○	○	○
H	39	Hardened steel	Hardened	630	60										
H	40	Chilled Cast Iron	Cast	400	42										
H	41	Hardened Cast Iron	Hardened	550	55										

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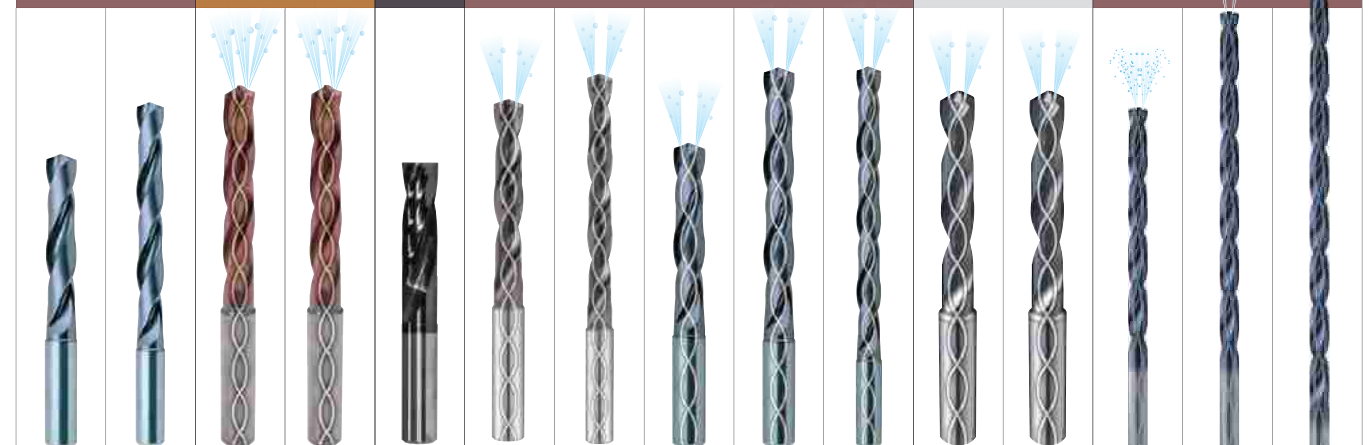

VDI 3323	DH423	DH424	DGR493 DGR496	DGR495 DGR497	DPP447	DH463 DH714	DH464 DH715	DH451	DH452	DH453	DGE466 DGE718	DGE433	DH510	DH515	DH520	ISO
	GENERAL	GENERAL	HIGH FEED (NEW SIZES)	HIGH FEED (NEW SIZES)	FLAT BOTTOM	INOX	INOX	INOX	INOX (NEW SIZES)	INOX (NEW SIZES)	ALU	ALU	MQL	MQL	MQL	
DRILLING DEPTH / STANDARD	3xD	5xD	3xD	5xD	2xD	3xD	5xD	3xD	5xD	8xD	5xD	5xD	10xD	15xD	20xD	
LENGTH	SHORT	LONG	SHORT	LONG	SHORT	STUB	LONG	SHORT	LONG	EXTRA LONG	LONG	LONG	EXTRA LONG	EXTRA LONG	EXTRA LONG	
SIZE MIN	D3.0	D1.0	D13/64 D4.0	D13/64 D4.0	D3.0	D1/8	D13/64	D2.1	D1.0	D2.0	D13/64	D3.0	D3.0	D3.0	D3.0	
SIZE MAX	D20.0	D20.0	D3/4 D20.0	D3/4 D20.0	D20.0	D5/8	D1/2	D20.0	D20.0	D20.0	D1/2	D20.0	D14.0	D14.0	D12.0	
PAGE	41	45	58	62	72	82	84	85	89	94	104	105	114	117	120	
SURFACE TREATMENT	TiAlN	TiAlN	H-Coating	H-Coating	X-Coating	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	DLC	DLC	TiAlN	TiAlN	TiAlN	
1					◎								◎	◎	◎	P
2	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎	P
3	◎	◎	◎	◎	◎	○	○	○	○	○			○	○	○	P
4	◎	◎	◎	◎	○											P
5	○	○	○	○	○											P
6	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			◎	◎	◎	P
7	◎	◎	◎	◎	○	○	○	○	○	○			○	○	○	P
8	○	○	○	○	○								○	○	○	P
9	○	○	○	○	○											P
10	◎	◎	◎	◎									○	○	○	P
11	○	○	○	○									○	○	○	P
12	○	○			○	◎	◎	◎	◎	◎						M
13	○	○				◎	◎	◎	◎	◎						M
14						◎	◎	◎	◎	◎						M
15	◎	◎	◎	◎	◎								◎	◎	◎	K
16	○	○	○	○	○								○	○	○	K
17	◎	◎	◎	◎									◎	◎	◎	K
18	○	○	○	○									○	○	○	K
19	◎	◎	◎	◎									◎	◎	◎	K
20	○	○	○	○									○	○	○	K
21					○	◎	◎	◎	◎	◎	◎	◎				N
22					○	◎	◎	◎	◎	◎	◎	◎				N
23						○	○	○	○	○	◎	◎				N
24						○	○	○	○	○	◎	◎				N
25						○	○	○	○	○						N
26																N
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36																S
37						○	○	○	○	○						S
38	○	○														H
39																H
40																H
41																H

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GUIDE LINE TO ICONS

Standard of Tools
DIN 6539
Number of DIN Standard

Coolant Supply Pressure
45 bar
20 bar

Tool Material
CARBIDE

Point Angle
140°

Surface Treatment
Z-Coating
YG-1 Z-Coating
TiAlN
Titanium Aluminum Nitride Coating
X-Coating
YG-1 X-Coating
H-Coating
YG-1 H-Coating
DLC
DLC Coating
Bright
Bright Finish

Tolerance of Dimension
m7
Tolerance of Outside Diameter
h6
Tolerance of Shank Diameter

Cutting Condition

SELECTION GUIDE

HOLEMAKING TOOLS

		MQL					HIGH HARDENED STEELS	
SERIES		DHM10	DHM15	DHM20	DHM25	DHM30	DH501	DH500
DRILLING DEPTH / STANDARD		10xD	15xD	20xD	25xD	30xD	3xD	
LENGTH		EXTRA LONG					SHORT	
SIZE MIN		D3.0	D3.0	D3.0	D3.0	D3.0	D1/8	D1.0
SIZE MAX		D14.0	D12.0	D12.0	D10.0	D8.0	D3/4	D14.0
PAGE		122	122	123	124	126	134	136
SURFACE TREATMENT		TiAlN			TiAlN		TiAlN	

SOLID CARBIDE

DREAM DRILLS

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

TECHNICAL DATA : P 97

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		400m							
	37		Alpha + Beta Alloys	Hardened	1050m							
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						

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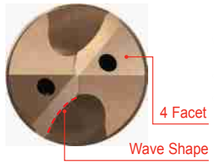
DREAM DRILLS PRO

- For General Purpose (HRc30 to HRc50)
- Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology

Performance Upgrade with Faster Cutting Speed

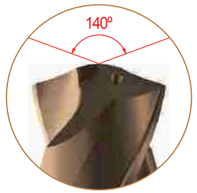
NEW

DREAM DRILLS PRO



Wave Shape Cutting Edge

- Improve chip formation
- Low Cutting Force

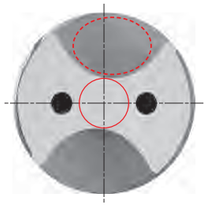


140 Degree Point Angle

- Provides edge strength and Exceptional tool life
- Good Self Centering
- Low Torque

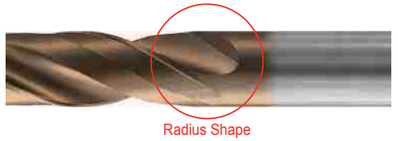
Micro-grained Carbide

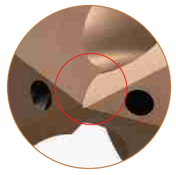
- Achieving Excellent Wear Resistance
- Maximum Tool Life and High Performance



Optimized wide flute design

The unique flute structure provides good surface finish, longer tool life and requires less cutting force





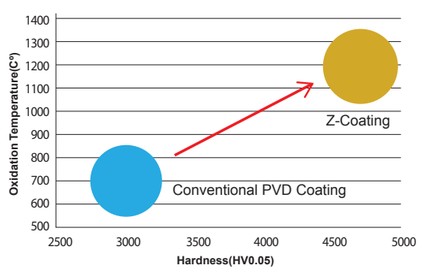
Helical Thinning

- Low Thrust
- Stable Torque
- Good Chip Breakage

Higher & Improved cutting conditions due to YG-1 Special Z-Coating Technology

(YG-1's Unique Silicon Based Coating: Nano-Layer Coating)

- Extremely High Hardness and Heat Resistance



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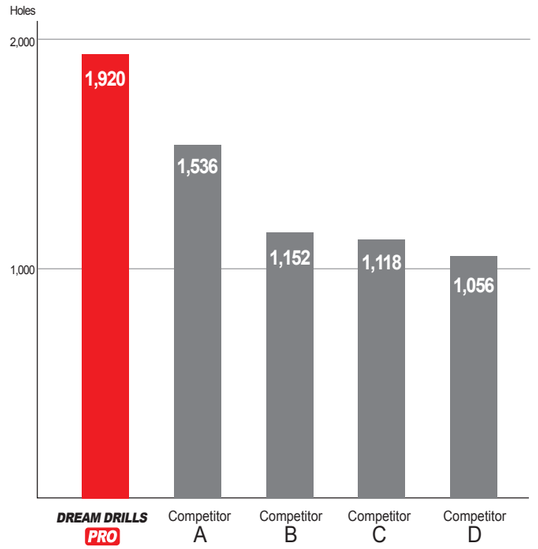
CASE STUDY

▶ SOLID CARBIDE DREAM DRILLS - PRO with Coolant Holes



CUTTING CONDITION	
Work Material	DIN: 42CrMo4 ANSI: 4140 JIS: SCM440 Hardness: HRc30 (HB286)
O.D SIZE(mm)	Ø10.0 (.3937 inch)
RPM	4,458 rev./min.
SFM	140 ft/min.
Feed	0.012inch/rev.
Drilling Depth	1.77" (4.5xD)
Coolant	Internal Cooling (20 bar) Water Soluble (9% Emulsion)
Machine	Machining Center

DREAM DRILLS PRO — Total Drilling 1,920 Holes

Competitor A — Total Drilling 1,536 Holes

Competitor B — Total Drilling 1,152 Holes

Competitor C — Total Drilling 1,118 Holes

Competitor D — Total Drilling 1,056 Holes

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Z-COATED SOLID CARBIDE DREAM DRILLS

PRO with Coolant Holes (3XD)

NEW **DGN506 SERIES**

- Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30-50), Cast Iron
- Wave shape cutting edge to improve chip formation for low cutting force
- Helical thinning for low thrust, stable torque and good chip breakage
- Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.16

SHORT 3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN506030	3.0		0.1181	6	20	62
DGN506031	3.1		0.1220	6	20	62
DGN506008F	3.175	1/8	0.1250	6	20	62
DGN506032	3.2		0.1260	6	20	62
DGN506033	3.3		0.1299	6	20	62
DGN5060336	3.36		0.1323	6	20	62
DGN506034	3.4		0.1339	6	20	62
DGN5060344	3.44		0.1356	6	20	62
DGN506035	3.5		0.1378	6	20	62
DGN5060352	3.52		0.1387	6	20	62
DGN5060357	3.57		0.1405	6	20	62
DGN506036	3.6		0.1417	6	20	62
DGN506037	3.7		0.1457	6	20	62
DGN5060377	3.77		0.1484	6	24	66
DGN506038	3.8		0.1496	6	24	66
DGN5060386	3.86		0.1521	6	24	66
DGN506039	3.9		0.1535	6	24	66
DGN506010F	3.969	5/32	0.1563	6	24	66
DGN506040	4.0		0.1575	6	24	66
DGN5060405	4.05		0.1596	6	24	66
DGN506020G	4.09	#20	0.1610	6	24	66
DGN506041	4.1		0.1614	6	24	66
DGN5060416	4.16		0.1636	6	24	66
DGN506042	4.2		0.1654	6	24	66
DGN5060427	4.27		0.1681	6	24	66
DGN506043	4.3		0.1693	6	24	66
DGN506011F	4.366	11/64	0.1719	6	24	66
DGN506044	4.4		0.1732	6	24	66
DGN5060446	4.46		0.1754	6	24	66
DGN506045	4.5		0.1772	6	24	66
DGN506046	4.6		0.1811	6	24	66
DGN5060466	4.66		0.1835	6	24	66
DGN506047	4.7		0.1850	6	24	66
DGN506012F	4.763	3/16	0.1875	6	28	66
DGN506048	4.8		0.1890	6	28	66
DGN506049	4.9		0.1929	6	28	66
DGN506050	5.0		0.1969	6	28	66
DGN506051	5.1		0.2008	6	28	66
DGN5060515	5.15		0.2029	6	28	66
DGN506013F	5.159	13/64	0.2031	6	28	66
DGN506052	5.2		0.2047	6	28	66
DGN5060526	5.26		0.2070	6	28	66
DGN506053	5.3		0.2087	6	28	66
DGN506054	5.4		0.2126	6	28	66
DGN506003G	5.41	#3	0.2130	6	28	66
DGN5060547	5.47		0.2152	6	28	66
DGN506055	5.5		0.2165	6	28	66
DGN506014F	5.556	7/32	0.2188	6	28	66
DGN506056	5.6		0.2205	6	28	66
DGN506057	5.7		0.2244	6	28	66
DGN506058	5.8		0.2283	6	28	66
DGN506059	5.9		0.2323	6	28	66

▶ 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											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																		○			

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Z-COATED SOLID CARBIDE DREAM DRILLS
PRO with Coolant Holes (3XD)
NEW DGN506 SERIES
- Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30-50), Cast Iron
- Wave shape cutting edge to improve chip formation for low cutting force
- Helical thinning for low thrust, stable torque and good chip breakage
- Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.16

SHORT 3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN506015F	5.953	15/64	0.2344	6	28	66
DGN506060	6.0		0.2362	6	28	66
DGN506061	6.1		0.2402	8	34	79
DGN506003L	6.147	C	0.2420	8	34	79
DGN506062	6.2		0.2441	8	34	79
DGN506063	6.3		0.2480	8	34	79
DGN506016F	6.350	1/4	0.2500	8	34	79
DGN506064	6.4		0.2520	8	34	79
DGN506065	6.5		0.2559	8	34	79
DGN506006L	6.528	F	0.2570	8	34	79
DGN506066	6.6		0.2598	8	34	79
DGN5060665	6.65		0.2620	8	34	79
DGN506067	6.7		0.2638	8	34	79
DGN506017F	6.747	17/64	0.2656	8	34	79
DGN506068	6.8		0.2677	8	34	79
DGN5060686	6.86		0.2701	8	34	79
DGN506069	6.9		0.2717	8	34	79
DGN506070	7.0		0.2756	8	34	79
DGN506010L	7.036	J	0.2770	8	41	79
DGN506071	7.1		0.2795	8	41	79
DGN506018F	7.144	9/32	0.2812	8	41	79
DGN506072	7.2		0.2835	8	41	79
DGN506073	7.3		0.2874	8	41	79
DGN506074	7.4		0.2913	8	41	79
DGN506075	7.5		0.2953	8	41	79
DGN506019F	7.541	19/64	0.2969	8	41	79
DGN506076	7.6		0.2992	8	41	79
DGN506077	7.7		0.3031	8	41	79
DGN506078	7.8		0.3071	8	41	79
DGN506079	7.9		0.3110	8	41	79
DGN506020F	7.938	5/16	0.3125	8	41	79
DGN506080	8.0		0.3150	8	41	79
DGN506081	8.1		0.3189	10	47	89
DGN5060815	8.15		0.3210	10	47	89
DGN506082	8.2		0.3228	10	47	89
DGN506083	8.3		0.3268	10	47	89
DGN506021F	8.334	21/64	0.3281	10	47	89
DGN506084	8.4		0.3307	10	47	89
DGN506017L	8.430	Q	0.3320	10	47	89
DGN506085	8.5		0.3346	10	47	89
DGN5060856	8.56		0.3371	10	47	89
DGN506086	8.6		0.3386	10	47	89
DGN5060864	8.64		0.3402	10	47	89
DGN506087	8.7		0.3425	10	47	89
DGN506022F	8.731	11/32	0.3438	10	47	89
DGN506088	8.8		0.3465	10	47	89
DGN5060886	8.86		0.3488	10	47	89
DGN506089	8.9		0.3504	10	47	89
DGN506090	9.0		0.3543	10	47	89
DGN506091	9.1		0.3583	10	47	89
DGN506023F	9.128	23/64	0.3594	10	47	89
DGN506092	9.2		0.3622	10	47	89

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◎ : 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											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																		○			

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Z-COATED SOLID CARBIDE DREAM DRILLS

PRO with Coolant Holes (3XD)

NEW **DGN506 SERIES**

- Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30-50), Cast Iron
- Wave shape cutting edge to improve chip formation for low cutting force
- Helical thinning for low thrust, stable torque and good chip breakage
- Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.16

SHORT 3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN506093	9.3		0.3661	10	47	89
DGN506094	9.4		0.3701	10	47	89
DGN506095	9.5		0.3740	10	47	89
DGN506024F	9.525	3/8	0.3750	10	47	89
DGN506096	9.6		0.3780	10	47	89
DGN506097	9.7		0.3819	10	47	89
DGN506098	9.8		0.3858	10	47	89
DGN506099	9.9		0.3898	10	47	89
DGN506025F	9.922	25/64	0.3906	10	47	89
DGN506100	10.0		0.3937	10	47	89
DGN506101	10.1		0.3976	12	55	102
DGN506102	10.2		0.4016	12	55	102
DGN506103	10.3		0.4055	12	55	102
DGN506026F	10.319	13/32	0.4062	12	55	102
DGN506104	10.4		0.4094	12	55	102
DGN506105	10.5		0.4134	12	55	102
DGN506106	10.6		0.4173	12	55	102
DGN506107	10.7		0.4212	12	55	102
DGN506027F	10.716	27/64	0.4219	12	55	102
DGN506108	10.8		0.4252	12	55	102
DGN5061086	10.86		0.4276	12	55	102
DGN506109	10.9		0.4291	12	55	102
DGN506110	11.0		0.4330	12	55	102
DGN506111	11.1		0.4370	12	55	102
DGN506028F	11.113	7/16	0.4375	12	55	102
DGN506112	11.2		0.4409	12	55	102
DGN506113	11.3		0.4448	12	55	102
DGN506114	11.4		0.4488	12	55	102
DGN506115	11.5		0.4527	12	55	102
DGN506029F	11.509	29/64	0.4531	12	55	102
DGN506116	11.6		0.4566	12	55	102
DGN506117	11.7		0.4606	12	55	102
DGN506118	11.8		0.4645	12	55	102
DGN506119	11.9		0.4685	12	55	102
DGN506030F	11.906	15/32	0.4688	12	55	102
DGN506120	12.0		0.4724	12	55	102
DGN506121	12.1		0.4764	14	60	107
DGN506122	12.2		0.4803	14	60	107
DGN506123	12.3		0.4843	14	60	107
DGN506031F	12.303	31/64	0.4844	14	60	107
DGN506124	12.4		0.4882	14	60	107
DGN506125	12.5		0.4921	14	60	107
DGN506126	12.6		0.4961	14	60	107
DGN506032F	12.7	1/2	0.5000	14	60	107
DGN506129	12.9		0.5079	14	60	107
DGN506130	13.0		0.5118	14	60	107
DGN506131	13.1		0.5157	14	60	107
DGN506132	13.2		0.5197	14	60	107
DGN506133	13.3		0.5236	14	60	107
DGN506134	13.4		0.5276	14	60	107
DGN506034F	13.49	17/32	0.5312	14	60	107
DGN506135	13.5		0.5314	14	60	107

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P																			
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											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																		○			

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Z-COATED SOLID CARBIDE DREAM DRILLS

PRO with Coolant Holes (3XD)

NEW DGN506 SERIES

- Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30-50), Cast Iron
- Wave shape cutting edge to improve chip formation for low cutting force
- Helical thinning for low thrust, stable torque and good chip breakage
- Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.16

SHORT 3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN506136	13.6		0.5354	14	60	107
DGN506137	13.7		0.5394	14	60	107
DGN506138	13.8		0.5433	14	60	107
DGN506139	13.9		0.5472	14	60	107
DGN506140	14.0		0.5512	14	60	107
DGN506141	14.1		0.5551	16	65	115
DGN506142	14.2		0.5591	16	65	115
DGN506036F	14.288	9/16	0.5625	16	65	115
DGN506143	14.3		0.5630	16	65	115
DGN506144	14.4		0.5669	16	65	115
DGN506145	14.5		0.5708	16	65	115
DGN506146	14.6		0.5748	16	65	115
DGN506037F	14.68	37/64	0.5781	16	65	115
DGN506147	14.7		0.5787	16	65	115
DGN506148	14.8		0.5827	16	65	115
DGN506149	14.9		0.5866	16	65	115
DGN506150	15.0		0.5905	16	65	115
DGN506151	15.1		0.5945	16	65	115
DGN506152	15.2		0.5984	16	65	115
DGN506153	15.3		0.6024	16	65	115
DGN506154	15.4		0.6063	16	65	115
DGN506155	15.5		0.6102	16	65	115
DGN506156	15.6		0.6142	16	65	115
DGN506157	15.7		0.6181	16	65	115
DGN506158	15.8		0.6220	16	65	115
DGN506040F	15.875	5/8	0.6250	16	65	115
DGN506159	15.9		0.6260	16	65	115
DGN506160	16		0.6299	16	65	115
DGN506165	16.5		0.6495	18	73	123
DGN506042F	16.67	21/32	0.6563	18	73	123
DGN506170	17.0		0.6692	18	73	123
DGN506175	17.5		0.6889	18	73	123
DGN5061761	17.61		0.6932	18	73	123
DGN5061773	17.73		0.6980	18	73	123
DGN506180	18.0		0.7087	18	73	123
DGN506185	18.5		0.7283	20	79	131
DGN5061864	18.64		0.7339	20	79	131
DGN506190	19.0		0.7480	20	79	131
DGN506048F	19.05	3/4	0.7500	20	79	131
DGN506195	19.5		0.7676	20	79	131
DGN5061966	19.66		0.7740	20	79	131
DGN5061973	19.73		0.7766	20	79	131
DGN506200	20.0		0.7874	20	79	131

◎ : Excellent ○ : Good

ISO	P																			
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											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																		○			

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Z-COATED SOLID CARBIDE DREAM DRILLS

PRO with Coolant Holes (5XD)

NEW **DGN508 SERIES**

- Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30-50), Cast Iron
- Wave shape cutting edge to improve chip formation for low cutting force
- Helical thinning for low thrust, stable torque and good chip breakage
- Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.16

LONG 5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN508010	1.0		0.0394	3	8	55
DGN508011	1.1		0.0433	3	12	55
DGN508012	1.2		0.0472	3	12	55
DGN508013	1.3		0.0512	3	12	55
DGN508014	1.4		0.0551	3	12	55
DGN508015	1.5		0.0591	3	16	55
DGN508004F	1.588	1/16	0.0625	3	16	55
DGN508016	1.6		0.0630	3	16	55
DGN508017	1.7		0.0669	3	16	55
DGN508018	1.8		0.0709	3	16	55
DGN508019	1.9		0.0748	3	16	55
DGN508005F	1.984	5/64	0.0781	3	16	55
DGN508020	2.0		0.0787	4	21	57
DGN508021	2.1		0.0827	4	21	57
DGN508022	2.2		0.0866	4	21	57
DGN508023	2.3		0.0906	4	21	57
DGN508006F	2.381	3/32	0.0938	4	21	57
DGN508024	2.4		0.0945	4	21	57
DGN508025	2.5		0.0984	4	21	57
DGN508026	2.6		0.1024	4	21	57
DGN508027	2.7		0.1063	4	21	57
DGN508007F	2.778	7/64	0.1094	4	21	57
DGN508028	2.8		0.1102	4	21	57
DGN508029	2.9		0.1142	4	21	57
DGN508030	3.0		0.1181	6	28	66
DGN508031	3.1		0.1220	6	28	66

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN508008F	3.175	1/8	0.1250	6	28	66
DGN508032	3.2		0.1260	6	28	66
DGN508033	3.3		0.1299	6	28	66
DGN508034	3.4		0.1339	6	28	66
DGN508035	3.5		0.1378	6	28	66
DGN508009F	3.572	9/64	0.1406	6	28	66
DGN508036	3.6		0.1417	6	28	66
DGN508037	3.7		0.1457	6	28	66
DGN508038	3.8		0.1496	6	36	74
DGN508039	3.9		0.1535	6	36	74
DGN508010F	3.969	5/32	0.1563	6	36	74
DGN508040	4.0		0.1575	6	36	74
DGN508020G	4.09	#20	0.1610	6	36	74
DGN508041	4.1		0.1614	6	36	74
DGN508042	4.2		0.1654	6	36	74
DGN508043	4.3		0.1693	6	36	74
DGN508011F	4.366	11/64	0.1719	6	36	74
DGN508044	4.4		0.1732	6	36	74
DGN508045	4.5		0.1772	6	36	74
DGN508046	4.6		0.1811	6	36	74
DGN508047	4.7		0.1850	6	36	74
DGN508012F	4.763	3/16	0.1875	6	44	82
DGN508048	4.8		0.1890	6	44	82
DGN508049	4.9		0.1929	6	44	82
DGN508050	5.0		0.1969	6	44	82
DGN508051	5.1		0.2008	6	44	82

▶ 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											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																		○			

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Z-COATED SOLID CARBIDE DREAM DRILLS

PRO with Coolant Holes (5XD)

NEW **DGN508 SERIES**

- Drilling for Carbon Steels, Alloy Steels (HB225-325), Pre-hardened Steels (HRc30-50), Cast Iron
- Wave shape cutting edge to improve chip formation for low cutting force
- Helical thinning for low thrust, stable torque and good chip breakage
- Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.16

LONG 5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN508013F	5.159	13/64	0.2031	6	44	82
DGN508052	5.2		0.2047	6	44	82
DGN508053	5.3		0.2087	6	44	82
DGN508054	5.4		0.2126	6	44	82
DGN508003G	5.41	#3	0.2130	6	44	82
DGN508055	5.5		0.2165	6	44	82
DGN508014F	5.556	7/32	0.2188	6	44	82
DGN508056	5.6		0.2205	6	44	82
DGN508057	5.7		0.2244	6	44	82
DGN508058	5.8		0.2283	6	44	82
DGN508059	5.9		0.2323	6	44	82
DGN508015F	5.953	15/64	0.2344	6	44	82
DGN508060	6.0		0.2362	6	44	82
DGN508061	6.1		0.2402	8	53	91
DGN508062	6.2		0.2441	8	53	91
DGN508063	6.3		0.2480	8	53	91
DGN508016F	6.350	1/4	0.2500	8	53	91
DGN508064	6.4		0.2520	8	53	91
DGN508065	6.5		0.2559	8	53	91
DGN508006L	6.528	F	0.2570	8	53	91
DGN508066	6.6		0.2598	8	53	91
DGN508067	6.7		0.2638	8	53	91
DGN508017F	6.747	17/64	0.2656	8	53	91
DGN508068	6.8		0.2677	8	53	91
DGN508069	6.9		0.2717	8	53	91
DGN508070	7.0		0.2756	8	53	91

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN508071	7.1		0.2795	8	53	91
DGN508018F	7.144	9/32	0.2812	8	53	91
DGN508072	7.2		0.2835	8	53	91
DGN508073	7.3		0.2874	8	53	91
DGN508074	7.4		0.2913	8	53	91
DGN508075	7.5		0.2953	8	53	91
DGN508019F	7.541	19/64	0.2969	8	53	91
DGN508076	7.6		0.2992	8	53	91
DGN508077	7.7		0.3031	8	53	91
DGN508078	7.8		0.3071	8	53	91
DGN508079	7.9		0.3110	8	53	91
DGN508020F	7.938	5/16	0.3125	8	53	91
DGN508080	8.0		0.3150	8	53	91
DGN508081	8.1		0.3189	10	61	103
DGN508082	8.2		0.3228	10	61	103
DGN508083	8.3		0.3268	10	61	103
DGN508021F	8.334	21/64	0.3281	10	61	103
DGN508084	8.4		0.3307	10	61	103
DGN508017L	8.430	Q	0.3320	10	61	103
DGN508085	8.5		0.3346	10	61	103
DGN508086	8.6		0.3386	10	61	103
DGN508087	8.7		0.3425	10	61	103
DGN508022F	8.731	11/32	0.3438	10	61	103
DGN508088	8.8		0.3465	10	61	103
DGN508089	8.9		0.3504	10	61	103
DGN508090	9.0		0.3543	10	61	103

▶ 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											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																		○			

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Z-COATED SOLID CARBIDE DREAM DRILLS

PRO with Coolant Holes (5XD)

NEW **DGN508 SERIES**

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- Wave shape cutting edge to improve chip formation for low cutting force
- Helical thinning for low thrust, stable torque and good chip breakage
- Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.16

LONG 5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN508091	9.1		0.3583	10	61	103
DGN508023F	9.128	23/64	0.3594	10	61	103
DGN508092	9.2		0.3622	10	61	103
DGN508093	9.3		0.3661	10	61	103
DGN508094	9.4		0.3701	10	61	103
DGN508095	9.5		0.3740	10	61	103
DGN508024F	9.525	3/8	0.3750	10	61	103
DGN508096	9.6		0.3780	10	61	103
DGN508097	9.7		0.3819	10	61	103
DGN508098	9.8		0.3858	10	61	103
DGN508099	9.9		0.3898	10	61	103
DGN508025F	9.922	25/64	0.3906	10	61	103
DGN508100	10.0		0.3937	10	61	103
DGN508101	10.1		0.3976	12	71	118
DGN508102	10.2		0.4016	12	71	118
DGN508103	10.3		0.4055	12	71	118
DGN508026F	10.319	13/32	0.4062	12	71	118
DGN508104	10.4		0.4094	12	71	118
DGN508105	10.5		0.4134	12	71	118
DGN508106	10.6		0.4173	12	71	118
DGN508107	10.7		0.4212	12	71	118
DGN508027F	10.716	27/64	0.4219	12	71	118
DGN508108	10.8		0.4252	12	71	118
DGN508109	10.9		0.4291	12	71	118
DGN508110	11.0		0.4330	12	71	118
DGN508111	11.1		0.4370	12	71	118

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN508028F	11.113	7/16	0.4375	12	71	118
DGN508112	11.2		0.4409	12	71	118
DGN508113	11.3		0.4448	12	71	118
DGN508114	11.4		0.4488	12	71	118
DGN508115	11.5		0.4527	12	71	118
DGN508029F	11.509	29/64	0.4531	12	71	118
DGN508116	11.6		0.4566	12	71	118
DGN508117	11.7		0.4606	12	71	118
DGN508118	11.8		0.4645	12	71	118
DGN508119	11.9		0.4685	12	71	118
DGN508030F	11.906	15/32	0.4688	12	71	118
DGN508120	12.0		0.4724	12	71	118
DGN508121	12.1		0.4764	14	77	124
DGN508123	12.3		0.4843	14	77	124
DGN508031F	12.303	31/64	0.4844	14	77	124
DGN508124	12.4		0.4882	14	77	124
DGN508125	12.5		0.4921	14	77	124
DGN508126	12.6		0.4961	14	77	124
DGN508032F	12.7	1/2	0.5000	14	77	124
DGN508129	12.9		0.5079	14	77	124
DGN508130	13.0		0.5118	14	77	124
DGN508132	13.2		0.5197	14	77	124
DGN508133	13.3		0.5236	14	77	124
DGN508134	13.4		0.5276	14	77	124
DGN508034F	13.49	17/32	0.5312	14	77	124
DGN508135	13.5		0.5314	14	77	124

▶ 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											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																		○			

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Z-COATED SOLID CARBIDE DREAM DRILLS

PRO with Coolant Holes (5XD)

NEW DGN508 SERIES

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- Extremely high hardness and heat resistance due to YG-1 special Z-Coating technology

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.16

LONG 5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN508140	14.0		0.5512	14	77	124
DGN508141	14.1		0.5551	16	83	133
DGN508036F	14.288	9/16	0.5625	16	83	133
DGN508143	14.3		0.5630	16	83	133
DGN508144	14.4		0.5669	16	83	133
DGN508145	14.5		0.5708	16	83	133
DGN508146	14.6		0.5748	16	83	133
DGN508149	14.9		0.5866	16	83	133
DGN508150	15.0		0.5905	16	83	133
DGN508153	15.3		0.6024	16	83	133
DGN508154	15.4		0.6063	16	83	133
DGN508155	15.5		0.6102	16	83	133
DGN508156	15.6		0.6142	16	83	133
DGN508157	15.7		0.6181	16	83	133

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
Z-Coating	D1			D2	L1	L2
DGN508040F	15.875	5/8	0.6250	16	83	133
DGN508159	15.9		0.6260	16	83	133
DGN508160	16.0		0.6299	16	83	133
DGN508165	16.5		0.6495	18	93	143
DGN508042F	16.67	21/32	0.6563	18	93	143
DGN508170	17.0		0.6692	18	93	143
DGN508175	17.5		0.6889	18	93	143
DGN508180	18.0		0.7087	18	93	143
DGN508185	18.5		0.7283	20	101	153
DGN508190	19.0		0.7480	20	101	153
DGN508048F	19.05	3/4	0.7500	20	101	153
DGN508195	19.5		0.7676	20	101	153
DGN508200	20.0		0.7874	20	101	153

◎ : 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											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																		○			

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DGN506, DGN508 SERIES with COOLANT HOLES

ISO	VDI 3323	Material Description	SFM	Drill Diameter			SFM	Drill Diameter					
			1.0 ~ 2.9	METRIC	1.0	2.0	3.0 ~ 20.0	METRIC	3.0	-	4.0	-	5.0
			-	FRACTIONAL	-	-	1/8 ~ 3/4	FRACTIONAL	-	1/8	-	3/16	-
			.0394 ~ .0787	DECIMAL	.0394	.0787	.1181 ~ .7874	DECIMAL	.1181	.1250	.1575	.1875	.1969
P	2	Non-alloy steel	312	RPM	30240	15120	427	RPM	13790		10350	8280	
				FEED	.0012- .002	.002- .0028		FEED	.0024- .0047		.0031- .0055	.0055- .0079	
	3		312	RPM	30240	15120	427	RPM	13790		10350	8280	
				FEED	.0012- .002	.002- .0028		FEED	.0024- .0047		.0031- .0055	.0055- .0079	
	4		312	RPM	30240	15120	427	RPM	13790		10350	8280	
				FEED	.0012- .002	.002- .0028		FEED	.0016- .0039		.0028- .0051	.0039- .0063	
	5		279	RPM	27060	13530	361	RPM	11670		8750	7000	
				FEED	.0012- .002	.002- .0028		FEED	.0016- .0039		.0028- .0051	.0039- .0063	
	6	Low alloy steel	312	RPM	30240	15120	427	RPM	13790		10350	8280	
				FEED	.0012- .002	.002- .0028		FEED	.0024- .0047		.0031- .0055	.0055- .0079	
	7		279	RPM	27060	13530	361	RPM	11670		8750	7000	
				FEED	.0012- .002	.002- .0028		FEED	.0024- .0047		.0031- .0055	.0039- .0079	
	8		312	RPM	30240	15120	361	RPM	11670		8750	7000	
				FEED	.0008- .0016	.0012- .002		FEED	.0016- .0039		.0028- .0051	.0039- .0063	
	9		164	RPM	15920	7960	197	RPM	6370		4770	3820	
				FEED	.0008- .0016	.0012- .002		FEED	.0012- .0031		.002- .0043	.0031- .0055	
	10	High alloyed steel, and tool steel	230	RPM	22280	11140	295	RPM	9550		7160	5730	
				FEED	.0012- .002	.002- .0028		FEED	.0016- .0039		.0028- .0051	.0039- .0063	
	11		148	RPM	14320	7160	164	RPM	5310		3980	3180	
				FEED	.0008- .0016	.0012- .002		FEED	.0012- .0031		.002- .0043	.0031- .0055	
M	12	Stainless steel	246	RPM	23870	11940	311	RPM	10080		7560	6050	
				FEED	.0012- .002	.002- .0028		FEED	.0024- .0047		.0031- .0055	.0055- .0079	
	13		180	RPM	17510	8750	213	RPM	6900		5170	4140	
				FEED	.0008- .0016	.0012- .002		FEED	.0016- .0039		.0028- .0051	.0039- .0063	
K	15	Grey cast iron	312	RPM	30240	15120	427	RPM	13790		10350	8280	
				FEED	.0016- .0024	.0016- .0024		FEED	.0031- .0055		.0047- .0071	.0071- .0094	
	16		295	RPM	28650	14320	377	RPM	12200		9150	7320	
				FEED	.0016- .0024	.0016- .0024		FEED	.0024- .0047		.0031- .0055	.0055- .0079	
	17	Nodular cast iron	361	RPM	35010	17510	475	RPM	15380		11540	9230	
				FEED	.0016- .0024	.0016- .0024		FEED	.0031- .0055		.0047- .0071	.0071- .0094	
	18		246	RPM	23870	11940	312	RPM	10080		7560	6050	
				FEED	.0016- .0024	.0016- .0024		FEED	.0024- .0047		.0031- .0055	.0055- .0079	
	19	Malleable cast iron	279	RPM	27060	13530	361	RPM	11670		8750	7000	
				FEED	.0016- .0024	.0016- .0024		FEED	.0031- .0055		.0047- .0071	.0071- .0094	
	20		246	RPM	23870	11940	312	RPM	10080		7560	6050	
				FEED	.0012- .002	.002- .0028		FEED	.0024- .0047		.0031- .0055	.0055- .0079	
H	38	Hardened steel	99	RPM	11140	5570	99	RPM	3710		2790	2230	
				FEED	.0004- .0008	.0004- .0012		FEED	.0004- .0012		.0004- .0016	.0008- .002	

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SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

Drill Diameter													
6.0	-	-	8.0	-	10.0	12.0	-	14.0	-	-	16.0	18.0	-	20.0
-	1/4	5/16	-	3/8	-	-	1/2	-	9/16	5/8	-	-	3/4	-
.2362	.2500	.3125	.3150	.3750	.3937	.4724	.5000	.5512	.5625	.6250	.6299	.7087	.7500	.7874
6900		5170		4140		3450	3270	2960		2590		2300	2180	2070
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0087- .0126	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
6900		5170		4140		3450	3270	2960		2590		2300	2180	2070
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0087- .0126	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
6900		5170		4140		3450	3270	2960		2590		2300	2180	2070
.0047- .0071		.0055- .0079		.0071- .0094		.0055- .0094	.0063- .0102	.0063- .0102		.0071- .011		.0079- .0118	.0079- .0118	.0087- .0126
5840		4380		3500		2920	2760	2500		2190		1950	1840	1750
.0047- .0071		.0055- .0079		.0071- .0094		.0055- .0094	.0063- .0102	.0063- .0102		.0071- .011		.0079- .0118	.0079- .0118	.0087- .0126
6900		5170		4140		3450	3270	2960		2590		2300	2180	2070
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0087- .0126	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
5840		4380		3500		2920	2760	2500		2190		1950	1840	1750
.0047- .0094		.0063- .011		.0079- .0118		.0083- .0118	.0087- .0138	.0087- .0138		.0098- .0142		.011- .015	.011- .015	.0118- .0157
5840		4380		3500		2920	2760	2500		2190		1950	1840	1750
.0047- .0071		.0055- .0079		.0071- .0094		.0055- .0094	.0063- .0102	.0063- .0102		.0071- .011		.0079- .0118	.0079- .0118	.0087- .0126
3180		2390		1910		1590	1510	1360		1190		1060	1010	950
.0039- .0063		.0047- .0071		.0055- .0079		.0047- .0087	.0051- .0091	.0051- .0091		.0055- .0094		.0063- .0102	.0063- .0102	.0071- .011
4770		3580		2860		2390	2260	2050		1790		1590	1510	1430
.0047- .0071		.0055- .0079		.0071- .0094		.0055- .0094	.0063- .0102	.0063- .0102		.0071- .011		.0079- .0118	.0079- .0118	.0087- .0126
2650		1990		1590		1330	1260	1140		990		880	840	800
.0039- .0063		.0047- .0071		.0055- .0079		.0047- .0087	.0051- .0091	.0051- .0091		.0055- .0094		.0063- .0102	.0063- .0102	.0071- .011
5040		3780		3020		2520	2380	2160		1890		1680	1590	1510
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0087- .0126	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
3450		2590		2070		1720	1630	1480		1290		1150	1090	1030
.0047- .0071		.0055- .0079		.0071- .0094		.0055- .0094	.0063- .0102	.0063- .0102		.0071- .011		.0079- .0118	.0079- .0118	.0087- .0126
6900		5170		4140		3450	3270	2960		2590		2300	2180	2070
.0055- .0102		.0063- .011		.0094- .0134		.0102- .0142	.011- .015	.011- .015		.0118- .0157		.0126- .0165	.0126- .0165	.0134- .0173
6100		4580		3660		3050	2890	2610		2290		2030	1930	1830
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0087- .0126	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
7690		5770		4620		3850	3630	3300		2880		2560	2420	2310
.0055- .0102		.0063- .011		.0094- .0134		.0102- .0142	.011- .015	.011- .015		.0118- .0157		.0126- .0165	.0126- .0165	.0134- .0173
5040		3780		3020		2520	2390	2160		1890		1680	1590	1510
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0087- .0126	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
5840		4380		3500		2920	2760	2500		2190		1950	1840	1750
.0055- .0102		.0063- .011		.0094- .0134		.0102- .0142	.011- .015	.011- .015		.0118- .0157		.0126- .0165	.0126- .0165	.0134- .0173
5040		3780		3020		2520	2390	2160		1890		1680	1590	1510
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0087- .0126	.0087- .0126		.0094- .0134		.011- .015	.011- .015	.0118- .0157
1860		1390		1110		930	880	800		700		620	580	560
.0012- .0024		.0012- .0024		.0016- .0028		.0016- .0031	.0016- .0031	.002- .0035		.002- .0035		.002- .0039	.002- .0039	.002- .0039

▶ Recommend to reduce the feed rate as following
Feed 100% : DGN506(3×D) **Feed 80%** : DGN508(5×D)

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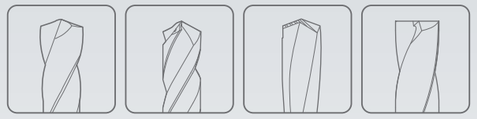
Global Cutting Tool Leader **YG-1**



DREAM DRILLS

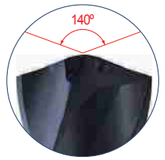
Leading Through Innovation

SOLID CARBIDE

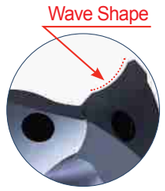
DREAM DRILLS GENERAL

- For General Purpose (HRc30 to HRc50)

DREAM DRILLS GENERAL

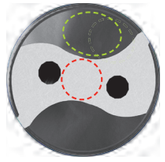


140 Degree Point Angle
for good centering and low thrust

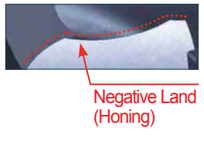


Wave shape Cutting Edge
will allow low thrust , stable torque and long tool life

Radius Thinning
for Self Centering and Chip Breaking

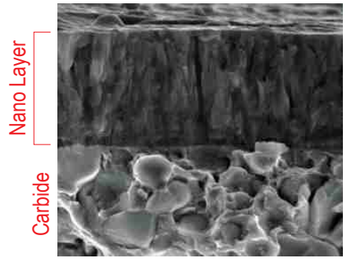


Optimized flute shape
for strength of drill and smooth chip evacuation



Negative land on the cutting edge
for Reliable Tool Life

TiAlN Coating
(Upgraded **Ti**tanium **Al**uminum **N**itride :
nano-Layer coating)
- Higher wear resistance and Lower friction
- Higher Cutting Speed and Feed
- Improved drill Hole Quality



Special surface treatment after coating
to reduce friction and better chip flow.

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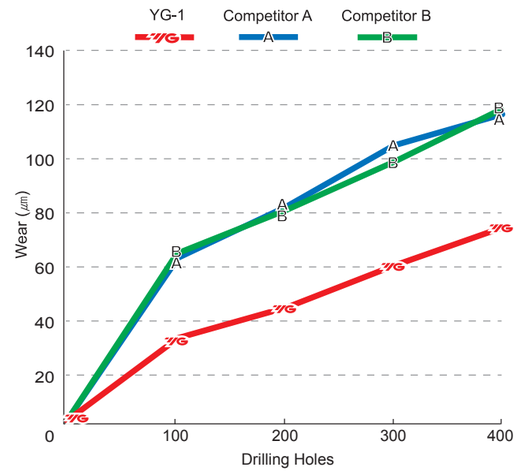
CASE STUDY

▶ SOLID CARBIDE DREAM DRILLS - General with Coolant Holes

CUTTING CONDITION	
Tool	DH408015 (Dream Drill with Coolant Holes)
Size	Ø1.5 x Ø3 x 15 x 55
Work Material	• AISI : H13 • JIS : SKD61 • DIN : X40GrMoV51 • WR : 1.2344 (HRc30)
RPM	14,856 rev./min.
Feed	.0019 inch/rev.
Drilling Depth	.29" (5xD)
Coolant	Wet Cut
Machine	Machining Center



YG-1 Total Drilling 400 Holes

Competitor A Total Drilling 400 Holes

Competitor B Total Drilling 400 Holes

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (3XD)

DH416 SERIES
DH711 SERIES

- ▶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
- ▶Tolerance : Dia. Tolerance ØD1 : See page 141
  Shank Tolerance ØD2: -.0001 -.0005

CARBIDE | h6 | 140° | 20 bar | P.50

SHORT
3×D

Unit : inch

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH711008	1/8	.1250	3/16	1.102	2.992
0081BTF	1/8	.1250	15/64	1.102	2.992
DH711011	11/64	.1719	3/16	1.417	3.386
0111BTF	11/64	.1719	15/64	1.417	3.386
DH711012	3/16	.1875	3/16	1.575	3.543
0121BTF	3/16	.1875	15/64	1.575	3.543
0131BTF	13/64	.2031	15/64	1.082	3.228
DH711013	13/64	.2031	1/4	1.082	3.228
0141BTF	7/32	.2188	15/64	1.181	3.228
DH711014	7/32	.2188	1/4	1.181	3.228
0151BTF	15/64	.2344	15/64	1.181	3.228
DH711015	15/64	.2344	1/4	1.181	3.228
DH711016	1/4	.2500	1/4	1.279	3.465
0161BTF	1/4	.2500	17/64	1.279	3.465
2061BTF	F	.2570	17/64	1.279	3.465
DH711206	F	.2570	5/16	1.279	3.465
0171BTF	17/64	.2656	17/64	1.378	3.465
DH711017	17/64	.2656	5/16	1.378	3.465
2091BTF	I	.2720	.2720	1.378	3.465
DH711209	I	.2720	5/16	1.378	3.465
0181BTF	9/32	.2812	5/16	1.476	3.701
0191BTF	19/64	.2969	5/16	1.476	3.701
0201BTF	5/16	.3125	5/16	1.575	3.701
0211BTF	21/64	.3281	11/32	1.673	3.937
DH711021	21/64	.3281	3/8	1.673	3.937
2171BTF	Q	.3320	11/32	1.673	3.937
DH711217	Q	.3320	3/8	1.673	3.937
0221BTF	11/32	.3438	11/32	1.772	3.937
DH711022	11/32	.3438	3/8	1.772	3.937
DH711023	23/64	.3594	3/8	1.87	4.174
0231BTF	23/64	.3594	25/64	1.870	4.174
DH711221	U	.3680	3/8	1.87	4.174
2211BTF	U	.3680	25/64	1.870	4.174
DH711024	3/8	.3750	3/8	1.969	4.174
0241BTF	3/8	.3750	25/64	1.969	4.174
0251BTF	25/64	.3906	25/64	1.969	4.174
DH711025	25/64	.3906	7/16	1.969	4.174
0261BTF	13/32	.4062	27/64	2.067	4.567
DH711026	13/32	.4062	7/16	2.067	4.567
0271BTF	27/64	.4219	27/64	2.165	4.567
DH711027	27/64	.4219	7/16	2.165	4.567
DH711028	7/16	.4375	7/16	2.264	4.803
0281BTF	7/16	.4375	15/32	2.264	4.803
0291BTF	29/64	.4531	15/32	2.264	4.803
DH711029	29/64	.4531	1/2	2.264	4.803
0301BTF	15/32	.4688	15/32	2.362	4.803
DH711030	15/32	.4688	1/2	2.362	4.803
0311BTF	31/64	.4844	1/2	2.461	5.039
0321BTF	1/2	.5000	1/2	2.559	5.039
0331BTF	33/64	.5156	35/64	2.657	5.276
DH711033	33/64	.5156	9/16	2.657	5.276
0341BTF	17/32	.5312	35/64	2.756	5.276

▶ 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											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																		○			

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (3XD)

DH416 SERIES
DH711 SERIES

- ▶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
- ▶Tolerance : Dia. Tolerance ØD1 : See page 141
  Shank Tolerance ØD2: -.0001 -.0005

CARBIDE | h6 | 140° | 20 bar | P.50

SHORT
3×D

Unit : inch

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH711034	17/32	.5312	9/16	2.756	5.276
0351BTF	35/64	.5469	35/64	2.756	5.276
DH711035	35/64	.5469	9/16	2.756	5.276
DH711036	9/16	.5625	9/16	2.854	5.512
0361BTF	9/16	.5625	37/64	2.854	5.512
0371BTF	37/64	.5781	37/64	2.953	5.512
DH711037	37/64	.5781	5/8	2.953	5.512
0381BTF	19/32	.5937	5/8	3.051	5.709
0391BTF	39/64	.6094	5/8	3.051	5.709
0401BTF	5/8	.6250	5/8	3.150	5.709

▶ 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											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																		○			

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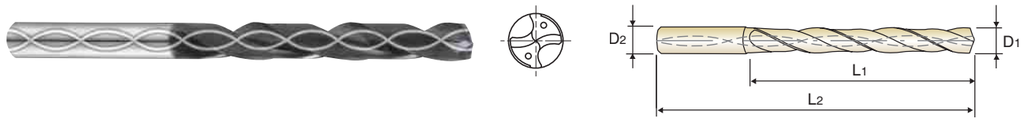
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (5XD)

DH418 SERIES
DH712 SERIES

- ▶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
- ▶Tolerance : Dia. Tolerance ØD1
  Shank Tolerance ØD2: -.0001 -.0005



CARBIDE | h6 | 140° | 20 bar | P.50

LONG
5× D

Unit : inch

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
0131CTF	13/64	.2031	15/64	1-3/4	3-15/16
DH712013	13/64	.2031	1/4	1-3/4	3-15/16
0141CTF	7/32	.2188	15/64	1-57/64	3-15/16
DH712014	7/32	.2188	1/4	1-57/64	3-15/16
0151CTF	15/64	.2344	15/64	1-57/64	3-15/16
DH712015	15/64	.2344	1/4	1-57/64	3-15/16
DH712016	1/4	.2500	1/4	2-3/64	4-19/64
0161CTF	1/4	.2500	17/64	2-3/64	4-19/64
2061CTF	F	.2570	17/64	2-13/64	4-19/64
DH712206	F	.2570	5/16	2-13/64	4-19/64
0171CTF	17/64	.2656	17/64	2-13/64	4-19/64
DH712017	17/64	.2656	5/16	2-13/64	4-19/64
2091CTF	I	.2720	.2720	2-13/64	4-19/64
DH712209	I	.2720	5/16	2-13/64	4-19/64
0181CTF	9/32	.2812	5/16	2-23/64	4-41/64
0191CTF	19/64	.2969	5/16	2-33/64	4-41/64
0201CTF	5/16	.3125	5/16	2-33/64	4-41/64
0211CTF	21/64	.3281	11/32	2-43/64	5
DH712021	21/64	.3281	3/8	2-43/64	5
2171CTF	Q	.3320	11/32	2-43/64	5
DH712217	Q	.3320	3/8	2-43/64	5
0221CTF	11/32	.3438	11/32	2-27/32	5
DH712022	11/32	.3438	3/8	2-27/32	5
DH712023	23/64	.3594	3/8	3	5-23/64
0231CTF	23/64	.3594	25/64	3	5-23/64
DH712221	U	.3680	3/8	3	5-23/64

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
2211CTF	U	.3680	25/64	3	5-23/64
DH712024	3/8	.3750	3/8	3-5/32	5-23/64
0241CTF	3/8	.3750	25/64	3-5/32	5-23/64
0251CTF	25/64	.3906	25/64	3-5/32	5-23/64
DH712025	25/64	.3906	7/16	3-5/32	5-23/64
0261CTF	13/32	.4062	27/64	3-5/16	5-7/8
DH712026	13/32	.4062	7/16	3-5/16	5-7/8
0271CTF	27/64	.4219	27/64	3-15/32	5-7/8
DH712027	27/64	.4219	7/16	3-15/32	5-7/8
DH712028	7/16	.4375	7/16	3-5/8	6-7/32
0281CTF	7/16	.4375	15/32	3-5/8	6-7/32
0291CTF	29/64	.4531	15/32	3-25/32	6-7/32
DH712029	29/64	.4531	1/2	3-25/32	6-7/32
0301CTF	15/32	.4688	15/32	3-25/32	6-7/32
DH712030	15/32	.4688	1/2	3-25/32	6-7/32
0311CTF	31/64	.4844	1/2	3-15/16	6-37/64
0321CTF	1/2	.5000	1/2	4-3/32	6-37/64
0291BTF	29/64	.4531	15/32	2.264	4.803
DH711029	29/64	.4531	1/2	2.264	4.803
0301BTF	15/32	.4688	15/32	2.362	4.803
DH711030	15/32	.4688	1/2	2.362	4.803
0311BTF	31/64	.4844	1/2	2.461	5.039
0321BTF	1/2	.5000	1/2	2.559	5.039

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

ISO	P																			
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											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																		○			

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (3XD)

DH406 SERIES

- ▶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

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.50

SHORT
3× D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH406030	3.0		.1181	6	20	62
DH406031	3.1		.1220	6	20	62
DH406008F	3.175	1/8	.1250	6	20	62
DH406032	3.2		.1260	6	20	62
DH406033	3.3		.1299	6	20	62
DH406034	3.4		.1339	6	20	62
DH406035	3.5		.1378	6	20	62
DH406009F	3.572	9/64	.1406	6	20	62
DH406036	3.6		.1417	6	20	62
DH406037	3.7		.1457	6	20	62
DH406038	3.8		.1496	6	24	66
DH406039	3.9		.1535	6	24	66
DH406010F	3.969	5/32	.1563	6	24	66
DH406040	4.0		.1575	6	24	66
DH406041	4.1		.1614	6	24	66
DH406042	4.2		.1654	6	24	66
DH406043	4.3		.1693	6	24	66
DH406011F	4.366	11/64	.1719	6	24	66
DH406044	4.4		.1732	6	24	66
DH406045	4.5		.1772	6	24	66
DH406046	4.6		.1811	6	24	66
DH406047	4.7		.1850	6	24	66
DH406012F	4.763	3/16	.1875	6	24	66
DH406048	4.8		.1890	6	28	66
DH406049	4.9		.1929	6	28	66
DH406050	5.0		.1969	6	28	66

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH406051	5.1		.2008	6	28	66
DH406013F	5.159	13/64	.2031	6	28	66
DH406052	5.2		.2047	6	28	66
DH406053	5.3		.2087	6	28	66
DH406054	5.4		.2126	6	28	66
DH406055	5.5		.2165	6	28	66
DH406014F	5.556	7/32	.2188	6	28	66
DH406056	5.6		.2205	6	28	66
DH406057	5.7		.2244	6	28	66
DH406058	5.8		.2283	6	28	66
DH406059	5.9		.2323	6	28	66
DH406015F	5.953	15/64	.2344	6	28	66
DH406060	6.0		.2362	6	28	66
DH406061	6.1		.2402	8	34	79
DH406062	6.2		.2441	8	34	79
DH406063	6.3		.2480	8	34	79
DH406016F	6.350	1/4	.2500	8	34	79
DH406064	6.4		.2520	8	34	79
DH406065	6.5		.2559	8	34	79
DH406006L	6.528	F	.2570	8	34	79
DH406066	6.6		.2598	8	34	79
DH406067	6.7		.2638	8	34	79
DH406017F	6.747	17/64	.2656	8	34	79
DH406068	6.8		.2677	8	34	79
DH406069	6.9		.2717	8	34	79
DH406009L	6.909	I	.2720	8	34	79

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P																			
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											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																		○			

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (3XD)

DH406 SERIES

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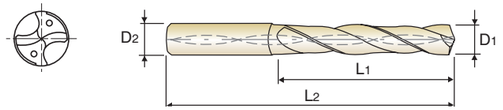

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.50

SHORT 3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH406070	7.0		.2756	8	34	79
DH406071	7.1		.2795	8	41	79
DH406018F	7.144	9/32	.2812	8	41	79
DH406072	7.2		.2835	8	41	79
DH406073	7.3		.2874	8	41	79
DH406074	7.4		.2913	8	41	79
DH406075	7.5		.2953	8	41	79
DH406019F	7.541	19/64	.2969	8	41	79
DH406076	7.6		.2992	8	41	79
DH406077	7.7		.3031	8	41	79
DH406078	7.8		.3071	8	41	79
DH406079	7.9		.3110	8	41	79
DH406020F	7.938	5/16	.3125	8	41	79
DH406080	8.0		.3150	8	41	79
DH406081	8.1		.3189	10	47	89
DH406082	8.2		.3228	10	47	89
DH406083	8.3		.3268	10	47	89
DH406021F	8.334	21/64	.3281	10	47	89
DH406084	8.4		.3307	10	47	89
DH406017L	8.433	Q	.3320	10	47	89
DH406085	8.5		.3346	10	47	89
DH406086	8.6		.3386	10	47	89
DH406087	8.7		.3425	10	47	89
DH406022F	8.731	11/32	.3438	10	47	89
DH406088	8.8		.3465	10	47	89
DH406089	8.9		.3504	10	47	89

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH406090	9.0		.3543	10	47	89
DH406091	9.1		.3583	10	47	89
DH406023F	9.128	23/64	.3594	10	47	89
DH406092	9.2		.3622	10	47	89
DH406093	9.3		.3661	10	47	89
DH406021L	9.347	U	.3680	10	47	89
DH406094	9.4		.3701	10	47	89
DH406095	9.5		.3740	10	47	89
DH406024F	9.525	3/8	.3750	10	47	89
DH406096	9.6		.3780	10	47	89
DH406097	9.7		.3819	10	47	89
DH406098	9.8		.3858	10	47	89
DH406099	9.9		.3898	10	47	89
DH406025F	9.922	25/64	.3906	10	47	89
DH406100	10.0		.3937	10	47	89
DH406101	10.1		.3976	12	55	102
DH406102	10.2		.4016	12	55	102
DH406103	10.3		.4055	12	55	102
DH406026F	10.319	13/32	.4062	12	55	102
DH406104	10.4		.4094	12	55	102
DH406105	10.5		.4134	12	55	102
DH406106	10.6		.4173	12	55	102
DH406107	10.7		.4212	12	55	102
DH406027F	10.716	27/64	.4219	12	55	102
DH406108	10.8		.4252	12	55	102
DH406109	10.9		.4291	12	55	102

▶ 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											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																		○			

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (3XD)
DH406 SERIES

▶Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron
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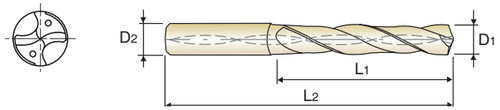

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.50

SHORT 3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH406110	11.0		.4330	12	55	102
DH406111	11.1		.4370	12	55	102
DH406028F	11.113	7/16	.4375	12	55	102
DH406112	11.2		.4409	12	55	102
DH406113	11.3		.4448	12	55	102
DH406114	11.4		.4488	12	55	102
DH406115	11.5		.4527	12	55	102
DH406029F	11.509	29/64	.4531	12	55	102
DH406116	11.6		.4566	12	55	102
DH406117	11.7		.4606	12	55	102
DH406118	11.8		.4645	12	55	102
DH406119	11.9		.4685	12	55	102
DH406030F	11.906	15/32	.4688	12	55	102
DH406120	12.0		.4724	12	55	102
DH406121	12.1		.4764	14	60	107
DH406122	12.2		.4803	14	60	107
DH406123	12.3		.4843	14	60	107
DH406031F	12.303	31/64	.4844	14	60	107
DH406124	12.4		.4882	14	60	107
DH406125	12.5		.4921	14	60	107
DH406126	12.6		.4961	14	60	107
DH406032F	12.7	1/2	.5000	14	60	107
DH406128	12.8		.5039	14	60	107
DH406129	12.9		.5079	14	60	107
DH406130	13.0		.5118	14	60	107
DH406131	13.1		.5157	14	60	107

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH406132	13.2		.5197	14	60	107
DH406133	13.3		.5236	14	60	107
DH406134	13.4		.5276	14	60	107
DH406135	13.5		.5314	14	60	107
DH406136	13.6		.5354	14	60	107
DH406137	13.7		.5394	14	60	107
DH406138	13.8		.5433	14	60	107
DH406139	13.9		.5472	14	60	107
DH406140	14.0		.5512	14	60	107
DH406141	14.1		.5551	16	65	115
DH406142	14.2		.5591	16	65	115
DH406036F	14.288	9/16	.5625	16	65	115
DH406143	14.3		.5630	16	65	115
DH406144	14.4		.5669	16	65	115
DH406145	14.5		.5708	16	65	115
DH406146	14.6		.5748	16	65	115
DH406147	14.7		.5787	16	65	115
DH406148	14.8		.5827	16	65	115
DH406149	14.9		.5866	16	65	115
DH406150	15.0		.5905	16	65	115
DH406151	15.1		.5945	16	65	115
DH406152	15.2		.5984	16	65	115
DH406153	15.3		.6024	16	65	115
DH406154	15.4		.6063	16	65	115
DH406155	15.5		.6102	16	65	115
DH406156	15.6		.6142	16	65	115

▶ 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											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																		○			

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (3XD)

DH406 SERIES

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DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.50

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH406157	15.7		.6181	16	65	115
DH406158	15.8		.6220	16	65	115
DH406040F	15.875	5/8	.6250	16	65	115
DH406159	15.9		.6260	16	65	115
DH406160	16.0		.6299	16	65	115
DH406161	16.1		.6339	18	73	123
DH406162	16.2		.6378	18	73	123
DH406163	16.3		.6417	18	73	123
DH406164	16.4		.6457	18	73	123
DH406165	16.5		.6495	18	73	123
DH406166	16.6		.6535	18	73	123
DH406167	16.7		.6575	18	73	123
DH406168	16.8		.6614	18	73	123
DH406169	16.9		.6654	18	73	123
DH406170	17.0		.6692	18	73	123
DH406171	17.1		.6732	18	73	123
DH406172	17.2		.6772	18	73	123
DH406173	17.3		.6811	18	73	123
DH406174	17.4		.6850	18	73	123
DH406044F	17.463	11/16	.6875	18	73	123
DH406175	17.5		.6889	18	73	123
DH406176	17.6		.6929	18	73	123
DH406177	17.7		.6968	18	73	123
DH406178	17.8		.7008	18	73	123
DH406179	17.9		.7047	18	73	123
DH406180	18.0		.7087	18	73	123

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH406181	18.1		.7126	20	79	131
DH406182	18.2		.7165	20	79	131
DH406183	18.3		.7205	20	79	131
DH406184	18.4		.7244	20	79	131
DH406185	18.5		.7283	20	79	131
DH406186	18.6		.7323	20	79	131
DH406187	18.7		.7362	20	79	131
DH406188	18.8		.7402	20	79	131
DH406189	18.9		.7441	20	79	131
DH406190	19.0		.7480	20	79	131
DH406048F	19.050	3/4	.7500	20	79	131
DH406191	19.1		.7520	20	79	131
DH406192	19.2		.7559	20	79	131
DH406193	19.3		.7598	20	79	131
DH406194	19.4		.7638	20	79	131
DH406195	19.5		.7676	20	79	131
DH406196	19.6		.7717	20	79	131
DH406197	19.7		.7756	20	79	131
DH406198	19.8		.7795	20	79	131
DH406199	19.9		.7835	20	79	131
DH406200	20.0		.7874	20	79	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											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																		○			

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (5XD)

DH408 SERIES

- ▶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

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.50

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH408010	1.0		.0394	3	8	55
DH408011	1.1		.0433	3	12	55
DH408012	1.2		.0472	3	12	55
DH408013	1.3		.0512	3	12	55
DH408014	1.4		.0551	3	12	55
DH408015	1.5		.0591	3	16	55
DH408004F	1.588	1/16	.0625	3	16	55
DH408016	1.6		.0630	3	16	55
DH408017	1.7		.0669	3	16	55
DH408018	1.8		.0709	3	16	55
DH408019	1.9		.0748	3	16	55
DH408005F	1.984	5/64	.0781	3	16	55
DH408020	2.0		.0787	4	21	57
DH408021	2.1		.0827	4	21	57
DH408022	2.2		.0866	4	21	57
DH408023	2.3		.0906	4	21	57
DH408006F	2.381	3/32	.0938	4	21	57
DH408024	2.4		.0945	4	21	57
DH408025	2.5		.0984	4	21	57
DH408026	2.6		.1024	4	21	57
DH408027	2.7		.1063	4	21	57
DH408007F	2.778	7/64	.1094	4	21	57
DH408028	2.8		.1102	4	21	57
DH408029	2.9		.1142	4	21	57
DH408030	3.0		.1181	6	28	66
DH408031	3.1		.1220	6	28	66
DH408008F	3.175	1/8	.1250	6	28	66
DH408032	3.2		.1260	6	28	66

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH408033	3.3		.1299	6	28	66
DH408034	3.4		.1339	6	28	66
DH408035	3.5		.1378	6	28	66
DH408009F	3.572	9/64	.1406	6	28	66
DH408036	3.6		.1417	6	28	66
DH408037	3.7		.1457	6	28	66
DH408038	3.8		.1496	6	36	74
DH408039	3.9		.1535	6	36	74
DH408010F	3.969	5/32	.1563	6	36	74
DH408040	4.0		.1575	6	36	74
DH408041	4.1		.1614	6	36	74
DH408042	4.2		.1654	6	36	74
DH408043	4.3		.1693	6	36	74
DH408011F	4.366	11/64	.1719	6	36	74
DH408044	4.4		.1732	6	36	74
DH408045	4.5		.1772	6	36	74
DH408046	4.6		.1811	6	36	74
DH408047	4.7		.1850	6	36	74
DH408012F	4.763	3/16	.1875	6	36	74
DH408048	4.8		.1890	6	44	82
DH408049	4.9		.1929	6	44	82
DH408050	5.0		.1969	6	44	82
DH408051	5.1		.2008	6	44	82
DH408013F	5.159	13/64	.2031	6	44	82
DH408052	5.2		.2047	6	44	82
DH408053	5.3		.2087	6	44	82
DH408054	5.4		.2126	6	44	82
DH408055	5.5		.2165	6	44	82

▶ NEXT PAGE

▶ 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											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																		○			

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (5XD)

DH408 SERIES

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- ▶Optimized flute shape for strength of drilling and smooth chip evacuation

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.50

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH408014F	5.556	7/32	.2188	6	44	82
DH408056	5.6		.2205	6	44	82
DH408057	5.7		.2244	6	44	82
DH408058	5.8		.2283	6	44	82
DH408059	5.9		.2323	6	44	82
DH408015F	5.953	15/64	.2344	6	44	82
DH408060	6.0		.2362	6	44	82
DH408061	6.1		.2402	8	53	91
DH408062	6.2		.2441	8	53	91
DH408063	6.3		.2480	8	53	91
DH408016F	6.350	1/4	.2500	8	53	91
DH408064	6.4		.2520	8	53	91
DH408065	6.5		.2559	8	53	91
DH408006L	6.528	F	.2570	8	53	91
DH408066	6.6		.2598	8	53	91
DH408067	6.7		.2638	8	53	91
DH408017F	6.747	17/64	.2656	8	53	91
DH408068	6.8		.2677	8	53	91
DH408069	6.9		.2717	8	53	91
DH408009L	6.909	I	.2720	8	53	91
DH408070	7.0		.2756	8	53	91
DH408071	7.1		.2795	8	53	91
DH408018F	7.144	9/32	.2812	8	53	91
DH408072	7.2		.2835	8	53	91
DH408073	7.3		.2874	8	53	91
DH408074	7.4		.2913	8	53	91
DH408075	7.5		.2953	8	53	91
DH408019F	7.541	19/64	.2969	8	53	91

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH408076	7.6		.2992	8	53	91
DH408077	7.7		.3031	8	53	91
DH408078	7.8		.3071	8	53	91
DH408079	7.9		.3110	8	53	91
DH408020F	7.938	5/16	.3125	8	53	91
DH408080	8.0		.3150	8	53	91
DH408081	8.1		.3189	10	61	103
DH408082	8.2		.3228	10	61	103
DH408083	8.3		.3268	10	61	103
DH408021F	8.334	21/64	.3281	10	61	103
DH408084	8.4		.3307	10	61	103
DH408017L	8.433	Q	.3320	10	61	103
DH408085	8.5		.3346	10	61	103
DH408086	8.6		.3386	10	61	103
DH408087	8.7		.3425	10	61	103
DH408022F	8.731	11/32	.3438	10	61	103
DH408088	8.8		.3465	10	61	103
DH408089	8.9		.3504	10	61	103
DH408090	9.0		.3543	10	61	103
DH408091	9.1		.3583	10	61	103
DH408023F	9.128	23/64	.3594	10	61	103
DH408092	9.2		.3622	10	61	103
DH408093	9.3		.3661	10	61	103
DH408021L	9.347	U	.3680	10	61	103
DH408094	9.4		.3701	10	61	103
DH408095	9.5		.3740	10	61	103
DH408024F	9.525	3/8	.3750	10	61	103
DH408096	9.6		.3780	10	61	103

▶ 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											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																		○			

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (5XD)
DH408 SERIES

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▶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

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.50

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH408097	9.7		.3819	10	61	103
DH408098	9.8		.3858	10	61	103
DH408099	9.9		.3898	10	61	103
DH408025F	9.922	25/64	.3906	10	61	103
DH408100	10.0		.3937	10	61	103
DH408101	10.1		.3976	12	71	118
DH408102	10.2		.4016	12	71	118
DH408103	10.3		.4055	12	71	118
DH408026F	10.319	13/32	.4062	12	71	118
DH408104	10.4		.4094	12	71	118
DH408105	10.5		.4134	12	71	118
DH408106	10.6		.4173	12	71	118
DH408107	10.7		.4212	12	71	118
DH408027F	10.716	27/64	.4219	12	71	118
DH408108	10.8		.4252	12	71	118
DH408109	10.9		.4291	12	71	118
DH408110	11.0		.4330	12	71	118
DH408111	11.1		.4370	12	71	118
DH408028F	11.113	7/16	.4375	12	71	118
DH408112	11.2		.4409	12	71	118
DH408113	11.3		.4448	12	71	118
DH408114	11.4		.4488	12	71	118
DH408115	11.5		.4527	12	71	118
DH408029F	11.509	29/64	.4531	12	71	118
DH408116	11.6		.4566	12	71	118
DH408117	11.7		.4606	12	71	118
DH408118	11.8		.4645	12	71	118
DH408119	11.9		.4685	12	71	118

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH408030F	11.906	15/32	.4688	12	71	118
DH408120	12.0		.4724	12	71	118
DH408121	12.1		.4764	14	77	124
DH408122	12.2		.4803	14	77	124
DH408123	12.3		.4843	14	77	124
DH408031F	12.303	31/64	.4844	14	77	124
DH408124	12.4		.4882	14	77	124
DH408125	12.5		.4921	14	77	124
DH408126	12.6		.4961	14	77	124
DH408032F	12.7	1/2	.5000	14	77	124
DH408128	12.8		.5039	14	77	124
DH408129	12.9		.5079	14	77	124
DH408130	13.0		.5118	14	77	124
DH408131	13.1		.5157	14	77	124
DH408132	13.2		.5197	14	77	124
DH408133	13.3		.5236	14	77	124
DH408134	13.4		.5276	14	77	124
DH408135	13.5		.5314	14	77	124
DH408136	13.6		.5354	14	77	124
DH408137	13.7		.5394	14	77	124
DH408138	13.8		.5433	14	77	124
DH408139	13.9		.5472	14	77	124
DH408140	14.0		.5512	14	77	124
DH408141	14.1		.5551	16	83	133
DH408142	14.2		.5591	16	83	133
DH408036F	14.288	9/16	.5625	16	83	133
DH408143	14.3		.5630	16	83	133
DH408144	14.4		.5669	16	83	133

▶ 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											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																		○			

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (5XD)

DH408 SERIES

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- ▶Optimized flute shape for strength of drilling and smooth chip evacuation

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.50

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH408145	14.5		.5708	16	83	133
DH408146	14.6		.5748	16	83	133
DH408147	14.7		.5787	16	83	133
DH408148	14.8		.5827	16	83	133
DH408149	14.9		.5866	16	83	133
DH408150	15.0		.5905	16	83	133
DH408151	15.1		.5945	16	83	133
DH408152	15.2		.5984	16	83	133
DH408153	15.3		.6024	16	83	133
DH408154	15.4		.6063	16	83	133
DH408155	15.5		.6102	16	83	133
DH408156	15.6		.6142	16	83	133
DH408157	15.7		.6181	16	83	133
DH408158	15.8		.6220	16	83	133
DH408040F	15.875	5/8	.6250	16	83	133
DH408159	15.9		.6260	16	83	133
DH408160	16.0		.6299	16	83	133
DH408161	16.1		.6339	18	93	143
DH408162	16.2		.6378	18	93	143
DH408163	16.3		.6417	18	93	143
DH408164	16.4		.6457	18	93	143
DH408165	16.5		.6495	18	93	143
DH408166	16.6		.6535	18	93	143
DH408167	16.7		.6575	18	93	143
DH408168	16.8		.6614	18	93	143
DH408169	16.9		.6654	18	93	143
DH408170	17.0		.6692	18	93	143
DH408171	17.1		.6732	18	93	143
DH408172	17.2		.6772	18	93	143

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH408173	17.3		.6811	18	93	143
DH408174	17.4		.6850	18	93	143
DH408175	17.5		.6889	18	93	143
DH408176	17.6		.6929	18	93	143
DH408177	17.7		.6968	18	93	143
DH408178	17.8		.7008	18	93	143
DH408179	17.9		.7047	18	93	143
DH408180	18.0		.7087	18	93	143
DH408181	18.1		.7126	20	101	153
DH408182	18.2		.7165	20	101	151
DH408183	18.3		.7205	20	101	151
DH408184	18.4		.7244	20	101	153
DH408185	18.5		.7283	20	101	153
DH408186	18.6		.7323	20	101	151
DH408187	18.7		.7362	20	101	153
DH408188	18.8		.7402	20	101	153
DH408189	18.9		.7441	20	101	153
DH408190	19.0		.7480	20	101	153
DH408048F	19.050	3/4	.7500	20	101	153
DH408191	19.1		.7520	20	101	151
DH408192	19.2		.7559	20	101	151
DH408193	19.3		.7598	20	101	151
DH408194	19.4		.7638	20	101	151
DH408195	19.5		.7676	20	101	153
DH408196	19.6		.7717	20	101	151
DH408197	19.7		.7756	20	101	151
DH408198	19.8		.7795	20	101	153
DH408199	19.9		.7835	20	101	151
DH408200	20.0		.7874	20	101	153

▶ 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											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																		○			

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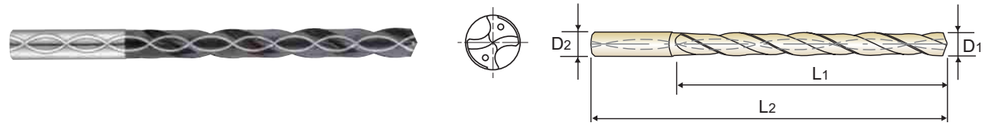
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes (8XD)

DH421 SERIES

- ▶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



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.50

EXTRA LONG
8×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH421030	3.0		.1181	6	34	72
DH421031	3.1		.1220	6	34	72
DH421008F	3.175	1/8	.1250	6	34	72
DH421032	3.2		.1260	6	34	72
DH421033	3.3		.1299	6	34	72
DH421034	3.4		.1339	6	34	72
DH421229G	3.450	#29	.1360	6	34	72
DH421035	3.5		.1378	6	34	72
DH421009F	3.572	9/64	.1406	6	34	72
DH421036	3.6		.1417	6	34	72
DH421037	3.7		.1457	6	34	72
DH421038	3.8		.1496	6	43	81
DH421039	3.9		.1535	6	43	81
DH421010F	3.969	5/32	.1563	6	43	81
DH421040	4.0		.1575	6	43	81
DH421221G	4.040	#21	.1590	6	43	81
DH421041	4.1		.1614	6	43	81
DH421042	4.2		.1654	6	43	81
DH421043	4.3		.1693	6	43	81
DH421011F	4.366	11/64	.1719	6	43	81
DH421044	4.4		.1732	6	43	81
DH421045	4.5		.1772	6	43	81
DH421046	4.6		.1811	6	43	81
DH421047	4.7		.1850	6	43	81
DH421012F	4.763	3/16	.1875	6	57	95
DH421048	4.8		.1890	6	57	95

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH421049	4.9		.1929	6	57	95
DH421050	5.0		.1969	6	57	95
DH421051	5.1		.2008	6	57	95
DH421013F	5.159	13/64	.2031	6	57	95
DH421052	5.2		.2047	6	57	95
DH421053	5.3		.2087	6	57	95
DH421054	5.4		.2126	6	57	95
DH421055	5.5		.2165	6	57	95
DH421014F	5.556	7/32	.2188	6	57	95
DH421056	5.6		.2205	6	57	95
DH421057	5.7		.2244	6	57	95
DH421058	5.8		.2283	6	57	95
DH421059	5.9		.2323	6	57	95
DH421015F	5.953	15/64	.2344	6	57	95
DH421060	6.0		.2362	6	57	95
DH421061	6.1		.2402	8	76	114
DH421062	6.2		.2441	8	76	114
DH421063	6.3		.2480	8	76	114
DH421016F	6.350	1/4	.2500	8	76	114
DH421064	6.4		.2520	8	76	114
DH421065	6.5		.2559	8	76	114
DH421106L	6.528	F	.2570	8	76	114
DH421066	6.6		.2598	8	76	114
DH421067	6.7		.2638	8	76	114
DH421017F	6.747	17/64	.2656	8	76	114
DH421068	6.8		.2677	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	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	400 Rm	1050 Rm	550	630	400	550
Recommended																		○			

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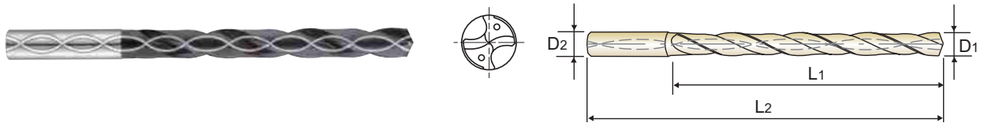

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.50

EXTRA LONG
8×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH421069	6.9		.2717	8	76	114
DH421009L	6.909	I	.2720	8	76	114
DH421070	7.0		.2756	8	76	114
DH421071	7.1		.2795	8	76	114
DH421018F	7.144	9/32	.2813	8	76	114
DH421072	7.2		.2835	8	76	114
DH421073	7.3		.2874	8	76	114
DH421074	7.4		.2913	8	76	114
DH421075	7.5		.2953	8	76	114
DH421019F	7.541	19/64	.2969	8	76	114
DH421076	7.6		.2992	8	76	114
DH421077	7.7		.3031	8	76	114
DH421078	7.8		.3071	8	76	114
DH421079	7.9		.3110	8	76	114
DH421020F	7.938	5/16	.3125	8	76	114
DH421080	8.0		.3150	8	76	114
DH421081	8.1		.3189	10	95	142
DH421082	8.2		.3228	10	95	142
DH421083	8.3		.3268	10	95	142
DH421021F	8.334	21/64	.3281	10	95	142
DH421084	8.4		.3307	10	95	142
DH421117L	8.430	Q	.3320	10	95	142
DH421085	8.5		.3346	10	95	142
DH421086	8.6		.3386	10	95	142
DH421087	8.7		.3425	10	95	142
DH421022F	8.731	11/32	.3438	10	95	142
DH421088	8.8		.3465	10	95	142
DH421089	8.9		.3504	10	95	142
DH421090	9.0		.3543	10	95	142
DH421091	9.1		.3583	10	95	142
DH421023F	9.128	23/64	.3594	10	95	142
DH421092	9.2		.3622	10	95	142
DH421093	9.3		.3661	10	95	142
DH421121L	9.350	U	.3680	10	95	142
DH421094	9.4		.3701	10	95	142
DH421095	9.5		.3740	10	95	142
DH421024F	9.525	3/8	.3750	10	95	142
DH421096	9.6		.3780	10	95	142
DH421097	9.7		.3819	10	95	142
DH421098	9.8		.3858	10	95	142
DH421099	9.9		.3898	10	95	142
DH421025F	9.922	25/64	.3906	10	95	142
DH421100	10.0		.3937	10	95	142
DH421101	10.1		.3976	12	114	162
DH421102	10.2		.4016	12	114	162
DH421103	10.3		.4055	12	114	162
DH421026F	10.319	13/32	.4063	12	114	162
DH421104	10.4		.4094	12	114	162
DH421105	10.5		.4134	12	114	162
DH421106	10.6		.4173	12	114	162
DH421107	10.7		.4212	12	114	162
DH421027F	10.716	27/64	.4219	12	114	162

▶ 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											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																		○			

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General with Coolant Holes (8XD)
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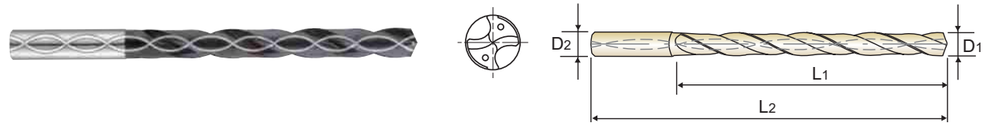

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.50

EXTRA LONG
8×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH421108	10.8		.4252	12	114	162
DH421 109	10.9		.4291	12	114	162
DH421110	11.0		.4330	12	114	162
DH421111	11.1		.4370	12	114	162
DH421028F	11.113	7/16	.4375	12	114	162
DH421112	11.2		.4409	12	114	162
DH421113	11.3		.4448	12	114	162
DH421114	11.4		.4488	12	114	162
DH421115	11.5		.4527	12	114	162
DH421029F	11.509	29/64	.4531	12	114	162
DH421116	11.6		.4566	12	114	162
DH421117	11.7		.4606	12	114	162
DH421118	11.8		.4645	12	114	162
DH421119	11.9		.4685	12	114	162
DH421030F	11.906	15/32	.4688	12	114	162
DH421120	12.0		.4724	12	114	162
DH421121	12.1		.4764	14	133	178
DH421122	12.2		.4803	14	133	178
DH421123	12.3		.4843	14	133	178
DH421031F	12.303	31/64	.4844	14	133	178
DH421124	12.4		.4882	14	133	178
DH421125	12.5		.4921	14	133	178
DH421126	12.6		.4961	14	133	178
DH421032F	12.7	1/2	.5000	14	133	178
DH421128	12.8		.5039	14	133	178
DH421129	12.9		.5079	14	133	178
DH421130	13.0		.5118	14	133	178
DH421033F	13.097	33/64	.5156	14	133	178
DH421131	13.1		.5157	14	133	178
DH421132	13.2		.5197	14	133	178
DH421133	13.3		.5236	14	133	178
DH421134	13.4		.5276	14	133	178
DH421135	13.5		.5314	14	133	178
DH421136	13.6		.5354	14	133	178
DH421137	13.7		.5394	14	133	178
DH421138	13.8		.5433	14	133	178
DH421139	13.9		.5472	14	133	178
DH421140	14.0		.5512	14	133	178
DH421141	14.1		.5551	16	152	203
DH421142	14.2		.5591	16	152	203
DH421036F	14.288	9/16	.5625	16	152	203
DH421143	14.3		.5630	16	152	203
DH421144	14.4		.5669	16	152	203
DH421145	14.5		.5709	16	152	203
DH421146	14.6		.5748	16	152	203
DH421147	14.7		.5787	16	152	203
DH421148	14.8		.5827	16	152	203
DH421149	14.9		.5866	16	152	203
DH421150	15.0		.5905	16	152	203
DH421151	15.1		.5945	16	152	203
DH421152	15.2		.5984	16	152	203
DH421153	15.3		.6024	16	152	203

▶ 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											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																		○			

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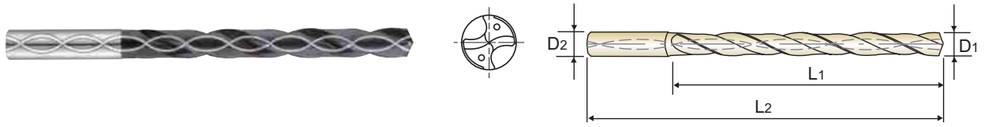


DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.50

EXTRA LONG
8×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH421154	15.4		.6063	16	152	203
DH421155	15.5		.6102	16	152	203
DH421156	15.6		.6142	16	152	203
DH421157	15.7		.6181	16	152	203
DH421158	15.8		.6220	16	152	203
DH421040F	15.875	5/8	.6250	16	152	203
DH421159	15.9		.6260	16	152	203
DH421160	16.0		.6299	16	152	203
DH421161	16.1		.6339	18	171	222
DH421162	16.2		.6378	18	171	222
DH421163	16.3		.6417	18	171	222
DH421164	16.4		.6457	18	171	222
DH421165	16.5		.6496	18	171	222
DH421166	16.6		.6535	18	171	222
DH421167	16.7		.6575	18	171	222
DH421168	16.8		.6614	18	171	222
DH421169	16.9		.6654	18	171	222
DH421170	17.0		.6693	18	171	222
DH421171	17.1		.6732	18	171	222
DH421172	17.2		.6772	18	171	222
DH421173	17.3		.6811	18	171	222
DH421174	17.4		.6850	18	171	222
DH421175	17.5		.6890	18	171	222
DH421176	17.6		.6929	18	171	222
DH421177	17.7		.6968	18	171	222
DH421178	17.8		.7008	18	171	222
DH421179	17.9		.7047	18	171	222
DH421180	18.0		.7087	18	171	222
DH421181	18.1		.7126	20	190	243
DH421182	18.2		.7165	20	190	243
DH421183	18.3		.7205	20	190	243
DH421184	18.4		.7244	20	190	243
DH421185	18.5		.7283	20	190	243
DH421186	18.6		.7323	20	190	243
DH421187	18.7		.7362	20	190	243
DH421188	18.8		.7402	20	190	243
DH421189	18.9		.7441	20	190	243
DH421190	19.0		.7480	20	190	243
DH421048F	19.050	3/4	.7500	20	190	243
DH421191	19.1		.7520	20	190	243
DH421192	19.2		.7559	20	190	243
DH421193	19.3		.7598	20	190	243
DH421194	19.4		.7638	20	190	243
DH421195	19.5		.7677	20	190	243
DH421196	19.6		.7717	20	190	243
DH421197	19.7		.7756	20	190	243
DH421198	19.8		.7795	20	190	243
DH421199	19.9		.7835	20	190	243
DH421200	20.0		.7874	20	190	243

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

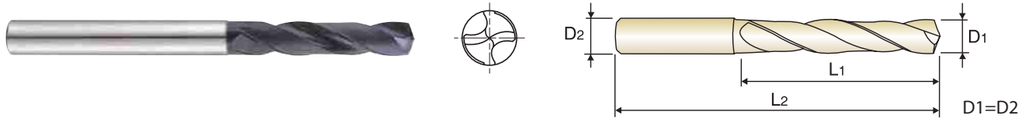
ISO	P												M			K					
Material Description	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc		13	25	28	32	10	29	32	38	15	35	15	23	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											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																		○			

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (3XD)

DH414 SERIES

- ▶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
- ▶Tolerance : Dia. Tolerance ØD1 : See page 141
  Shank Tolerance ØD2: -.0001 -.0005



CARBIDE | h6 | 140° | P.52

STUB
3×D

Unit : inch

EDP No.	Drill Diameter		Flute Length	Overall Length
	Fractional	Decimal		
TiAlN	D1 = D2		L1	L2
0081ATF	1/8	.1250	45/64	1-59/64
0091ATF	9/64	.1406	25/32	2-3/64
0101ATF	5/32	.1562	7/8	2-3/16
0111ATF	11/64	.1719	15/16	2-9/32
0121ATF	3/16	.1875	1	2-7/16
0131ATF	13/64	.2031	1	2-7/16
0141ATF	7/32	.2188	1-1/8	2-5/8
0151ATF	15/64	.2344	1-1/8	2-5/8
0161ATF	1/4	.2500	1-5/8	3-3/16
2061ATF	F	.2570	1-11/16	3-17/64
0171ATF	17/64	.2656	1-11/16	3-17/64
2091ATF	I	.2720	1-11/16	3-17/64
0181ATF	9/32	.2812	1-3/4	3-7/16
0191ATF	19/64	.2969	1-7/8	3-9/16
0201ATF	5/16	.3125	1-7/8	3-9/16
0211ATF	21/64	.3281	2-1/16	3-3/4
2171ATF	Q	.3320	2-1/16	3-3/4
0221ATF	11/32	.3438	2-3/16	3-7/8
0231ATF	23/64	.3594	2-9/32	4
2211ATF	U	.3680	2-9/32	4
0241ATF	3/8	.3750	2-3/8	4-1/8
0251ATF	25/64	.3906	2-3/8	4-1/8
0261ATF	13/32	.4062	2-5/8	4-13/32
0271ATF	27/64	.4219	2-11/16	4-1/2
0281ATF	7/16	.4375	2-13/16	4-5/8
0291ATF	29/64	.4531	2-7/8	4-3/4
0301ATF	15/32	.4688	2-7/8	4-3/4
0311ATF	31/64	.4844	3	5-5/16
0321ATF	1/2	.5000	3-1/16	5-3/8
0331ATF	33/64	.5156	3-11/32	5-11/16
0341ATF	17/32	.5312	3-11/32	5-11/16
0361ATF	9/16	.5625	3-1/2	5-15/16
0371ATF	37/64	.5781	3-37/64	6
0401ATF	5/8	.6250	3-25/3	6-19/64

▶ 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											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																		○			

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (5XD)

DH722 SERIES

- ▶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
- ▶Tolerance : Dia. Tolerance ØD1 : See page 141
  Shank Tolerance ØD2: -.0001 -.0005

CARBIDE | h6 | 140° | P.52

LONG
5×D

Unit : inch

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH722013	13/64	.2031	1/4	1-3/4	3-15/16
DH722014	7/32	.2188	1/4	1-57/64	3-15/16
DH722015	15/64	.2344	1/4	1-57/64	3-15/16
DH722016	1/4	.2500	1/4	2-3/64	4-19/64
DH722206	F	.2570	5/16	2-13/64	4-19/64
DH722017	17/64	.2656	5/16	2-13/64	4-19/64
DH722209	I	.2720	5/16	2-13/64	4-19/64
DH722018	9/32	.2812	5/16	2-23/64	4-41/64
DH722019	19/64	.2969	5/16	2-33/64	4-41/64
DH722020	5/16	.3125	5/16	2-33/64	4-41/64
DH722021	21/64	.3281	3/8	2-43/64	5
DH722217	Q	.3320	3/8	2-43/64	5
DH722022	11/32	.3438	3/8	2-27/32	5
DH722023	23/64	.3594	3/8	3	5-23/64
DH722221	U	.3680	3/8	3	5-23/64
DH722024	3/8	.3750	3/8	3-5/32	5-23/64
DH722025	25/64	.3906	7/16	3-5/32	5-23/64
DH722026	13/32	.4062	7/16	3-5/16	5-7/8
DH722027	27/64	.4219	7/16	3-15/32	5-7/8
DH722028	7/16	.4375	7/16	3-5/8	6-7/32
DH722029	29/64	.4531	1/2	3-25/32	6-7/32
DH722030	15/32	.4688	1/2	3-25/32	6-7/32
DH722031	31/64	.4844	1/2	3-15/16	6-37/64
DH722032	1/2	.5000	1/2	4-3/32	6-37/64

▶ 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											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																		○			

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (3XD)

DH404 SERIES

- ▶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

D1=D2

DIN 6539 | CARBIDE | h6 | m7 | 140° | P.52

STUB
3×D

Unit : mm

EDP No.	Drill Diameter		Flute Length	Overall Length
	Metric	Inch		
TiAlN	D1 = D2		L1	L2
DH404030	3.0	.1181	16	46
DH404031	3.1	.1220	18	49
DH404032	3.2	.1260	18	49
DH404033	3.3	.1299	18	49
DH404034	3.4	.1339	20	52
DH404035	3.5	.1378	20	52
DH404036	3.6	.1417	20	52
DH404037	3.7	.1457	20	52
DH404038	3.8	.1496	22	55
DH404039	3.9	.1535	22	55
DH404040	4.0	.1575	22	55
DH404041	4.1	.1614	22	55
DH404042	4.2	.1654	22	55
DH404043	4.3	.1693	24	58
DH404044	4.4	.1732	24	58
DH404045	4.5	.1772	24	58
DH404046	4.6	.1811	24	58
DH404047	4.7	.1850	24	58
DH404048	4.8	.1890	26	62
DH404049	4.9	.1929	26	62
DH404050	5.0	.1969	26	62
DH404051	5.1	.2008	26	62
DH404052	5.2	.2047	26	62
DH404053	5.3	.2087	26	62
DH404054	5.4	.2126	28	66
DH404055	5.5	.2165	28	66
DH404056	5.6	.2205	28	66
DH404057	5.7	.2244	28	66
DH404058	5.8	.2283	28	66
DH404059	5.9	.2323	28	66
DH404060	6.0	.2362	28	66
DH404061	6.1	.2402	31	70
DH404062	6.2	.2441	31	70
DH404063	6.3	.2480	31	70
DH404064	6.4	.2520	31	70
DH404065	6.5	.2559	31	70
DH404066	6.6	.2598	31	70
DH404067	6.7	.2638	31	70
DH404068	6.8	.2677	34	74
DH404069	6.9	.2717	34	74
DH404070	7.0	.2756	34	74
DH404071	7.1	.2795	34	74
DH404072	7.2	.2835	34	74
DH404073	7.3	.2874	34	74
DH404074	7.4	.2913	34	74
DH404075	7.5	.2953	34	74
DH404076	7.6	.2992	37	79
DH404077	7.7	.3031	37	79
DH404078	7.8	.3071	37	79
DH404079	7.9	.3110	37	79
DH404080	8.0	.3150	37	79
DH404081	8.1	.3189	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											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																		○			

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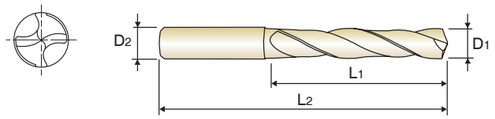
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (3XD)

DH404 SERIES

- ▶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



D1=D2

DIN 6539 | CARBIDE | h6 | m7 | 140° | P.52

STUB

3×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Flute Length	Overall Length
TiAlN	D1 = D2		L1	L2
DH404082	8.2	.3228	37	79
DH404083	8.3	.3268	37	79
DH404084	8.4	.3307	37	79
DH404085	8.5	.3346	37	79
DH404086	8.6	.3386	40	84
DH404087	8.7	.3425	40	84
DH404088	8.8	.3465	40	84
DH404089	8.9	.3504	40	84
DH404090	9.0	.3543	40	84
DH404091	9.1	.3583	40	84
DH404092	9.2	.3622	40	84
DH404093	9.3	.3661	40	84
DH404094	9.4	.3701	40	84
DH404095	9.5	.3740	40	84
DH404096	9.6	.3780	43	89
DH404097	9.7	.3819	43	89
DH404098	9.8	.3858	43	89
DH404099	9.9	.3898	43	89
DH404100	10.0	.3937	43	89
DH404102	10.2	.4016	43	89
DH404105	10.5	.4134	43	89
DH404110	11.0	.4331	47	95
DH404115	11.5	.4528	47	95
DH404120	12.0	.4724	51	102
DH404130	13.0	.5118	51	102
DH404135	13.5	.5314	54	107

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Flute Length	Overall Length
TiAlN	D1 = D2		L1	L2
DH404140	14.0	.5512	54	107
DH404145	14.5	.5708	56	111
DH404150	15.0	.5905	56	111
DH404155	15.5	.6102	58	115
DH404160	16.0	.6299	58	115
DH404165	16.5	.6495	60	119
DH404170	17.0	.6692	60	119
DH404175	17.5	.6889	62	123
DH404180	18.0	.7087	62	123
DH404185	18.5	.7283	64	127
DH404190	19.0	.7480	64	127
DH404195	19.5	.7676	66	131
DH404200	20.0	.7874	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											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																		○			

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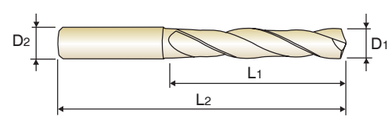
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (3XD)

DH423 SERIES

- ▶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



DIN 6537 | CARBIDE | h6 | m7 | 140° | P.52

SHORT

3×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH423030	3.0		.1181	6	20	62
DH423031	3.1		.1220	6	20	62
DH423008F	3.175	1/8	.1250	6	20	62
DH423032	3.2		.1260	6	20	62
DH423033	3.3		.1299	6	20	62
DH423034	3.4		.1339	6	20	62
DH423035	3.5		.1378	6	20	62
DH423009F	3.572	9/64	.1406	6	20	62
DH423036	3.6		.1417	6	20	62
DH423037	3.7		.1457	6	20	62
DH423038	3.8		.1496	6	24	66
DH423039	3.9		.1535	6	24	66
DH423010F	3.969	5/32	.1563	6	24	66
DH423040	4.0		.1575	6	24	66
DH423041	4.1		.1614	6	24	66
DH423042	4.2		.1654	6	24	66
DH423043	4.3		.1693	6	24	66
DH423011F	4.366	11/64	.1719	6	24	66
DH423044	4.4		.1732	6	24	66
DH423045	4.5		.1772	6	24	66
DH423046	4.6		.1811	6	24	66
DH423047	4.7		.1850	6	24	66
DH423012F	4.763	3/16	.1875	6	24	66
DH423048	4.8		.1890	6	28	66
DH423049	4.9		.1929	6	28	66
DH423050	5.0		.1969	6	28	66

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH423051	5.1		.2008	6	28	66
DH423013F	5.159	13/64	.2031	6	28	66
DH423052	5.2		.2047	6	28	66
DH423053	5.3		.2087	6	28	66
DH423054	5.4		.2126	6	28	66
DH423055	5.5		.2165	6	28	66
DH423014F	5.556	7/32	.2188	6	28	66
DH423056	5.6		.2205	6	28	66
DH423057	5.7		.2244	6	28	66
DH423058	5.8		.2283	6	28	66
DH423059	5.9		.2323	6	28	66
DH423015F	5.953	15/64	.2344	6	28	66
DH423060	6.0		.2362	6	28	66
DH423061	6.1		.2402	8	34	79
DH423062	6.2		.2441	8	34	79
DH423063	6.3		.2480	8	34	79
DH423016F	6.350	1/4	.2500	8	34	79
DH423064	6.4		.2520	8	34	79
DH423065	6.5		.2559	8	34	79
DH423006L	6.528	F	.2570	8	34	79
DH423066	6.6		.2598	8	34	79
DH423067	6.7		.2638	8	34	79
DH423017F	6.747	17/64	.2656	8	34	79
DH423068	6.8		.2677	8	34	79
DH423069	6.9		.2717	8	34	79
DH423009L	6.909	I	.2720	8	34	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											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																		○			

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (3XD)

DH423 SERIES

- ▶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

DIN 6537 | CARBIDE | h6 | m7 | 140° | P.52

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH423070	7.0		.2756	8	34	79
DH423071	7.1		.2795	8	41	79
DH423018F	7.144	9/32	.2812	8	41	79
DH423072	7.2		.2835	8	41	79
DH423073	7.3		.2874	8	41	79
DH423074	7.4		.2913	8	41	79
DH423075	7.5		.2953	8	41	79
DH423019F	7.541	19/64	.2969	8	41	79
DH423076	7.6		.2992	8	41	79
DH423077	7.7		.3031	8	41	79
DH423078	7.8		.3071	8	41	79
DH423079	7.9		.3110	8	41	79
DH423020F	7.938	5/16	.3125	8	41	79
DH423080	8.0		.3150	8	41	79
DH423081	8.1		.3189	10	47	89
DH423082	8.2		.3228	10	47	89
DH423083	8.3		.3268	10	47	89
DH423021F	8.334	21/64	.3281	10	47	89
DH423084	8.4		.3307	10	47	89
DH423017L	8.433	Q	.3320	10	47	89
DH423085	8.5		.3346	10	47	89
DH423086	8.6		.3386	10	47	89
DH423087	8.7		.3425	10	47	89
DH423022F	8.731	11/32	.3438	10	47	89
DH423088	8.8		.3465	10	47	89
DH423089	8.9		.3504	10	47	89

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH423090	9.0		.3543	10	47	89
DH423091	9.1		.3583	10	47	89
DH423023F	9.128	23/64	.3594	10	47	89
DH423092	9.2		.3622	10	47	89
DH423093	9.3		.3661	10	47	89
DH423021L	9.347	U	.3680	10	47	89
DH423094	9.4		.3701	10	47	89
DH423095	9.5		.3740	10	47	89
DH423024F	9.525	3/8	.3750	10	47	89
DH423096	9.6		.3780	10	47	89
DH423097	9.7		.3819	10	47	89
DH423098	9.8		.3858	10	47	89
DH423099	9.9		.3898	10	47	89
DH423025F	9.922	25/64	.3906	10	47	89
DH423100	10.0		.3937	10	47	89
DH423101	10.1		.3976	12	55	102
DH423102	10.2		.4016	12	55	102
DH423103	10.3		.4055	12	55	102
DH423026F	10.319	13/32	.4062	12	55	102
DH423104	10.4		.4094	12	55	102
DH423105	10.5		.4134	12	55	102
DH423106	10.6		.4173	12	55	102
DH423107	10.7		.4213	12	55	102
DH423027F	10.716	27/64	.4219	12	55	102
DH423108	10.8		.4252	12	55	102
DH423109	10.9		.4291	12	55	102

▶ 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											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																		○			

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (3XD)
DH423 SERIES
▶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

DIN 6537 | CARBIDE | h6 | m7 | 140° | P.52
SHORT
3×D
Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH423110	11.0		.4331	12	55	102
DH423111	11.1		.4370	12	55	102
DH423028F	11.113	7/16	.4375	12	55	102
DH423112	11.2		.4409	12	55	102
DH423113	11.3		.4449	12	55	102
DH423114	11.4		.4488	12	55	102
DH423115	11.5		.4528	12	55	102
DH423029F	11.509	29/64	.4531	12	55	102
DH423116	11.6		.4567	12	55	102
DH423117	11.7		.4606	12	55	102
DH423118	11.8		.4646	12	55	102
DH423119	11.9		.4685	12	55	102
DH423030F	11.906	15/32	.4688	12	55	102
DH423120	12.0		.4724	12	55	102
DH423121	12.1		.4764	14	60	107
DH423122	12.2		.4803	14	60	107
DH423123	12.3		.4843	14	60	107
DH423031F	12.303	31/64	.4844	14	60	107
DH423124	12.4		.4882	14	60	107
DH423125	12.5		.4921	14	60	107
DH423126	12.6		.4961	14	60	107
DH423032F	12.7	1/2	.5000	14	60	107
DH423128	12.8		.5039	14	60	107
DH423129	12.9		.5079	14	60	107
DH423130	13.0		.5118	14	60	107
DH423131	13.1		.5157	14	60	107

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH423132	13.2		.5197	14	60	107
DH423133	13.3		.5236	14	60	107
DH423134	13.4		.5276	14	60	107
DH423135	13.5		.5315	14	60	107
DH423136	13.6		.5354	14	60	107
DH423137	13.7		.5394	14	60	107
DH423138	13.8		.5433	14	60	107
DH423139	13.9		.5472	14	60	107
DH423140	14.0		.5512	14	60	107
DH423141	14.1		.5551	16	65	115
DH423142	14.2		.5591	16	65	115
DH423036F	14.288	9/16	.5625	16	65	115
DH423143	14.3		.5630	16	65	115
DH423144	14.4		.5669	16	65	115
DH423145	14.5		.5708	16	65	115
DH423146	14.6		.5748	16	65	115
DH423147	14.7		.5787	16	65	115
DH423148	14.8		.5827	16	65	115
DH423149	14.9		.5866	16	65	115
DH423150	15.0		.5905	16	65	115
DH423151	15.1		.5945	16	65	115
DH423152	15.2		.5984	16	65	115
DH423153	15.3		.6024	16	65	115
DH423154	15.4		.6063	16	65	115
DH423155	15.5		.6102	16	65	115
DH423156	15.6		.6142	16	65	115

▶ 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											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																		○			

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (3XD)

DH423 SERIES

- ▶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

DIN 6537 | CARBIDE | h6 | m7 | 140° | P.52

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH423157	15.7		.6181	16	65	115
DH423158	15.8		.6220	16	65	115
DH423040F	15.875	5/8	.6250	16	65	115
DH423159	15.9		.6260	16	65	115
DH423160	16.0		.6299	16	65	115
DH423161	16.1		.6339	18	73	123
DH423162	16.2		.6378	18	73	123
DH423163	16.3		.6417	18	73	123
DH423164	16.4		.6457	18	73	123
DH423165	16.5		.6495	18	73	123
DH423166	16.6		.6535	18	73	123
DH423167	16.7		.6575	18	73	123
DH423168	16.8		.6614	18	73	123
DH423169	16.9		.6654	18	73	123
DH423170	17.0		.6692	18	73	123
DH423171	17.1		.6732	18	73	123
DH423172	17.2		.6772	18	73	123
DH423173	17.3		.6811	18	73	123
DH423174	17.4		.6850	18	73	123
DH423044F	17.463	11/16	.6875	18	73	123
DH423175	17.5		.6889	18	73	123
DH423176	17.6		.6929	18	73	123
DH423177	17.7		.6968	18	73	123
DH423178	17.8		.7008	18	73	123
DH423179	17.9		.7047	18	73	123
DH423180	18.0		.7087	18	73	123

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH423181	18.1		.7126	20	79	131
DH423182	18.2		.7165	20	79	131
DH423183	18.3		.7205	20	79	131
DH423184	18.4		.7244	20	79	131
DH423185	18.5		.7283	20	79	131
DH423186	18.6		.7323	20	79	131
DH423187	18.7		.7362	20	79	131
DH423188	18.8		.7402	20	79	131
DH423189	18.9		.7441	20	79	131
DH423190	19.0		.7480	20	79	131
DH423048F	19.050	3/4	.7500	20	79	131
DH423191	19.1		.7520	20	79	131
DH423192	19.2		.7559	20	79	131
DH423193	19.3		.7598	20	79	131
DH423194	19.4		.7638	20	79	131
DH423195	19.5		.7676	20	79	131
DH423196	19.6		.7717	20	79	131
DH423197	19.7		.7756	20	79	131
DH423198	19.8		.7795	20	79	131
DH423199	19.9		.7835	20	79	131
DH423200	20.0		.7874	20	79	131

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

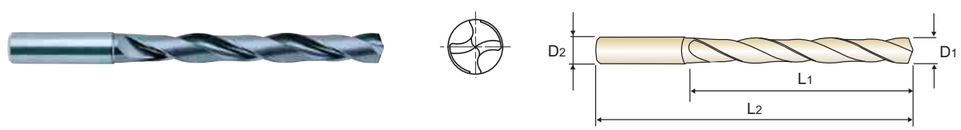
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	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											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																		○			

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (5XD)

DH424 SERIES

- ▶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



DIN 6537 | CARBIDE | h6 | m7 | 140° | P.52

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH424010	1.0		.0394	3	8	55
DH424011	1.1		.0433	3	12	55
DH424012	1.2		.0472	3	12	55
DH424013	1.3		.0512	3	12	55
DH424014	1.4		.0551	3	12	55
DH424015	1.5		.0591	3	16	55
DH424004F	1.588	1/16	.0625	3	16	55
DH424016	1.6		.0630	3	16	55
DH424017	1.7		.0669	3	16	55
DH424018	1.8		.0709	3	16	55
DH424019	1.9		.0748	3	16	55
DH424005F	1.984	5/64	.0781	3	16	55
DH424020	2.0		.0787	4	21	57
DH424021	2.1		.0827	4	21	57
DH424022	2.2		.0866	4	21	57
DH424023	2.3		.0906	4	21	57
DH424006F	2.381	3/32	.0938	4	21	57
DH424024	2.4		.0945	4	21	57
DH424025	2.5		.0984	4	21	57
DH424026	2.6		.1024	4	21	57
DH424027	2.7		.1063	4	21	57
DH424007F	2.778	7/64	.1094	4	21	57
DH424028	2.8		.1102	4	21	57
DH424029	2.9		.1142	4	21	57
DH424030	3.0		.1181	6	28	66
DH424031	3.1		.1220	6	28	66

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH424008F	3.175	1/8	.1250	6	28	66
DH424032	3.2		.1260	6	28	66
DH424033	3.3		.1299	6	28	66
DH424034	3.4		.1339	6	28	66
DH424035	3.5		.1378	6	28	66
DH424009F	3.572	9/64	.1406	6	28	66
DH424036	3.6		.1417	6	28	66
DH424037	3.7		.1457	6	28	66
DH424038	3.8		.1496	6	36	74
DH424039	3.9		.1535	6	36	74
DH424010F	3.969	5/32	.1563	6	36	74
DH424040	4.0		.1575	6	36	74
DH424041	4.1		.1614	6	36	74
DH424042	4.2		.1654	6	36	74
DH424043	4.3		.1693	6	36	74
DH424011F	4.366	11/64	.1719	6	36	74
DH424044	4.4		.1732	6	36	74
DH424045	4.5		.1772	6	36	74
DH424046	4.6		.1811	6	36	74
DH424047	4.7		.1850	6	36	74
DH424012F	4.763	3/16	.1875	6	36	74
DH424048	4.8		.1890	6	44	82
DH424049	4.9		.1929	6	44	82
DH424050	5.0		.1969	6	44	82
DH424051	5.1		.2008	6	44	82
DH424013F	5.159	13/64	.2031	6	44	82

▶ 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											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																		○			

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (5XD)

DH424 SERIES

- ▶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

DIN 6537 | CARBIDE | h6 | m7 | 140° | P.52

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH424052	5.2		.2047	6	44	82
DH424053	5.3		.2087	6	44	82
DH424054	5.4		.2126	6	44	82
DH424055	5.5		.2165	6	44	82
DH424014F	5.556	7/32	.2188	6	44	82
DH424056	5.6		.2205	6	44	82
DH424057	5.7		.2244	6	44	82
DH424058	5.8		.2283	6	44	82
DH424059	5.9		.2323	6	44	82
DH424015F	5.953	15/64	.2344	6	44	82
DH424060	6.0		.2362	6	44	82
DH424061	6.1		.2402	8	53	91
DH424062	6.2		.2441	8	53	91
DH424063	6.3		.2480	8	53	91
DH424016F	6.350	1/4	.2500	8	53	91
DH424064	6.4		.2520	8	53	91
DH424065	6.5		.2559	8	53	91
DH424006L	6.528	F	.2570	8	53	91
DH424066	6.6		.2598	8	53	91
DH424067	6.7		.2638	8	53	91
DH424017F	6.747	17/64	.2656	8	53	91
DH424068	6.8		.2677	8	53	91
DH424069	6.9		.2717	8	53	91
DH424009L	6.909	I	.2720	8	53	91
DH424070	7.0		.2756	8	53	91
DH424071	7.1		.2795	8	53	91
DH424018F	7.144	9/32	.2812	8	53	91
DH424072	7.2		.2835	8	53	91
DH424073	7.3		.2874	8	53	91
DH424074	7.4		.2913	8	53	91
DH424075	7.5		.2953	8	53	91
DH424019F	7.541	19/64	.2969	8	53	91
DH424076	7.6		.2992	8	53	91
DH424077	7.7		.3031	8	53	91
DH424078	7.8		.3071	8	53	91
DH424079	7.9		.3110	8	53	91
DH424020F	7.938	5/16	.3125	8	53	91
DH424080	8.0		.3150	8	53	91
DH424081	8.1		.3189	10	61	103
DH424082	8.2		.3228	10	61	103
DH424083	8.3		.3268	10	61	103
DH424021F	8.334	21/64	.3281	10	61	103
DH424084	8.4		.3307	10	61	103
DH424017L	8.433	Q	.3320	10	61	103
DH424085	8.5		.3346	10	61	103
DH424086	8.6		.3386	10	61	103
DH424087	8.7		.3425	10	61	103
DH424022F	8.731	11/32	.3438	10	61	103
DH424088	8.8		.3465	10	61	103
DH424089	8.9		.3504	10	61	103
DH424090	9.0		.3543	10	61	103
DH424091	9.1		.3583	10	61	103

▶ 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											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																		○			

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (5XD)
DH424 SERIES

▶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

DIN 6537 | CARBIDE | h6 | m7 | 140° | P.52

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH424023F	9.128	23/64	.3594	10	61	103
DH424092	9.2		.3622	10	61	103
DH424093	9.3		.3661	10	61	103
DH424021L	9.347	U	.3680	10	61	103
DH424094	9.4		.3701	10	61	103
DH424095	9.5		.3740	10	61	103
DH424024F	9.525	3/8	.3750	10	61	103
DH424096	9.6		.3780	10	61	103
DH424097	9.7		.3819	10	61	103
DH424098	9.8		.3858	10	61	103
DH424099	9.9		.3898	10	61	103
DH424025F	9.922	25/64	.3906	10	61	103
DH424100	10.0		.3937	10	61	103
DH424101	10.1		.3976	12	71	118
DH424102	10.2		.4016	12	71	118
DH424103	10.3		.4055	12	71	118
DH424026F	10.319	13/32	.4062	12	71	118
DH424104	10.4		.4094	12	71	118
DH424105	10.5		.4134	12	71	118
DH424106	10.6		.4173	12	71	118
DH424107	10.7		.4213	12	71	118
DH424027F	10.716	27/64	.4219	12	71	118
DH424108	10.8		.4252	12	71	118
DH424109	10.9		.4291	12	71	118
DH424110	11.0		.4331	12	71	118
DH424111	11.1		.4370	12	71	118
DH424028F	11.113	7/16	.4375	12	71	118
DH424112	11.2		.4409	12	71	118
DH424113	11.3		.4449	12	71	118
DH424114	11.4		.4488	12	71	118
DH424115	11.5		.4528	12	71	118
DH424029F	11.509	29/64	.4531	12	71	118
DH424116	11.6		.4567	12	71	118
DH424117	11.7		.4606	12	71	118
DH424118	11.8		.4646	12	71	118
DH424119	11.9		.4685	12	71	118
DH424030F	11.906	15/32	.4688	12	71	118
DH424120	12.0		.4724	12	71	118
DH424121	12.1		.4764	14	77	124
DH424122	12.2		.4803	14	77	124
DH424123	12.3		.4843	14	77	124
DH424031F	12.303	31/64	.4844	14	77	124
DH424124	12.4		.4882	14	77	124
DH424125	12.5		.4921	14	77	124
DH424126	12.6		.4961	14	77	124
DH424032F	12.7	1/2	.5000	14	77	124
DH424128	12.8		.5039	14	77	124
DH424129	12.9		.5079	14	77	124
DH424130	13.0		.5118	14	77	124
DH424131	13.1		.5157	14	77	124
DH424132	13.2		.5197	14	77	124
DH424133	13.3		.5236	14	77	124

▶ 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											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																		○			

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (5XD)

DH424 SERIES

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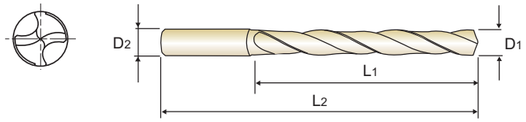

DIN 6537 | CARBIDE | h6 | m7 | 140° | P.52

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH424134	13.4		.5276	14	77	124
DH424135	13.5		.5315	14	77	124
DH424136	13.6		.5354	14	77	124
DH424137	13.7		.5394	14	77	124
DH424138	13.8		.5433	14	77	124
DH424139	13.9		.5472	14	77	124
DH424140	14.0		.5512	14	77	124
DH424141	14.1		.5551	16	83	133
DH424142	14.2		.5591	16	83	133
DH424036F	14.288	9/16	.5625	16	83	133
DH424143	14.3		.5630	16	83	133
DH424144	14.4		.5669	16	83	133
DH424145	14.5		.5708	16	83	133
DH424146	14.6		.5748	16	83	133
DH424147	14.7		.5787	16	83	133
DH424148	14.8		.5827	16	83	133
DH424149	14.9		.5866	16	83	133
DH424150	15.0		.5905	16	83	133
DH424151	15.1		.5945	16	83	133
DH424152	15.2		.5984	16	83	133
DH424153	15.3		.6024	16	83	133
DH424154	15.4		.6063	16	83	133
DH424155	15.5		.6102	16	83	133
DH424156	15.6		.6142	16	83	133
DH424157	15.7		.6181	16	83	133
DH424158	15.8		.6220	16	83	133

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH424040F	15.875	5/8	.6250	16	83	133
DH424159	15.9		.6260	16	83	133
DH424160	16.0		.6299	16	83	133
DH424161	16.1		.6339	18	93	143
DH424162	16.2		.6378	18	93	143
DH424163	16.3		.6417	18	93	143
DH424164	16.4		.6457	18	93	143
DH424165	16.5		.6495	18	93	143
DH424166	16.6		.6535	18	93	143
DH424167	16.7		.6575	18	93	143
DH424168	16.8		.6614	18	93	143
DH424169	16.9		.6654	18	93	143
DH424170	17.0		.6692	18	93	143
DH424171	17.1		.6732	18	93	143
DH424172	17.2		.6772	18	93	143
DH424173	17.3		.6811	18	93	143
DH424174	17.4		.6850	18	93	143
DH424175	17.5		.6889	18	93	143
DH424176	17.6		.6929	18	93	143
DH424177	17.7		.6968	18	93	143
DH424178	17.8		.7008	18	93	143
DH424179	17.9		.7047	18	93	143
DH424180	18.0		.7087	18	93	143
DH424181	18.1		.7126	20	101	153
DH424182	18.2		.7165	20	101	153
DH424183	18.3		.7205	20	101	153

▶ 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											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																		○			

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (5XD)
DH424 SERIES

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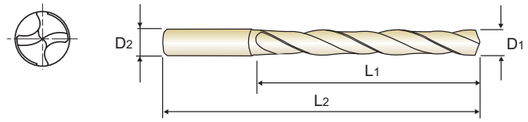

DIN 6537 | CARBIDE | h6 | m7 | 140° | P.52

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH424184	18.4		.7244	20	101	153
DH424185	18.5		.7283	20	101	153
DH424186	18.6		.7323	20	101	153
DH424187	18.7		.7362	20	101	153
DH424188	18.8		.7402	20	101	153
DH424189	18.9		.7441	20	101	153
DH424190	19.0		.7480	20	101	153
DH424048F	19.005	3/4	.7500	20	101	153
DH424191	19.1		.7520	20	101	153
DH424192	19.2		.7559	20	101	153
DH424193	19.3		.7598	20	101	153
DH424194	19.4		.7638	20	101	153
DH424195	19.5		.7676	20	101	153
DH424196	19.6		.7717	20	101	153
DH424197	19.7		.7756	20	101	153
DH424198	19.8		.7795	20	101	153
DH424199	19.9		.7835	20	101	153
DH424200	20.0		.7874	20	101	153

▶ 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											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																		○			

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DH416, DH418, DH711, DH712, DH406, DH408, DH421 SERIES

with COOLANT HOLES

ISO	VDI 3323	Material Description	SFM	Drill Diameter			SFM	Drill Diameter					
			1.0 ~ 2.9	METRIC	1.0	2.0	3.0 ~ 20.0	METRIC	3.0	-	4.0	-	5.0
			-	FRACTIONAL	-	-	1/8 ~ 3/4	FRACTIONAL	-	1/8	-	3/16	-
			.0394 ~ .0787	DECIMAL	.0394	.0787	.1181 ~ .7874	DECIMAL	.1181	.1250	.1575	.1875	.1969
P	2	Non-alloy steel	263	RPM	25460	12730	362	RPM	11670		8750	7000	
				FEED	.0012- .002	.002- .0028		FEED	.0024- .0047		.0031- .0055	.0055- .0079	
	3		263	RPM	25460	12730	362	RPM	11670		8750	7000	
				FEED	.0012- .002	.002- .0028		FEED	.0024- .0047		.0031- .0055	.0055- .0079	
	4		263	RPM	25460	12730	362	RPM	11670		8750	7000	
				FEED	.0012- .002	.002- .0028		FEED	.0016- .0039		.0028- .0051	.0039- .0063	
	5		230	RPM	22280	11140	296	RPM	9550		7160	5730	
				FEED	.0012- .002	.002- .0028		FEED	.0016- .0039		.0028- .0051	.0039- .0063	
	6	Low alloy steel	263	RPM	25460	12730	362	RPM	11670		8750	7000	
				FEED	.0012- .002	.002- .0028		FEED	.0024- .0047		.0031- .0055	.0055- .0079	
	7		230	RPM	22280	11140	296	RPM	9550		7160	5730	
				FEED	.0012- .002	.002- .0028		FEED	.0024- .0047		.0031- .0055	.0039- .0079	
	8		230	RPM	22280	11140	296	RPM	9550		7160	5730	
				FEED	.0008- .0016	.0012- .002		FEED	.0016- .0039		.0028- .0051	.0039- .0063	
	9		132	RPM	12730	6370	165	RPM	5310		3980	3180	
				FEED	.0008- .0016	.0012- .002		FEED	.0012- .0031		.002- .0043	.0031- .0055	
	10	High alloyed steel, and tool steel	198	RPM	19100	9550	263	RPM	8490		6370	5090	
				FEED	.0012- .002	.002- .0028		FEED	.0016- .0039		.0028- .0051	.0039- .0063	
	11		132	RPM	12730	6370	148	RPM	4770		3580	2860	
				FEED	.0008- .0016	.0012- .002		FEED	.0012- .0031		.002- .0043	.0031- .0055	
M	12	Stainless steel	198	RPM	19100	9550	263	RPM	8490		6370	5090	
				FEED	.0012- .002	.002- .0028		FEED	.0024- .0047		.0031- .0055	.0055- .0079	
	13		148	RPM	14320	7160	181	RPM	5840		4380	3500	
				FEED	.0008- .0016	.0012- .002		FEED	.0016- .0039		.0028- .0051	.0039- .0063	
K	15	Grey cast iron	263	RPM	25460	12730	362	RPM	11670		8750	7000	
				FEED	.0016- .0024	.0016- .0024		FEED	.0031- .0055		.0047- .0071	.0071- .0094	
	16		247	RPM	23870	11940	313	RPM	10080		7560	6050	
				FEED	.0016- .0024	.0016- .0024		FEED	.0024- .0047		.0031- .0055	.0055- .0079	
	17	Nodular cast iron	296	RPM	28650	14320	395	RPM	12730		9550	7640	
				FEED	.0016- .0024	.0016- .0024		FEED	.0031- .0055		.0047- .0071	.0071- .0094	
	18		198	RPM	19100	9550	263	RPM	8490		6370	5090	
				FEED	.0016- .0024	.0016- .0024		FEED	.0024- .0047		.0031- .0055	.0055- .0079	
	19	Malleable cast iron	230	RPM	22280	11140	296	RPM	9550		7160	5730	
				FEED	.0016- .0024	.0016- .0024		FEED	.0031- .0055		.0047- .0071	.0071- .0094	
	20		198	RPM	19100	9550	263	RPM	8490		6370	5090	
				FEED	.0012- .002	.002- .0028		FEED	.0024- .0047		.0031- .0055	.0055- .0079	
H	38	Hardened steel	82	RPM	9550	4770	99	RPM	3180		2390	1910	
				FEED	.0004- .0008	.0004- .0012		FEED	.0004- .0012		.0004- .0016	.0008- .002	

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

Drill Diameter													
6.0	-	-	8.0	-	10.0	12.0	-	14.0	-	-	16.0	18.0	-	20.0
-	1/4	5/16	-	3/8	-	-	1/2	-	9/16	5/8	-	-	3/4	-
.2362	.2500	.3125	.3150	.3750	.3937	.4724	.5000	.5512	.5625	.6250	.6299	.7087	.7500	.7874
5840		4380		3500		2920	2770		2500		2190	1950	1840	1750
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0079- .0118		.0087- .0126		.0094- .0134	.011- .015	.011- .015	.0118- .0157
5840		4380		3500		2920	2770		2500		2190	1950	1840	1750
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0079- .0118		.0087- .0126		.0094- .0134	.011- .015	.011- .015	.0118- .0157
5840		4380		3500		2920	2770		2500		2190	1950	1840	1750
.0047- .0071		.0055- .0079		.0071- .0094		.0055- .0094	.0055- .0094		.0063- .0102		.0071- .011	.0079- .0118	.0079- .0118	.0087- .0126
4770		3580		2860		2390	2260		2050		1790	1590	1510	1430
.0047- .0071		.0055- .0079		.0071- .0094		.0055- .0094	.0055- .0094		.0063- .0102		.0071- .011	.0079- .0118	.0079- .0118	.0087- .0126
5840		4380		3500		2920	2770		2500		2190	1950	1840	1750
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0079- .0118		.0087- .0126		.0094- .0134	.011- .015	.011- .015	.0118- .0157
4770		3580		2860		2390	2260		2050		1790	1590	1510	1430
.0047- .0094		.0063- .011		.0079- .0118		.0083- .0118	.0083- .0118		.0087- .0138		.0098- .0142	.011- .015	.011- .015	.0118- .0157
4770		3580		2860		2390	2260		2050		1790	1590	1510	1430
.0047- .0071		.0055- .0079		.0071- .0094		.0055- .0094	.0055- .0094		.0063- .0102		.0071- .011	.0079- .0118	.0079- .0118	.0087- .0126
2650		1990		1590		1330	1260		1140		990	880	840	800
.0039- .0063		.0047- .0071		.0055- .0079		.0047- .0087	.0047- .0087		.0051- .0091		.0055- .0094	.0063- .0102	.0063- .0102	.0071- .011
4240		3180		2550		2120	2010		1820		1590	1410	1340	1270
.0047- .0071		.0055- .0079		.0071- .0094		.0055- .0094	.0055- .0094		.0063- .0102		.0071- .011	.0079- .0118	.0079- .0118	.0087- .0126
2390		1790		1430		1190	1130		1020		900	800	750	720
.0039- .0063		.0047- .0071		.0055- .0079		.0047- .0087	.0047- .0087		.0051- .0091		.0055- .0094	.0063- .0102	.0063- .0102	.0071- .011
4240		3180		2550		2120	2010		1820		1590	1410	1340	1270
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0079- .0118		.0087- .0126		.0094- .0134	.011- .015	.011- .015	.0118- .0157
2920		2190		1750		1460	1380		1250		1090	970	920	880
.0047- .0071		.0055- .0079		.0071- .0094		.0055- .0094	.0055- .0094		.0063- .0102		.0071- .011	.0079- .0118	.0079- .0118	.0087- .0126
5840		4380		3500		2920	2770		2500		2190	1950	1840	1750
.0055- .0102		.0063- .011		.0094- .0134		.0102- .0142	.0102- .0142		.011- .015		.0118- .0157	.0126- .0165	.0126- .0165	.0134- .0173
5040		3780		3020		2520	2390		2160		1890	1680	1590	1510
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0079- .0118		.0087- .0126		.0094- .0134	.011- .015	.011- .015	.0118- .0157
6370		4770		3820		3180	3020		2730		2390	2120	2010	1910
.0055- .0102		.0063- .011		.0094- .0134		.0102- .0142	.0102- .0142		.011- .015		.0118- .0157	.0126- .0165	.0126- .0165	.0134- .0173
4240		3180		2550		2120	2010		1820		1590	1410	1340	1270
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0079- .0118		.0087- .0126		.0094- .0134	.011- .015	.011- .015	.0118- .0157
4770		3580		2860		2390	2260		2050		1790	1590	1510	1430
.0055- .0102		.0063- .011		.0094- .0134		.0102- .0142	.0102- .0142		.011- .015		.0118- .0157	.0126- .0165	.0126- .0165	.0134- .0173
4240		3180		2550		2120	2010		1820		1590	1410	1340	1270
.0063- .0087		.0071- .0094		.0087- .011		.0079- .0118	.0079- .0118		.0087- .0126		.0094- .0134	.011- .015	.011- .015	.0118- .0157
1590		1190		950		800	750		680		600	530	500	480
.0012- .0024		.0012- .0024		.0016- .0028		.0016- .0031	.0016- .0031		.002- .0035		.002- .0035	.002- .0039	.002- .0039	.002- .0039

▶ Recommend to reduce the feed rate as following
Feed 100% : DH416/DH711(3xD), DH406(3xD) **Feed 80%** : DH418/DH712(5xD), DH408(5xD) **Feed 70%** : DH421(8xD)

DH414, DH722, DH404, DH423, DH424 SERIES

without COOLANT HOLES

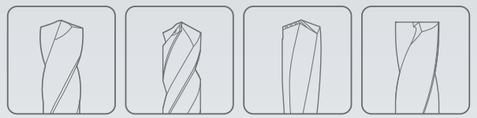
ISO	VDI 3323	Material Description	SFM		Drill Diameter			SFM		Drill Diameter					
			1.0 ~ 2.9	METRIC	1.0	2.0		3.0 ~ 20.0	METRIC	3.0	-	4.0	-	5.0	
			-	FRACTIONAL	-	-		1/8 ~ 3/4	FRACTIONAL	-	1/8	-	3/16	-	
			.0394 ~ .0787	DECIMAL	.0394	.0787		.1181 ~ .7874	DECIMAL	.1181	.1250	.1575	.1875	.1969	
P	2	Non-alloy steel	230	RPM	22280	11140		329	RPM	10610		7960		6370	
				FEED	.0012- .002	.002- .0028			FEED	.0024- .0047		.0031- .0055		.0055- .0079	
	3		230	RPM	22280	11140		329	RPM	10610		7960		6370	
				FEED	.0012- .002	.002- .0028			FEED	.0024- .0047		.0031- .0055		.0055- .0079	
	4		230	RPM	22280	11140		329	RPM	10610		7960		6370	
				FEED	.0012- .002	.002- .0028			FEED	.0016- .0039		.0028- .0051		.0039- .0063	
	5		197	RPM	19100	9550		263	RPM	8490		6370		5090	
				FEED	.0012- .002	.002- .0028			FEED	.0016- .0039		.0028- .0051		.0039- .0063	
	6	Low alloy steel	230	RPM	22280	11140		329	RPM	10610		7960		6370	
				FEED	.0012- .002	.002- .0028			FEED	.0024- .0047		.0031- .0055		.0055- .0079	
	7		197	RPM	19100	9550		263	RPM	8490		6370		5090	
				FEED	.0012- .002	.002- .0028			FEED	.0024- .0047		.0031- .0055		.0039- .0079	
	8		197	RPM	19100	9550		263	RPM	8490		6370		5090	
				FEED	.0008- .0016	.0012- .002			FEED	.0016- .0039		.0028- .0051		.0039- .0063	
	9		99	RPM	9550	4770		132	RPM	4240		3180		2550	
				FEED	.0008- .0016	.0012- .002			FEED	.0012- .0031		.002- .0043		.0031- .0055	
	10	High alloyed steel, and tool steel	165	RPM	15920	7960		230	RPM	7430		5570		4460	
				FEED	.0012- .002	.002- .0028			FEED	.0016- .0039		.0028- .0051		.0039- .0063	
	11		99	RPM	9550	4770		132	RPM	4240		3180		2550	
				FEED	.0008- .0016	.0012- .002			FEED	.0012- .0031		.002- .0043		.0031- .0055	
M	12	Stainless steel	165	RPM	15920	7960		230	RPM	7430		5570		4460	
				FEED	.0012- .002	.002- .0028			FEED	.0024- .0047		.0031- .0055		.0055- .0079	
	13		115	RPM	11140	5570		148	RPM	4770		3580		2860	
				FEED	.0008- .0016	.0012- .002			FEED	.0016- .0039		.0028- .0051		.0039- .0063	
K	15	Grey cast iron	230	RPM	22280	11140		329	RPM	10610		7960		6370	
				FEED	.0016- .0024	.0016- .0024			FEED	.0031- .0055		.0047- .0071		.0071- .0094	
	16		214	RPM	20690	10350		263	RPM	8490		6370		5090	
				FEED	.0016- .0024	.0016- .0024			FEED	.0024- .0047		.0031- .0055		.0055- .0079	
	17	Nodular cast iron	230	RPM	22280	11140		329	RPM	10610		7960		6370	
				FEED	.0016- .0024	.0016- .0024			FEED	.0031- .0055		.0047- .0071		.0071- .0094	
	18		165	RPM	15920	7960		230	RPM	7430		5570		4460	
				FEED	.0016- .0024	.0016- .0024			FEED	.0024- .0047		.0031- .0055		.0055- .0079	
	19	Malleable cast iron	197	RPM	19100	9550		263	RPM	8490		6370		5090	
				FEED	.0016- .0024	.0016- .0024			FEED	.0031- .0055		.0047- .0071		.0071- .0094	
	20		165	RPM	15920	7960		230	RPM	7430		5570		4460	
				FEED	.0012- .002	.002- .0028			FEED	.0024- .0047		.0031- .0055		.0055- .0079	
H	38	Hardened steel	66	RPM	7960	3980		82	RPM	2650		1990		1590	
				FEED	.0004- .0008	.0004- .0012			FEED	.0004- .0012		.0004- .0016		.0008- .002	

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

Drill Diameter													
6.0	-	-	8.0	-	10.0	12.0	-	14.0	-	-	16.0	18.0	-	20.0
-	1/4	5/16	-	3/8	-	-	1/2	-	9/16	5/8	-	-	3/4	-
.2362	.2500	.3125	.3150	.3750	.3937	.4724	.5000	.5512	.5625	.6250	.6299	.7087	.7500	.7874
5310	3980		3180		2650	2510		2270			1990	1770	1680	1590
.0063- .0087	.0071- .0094		.0087- .011		.0079- .0118	.0079- .0118		.0087- .0126			.0094- .0134	.011- .015	.011- .015	.0118- .0157
5310	3980		3180		2650	2510		2270			1990	1770	1680	1590
.0063- .0087	.0071- .0094		.0087- .011		.0079- .0118	.0079- .0118		.0087- .0126			.0094- .0134	.011- .015	.011- .015	.0118- .0157
5310	3980		3180		2650	2510		2270			1990	1770	1680	1590
.0047- .0071	.0055- .0079		.0071- .0094		.0055- .0094	.0055- .0094		.0063- .0102			.0071- .011	.0079- .0118	.0079- .0118	.0087- .0126
4240	3180		2550		2120	2010		1820			1590	1410	1340	1270
.0047- .0071	.0055- .0079		.0071- .0094		.0055- .0094	.0055- .0094		.0063- .0102			.0071- .011	.0079- .0118	.0079- .0118	.0087- .0126
5310	3980		3180		2650	2510		2270			1990	1770	1680	1590
.0063- .0087	.0071- .0094		.0087- .011		.0079- .0118	.0079- .0118		.0087- .0126			.0094- .0134	.011- .015	.011- .015	.0118- .0157
4240	3180		2550		2120	2010		1820			1590	1410	1340	1270
.0047- .0094	.0063- .011		.0079- .0118		.0083- .0118	.0083- .0118		.0087- .0138			.0098- .0142	.011- .015	.011- .015	.0118- .0157
4240	3180		2550		2120	2010		1820			1590	1410	1340	1270
.0047- .0071	.0055- .0079		.0071- .0094		.0055- .0094	.0055- .0094		.0063- .0102			.0071- .011	.0079- .0118	.0079- .0118	.0087- .0126
2120	1590		1270		1060	1010		910			800	710	670	640
.0039- .0063	.0047- .0071		.0055- .0079		.0047- .0087	.0047- .0087		.0051- .0091			.0055- .0094	.0063- .0102	.0063- .0102	.0071- .011
3710	2790		2230		1860	1760		1590			1390	1240	1170	1110
.0047- .0071	.0055- .0079		.0071- .0094		.0055- .0094	.0055- .0094		.0063- .0102			.0071- .011	.0079- .0118	.0079- .0118	.0087- .0126
2120	1590		1270		1060	1010		910			800	710	670	640
.0039- .0063	.0047- .0071		.0055- .0079		.0047- .0087	.0047- .0087		.0051- .0091			.0055- .0094	.0063- .0102	.0063- .0102	.0071- .011
3710	2790		2230		1860	1760		1590			1390	1240	1170	1110
.0063- .0087	.0071- .0094		.0087- .011		.0079- .0118	.0079- .0118		.0087- .0126			.0094- .0134	.011- .015	.011- .015	.0118- .0157
2390	1790		1430		1190	1130		1020			900	800	750	720
.0047- .0071	.0055- .0079		.0071- .0094		.0055- .0094	.0055- .0094		.0063- .0102			.0071- .011	.0079- .0118	.0079- .0118	.0087- .0126
5310	3980		3180		2650	2510		2270			1990	1770	1680	1590
.0055- .0102	.0063- .011		.0094- .0134		.0102- .0142	.0102- .0142		.011- .015			.0118- .0157	.0126- .0165	.0126- .0165	.0134- .0173
4240	3180		2550		2120	2010		1820			1590	1410	1340	1270
.0063- .0087	.0071- .0094		.0087- .011		.0079- .0118	.0079- .0118		.0087- .0126			.0094- .0134	.011- .015	.011- .015	.0118- .0157
5310	3980		3180		2650	2510		2270			1990	1770	1680	1590
.0055- .0102	.0063- .011		.0094- .0134		.0102- .0142	.0102- .0142		.011- .015			.0118- .0157	.0126- .0165	.0126- .0165	.0134- .0173
3710	2790		2230		1860	1760		1590			1390	1240	1170	1110
.0063- .0087	.0071- .0094		.0087- .011		.0079- .0118	.0079- .0118		.0087- .0126			.0094- .0134	.011- .015	.011- .015	.0118- .0157
4240	3180		2550		2120	2010		1820			1590	1410	1340	1270
.0055- .0102	.0063- .011		.0094- .0134		.0102- .0142	.0102- .0142		.011- .015			.0118- .0157	.0126- .0165	.0126- .0165	.0134- .0173
3710	2790		2230		1860	1760		1590			1390	1240	1170	1110
.0063- .0087	.0071- .0094		.0087- .011		.0079- .0118	.0079- .0118		.0087- .0126			.0094- .0134	.011- .015	.011- .015	.0118- .0157
1330	990		800		660	630		570			500	440	420	400
.0012- .0024	.0012- .0024		.0016- .0028		.0016- .0031	.0016- .0031		.002- .0035			.002- .0035	.002- .0039	.002- .0039	.002- .0039

▶ Recommend to reduce the feed rate as following
Feed 100% : DH414(3xD), DH404(3xD), DH423(3xD) **Feed 80%** : DH722(5xD), DH424(5xD)

Global Cutting Tool Leader **YG-1**



DREAM DRILLS

Leading Through Innovation

NEW SIZES

SOLID CARBIDE

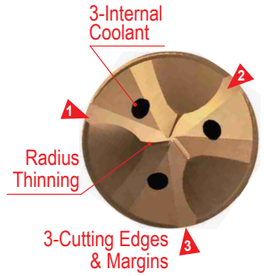
DREAM DRILLS HIGH FEED

- 1.5 to 2 Times Faster Feeding Speed than 2-Flute Drill
  For Carbon Steels, Alloy Steels(up to HRc35) and Cast Iron

NEW SIZES

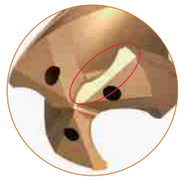
DREAM DRILLS HIGH FEED

1.5 ~ 2 times Faster in drilling compared to two flute carbide drills



3-Cutting Edges & Margins will allow high penetration rate, accurate holelocation and good surface finish.

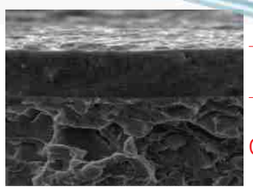
Radius Thinning for
Self Centering and Chip Breaking



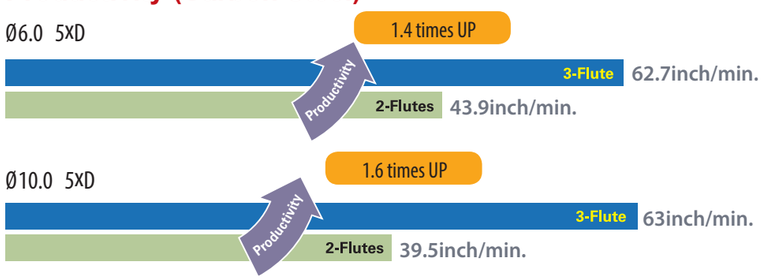
Ground Negative land
on cutting edge for Reliable Tool Life

3-Slots on end of shank for smooth and consistent coolant supply

H - Coating
(Upgraded AlCrN-Based : **Multi-Layer coating**)
- Higher worn-out resistance and Lower friction
- Higher Cutting Speed and Feed
- Improved drill Hole Quality



Productivity (Carbon Steel)



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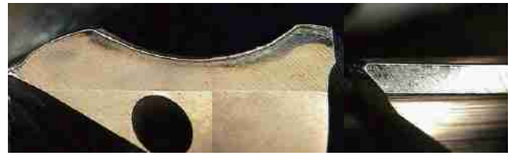
CASE STUDY

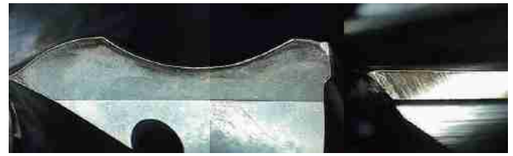
▶ SOLID CARBIDE DREAM DRILLS - High Feed with Coolant Holes

CUTTING CONDITION	
Tool	DGR495100 (Dream Drills High Feed)
Size	Ø10 x Ø10 x 61 x 103
Work Material	• AISI : 1045 • JIS : S45C • DIN : C45 (HRc20)
RPM	3,200 rev./min.
Feed	.0197 inch/rev.
Drilling Depth	1.97" (5xD)
Drilling Method	Blind Hole
Coolant	Wet Cut
Machine	Machining Center

YG-1 Total Drilling 330 Holes



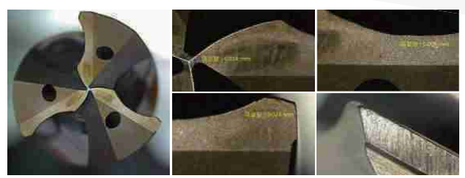
Competitor A Total Drilling 330 Holes



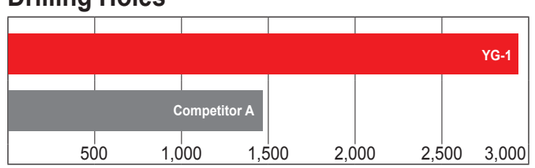
Competitor B Total Drilling 330 Holes

▶ SOLID CARBIDE DREAM DRILLS - High Feed with Coolant Holes

CUTTING CONDITION	
Tool	DGR495080 (Dream Drills High Feed)
Size	Ø8 x Ø8 x 53 x 91
Work Material	Connecting rod
RPM	2,000 rev./min.
Feed	0.009inch/rev.
Drilling Depth	1.58" (5xD)
Drilling Method	Internal Cooling, Water Soluble
Coolant	Wet Cut
Machine	Machining Center



Drilling Holes



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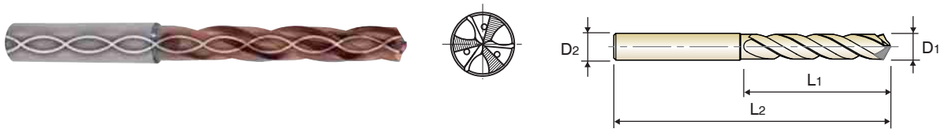
H-COATED SOLID CARBIDE DREAM DRILLS
High Feed with Coolant Holes (3XD)

NEW SIZES

DGR493 SERIES
DGR496 SERIES

- ▶Drilling for Carbon Steels, Alloy Steels(-HRc35) and Cast Iron
- ▶Higher productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
- ▶Multi-Layer coating delivers much better productivity and reliability
- ▶Self centering and chip breaking by R-thinning and coolant holes



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.66 * NEW SIZE

SHORT
3×D

Unit : mm

	EDP No.	Drill Diameter Metric	Inch	Decimal	Shank Diameter	Flute Length	Overall Length
	H-coating	D1			D2	L1	L2
*	DGR493040	4.00			6	24	66
*	DGR493945	4.05			6	24	66
*	DGR493020G	4.09	#20	.1610	6	24	66
*	DGR493041	4.10			6	24	66
*	DGR4930416	4.16			6	24	66
*	DGR493042	4.20			6	24	66
*	DGR4930427	4.27			6	24	66
*	DGR493043	4.30			6	24	66
*	DGR493011F	4.366	11/64	.1719	6	24	66
*	DGR493044	4.40			6	24	66
*	DGR4930446	4.46			6	24	66
*	DGR493045	4.50			6	24	66
*	DGR493046	4.60			6	24	66
*	DGR4930466	4.66			6	24	66
*	DGR493047	4.70			6	24	66
*	DGR493012F	4.763	3/16	.1875	6	28	66
*	DGR493048	4.80			6	28	66
*	DGR493049	4.90			6	28	66
	DGR493050	5.00		.1969	6	28	66
	DGR493051	5.10		.2008	6	28	66
	DGR496013	5.16	13/64	.2031	1/4	28	66
	DGR493052	5.20		.2047	6	28	66
	DGR493053	5.30		.2087	6	28	66
	DGR493054	5.40		.2126	6	28	66
	DGR496103	5.41	#3	.2130	1/4	28	66
	DGR493055	5.50		.2165	6	28	66

	EDP No.	Drill Diameter Metric	Inch	Decimal	Shank Diameter	Flute Length	Overall Length
	H-coating	D1			D2	L1	L2
	DGR496014	5.56	7/32	.2188	1/4	28	66
	DGR493056	5.60		.2205	6	28	66
	DGR496102	5.61	#2	.2210	1/4	28	66
	DGR493057	5.70		.2244	6	28	66
	DGR496101	5.79	#1	.2280	1/4	28	66
	DGR493058	5.80		.2283	6	28	66
	DGR493059	5.90		.2323	6	28	66
	DGR496015	5.95	15/64	.2344	1/4	28	66
	DGR493060	6.00		.2362	6	28	66
	DGR493061	6.10		.2402	8	34	79
	DGR493062	6.20		.2441	8	34	79
	DGR493063	6.30		.2480	8	34	79
	DGR496016	6.35	1/4	.2500	1/4	34	79
	DGR493064	6.40		.2520	8	34	79
	DGR493065	6.50		.2559	8	34	79
	DGR496206	6.53	F	.2570	5/16	34	79
	DGR493066	6.60		.2598	8	34	79
	DGR493067	6.70		.2638	8	34	79
	DGR496017	6.75	17/64	.2656	5/16	34	79
	DGR493068	6.80		.2677	8	34	79
	DGR493069	6.90		.2717	8	34	79
	DGR496209	6.91	I	.2720	5/16	34	79
	DGR493070	7.00		.2756	8	34	79
	DGR493071	7.10		.2795	8	41	79
	DGR496018	7.14	9/32	.2813	5/16	41	79
	DGR493072	7.20		.2835	8	41	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											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																					

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H-COATED SOLID CARBIDE DREAM DRILLS
High Feed with Coolant Holes (3XD)

NEW SIZES

DGR493 SERIES
DGR496 SERIES

- ▶Drilling for Carbon Steels, Alloy Steels(-HRc35) and Cast Iron
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- ▶Self centering and chip breaking by R-thinning and coolant holes

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.66

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter Metric	Inch	Decimal	Shank Diameter	Flute Length	Overall Length
H-coating	D1			D2	L1	L2
DGR493073	7.30		.2874	8	41	79
DGR493074	7.40		.2913	8	41	79
DGR493075	7.50		.2953	8	41	79
DGR496019	7.54	19/64	.2969	5/16	41	79
DGR493076	7.60		.2992	8	41	79
DGR493077	7.70		.3031	8	41	79
DGR493078	7.80		.3071	8	41	79
DGR493079	7.90		.3110	8	41	79
DGR496020	7.94	5/16	.3125	5/16	41	79
DGR493080	8.00		.3150	8	41	79
DGR493081	8.10		.3189	10	47	89
DGR493082	8.20	P	.3228	10	47	89
DGR493083	8.30		.3268	10	47	89
DGR496021	8.33	21/64	.3281	3/8	47	89
DGR493084	8.40		.3307	10	47	89
DGR496217	8.43	Q	.3320	3/8	47	89
DGR493085	8.50		.3346	10	47	89
DGR493086	8.60		.3386	10	47	89
DGR493087	8.70		.3425	10	47	89
DGR496022	8.73	11/32	.3437	3/8	47	89
DGR493088	8.80		.3465	10	47	89
DGR493089	8.90		.3504	10	47	89
DGR493090	9.00		.3543	10	47	89
DGR493091	9.10		.3583	10	47	89
DGR496023	9.13	23/64	.3594	3/8	47	89
DGR493092	9.20		.3622	10	47	89

EDP No.	Drill Diameter Metric	Inch	Decimal	Shank Diameter	Flute Length	Overall Length
H-coating	D1			D2	L1	L2
DGR493093	9.30		.3661	10	47	89
DGR496221	9.35	U	.3680	3/8	47	89
DGR493094	9.40		.3701	10	47	89
DGR493095	9.50		.3740	10	47	89
DGR496024	9.53	3/8	.3750	3/8	47	89
DGR493096	9.60		.3780	10	47	89
DGR493097	9.70		.3819	10	47	89
DGR493098	9.80	W	.3858	10	47	89
DGR493099	9.90		.3898	10	47	89
DGR496025	9.92	25/64	.3906	7/16	47	89
DGR493100	10.00		.3937	10	47	89
DGR493101	10.10		.3976	12	55	102
DGR493102	10.20		.4016	12	55	102
DGR493103	10.30		.4055	12	55	102
DGR496026	10.32	13/32	.4063	7/16	55	102
DGR493104	10.40		.4094	12	55	102
DGR493105	10.50		.4134	12	55	102
DGR493106	10.60		.4173	12	55	102
DGR493107	10.70		.4213	12	55	102
DGR496027	10.72	27/64	.4219	7/16	55	102
DGR493108	10.80		.4252	12	55	102
DGR493109	10.90		.4291	12	55	102
DGR493110	11.00		.4331	12	55	102
DGR493111	11.10		.4370	12	55	102
DGR496028	11.11	7/16	.4375	7/16	55	102
DGR493112	11.20		.4409	12	55	102

▶ 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											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																					

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High Feed with Coolant Holes (3XD)

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DGR493 SERIES
DGR496 SERIES

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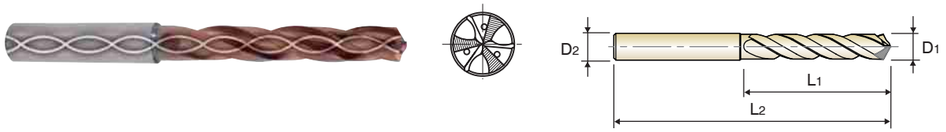

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar P.66

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR493113	11.30		.4449	12	55	102
DGR493114	11.40		.4488	12	55	102
DGR493115	11.50		.4528	12	55	102
DGR496029	11.51	29/64	.4531	1/2	55	102
DGR493116	11.60		.4567	12	55	102
DGR493117	11.70		.4606	12	55	102
DGR493118	11.80		.4646	12	55	102
DGR493119	11.90		.4685	12	55	102
DGR496030	11.91	15/32	.4688	1/2	55	102
DGR493120	12.00		.4724	12	55	102
DGR493121	12.10		.4764	14	60	107
DGR493122	12.20		.4803	14	60	107
DGR493123	12.30		.4843	14	60	107
DGR496031	12.30	31/64	.4844	1/2	60	107
DGR493124	12.40		.4882	14	60	107
DGR493125	12.50		.4921	14	60	107
DGR493126	12.60		.4961	14	60	107
DGR496032	12.70	1/2	.5000	1/2	60	107
DGR493127	12.70		.5000	14	60	107
DGR493128	12.80		.5039	14	60	107
DGR493129	12.90		.5079	14	60	107
DGR493130	13.00		.5118	14	60	107
DGR493131	13.10	33/64	.5156	14	60	107
DGR493132	13.20		.5197	14	60	107
DGR493133	13.30		.5236	14	60	107
DGR493134	13.40		.5276	14	60	107
DGR496034	13.49	17/32	.5312	9/16	60	107
DGR493135	13.50		.5315	14	60	107
DGR493136	13.60		.5354	14	60	107
DGR493137	13.70		.5394	14	60	107
DGR493138	13.80		.5433	14	60	107
DGR496035	13.89	35/64	.5469	9/16	60	107
DGR493139	13.90		.5472	14	60	107
DGR493140	14.00		.5512	14	60	107
DGR493141	14.10		.5551	16	65	115
DGR493142	14.20		.5591	16	65	115
DGR496036	14.29	9/16	.5625	9/16	65	115
DGR493143	14.30		.5630	16	65	115
DGR493144	14.40		.5669	16	65	115
DGR493145	14.50		.5709	16	65	115
DGR493146	14.60		.5748	16	65	115
DGR496037	14.68	37/64	.5781	5/8	65	115
DGR493147	14.70		.5787	16	65	115
DGR493148	14.80		.5827	16	65	115
DGR493149	14.90		.5866	16	65	115
DGR493150	15.00		.5906	16	65	115
DGR496038	15.08	19/32	.5938	5/8	65	115
DGR493151	15.10		.5945	16	65	115
DGR493152	15.20		.5984	16	65	115
DGR493153	15.30		.6024	16	65	115
DGR493154	15.40		.6063	16	65	115
DGR496039	15.48	39/64	.6094	5/8	65	115

▶ 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											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																					

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High Feed with Coolant Holes (3XD)

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DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar P.66

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR493155	15.50		.6102	16	65	115
DGR493156	15.60		.6142	16	65	115
DGR493157	15.70		.6181	16	65	115
DGR493158	15.80		.6220	16	65	115
DGR496040	15.88	5/8	.6250	5/8	65	115
DGR493159	15.90		.6260	16	65	115
DGR493160	16.00		.6299	16	65	115
DGR493161	16.10		.6339	18	73	123
DGR496041	16.27	41/64	.6406	11/16	73	123
DGR493165	16.50		.6496	18	73	123
DGR496042	16.67	21/32	.6563	11/16	73	123
DGR493170	17.00		.6693	18	73	123
DGR496043	17.07	43/64	.6719	11/16	73	123
DGR496044	17.46	11/16	.6875	11/16	73	123
DGR493175	17.50		.6890	18	73	123
DGR496045	17.86	45/64	.7031	3/4	73	123
DGR493180	18.00		.7087	18	73	123
DGR496046	18.26	23/32	.7188	3/4	79	131
DGR493185	18.50		.7283	20	79	131
DGR496047	18.65	47/64	.7344	3/4	79	131
DGR493190	19.00		.7480	20	79	131
DGR496048	19.05	3/4	.7500	3/4	79	131
DGR493195	19.50		.7677	20	79	131
DGR493200	20.00		.7874	20	79	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											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																					

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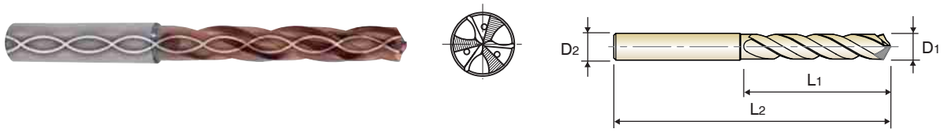
Phone: +1-800-765-8665, www.yg1usa.com

H-COATED SOLID CARBIDE DREAM DRILLS
High Feed with Coolant Holes (5XD)

NEW SIZES

DGR495 SERIES
DGR497 SERIES

- ▶Drilling for Carbon Steels, Alloy Steels(-HRc35) and Cast Iron
- ▶Higher productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
- ▶Multi-Layer coating delivers much better productivity and reliability
- ▶Self centering and chip breaking by R-thinning and coolant holes



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.66 * NEW SIZE

LONG
5×D

Unit : mm

	EDP No.	Drill Diameter Metric	Drill Diameter Inch	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
	H-coating	D1			D2	L1	L2
*	DGR495040	4.00			6	36	74
*	DGR495020G	4.09	#20	.1610	6	36	74
*	DGR495041	4.10			6	36	74
*	DGR495042	4.20			6	36	74
*	DGR495043	4.30			6	36	74
*	DGR495011F	4.366	11/64	.1719	6	36	74
*	DGR495044	4.40			6	36	74
*	DGR495045	4.50			6	36	74
*	DGR495046	4.60			6	36	74
*	DGR495047	4.70			6	36	74
*	DGR495012F	4.763	3/16	.1875	6	44	82
*	DGR495048	4.80			6	44	82
*	DGR495049	4.90			6	44	82
	DGR495050	5.00		.1969	6	44	82
	DGR495051	5.10		.2008	6	44	82
	DGR497013	5.16	13/64	.2031	1/4	44	82
	DGR495052	5.20		.2047	6	44	82
	DGR495053	5.30		.2087	6	44	82
	DGR495054	5.40		.2126	6	44	82
	DGR497103	5.41	#3	.2130	1/4	44	82
	DGR495055	5.50		.2165	6	44	82
	DGR497014	5.56	7/32	.2188	1/4	44	82
	DGR495056	5.60		.2205	6	44	82
	DGR497102	5.61	#2	.2210	1/4	44	82
	DGR495057	5.70		.2244	6	44	82
	DGR497101	5.79	#1	.2280	1/4	44	82

	EDP No.	Drill Diameter Metric	Drill Diameter Inch	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
	H-coating	D1			D2	L1	L2
	DGR495058	5.80		.2283	6	44	82
	DGR495059	5.90		.2323	6	44	82
	DGR497015	5.95	15/64	.2344	1/4	44	82
	DGR495060	6.00		.2362	6	44	82
	DGR495061	6.10		.2402	8	53	91
	DGR495062	6.20		.2441	8	53	91
	DGR495063	6.30		.2480	8	53	91
	DGR497016	6.35	1/4	.2500	1/4	53	91
	DGR495064	6.40		.2520	8	53	91
	DGR495065	6.50		.2559	8	53	91
	DGR497206	6.53	F	.2570	5/16	53	91
	DGR495066	6.60		.2598	8	53	91
	DGR495067	6.70		.2638	8	53	91
	DGR497017	6.75	17/64	.2656	5/16	53	91
	DGR495068	6.80		.2677	8	53	91
	DGR495069	6.90		.2717	8	53	91
	DGR497209	6.91	I	.2720	5/16	53	91
	DGR495070	7.00		.2756	8	53	91
	DGR495071	7.10		.2795	8	53	91
	DGR497018	7.14	9/32	.2813	5/16	53	91
	DGR495072	7.20		.2835	8	53	91
	DGR495073	7.30		.2874	8	53	91
	DGR495074	7.40		.2913	8	53	91
	DGR495075	7.50		.2953	8	53	91
	DGR497019	7.54	19/64	.2969	5/16	53	91
	DGR495076	7.60		.2992	8	53	91

▶ 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											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																					

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High Feed with Coolant Holes (5XD)

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DGR497 SERIES

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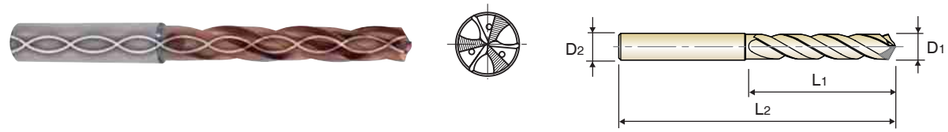

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.66

LONG
5×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
H-coating	D1			D2	L1	L2
DGR495077	7.70		.3031	8	53	91
DGR495078	7.80		.3071	8	53	91
DGR495079	7.90		.3110	8	53	91
DGR497020	7.94	5/16	.3125	5/16	53	91
DGR495080	8.00		.3150	8	53	91
DGR495081	8.10		.3189	10	61	103
DGR495082	8.20	P	.3228	10	61	103
DGR495083	8.30		.3268	10	61	103
DGR497021	8.33	21/64	.3281	3/8	61	103
DGR495084	8.40		.3307	10	61	103
DGR497217	8.43	Q	.3320	3/8	61	103
DGR495085	8.50		.3346	10	61	103
DGR495086	8.60		.3386	10	61	103
DGR495087	8.70		.3425	10	61	103
DGR497022	8.73	11/32	.3437	3/8	61	103
DGR495088	8.80		.3465	10	61	103
DGR495089	8.90		.3504	10	61	103
DGR495090	9.00		.3543	10	61	103
DGR495091	9.10		.3583	10	61	103
DGR497023	9.13	23/64	.3594	3/8	61	103
DGR495092	9.20		.3622	10	61	103
DGR495093	9.30		.3661	10	61	103
DGR497221	9.35	U	.3680	3/8	61	103
DGR495094	9.40		.3701	10	61	103
DGR495095	9.50		.3740	10	61	103
DGR497024	9.53	3/8	.3750	3/8	61	103

EDP No.	Drill Diameter Metric	Drill Diameter Inch	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
H-coating	D1			D2	L1	L2
DGR495096	9.60		.3780	10	61	103
DGR495097	9.70		.3819	10	61	103
DGR495098	9.80	W	.3858	10	61	103
DGR495099	9.90		.3898	10	61	103
DGR497025	9.92	25/64	.3906	7/16	61	103
DGR495100	10.00		.3937	10	61	103
DGR495101	10.10		.3976	12	71	118
DGR495102	10.20		.4016	12	71	118
DGR495103	10.30		.4055	12	71	118
DGR497026	10.32	13/32	.4063	7/16	71	118
DGR495104	10.40		.4094	12	71	118
DGR495105	10.50		.4134	12	71	118
DGR495106	10.60		.4173	12	71	118
DGR495107	10.70		.4213	12	71	118
DGR497027	10.72	27/64	.4219	7/16	71	118
DGR495108	10.80		.4252	12	71	118
DGR495109	10.90		.4291	12	71	118
DGR495110	11.00		.4331	12	71	118
DGR495111	11.10		.4370	12	71	118
DGR497028	11.11	7/16	.4375	7/16	71	118
DGR495112	11.20		.4409	12	71	118
DGR495113	11.30		.4449	12	71	118
DGR495114	11.40		.4488	12	71	118
DGR495115	11.50		.4528	12	71	118
DGR497029	11.51	29/64	.4531	1/2	71	118
DGR495116	11.60		.4567	12	71	118

▶ 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											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																					

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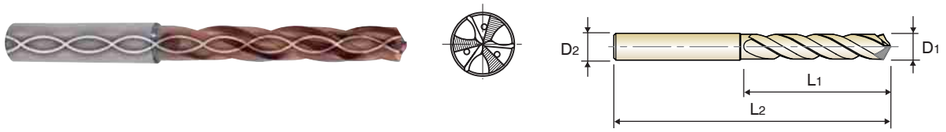

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.66

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR495117	11.70		.4606	12	71	118
DGR495118	11.80		.4646	12	71	118
DGR495119	11.90		.4685	12	71	118
DGR497030	11.91	15/32	.4688	1/2	71	118
DGR495120	12.00		.4724	12	71	118
DGR495121	12.10		.4764	14	77	124
DGR495122	12.20		.4803	14	77	124
DGR495123	12.30		.4843	14	77	124
DGR497031	12.30	31/64	.4844	1/2	77	124
DGR495124	12.40		.4882	14	77	124
DGR495125	12.50		.4921	14	77	124
DGR495126	12.60		.4961	14	77	124
DGR497032	12.70	1/2	.5000	1/2	77	124
DGR495127	12.70		.5000	14	77	124
DGR495128	12.80		.5039	14	77	124
DGR495129	12.90		.5079	14	77	124
DGR495130	13.00		.5118	14	77	124
DGR495131	13.10	33/64	.5156	14	77	124
DGR495132	13.20		.5197	14	77	124
DGR495133	13.30		.5236	14	77	124
DGR495134	13.40		.5276	14	77	124
DGR497034	13.49	17/32	.5312	9/16	77	124
DGR495135	13.50		.5315	14	77	124
DGR495136	13.60		.5354	14	77	124
DGR495137	13.70		.5394	14	77	124
DGR495138	13.80		.5433	14	77	124
DGR497035	13.89	35/64	.5469	9/16	77	124
DGR495139	13.90		.5472	14	77	124
DGR495140	14.00		.5512	14	77	124
DGR495141	14.10		.5551	16	83	133
DGR495142	14.20		.5591	16	83	133
DGR497036	14.29	9/16	.5625	9/16	83	133
DGR495143	14.30		.5630	16	83	133
DGR495144	14.40		.5669	16	83	133
DGR495145	14.50		.5709	16	83	133
DGR495146	14.60		.5748	16	83	133
DGR497037	14.68	37/64	.5781	5/8	83	133
DGR495147	14.70		.5787	16	83	133
DGR495148	14.80		.5827	16	83	133
DGR495149	14.90		.5866	16	83	133
DGR495150	15.00		.5906	16	83	133
DGR497038	15.08	19/32	.5938	5/8	83	133
DGR495151	15.10		.5945	16	83	133
DGR495152	15.20		.5984	16	83	133
DGR495153	15.30		.6024	16	83	133
DGR495154	15.40		.6063	16	83	133
DGR497039	15.48	39/64	.6094	5/8	83	133
DGR495155	15.50		.6102	16	83	133
DGR495156	15.60		.6142	16	83	133
DGR495157	15.70		.6181	16	83	133
DGR495158	15.80		.6220	16	83	133
DGR497040	15.88	5/8	.6250	5/8	83	133

▶ 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											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																					

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DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.66

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2
DGR495159	15.90		.6260	16	83	133
DGR495160	16.00		.6299	16	83	133
DGR495161	16.10		.6339	18	93	143
DGR497041	16.27	41/64	.6406	11/16	93	143
DGR495165	16.50		.6496	18	93	143
DGR497042	16.67	21/32	.6563	11/16	93	143
DGR495170	17.00		.6693	18	93	143
DGR497043	17.07	43/64	.6719	11/16	93	143
DGR497044	17.46	11/16	.6875	11/16	93	143
DGR495175	17.50		.6890	18	93	143
DGR497045	17.86	45/64	.7031	3/4	93	143
DGR495180	18.00		.7087	18	93	143
DGR497046	18.26	23/32	.7188	3/4	101	153
DGR495185	18.50		.7283	20	101	153
DGR497047	18.65	47/64	.7344	3/4	101	153
DGR495190	19.00		.7480	20	101	153
DGR497048	19.05	3/4	.7500	3/4	101	153
DGR495195	19.50		.7677	20	101	153
DGR495200	20.00		.7874	20	101	153

▶ 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											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																					

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DGR493, DGR496, DGR495, DGR497 SERIES with COOLANT HOLES

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter									
				METRIC	-	5.0	6.0	-	-	8.0	-	10.0	12.0
				FRACTIONAL	3/16	-	-	1/4	5/16	-	3/8	-	-
				DECIMAL	.1875	.1969	.2362	.2500	.3125	.3150	.3750	.3937	.4724
P	2	Non-alloy steel	329	RPM	6370		5310		3980		3180		2650
				FEED	.0079 - .0098		.0094 - .0118		.0126 - .0157		.0157 - .0197		.0189 - .0236
	3		329	RPM	6370		5310		3980		3180		2650
				FEED	.0079 - .0098		.0094 - .0118		.0126 - .0157		.0157 - .0197		.0189 - .0236
	4		329	RPM	6370		5310		3980		3180		2650
				FEED	.0063 - .0083		.0079 - .0102		.0102 - .0134		.0134 - .0165		.0161 - .0185
	5		263	RPM	5090		4240		3180		2550		2120
				FEED	.0063 - .0083		.0079 - .0102		.0102 - .0134		.0134 - .0165		.0161 - .0185
	6	Low alloy steel	329	RPM	6370		5310		3980		3180		2650
				FEED	.0079 - .0098		.0094 - .0118		.0126 - .0157		.0157 - .0197		.0189 - .0213
	7		263	RPM	5090		4240		3180		2550		2120
				FEED	.0079 - .0098		.0094 - .0118		.0126 - .0157		.0157 - .0197		.0189 - .0213
	8		263	RPM	5090		4240		3180		2550		2120
				FEED	.0063 - .0083		.0079 - .0102		.0102 - .0134		.0134 - .0165		.0161 - .0185
	9		132	RPM	2550		2120		1590		1270		1060
				FEED	.0051 - .0071		.0063 - .0087		.0083 - .0114		.0102 - .0142		.0126 - .015
	10	High alloyed steel, and tool steel	230	RPM	4460		3710		2790		2230		1860
				FEED	.0063 - .0083		.0079 - .0102		.0102 - .0134		.0134 - .0165		.0161 - .0185
	11		132	RPM	2550		2120		1590		1270		1060
				FEED	.0051 - .0071		.0063 - .0087		.0083 - .0114		.0102 - .0142		.0126 - .015
K	15	Grey cast iron	329	RPM	6370		5310		3980		3180		2650
				FEED	.0091 - .0118		.0106 - .0142		.0142 - .0189		.0177 - .0236		.0213 - .0283
	16		263	RPM	5090		4240		3180		2550		2120
				FEED	.0079 - .0098		.0094 - .0118		.0126 - .0157		.0157 - .0197		.0189 - .0236
	17	Nodular cast iron	329	RPM	6370		5310		3980		3180		2650
				FEED	.0091 - .0118		.0106 - .0142		.0142 - .0189		.0177 - .0236		.0213 - .0283
	18		230	RPM	4460		3710		2790		2230		1860
				FEED	.0079 - .0098		.0094 - .0118		.0126 - .0157		.0157 - .0197		.0189 - .0236
	19	Malleable cast iron	263	RPM	5090		4240		3180		2550		2120
				FEED	.0091 - .0118		.0106 - .0142		.0142 - .0189		.0177 - .0236		.0213 - .0283
	20		230	RPM	4460		3710		2790		2230		1860
				FEED	.0079 - .0098		.0094 - .0118		.0126 - .0157		.0157 - .0197		.0189 - .0236

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Drill Diameter							
-	14.0	-	-	16.0	18.0	-	20.0
1/2	-	9/16	5/8	-	-	3/4	-
.5000	.5512	.5625	.6250	.6299	.7087	.7500	.7874
2510	2270		1990		1770	1680	1590
.0189 - .0236	.022 - .0276		.022 - .0283		.0248 - .0319	.0248 - .0319	.0276 - .0346
2510	2270		1990		1770	1680	1590
.0189 - .0236	.022 - .0276		.022 - .0283		.0248 - .0319	.0248 - .0319	.0276 - .0346
2510	2270		1990		1770	1680	1590
.0161 - .0185	.0185 - .0213		.0185 - .0217		.0197 - .0232	.0197 - .0232	.0213 - .0264
2010	1820		1590		1410	1340	1270
.0161 - .0185	.0185 - .0213		.0185 - .0217		.0197 - .0232	.0197 - .0232	.0213 - .0264
2510	2270		1990		1770	1680	1590
.0189 - .0213	.022 - .0248		.022 - .0252		.0248 - .0283	.0248 - .0283	.0268 - .0319
2010	1820		1590		1410	1340	1270
.0189 - .0213	.022 - .0248		.022 - .0252		.0248 - .0283	.0248 - .0283	.0268 - .0319
2010	1820		1590		1410	1340	1270
.0161 - .0185	.0185 - .0213		.0185 - .0217		.0197 - .0232	.0197 - .0232	.0213 - .0264
1010	910		800		710	670	640
.0126 - .015	.0142 - .0169		.0142 - .0177		.015 - .0185	.015 - .0185	.0161 - .0213
1760	1590		1390		1240	1170	1110
.0161 - .0185	.0185 - .0213		.0185 - .0217		.0197 - .0232	.0197 - .0232	.0213 - .0264
1010	910		800		710	670	640
.0126 - .015	.0142 - .0169		.0142 - .0177		.015 - .0185	.015 - .0185	.0161 - .0213
2510	2270		1990		1770	1680	1590
.0213 - .0283	.0248 - .0331		.0252 - .0315		.0283 - .0354	.0283 - .0354	.0315 - .0386
2010	1820		1590		1410	1340	1270
.0189 - .0236	.022 - .0276		.022 - .0283		.0248 - .0319	.0248 - .0319	.0276 - .0354
2510	2270		1990		1770	1680	1590
.0213 - .0283	.0248 - .0331		.0252 - .0315		.0283 - .0354	.0283 - .0354	.0315 - .0386
1760	1590		1390		1240	1170	1110
.0189 - .0236	.022 - .0276		.022 - .0283		.0248 - .0319	.0248 - .0319	.0276 - .0354
2010	1820		1590		1410	1340	1270
.0213 - .0283	.0248 - .0331		.0252 - .0315		.0283 - .0354	.0283 - .0354	.0315 - .0386
1760	1590		1390		1240	1170	1110
.0189 - .0236	.022 - .0276		.022 - .0283		.0248 - .0319	.0248 - .0319	.0276 - .0354

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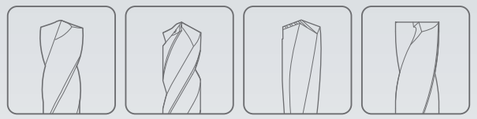
Global Cutting Tool Leader **YG-1**



DREAM DRILLS

Leading Through Innovation

SOLID CARBIDE

DREAM DRILLS FLAT BOTTOM

- For Holes on Various Angled Surfaces

DREAM DRILLS FLAT BOTTOM

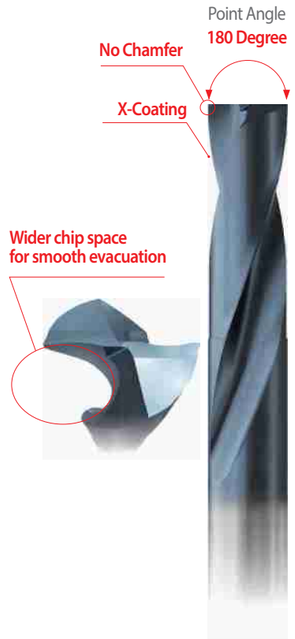
Advantages for Flat Bottom 2xD, 5xD

180 Degree Point Angle enables drilling of Horizontal Surface and Sloped Surface

180 Degree Point Angle enables drilling of Horizontal Surface and Sloped Surface

Optimized flute shape for **Excellent Chip Evacuation**

High **Strength Cutting Edge** to improve tool life and versatility drilling



VARIETY OF DRILLING


Curved Surface


Chained Hole


Blind Hole for Threading

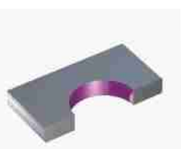

Guide Drilling


Cross Drilling


Inclined Entry


Inclined Exit


Counter Boring


Thin Plate

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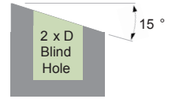
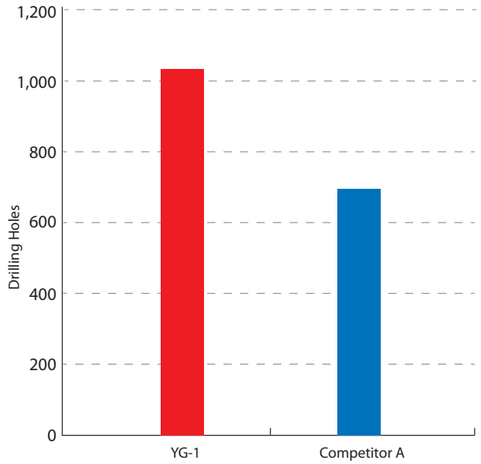
CASE STUDY

▶ SOLID CARBIDE DREAM DRILLS - Flat Bottom without Coolant Holes

CUTTING CONDITION	
Drill Diameter (mm)	Ø6.0 (.2362 inch)
Work Material	• AISI : 1045 • JIS : S45C • DIN : C45 (HRc 20)
Cutting Speed	244.4 ft/min.
RPM	4,000 rev/min
Feed	.0039 in/rev.
Drilling Depth	12.0 mm (2XD) Blind Hole / without Pecking
Coolant	External Cooling Water Soluble (9% Emulsion)
Machine	Machining Center





YG-1

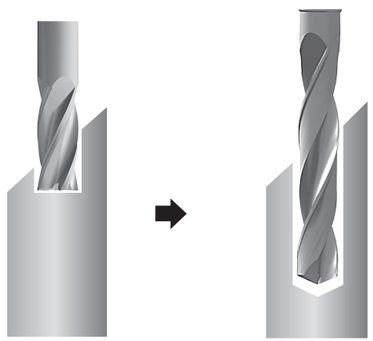

Small Chipping

Competitor A


Big Chipping

Only One Operation for Angled Surface

For angled surfaces, two operations are required to drill in a conventional Process



1st operation(End mill)
Counter boring to make flat surface and guide hole

2nd operation(Drill)
Drilling to required depth of hole

For angled surfaces, only one operation can complete the drilling with Dream Drill Flat Bottom

One operation(Dream Drill Flat Bottom)
One Drill does it all
without using both an end mill and a drill

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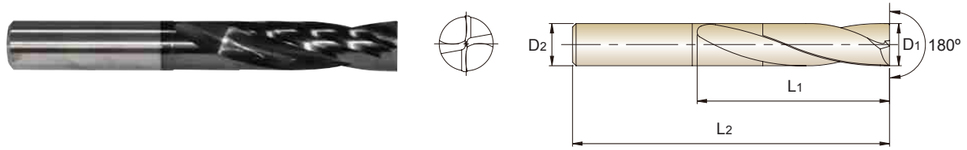
X-COATED SOLID CARBIDE DREAM DRILLS
Flat Bottom without Coolant Holes (2XD)

DPP447 SERIES

- ▶Just ONE Drill 180 degree point angle enables drilling of horizontal surface and sloped surface
- ▶Excellent chip evacuation by optimized flute shape
- ▶High strength cutting edge to improve tool life and versatility drilling
- ▶Variety of drilling can be used in a variety of drilling applications



CARBIDE h6 h7 180° P.76

SHORT
2×D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
X-Coating	D1	D2	L1	L2
DPP447030	3.0	6	16	50
DPP447031	3.1	6	16	50
DPP447008F	1/8	6	16	50
DPP447032	3.2	6	16	50
DPP447033	3.3	6	16	50
DPP447034	3.4	6	18	50
DPP447035	3.5	6	18	50
DPP447036	3.6	6	18	50
DPP447037	3.7	6	18	50
DPP447038	3.8	6	18	50
DPP447039	3.9	6	18	50
DPP447010F	5/32	6	18	50
DPP447040	4.0	6	18	50
DPP447041	4.1	6	20	60
DPP447042	4.2	6	20	60
DPP447043	4.3	6	20	60
DPP447044	4.4	6	20	60
DPP447045	4.5	6	22	60
DPP447046	4.6	6	22	60
DPP447047	4.7	6	22	60
DPP447012F	3/16	6	22	60
DPP447048	4.8	6	22	60
DPP447049	4.9	6	22	60
DPP447050	5.0	6	22	60
DPP447051	5.1	6	24	60
DPP447052	5.2	6	24	60
DPP447053	5.3	6	24	60
DPP447054	5.4	6	24	60
DPP447055	5.5	6	24	60
DPP447014F	7/32	6	24	60
DPP447056	5.6	6	24	60
DPP447057	5.7	6	26	60
DPP447058	5.8	6	26	60
DPP447059	5.9	6	26	60
DPP447060	6.0	6	26	60
DPP447061	6.1	8	28	70
DPP447062	6.2	8	28	70
DPP447063	6.3	8	28	70
DPP447016F	1/4	8	30	70
DPP447064	6.4	8	30	70
DPP447065	6.5	8	30	70
DPP447066	6.6	8	30	70
DPP447067	6.7	8	30	70
DPP447068	6.8	8	30	70
DPP447069	6.9	8	30	70
DPP447070	7.0	8	30	70
DPP447071	7.1	8	34	70
DPP447018F	9/32	8	34	70

▶ 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											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	○	○																			

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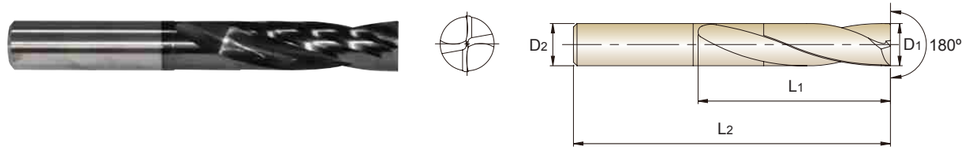
X-COATED SOLID CARBIDE DREAM DRILLS
Flat Bottom without Coolant Holes (2XD)
DPP447 SERIES

- ▶Just ONE Drill 180 degree point angle enables drilling of horizontal surface and sloped surface
- ▶Excellent chip evacuation by optimized flute shape
- ▶High strength cutting edge to improve tool life and versatility drilling
- ▶Variety of drilling can be used in a variety of drilling applications



CARBIDE h6 h7 180° P.76

SHORT
2×D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
X-Coating	D1	D2	L1	L2
DPP447072	7.2	8	34	70
DPP447073	7.3	8	34	70
DPP447074	7.4	8	34	70
DPP447075	7.5	8	34	70
DPP447076	7.6	8	34	70
DPP447077	7.7	8	34	70
DPP447078	7.8	8	34	70
DPP447079	7.9	8	34	70
DPP447020F	5/16	8	34	70
DPP447080	8.0	8	34	70
DPP447081	8.1	10	38	80
DPP447082	8.2	10	38	80
DPP447083	8.3	10	38	80
DPP447021F	21/64	10	38	80
DPP447084	8.4	10	38	80
DPP447085	8.5	10	38	80
DPP447086	8.6	10	38	80
DPP447087	8.7	10	40	80
DPP447088	8.8	10	40	80
DPP447089	8.9	10	40	80
DPP447090	9.0	10	40	80
DPP447091	9.1	10	42	80
DPP447023F	23/64	10	42	80
DPP447092	9.2	10	42	80
DPP447093	9.3	10	42	80
DPP447094	9.4	10	42	80
DPP447095	9.5	10	42	80
DPP447024F	3/8	10	42	80
DPP447096	9.6	10	42	80
DPP447097	9.7	10	45	80
DPP447098	9.8	10	45	80
DPP447099	9.9	10	45	80
DPP447100	10.0	10	45	80
DPP447101	10.1	12	46	90
DPP447102	10.2	12	46	90
DPP447103	10.3	12	46	90
DPP447026F	13/32	12	46	90
DPP447104	10.4	12	48	90
DPP447105	10.5	12	48	90
DPP447106	10.6	12	48	90
DPP447107	10.7	12	48	90
DPP447108	10.8	12	48	90
DPP447109	10.9	12	48	90
DPP447110	11.0	12	48	90
DPP447111	11.1	12	50	90
DPP447028F	7/16	12	50	90
DPP447112	11.2	12	50	90
DPP447113	11.3	12	50	90

▶ 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											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	○	○																			

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X-COATED SOLID CARBIDE DREAM DRILLS
Flat Bottom without Coolant Holes (2XD)

DPP447 SERIES

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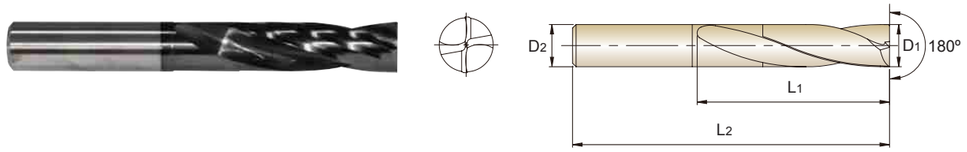

CARBIDE | h6 | h7 | 180° | P.76

SHORT
2×D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
X-Coating	D1	D2	L1	L2
DPP447114	11.4	12	50	90
DPP447115	11.5	12	50	90
DPP447029F	29/64	12	50	90
DPP447116	11.6	12	50	90
DPP447117	11.7	12	52	90
DPP447118	11.8	12	52	90
DPP447119	11.9	12	52	90
DPP447030F	15/32	12	52	90
DPP447120	12.0	12	52	90
DPP447121	12.1	14	54	100
DPP447122	12.2	14	54	100
DPP447123	12.3	14	54	100
DPP447124	12.4	14	54	100
DPP447125	12.5	14	54	100
DPP447126	12.6	14	54	100
DPP447127	12.7	14	56	100
DPP447128	12.8	14	56	100
DPP447129	12.9	14	56	100
DPP447130	13.0	14	56	100
DPP447131	13.1	14	58	100
DPP447132	13.2	14	58	100
DPP447133	13.3	14	58	100
DPP447134	13.4	14	58	100
DPP447135	13.5	14	58	100
DPP447136	13.6	14	58	100
DPP447137	13.7	14	58	100
DPP447138	13.8	14	58	100
DPP447139	13.9	14	58	100
DPP447140	14.0	14	58	100
DPP447141	14.1	16	62	105
DPP447142	14.2	16	62	105
DPP447036F	9/16	16	62	105
DPP447143	14.3	16	62	105
DPP447144	14.4	16	62	105
DPP447145	14.5	16	62	105
DPP447146	14.6	16	62	105
DPP447147	14.7	16	62	105
DPP447148	14.8	16	62	105
DPP447149	14.9	16	62	105
DPP447150	15.0	16	62	105
DPP447151	15.1	16	64	115
DPP447152	15.2	16	64	115
DPP447153	15.3	16	64	115
DPP447154	15.4	16	64	115
DPP447155	15.5	16	64	115
DPP447156	15.6	16	64	115
DPP447157	15.7	16	64	115
DPP447158	15.8	16	64	115

▶ 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											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	○	○																			

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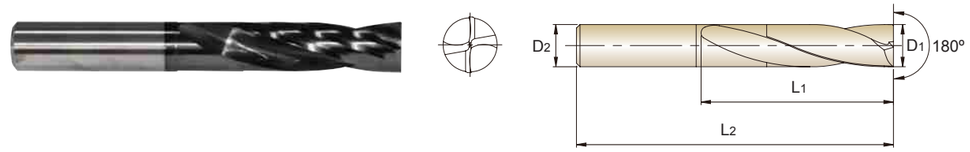
X-COATED SOLID CARBIDE DREAM DRILLS
Flat Bottom without Coolant Holes (2XD)
DPP447 SERIES
▶Just ONE Drill 180 degree point angle enables drilling of horizontal surface and sloped surface
▶Excellent chip evacuation by optimized flute shape
▶High strength cutting edge to improve tool life and versatility drilling
▶Variety of drilling can be used in a variety of drilling applications



CARBIDE | h6 | h7 | 180° | P.76

SHORT
2×D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
X-Coating	D1	D2	L1	L2
DPP447040F	5/8	16	64	115
DPP447159	15.9	16	64	115
DPP447160	16.0	16	64	115
DPP447165	16.5	18	70	125
DPP447170	17.0	18	70	125
DPP447044F	11/16	18	70	125
DPP447175	17.5	18	70	125
DPP447180	18.0	18	70	125
DPP447185	18.5	20	75	135
DPP447190	19.0	20	75	135
DPP447048F	3/4	20	75	135
DPP447195	19.5	20	75	145
DPP447200	20.0	20	75	145

◎ : 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											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	○	○																			

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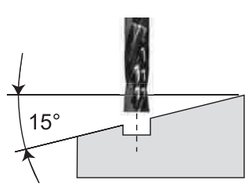
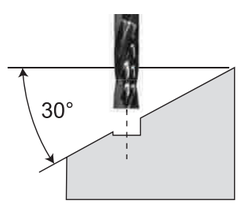
RECOMMENDED CUTTING CONDITIONS

DPP447 SERIES without COOLANT HOLES

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter								
				METRIC	3.0	-	4.0	-	5.0	6.0	-	8.0
				FRACTIONAL	-	1/8	-	3/16	-	-	5/16	-
				DECIMAL	.1181	.1250	.1575	.1875	.1969	.2362	.3125	.3150
P	1	Non-alloy steel	263	RPM	8490		6370	5090		4240	3180	
				FEED	.0008 - .002		.0012 - .0028	.0012 - .0031		.0016 - .0039	.0031 - .0055	
	2		263	RPM	8490		6370	5090		4240	3180	
				FEED	.0008 - .002		.0012 - .0028	.0012 - .0031		.0016 - .0039	.0031 - .0055	
	3		230	RPM	7430		5570	4460		3710	2790	
				FEED	.0008 - .002		.0012 - .0028	.0012 - .0031		.0016 - .0039	.0028 - .0051	
	4		132	RPM	4240		3180	2550		2120	1590	
				FEED	.0008 - .002		.0012 - .0028	.0012 - .0031		.0016 - .0039	.0028 - .0051	
	5		125	RPM	4030		3020	2420		2020	1510	
				FEED	.0008 - .002		.0008 - .0024	.0012 - .0031		.0012 - .0035	.0024 - .0047	
	6	Low alloy steel	148	RPM	4770		3580	2860		2390	1790	
				FEED	.0008 - .002		.0012 - .0028	.0012 - .0031		.0016 - .0039	.0028 - .0051	
	7		132	RPM	4240		3180	2550		2120	1590	
				FEED	.0008 - .002		.0012 - .0028	.0012 - .0031		.0016 - .0039	.0028 - .0051	
	8		125	RPM	4030		3020	2420		2020	1510	
				FEED	.0008 - .002		.0008 - .0024	.0012 - .0031		.0012 - .0035	.0024 - .0047	
	9		82	RPM	2650		1990	1590		1330	990	
				FEED	.0004 - .0012		.0008 - .0016	.0008 - .002		.0012 - .0024	.0012 - .0031	
M	12	Stainless steel	99	RPM	3180		2390	1910		1590	1190	
				FEED	.0004 - .0012		.0004 - .0012	.0008 - .0016		.0008 - .002	.0012 - .0024	
K	15	Grey cast iron	230	RPM	7430		5570	4460		3710	2790	
				FEED	.0008 - .002		.0008 - .0024	.0012 - .0031		.0012 - .0035	.0024 - .0047	
	16		197	RPM	6370		4770	3820		3180	2390	
				FEED	.0008 - .002		.0008 - .002	.0012 - .0024		.0012 - .0028	.0016 - .0039	
N	21	Aluminum-wrought alloy	543	RPM	17510		13130	10500		8750	6570	
				FEED	.0008 - .002		.0016 - .0031	.0016 - .0039		.0024 - .0047	.0039 - .0063	
	22		543	RPM	17510		13130	10500		8750	6570	
				FEED	.0008 - .002		.0016 - .0031	.0016 - .0039		.0024 - .0047	.0039 - .0063	





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

Surface Angle	Cutting Conditions	
	RPM	IPR
0° ~ 15°	100%	100%
15° ~ 30°	100%	50%
30° ~	70%	30%

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Drill Diameter							
-	10.0	12.0	-	-	16.0	-	20.0
3/8	-	-	1/2	5/8	-	3/4	-
.3750	.3937	.4724	.5000	.6250	.6299	.7500	.7874
2550		2120	2010	1590		1340	1270
.0043 - .0067		.0043 - .0083	.0043 - .0083	.0071 - .011		.0104 - .0144	.011 - .015
2550		2120	2010	1590		1340	1270
.0043 - .0067		.0043 - .0083	.0043 - .0083	.0071 - .011		.0104 - .0144	.011 - .015
2230		1860	1760	1390		1170	1110
.0043 - .0067		.0043 - .0083	.0043 - .0083	.0071 - .011		.0088 - .0128	.0094 - .0134
1270		1060	1010	800		670	640
.0043 - .0067		.0043 - .0083	.0043 - .0083	.0071 - .011		.0088 - .0128	.0094 - .0134
1210		1010	960	760		640	600
.0035 - .0059		.0031 - .0071	.0031 - .0071	.0055 - .0094		.0077 - .0117	.0083 - .0122
1430		1190	1130	900		750	720
.0043 - .0067		.0043 - .0083	.0043 - .0083	.0071 - .011		.0088 - .0128	.0094 - .0134
1270		1060	1010	800		670	640
.0043 - .0067		.0043 - .0083	.0043 - .0083	.0071 - .011		.0088 - .0128	.0094 - .0134
1210		1010	960	760		640	600
.0035 - .0059		.0031 - .0071	.0031 - .0071	.0055 - .0094		.0077 - .0117	.0083 - .0122
800		660	630	500		420	400
.002 - .0039		.0024 - .0047	.0024 - .0047	.0024 - .0063		.0025 - .0065	.0039 - .0079
950		800	760	600		500	480
.0012 - .0031		.002 - .0039	.002 - .0039	.0024 - .0047		.0025 - .0065	.0035 - .0059
2010		1820	1590	1410		1340	1270
.0189 - .0236		.022 - .0276	.022 - .0283	.0248 - .0319		.0248 - .0319	.0276 - .0354
2510		2270	1990	1770		1680	1590
.0213 - .0283		.0248 - .0331	.0252 - .0315	.0283 - .0354		.0283 - .0354	.0315 - .0386
5250		4380	4150	3280		2770	2630
.0055 - .0079		.0055 - .0094	.0055 - .0094	.0087 - .0126		.0111 - .0151	.0118 - .0157
5250		4380	4150	3280		2770	2630
.0055 - .0079		.0055 - .0094	.0055 - .0094	.0087 - .0126		.0111 - .0151	.0118 - .0157

- ▶ The cutting conditions are for 2xD.
- ▶ The rigid and precise machine and holder are required.
- ▶ The recommended depth of hole is measured from the highest point of the hole on drilling in inclined and angled surfaces.
- ▶ The recommended cutting conditions are those for drilling on flat and horizontal surfaces.
- ▶ Please adjust feed rate according to the above surface angle when drilling on an inclined surface.
  - The recommended feed rate 50% or lower, in case of 15°~30° of the incline angle.
  - The recommended feed rate 30% or lower and RPM 70%, in case of 30° ~ of the incline angle.
- ▶ Please decrease cutting speed as material hardness increases.
- ▶ Only use drilling tool. Side milling, traversing, helical milling are not usable.

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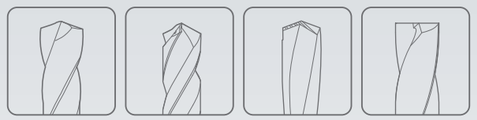
Global Cutting Tool Leader **YG-1**



DREAM DRILLS

Leading Through Innovation

NEW SIZES

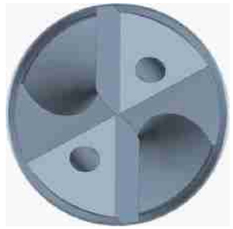
SOLID CARBIDE

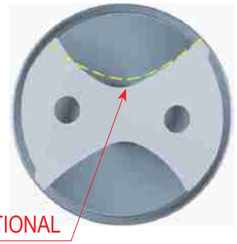
DREAM DRILLS INOX

- For Tough Materials like Stainless Steels

NEW SIZES

DREAM DRILLS INOX





CONVENTIONAL

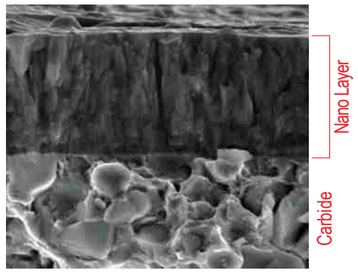
- Special Flute geometry and Chip pocket to help Chip evacuation and proper Chip Curl.
- strong rigidity from **Cutting Edge**
- high Performance on Stainless Steel and pre hardend Steel

R-Thinning
(Radius Thinning)

- Positive Axial **Rake Angle** and cutting force, with **R-Thinning** enhance centering and Chip Breaking.

TiAlN Coating
(Upgraded Titanium Aluminum Nitride : nano-Layer coating)
- Higher wear resistance and Lower friction
- Higher Cutting Speed and Feed
- Improved drill Hole Quality

Special surface treatment after coating
to reduce friction and better chip flow.



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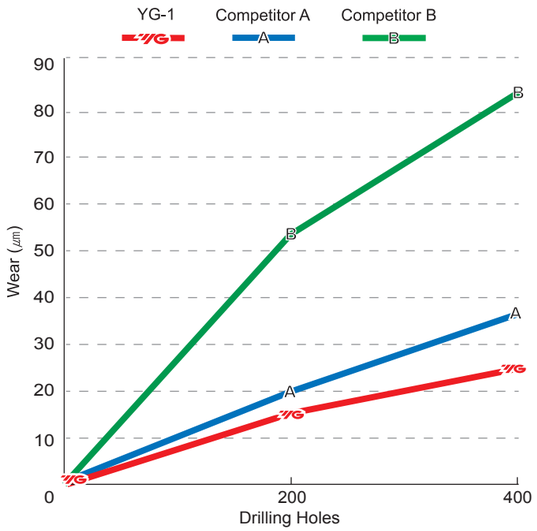
CASE STUDY

▶ SOLID CARBIDE DREAM DRILLS - INOX with Coolant Holes

CUTTING CONDITION	
Tool	DH452060 (DREAM DRILL-INOX)
Size	Ø6 x Ø6 x 44 x 82
Work Material	•AISI : 304 •JIS : SUS304 •DIN : X5CrNi1810 (X4CrNi18-10) (HRc10)
RPM	14,856 rev./min.
Feed	.0028 inch/rev.
SFM	229 ft/min.
Drilling Depth	.94" (4xD)
Coolant	Wet Cut
Machine	Machining Center



YG-1 TotaL Dilling 400 Holes

Competitor A Total Drilling 400 Holes

Competitor B Total Drilling 400 Holes

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (3XD)

DH463 SERIES
DH714 SERIES

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life
- ▶Tolerance : Dia. Tolerance ØD1 : See page 141
  Shank Tolerance ØD2: -.0001 -.0005

CARBIDE | 140° | 20 bar | P.98

STUB
3×D

Unit : inch

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH714008	1/8	.1250	3/16	1.102	2.992
DH463008	1/8	.1250	15/64	1.102	2.992
DH714011	11/64	.1719	3/16	1.417	3.386
DH463011	11/64	.1719	15/64	1.417	3.386
DH714012	3/16	.1875	3/16	1.575	3.543
DH463012	3/16	.1875	15/64	1.575	3.543
DH463013	13/64	.2031	15/64	1.082	3.228
DH714013	13/64	.2031	1/4	1.082	3.228
DH463014	7/32	.2188	15/64	1.181	3.228
DH714014	7/32	.2188	1/4	1.181	3.228
DH463015	15/64	.2344	15/64	1.181	3.228
DH714015	15/64	.2344	1/4	1.181	3.228
DH714016	1/4	.2500	1/4	1.279	3.465
DH463016	1/4	.2500	17/64	1.279	3.465
DH463206	F	.2570	17/64	1.279	3.465
DH714206	F	.2570	5/16	1.279	3.465
DH463017	17/64	.2656	17/64	1.378	3.465
DH714017	17/64	.2656	5/16	1.378	3.465
DH463209	I	.2720	.2720	1.378	3.465
DH714209	I	.2720	5/16	1.378	3.465
DH463018	9/32	.2812	5/16	1.476	3.701
DH463019	19/64	.2969	5/16	1.476	3.701
DH463020	5/16	.3125	5/16	1.575	3.701
DH463021	21/64	.3281	11/32	1.673	3.937
DH714021	21/64	.3281	3/8	1.673	3.937
DH463217	Q	.3320	11/32	1.673	3.937

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH714217	Q	.3320	3/8	1.673	3.937
DH463022	11/32	.3438	11/32	1.772	3.937
DH714022	11/32	.3438	3/8	1.772	3.937
DH714023	23/64	.3594	3/8	1.870	4.174
DH463023	23/64	.3594	25/64	1.870	4.174
DH714221	U	.3680	3/8	1.870	4.174
DH463221	U	.3680	25/64	1.870	4.174
DH714024	3/8	.3750	3/8	1.969	4.174
DH463024	3/8	.3750	25/64	1.969	4.174
DH463025	25/64	.3906	25/64	1.969	4.174
DH714025	25/64	.3906	7/16	1.969	4.174
DH463026	13/32	.4062	27/64	2.067	4.567
DH714026	13/32	.4062	7/16	2.067	4.567
DH463027	27/64	.4219	27/64	2.165	4.567
DH714027	27/64	.4219	7/16	2.165	4.567
DH714028	7/16	.4375	7/16	2.264	4.803
DH463028	7/16	.4375	15/32	2.264	4.803
DH463029	29/64	.4531	15/32	2.264	4.803
DH714029	29/64	.4531	1/2	2.264	4.803
DH463030	15/32	.4688	15/32	2.362	4.803
DH714030	15/32	.4688	1/2	2.362	4.803
DH463031	31/64	.4844	1/2	2.461	5.039
DH463032	1/2	.5000	1/2	2.559	5.039
DH463033	33/64	.5156	35/64	2.657	5.276
DH714033	33/64	.5156	9/16	2.657	5.276
DH463034	17/32	.5312	35/64	2.756	5.276

▶ 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											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	◎	◎	○	○	○												○				

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (3XD)

DH463 SERIES
DH714 SERIES

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life
- ▶Tolerance : Dia. Tolerance ØD1 : See page 141
  Shank Tolerance ØD2: -.0001 -.0005

CARBIDE | 140° | 20 bar | P.98

STUB
3×D

Unit : inch

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH714034	17/32	.5312	9/16	2.756	5.276
DH463035	35/64	.5469	35/64	2.756	5.276
DH714035	35/64	.5469	9/16	2.756	5.276
DH714036	9/16	.5625	9/16	2.854	5.512
DH463036	9/16	.5625	37/64	2.854	5.512
DH463037	37/64	.5781	37/64	2.953	5.512
DH714037	37/64	.5781	5/8	2.953	5.512
DH463038	19/32	.5937	5/8	3.051	5.709
DH463039	39/64	.6094	5/8	3.051	5.709
DH463040	5/8	.6250	5/8	3.150	5.709

▶ 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											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	◎	◎	○	○	○												○				

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (3XD)

DH464 SERIES
DH715 SERIES

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life
- ▶Tolerance : Dia. Tolerance ØD1 : See page 141
  Shank Tolerance ØD2: -.0001 -.0005

CARBIDE | 140° | 20 bar | P.98

LONG
5×D

Unit : inch

EDP No.	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1		D2	L1	L2
DH464013	13/64	.2031	15/64	1-3/4	3-15/16
DH715013	13/64	.2031	1/4	1-3/4	3-15/16
DH464014	7/32	.2188	15/64	1-57/64	3-15/16
DH715014	7/32	.2188	1/4	1-57/64	3-15/16
DH464015	15/64	.2344	15/64	1-57/64	3-15/16
DH715015	15/64	.2344	1/4	1-57/64	3-15/16
DH715016	1/4	.2500	1/4	2-3/64	4-19/64
DH464016	1/4	.2500	17/64	2-3/64	4-19/64
DH464206	F	.2570	17/64	2-13/64	4-19/64
DH715206	F	.2570	5/16	2-13/64	4-19/64
DH464017	17/64	.2656	17/64	2-13/64	4-19/64
DH715017	17/64	.2656	5/16	2-13/64	4-19/64
DH464209	I	.2720	.2720	2-13/64	4-19/64
DH715209	I	.2720	5/16	2-13/64	4-19/64
DH464018	9/32	.2812	5/16	2-23/64	4-41/64
DH464019	19/64	.2969	5/16	2-33/64	4-41/64
DH464020	5/16	.3125	5/16	2-33/64	4-41/64
DH464021	21/64	.3281	11/32	2-43/64	5
DH715021	21/64	.3281	3/8	2-43/64	5
DH464217	Q	.3320	11/32	2-43/64	5
DH715217	Q	.3320	3/8	2-43/64	5
DH464022	11/32	.3438	11/32	2-27/32	5
DH715022	11/32	.3438	3/8	2-27/32	5
DH715023	23/64	.3594	3/8	3	5-23/64
DH464023	23/64	.3594	25/64	3	5-23/64
DH715221	U	.3680	3/8	3	5-23/64

EDP No.	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1		D2	L1	L2
DH464221	U	.3680	25/64	3	5-23/64
DH715024	3/8	.3750	3/8	3-5/32	5-23/64
DH464024	3/8	.3750	25/64	3-5/32	5-23/64
DH464025	25/64	.3906	25/64	3-5/32	5-23/64
DH715025	25/64	.3906	7/16	3-5/32	5-23/64
DH464026	13/32	.4062	27/64	3-5/16	5-7/8
DH715026	13/32	.4062	7/16	3-5/16	5-7/8
DH464027	27/64	.4219	27/64	3-15/32	5-7/8
DH715027	27/64	.4219	7/16	3-15/32	5-7/8
DH715028	7/16	.4375	7/16	3-5/8	6-7/32
DH464028	7/16	.4375	15/32	3-5/8	6-7/32
DH464029	29/64	.4531	15/32	3-25/32	6-7/32
DH715029	29/64	.4531	1/2	3-25/32	6-7/32
DH464030	15/32	.4688	15/32	3-25/32	6-7/32
DH715030	15/32	.4688	1/2	3-25/32	6-7/32
DH464031	31/64	.4844	1/2	3-15/16	6-37/64
DH464032	1/2	.5000	1/2	4-3/32	6-37/64

▶ 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											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	◎	◎	○	○	○												○				

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (3XD)

NEW SIZES
DH451 SERIES

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.98 * NEW SIZE

SHORT
3×D

Unit : mm

	EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
	TiAlN	D1			D2	L1	L2
*	DH451021	2.1			4	25	66
*	DH451006F	2.381	3/32	.0938	4	30	66
*	DH451027	2.7			4	30	66
*	DH451007F	2.778	7/64	.1094	4	30	66
*	DH451929	2.95			4	30	66
	DH451030	3.0		.1181	6	20	62
	DH451031	3.1		.1220	6	20	62
	DH451008F	3.175	1/8	.1250	6	20	62
	DH451032	3.2		.1260	6	20	62
	DH451033	3.3		.1299	6	20	62
	DH451034	3.4		.1339	6	20	62
	DH451035	3.5		.1378	6	20	62
	DH451009F	3.572	9/64	.1406	6	20	62
	DH451036	3.6		.1417	6	20	62
	DH451037	3.7		.1457	6	20	62
	DH451038	3.8		.1496	6	24	66
	DH451039	3.9		.1535	6	24	66
	DH451010F	3.969	5/32	.1563	6	24	66
	DH451040	4.0		.1575	6	24	66
	DH451041	4.1		.1614	6	24	66
	DH451042	4.2		.1654	6	24	66
	DH451043	4.3		.1693	6	24	66
	DH451011F	4.366	11/64	.1719	6	24	66
	DH451044	4.4		.1732	6	24	66
	DH451045	4.5		.1772	6	24	66
	DH451046	4.6		.1811	6	24	66

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
TiAlN	D1			D2	L1	L2
DH451047	4.7		.1850	6	24	66
DH451012F	4.763	3/16	.1875	6	24	66
DH451048	4.8		.1890	6	28	66
DH451049	4.9		.1929	6	28	66
DH451050	5.0		.1969	6	28	66
DH451051	5.1		.2008	6	28	66
DH451013F	5.159	13/64	.2031	6	28	66
DH451052	5.2		.2047	6	28	66
DH451053	5.3		.2087	6	28	66
DH451054	5.4		.2126	6	28	66
DH451055	5.5		.2165	6	28	66
DH451014F	5.556	7/32	.2188	6	28	66
DH451056	5.6		.2205	6	28	66
DH451057	5.7		.2244	6	28	66
DH451058	5.8		.2283	6	28	66
DH451059	5.9		.2323	6	28	66
DH451015F	5.953	15/64	.2344	6	28	66
DH451060	6.0		.2362	6	28	66
DH451061	6.1		.2402	8	34	79
DH451062	6.2		.2441	8	34	79
DH451063	6.3		.2480	8	34	79
DH451016F	6.350	1/4	.2500	8	34	79
DH451064	6.4		.2520	8	34	79
DH451065	6.5		.2559	8	34	79
DH451006L	6.528	F	.2570	8	34	79
DH451066	6.6		.2598	8	34	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											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	◎	◎	○	○	○												○				

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (3XD)

NEW SIZES **DH451 SERIES**

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar P.98

SHORT 3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH451067	6.7		.2638	8	34	79
DH451017F	6.747	17/64	.2656	8	34	79
DH451068	6.8		.2677	8	34	79
DH451069	6.9		.2717	8	34	79
DH451009L	6.909	I	.2720	8	34	79
DH451070	7.0		.2756	8	34	79
DH451071	7.1		.2795	8	41	79
DH451018F	7.144	9/32	.2812	8	41	79
DH451072	7.2		.2835	8	41	79
DH451073	7.3		.2874	8	41	79
DH451074	7.4		.2913	8	41	79
DH451075	7.5		.2953	8	41	79
DH451019F	7.541	19/64	.2969	8	41	79
DH451076	7.6		.2992	8	41	79
DH451077	7.7		.3031	8	41	79
DH451078	7.8		.3071	8	41	79
DH451079	7.9		.3110	8	41	79
DH451020F	7.938	5/16	.3125	8	41	79
DH451080	8.0		.3150	8	41	79
DH451081	8.1		.3189	10	47	89
DH451082	8.2		.3228	10	47	89
DH451083	8.3		.3268	10	47	89
DH451021F	8.334	21/64	.3281	10	47	89
DH451084	8.4		.3307	10	47	89
DH451017L	8.433	Q	.3320	10	47	89
DH451085	8.5		.3346	10	47	89
DH451086	8.6		.3386	10	47	89
DH451087	8.7		.3425	10	47	89
DH451022F	8.731	11/32	.3438	10	47	89
DH451088	8.8		.3465	10	47	89
DH451089	8.9		.3504	10	47	89
DH451090	9.0		.3543	10	47	89
DH451091	9.1		.3583	10	47	89
DH451023F	9.128	23/64	.3594	10	47	89
DH451092	9.2		.3622	10	47	89
DH451093	9.3		.3661	10	47	89
DH451021L	9.347	U	.3680	10	47	89
DH451094	9.4		.3701	10	47	89
DH451095	9.5		.3740	10	47	89
DH451024F	9.525	3/8	.3750	10	47	89
DH451096	9.6		.3780	10	47	89
DH451097	9.7		.3819	10	47	89
DH451098	9.8		.3858	10	47	89
DH451099	9.9		.3898	10	47	89
DH451025F	9.922	25/64	.3906	10	47	89
DH451100	10.0		.3937	10	47	89
DH451101	10.1		.3976	12	55	102
DH451102	10.2		.4016	12	55	102
DH451103	10.3		.4055	12	55	102
DH451026F	10.319	13/32	.4062	12	55	102
DH451104	10.4		.4094	12	55	102
DH451105	10.5		.4134	12	55	102

▶ 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											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	◎	◎	○	○	○												○				

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (3XD)

NEW SIZES DH451 SERIES

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
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DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar P.98

SHORT 3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH451106	10.6		.4173	12	55	102
DH451107	10.7		.4212	12	55	102
DH451027F	10.716	27/64	.4219	12	55	102
DH451108	10.8		.4252	12	55	102
DH451109	10.9		.4291	12	55	102
DH451110	11.0		.4330	12	55	102
DH451111	11.1		.4370	12	55	102
DH451028F	11.113	7/16	.4375	12	55	102
DH451112	11.2		.4409	12	55	102
DH451113	11.3		.4448	12	55	102
DH451114	11.4		.4488	12	55	102
DH451115	11.5		.4527	12	55	102
DH451029F	11.509	29/64	.4531	12	55	102
DH451116	11.6		.4566	12	55	102
DH451117	11.7		.4606	12	55	102
DH451118	11.8		.4645	12	55	102
DH451119	11.9		.4685	12	55	102
DH451030F	11.906	15/32	.4688	12	55	102
DH451120	12.0		.4724	12	55	102
DH451121	12.1		.4764	14	60	107
DH451122	12.2		.4803	14	60	107
DH451123	12.3		.4843	14	60	107
DH451031F	12.303	31/64	.4844	14	60	107
DH451124	12.4		.4882	14	60	107
DH451125	12.5		.4921	14	60	107
DH451126	12.6		.4961	14	60	107
DH451032F	12.7	1/2	.5000	14	60	107
DH451128	12.8		.5039	14	60	107
DH451129	12.9		.5079	14	60	107
DH451130	13.0		.5118	14	60	107
DH451131	13.1		.5157	14	60	107
DH451132	13.2		.5197	14	60	107
DH451133	13.3		.5236	14	60	107
DH451134	13.4		.5276	14	60	107
DH451135	13.5		.5314	14	60	107
DH451136	13.6		.5354	14	60	107
DH451137	13.7		.5394	14	60	107
DH451138	13.8		.5433	14	60	107
DH451139	13.9		.5472	14	60	107
DH451140	14.0		.5512	14	60	107
DH451141	14.1		.5551	16	65	115
DH451142	14.2		.5591	16	65	115
DH451036F	14.288	9/16	.5625	16	65	115
DH451143	14.3		.5630	16	65	115
DH451144	14.4		.5669	16	65	115
DH451145	14.5		.5708	16	65	115
DH451146	14.6		.5748	16	65	115
DH451147	14.7		.5787	16	65	115
DH451148	14.8		.5827	16	65	115
DH451149	14.9		.5866	16	65	115
DH451150	15.0		.5905	16	65	115
DH451151	15.1		.5945	16	65	115

▶ 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											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	◎	◎	○	○	○												○				

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (3XD)

NEW SIZES

DH451 SERIES

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.98

SHORT
3×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH451152	15.2		.5984	16	65	115
DH451153	15.3		.6024	16	65	115
DH451154	15.4		.6063	16	65	115
DH451155	15.5		.6102	16	65	115
DH451156	15.6		.6142	16	65	115
DH451157	15.7		.6181	16	65	115
DH451158	15.8		.6220	16	65	115
DH451040F	15.875	5/8	.6250	16	65	115
DH451159	15.9		.6260	16	65	115
DH451160	16.0		.6299	16	65	115
DH451161	16.1		.6339	18	73	123
DH451162	16.2		.6378	18	73	123
DH451163	16.3		.6417	18	73	123
DH451164	16.4		.6457	18	73	123
DH451165	16.5		.6495	18	73	123
DH451166	16.6		.6535	18	73	123
DH451167	16.7		.6575	18	73	123
DH451168	16.8		.6614	18	73	123
DH451169	16.9		.6654	18	73	123
DH451170	17.0		.6692	18	73	123
DH451171	17.1		.6732	18	73	123
DH451172	17.2		.6772	18	73	123
DH451173	17.3		.6811	18	73	123
DH451174	17.4		.6850	18	73	123
DH451044F	17.463	11/16	.6875	18	73	123
DH451175	17.5		.6889	18	73	123
DH451176	17.6		.6929	18	73	123
DH451177	17.7		.6968	18	73	123
DH451178	17.8		.7008	18	73	123
DH451179	17.9		.7047	18	73	123
DH451180	18.0		.7087	18	73	123
DH451181	18.1		.7126	20	79	131
DH451182	18.2		.7165	20	79	131
DH451183	18.3		.7205	20	79	131
DH451184	18.4		.7244	20	79	131
DH451185	18.5		.7283	20	79	131
DH451186	18.6		.7323	20	79	131
DH451187	18.7		.7362	20	79	131
DH451188	18.8		.7402	20	79	131
DH451189	18.9		.7441	20	79	131
DH451190	19.0		.7480	20	79	131
DH451048F	19.050	3/4	.7500	20	79	131
DH451191	19.1		.7520	20	79	131
DH451192	19.2		.7559	20	79	131
DH451193	19.3		.7598	20	79	131
DH451194	19.4		.7638	20	79	131
DH451195	19.5		.7676	20	79	131
DH451196	19.6		.7717	20	79	131
DH451197	19.7		.7756	20	79	131
DH451198	19.8		.7795	20	79	131
DH451199	19.9		.7835	20	79	131
DH451200	20.0		.7874	20	79	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											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	◎	◎	○	○	○												○				

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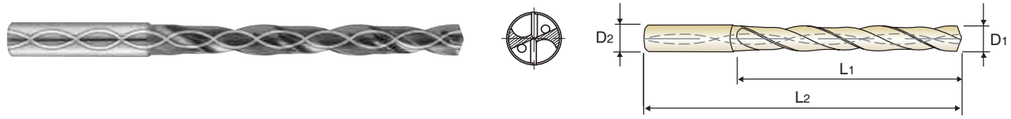
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (5XD)

DH452 SERIES

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.98

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH452010	1.0		.0394	3	8	55
DH452011	1.1		.0433	3	12	55
DH452012	1.2		.0472	3	12	55
DH452013	1.3		.0512	3	12	55
DH452014	1.4		.0551	3	12	55
DH452015	1.5		.0591	3	16	55
DH452004F	1.588	1/16	.0625	3	16	55
DH452016	1.6		.0630	3	16	55
DH452017	1.7		.0669	3	16	55
DH452018	1.8		.0709	3	16	55
DH452019	1.9		.0748	3	16	55
DH452005F	1.984	5/64	.0781	3	16	55
DH452020	2.0		.0787	4	21	57
DH452021	2.1		.0827	4	21	57
DH452022	2.2		.0866	4	21	57
DH452023	2.3		.0906	4	21	57
DH452006F	2.381	3/32	.0938	4	21	57
DH452024	2.4		.0945	4	21	57
DH452025	2.5		.0984	4	21	57
DH452026	2.6		.1024	4	21	57
DH452027	2.7		.1063	4	21	57
DH452007F	2.778	7/64	.1094	4	21	57
DH452028	2.8		.1102	4	21	57
DH452029	2.9		.1142	4	21	57
DH452030	3.0		.1181	6	28	66
DH452031	3.1		.1220	6	28	66
DH452008F	3.175	1/8	.1250	6	28	66
DH452032	3.2		.1260	6	28	66
DH452033	3.3		.1299	6	28	66
DH452034	3.4		.1339	6	28	66
DH452035	3.5		.1378	6	28	66
DH452009F	3.572	9/64	.1406	6	28	66
DH452036	3.6		.1417	6	28	66
DH452037	3.7		.1457	6	28	66
DH452038	3.8		.1496	6	36	74
DH452039	3.9		.1535	6	36	74
DH452010F	3.969	5/32	.1563	6	36	74
DH452040	4.0		.1575	6	36	74
DH452041	4.1		.1614	6	36	74
DH452042	4.2		.1654	6	36	74
DH452043	4.3		.1693	6	36	74
DH452011F	4.366	11/64	.1719	6	36	74
DH452044	4.4		.1732	6	36	74
DH452045	4.5		.1772	6	36	74
DH452046	4.6		.1811	6	36	74
DH452047	4.7		.1850	6	36	74
DH452012F	4.763	3/16	.1875	6	36	74
DH452048	4.8		.1890	6	44	82
DH452049	4.9		.1929	6	44	82
DH452050	5.0		.1969	6	44	82
DH452051	5.1		.2008	6	44	82
DH452013F	5.159	13/64	.2031	6	44	82

▶ 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											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	◎	◎	○	○	○												○				

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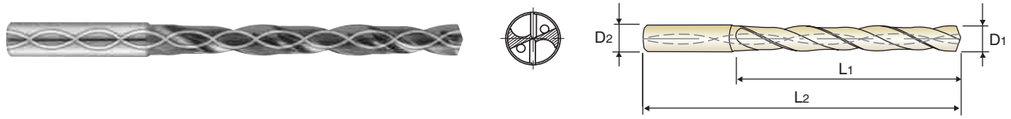
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (5XD)

DH452 SERIES

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.98

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH452052	5.2		.2047	6	44	82
DH452053	5.3		.2087	6	44	82
DH452054	5.4		.2126	6	44	82
DH452055	5.5		.2165	6	44	82
DH452014F	5.556	7/32	.2188	6	44	82
DH452056	5.6		.2205	6	44	82
DH452057	5.7		.2244	6	44	82
DH452058	5.8		.2283	6	44	82
DH452059	5.9		.2323	6	44	82
DH452015F	5.953	15/64	.2344	6	44	82
DH452060	6.0		.2362	6	44	82
DH452061	6.1		.2402	8	53	91
DH452062	6.2		.2441	8	53	91
DH452063	6.3		.2480	8	53	91
DH452016F	6.350	1/4	.2500	8	53	91
DH452064	6.4		.2520	8	53	91
DH452065	6.5		.2559	8	53	91
DH452006L	6.528	F	.2570	8	53	91
DH452066	6.6		.2598	8	53	91
DH452067	6.7		.2638	8	53	91
DH452017F	6.747	17/64	.2656	8	53	91
DH452068	6.8		.2677	8	53	91
DH452069	6.9		.2717	8	53	91
DH452009L	6.909	I	.2720	8	53	91
DH452070	7.0		.2756	8	53	91
DH452071	7.1		.2795	8	53	91
DH452018F	7.144	9/32	.2812	8	53	91
DH452072	7.2		.2835	8	53	91
DH452073	7.3		.2874	8	53	91
DH452074	7.4		.2913	8	53	91
DH452075	7.5		.2953	8	53	91
DH452019F	7.541	19/64	.2969	8	53	91
DH452076	7.6		.2992	8	53	91
DH452077	7.7		.3031	8	53	91
DH452078	7.8		.3071	8	53	91
DH452079	7.9		.3110	8	53	91
DH452020F	7.938	5/16	.3125	8	53	91
DH452080	8.0		.3150	8	53	91
DH452081	8.1		.3189	10	61	103
DH452082	8.2		.3228	10	61	103
DH452083	8.3		.3268	10	61	103
DH452021F	8.334	21/64	.3281	10	61	103
DH452084	8.4		.3307	10	61	103
DH452017L	8.433	Q	.3320	10	61	103
DH452085	8.5		.3346	10	61	103
DH452086	8.6		.3386	10	61	103
DH452087	8.7		.3425	10	61	103
DH452022F	8.731	11/32	.3438	10	61	103
DH452088	8.8		.3465	10	61	103
DH452089	8.9		.3504	10	61	103
DH452090	9.0		.3543	10	61	103
DH452091	9.1		.3583	10	61	103

▶ 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											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	◎	◎	○	○	○												○				

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (5XD)

DH452 SERIES

▶Special flute shape and geometry suitable for machining stainless steel
▶Excellent chip evacuation from better surface treatment
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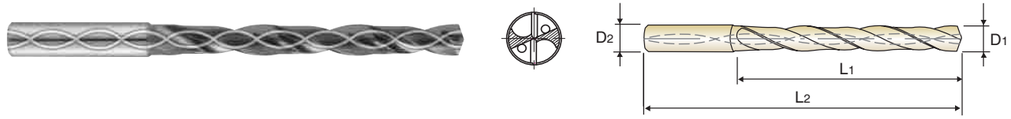
▶TiAlN coating for better surface finishes and longer tool life



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.98

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH452023F	9.128	23/64	.3594	10	61	103
DH452092	9.2		.3622	10	61	103
DH452093	9.3		.3661	10	61	103
DH452021L	9.347	U	.3680	10	61	103
DH452094	9.4		.3701	10	61	103
DH452095	9.5		.3740	10	61	103
DH452024F	9.525	3/8	.3750	10	61	103
DH452096	9.6		.3780	10	61	103
DH452097	9.7		.3819	10	61	103
DH452098	9.8		.3858	10	61	103
DH452099	9.9		.3898	10	61	103
DH452025F	9.922	25/64	.3906	10	61	103
DH452100	10.0		.3937	10	61	103
DH452101	10.1		.3976	12	71	118
DH452102	10.2		.4016	12	71	118
DH452103	10.3		.4055	12	71	118
DH452026F	10.319	13/32	.4062	12	71	118
DH452104	10.4		.4094	12	71	118
DH452105	10.5		.4134	12	71	118
DH452106	10.6		.4173	12	71	118
DH452107	10.7		.4212	12	71	118
DH452027F	10.716	27/64	.4219	12	71	118
DH452108	10.8		.4252	12	71	118
DH452109	10.9		.4291	12	71	118
DH452110	11.0		.4330	12	71	118
DH452111	11.1		.4370	12	71	118
DH452028F	11.113	7/16	.4375	12	71	118
DH452112	11.2		.4409	12	71	118
DH452113	11.3		.4448	12	71	118
DH452114	11.4		.4488	12	71	118
DH452115	11.5		.4527	12	71	118
DH452029F	11.509	29/64	.4531	12	71	118
DH452116	11.6		.4566	12	71	118
DH452117	11.7		.4606	12	71	118
DH452118	11.8		.4645	12	71	118
DH452119	11.9		.4685	12	71	118
DH452030F	11.906	15/32	.4688	12	71	118
DH452120	12.0		.4724	12	71	118
DH452121	12.1		.4764	14	77	124
DH452122	12.2		.4803	14	77	124
DH452123	12.3		.4843	14	77	124
DH452031F	12.303	31/64	.4844	14	77	124
DH452124	12.4		.4882	14	77	124
DH452125	12.5		.4921	14	77	124
DH452126	12.6		.4961	14	77	124
DH452032F	12.7	1/2	.5000	14	77	124
DH452128	12.8		.5039	14	77	124
DH452129	12.9		.5079	14	77	124
DH452130	13.0		.5118	14	77	124
DH452131	13.1		.5157	14	77	124
DH452132	13.2		.5197	14	77	124
DH452133	13.3		.5236	14	77	124

▶ 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											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	◎	◎	○	○	○												○				

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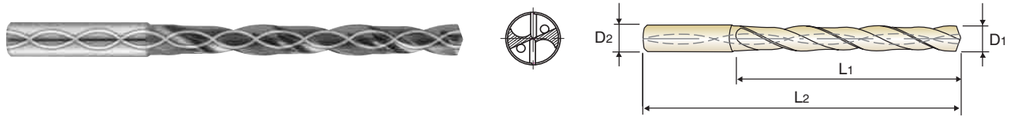
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (5XD)

DH452 SERIES

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling
- ▶TiAlN coating for better surface finishes and longer tool life



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.98

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH452134	13.4		.5276	14	77	124
DH452135	13.5		.5314	14	77	124
DH452136	13.6		.5354	14	77	124
DH452137	13.7		.5394	14	77	124
DH452138	13.8		.5433	14	77	124
DH452139	13.9		.5472	14	77	124
DH452140	14.0		.5512	14	77	124
DH452141	14.1		.5551	16	83	133
DH452142	14.2		.5591	16	83	133
DH452036F	14.288	9/16	.5625	16	83	133
DH452143	14.3		.5630	16	83	133
DH452144	14.4		.5669	16	83	133
DH452145	14.5		.5708	16	83	133
DH452146	14.6		.5748	16	83	133
DH452147	14.7		.5787	16	83	133
DH452148	14.8		.5827	16	83	133
DH452149	14.9		.5866	16	83	133
DH452150	15.0		.5905	16	83	133
DH452151	15.1		.5945	16	83	133
DH452152	15.2		.5984	16	83	133
DH452153	15.3		.6024	16	83	133
DH452154	15.4		.6063	16	83	133
DH452155	15.5		.6102	16	83	133
DH452156	15.6		.6142	16	83	133
DH452157	15.7		.6181	16	83	133
DH452158	15.8		.6220	16	83	133
DH452040F	15.875	5/8	.6250	16	83	133
DH452159	15.9		.6260	16	83	133
DH452160	16.0		.6299	16	83	133
DH452161	16.1		.6339	18	93	143
DH452162	16.2		.6378	18	93	143
DH452163	16.3		.6417	18	93	143
DH452164	16.4		.6457	18	93	143
DH452165	16.5		.6495	18	93	143
DH452166	16.6		.6535	18	93	143
DH452167	16.7		.6575	18	93	143
DH452168	16.8		.6614	18	93	143
DH452169	16.9		.6654	18	93	143
DH452170	17.0		.6692	18	93	143
DH452171	17.1		.6732	18	93	143
DH452172	17.2		.6772	18	93	143
DH452173	17.3		.6811	18	93	143
DH452174	17.4		.6850	18	93	143
DH452175	17.5		.6889	18	93	143
DH452176	17.6		.6929	18	93	143
DH452177	17.7		.6968	18	93	143
DH452178	17.8		.7008	18	93	143
DH452179	17.9		.7047	18	93	143
DH452180	18.0		.7087	18	93	143
DH452181	18.1		.7126	20	101	153
DH452182	18.2		.7165	20	101	151
DH452183	18.3		.7205	20	101	151

▶ 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											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	◎	◎	○	○	○												○				

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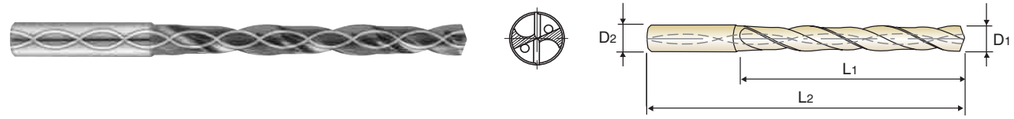
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (5XD)

DH452 SERIES

▶Special flute shape and geometry suitable for machining stainless steel
▶Excellent chip evacuation from better surface treatment
▶Point R-thinning achieves superior centering and chip curling
▶TiAlN coating for better surface finishes and longer tool life



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.98

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH452184	18.4		.7244	20	101	153
DH452185	18.5		.7283	20	101	153
DH452186	18.6		.7323	20	101	151
DH452187	18.7		.7362	20	101	153
DH452188	18.8		.7402	20	101	153
DH452189	18.9		.7441	20	101	153
DH452190	19.0		.7480	20	101	153
DH452048F	19.050	3/4	.7500	20	101	153
DH452191	19.1		.7520	20	101	151
DH452192	19.2		.7559	20	101	151
DH452193	19.3		.7598	20	101	151
DH452194	19.4		.7638	20	101	151
DH452195	19.5		.7676	20	101	153
DH452196	19.6		.7717	20	101	151
DH452197	19.7		.7756	20	101	151
DH452198	19.8		.7795	20	101	153
DH452199	19.9		.7835	20	101	151
DH452200	20.0		.7874	20	101	153

▶ 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											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	◎	◎	○	○	○												○				

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (8XD)

NEW SIZES **DH453 SERIES**

- ▶Special flute shape and geometry suitable for machining stainless steel
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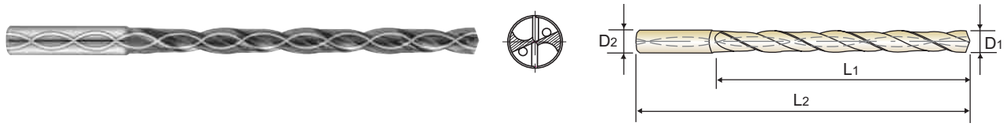
- ▶Point R-thinning achieves superior centering and chip curling



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.98 | * NEW SIZE

EXTRA LONG 8×D

Unit : mm

	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
		Metric	Fractional	Decimal			
	TiAlN	D1			D2	L1	L2
*	DH453020	2.0			4	25	66
*	DH453021	2.1			4	25	66
*	DH453022	2.2			4	25	66
*	DH453023	2.3			4	25	66
*	DH453006F	2.381	3/32	.0938	4	30	66
*	DH453024	2.4			4	30	66
*	DH453025	2.5			4	30	66
*	DH453026	2.6			4	30	66
*	DH453027	2.7			4	30	66
*	DH453007F	2.778	7/64	.1094	4	30	66
*	DH453028	2.8			4	30	66
*	DH453029	2.9			4	30	66
	DH453030	3.0		.1181	6	34	72
	DH453031	3.1		.1220	6	34	72
	DH453008F	3.175	1/8	.1250	6	34	72
	DH453032	3.2		.1260	6	34	72
	DH453033	3.3		.1299	6	34	72
	DH453034	3.4		.1339	6	34	72
	DH453229G	3.454	#29	.1360	6	34	72
	DH453035	3.5		.1378	6	34	72
	DH453009F	3.572	9/64	.1406	6	34	72
	DH453036	3.6		.1417	6	34	72
	DH453037	3.7		.1457	6	34	72
	DH453038	3.8		.1496	6	43	81
	DH453039	3.9		.1535	6	43	81
	DH453010F	3.969	5/32	.1563	6	43	81
	DH453040	4.0		.1575	6	43	81
	DH453221G	4.038	#21	.1590	6	43	81
	DH453041	4.1		.1614	6	43	81
	DH453042	4.2		.1654	6	43	81
	DH453043	4.3		.1693	6	43	81
	DH453011F	4.366	11/64	.1719	6	43	81
	DH453044	4.4		.1732	6	43	81
	DH453045	4.5		.1772	6	43	81
	DH453046	4.6		.1811	6	43	81
	DH453047	4.7		.1850	6	43	81
	DH453012F	4.763	3/16	.1875	6	57	95
	DH453048	4.8		.1890	6	57	95
	DH453049	4.9		.1929	6	57	95
	DH453050	5.0		.1969	6	57	95
	DH453051	5.1		.2008	6	57	95
	DH453013F	5.159	13/64	.2031	6	57	95
	DH453052	5.2		.2047	6	57	95
	DH453053	5.3		.2087	6	57	95
	DH453054	5.4		.2126	6	57	95
	DH453055	5.5		.2165	6	57	95
	DH453014F	5.556	7/32	.2188	6	57	95
	DH453056	5.6		.2205	6	57	95
	DH453057	5.7		.2244	6	57	95
	DH453058	5.8		.2283	6	57	95
	DH453059	5.9		.2323	6	57	95
	DH453015F	5.953	15/64	.2344	6	57	95
	DH453060	6.0		.2362	6	57	95
	DH453061	6.1		.2402	8	76	114

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P																			
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											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	◎	◎	○	○	○												○				

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (8XD)

NEW SIZES DH453 SERIES

- ▶Special flute shape and geometry suitable for machining stainless steel
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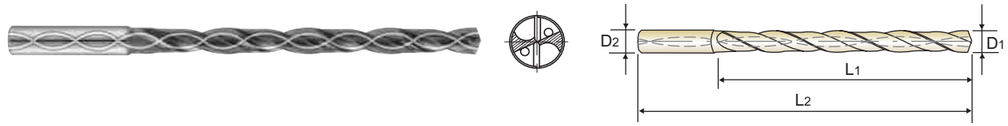

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.98

EXTRA LONG 8×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH453062	6.2		.2441	8	76	114
DH453063	6.3		.2480	8	76	114
DH453016F	6.350	1/4	.2500	8	76	114
DH453064	6.4		.2520	8	76	114
DH453065	6.5		.2559	8	76	114
DH453106L	6.527	F	.2570	8	76	114
DH453066	6.6		.2598	8	76	114
DH453067	6.7		.2638	8	76	114
DH453017F	6.747	17/64	.2656	8	76	114
DH453068	6.8		.2677	8	76	114
DH453069	6.9		.2717	8	76	114
DH453009L	6.909	I	.2720	8	76	114
DH453070	7.0		.2756	8	76	114
DH453071	7.1		.2795	8	76	114
DH453018F	7.144	9/32	.2813	8	76	114
DH453072	7.2		.2835	8	76	114
DH453073	7.3		.2874	8	76	114
DH453074	7.4		.2913	8	76	114
DH453075	7.5		.2953	8	76	114
DH453019F	7.541	19/64	.2969	8	76	114
DH453076	7.6		.2992	8	76	114
DH453077	7.7		.3031	8	76	114
DH453078	7.8		.3071	8	76	114
DH453079	7.9		.3110	8	76	114
DH453020F	7.938	5/16	.3125	8	76	114
DH453080	8.0		.3150	8	76	114
DH453081	8.1		.3189	10	95	142
DH453082	8.2		.3228	10	95	142
DH453083	8.3		.3268	10	95	142
DH453021F	8.334	21/64	.3281	10	95	142
DH453084	8.4		.3307	10	95	142
DH453117L	8.432	Q	.3320	10	95	142
DH453085	8.5		.3346	10	95	142
DH453086	8.6		.3386	10	95	142
DH453087	8.7		.3425	10	95	142
DH453022F	8.731	11/32	.3438	10	95	142
DH453088	8.8		.3465	10	95	142
DH453089	8.9		.3504	10	95	142
DH453090	9.0		.3543	10	95	142
DH453091	9.1		.3583	10	95	142
DH453023F	9.128	23/64	.3594	10	95	142
DH453092	9.2		.3622	10	95	142
DH453093	9.3		.3661	10	95	142
DH453121L	9.347	U	.3680	10	95	142
DH453094	9.4		.3701	10	95	142
DH453095	9.5		.3740	10	95	142
DH453024F	9.525	3/8	.3750	10	95	142
DH453096	9.6		.3780	10	95	142
DH453097	9.7		.3819	10	95	142
DH453098	9.8		.3858	10	95	142
DH453099	9.9		.3898	10	95	142
DH453025F	9.922	25/64	.3906	10	95	142
DH453100	10.0		.3937	10	95	142
DH453101	10.1		.3976	12	114	162

▶ 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											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	◎	◎	○	○	○												○				

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (8XD)

NEW SIZES **DH453 SERIES**

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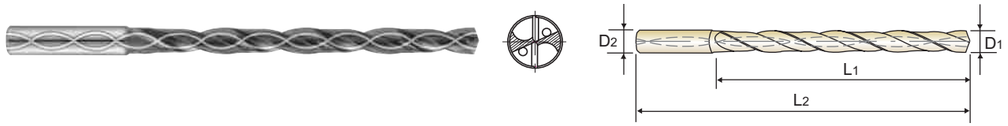

DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.98

EXTRA LONG
8×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH453102	10.2		.4016	12	114	162
DH453103	10.3		.4055	12	114	162
DH453026F	10.319	13/32	.4063	12	114	162
DH453104	10.4		.4094	12	114	162
DH453105	10.5		.4134	12	114	162
DH453106	10.6		.4173	12	114	162
DH453107	10.7		.4212	12	114	162
DH453027F	10.716	27/64	.4219	12	114	162
DH453108	10.8		.4252	12	114	162
DH453109	10.9		.4291	12	114	162
DH453110	11.0		.4330	12	114	162
DH453111	11.1		.4370	12	114	162
DH453028F	11.113	7/16	.4375	12	114	162
DH453112	11.2		.4409	12	114	162
DH453113	11.3		.4448	12	114	162
DH453114	11.4		.4488	12	114	162
DH453115	11.5		.4527	12	114	162
DH453029F	11.509	29/64	.4531	12	114	162
DH453116	11.6		.4566	12	114	162
DH453117	11.7		.4606	12	114	162
DH453118	11.8		.4645	12	114	162
DH453119	11.9		.4685	12	114	162
DH453030F	11.906	15/32	.4688	12	114	162
DH453120	12.0		.4724	12	114	162
DH453121	12.1		.4764	14	133	178
DH453122	12.2		.4803	14	133	178
DH453123	12.3		.4843	14	133	178
DH453031F	12.303	31/64	.4844	14	133	178
DH453124	12.4		.4882	14	133	178
DH453125	12.5		.4921	14	133	178
DH453126	12.6		.4961	14	133	178
DH453032F	12.7	1/2	.5000	14	133	178
DH453128	12.8		.5039	14	133	178
DH453129	12.9		.5079	14	133	178
DH453130	13.0		.5118	14	133	178
DH453033F	13.097	33/64	.5156	14	133	178
DH453131	13.1		.5157	14	133	178
DH453132	13.2		.5197	14	133	178
DH453133	13.3		.5236	14	133	178
DH453134	13.4		.5276	14	133	178
DH453135	13.5		.5314	14	133	178
DH453136	13.6		.5354	14	133	178
DH453137	13.7		.5394	14	133	178
DH453138	13.8		.5433	14	133	178
DH453139	13.9		.5472	14	133	178
DH453140	14.0		.5512	14	133	178
DH453141	14.1		.5551	16	152	203
DH453142	14.2		.5591	16	152	203
DH453036F	14.288	9/16	.5625	16	152	203
DH453143	14.3		.5630	16	152	203
DH453144	14.4		.5669	16	152	203
DH453145	14.5		.5709	16	152	203
DH453146	14.6		.5748	16	152	203
DH453147	14.7		.5787	16	152	203

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

ISO	P																			
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											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	◎	◎	○	○	○												○				

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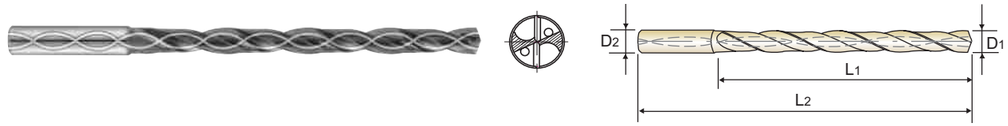
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (8XD)

NEW SIZES DH453 SERIES

- ▶Special flute shape and geometry suitable for machining stainless steel
- ▶Excellent chip evacuation from better surface treatment
- ▶Point R-thinning achieves superior centering and chip curling



DIN 6537 | CARBIDE | h6 | m7 | 140° | 20 bar | P.98

EXTRA LONG
8×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2
DH453148	14.8		.5827	16	152	203
DH453149	14.9		.5866	16	152	203
DH453150	15.0		.5905	16	152	203
DH453151	15.1		.5945	16	152	203
DH453152	15.2		.5984	16	152	203
DH453153	15.3		.6024	16	152	203
DH453154	15.4		.6063	16	152	203
DH453155	15.5		.6102	16	152	203
DH453156	15.6		.6142	16	152	203
DH453157	15.7		.6181	16	152	203
DH453158	15.8		.6220	16	152	203
DH453040F	15.875	5/8	.6250	16	152	203
DH453159	15.9		.6260	16	152	203
DH453160	16.0		.6299	16	152	203
DH453161	16.1		.6339	18	171	222
DH453162	16.2		.6378	18	171	222
DH453163	16.3		.6417	18	171	222
DH453164	16.4		.6457	18	171	222
DH453165	16.5		.6496	18	171	222
DH453166	16.6		.6535	18	171	222
DH453167	16.7		.6575	18	171	222
DH453168	16.8		.6614	18	171	222
DH453169	16.9		.6654	18	171	222
DH453170	17.0		.6693	18	171	222
DH453171	17.1		.6732	18	171	222
DH453172	17.2		.6772	18	171	222
DH453173	17.3		.6811	18	171	222
DH453174	17.4		.6850	18	171	222
DH453175	17.5		.6890	18	171	222
DH453176	17.6		.6929	18	171	222
DH453177	17.7		.6968	18	171	222
DH453178	17.8		.7008	18	171	222
DH453179	17.9		.7047	18	171	222
DH453180	18.0		.7087	18	171	222
DH453181	18.1		.7126	20	190	243
DH453182	18.2		.7165	20	190	243
DH453183	18.3		.7205	20	190	243
DH453184	18.4		.7244	20	190	243
DH453185	18.5		.7283	20	190	243
DH453186	18.6		.7323	20	190	243
DH453187	18.7		.7362	20	190	243
DH453188	18.8		.7402	20	190	243
DH453189	18.9		.7441	20	190	243
DH453190	19.0		.7480	20	190	243
DH453048F	19.050	3/4	.7500	20	190	243
DH453191	19.1		.7520	20	190	243
DH453192	19.2		.7559	20	190	243
DH453193	19.3		.7598	20	190	243
DH453194	19.4		.7638	20	190	243
DH453195	19.5		.7677	20	190	243
DH453196	19.6		.7717	20	190	243
DH453197	19.7		.7756	20	190	243
DH453198	19.8		.7795	20	190	243
DH453199	19.9		.7835	20	190	243
DH453200	20.0		.7874	20	190	243

▶ 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											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	◎	◎	○	○	○												○				

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DH463, DH714, DH464, DH715, DH451, DH452, DH453 SERIES

with COOLANT HOLES

ISO	VDI 3323	Material Description	SFM		Drill Diameter 1.0	2.0	SFM		Drill Diameter 3.0	-	4.0	-	5.0
				FRACTIONAL	-	-		FRACTIONAL	-	1/8	-	3/16	-
				DECIMAL	.0394	.0787		DECIMAL	.1181	.1250	.1575	.1875	.1969
P	2	Non-alloy steel	230	RPM	22280	11140	329	RPM	10610		7960	6370	
				FEED	.0008-.0016	.0016-.0024		FEED	.0016-.0039		.0024-.0047	.0047-.0071	
	3		230	RPM	22280	11140	329	RPM	10610		7960	6370	
				FEED	.0008-.0016	.0016-.0024		FEED	.0016-.0039		.0024-.0047	.0047-.0071	
	6	Low alloy steel	230	RPM	22280	11140	329	RPM	10610		7960	6370	
				FEED	.0008-.0016	.0016-.0024		FEED	.0016-.0039		.0024-.0047	.0047-.0071	
	7		160	RPM	15920	7960	230	RPM	7430		5570	4460	
				FEED	.0008-.0016	.0016-.0024		FEED	.0016-.0039		.0024-.0047	.0047-.0071	
M	12	Stainless steel	130	RPM	12730	6370	165	RPM	5310		3980	3180	
				FEED	.0008-.0016	.0008-.0016		FEED	.0012-.002		.002-.0035	.0028-.0043	
	13		80	RPM	7960	3980	132	RPM	4240		3180	2550	
				FEED	.0008-.0016	.0008-.0016		FEED	.0012-.002		.002-.0035	.0028-.0043	
	14		150	RPM	14320	7160	198	RPM	6370		4770	3820	
				FEED	.0008-.0016	.0008-.0016		FEED	.0016-.0024		.0024-.0039	.0031-.0047	
N	21	Aluminum-wrought alloy	430	RPM	41380	20690	659	RPM	21220		15920	12730	
				FEED	.0016-.0039	.0031-.0055		FEED	.0055-.0079		.0075-.0098	.0079-.0102	
	22		430	RPM	41380	20690	659	RPM	21220		15920	12730	
				FEED	.0016-.0039	.0031-.0055		FEED	.0055-.0079		.0075-.0098	.0079-.0102	
	23	Aluminum-wrought alloy	360	RPM	35010	17510	593	RPM	19100		14320	11460	
				FEED	.0016-.0039	.0031-.0055		FEED	.0055-.0079		.0075-.0098	.0079-.0102	
	24	Aluminum-wrought alloy	360	RPM	35010	17510	593	RPM	19100		14320	11460	
				FEED	.0016-.0039	.0031-.0055		FEED	.0055-.0079		.0075-.0098	.0079-.0102	
	25	Aluminum-wrought alloy	300	RPM	28650	14320	494	RPM	15920		11940	9550	
				FEED	.0016-.0031	.0024-.0039		FEED	.0047-.0071		.0063-.0087	.0067-.0091	
S	37	Aluminum-wrought alloy	80	RPM	7960	3980	132	RPM	4240		3180	2550	
				FEED	.0004-.0012	.0004-.0012		FEED	.0008-.0016		.0016-.0031	.0024-.0039	

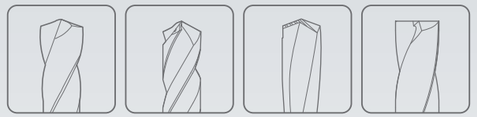
Note: In the metric header row, 3.0 and "-" (1/8), and "-" (3/16) and 5.0, each share one value column in the data rows.

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI		Drill Diameter 6.0 / - (.2362) – - / 1/4 (.2500)	- / 5/16 (.3125) – 8.0 / - (.3150)	- / 3/8 (.3750) – 10.0 / - (.3937)	12.0 / - (.4724)	- / 1/2 (.5000)	14.0 / - (.5512) – - / 9/16 (.5625)	- / 5/8 (.6250) – 16.0 / - (.6299)	18.0 / - (.7087)	- / 3/4 (.7500)	20.0 / - (.7874)
P	2	RPM	5310	3980	3180	2650	2510	2270	1990	1770	1680	1590
		FEED	.0055-.0079	.0063-.0087	.0079-.0102	.0071-.011	.0071-.011	.0079-.0118	.0087-.0126	.0102-.0142	.0102-.0142	.011-.015
	3	RPM	5310	3980	3180	2650	2510	2270	1990	1770	1680	1590
		FEED	.0055-.0079	.0063-.0087	.0079-.0102	.0071-.011	.0071-.011	.0079-.0118	.0087-.0126	.0102-.0142	.0102-.0142	.011-.015
	6	RPM	5310	3980	3180	2650	2510	2270	1990	1770	1680	1590
		FEED	.0055-.0079	.0063-.0087	.0079-.0102	.0071-.011	.0071-.011	.0079-.0118	.0087-.0126	.0102-.0142	.0102-.0142	.011-.015
	7	RPM	3710	2790	2230	1860	1760	1590	1390	1240	1170	1110
		FEED	.0055-.0079	.0063-.0087	.0079-.0102	.0071-.011	.0071-.011	.0079-.0118	.0087-.0126	.0102-.0142	.0102-.0142	.011-.015
M	12	RPM	2650	1990	1590	1330	1260	1140	990	880	840	800
		FEED	.0035-.0051	.0035-.0051	.0039-.0059	.0043-.0063	.0043-.0063	.0047-.0067	.0051-.0071	.0055-.0075	.0055-.0075	.0059-.0079
	13	RPM	2120	1590	1270	1060	1010	910	800	710	670	640
		FEED	.0035-.0051	.0035-.0051	.0039-.0059	.0043-.0063	.0043-.0063	.0047-.0067	.0051-.0071	.0055-.0075	.0055-.0075	.0059-.0079
	14	RPM	3180	2390	1910	1590	1510	1360	1190	1060	1010	950
		FEED	.0039-.0055	.0039-.0055	.0043-.0063	.0047-.0067	.0047-.0067	.0051-.0071	.0055-.0075	.0059-.0079	.0059-.0079	.0063-.0083
N	21	RPM	10610	7960	6370	5310	5030	4550	3980	3540	3360	3180
		FEED	.0087-.011	.0094-.0118	.0114-.0138	.0114-.0138	.0114-.0138	.0118-.0157	.0118-.0157	.013-.0169	.013-.0169	.0138-.0177
	22	RPM	10610	7960	6370	5310	5030	4550	3980	3540	3360	3180
		FEED	.0087-.011	.0094-.0118	.0114-.0138	.0114-.0138	.0114-.0138	.0118-.0157	.0118-.0157	.013-.0169	.013-.0169	.0138-.0177
	23	RPM	9550	7160	5730	4770	4530	4090	3580	3180	3020	2860
		FEED	.0087-.011	.0094-.0118	.0114-.0138	.0114-.0138	.0114-.0138	.0118-.0157	.0118-.0157	.013-.0169	.013-.0169	.0138-.0177
	24	RPM	9550	7160	5730	4770	4530	4090	3580	3180	3020	2860
		FEED	.0087-.011	.0094-.0118	.0114-.0138	.0114-.0138	.0114-.0138	.0118-.0157	.0118-.0157	.013-.0169	.013-.0169	.0138-.0177
	25	RPM	7960	5970	4770	3980	3770	3410	2980	2650	2520	2390
		FEED	.0075-.0098	.0087-.011	.0094-.0118	.0094-.0118	.0094-.0118	.0098-.0138	.0098-.0138	.011-.015	.011-.015	.0118-.0157
S	37	RPM	2120	1590	1270	1060	1010	910	800	710	670	640
		FEED	.0031-.0047	.0031-.0047	.0035-.0055	.0039-.0059	.0039-.0059	.0043-.0063	.0047-.0067	.0051-.0071	.0051-.0071	.0055-.0075

▶ Recommend to reduce the feed rate as following
Feed 100% : DH463/DH714/DH451(3xD), DH464/DH714/DH452(5xD)
Feed 85% : DH453(8xD)

Global Cutting Tool Leader **YG-1**



DREAM DRILLS

Leading Through Innovation

SOLID CARBIDE

DREAM DRILLS ALU

- For Aluminum and Aluminum Alloys

DREAM DRILLS ALU

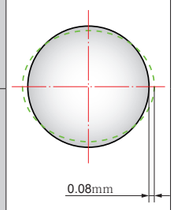
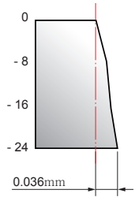
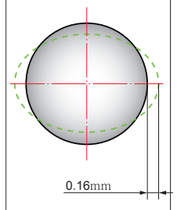
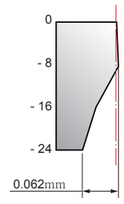
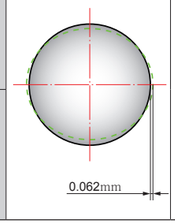
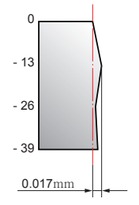
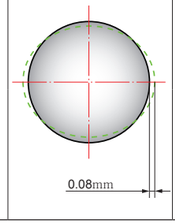
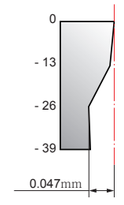
Design that optimized flute shape and geometry suitable **for Aluminum, Aluminum alloy.**

Optimized point thinning to prevent any **chip-clogging from chip welding.**

Polished flutes improve **chip control and evacuation.**

The Drilling of High Speed is possible while maintaining **the excellent surface roughness of workpiece.**

Ø6.0 & Ø10.0 TEST, Aluminum(6061)

CUTTING CONDITION	DREAM DRILL-ALU		COMPETITOR A	
	Roundness	Straightness	Roundness	Straightness
SIZE Ø 6.0				
Drilling Holes 1200 Holes				
SIZE Ø10.0				
Drilling Holes 820 Holes				

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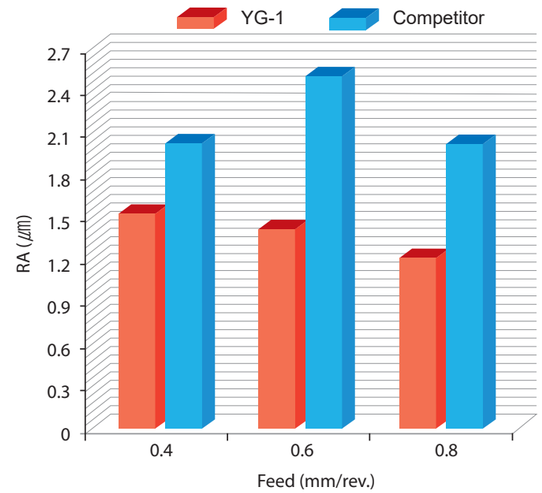
CASE STUDY

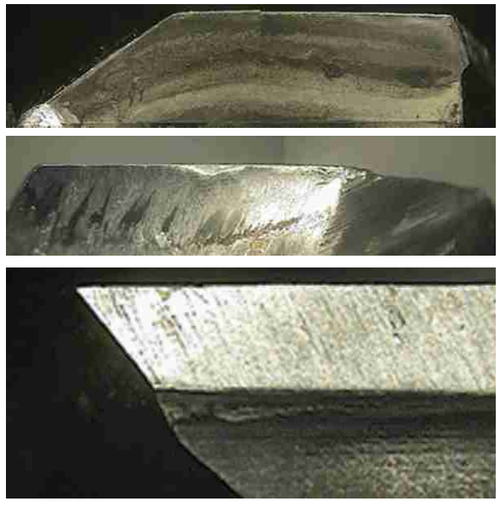
▶ SOLID CARBIDE DREAM DRILLS - ALU with Coolant Holes

CUTTING CONDITION	
Tool	D5433100 (DREAM DRILLS-ALU)
Size	Ø10 × Ø10 × 61 × 103
Work Material	•AISI : 6061 •JIS : A6061 •DIN : AlMgSiCu (HB75)
RPM	6,367 rev./min.
Feed	.0157 ~ .0315 inch/rev.
SFM	656 ft/min.
Drilling Depth	1.77" (4.5xD)
Coolant	Wet Cut
Machine	Machining Center

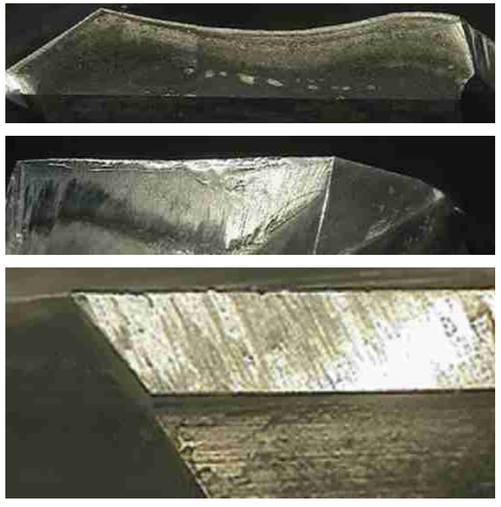


Surface Roughness of Work Piece

YG-1 Total Drilling 820 Holes



Competitor A Total Drilling 820 Holes



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DLC-COATED SOLID CARBIDE DREAM DRILLS
ALU with Coolant Holes (5XD)

DGE466 SERIES
DGE718 SERIES

- ▶Optimized thining for Aluminum & Aluminum Alloys to prevent any clogging from chip welding
- ▶Wider and deeper flute gullets for maximum chip removal
- ▶Special geometry and smooth coating reduces built up edge and improves finishes
- ▶Tolerance : Dia. Tolerance ØD1 : See page 141
  Shank Tolerance ØD2: -.0001 -.0005

CARBIDE | h6 | 118° | 20 bar | P.109

LONG
5×D

Unit : inch

EDP No.	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
DLC	D1		D2	L1	L2
DGE466013	13/64	.2031	15/64	1-3/4	3-15/16
DGE718013	13/64	.2031	1/4	1-3/4	3-15/16
DGE466014	7/32	.2188	15/64	1-57/64	3-15/16
DGE718014	7/32	.2188	1/4	1-57/64	3-15/16
DGE466015	15/64	.2344	15/64	1-57/64	3-15/16
DGE718015	15/64	.2344	1/4	1-57/64	3-15/16
DGE718016	1/4	.2500	1/4	2-3/64	4-19/64
DGE466016	1/4	.2500	17/64	2-3/64	4-19/64
DGE466206	F	.2570	17/64	2-13/64	4-19/64
DGE718206	F	.2570	5/16	2-13/64	4-19/64
DGE466017	17/64	.2656	17/64	2-13/64	4-19/64
DGE718017	17/64	.2656	5/16	2-13/64	4-19/64
DGE466209	I	.2720	.272	2-13/64	4-19/64
DGE718209	I	.2720	5/16	2-13/64	4-19/64
DGE466018	9/32	.2812	5/16	2-23/64	4-41/64
DGE466019	19/64	.2969	5/16	2-33/64	4-41/64
DGE466020	5/16	.3125	5/16	2-33/64	4-41/64
DGE466021	21/64	.3281	11/32	2-43/64	5
DGE718021	21/64	.3281	3/8	2-43/64	5
DGE466217	Q	.3320	11/32	2-43/64	5
DGE718217	Q	.3320	3/8	2-43/64	5
DGE466022	11/32	.3438	11/32	2-27/32	5
DGE718022	11/32	.3438	3/8	2-27/32	5
DGE718023	23/64	.3594	3/8	3	5-23/64
DGE466023	23/64	.3594	25/64	3	5-23/64
DGE718221	U	.3680	3/8	3	5-23/64

EDP No.	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
DLC	D1		D2	L1	L2
DGE466221	U	.3680	25/64	3	5-23/64
DGE718024	3/8	.3750	3/8	3-5/32	5-23/64
DGE466024	3/8	.3750	25/64	3-5/32	5-23/64
DGE466025	25/64	.3906	25/64	3-5/32	5-23/64
DGE718025	25/64	.3906	7/16	3-5/32	5-23/64
DGE466026	13/32	.4062	27/64	3-5/16	5-7/8
DGE718026	13/32	.4062	7/16	3-5/16	5-7/8
DGE466027	27/64	.4219	27/64	3-15/32	5-7/8
DGE718027	27/64	.4219	7/16	3-15/32	5-7/8
DGE718028	7/16	.4375	7/16	3-5/8	6-7/32
DGE466028	7/16	.4375	15/32	3-5/8	6-7/32
DGE466029	29/64	.4531	15/32	3-25/32	6-7/32
DGE718029	29/64	.4531	1/2	3-25/32	6-7/32
DGE466030	15/32	.4688	15/32	3-25/32	6-7/32
DGE718030	15/32	.4688	1/2	3-25/32	6-7/32
DGE466031	31/64	.4844	1/2	3-15/16	6-37/64
DGE466032	1/2	.5000	1/2	4-3/32	6-37/64

▶ 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											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	◎	◎	◎	◎																	

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DLC-COATED SOLID CARBIDE DREAM DRILLS
ALU with Coolant Holes (5XD)

DGE433 SERIES

- ▶Optimized thining for Aluminum & Aluminum Alloys to prevent any clogging from chip welding
- ▶Wider and deeper flute gullets for maximum chip removal
- ▶Special geometry and smooth coating reduces built up edge and improves finishes

DIN 6537 | CARBIDE | h6 | m7 | 118° | 20 bar | P.109

LONG
5×D

Unit : mm

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
DLC	D1			D2	L1	L2
DGE433030	3.0		.1181	6	28	66
DGE433031	3.1		.1220	6	28	66
DGE433008F	3.175	1/8	.1250	6	28	66
DGE433032	3.2		.1260	6	28	66
DGE433033	3.3		.1299	6	28	66
DGE433034	3.4		.1339	6	28	66
DGE433035	3.5		.1378	6	28	66
DGE433009F	3.572	9/64	.1406	6	28	66
DGE433036	3.6		.1417	6	28	66
DGE433037	3.7		.1457	6	28	66
DGE433038	3.8		.1496	6	36	74
DGE433039	3.9		.1535	6	36	74
DGE433010F	3.969	5/32	.1563	6	36	74
DGE433040	4.0		.1575	6	36	74
DGE433041	4.1		.1614	6	36	74
DGE433042	4.2		.1654	6	36	74
DGE433043	4.3		.1693	6	36	74
DGE433011F	4.366	11/64	.1719	6	36	74
DGE433044	4.4		.1732	6	36	74
DGE433045	4.5		.1772	6	36	74
DGE433046	4.6		.1811	6	36	74
DGE433047	4.7		.1850	6	36	74
DGE433012F	4.763	3/16	.1875	6	36	74
DGE433048	4.8		.1890	6	44	82
DGE433049	4.9		.1929	6	44	82
DGE433050	5.0		.1969	6	44	82

EDP No.	Drill Diameter Metric	Drill Diameter Fractional	Drill Diameter Decimal	Shank Diameter	Flute Length	Overall Length
DLC	D1			D2	L1	L2
DGE433051	5.1		.2008	6	44	82
DGE433013F	5.159	13/64	.2031	6	44	82
DGE433052	5.2		.2047	6	44	82
DGE433053	5.3		.2087	6	44	82
DGE433054	5.4		.2126	6	44	82
DGE433055	5.5		.2165	6	44	82
DGE433014F	5.556	7/32	.2188	6	44	82
DGE433056	5.6		.2205	6	44	82
DGE433057	5.7		.2244	6	44	82
DGE433058	5.8		.2283	6	44	82
DGE433059	5.9		.2323	6	44	82
DGE433015F	5.953	15/64	.2344	6	44	82
DGE433060	6.0		.2362	6	44	82
DGE433061	6.1		.2402	8	53	91
DGE433062	6.2		.2441	8	53	91
DGE433063	6.3		.2480	8	53	91
DGE433016F	6.350	1/4	.2500	8	53	91
DGE433064	6.4		.2520	8	53	91
DGE433065	6.5		.2559	8	53	91
DGE433006L	6.528	F	.2570	8	53	9
DGE433066	6.6		.2598	8	53	91
DGE433067	6.7		.2638	8	53	91
DGE433017F	6.747	17/64	.2656	8	53	91
DGE433068	6.8		.2677	8	53	91
DGE433069	6.9		.2717	8	53	91
DGE433009L	6.909	I	.2720	8	53	91

▶ 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											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	◎	◎	◎	◎																	

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DLC-COATED SOLID CARBIDE DREAM DRILLS
ALU with Coolant Holes (5XD)

DGE433 SERIES

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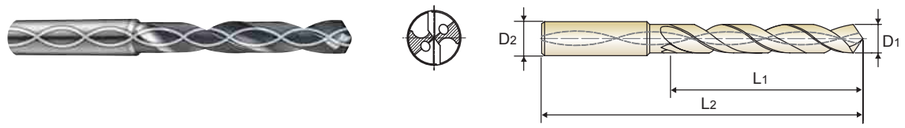
- ▶Wider and deeper flute gullets for maximum chip removal
- ▶Special geometry and smooth coating reduces built up edge and improves finishes



DIN 6537 | CARBIDE | h6 | m7 | 118° | 20 bar | P.109

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
DLC	D1			D2	L1	L2
DGE433070	7.0		.2756	8	53	91
DGE433071	7.1		.2795	8	53	91
DGE433018F	7.144	9/32	.2812	8	53	91
DGE433072	7.2		.2835	8	53	91
DGE433073	7.3		.2874	8	53	91
DGE433074	7.4		.2913	8	53	91
DGE433075	7.5		.2953	8	53	91
DGE433019F	7.541	19/64	.2969	8	53	91
DGE433076	7.6		.2992	8	53	91
DGE433077	7.7		.3031	8	53	91
DGE433078	7.8		.3071	8	53	91
DGE433079	7.9		.3110	8	53	91
DGE433020F	7.938	5/16	.3125	8	53	91
DGE433080	8.0		.3150	8	53	91
DGE433081	8.1		.3189	10	61	103
DGE433082	8.2		.3228	10	61	103
DGE433083	8.3		.3268	10	61	103
DGE433021F	8.334	21/64	.3281	10	61	103
DGE433084	8.4		.3307	10	61	103
DGE433017L	8.433	Q	.3320	10	61	103
DGE433085	8.5		.3346	10	61	103
DGE433086	8.6		.3386	10	61	103
DGE433087	8.7		.3425	10	61	103
DGE433022F	8.731	11/32	.3438	10	61	103
DGE433088	8.8		.3465	10	61	103
DGE433089	8.9		.3504	10	61	103

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
DLC	D1			D2	L1	L2
DGE433090	9.0		.3543	10	61	103
DGE433091	9.1		.3583	10	61	103
DGE433023F	9.128	23/64	.3594	10	61	103
DGE433092	9.2		.3622	10	61	103
DGE433093	9.3		.3661	10	61	103
DGE433021L	9.347	U	.3680	10	61	103
DGE433094	9.4		.3701	10	61	103
DGE433095	9.5		.3740	10	61	103
DGE433024F	9.525	3/8	.3750	10	61	103
DGE433096	9.6		.3780	10	61	103
DGE433097	9.7		.3819	10	61	103
DGE433098	9.8		.3858	10	61	103
DGE433099	9.9		.3898	10	61	103
DGE433025F	9.922	25/64	.3906	10	61	103
DGE433100	10.0		.3937	10	61	103
DGE433101	10.1		.3976	12	71	118
DGE433102	10.2		.4016	12	71	118
DGE433103	10.3		.4055	12	71	118
DGE433026F	10.319	13/32	.4062	12	71	118
DGE433104	10.4		.4094	12	71	118
DGE433105	10.5		.4134	12	71	118
DGE433106	10.6		.4173	12	71	118
DGE433107	10.7		.4212	12	71	118
DGE433027F	10.716	27/64	.4219	12	71	118
DGE433108	10.8		.4252	12	71	118
DGE433109	10.9		.4291	12	71	118

▶ 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											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	◎	◎	◎	◎																	

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DLC-COATED SOLID CARBIDE DREAM DRILLS
ALU with Coolant Holes (5XD)

DGE433 SERIES

▶Optimized thining for Aluminum & Aluminum Alloys to prevent any clogging from chip welding
▶Wider and deeper flute gullets for maximum chip removal
▶Special geometry and smooth coating reduces built up edge and improves finishes

DIN 6537 | CARBIDE | h6 | m7 | 118° | 20 bar | P.109

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
DLC	D1			D2	L1	L2
DGE433110	11.0		.4330	12	71	118
DGE433111	11.1		.4370	12	71	118
DGE433028F	11.113	7/16	.4375	12	71	118
DGE433112	11.2		.4409	12	71	118
DGE433113	11.3		.4448	12	71	118
DGE433114	11.4		.4488	12	71	118
DGE433115	11.5		.4527	12	71	118
DGE433029F	11.509	29/64	.4531	12	71	118
DGE433116	11.6		.4566	12	71	118
DGE433117	11.7		.4606	12	71	118
DGE433118	11.8		.4645	12	71	118
DGE433119	11.9		.4685	12	71	118
DGE433030F	11.906	15/32	.4688	12	71	118
DGE433120	12.0		.4724	12	71	118
DGE433121	12.1		.4764	14	77	124
DGE433122	12.2		.4803	14	77	124
DGE433123	12.3		.4843	14	77	124
DGE433031F	12.303	31/64	.4844	14	77	124
DGE433124	12.4		.4882	14	77	124
DGE433125	12.5		.4921	14	77	124
DGE433126	12.6		.4961	14	77	124
DGE433032F	12.7	1/2	.5000	14	77	124
DGE433128	12.8		.5039	14	77	124
DGE433129	12.9		.5079	14	77	124
DGE433130	13.0		.5118	14	77	124
DGE433131	13.1		.5157	14	77	124

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
DLC	D1			D2	L1	L2
DGE433132	13.2		.5197	14	77	124
DGE433133	13.3		.5236	14	77	124
DGE433134	13.4		.5276	14	77	124
DGE433135	13.5		.5314	14	77	124
DGE433136	13.6		.5354	14	77	124
DGE433137	13.7		.5394	14	77	124
DGE433138	13.8		.5433	14	77	124
DGE433139	13.9		.5472	14	77	124
DGE433140	14.0		.5512	14	77	124
DGE433141	14.1		.5551	16	83	133
DGE433142	14.2		.5591	16	83	133
DGE433036F	14.288	9/16	.5625	16	83	133
DGE433143	14.3		.5630	16	83	133
DGE433144	14.4		.5669	16	83	133
DGE433145	14.5		.5708	16	83	133
DGE433146	14.6		.5748	16	83	133
DGE433147	14.7		.5787	16	83	133
DGE433148	14.8		.5827	16	83	133
DGE433149	14.9		.5866	16	83	133
DGE433150	15.0		.5905	16	83	133
DGE433151	15.1		.5945	16	83	133
DGE433152	15.2		.5984	16	83	133
DGE433153	15.3		.6024	16	83	133
DGE433154	15.4		.6063	16	83	133
DGE433155	15.5		.6102	16	83	133
DGE433156	15.6		.6142	16	83	133

▶ 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											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	◎	◎	◎	◎																	

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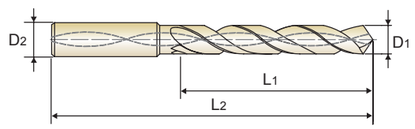
DLC-COATED SOLID CARBIDE DREAM DRILLS
ALU with Coolant Holes (5XD)

DGE433 SERIES

- ▶Optimized thining for Aluminum & Aluminum Alloys to prevent any clogging from chip welding
- ▶Wider and deeper flute gullets for maximum chip removal
- ▶Special geometry and smooth coating reduces built up edge and improves finishes



DIN 6537 | CARBIDE | h6 | m7 | 118° | 20 bar | P.109

LONG
5×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
DLC	D1			D2	L1	L2
DGE433157	15.7		.6181	16	83	133
DGE433158	15.8		.6220	16	83	133
DGE433040F	15.875	5/8	.6250	16	83	133
DGE433159	15.9		.6260	16	83	133
DGE433160	16.0		.6299	16	83	133
DGE433161	16.1		.6339	18	93	143
DGE433162	16.2		.6378	18	93	143
DGE433163	16.3		.6417	18	93	143
DGE433164	16.4		.6457	18	93	143
DGE433165	16.5		.6495	18	93	143
DGE433166	16.6		.6535	18	93	143
DGE433167	16.7		.6575	18	93	143
DGE433168	16.8		.6614	18	93	143
DGE433169	16.9		.6654	18	93	143
DGE433170	17.0		.6692	18	93	143
DGE433171	17.1		.6732	18	93	143
DGE433172	17.2		.6772	18	93	143
DGE433173	17.3		.6811	18	93	143
DGE433174	17.4		.6850	18	93	143
DGE433175	17.5		.6889	18	93	143
DGE433176	17.6		.6929	18	93	143
DGE433177	17.7		.6968	18	93	143
DGE433178	17.8		.7008	18	93	143
DGE433179	17.9		.7047	18	93	143
DGE433180	18.0		.7087	18	93	143
DGE433181	18.1		.7126	20	101	153

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal			
DLC	D1			D2	L1	L2
DGE433182	18.2		.7165	20	101	153
DGE433183	18.3		.7205	20	101	153
DGE433184	18.4		.7244	20	101	153
DGE433185	18.5		.7283	20	101	153
DGE433186	18.6		.7323	20	101	153
DGE433187	18.7		.7362	20	101	153
DGE433188	18.8		.7402	20	101	153
DGE433189	18.9		.7441	20	101	153
DGE433190	19.0		.7480	20	101	153
DGE433048F	19.050	3/4	.7500	20	101	153
DGE433191	19.1		.7520	20	101	153
DGE433192	19.2		.7559	20	101	153
DGE433193	19.3		.7598	20	101	153
DGE433194	19.4		.7638	20	101	153
DGE433195	19.5		.7676	20	101	153
DGE433196	19.6		.7717	20	101	153
DGE433197	19.7		.7756	20	101	153
DGE433198	19.8		.7795	20	101	153
DGE433199	19.9		.7835	20	101	153
DGE433200	20.0		.7874	20	101	153

▶ 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											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	◎	◎	◎	◎																	

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RECOMMENDED CUTTING CONDITIONS

DGE466, DGE718, DGE433 SERIES with COOLANT HOLES

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter										
				METRIC	3.0	-	4.0	-	5.0	6.0	-	-	8.0	-	10.0
				FRACTIONAL	-	1/8	-	3/16	-	-	1/4	5/16	-	3/8	-
				DECIMAL	.1181	.1250	.1575	.1875	.1969	.2362	.2500	.3125	.3150	.3750	.3937
N	21	Aluminum-wrought alloy	658	RPM	21220		15920		12730		10610		7960		6370
				FEED	.0047 - .0071		.0055 - .0087		.0059 - .0091		.0067 - .0098		.0083 - .011		.0094 - .0118
	22		527	RPM	16980		12730		10190		8490		6370		5090
				FEED	.0047 - .0071		.0055 - .0087		.0059 - .0091		.0067 - .0098		.0083 - .011		.0094 - .0118
	23	Aluminum-cast, alloyed	494	RPM	15920		11940		9550		7960		5970		4770
				FEED	.0059 - .0083		.0067 - .0098		.0075 - .0106		.0083 - .011		.0094 - .0122		.0114 - .0177
	24		461	RPM	14850		11140		8910		7430		5570		4460
				FEED	.0059 - .0083		.0067 - .0098		.0075 - .0106		.0083 - .011		.0094 - .0122		.0114 - .0177

ISO	VDI 3323	Material Description	SFM	Drill Diameter								
				METRIC	12.0	-	14.0	-	-	16.0	18.0	-	20.0
				FRACTIONAL	-	1/2	-	9/16	5/8	-	-	3/4	-
				DECIMAL	.4724	.5000	.5512	.5625	.6250	.6299	.7087	.7500	.7874
N	21	Aluminum-wrought alloy	658	RPM	5310	5030	4550		3980		3540	3350	3180
				FEED	.0094 - .0118	.0094 - .0118	.0098 - .0138		.0098 - .0138		.011 - .015	.011 - .015	.0118 - .0157
	22		527	RPM	4240	4030	3640		3180		2830	2680	2550
				FEED	.0094 - .0118	.0094 - .0118	.0098 - .0138		.0098 - .0138		.011 - .015	.011 - .015	.0118 - .0157
	23	Aluminum-cast, alloyed	494	RPM	3980	3770	3410		2980		2650	2520	2390
				FEED	.013 - .0217	.013 - .0217	.0138 - .0236		.0138 - .0236		.0154 - .0287	.0154 - .0287	.0154 - .0335
	24		461	RPM	3710	3520	3180		2790		2480	2350	2230
				FEED	.013 - .0217	.013 - .0217	.0138 - .0236		.0138 - .0236		.0154 - .0287	.0154 - .0287	.0154 - .0335

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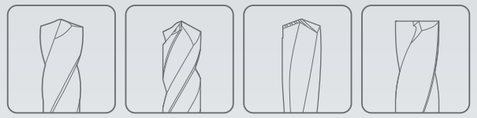
Global Cutting Tool Leader **YG-1**



DREAM DRILLS

Leading Through Innovation

SOLID CARBIDE

DREAM DRILLS MQL TYPE

- Minimum Quantity Lubrication
  Drilling Deep Holes (10×D - 40×D)

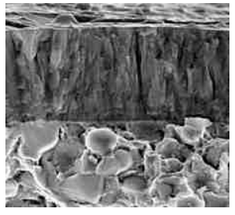
DREAM DRILLS MQL TYPE

4-Facet point for good **centering capability**

Polished flute for enhanced **chip evacuation**

Optimized special **flutes** are ideal for removing chips and for productive drilling

Upgraded **TiAlN nano Layer** Full Coating



Compatible with the MQL
(Minimum Quantity Lubrication) system.
- **Reduction** of **Cooling Cost**
- **Reduce** generation of **dioxin** for human **[Eco-Friendly]**

Compare with Gun drills
- Used on conventional machining center **(MQL Drills)**
- **Higher productivity** than conventional HSS deep hole drills and Gun drills

Gun drill

Productivity

Up to 10 times Drilling Feedrate

MQL Drill

- Size Range : Ø2~Ø25
- Drilling Depth : 25xD ~ over 100xD

* Need Gun drilling machine

- Size Range : Ø3~Ø14
- Drilling Depth : 10xD ~ 40xD

* Need enough machine stroke on machining center

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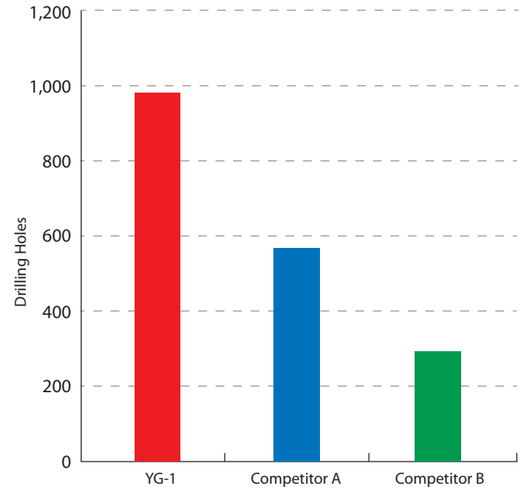
CASE STUDY

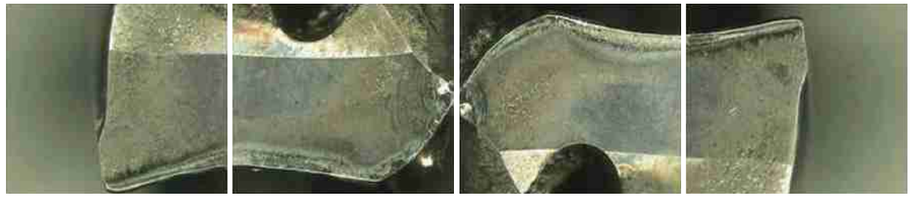
- Flute Shape and Point Shape allowing better chip evacuation in deep hole drilling
- Excellent Coating and Surface Treatment for better performance and chip evacuation

▶ SOLID CARBIDE DREAM DRILLS - MQL Type with Coolant Holes

CUTTING CONDITION	
Tool	DH520060 (DREAM DRILL- MQL TYPE, 20×D)
Size	Ø6 × Ø6 × 138 × 193
Work Material	• AISI : 1045 • JIS : S45C • DIN : C45 (HRc25)
RPM	3,528 rev./min.
Feed	.0075 inch/rev.
SFM	218 ft/min.
Drilling Depth	3.15″
Coolant	Wet Cut
Machine	Machining Center



YG-1 After Drilling 1,000 Holes



Competitor A After Drilling 546 Holes

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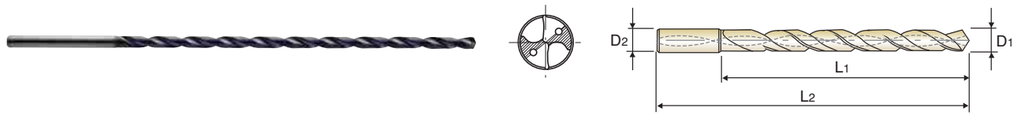
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (10XD)

DH510 SERIES

- ▶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)



CARBIDE | h6 | h7 | 140° | 20 bar P.128

EXTRA LONG
10×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DH510030	3.0		.1181	3	39	90
DH510031	3.1		.1220	4	46	97
DH510008F	3.175	1/8	.1250	4	46	97
DH510032	3.2		.1260	4	46	97
DH510033	3.3		.1299	4	46	97
DH510034	3.4		.1339	4	46	97
DH510035	3.5		.1378	4	46	97
DH510036	3.6		.1417	4	52	103
DH510037	3.7		.1457	4	52	103
DH510038	3.8		.1496	4	52	103
DH510039	3.9		.1535	4	52	103
DH510040	4.0		.1575	4	52	103
DH510041	4.1		.1614	5	59	112
DH510042	4.2		.1654	5	59	112
DH510043	4.3		.1693	5	59	112
DH510044	4.4		.1732	5	59	112
DH510045	4.5		.1772	5	59	112
DH510046	4.6		.1811	5	65	118
DH510047	4.7		.1850	5	65	118
DH510048	4.8		.1890	5	65	118
DH510049	4.9		.1929	5	65	118
DH510050	5.0		.1969	5	65	118
DH510051	5.1		.2008	6	72	127
DH510052	5.2		.2047	6	72	127
DH510053	5.3		.2087	6	72	127
DH510054	5.4		.2126	6	72	127

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DH510055	5.5		.2165	6	72	127
DH510056	5.6		.2205	6	78	133
DH510057	5.7		.2244	6	78	133
DH510058	5.8		.2283	6	78	133
DH510059	5.9		.2323	6	78	133
DH510060	6.0		.2362	6	78	133
DH510061	6.1		.2402	7	85	141
DH510062	6.2		.2441	7	85	141
DH510063	6.3		.2480	7	85	141
DH510016F	6.350	1/4	.2500	7	85	141
DH510064	6.4		.2520	7	85	141
DH510065	6.5		.2559	7	85	141
DH510206L	6.528	F	.2570	7	91	147
DH510066	6.6		.2598	7	91	147
DH510067	6.7		.2638	7	91	147
DH510017F	6.746	17/64	.2656	7	91	147
DH510068	6.8		.2677	7	91	147
DH510069	6.9		.2717	7	91	147
DH510209L	6.909	I	.2720	7	91	147
DH510070	7.0		.2756	7	91	147
DH510071	7.1		.2795	8	98	155
DH510018F	7.142	9/32	.2812	8	98	155
DH510072	7.2		.2835	8	98	155
DH510073	7.3		.2874	8	98	155
DH510074	7.4		.2913	8	98	155
DH510075	7.5		.2953	8	98	155

▶ 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											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																					

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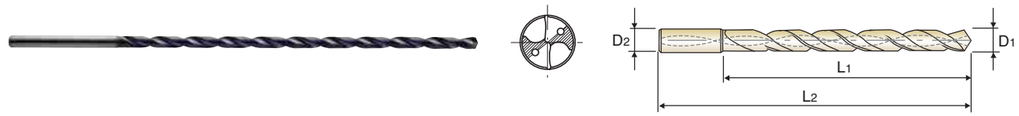
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (10XD)

DH510 SERIES

▶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)



CARBIDE | h6 | h7 | 140° | 20 bar P.128

EXTRA LONG
10×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DH510019F	7.541	19/64	.2969	8	104	161
DH510076	7.6		.2992	8	104	161
DH510077	7.7		.3031	8	104	161
DH510078	7.8		.3071	8	104	161
DH510079	7.9		.3110	8	104	161
DH510020F	7.938	5/16	.3125	8	104	161
DH510080	8.0		.3150	8	104	161
DH510081	8.1		.3189	9	111	169
DH510082	8.2		.3228	9	111	169
DH510083	8.3		.3268	9	111	169
DH510021F	8.334	21/64	.3281	9	111	169
DH510084	8.4		.3307	9	111	169
DH510217L	8.433	Q	.3320	9	111	169
DH510085	8.5		.3346	9	111	169
DH510086	8.6		.3386	9	117	175
DH510087	8.7		.3425	9	117	175
DH510022F	8.733	11/32	.3438	9	117	175
DH510088	8.8		.3465	9	117	175
DH510089	8.9		.3504	9	117	175
DH510090	9.0		.3543	9	117	175
DH510091	9.1		.3583	10	124	182
DH510023F	9.129	23/64	.3594	10	124	182
DH510092	9.2		.3622	10	124	182
DH510093	9.3		.3661	10	124	182
DH510221L	9.347	U	.3680	10	124	182
DH510094	9.4		.3701	10	124	182

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DH510095	9.5		.3740	10	124	182
DH510024F	9.525	3/8	.3750	10	130	188
DH510096	9.6		.3780	10	130	188
DH510097	9.7		.3819	10	130	188
DH510098	9.8		.3858	10	130	188
DH510099	9.9		.3898	10	130	188
DH510025F	9.921	25/64	.3906	10	130	188
DH510100	10.0		.3937	10	130	188
DH510101	10.1		.3976	11	137	201
DH510102	10.2		.4016	11	137	201
DH510103	10.3		.4055	11	137	201
DH510026F	10.318	13/32	.4062	11	137	201
DH510104	10.4		.4094	11	137	201
DH510105	10.5		.4134	11	137	201
DH510106	10.6		.4173	11	143	207
DH510107	10.7		.4213	11	143	207
DH510027F	10.716	27/64	.4219	11	143	207
DH510108	10.8		.4252	11	143	207
DH510109	10.9		.4291	11	143	207
DH510110	11.0		.4331	11	143	207
DH510111	11.1		.4370	12	150	215
DH510028F	11.113	7/16	.4375	12	150	215
DH510112	11.2		.4409	12	150	215
DH510113	11.3		.4449	12	150	215
DH510114	11.4		.4488	12	150	215
DH510115	11.5		.4528	12	150	215

▶ 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											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																					

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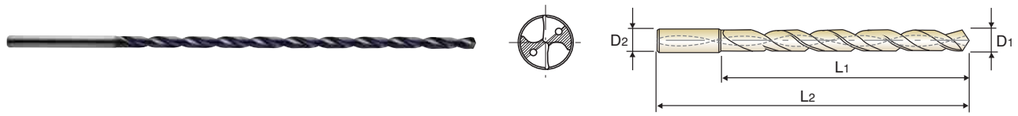
Phone: +1-800-765-8665, www.yg1usa.com

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (10XD)

DH510 SERIES

- ▶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)



CARBIDE | h6 | h7 | 140° | 20 bar

P.128

EXTRA LONG
10 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DH510029F	11.509	29/64	.4531	12	156	221
DH510116	11.6		.4567	12	156	221
DH510117	11.7		.4606	12	156	221
DH510118	11.8		.4646	12	156	221
DH510119	11.9		.4685	12	156	221
DH510030F	11.908	15/32	.4688	12	156	221
DH510120	12.0		.4724	12	156	221
DH510121	12.1		.4764	13	163	229
DH510122	12.2		.4803	13	163	229
DH510123	12.3		.4843	13	163	229
DH510031F	12.304	31/64	.4844	13	163	229
DH510124	12.4		.4882	13	163	229
DH510125	12.5		.4921	13	163	229
DH510126	12.6		.4961	13	169	235
DH510127	12.7	1/2	.5000	13	169	235
DH510128	12.8		.5039	13	169	235
DH510129	12.9		.5079	13	169	235
DH510130	13.0		.5118	13	169	235
DH510131	13.1		.5157	14	176	243
DH510132	13.2		.5197	14	176	243
DH510133	13.3		.5236	14	176	243
DH510134	13.4		.5276	14	176	243
DH510135	13.5		.5315	14	176	243
DH510136	13.6		.5354	14	182	249
DH510137	13.7		.5394	14	182	249
DH510138	13.8		.5433	14	182	249

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DH510139	13.9		.5472	14	182	249
DH510140	14.0		.5512	14	182	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	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	400 Rm	1050 Rm	550	630	400	550
Recommended																					

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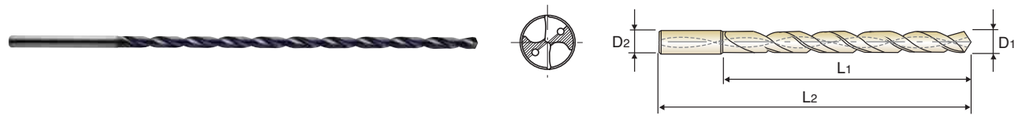
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (15XD)

DH515 SERIES

- ▶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)



CARBIDE | h6 | h7 | 140° | 45 bar

P.128

EXTRA LONG
15 x D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DH515030	3.0		.1181	3	54	105
DH515031	3.1		.1220	4	63	114
DH515008F	3.175	1/8	.1250	4	63	114
DH515032	3.2		.1260	4	63	114
DH515033	3.3		.1299	4	63	114
DH515034	3.4		.1339	4	63	114
DH515035	3.5		.1378	4	63	114
DH515036	3.6		.1417	4	72	123
DH515037	3.7		.1457	4	72	123
DH515038	3.8		.1496	4	72	123
DH515039	3.9		.1535	4	72	123
DH515040	4.0		.1575	4	72	123
DH515041	4.1		.1614	5	81	134
DH515042	4.2		.1654	5	81	134
DH515043	4.3		.1693	5	81	134
DH515044	4.4		.1732	5	81	134
DH515045	4.5		.1772	5	81	134
DH515046	4.6		.1811	5	90	143
DH515047	4.7		.1850	5	90	143
DH515048	4.8		.1890	5	90	143
DH515049	4.9		.1929	5	90	143
DH515050	5.0		.1969	5	90	143
DH515051	5.1		.2008	6	99	154
DH515052	5.2		.2047	6	99	154
DH515053	5.3		.2087	6	99	154
DH515054	5.4		.2126	6	99	154

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DH515055	5.5		.2165	6	99	154
DH515056	5.6		.2205	6	108	163
DH515057	5.7		.2244	6	108	163
DH515058	5.8		.2283	6	108	163
DH515059	5.9		.2323	6	108	163
DH515060	6.0		.2362	6	108	163
DH515061	6.1		.2402	7	117	173
DH515062	6.2		.2441	7	117	173
DH515063	6.3		.2480	7	117	173
DH515016F	6.350	1/4	.2500	7	117	173
DH515064	6.4		.2520	7	117	173
DH515065	6.5		.2559	7	117	173
DH515206L	6.528	F	.2570	7	126	182
DH515066	6.6		.2598	7	126	182
DH515067	6.7		.2638	7	126	182
DH515017F	6.746	17/64	.2656	7	126	182
DH515068	6.8		.2677	7	126	182
DH515069	6.9		.2717	7	126	182
DH515209L	6.909	I	.2720	7	126	182
DH515070	7.0		.2756	7	126	182
DH515071	7.1		.2795	8	135	192
DH515018F	7.142	9/32	.2812	8	135	192
DH515072	7.2		.2835	8	135	192
DH515073	7.3		.2874	8	135	192
DH515074	7.4		.2913	8	135	192
DH515075	7.5		.2953	8	135	192

▶ 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											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																					

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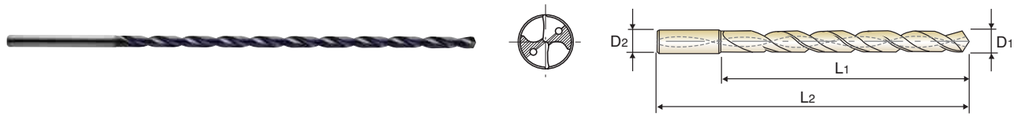
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (15XD)

DH515 SERIES

- ▶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)



CARBIDE | h6 | h7 | 140° | 45 bar P.128

EXTRA LONG
15 x D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DH515019F	7.541	19/64	.2969	8	144	201
DH515076	7.6		.2992	8	144	201
DH515077	7.7		.3031	8	144	201
DH515078	7.8		.3071	8	144	201
DH515079	7.9		.3110	8	144	201
DH515020F	7.938	5/16	.3125	8	144	201
DH515080	8.0		.3150	8	144	201
DH515081	8.1		.3189	9	153	211
DH515082	8.2		.3228	9	153	211
DH515083	8.3		.3268	9	153	211
DH515021F	8.334	21/64	.3281	9	153	211
DH515084	8.4		.3307	9	153	211
DH515217L	8.433	Q	.3320	9	153	211
DH515085	8.5		.3346	9	153	211
DH515086	8.6		.3386	9	162	220
DH515087	8.7		.3425	9	162	220
DH515022F	8.733	11/32	.3438	9	162	220
DH515088	8.8		.3465	9	162	220
DH515089	8.9		.3504	9	162	220
DH515090	9.0		.3543	9	162	220
DH515091	9.1		.3583	10	171	229
DH515023F	9.129	23/64	.3594	10	171	229
DH515092	9.2		.3622	10	171	229
DH515093	9.3		.3661	10	171	229
DH515221L	9.347	U	.3680	10	171	229
DH515094	9.4		.3701	10	171	229

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DH515095	9.5		.3740	10	171	229
DH515024F	9.525	3/8	.3750	10	180	238
DH515096	9.6		.3780	10	180	238
DH515097	9.7		.3819	10	180	238
DH515098	9.8		.3858	10	180	238
DH515099	9.9		.3898	10	180	238
DH515025F	9.921	25/64	.3906	10	180	238
DH515100	10.0		.3937	10	180	238
DH515101	10.1		.3976	11	189	253
DH515102	10.2		.4016	11	189	253
DH515103	10.3		.4055	11	189	253
DH515026F	10.318	13/32	.4062	11	189	253
DH515104	10.4		.4094	11	189	253
DH515105	10.5		.4134	11	189	253
DH515106	10.6		.4173	11	198	262
DH515107	10.7		.4213	11	198	262
DH515027F	10.716	27/64	.4219	11	198	262
DH515108	10.8		.4252	11	198	262
DH515109	10.9		.4291	11	198	262
DH515110	11.0		.4331	11	198	262
DH515111	11.1		.4370	12	207	272
DH515028F	11.113	7/16	.4375	12	207	272
DH515112	11.2		.4409	12	207	272
DH515113	11.3		.4449	12	207	272
DH515114	11.4		.4488	12	207	272
DH515115	11.5		.4527	12	207	272

▶ 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											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																					

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (15XD)

DH515 SERIES

▶4-Facet Point for good centering capability
▶Optimized special flutes are ideal for removing chips and for productive drilling
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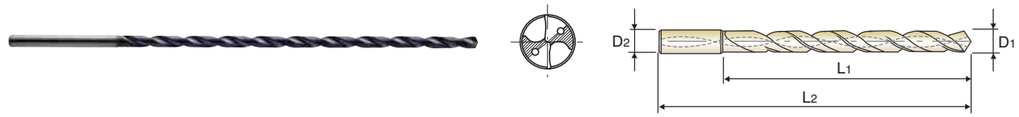
▶MQL system compatible (Minimum Quantity Lubrication)



CARBIDE | h6 | h7 | 140° | 45 bar P.128

EXTRA LONG
15 x D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DH515029F	11.509	29/64	.4531	12	216	281
DH515116	11.6		.4567	12	216	281
DH515117	11.7		.4606	12	216	281
DH515118	11.8		.4646	12	216	281
DH515119	11.9		.4685	12	216	281
DH515030F	11.908	15/32	.4688	12	216	281
DH515120	12.0		.4724	12	216	281
DH515121	12.1		.4764	13	225	291
DH515122	12.2		.4803	13	225	291
DH515123	12.3		.4843	13	225	291
DH515031F	12.304	31/64	.4844	13	225	291
DH515124	12.4		.4882	13	225	291
DH515125	12.5		.4921	13	225	291
DH515126	12.6		.4961	13	234	300
DH515127	12.7	1/2	.5000	13	234	300
DH515128	12.8		.5039	13	234	300
DH515129	12.9		.5079	13	234	300
DH515130	13.0		.5118	13	234	300
DH515131	13.1		.5157	14	243	310
DH515132	13.2		.5197	14	243	310
DH515133	13.3		.5236	14	243	310
DH515134	13.4		.5276	14	243	310
DH515135	13.5		.5314	14	243	310
DH515136	13.6		.5354	14	252	319
DH515137	13.7		.5394	14	252	319
DH515138	13.8		.5433	14	252	319

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DH515139	13.9		.5472	14	252	319
DH515140	14.0		.5512	14	252	319

◎ : 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											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																					

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MQL with Coolant Holes (20XD)

DH520 SERIES

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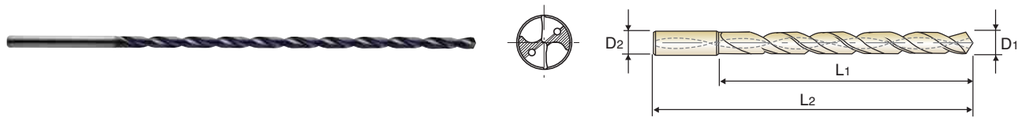

CARBIDE | h6 | h7 | 140° | 45 bar | P.128

EXTRA LONG
20×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DH520030	3.0		.1181	3	69	120
DH520031	3.1		.1220	4	81	132
DH520008F	3.175	1/8	.1250	4	81	132
DH520032	3.2		.1260	4	81	132
DH520033	3.3		.1299	4	81	132
DH520034	3.4		.1339	4	81	132
DH520035	3.5		.1378	4	81	132
DH520036	3.6		.1417	4	92	143
DH520037	3.7		.1457	4	92	143
DH520038	3.8		.1496	4	92	143
DH520039	3.9		.1535	4	92	143
DH520040	4.0		.1575	4	92	143
DH520041	4.1		.1614	5	104	157
DH520042	4.2		.1654	5	104	157
DH520043	4.3		.1693	5	104	157
DH520044	4.4		.1732	5	104	157
DH520045	4.5		.1772	5	104	157
DH520046	4.6		.1811	5	115	168
DH520047	4.7		.1850	5	115	168
DH520048	4.8		.1890	5	115	168
DH520049	4.9		.1929	5	115	168
DH520050	5.0		.1969	5	115	168
DH520051	5.1		.2008	6	127	182
DH520052	5.2		.2047	6	127	182
DH520053	5.3		.2087	6	127	182
DH520054	5.4		.2126	6	127	182
DH520055	5.5		.2165	6	127	182
DH520056	5.6		.2205	6	138	193
DH520057	5.7		.2244	6	138	193
DH520058	5.8		.2283	6	138	193
DH520059	5.9		.2323	6	138	193
DH520060	6.0		.2362	6	138	193
DH520061	6.1		.2402	7	150	206
DH520062	6.2		.2441	7	150	206
DH520063	6.3		.2480	7	150	206
DH520016F	6.350	1/4	.2500	7	150	206
DH520064	6.4		.2520	7	150	206
DH520065	6.5		.2559	7	150	206
DH520206L	6.528	F	.2570	7	161	217
DH520066	6.6		.2598	7	161	217
DH520067	6.7		.2638	7	161	217
DH520017F	6.746	17/64	.2656	7	161	217
DH520068	6.8		.2677	7	161	217
DH520069	6.9		.2717	7	161	217
DH520209L	6.909	I	.2720	7	161	217
DH520070	7.0		.2756	7	161	217
DH520071	7.1		.2795	8	173	230
DH520018F	7.142	9/32	.2812	8	173	230
DH520072	7.2		.2835	8	173	230
DH520073	7.3		.2874	8	173	230
DH520074	7.4		.2913	8	173	230
DH520075	7.5		.2953	8	173	230
DH520019F	7.541	19/64	.2969	8	184	241
DH520076	7.6		.2992	8	184	241
DH520077	7.7		.3031	8	184	241
DH520078	7.8		.3071	8	184	241

▶ 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											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																					

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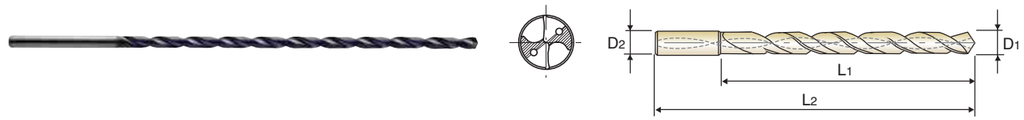
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (20XD)

DH520 SERIES

▶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)



CARBIDE | h6 | h7 | 140° | 45 bar | P.128

EXTRA LONG
20×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DH520079	7.9		.3110	8	184	241
DH520020F	7.938	5/16	.3125	8	184	241
DH520080	8.0		.3150	8	184	241
DH520081	8.1		.3189	9	196	254
DH520082	8.2		.3228	9	196	254
DH520083	8.3		.3268	9	196	254
DH520021F	8.334	21/64	.3281	9	196	254
DH520084	8.4		.3307	9	196	254
DH520217L	8.433	Q	.3320	9	196	254
DH520085	8.5		.3346	9	196	254
DH520086	8.6		.3386	9	207	265
DH520087	8.7		.3425	9	207	265
DH520022F	8.733	11/32	.3438	9	207	265
DH520088	8.8		.3465	9	207	265
DH520089	8.9		.3504	9	207	265
DH520090	9.0		.3543	9	207	265
DH520091	9.1		.3583	10	219	277
DH520023F	9.129	23/64	.3594	10	219	277
DH520092	9.2		.3622	10	219	277
DH520093	9.3		.3661	10	219	277
DH520221L	9.347	U	.3680	10	219	277
DH520094	9.4		.3701	10	219	277
DH520095	9.5		.3740	10	219	277
DH520024F	9.525	3/8	.3750	10	219	277
DH520096	9.6		.3780	10	230	288
DH520097	9.7		.3819	10	230	288
DH520098	9.8		.3858	10	230	288
DH520099	9.9		.3898	10	230	288
DH520025F	9.921	25/64	.3906	10	230	288
DH520100	10.0		.3937	10	230	288
DH520101	10.1		.3976	11	242	306
DH520102	10.2		.4016	11	242	306
DH520103	10.3		.4055	11	242	306
DH520026F	10.318	13/32	.4062	11	242	306
DH520104	10.4		.4094	11	242	306
DH520105	10.5		.4134	11	242	306
DH520106	10.6		.4173	11	253	317
DH520107	10.7		.4213	11	253	317
DH520027F	10.716	27/64	.4219	11	253	317
DH520108	10.8		.4252	11	253	317
DH520109	10.9		.4291	11	253	317
DH520110	11.0		.4331	11	253	317
DH520111	11.1		.4370	12	265	330
DH520028F	11.113	7/16	.4375	12	265	330
DH520112	11.2		.4409	12	265	330
DH520113	11.3		.4449	12	265	330
DH520114	11.4		.4488	12	265	330
DH520115	11.5		.4527	12	265	330
DH520029F	11.509	29/64	.4531	12	276	341
DH520116	11.6		.4567	12	276	341
DH520117	11.7		.4606	12	276	341
DH520118	11.8		.4646	12	276	341
DH520119	11.9		.4685	12	276	341
DH520030F	11.908	15/32	.4688	12	276	341
DH520120	12.0		.4724	12	276	341

◎ : 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											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																					

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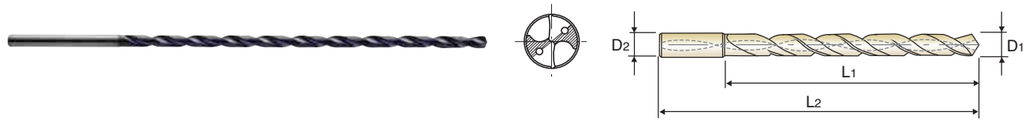
TiAIN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (10XD, 15XD)

DHM10 SERIES
DHM15 SERIES

- ▶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)



DHM10 DHM15

CARBIDE | h6 | h7 | 140° | 20 bar | 45 bar | P.128

EXTRA LONG

15×D (DHM15)	15×D (DHM15)

10XD

Unit : mm

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Metric	Decimal			
TiAlN	D1		D2	L1	L2
DHM10030	3.0	.1181	6	40	80
DHM10033	3.3	.1299	6	47	87
DHM10035	3.5	.1378	6	47	87
DHM10040	4.0	.1575	6	53	93
DHM10042	4.2	.1654	6	60	100
DHM10045	4.5	.1772	6	60	100
DHM10050	5.0	.1969	6	66	106
DHM10055	5.5	.2165	6	73	113
DHM10060	6.0	.2362	6	79	119
DHM10065	6.5	.2559	8	86	126
DHM10068	6.8	.2677	8	92	132
DHM10070	7.0	.2756	8	92	132
DHM10075	7.5	.2953	8	99	139
DHM10080	8.0	.3150	8	105	145
DHM10085	8.5	.3346	10	112	156
DHM10090	9.0	.3543	10	118	162
DHM10095	9.5	.3740	10	126	170
DHM10100	10.0	.3937	10	132	176
DHM10105	10.5	.4134	12	139	188
DHM10110	11.0	.4330	12	145	194
DHM10115	11.5	.4527	12	152	201
DHM10120	12.0	.4724	12	158	207
DHM10125	12.5	.4921	14	165	214
DHM10130	13.0	.5118	14	171	220
DHM10135	13.5	.5314	14	178	227
DHM10140	14.0	.5512	14	184	233

15XD

Unit : mm

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Metric	Decimal			
TiAlN	D1		D2	L1	L2
DHM15030	3.0	.1181	6	55	95
DHM15035	3.5	.1378	6	64	104
DHM15040	4.0	.1575	6	73	113
DHM15045	4.5	.1772	6	82	122
DHM15050	5.0	.1969	6	91	131
DHM15055	5.5	.2165	6	100	140
DHM15060	6.0	.2362	6	109	149
DHM15070	7.0	.2756	8	127	167
DHM15080	8.0	.3150	8	145	185
DHM15090	9.0	.3543	10	163	207
DHM15100	10.0	.3937	10	182	226
DHM15110	11.0	.4330	12	200	249
DHM15120	12.0	.4724	12	21 8	267

◎ : Excellent ○ : Good

ISO	P																			
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											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																					

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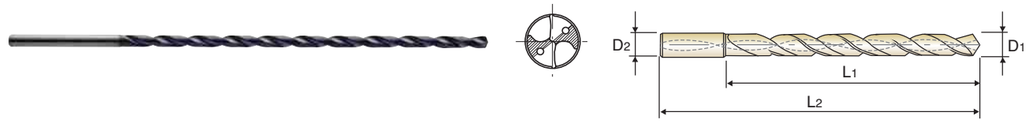
TiAIN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (20XD)

DHM20 SERIES

- ▶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)



DHM20

CARBIDE | h6 | h7 | 140° | 45 bar | P.128

EXTRA LONG

20×D (DHM20)

20XD

Unit : mm

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Metric	Decimal			
TiAlN	D1		D2	L1	L2
DHM20030	3.0	.1181	6	70	110
DHM20035	3.5	.1378	6	82	122
DHM20040	4.0	.1575	6	93	133
DHM20045	4.5	.1772	6	105	145
DHM20050	5.0	.1969	6	116	156
DHM20055	5.5	.2165	6	128	168
DHM20060	6.0	.2362	6	139	179
DHM20070	7.0	.2756	8	162	202
DHM20080	8.0	.3150	8	185	225
DHM20090	9.0	.3543	10	208	252
DHM20100	10.0	.3937	10	232	276
DHM20110	11.0	.4330	12	255	304
DHM20120	12.0	.4724	12	278	327

◎ : Excellent ○ : Good

ISO	P																			
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											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																					

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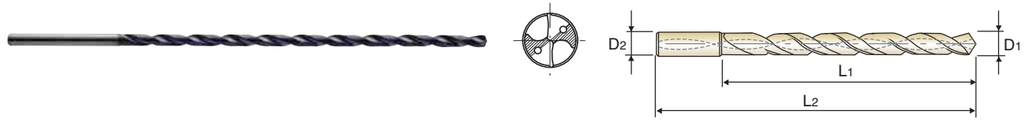
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (25XD)

DHM25 SERIES

- ▶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)



CARBIDE | h6 | h7 | 140° | 45 bar | P.128

EXTRA LONG
25×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DHM25030	3.0		.1181	6	85	125
DHM25031	3.1		.1220	6	99	139
DHM25008F	3.175	1/8	.1250	6	99	139
DHM25032	3.2		.1260	6	99	139
DHM25033	3.3		.1299	6	99	139
DHM25034	3.4		.1339	6	99	139
DHM25035	3.5		.1378	6	99	139
DHM25036	3.6		.1417	6	113	153
DHM25037	3.7		.1457	6	113	153
DHM25038	3.8		.1496	6	113	153
DHM25039	3.9		.1535	6	113	153
DHM25040	4.0		.1575	6	113	153
DHM25041	4.1		.1614	6	127	167
DHM25042	4.2		.1654	6	127	167
DHM25043	4.3		.1693	6	127	167
DHM25044	4.4		.1732	6	127	167
DHM25045	4.5		.1772	6	127	167
DHM25046	4.6		.1811	6	141	181
DHM25047	4.7		.1850	6	141	181
DHM25048	4.8		.1890	6	141	181
DHM25049	4.9		.1929	6	141	181
DHM25050	5.0		.1969	6	141	181
DHM25051	5.1		.2008	6	155	195
DHM25052	5.2		.2047	6	155	195
DHM25053	5.3		.2087	6	155	195
DHM25054	5.4		.2126	6	155	195

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DHM25055	5.5		.2165	6	155	195
DHM25056	5.6		.2205	6	169	209
DHM25057	5.7		.2244	6	169	209
DHM25058	5.8		.2283	6	169	209
DHM25059	5.9		.2323	6	169	209
DHM25060	6.0		.2362	6	169	209
DHM25061	6.1		.2402	8	183	223
DHM25062	6.2		.2441	8	183	223
DHM25063	6.3		.2480	8	183	223
DHM25016F	6.350	1/4	.2500	8	183	223
DHM25064	6.4		.2520	8	183	223
DHM25065	6.5		.2559	8	183	223
DHM25206L	6.528	F	.2570	8	197	237
DHM25066	6.6		.2598	8	197	237
DHM25067	6.7		.2638	8	197	237
DHM25017F	6.746	17/64	.2656	8	197	237
DHM25068	6.8		.2677	8	197	237
DHM25069	6.9		.2717	8	197	237
DHM25209L	6.909	I	.2720	8	197	237
DHM25070	7.0		.2756	8	197	237
DHM25071	7.1		.2795	8	211	251
DHM25018F	7.142	9/32	.2812	8	211	251
DHM25072	7.2		.2835	8	211	251
DHM25073	7.3		.2874	8	211	251
DHM25074	7.4		.2913	8	211	251
DHM25075	7.5		.2953	8	211	251

▶ NEXT PAGE

◎ : Excellent ○ : Good

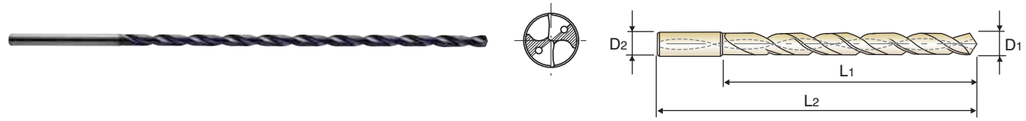
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	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											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																					

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (25XD)

DHM25 SERIES

- ▶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)



CARBIDE | h6 | h7 | 140° | 45 bar | P.128

EXTRA LONG
25×D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DHM25019F	7.541	19/64	.2969	8	225	265
DHM25076	7.6		.2992	8	225	265
DHM25077	7.7		.3031	8	225	265
DHM25078	7.8		.3071	8	225	265
DHM25079	7.9		.3110	8	225	265
DHM25020F	7.938	5/16	.3125	8	225	265
DHM25080	8.0		.3150	8	225	265
DHM25081	8.1		.3189	10	239	283
DHM25082	8.2		.3228	10	239	283
DHM25083	8.3		.3268	10	239	283
DHM25021F	8.334	21/64	.3281	10	239	283
DHM25084	8.4		.3307	10	239	283
DHM25217L	8.433	Q	.3320	10	239	283
DHM25085	8.5		.3346	10	239	283
DHM25086	8.6		.3386	10	253	297
DHM25087	8.7		.3425	10	253	297
DHM25022F	8.733	11/32	.3438	10	253	297
DHM25088	8.8		.3465	10	253	297
DHM25089	8.9		.3504	10	253	297
DHM25090	9.0		.3543	10	253	297
DHM25091	9.1		.3583	10	268	312
DHM25023F	9.129	23/64	.3594	10	268	312
DHM25092	9.2		.3622	10	268	312
DHM25093	9.3		.3661	10	268	312
DHM25221L	9.347	U	.3680	10	268	312
DHM25094	9.4		.3701	10	268	312

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2
DHM25095	9.5		.3740	10	268	312
DHM25024F	9.525	3/8	.3750	10	282	326
DHM25096	9.6		.3780	10	282	326
DHM25097	9.7		.3819	10	282	326
DHM25098	9.8		.3858	10	282	326
DHM25099	9.9		.3898	10	282	326
DHM25025F	9.921	25/64	.3906	10	282	326
DHM25100	10.0		.3937	10	282	326

◎ : Excellent ○ : Good

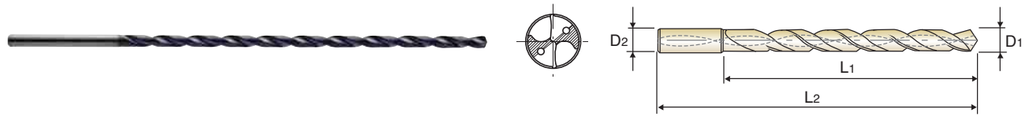
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	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											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																					

TiAIN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (30XD)

DHM30 SERIES

- ▶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 TiAIN nano layer full coating
- ▶MQL system compatible (Minimum Quantity Lubrication)



CARBIDE | h6 | h7 | 140° | 45 bar P.128

EXTRA LONG
30 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAIN	D1			D2	L1	L2
DHM30030	3.0		.1181	6	100	140
DHM30031	3.1		.1220	6	117	157
DHM30008F	3.175	1/8	.1250	6	117	157
DHM30032	3.2		.1260	6	117	157
DHM30033	3.3		.1299	6	117	157
DHM30034	3.4		.1339	6	117	157
DHM30035	3.5		.1378	6	117	157
DHM30036	3.6		.1417	6	133	173
DHM30037	3.7		.1457	6	133	173
DHM30038	3.8		.1496	6	133	173
DHM30039	3.9		.1535	6	133	173
DHM30040	4.0		.1575	6	133	173
DHM30041	4.1		.1614	6	150	190
DHM30042	4.2		.1654	6	150	190
DHM30043	4.3		.1693	6	150	190
DHM30044	4.4		.1732	6	150	190
DHM30045	4.5		.1772	6	150	190
DHM30046	4.6		.1811	6	166	206
DHM30047	4.7		.1850	6	166	206
DHM30048	4.8		.1890	6	166	206
DHM30049	4.9		.1929	6	166	206
DHM30050	5.0		.1969	6	166	206
DHM30051	5.1		.2008	6	183	223
DHM30052	5.2		.2047	6	183	223
DHM30053	5.3		.2087	6	183	223
DHM30054	5.4		.2126	6	183	223
DHM30055	5.5		.2165	6	183	223
DHM30056	5.6		.2205	6	199	239
DHM30057	5.7		.2244	6	199	239
DHM30058	5.8		.2283	6	199	239
DHM30059	5.9		.2323	6	199	239
DHM30060	6.0		.2362	6	199	239
DHM30061	6.1		.2402	8	216	256
DHM30062	6.2		.2441	8	216	256
DHM30063	6.3		.2480	8	216	256
DHM30016F	6.350	1/4	.2500	8	216	256
DHM30064	6.4		.2520	8	216	256
DHM30065	6.5		.2559	8	216	256
DHM30206L	6.528	F	.2570	8	232	272
DHM30066	6.6		.2598	8	232	272
DHM30067	6.7		.2638	8	232	272
DHM30017F	6.746	17/64	.2656	8	232	272
DHM30068	6.8		.2677	8	232	272
DHM30069	6.9		.2717	8	232	272
DHM30209L	6.909	I	.2720	8	232	272
DHM30070	7.0		.2756	8	232	272
DHM30071	7.1		.2795	8	249	289
DHM30018F	7.142	9/32	.2812	8	249	289
DHM30072	7.2		.2835	8	249	289
DHM30073	7.3		.2874	8	249	289
DHM30074	7.4		.2913	8	249	289
DHM30075	7.5		.2953	8	249	289

▶ 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											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																					

Phone: +82-32-526-0909, www.yg1.kr, E-mail: yg1@yg1.kr
Phone: +1-800-765-8665, www.yg1usa.com

TiAIN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (30XD)
DHM30 SERIES
▶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 TiAIN nano layer full coating
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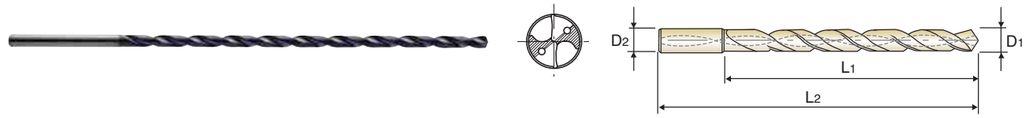


CARBIDE | h6 | h7 | 140° | 45 bar P.128
EXTRA LONG
30 × D

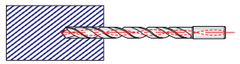
Unit : inch

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal			
TiAIN	D1			D2	L1	L2
DHM30019F	7.541	19/64	.2969	8	265	305
DHM30076	7.6		.2992	8	265	305
DHM30077	7.7		.3031	8	265	305
DHM30078	7.8		.3071	8	265	305
DHM30079	7.9		.3110	8	265	305
DHM30020F	7.938	5/16	.3125	8	265	305
DHM30080	8.0		.3150	8	265	305

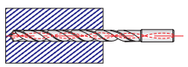
▶ Made to order in depth 35xD(Ø3-Ø6) & 40xD(Ø3-Ø6)

▶Coolant Pressure : 900 PSI

1. Use a YG 3xD Drill to produce a guide hole no larger than .004 over the required drill size. Drill the pilot hole 2xD deep hole.



2. Enter the guide hole at 50 SFM surface and .010 feed rate / per rev.



3. Before hitting the bottom of the guide hole, Increase SFM and feed rate for normal drilling.

4. After drilling, to withdraw drill, reduce SFM to 50 @ 10 inches per minute.

◎ : 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											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																					

Phone: +82-32-526-0909, www.yg1.kr, E-mail: yg1@yg1.kr
Phone: +1-800-765-8665, www.yg1usa.com

DH510, DH515, DH520, DHM10, DHM15, DHM20, DHM25, DHM30 SERIES

with COOLANT HOLES

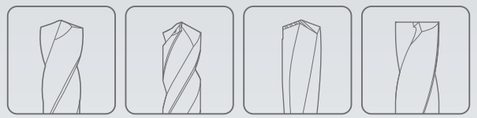
SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM 10xD ~20xD	SFM 25xD ~30xD	Drill Diameter									
					METRIC	3.0	-	4.0	-	5.0	6.0	-	-	8.0
					FRACTIONAL	-	1/8	-	3/16	-	-	1/4	5/16	-
					DECIMAL	.1181	.1250	.1575	.1875	.1969	.2362	.2500	.3125	.3150
P	1	Non-alloy steel	395	329	RPM(10xD~20xD)	12730		9550	7640		6370		4770	
					RPM(25xD~30xD)	10610		7960	6370		5310		3980	
					FEED	.0031 - .0047		.0039 - .0055	.0047 - .0071		.0055 - .0079		.0071 - .0094	
	2		329	263	RPM(10xD~20xD)	10610		7960	6370		5310		3980	
					RPM(25xD~30xD)	8490		6370	5090		4240		3180	
					FEED	.0031 - .0047		.0039 - .0055	.0047 - .0071		.0055 - .0079		.0071 - .0094	
	3		263	214	RPM(10xD~20xD)	8490		6370	5090		4240		3180	
					RPM(25xD~30xD)	6900		5170	4140		3450		2590	
					FEED	.0024 - .0039		.0031 - .0047	.0039 - .0063		.0047 - .0071		.0055 - .0079	
	6	Low alloy steel	329	329	RPM(10xD~20xD)	10610		7960	6370		5310		3980	
					RPM(25xD~30xD)	10610		7960	6370		5310		3980	
					FEED	.0031 - .0047		.0039 - .0055	.0047 - .0071		.0055 - .0079		.0071 - .0094	
	7		230	197	RPM(10xD~20xD)	7430		5570	4460		3710		2790	
					RPM(25xD~30xD)	6370		4770	3820		3180		2390	
					FEED	.0024 - .0039		.0031 - .0047	.0039 - .0063		.0047 - .0071		.0055 - .0079	
	8		181	165	RPM(10xD~20xD)	5840		4380	3500		2920		2190	
					RPM(25xD~30xD)	5310		3980	3180		2650		1990	
					FEED	.0024 - .0039		.0031 - .0047	.0039 - .0063		.0047 - .0071		.0055 - .0079	
	10	High alloyed steel, and tool steel	197	165	RPM(10xD~20xD)	6370		4770	3820		3180		2390	
					RPM(25xD~30xD)	5310		3980	3180		2650		1990	
					FEED	.002 - .0035		.0028 - .0043	.0031 - .0055		.0039 - .0063		.0047 - .0071	
	11		165	148	RPM(10xD~20xD)	5310		3980	3180		2650		1990	
					RPM(25xD~30xD)	4770		3580	2860		2390		1790	
					FEED	.0016 - .0031		.0024 - .0039	.0028 - .0051		.0031 - .0055		.0039 - .0063	
K	15	Grey cast iron	296	247	RPM(10xD~20xD)	9550		7160	5730		4770		3580	
					RPM(25xD~30xD)	7960		5970	4770		3980		2980	
					FEED	.0039 - .0055		.0047 - .0063	.0067 - .0091		.0075 - .0098		.0087 - .011	
	16		230	197	RPM(10xD~20xD)	7430		5570	4460		3710		2790	
					RPM(25xD~30xD)	6370		4770	3820		3180		2390	
					FEED	.0039 - .0055		.0047 - .0063	.0067 - .0091		.0075 - .0098		.0087 - .011	
	17	Nodular cast iron	329	263	RPM(10xD~20xD)	10610		7960	6370		5310		3980	
					RPM(25xD~30xD)	8490		6370	5090		4240		3180	
					FEED	.0039 - .0055		.0047 - .0063	.0067 - .0091		.0075 - .0098		.0087 - .011	
	18		230	197	RPM(10xD~20xD)	7430		5570	4460		3710		2790	
					RPM(25xD~30xD)	6370		4770	3820		3180		2390	
					FEED	.0031 - .0047		.0039 - .0055	.0047 - .0071		.0055 - .0079		.0071 - .0094	
	19	Malleable cast iron	263	214	RPM(10xD~20xD)	8490		6370	5090		4240		3180	
					RPM(25xD~30xD)	6900		5170	4140		3450		2590	
					FEED	.0039 - .0055		.0047 - .0063	.0067 - .0091		.0075 - .0098		.0087 - .011	
	20		230	181	RPM(10xD~20xD)	7430		5570	4460		3710		2790	
					RPM(25xD~30xD)	5840		4380	3500		2920		2190	
					FEED	.0031 - .0047		.0039 - .0055	.0047 - .0071		.0055 - .0079		.0071 - .0094	

Drill Diameter								
-	8.0	-	10.0	12.0	-	14.0		
-	-	3/8	-	-	1/2	-		
.3750	.3937	.4724	.5000	.5512				
3820		3180	3020	2730				
3180		2650	2510	2270				
.0079 - .0102		.0087 - .0102	.0087 - .0102	.0098 - .0122				
3180		2650	2510	2270				
2550		2120	2010	1820				
.0079 - .0102		.0087 - .0102	.0087 - .0102	.0098 - .0122				
2550		2120	2010	1820				
2070		1720	1630	1480				
.0063 - .0087		.0071 - .0094	.0071 - .0094	.0079 - .0102				
3180		2650	2510	2270				
3180		2650	2510	2270				
.0079 - .0102		.0087 - .0102	.0087 - .0102	.0098 - .0122				
2230		1860	1760	1590				
1910		1590	1510	1360				
.0079 - .0102		.0071 - .0094	.0071 - .0094	.0079 - .0102				
1750		1460	1380	1250				
1590		1330	1260	1140				
.0079 - .0102		.0071 - .0094	.0071 - .0094	.0079 - .0102				
1910		1590	1510	1360				
1590		1330	1260	1140				
.0055 - .0079		.0063 - .0087	.0063 - .0087	.0071 - .0094				
1590		1330	1260	1140				
1430		1190	1130	1020				
.0047 - .0071		.0051 - .0075	.0051 - .0075	.0059 - .0083				
2860		2390	2260	2050				
2390		1990	1890	1710				
.0094 - .0118		.011 - .0134	.011 - .0134	.0118 - .0142				
2230		1860	1760	1590				
1910		1590	1510	1360				
.0094 - .0118		.011 - .0134	.011 - .0134	.0118 - .0142				
3180		2650	2510	2270				
2550		2120	2010	1820				
.0094 - .0118		.011 - .0134	.011 - .0134	.0118 - .0142				
2230		1860	1760	1590				
1910		1590	1510	1360				
.0079 - .0102		.0087 - .0102	.0087 - .0102	.0098 - .0122				
2550		2120	2010	1820				
2070		1720	1630	1480				
.0094 - .0118		.011 - .0134	.011 - .0134	.0118 - .0142				
2230		1860	1760	1590				
1750		1460	1380	1250				
.0079 - .0102		.0087 - .0102	.0087 - .0102	.0098 - .0122				

DREAM DRILLS MQL TYPE
RECOMMENDED CUTTING CONDITIONS

Global Cutting Tool Leader **YG-1**



DREAM DRILLS

Leading Through Innovation

SOLID CARBIDE

DREAM DRILLS
for HIGH HARDENED STEELS

- For High Hardened Steels (HRc 50 - 70)

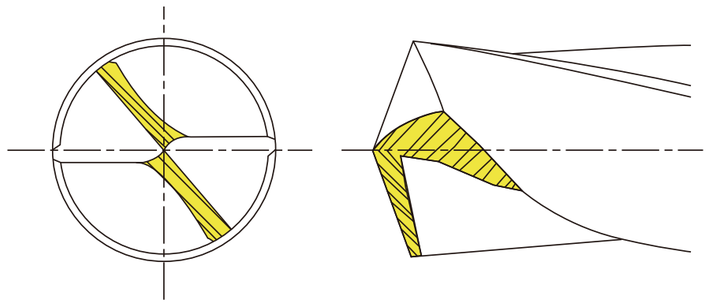
DREAM DRILLS for HIGH HARDENED STEELS

Low Helix

The low Helix angle maximizes tools' rigidity and stability with less deflection

Special Thinning (R+U Thinning)

Unique drill point geometry with special thinning to minimize cutting workload, axial thrust loading and heat generation.



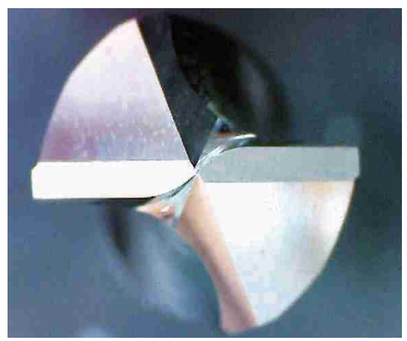
Coating

TiAlN nano coating combines high hardness with high thermal stability against oxidation, allows machining the upper level of hardened steels HRc 50-70.

Polished Flutes

Polished flutes improve coating addition, with better chip control and evacuation.

Point Shape



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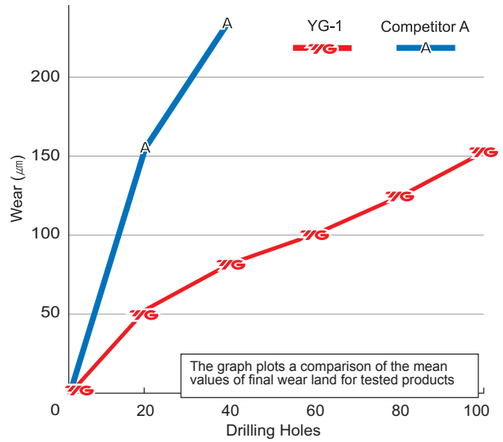
DREAM DRILLS for HIGH HARDENED STEELS

CASE STUDY

- Low Helix Angle to maximize tools' rigidity.
- Special Point Thinning to improve chip evacuation.
- Excellent Coating and Surface Treatment for improved surface and better chip evacuation.

▶ **SOLID CARBIDE DREAM DRILLS for HIGH HARDENED STEELS (HRc50-70)**

CUTTING CONDITION	
Tool	DH500100 (Dream Drills for High Hardened Steels)
Size	Ø10 × Ø10 × 63 × 111
Work Material	• AISI : H13 • JIS : SKD11 • DIN : X155CrV-Mo12-1 (HRc60)
RPM	3,528 rev./min.
Feed	.0016 inch/rev.
SFM	39 ft/min.
Drilling Depth	.98″(2.5xD)
Coolant	Wet Cut
Machine	Machining Center



YG-1 After Drilling 100 Holes

Competitor A After Drilling 40 Holes

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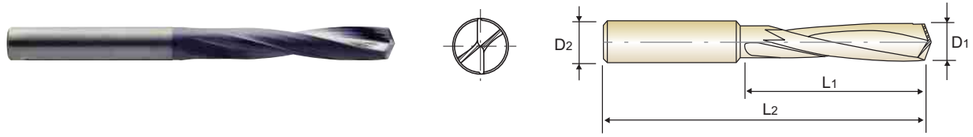
TiAlN-COATED SOLID CARBIDE DREAM DRILLS
for High Hardened Steels (HRc50~HRc70)

DH501 SERIES

- ▶Drilling for High Hardened Steels; Quenched Steels, Tempered Steels (under HRc 70)
- ▶Special geometry design for Hardened Steels
- ▶Minimum of cutting load through special thinning
- ▶Performing good chip removal and powerful drilling
- ▶Tolerance : Dia. Tolerance ØD1 : See page 141
  Shank Tolerance ØD2: -.0001 -.0005



CARBIDE h6 140° P.138

Unit : inch

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH501001	1/8	.1250	1/8	21/32	2
DH501002	#30	.1285	3/16	23/32	2
DH501003	#29	.1360	3/16	13/16	2
DH501004	#28	.1405	3/16	13/16	2
DH501005	9/64	.1406	3/16	13/16	2
DH501006	#27	.1440	3/16	13/16	2
DH501007	#26	.1470	3/16	13/16	2
DH501008	#25	.1495	3/16	7/8	2-1/16
DH501009	#24	.1520	3/16	7/8	2-1/16
DH501010	#23	.1540	3/16	7/8	2-1/16
DH501011	5/32	.1562	3/16	7/8	2-1/16
DH501012	#22	.1570	3/16	7/8	2-1/16
DH501013	#21	.1590	3/16	7/8	2-1/16
DH501014	#20	.1610	3/16	1	2-1/2
DH501015	#19	.1660	3/16	1	2-1/2
DH501016	11/64	.1719	3/16	1-1/8	2-3/4
DH501017	#15	.1800	3/16	1-1/8	2-3/4
DH501018	#14	.1820	3/16	1-1/8	2-3/4
DH501019	3/16	.1875	3/16	1-1/8	2-3/4
DH501020	#10	.1935	1/4	1-9/32	2-7/8
DH501021	#9	.1960	1/4	1-9/32	2-7/8
DH501022	#8	.1990	1/4	1-9/32	2-7/8
DH501023	#7	.2010	1/4	1-9/32	2-7/8
DH501024	13/64	.2031	1/4	1-9/32	2-7/8
DH501025	#6	.2040	1/4	1-9/32	2-7/8
DH501026	#5	.2055	1/4	1-9/32	2-7/8

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH501027	#4	.2090	1/4	1-9/32	2-7/8
DH501028	#3	.2130	1/4	1-13/32	3
DH501029	7/32	.2188	1/4	1-13/32	3
DH501030	#2	.2210	1/4	1-13/32	3
DH501031	#1	.2280	1/4	1-13/32	3
DH501032	15/64	.2344	1/4	1-13/32	3
DH501033	B	.2380	1/4	1-19/32	3-1/8
DH501034	C	.2420	1/4	1-19/32	3-1/8
DH501035	D	.2460	1/4	1-19/32	3-1/8
DH501036	1/4	.2500	1/4	1-19/32	3-1/8
DH501037	F	.2570	3/8	1-19/32	3-1/8
DH501038	G	.2610	3/8	1-19/32	3-1/8
DH501039	17/64	.2656	3/8	1-19/32	3-1/8
DH501040	I	.2720	3/8	1-25/32	3-3/8
DH501041	J	.2770	3/8	1-25/32	3-3/8
DH501042	9/32	.2812	3/8	1-25/32	3-3/8
DH501043	L	.2900	3/8	1-25/32	3-3/8
DH501044	M	.2950	3/8	1-25/32	3-3/8
DH501045	19/64	.2969	3/8	1-25/32	3-3/8
DH501046	N	.3020	3/8	1-31/32	3-7/8
DH501047	5/16	.3125	3/8	1-31/32	3-7/8
DH501048	O	.3160	3/8	1-31/32	3-7/8
DH501049	21/64	.3281	3/8	1-31/32	3-7/8
DH501050	Q	.3320	3/8	1-31/32	3-7/8
DH501051	R	.3390	3/8	2-1/4	4-1/8
DH501052	11/32	.3438	3/8	2-1/4	4-1/8

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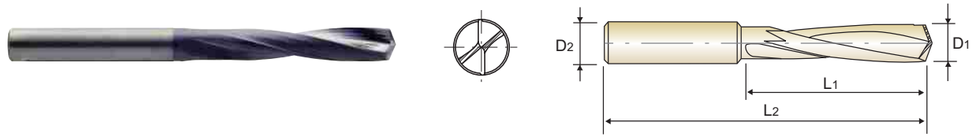
DREAM DRILLS for HIGH HARDENED STEELS

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
for High Hardened Steels (HRc50~HRc70)
DH501 SERIES

▶Drilling for High Hardened Steels; Quenched Steels, Tempered Steels (under HRc 70)
▶Special geometry design for Hardened Steels
▶Minimum of cutting load through special thinning
▶Performing good chip removal and powerful drilling
▶Tolerance : Dia. Tolerance ØD1 : See page 141
Shank Tolerance ØD2: -.0001 -.0005



CARBIDE h6 140° P.138

Unit : inch

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH501053	23/64	.3594	3/8	2-1/4	4-1/8
DH501054	U	.3680	3/8	2-1/4	4-1/8
DH501055	3/8	.3750	3/8	2-1/4	4-1/8
DH501056	V	.3770	1/2	2-1/2	4-3/8
DH501057	25/64	.3906	1/2	2-1/2	4-3/8
DH501058	X	.3970	1/2	2-1/2	4-3/8
DH501059	Y	.4040	1/2	2-1/2	4-3/8
DH501060	13/32	.4062	1/2	2-1/2	4-3/8
DH501061	Z	.4130	1/2	2-1/2	4-3/8
DH501062	27/64	.4219	1/2	2-13/16	4-5/8
DH501063	7/16	.4375	1/2	2-13/16	4-5/8
DH501064	29/64	.4531	1/2	2-13/16	4-5/8
DH501065	15/32	.4688	1/2	2-13/16	4-5/8
DH501066	31/64	.4844	1/2	2-13/16	4-5/8
DH501067	1/2	.5000	1/2	3-1/16	5
DH501068	33/64	.5156	5/8	3-1/16	5
DH501069	17/32	.5312	5/8	3-1/16	5
DH501070	35/64	.5469	5/8	3-1/16	5
DH501071	9/16	.5625	5/8	3-1/16	5
DH501072	37/64	.5781	5/8	3-9/32	5-1/4
DH501073	19/32	.5937	5/8	3-9/32	5-1/4
DH501074	39/64	.6094	5/8	3-9/32	5-1/4
DH501075	5/8	.6250	5/8	3-9/32	5-1/4
DH501076	41/64	.6406	3/4	3-9/32	5-1/4
DH501077	21/32	.6563	3/4	3-11/16	5-5/8
DH501078	43/64	.6719	3/4	3-11/16	5-5/8

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal			
TiAlN	D1		D2	L1	L2
DH501079	11/16	.6875	3/4	3-11/16	5-5/8
DH501080	45/64	.7031	3/4	3-11/16	5-5/8
DH501081	23/32	.7188	3/4	3-3/4	6
DH501082	47/64	.7344	3/4	3-3/4	6
DH501083	3/4	.7500	3/4	3-3/4	6

◎ : Excellent ○ : Good

ISO	P																			
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	40	41
HRc											15	30	25	38	34			55	60	70	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																		◎	◎	◎		

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TiAlN-COATED SOLID CARBIDE DREAM DRILLS
for High Hardened Steels (HRc50~HRc70)

DH500 SERIES

- ▶Drilling for High Hardened Steels; Quenched Steels, Tempered Steels (under HRc 70)
- ▶Special geometry design for Hardened Steels
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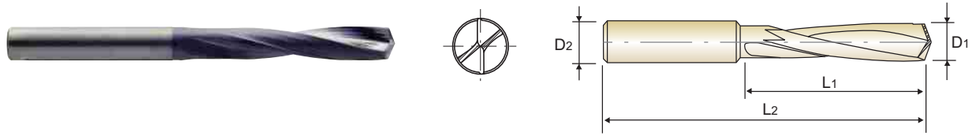
- ▶Performing good chip removal and powerful drilling



CARBIDE | h6 | m7 | 140° | P.138

Unit : mm

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Metric	Decimal			
TiAlN	D1		D2	L1	L2
DH500010	1.0	.0394	3	6	40
DH500011	1.1	.0433	3	6	40
DH500012	1.2	.0472	3	6	40
DH500013	1.3	.0512	3	8	40
DH500014	1.4	.0551	3	8	40
DH500015	1.5	.0591	3	8	40
DH500016	1.6	.0630	3	10	40
DH500017	1.7	.0669	3	10	40
DH500018	1.8	.0709	3	10	40
DH500019	1.9	.0748	3	10	40
DH500020	2.0	.0787	3	12	42
DH500025	2.5	.0984	3	14	44
DH500026	2.6	.1024	3	16	44
DH500028	2.8	.1102	3	16	46
DH500030	3.0	.1181	3	18	46
DH500033	3.3	.1299	4	18	48
DH500034	3.4	.1339	4	20	50
DH500035	3.5	.1378	4	20	50
DH500038	3.8	.1496	4	22	52
DH500040	4.0	.1575	4	22	52
DH500041	4.1	.1614	6	25	65
DH500042	4.2	.1654	6	25	65
DH500043	4.3	.1693	6	28	68
DH500044	4.4	.1732	6	28	68
DH500045	4.5	.1772	6	28	68
DH500046	4.6	.1811	6	28	68

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Metric	Decimal			
TiAlN	D1		D2	L1	L2
DH500048	4.8	.1890	6	32	72
DH500049	4.9	.1929	6	32	72
DH500050	5.0	.1969	6	32	72
DH500051	5.1	.2008	6	32	72
DH500052	5.2	.2047	6	32	72
DH500053	5.3	.2087	6	32	72
DH500055	5.5	.2165	6	35	75
DH500060	6.0	.2362	6	35	75
DH500062	6.2	.2441	8	40	80
DH500065	6.5	.2559	8	40	80
DH500068	6.8	.2677	8	45	85
DH500069	6.9	.2717	8	45	85
DH500070	7.0	.2756	8	45	85
DH500075	7.5	.2953	8	45	85
DH500080	8.0	.3150	8	50	98
DH500085	8.5	.3346	10	50	98
DH500086	8.6	.3386	10	57	105
DH500088	8.8	.3465	10	57	105
DH500090	9.0	.3543	10	57	105
DH500093	9.3	.3661	10	57	105
DH500095	9.5	.3740	10	57	105
DH500100	10.0	.3937	10	63	111
DH500102	10.2	.4016	12	63	111
DH500103	10.3	.4055	12	63	111
DH500105	10.5	.4134	12	71	111
DH500108	10.8	.4252	12	71	119

▶ 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	39.1	39.3	40	41
HRc											15	30	25	38	34			55	60	70	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																		◎	◎	◎		

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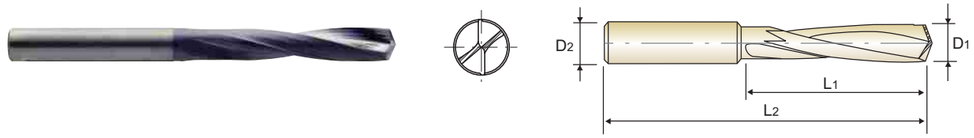

CARBIDE | h6 | m7 | 140° | P.138

Unit : mm

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Metric	Decimal			
TiAlN	D1		D2	L1	L2
DH500110	11.0	.4331	12	71	119
DH500115	11.5	.4528	12	71	119
DH500120	12.0	.4724	12	71	119
DH500121	12.1	.4764	14	77	125
DH500140	14.0	.5512	14	77	125

◎ : 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	40	41
HRc											15	30	25	38	34			55	60	70	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																		◎	◎	◎		

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DH501, DH500 SERIES without COOLANT HOLES

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM		Drill Diameter										
				METRIC	3.0	-	4.0	-	5.0	6.0	-	-	8.0	-	10.0
				FRACTIONAL	-	1/8	-	3/16	-	-	1/4	5/16	-	3/8	-
				DECIMAL	.1181	.1250	.1575	.1875	.1969	.2362	.2500	.3125	.3150	.3750	.3937
H	38	Hardened steel	66	RPM	2120		1590	1270		1060		800		640	
				FEED	.0004 - .0012		.0004 - .0016	.0004 - .0016		.0004 - .002		.0004 - .002		.0004 - .002	
	39.1		49	RPM	1590		1190	950		800		600		480	
				FEED	.0004 - .0012		.0004 - .0016	.0004 - .0016		.0004 - .002		.0004 - .002		.0004 - .002	
	39.3		39	RPM	1270		950	760		640		480		380	
				FEED	.0004 - .0012		.0004 - .0016	.0004 - .0016		.0004 - .002		.0004 - .002		.0004 - .002	

ISO	VDI 3323	Material Description	SFM		Drill Diameter							
				METRIC	12.0	-	14.0	-	-	16.0	18.0	-
				FRACTIONAL	-	1/2	-	9/16	5/8	-	-	3/4
				DECIMAL	.4724	.5000	.5512	.5625	.6250	.6299	.7087	.7500
H	38	Hardened steel	66	RPM	530	504	450		403		356	336
				FEED	.0004 - .0024	.0004 - .0024	.0004 - .0024		.0004 - .0024		.0004 - .0024	.0004 - .0024
	39.1		49	RPM	400	374	340		299		299	250
				FEED	.0004 - .0024	.0004 - .0024	.0004 - .0024		.0004 - .0024		.0004 - .0024	.0004 - .0024
	39.3		39	RPM	320	298	270		238		238	199
				FEED	.0004 - .0024	.0004 - .0024	.0004 - .0024		.0004 - .0024		.0004 - .0024	.0004 - .0024

TECHNICAL DATA

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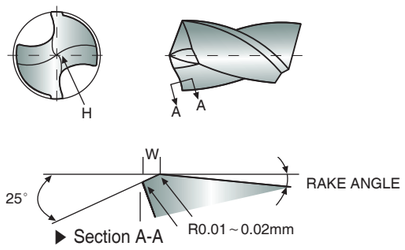
1 CHARACTERISTIC OF DREAM DRILLS

- YG-1's Dream Drill Series are suitable for high speed and accurate drilling operations by special design and high quality.
- Good performance for Steels, Cast Irons, Tool steels, Alloy steels and Stainless steels, Aluminum and Composite Material.
- Rapid chip evacuation and excellent chip breaking can be achieved by special designed cutting edges on point and chip breakers on leading edges.
- High accuracy and stability.
- Longer tool life with TiAlN coating.
- Self-centering

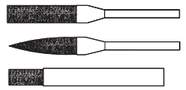
2 HONING GUIDE OF DREAM DRILLS

■ **Dimension of Honing**



▶ Section A-A

■ **Scraper**



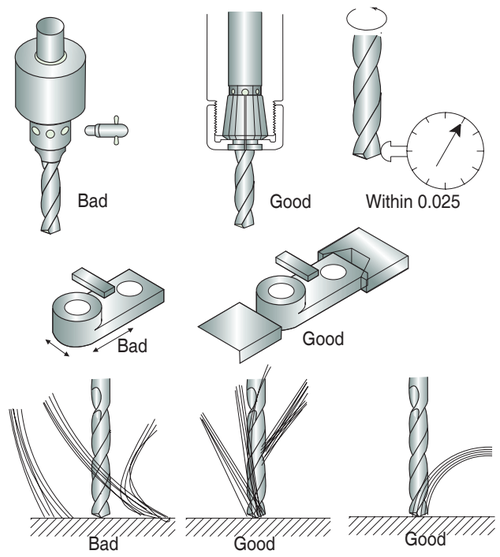
for Roughing (#140)

for Finishing (#230 ~ #400)

Work Material	Alloy Steels	Mild Steels	Cast Iron
W(mm)	0.15 ~ 0.2	0.1 ~ 0.15	0.03

▶ The dimension W of stocked products is 0.1 ~ 0.15.

3 USE OF DREAM DRILLS



▶ Chucking with spring collet correctly.
▶ Radial run out at cutting lip must not exceed 0.025 mm.

▶ Tighten clamp of work piece.

▶ Supply coolant enoughly to the entrance of holes.
▶ In using Dream Drill with Coolant holes, high pressure coolant is needed.

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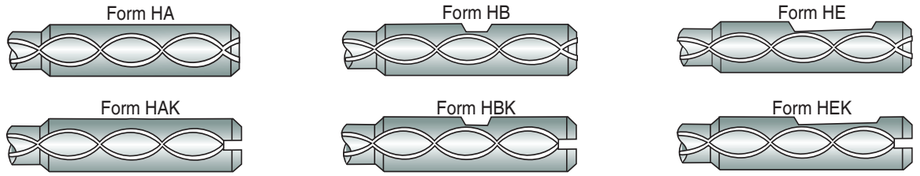
4 SHANK TYPE DREAM DRILLS WITH COOLANT HOLES



▶ If you need other Shank Type, we can supply them.

5 DRILL DIAMETER TOLERANCE INCH

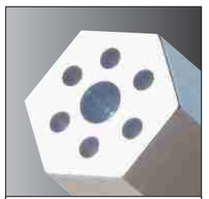
㎛ = 1/1000mm

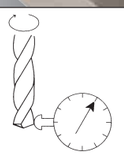
up to .118	over .118 up to .236	over .236 up to .394	over .394 up to .709
+0 –.00055	+0 –.00071	+0 –.00087	+0 –.00106

6 DRILL DIAMETER TOLERANCE METRIC

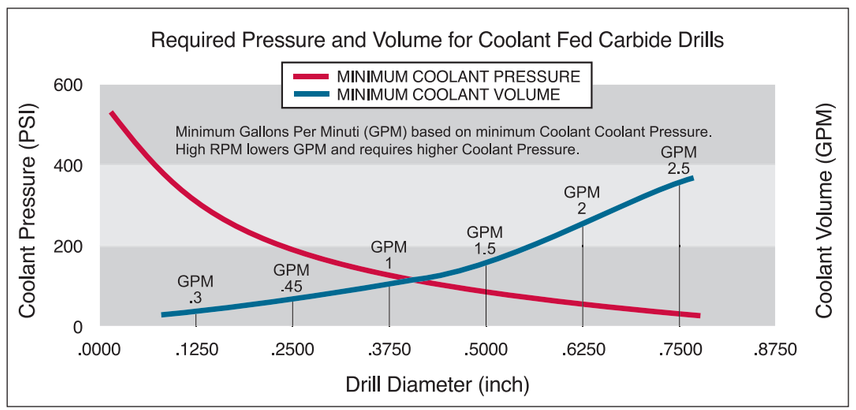
Diameter (mm)	1 - 3 from to	3 - 6 over to	6 - 10 over to	10 - 18 over to	18 - 30 over to
h6	0 –.00024	0 –.00032	0 –.00036	0 –.00044	0 –.00052
h7	0 –.0004	0 –.00048	0 –.00059	0 –.00071	0 –.00083
h8	0 –.00056	0 –.00071	0 –.00087	0 –.00107	0 –.00130
m7	+.00048 +.00007	+.00063 +.00015	+.00083 +.00023	+.00099 +.00027	+.00114 +.00031

7 COOLANT RECOMMENDATIONS FOR CARBIDE DREAM DRILLS





• Radial run out at cutting lip must not exceed .001



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