

YE-DD18



DREAM DRILLS

SOLID CARBIDE DREAM DRILLS

YG-1 CO., LTD.

HEAD OFFICE

211, Sewolcheon-ro, Bupyeong-gu, Incheon, South Korea

Phone: +82-32-526-0909

Http://www.yg1.kr

E-mail:yg1@yg1.kr

Note The new address above has currently been updated since Korean new postal standard was valid from 2014.
Be noticed that the location of the Headquarters has NOT changed.



Tool specifications are subject to change without prior notice.

DREAM DRILLS · GENERAL with/without Coolant Holes

DREAM DRILLS · HIGH FEED with Coolant Holes

NEW SERIES **DREAM DRILLS · FLAT BOTTOM** with/without Coolant Holes

DREAM DRILLS · INOX with Coolant Holes

DREAM DRILLS · ALU with Coolant Holes

DREAM DRILLS · CFRP

DREAM DRILLS · MQL with Coolant Holes(10xD ~ 40xD)

DREAM DRILLS · HIGH HARDENED STEELS HRC50-70

SELECTION GUIDE

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	

DREAM DRILLS · GENERAL

TIAIN-COATED SOLID CARBIDE DREAM DRILLS with/without Coolant Holes

3XD DH404		General without Coolant Holes (3×D)	<i>STUB</i>	D3.0	D20.0	7
3XD DH423		General without Coolant Holes (3×D)	<i>SHORT</i>	D3.0	D20.0	9
5XD DH424		General without Coolant Holes (5×D)	<i>LONG</i>	D1.0	D20.0	11
3XD DH406		General with Coolant Holes (3×D)	<i>SHORT</i>	D3.0	D20.0	14
5XD DH408		General with Coolant Holes (5×D)	<i>LONG</i>	D1.0	D20.0	16
8XD DH421		General with Coolant Holes (8×D)	<i>EXTRA LONG</i>	D3.0	D14.0	19
RECOMMENDED CUTTING CONDITIONS						21

DREAM DRILLS · HIGH FEED

H-COATED SOLID CARBIDE DREAM DRILLS with Coolant Holes for Faster Drilling in Steels and Cast Iron

3XD DGR493		High Feed with Coolant Holes (3×D)	<i>SHORT</i>	D5.0	D20.0	23
5XD DGR495		High Feed with Coolant Holes (5×D)	<i>LONG</i>	D5.0	D20.0	25
RECOMMENDED CUTTING CONDITIONS						27

DREAM DRILLS · FLAT BOTTOM

SOLID CARBIDE DREAM DRILLS with/without Coolant Holes in 180° Point Angle for Variety Drilling

DPP447		Flat Bottom without Coolant Holes (2×D)	<i>SHORT</i>	D3.0	D20.0	29
DH450		Flat Bottom with Coolant Holes (5×D)	<i>LONG</i>	D3.0	D20.0	31
RECOMMENDED CUTTING CONDITIONS						34

DREAM DRILLS · INOX

TIAIN-COATED SOLID CARBIDE DREAM DRILLS with Coolant Holes for Drilling Tough Materials; Stainless Steels, Nickel Alloys and Titanium

3XD DH451		INOX with Coolant Holes (3×D)	<i>SHORT</i>	D3.0	D20.0	37
5XD DH452		INOX with Coolant Holes (5×D)	<i>LONG</i>	D1.0	D20.0	40
8XD DH453		INOX with Coolant Holes (8×D)	<i>EXTRA LONG</i>	D3.0	D14.0	43
RECOMMENDED CUTTING CONDITIONS						45

◎ : Excellent ○ : Good

P			H		M	K	N			S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							

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SELECTION GUIDE

ITEM	MODEL	DESCRIPTION	SIZE		PAGE	
			MIN	MAX		
DREAM DRILLS · ALU						
SOLID CARBIDE DREAM DRILLS with Coolant Holes for Aluminum & Aluminum Alloys						
3XD D5432		ALU with Coolant Holes (3×D)	<i>SHORT</i>	D3.0	D20.0	47
5XD D5433		ALU with Coolant Holes (5×D)	<i>LONG</i>	D3.0	D20.0	49
8XD D5434		ALU with Coolant Holes (8×D)	<i>EXTRA LONG</i>	D3.0	D14.0	51
RECOMMENDED CUTTING CONDITIONS					53	

DREAM DRILLS · CFRP

DIAMOND-COATED SOLID CARBIDE DREAM DRILLS for CFRP

DI473		CFRP without Coolant Holes		D2.5	D12.0	55
RECOMMENDED CUTTING CONDITIONS					55	

DREAM DRILLS · MQL

TIAIN-COATED SOLID CARBIDE DREAM DRILLS with Coolant Holes for Deep Hole Drilling

10XD DH510		MQL with Coolant Holes (10×D)	<i>EXTRA LONG</i>	D3.0	D14.0	57
15XD DH515		MQL with Coolant Holes (15×D)	<i>EXTRA LONG</i>	D3.0	D12.0	58
20XD DH520		MQL with Coolant Holes (20×D)	<i>EXTRA LONG</i>	D3.0	D12.0	58
10XD DHM10		MQL with Coolant Holes (10×D)	<i>EXTRA LONG</i>	D3.0	D14.0	59
15XD DHM15		MQL with Coolant Holes (15×D)	<i>EXTRA LONG</i>	D3.0	D12.0	59
20XD DHM20		MQL with Coolant Holes (20×D)	<i>EXTRA LONG</i>	D3.0	D12.0	59
25XD DHM25		MQL with Coolant Holes (25×D)	<i>EXTRA LONG</i>	D3.0	D10.0	60
30XD DHM30		MQL with Coolant Holes (30×D)	<i>EXTRA LONG</i>	D3.0	D8.0	60
RECOMMENDED CUTTING CONDITIONS					61	

DREAM DRILLS · HIGH HARDENED STEELS

TIAIN-COATED SOLID CARBIDE DREAM DRILLS for High Hardened Steels (HRc50–HRc70)

DH500		for High Hardened Steels (HRc50–HRc70)		D2.6	D14.0	63
RECOMMENDED CUTTING CONDITIONS					64	

TECHNICAL DATA

65

◎ : Excellent ○ : Good

P		H	M	K	N			S			
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							

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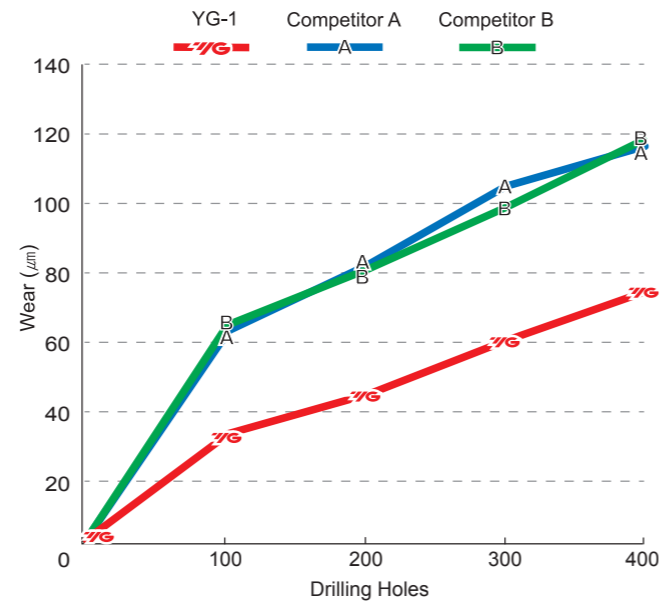
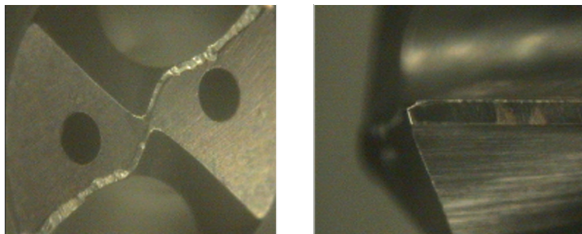
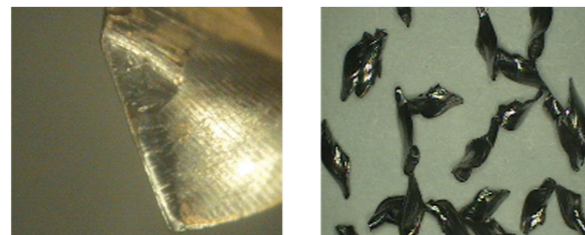
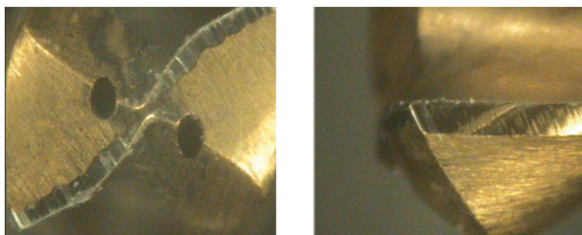
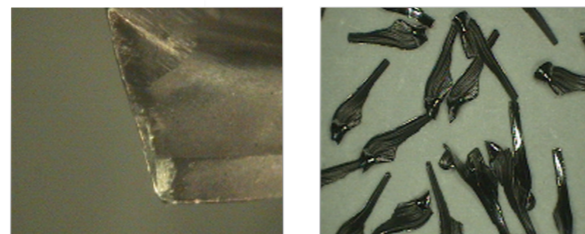
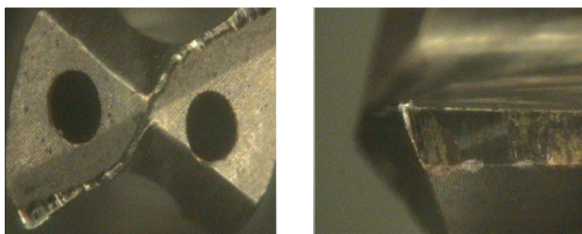
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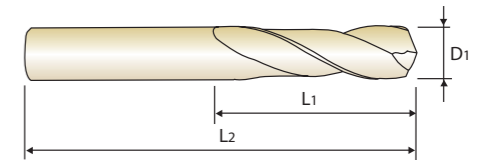
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CASE STUDY
► SOLID CARBIDE DREAM DRILLS - General with Coolant Holes

CUTTING CONDITION	
Tool	DH408015 (Dream Drill with Coolant Holes)
Size	Ø1.5 x 3 x 15 x 55
Work Material	• DIN: X40GrMoV51 • WR: 1.2344 • JIS: SKD61 (HRc30)
RPM	14,856 rev./min.
Feed	0.05 mm/rev.
Drilling Depth	7.5 mm
Coolant	Wet Cut


► YG-1 (Total Drilling 400 Holes)

► Competitor A (Total Drilling 400 Holes)

► Competitor B (Total Drilling 400 Holes)

**TiAIN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (3XD)**
STUB
DH404 SERIES

- Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- 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
3 × D

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
TiAIN	D1	L1	L2
DH404030	3.0	16	46
DH404031	3.1	18	49
DH404032	3.2	18	49
DH404033	3.3	18	49
DH404034	3.4	20	52
DH404035	3.5	20	52
DH404036	3.6	20	52
DH404037	3.7	20	52
DH404038	3.8	22	55
DH404039	3.9	22	55
DH404040	4.0	22	55
DH404041	4.1	22	55
DH404042	4.2	22	55
DH404043	4.3	24	58
DH404044	4.4	24	58
DH404045	4.5	24	58
DH404046	4.6	24	58
DH404047	4.7	24	58
DH404048	4.8	26	62
DH404049	4.9	26	62
DH404050	5.0	26	62
DH404051	5.1	26	62
DH404052	5.2	26	62
DH404053	5.3	26	62
DH404054	5.4	28	66
DH404055	5.5	28	66

EDP No.	Drill Diameter	Flute Length	Overall Length
TiAIN	D1	L1	L2
DH404056	5.6	28	66
DH404057	5.7	28	66
DH404058	5.8	28	66
DH404059	5.9	28	66
DH404060	6.0	28	66
DH404061	6.1	31	70
DH404062	6.2	31	70
DH404063	6.3	31	70
DH404064	6.4	31	70
DH404065	6.5	31	70
DH404066	6.6	31	70
DH404067	6.7	31	70
DH404068	6.8	34	74
DH404069	6.9	34	74
DH404070	7.0	34	74
DH404071	7.1	34	74
DH404072	7.2	34	74
DH404073	7.3	34	74
DH404074	7.4	34	74
DH404075	7.5	34	74
DH404076	7.6	37	79
DH404077	7.7	37	79
DH404078	7.8	37	79
DH404079	7.9	37	79
DH404080	8.0	37	79
DH404081	8.1	37	79

► Other shank types are available on your request.

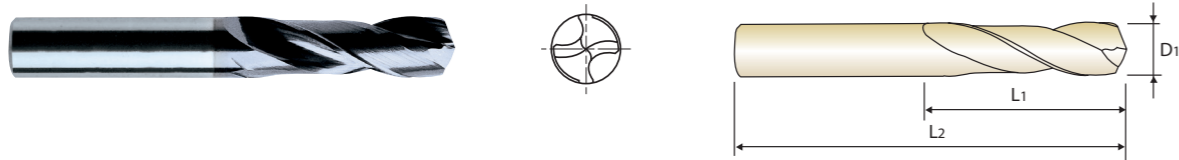
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P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
-HB225	HB225~325	HRc30~45	HRc45~55	HRc55~								
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TiAIN-COATED SOLID CARBIDE DREAM DRILLS General without Coolant Holes (3XD)

STUB DH404 SERIES

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ 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
3 × D

EDP No.	Drill Diameter	Flute Length	Overall Length
TiAIN	D1	L1	L2
DH404082	8.2	37	79
DH404083	8.3	37	79
DH404084	8.4	37	79
DH404085	8.5	37	79
DH404086	8.6	40	84
DH404087	8.7	40	84
DH404088	8.8	40	84
DH404089	8.9	40	84
DH404090	9.0	40	84
DH404091	9.1	40	84
DH404092	9.2	40	84
DH404093	9.3	40	84
DH404094	9.4	40	84
DH404095	9.5	40	84
DH404096	9.6	43	89
DH404097	9.7	43	89
DH404098	9.8	43	89
DH404099	9.9	43	89
DH404100	10.0	43	89
DH404102	10.2	43	89

EDP No.	Drill Diameter	Flute Length	Overall Length
TiAIN	D1	L1	L2
DH404105	10.5	43	89
DH404110	11.0	47	95
DH404115	11.5	47	95
DH404120	12.0	51	102
DH404130	13.0	51	102
DH404135	13.5	54	107
DH404140	14.0	54	107
DH404145	14.5	56	111
DH404150	15.0	56	111
DH404155	15.5	58	115
DH404160	16.0	58	115
DH404165	16.5	60	119
DH404170	17.0	60	119
DH404175	17.5	62	123
DH404180	18.0	62	123
DH404185	18.5	64	127
DH404190	19.0	64	127
DH404195	19.5	66	131
DH404200	20.0	66	131

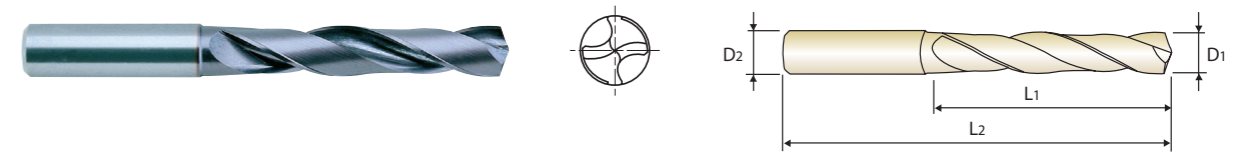
▶ Other shank types are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
-HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
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TiAIN-COATED SOLID CARBIDE DREAM DRILLS General without Coolant Holes (3XD)

SHORT DH423 SERIES

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ 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



3 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH423030	3.0	6	20	62
DH423031	3.1	6	20	62
DH423032	3.2	6	20	62
DH423033	3.3	6	20	62
DH423034	3.4	6	20	62
DH423035	3.5	6	20	62
DH423036	3.6	6	20	62
DH423037	3.7	6	20	62
DH423038	3.8	6	24	66
DH423039	3.9	6	24	66
DH423040	4.0	6	24	66
DH423041	4.1	6	24	66
DH423042	4.2	6	24	66
DH423043	4.3	6	24	66
DH423044	4.4	6	24	66
DH423045	4.5	6	24	66
DH423046	4.6	6	24	66
DH423047	4.7	6	24	66
DH423048	4.8	6	28	66
DH423049	4.9	6	28	66
DH423050	5.0	6	28	66
DH423051	5.1	6	28	66
DH423052	5.2	6	28	66
DH423053	5.3	6	28	66
DH423054	5.4	6	28	66
DH423055	5.5	6	28	66
DH423056	5.6	6	28	66
DH423057	5.7	6	28	66
DH423058	5.8	6	28	66

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH423059	5.9	6	28	66
DH423060	6.0	6	28	66
DH423061	6.1	8	34	79
DH423062	6.2	8	34	79
DH423063	6.3	8	34	79
DH423064	6.4	8	34	79
DH423065	6.5	8	34	79
DH423066	6.6	8	34	79
DH423067	6.7	8	34	79
DH423068	6.8	8	34	79
DH423069	6.9	8	34	79
DH423070	7.0	8	34	79
DH423071	7.1	8	41	79
DH423072	7.2	8	41	79
DH423073	7.3	8	41	79
DH423074	7.4	8	41	79
DH423075	7.5	8	41	79
DH423076	7.6	8	41	79
DH423077	7.7	8	41	79
DH423078	7.8	8	41	79
DH423079	7.9	8	41	79
DH423080	8.0	8	41	79
DH423081	8.1	10	47	89
DH423082	8.2	10	47	89
DH423083	8.3	10	47	89
DH423084	8.4	10	47	89
DH423085	8.5	10	47	89
DH423086	8.6	10	47	89
DH423087	8.7	10	47	89

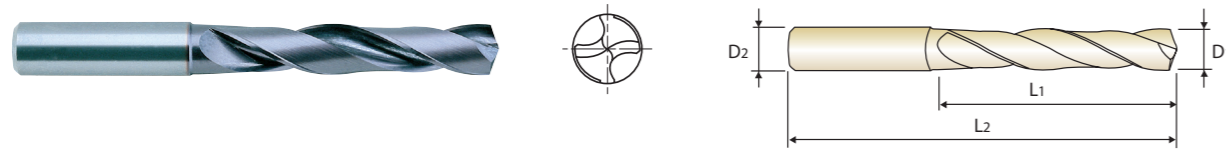
▶ Other shank types are available on your request.

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P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
-HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
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**TiAIN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (3XD)**
**SHORT
DH423 SERIES**

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ 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


3 × D

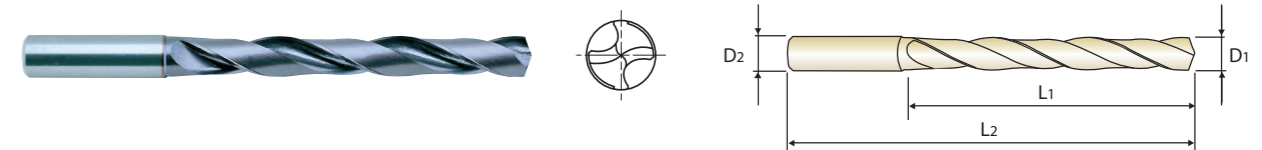
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH423088	8.8	10	47	89
DH423089	8.9	10	47	89
DH423090	9.0	10	47	89
DH423091	9.1	10	47	89
DH423092	9.2	10	47	89
DH423093	9.3	10	47	89
DH423094	9.4	10	47	89
DH423095	9.5	10	47	89
DH423096	9.6	10	47	89
DH423097	9.7	10	47	89
DH423098	9.8	10	47	89
DH423099	9.9	10	47	89
DH423100	10.0	10	47	89
DH423101	10.1	12	55	102
DH423102	10.2	12	55	102
DH423103	10.3	12	55	102
DH423104	10.4	12	55	102
DH423105	10.5	12	55	102
DH423106	10.6	12	55	102
DH423107	10.7	12	55	102
DH423108	10.8	12	55	102
DH423109	10.9	12	55	102
DH423110	11.0	12	55	102
DH423111	11.1	12	55	102
DH423112	11.2	12	55	102
DH423113	11.3	12	55	102
DH423114	11.4	12	55	102
DH423115	11.5	12	55	102
DH423116	11.6	12	55	102

▶ Other shank types are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
-HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
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**TiAIN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes (5XD)**
**LONG
DH424 SERIES**

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ 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


5 × D

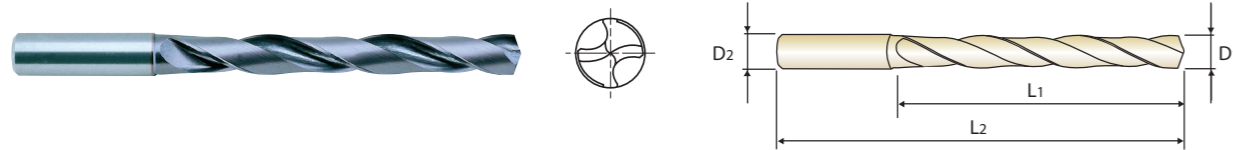
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH424010	1.0	3	8	55
DH424011	1.1	3	12	55
DH424012	1.2	3	12	55
DH424013	1.3	3	12	55
DH424014	1.4	3	12	55
DH424015	1.5	3	16	55
DH424016	1.6	3	16	55
DH424017	1.7	3	16	55
DH424018	1.8	3	16	55
DH424019	1.9	3	16	55
DH424020	2.0	4	21	57
DH424021	2.1	4	21	57
DH424022	2.2	4	21	57
DH424023	2.3	4	21	57
DH424024	2.4	4	21	57
DH424025	2.5	4	21	57
DH424026	2.6	4	21	57
DH424027	2.7	4	21	57
DH424028	2.8	4	21	57
DH424029	2.9	4	21	57
DH424030	3.0	6	28	66
DH424031	3.1	6	28	66
DH424032	3.2	6	28	66
DH424033	3.3	6	28	66
DH424034	3.4	6	28	66
DH424035	3.5	6	28	66

▶ Other shank types are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
-HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	◎			○						

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

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ 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


5 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH424062	6.2	8	53	91
DH424063	6.3	8	53	91
DH424064	6.4	8	53	91
DH424065	6.5	8	53	91
DH424066	6.6	8	53	91
DH424067	6.7	8	53	91
DH424068	6.8	8	53	91
DH424069	6.9	8	53	91
DH424070	7.0	8	53	91
DH424071	7.1	8	53	91
DH424072	7.2	8	53	91
DH424073	7.3	8	53	91
DH424074	7.4	8	53	91
DH424075	7.5	8	53	91
DH424076	7.6	8	53	91
DH424077	7.7	8	53	91
DH424078	7.8	8	53	91
DH424079	7.9	8	53	91
DH424080	8.0	8	53	91
DH424081	8.1	10	61	103
DH424082	8.2	10	61	103
DH424083	8.3	10	61	103
DH424084	8.4	10	61	103
DH424085	8.5	10	61	103
DH424086	8.6	10	61	103
DH424087	8.7	10	61	103

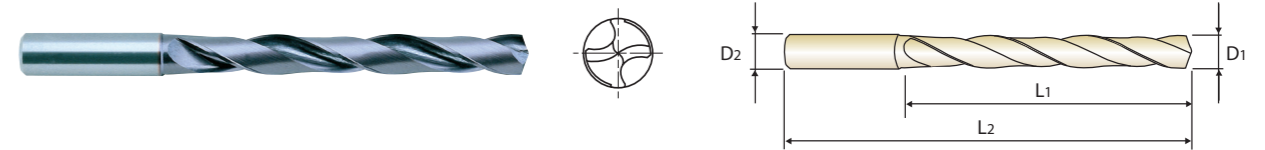
▶ Other shank types are available on your request.

▶ NEXT PAGE

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
-HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	◎			○						

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

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ 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


5 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH424114	11.4	12	71	118
DH424115	11.5	12	71	118
DH424116	11.6	12	71	118
DH424117	11.7	12	71	118
DH424118	11.8	12	71	118
DH424119	11.9	12	71	118
DH424120	12.0	12	71	118
DH424123	12.3	14	77	124
DH424125	12.5	14	77	124
DH424128	12.8	14	77	124
DH424130	13.0	14	77	124
DH424135	13.5	14	77	124
DH424138	13.8	14	77	124
DH424140	14.0	14	77	124
DH424145	14.5	16	83	133
DH424148	14.8	16	83	133

▶ Other shank types are available on your request.

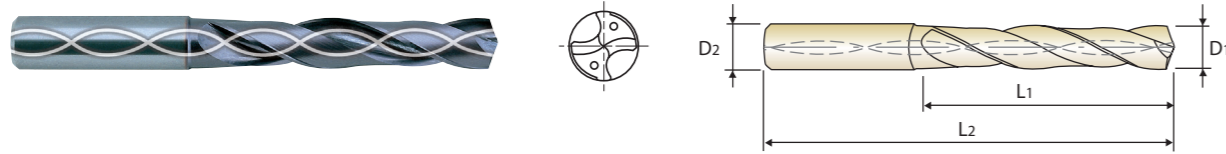
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH424150	15.0	16	83	133
DH424155	15.5	16	83	133
DH424158	15.8	16	83	133
DH424160	16.0	16	83	133
DH424165	16.5	18	93	143
DH424168	16.8	18	93	143
DH424170	17.0	18	93	143
DH424175	17.5	18	93	143
DH424178	17.8	18	93	143
DH424180	18.0	18	93	143
DH424185	18.5	20	101	153
DH424190	19.0	20	101	153
DH424195	19.5	20	101	153
DH424198	19.8	20	101	153
DH424200	20.0	20	101	153

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
-HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	◎			○						

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

SHORT DH406 SERIES

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ 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


3 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH406030	3.0	6	20	62
DH406031	3.1	6	20	62
DH406032	3.2	6	20	62
DH406033	3.3	6	20	62
DH406034	3.4	6	20	62
DH406035	3.5	6	20	62
DH406036	3.6	6	20	62
DH406037	3.7	6	20	62
DH406038	3.8	6	24	66
DH406039	3.9	6	24	66
DH406040	4.0	6	24	66
DH406041	4.1	6	24	66
DH406042	4.2	6	24	66
DH406043	4.3	6	24	66
DH406044	4.4	6	24	66
DH406045	4.5	6	24	66
DH406046	4.6	6	24	66
DH406047	4.7	6	24	66
DH406048	4.8	6	28	66
DH406049	4.9	6	28	66
DH406050	5.0	6	28	66
DH406051	5.1	6	28	66
DH406052	5.2	6	28	66
DH406053	5.3	6	28	66
DH406054	5.4	6	28	66
DH406055	5.5	6	28	66
DH406056	5.6	6	28	66

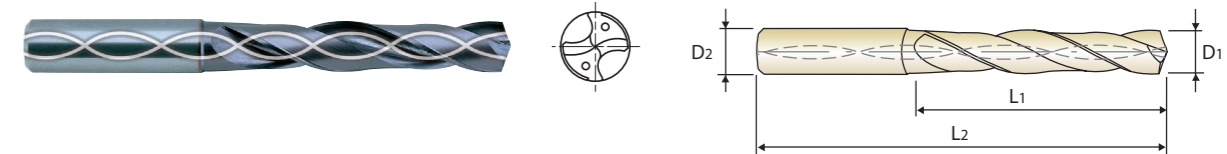
▶ Other shank types are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
-HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎		○	○						

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

SHORT DH406 SERIES

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ 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


3 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH406084	8.4	10	47	89
DH406085	8.5	10	47	89
DH406086	8.6	10	47	89
DH406087	8.7	10	47	89
DH406088	8.8	10	47	89
DH406089	8.9	10	47	89
DH406090	9.0	10	47	89
DH406091	9.1	10	47	89
DH406092	9.2	10	47	89
DH406093	9.3	10	47	89
DH406094	9.4	10	47	89
DH406095	9.5	10	47	89
DH406096	9.6	10	47	89
DH406097	9.7	10	47	89
DH406098	9.8	10	47	89
DH406099	9.9	10	47	89
DH406100	10.0	10	47	89
DH406101	10.1	12	55	102
DH406102	10.2	12	55	102
DH406103	10.3	12	55	102
DH406104	10.4	12	55	102
DH406105	10.5	12	55	102
DH406106	10.6	12	55	102
DH406107	10.7	12	55	102
DH406108	10.8	12	55	102
DH406109	10.9	12	55	102
DH406110	11.0	12	55	102

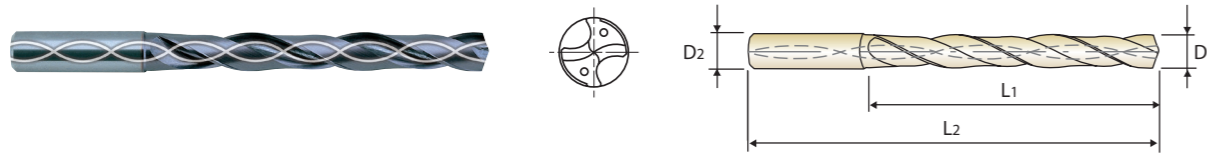
▶ Other shank types are available on your request.

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
-HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎		○	○						

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

LONG
DH408 SERIES

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ 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



5 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH408010	1.0	3	8	55
DH408011	1.1	3	12	55
DH408012	1.2	3	12	55
DH408013	1.3	3	12	55
DH408014	1.4	3	12	55
DH408015	1.5	3	16	55
DH408016	1.6	3	16	55
DH408017	1.7	3	16	55
DH408018	1.8	3	16	55
DH408019	1.9	3	16	55
DH408020	2.0	4	21	57
DH408021	2.1	4	21	57
DH408022	2.2	4	21	57
DH408023	2.3	4	21	57
DH408024	2.4	4	21	57
DH408025	2.5	4	21	57
DH408026	2.6	4	21	57
DH408027	2.7	4	21	57
DH408028	2.8	4	21	57
DH408029	2.9	4	21	57
DH408030	3.0	6	28	66
DH408031	3.1	6	28	66
DH408032	3.2	6	28	66
DH408033	3.3	6	28	66
DH408034	3.4	6	28	66
DH408035	3.5	6	28	66

▶ Other shank types are available on your request.

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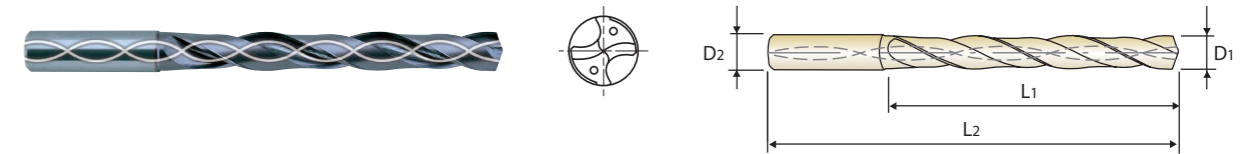
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
-HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	◎			○						

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

LONG
DH408 SERIES

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ 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



5 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH408062	6.2	8	53	91
DH408063	6.3	8	53	91
DH408064	6.4	8	53	91
DH408065	6.5	8	53	91
DH408066	6.6	8	53	91
DH408067	6.7	8	53	91
DH408068	6.8	8	53	91
DH408069	6.9	8	53	91
DH408070	7.0	8	53	91
DH408071	7.1	8	53	91
DH408072	7.2	8	53	91
DH408073	7.3	8	53	91
DH408074	7.4	8	53	91
DH408075	7.5	8	53	91
DH408076	7.6	8	53	91
DH408077	7.7	8	53	91
DH408078	7.8	8	53	91
DH408079	7.9	8	53	91
DH408080	8.0	8	53	91
DH408081	8.1	10	61	103
DH408082	8.2	10	61	103
DH408083	8.3	10	61	103
DH408084	8.4	10	61	103
DH408085	8.5	10	61	103
DH408086	8.6	10	61	103
DH408087	8.7	10	61	103

▶ Other shank types are available on your request.

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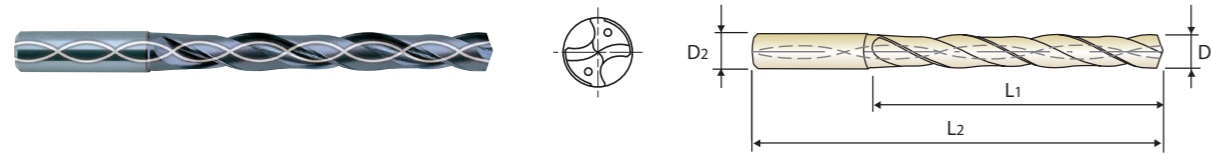
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
-HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	◎			○						

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

LONG
DH408 SERIES

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ 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



5 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D ₁	D ₂	L ₁	L ₂
DH408114	11.4	12	71	118
DH408115	11.5	12	71	118
DH408116	11.6	12	71	118
DH408117	11.7	12	71	118
DH408118	11.8	12	71	118
DH408119	11.9	12	71	118
DH408120	12.0	12	71	118
DH408125	12.5	14	77	124
DH408130	13.0	14	77	124
DH408135	13.5	14	77	124
DH408140	14.0	14	77	124
DH408145	14.5	16	83	133

▶ Other shank types are available on your request.

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D ₁	D ₂	L ₁	L ₂
DH408150	15.0	16	83	133
DH408155	15.5	16	83	133
DH408160	16.0	16	83	133
DH408165	16.5	18	93	143
DH408170	17.0	18	93	143
DH408175	17.5	18	93	143
DH408180	18.0	18	93	143
DH408185	18.5	20	101	153
DH408190	19.0	20	101	153
DH408195	19.5	20	101	153
DH408200	20.0	20	101	153

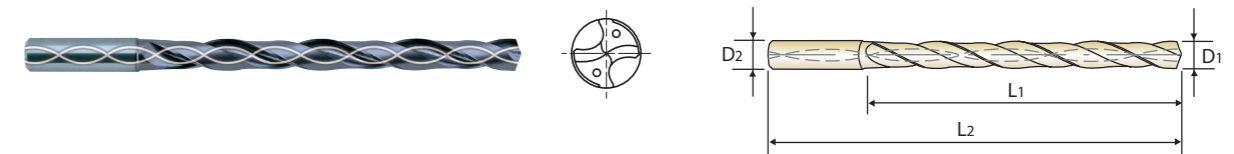
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
-HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	◎		○	○						

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

EXTRA LONG
DH421 SERIES

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ 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



8 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D ₁	D ₂	L ₁	L ₂
DH421030	3.0	6	34	72
DH421031	3.1	6	34	72
DH421032	3.2	6	34	72
DH421033	3.3	6	34	72
DH421034	3.4	6	34	72
DH421035	3.5	6	34	72
DH421036	3.6	6	34	72
DH421037	3.7	6	34	72
DH421038	3.8	6	43	81
DH421039	3.9	6	43	81
DH421040	4.0	6	43	81
DH421041	4.1	6	43	81
DH421042	4.2	6	43	81
DH421043	4.3	6	43	81
DH421044	4.4	6	43	81
DH421045	4.5	6	43	81
DH421046	4.6	6	43	81
DH421047	4.7	6	43	81
DH421048	4.8	6	57	95
DH421049	4.9	6	57	95
DH421050	5.0	6	57	95
DH421051	5.1	6	57	95
DH421052	5.2	6	57	95
DH421053	5.3	6	57	95
DH421054	5.4	6	57	95
DH421055	5.5	6	57	95

▶ Other shank types are available on your request.

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D ₁	D ₂	L ₁	L ₂
DH421056	5.6	6	57	95
DH421057	5.7	6	57	95
DH421058	5.8	6	57	95
DH421059	5.9	6	57	95
DH421060	6.0	6	57	95
DH421061	6.1	8	76	114
DH421062	6.2	8	76	114
DH421063	6.3	8	76	114
DH421064	6.4	8	76	114
DH421065	6.5	8	76	114
DH421066	6.6	8	76	114
DH421067	6.7	8	76	114
DH421068	6.8	8	76	114
DH421069	6.9	8	76	114
DH421070	7.0	8	76	114
DH421071	7.1	8	76	114
DH421072	7.2	8	76	114
DH421073	7.3	8	76	114
DH421074	7.4	8	76	114
DH421075	7.5	8	76	114
DH421076	7.6	8	76	114
DH421077	7.7	8	76	114
DH421078	7.8	8	76	114
DH421079	7.9	8	76	114
DH421080	8.0	8	76	114
DH421081	8.1	10	95	142

▶ NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
-HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	◎		○	○						

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

EXTRA LONG
DH421 SERIES

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ 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



8 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH421082	8.2	10	95	142
DH421083	8.3	10	95	142
DH421084	8.4	10	95	142
DH421085	8.5	10	95	142
DH421086	8.6	10	95	142
DH421087	8.7	10	95	142
DH421088	8.8	10	95	142
DH421089	8.9	10	95	142
DH421090	9.0	10	95	142
DH421091	9.1	10	95	142
DH421092	9.2	10	95	142
DH421093	9.3	10	95	142
DH421094	9.4	10	95	142
DH421095	9.5	10	95	142
DH421096	9.6	10	95	142
DH421097	9.7	10	95	142
DH421098	9.8	10	95	142
DH421099	9.9	10	95	142
DH421100	10.0	10	95	142
DH421101	10.1	12	114	162
DH421102	10.2	12	114	162
DH421103	10.3	12	114	162

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

Unit: mm

▶ Other shank types are available on your request.

P		H	M	K	N			S		
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
-HB225	HB225~325	HRc30~45	HRc45~55	HRc55~						
◎	◎	◎		○	○					

◎ : Excellent ○ : Good

RECOMMENDED CUTTING CONDITIONS

TiAIN-COATED SOLID CARBIDE DREAM DRILLS
General without Coolant Holes

DH404 | DH423 | DH424 SERIES

WORK MATERIAL	P						K					
	NON-ALLOY STEELS			ALLOY STEELS			SOFT GREY CAST IRON			HARD GREY CAST IRON		
STRENGTH	< 700 N/mm ²			< 1000 N/mm ²			< HB240, GG25			< HB300, GG40		
DRILLING SPEED	Ø1.0 ~ Ø2.9 : 40 ~ 80 m/min Ø3.0 ~ : 100 m/min			Ø1.0 ~ Ø2.9 : 35 ~ 70 m/min Ø3.0 ~ : 75 m/min			Ø1.0 ~ Ø2.9 : 60 ~ 130 m/min Ø3.0 ~ : 100 m/min			Ø1.0 ~ Ø2.9 : 40 ~ 90 m/min Ø3.0 ~ : 80 m/min		
DRILLING DIAMETER	RPM	FEED		RPM	FEED		RPM	FEED		RPM	FEED	
		Min	Max		Min	Max		Min	Max		Min	Max
1.0	13000	0.03	0.05	11250	0.03	0.05	21300	0.03	0.05	14200	0.03	0.05
2.0	13000	0.05	0.07	11250	0.05	0.07	21300	0.05	0.07	14200	0.05	0.07
3.0	10500	0.06	0.12	7890	0.06	0.12	10500	0.06	0.12	8410	0.06	0.12
4.0	7920	0.08	0.16	5920	0.08	0.16	7920	0.08	0.16	6310	0.08	0.16
5.0	6310	0.10	0.20	4740	0.10	0.20	6310	0.10	0.20	5050	0.10	0.20
6.0	5270	0.12	0.24	3950	0.12	0.24	5270	0.12	0.24	4220	0.12	0.24
7.0	4510	0.14	0.26	3400	0.14	0.26	4510	0.14	0.26	3610	0.14	0.26
8.0	3950	0.16	0.28	2970	0.16	0.28	3950	0.16	0.28	3160	0.16	0.28
9.0	3510	0.18	0.30	2640	0.18	0.30	3510	0.18	0.30	2820	0.18	0.30
10.0	3160	0.20	0.30	2370	0.20	0.30	3160	0.20	0.30	2530	0.20	0.30
11.0	2880	0.20	0.30	2160	0.20	0.30	2880	0.20	0.30	2310	0.20	0.30
12.0	2640	0.21	0.30	1980	0.21	0.30	2640	0.21	0.30	2120	0.21	0.30
13.0	2430	0.21	0.33	1830	0.21	0.33	2430	0.21	0.33	1950	0.21	0.33
14.0	2260	0.22	0.35	1710	0.22	0.35	2260	0.22	0.35	1810	0.22	0.35
16.0	1980	0.25	0.36	1490	0.25	0.36	1980	0.25	0.36	1590	0.25	0.36
18.0	1760	0.28	0.38	1330	0.28	0.38	1760	0.28	0.38	1420	0.28	0.38
20.0	1590	0.30	0.40	1180	0.30	0.40	1590	0.30	0.40	1270	0.30	0.40

▶ Recommend to reduce the feed rate as following

Feed 100% : DH404(3×D), DH423(3×D) **Feed 85%** : DH424(5×D)

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

TiAIN-COATED SOLID CARBIDE DREAM DRILLS
General with Coolant Holes

DH406 | DH408 | DH421 SERIES

WORK MATERIAL	P						K					
	NON-ALLOY STEELS			ALLOY STEELS			SOFT GREY CAST IRON			HARD GREY CAST IRON		
STRENGTH	< 700 N/mm ²			< 1000 N/mm ²			< HB240, GG25			< HB300, GG40		
DRILLING SPEED	Ø1.0 ~ Ø2.9 : 50 ~ 100 m/min Ø3.0 ~ : 110 m/min			Ø1.0 ~ Ø2.9 : 40 ~ 90 m/min Ø3.0 ~ : 83 m/min			Ø1.0 ~ Ø2.9 : 80 ~ 160 m/min Ø3.0 ~ : 110 m/min			Ø1.0 ~ Ø2.9 : 50 ~ 100 m/min Ø3.0 ~ : 88 m/min		
DRILLING DIAMETER	RPM	FEED		RPM	FEED		RPM	FEED		RPM	FEED	
		Min	Max		Min	Max		Min	Max		Min	Max
1.0	16250	0.04	0.06	14800	0.04	0.06	26600	0.04	0.06	17300	0.04	0.06
2.0	16250	0.06	0.08	14800	0.06	0.08	26600	0.06	0.08	17300	0.06	0.08
3.0	11660	0.06	0.12	8760	0.06	0.12	11660	0.06	0.12	9340	0.06	0.12
4.0	8800	0.08	0.16	6570	0.08	0.16	8800	0.08	0.16	7010	0.08	0.16
5.0	7010	0.10	0.20	5260	0.10	0.20	7010	0.10	0.20	5610	0.10	0.20
6.0	5850	0.12	0.24	4380	0.12	0.24	5850	0.12	0.24	4680	0.12	0.24
7.0	5010	0.14	0.26	3770	0.14	0.26	5010	0.14	0.26	4010	0.14	0.26
8.0	4380	0.16	0.28	2390	0.16	0.28	4380	0.16	0.28	3510	0.16	0.28
9.0	3900	0.18	0.30	2930	0.18	0.30	3900	0.18	0.30	3130	0.18	0.30
10.0	3510	0.20	0.30	2630	0.20	0.30	3510	0.20	0.30	2810	0.20	0.30
11.0	3190	0.20	0.30	2400	0.20	0.30	3190	0.20	0.30	2560	0.20	0.30
12.0	2930	0.21	0.30	2200	0.21	0.30	2930	0.21	0.30	2350	0.21	0.30
13.0	2700	0.21	0.33	2030	0.21	0.33	2700	0.21	0.33	2160	0.21	0.33
14.0	2510	0.22	0.35	1890	0.22	0.35	2510	0.22	0.35	2010	0.22	0.35
16.0	2190	0.25	0.36	1650	0.25	0.36	2190	0.25	0.36	1760	0.25	0.36
18.0	1950	0.28	0.38	1470	0.28	0.38	1950	0.28	0.38	1570	0.28	0.38
20.0	1760	0.30	0.40	1310	0.30	0.40	1760	0.30	0.40	1410	0.30	0.40

▶ Recommend to reduce the feed rate as following

Feed 100% : DH406(3×D) **Feed 85%** : DH408(5×D) **Feed 70%** : DH421(8×D)

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

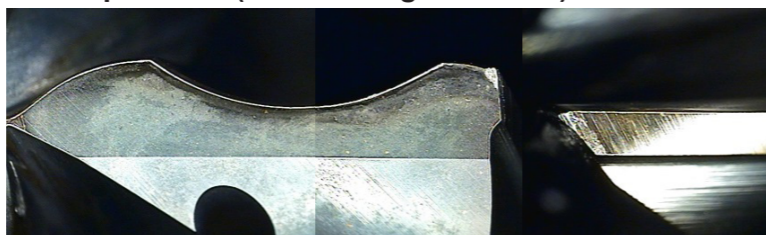
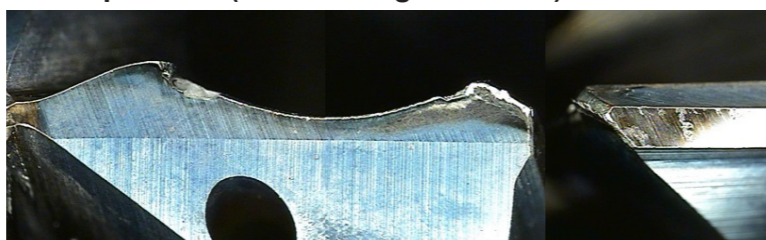
CASE STUDY

Dream Drills-High Feed offers 1.5 to 2 times higher feeding speed compared to conventional 2-flute drills. The unique flute design and exceptional surface finish promise extraordinary chip evacuation.

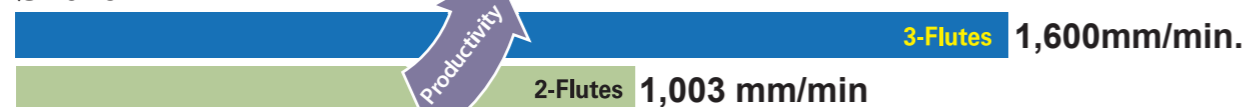
► SOLID CARBIDE DREAM DRILLS - High Feed with Coolant Holes

CUTTING CONDITION	
Tool	DGR495100 (Dream Drills High Feed)
Size	Ø10 x 10 x 61 x 103
Work Material	• DIN: C45 • AISI: 1045 • JIS: S45C (HRc20)
RPM	3,200 rev./min.
Feed	0.5 mm/rev.
Drilling Depth	50 mm (5xD)
Drilling Method	Blind Hole
Coolant	Wet Cut
Machine	Machining Center

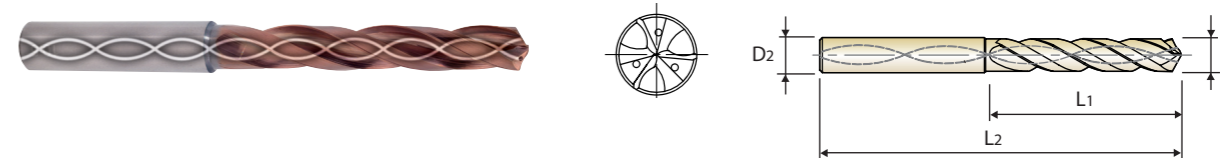
► YG-1 (Total Drilling 330 Holes)

► Competitor A (Total Drilling 330 Holes)

► Competitor B (Total Drilling 330 Holes)

Productivity (Carbon Steel)

Ø10 5xD

1.6 times UP

**H-COATED SOLID CARBIDE DREAM DRILLS
High Feed with Coolant Holes (3XD)**
**SHORT
DGR493 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



3 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	Unit : mm				
					H-Coating	D1	D2	L1	L2
DGR493050	5.00	6	28	66	DGR493078	7.80	8	41	79
DGR493051	5.10	6	28	66	DGR493079	7.90	8	41	79
DGR493052	5.20	6	28	66	DGR493080	8.00	8	41	79
DGR493053	5.30	6	28	66	DGR493081	8.10	10	47	89
DGR493054	5.40	6	28	66	DGR493082	8.20	10	47	89
DGR493055	5.50	6	28	66	DGR493083	8.30	10	47	89
DGR493056	5.60	6	28	66	DGR493084	8.40	10	47	89
DGR493057	5.70	6	28	66	DGR493085	8.50	10	47	89
DGR493058	5.80	6	28	66	DGR493086	8.60	10	47	89
DGR493059	5.90	6	28	66	DGR493087	8.70	10	47	89
DGR493060	6.00	6	28	66	DGR493088	8.80	10	47	89
DGR493061	6.10	8	34	79	DGR493089	8.90	10	47	89
DGR493062	6.20	8	34	79	DGR493090	9.00	10	47	89
DGR493063	6.30	8	34	79	DGR493091	9.10	10	47	89
DGR493064	6.40	8	34	79	DGR493092	9.20	10	47	89
DGR493065	6.50	8	34	79	DGR493093	9.30	10	47	89
DGR493066	6.60	8	34	79	DGR493094	9.40	10	47	89
DGR493067	6.70	8	34	79	DGR493095	9.50	10	47	89
DGR493068	6.80	8	34	79	DGR493096	9.60	10	47	89
DGR493069	6.90	8	34	79	DGR493097	9.70	10	47	89
DGR493070	7.00	8	34	79	DGR493098	9.80	10	47	89
DGR493071	7.10	8	41	79	DGR493099	9.90	10	47	89
DGR493072	7.20	8	41	79	DGR493100	10.00	10	47	89
DGR493073	7.30	8	41	79	DGR493101	10.10	12	55	102
DGR493074	7.40	8	41	79	DGR493102	10.20	12	55	102
DGR493075	7.50	8	41	79	DGR493103	10.30	12	55	102
DGR493076	7.60	8	41	79	DGR493104	10.40	12	55	102
DGR493077	7.70	8	41	79	DGR493105	10.50	12	55	102

► Other shank types are available on your request.

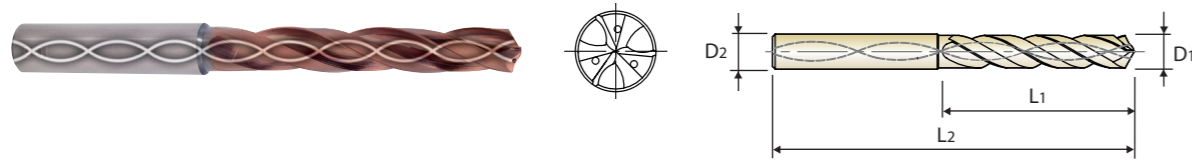
► NEXT PAGE

P		H		M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~						
◎	◎	○			◎					

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

SHORT DGR493 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


3 × D

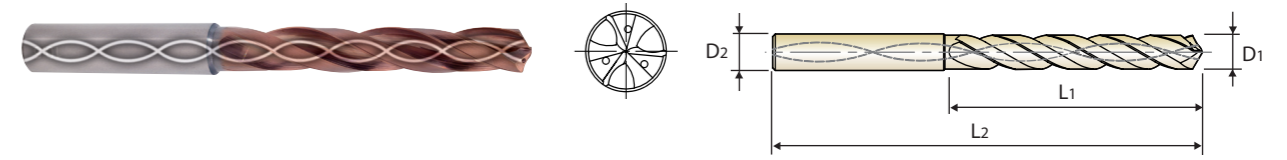
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	
				L1	L2
DGR493106	10.60	12	55	102	
DGR493107	10.70	12	55	102	
DGR493108	10.80	12	55	102	
DGR493109	10.90	12	55	102	
DGR493110	11.00	12	55	102	
DGR493111	11.10	12	55	102	
DGR493112	11.20	12	55	102	
DGR493113	11.30	12	55	102	
DGR493114	11.40	12	55	102	
DGR493115	11.50	12	55	102	
DGR493116	11.60	12	55	102	
DGR493117	11.70	12	55	102	
DGR493118	11.80	12	55	102	
DGR493119	11.90	12	55	102	
DGR493120	12.00	12	55	102	
DGR493125	12.50	14	60	107	

▶ Other shank types are available on your request.

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

LONG DGR495 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


5 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	
				L1	L2
DGR495050	5.00	6	44	82	
DGR495051	5.10	6	44	82	
DGR495052	5.20	6	44	82	
DGR495053	5.30	6	44	82	
DGR495054	5.40	6	44	82	
DGR495055	5.50	6	44	82	
DGR495056	5.60	6	44	82	
DGR495057	5.70	6	44	82	
DGR495058	5.80	6	44	82	
DGR495059	5.90	6	44	82	
DGR495060	6.00	6	44	82	
DGR495061	6.10	8	53	91	
DGR495062	6.20	8	53	91	
DGR495063	6.30	8	53	91	
DGR495064	6.40	8	53	91	
DGR495065	6.50	8	53	91	
DGR495066	6.60	8	53	91	
DGR495067	6.70	8	53	91	
DGR495068	6.80	8	53	91	
DGR495069	6.90	8	53	91	
DGR495070	7.00	8	53	91	
DGR495071	7.10	8	53	91	
DGR495072	7.20	8	53	91	
DGR495073	7.30	8	53	91	
DGR495074	7.40	8	53	91	
DGR495075	7.50	8	53	91	
DGR495076	7.60	8	53	91	
DGR495077	7.70	8	53	91	

▶ Other shank types are available on your request.

▶ NEXT PAGE

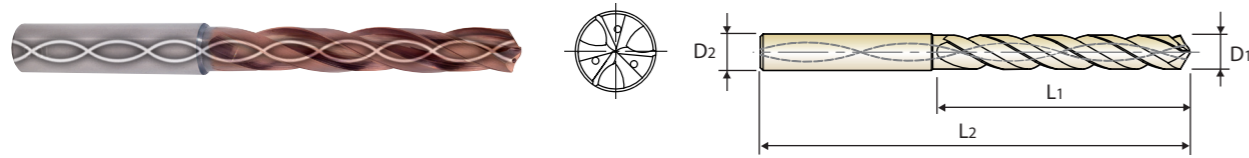
P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~								
◎	◎	○				◎						

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~								
◎	◎	○				◎						

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

LONG
DGR495 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



5 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
H-Coating	D1	D2	L1	L2
DGR495106	10.60	12	71	118
DGR495107	10.70	12	71	118
DGR495108	10.80	12	71	118
DGR495109	10.90	12	71	118
DGR495110	11.00	12	71	118
DGR495111	11.10	12	71	118
DGR495112	11.20	12	71	118
DGR495113	11.30	12	71	118
DGR495114	11.40	12	71	118
DGR495115	11.50	12	71	118
DGR495116	11.60	12	71	118
DGR495117	11.70	12	71	118
DGR495118	11.80	12	71	118
DGR495119	11.90	12	71	118
DGR495120	12.00	12	71	118
DGR495125	12.50	14	77	124

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
H-Coating	D1	D2	L1	L2
DGR495130	13.00	14	77	124
DGR495135	13.50	14	77	124
DGR495140	14.00	14	77	124
DGR495145	14.50	16	83	133
DGR495150	15.00	16	83	133
DGR495155	15.50	16	83	133
DGR495160	16.00	16	83	133
DGR495165	16.50	18	93	143
DGR495170	17.00	18	93	143
DGR495175	17.50	18	93	143
DGR495180	18.00	18	93	143
DGR495185	18.50	20	101	153
DGR495190	19.00	20	101	153
DGR495195	19.50	20	101	153
DGR495200	20.00	20	101	153

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○				◎					

RECOMMENDED CUTTING CONDITIONS

DREAM DRILLS · HIGH FEED

H-COATED SOLID CARBIDE DREAM DRILLS High Feed with Coolant Holes

DGR493 | DGR495 SERIES

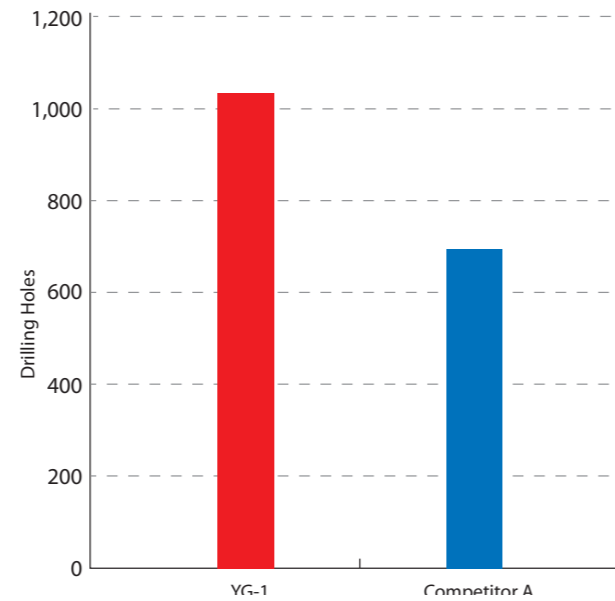
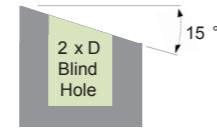
WORK MATERIAL	P						K					
	CARBON STEELS ALLOY STEELS			ALLOY STEELS			CAST IRON			DUCTILE CAST IRON		
HARDNESS	~ HRc 20			HRc 20 ~ 35			-			-		
DRILLING SPEED	100 m/min			75 m/min			100 m/min			80 m/min		
DRILLING DIAMETER	RPM	FEED		RPM	FEED		RPM	FEED		RPM	FEED	
		Min	Max		Min	Max		Min	Max		Min	Max
5.0	6370	0.200	0.250	4780	0.200	0.250	6370	0.230	0.300	5100	0.200	0.250
6.0	5310	0.240	0.300	3980	0.240	0.300	5310	0.270	0.360	4250	0.240	0.300
7.0	4550	0.280	0.350	3420	0.280	0.350	4550	0.320	0.420	3640	0.280	0.350
8.0	3980	0.320	0.400	2990	0.320	0.400	3980	0.360	0.480	3190	0.320	0.400
9.0	3540	0.360	0.450	2660	0.360	0.450	3540	0.410	0.540	2840	0.360	0.450
10.0	3190	0.400	0.500	2390	0.400	0.500	3190	0.450	0.600	2550	0.400	0.500
12.0	2660	0.480	0.600	2000	0.480	0.540	2660	0.540	0.720	2130	0.480	0.600
14.0	2280	0.560	0.700	1710	0.560	0.630	2280	0.630	0.840	1820	0.560	0.700
16.0	1990	0.560	0.720	1500	0.560	0.640	1990	0.640	0.800	1600	0.560	0.720
18.0	1770	0.630	0.810	1330	0.630	0.720	1770	0.720	0.900	1420	0.630	0.810
20.0	1600	0.700	0.880	1190	0.680	0.810	1600	0.800	0.980	1280	0.700	0.900

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

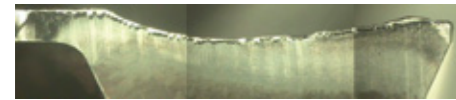
CASE STUDY - TEST 1

► SOLID CARBIDE DREAM DRILLS - Flat Bottom without Coolant Holes

CUTTING CONDITION	
Drill Diameter (mm)	Ø6.0
Work Material	• DIN: C45 • AISI: 1045 • JIS: S45C (HRc20)
Cutting Speed	75.4 m/min
RPM	4,000 rev/min
Feed	0.1 mm/rev
Drilling Depth	12.0 mm (2XD) Blind Hole / without Pecking
Coolant	External Cooling Water Soluble (9% Emulsion)
Machine	Vertical Machining Center

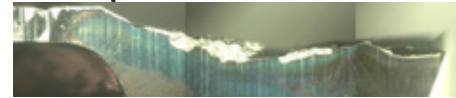


► YG-1



Small Chipping

► Competitor A

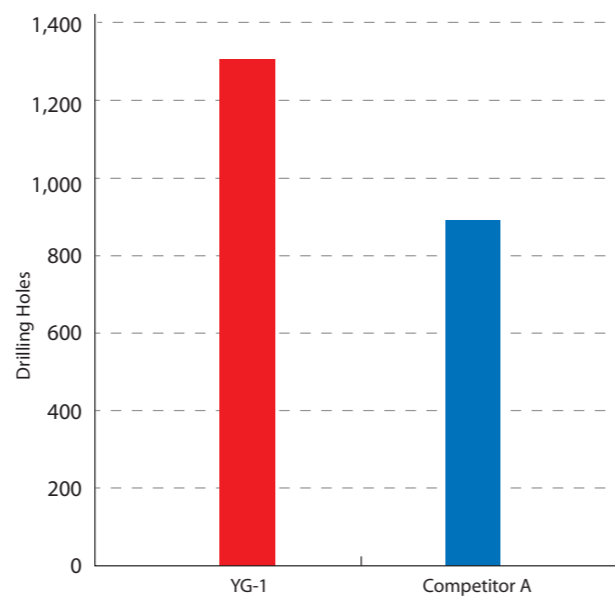
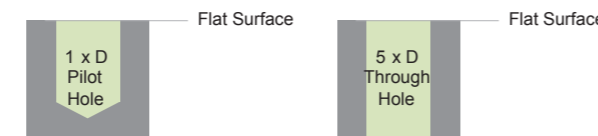


Big Chipping

CASE STUDY - TEST 2

► SOLID CARBIDE DREAM DRILLS - Flat Bottom with Coolant Holes

CUTTING CONDITION	
Drill Diameter (mm)	Ø6.0
Work Material	• DIN: 42CrMo4 • AISI: 4140 • JIS: SCM440 (HRc30)
Cutting Speed	100.0 m/min
RPM	5,300 rev/min
Feed	0.12 mm/rev
Drilling Depth	Pilot Drill- 6.0mm (1XD) Total depth- 30.0 mm (5XD) Through Hole / without Pecking
Coolant	Internal Cooling Water Soluble (9% Emulsion)
Machine	Vertical Machining Center

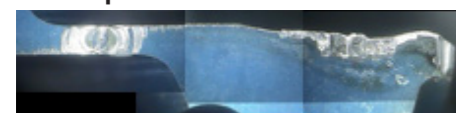


► YG-1



Small Chipping

► Competitor A

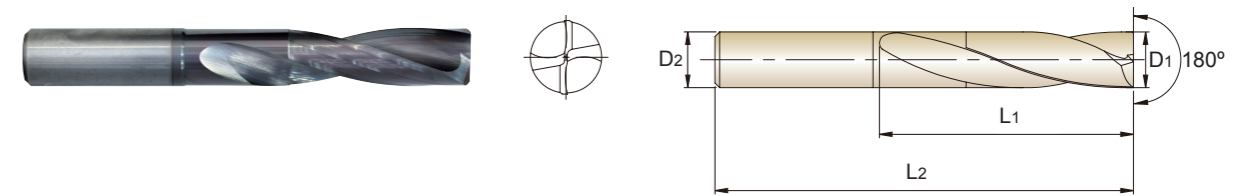


Big Chipping

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

SHORT
DPP447 SERIES

- For holes on various angled surfaces.
- 180 degree point angle enables drilling of flat, inclined and curved surfaces.
- Optimized flute shape for excellent chip evacuation.
- High strength cutting edge to improve tool life and versatility drilling.
- For through holes, minimized burrs at entrance and exit when drilling thin plate.



2 x D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
DPP447030	3.0	6	16	50
DPP447031	3.1	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
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
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
DPP447056	5.6	6	24	60
DPP447057	5.7	6	26	60

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
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
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
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
DPP447080	8.0	8	34	70
DPP447081	8.1	10	38	80
DPP447082	8.2	10	38	80
DPP447083	8.3	10	38	80
DPP447084	8.4	10	38	80
DPP447085	8.5	10	38	80

► Other shank types are available on your request.

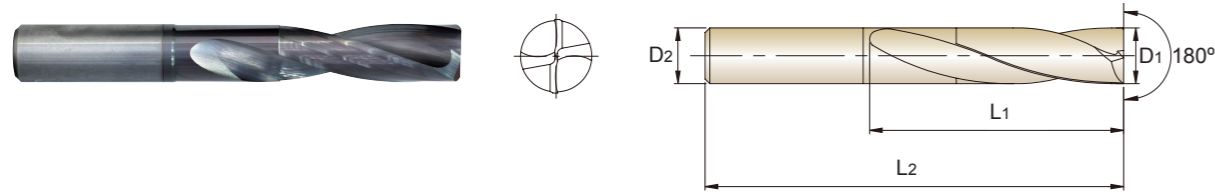
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◎ : Excellent ○ : Good

P				H	M	K	N			S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
-HB225	HB225~325	HRc30~45	HRc45~55	HRc55~						
◎	◎	◎	○		◎	○	○			

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

- ▶ For holes on various angled surfaces.
- ▶ 180 degree point angle enables drilling of flat, inclined and curved surfaces.
- ▶ Optimized flute shape for excellent chip evacuation.
- ▶ High strength cutting edge to improve tool life and versatility drilling.
- ▶ For through holes, minimized burrs at entrance and exit when drilling thin plate.


2 × D

Unit : mm				
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
X-Coating	D ₁	D ₂	L ₁	L ₂
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
DPP447092	9.2	10	42	80
DPP447093	9.3	10	42	80
DPP447094	9.4	10	42	80
DPP447095	9.5	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
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

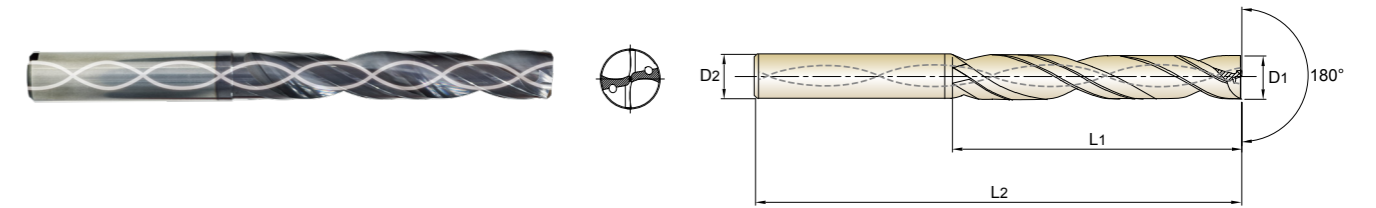
▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

P		H		M	K	N			S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~						
◎	◎	◎	○	○	◎	○	○			

**TiAlN-COATED SOLID CARBIDE DREAM DRILLS
Flat Bottom with Coolant Holes (5XD)**
**LONG
NEW SERIES
DH450 SERIES**

- ▶ For holes on various angled surfaces.
- ▶ 180 degree point angle enables drilling of flat, inclined and curved surfaces.
- ▶ Slope surface needs pilot drilling with YG-1 flat bottom drill(2XD) and flat surface needs pilot drilling with YG-1 dream drill general.
- ▶ Optimized flute shape for excellent chip evacuation.
- ▶ High strength cutting edge to improve tool life and versatility drilling.
- ▶ For through holes, minimized burrs at entrance and exit when drilling thin plate.
- ▶ Double margin provides good alignments with hole straightness and roundness to improve tool life and versatility drilling.


5 × D

Unit : mm				
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN-Coating	D ₁	D ₂	L ₁	L ₂
DH450030	3.0	6	28	66
DH450031	3.1	6	28	66
DH450032	3.2	6	28	66
DH450033	3.3	6	28	66
DH450034	3.4	6	28	66
DH450035	3.5	6	28	66
DH450036	3.6	6	28	66
DH450037	3.7	6	28	66
DH450038	3.8	6	36	74
DH450039	3.9	6	36	74
DH450040	4.0	6	36	74
DH450041	4.1	6	36	74
DH450042	4.2	6	36	74
DH450043	4.3	6	36	74
DH450044	4.4	6	36	74
DH450045	4.5	6	36	74
DH450046	4.6	6	36	74
DH450047	4.7	6	36	74
DH450048	4.8	6	44	82
DH450049	4.9	6	44	82
DH450050	5.0	6	44	82
DH450051	5.1	6	44	82

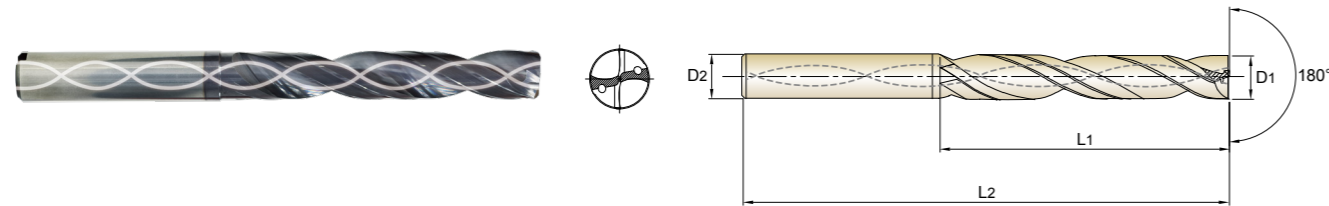
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◎ : Excellent ○ : Good

P		H		M	K	N			S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~						
◎	◎	◎	○	○	◎	○	○			

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
Flat Bottom with Coolant Holes (5XD)
NEW SERIES
DH450 SERIES
LONG

- ▶ For holes on various angled surfaces.
- ▶ 180 degree point angle enables drilling of flat, inclined and curved surfaces.
- ▶ Slope surface needs pilot drilling with YG-1 flat bottom drill(2XD) and flat surface needs pilot drilling with YG-1 dream drill general.
- ▶ Optimized flute shape for excellent chip evacuation.
- ▶ High strength cutting edge to improve tool life and versatility drilling.
- ▶ For through holes, minimized burrs at entrance and exit when drilling thin plate.
- ▶ Double margin provides good alignments with hole straightness and roundness to improve tool life and versatility drilling.


5×D

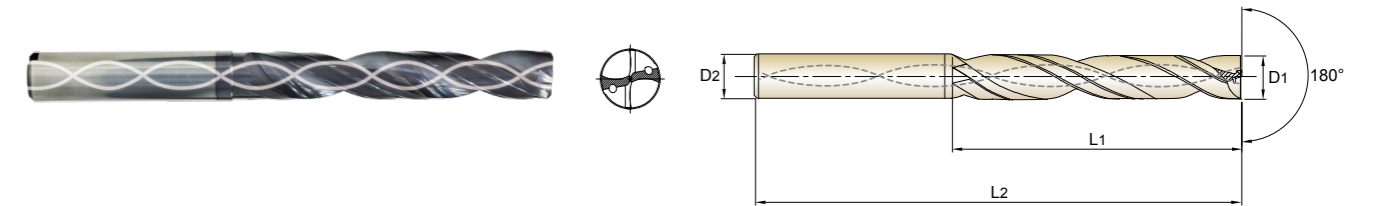
Unit : mm				
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN-Coating	D1	D2	L1	L2
DH450074	7.4	8	53	91
DH450075	7.5	8	53	91
DH450076	7.6	8	53	91
DH450077	7.7	8	53	91
DH450078	7.8	8	53	91
DH450079	7.9	8	53	91
DH450080	8.0	8	53	91
DH450081	8.1	10	61	103
DH450082	8.2	10	61	103
DH450083	8.3	10	61	103
DH450084	8.4	10	61	103
DH450085	8.5	10	61	103
DH450086	8.6	10	61	103
DH450087	8.7	10	61	103
DH450088	8.8	10	61	103
DH450089	8.9	10	61	103
DH450090	9.0	10	61	103
DH450091	9.1	10	61	103
DH450092	9.2	10	61	103
DH450093	9.3	10	61	103
DH450094	9.4	10	61	103
DH450095	9.5	10	61	103

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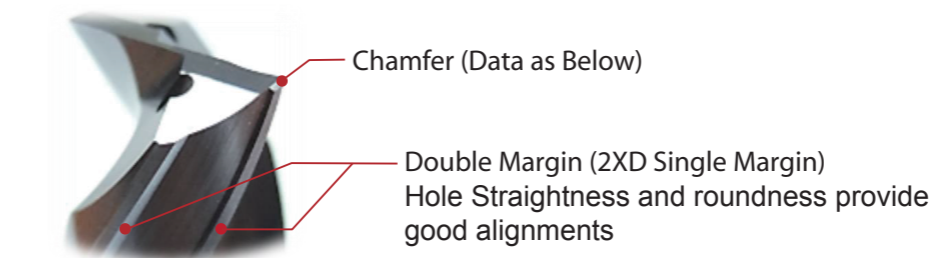
P					H	M	K	N			S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
-HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	◎	○		○	◎	○	○			

TiAlN-COATED SOLID CARBIDE DREAM DRILLS
Flat Bottom with Coolant Holes (5XD)
NEW SERIES
DH450 SERIES
LONG

- ▶ For holes on various angled surfaces.
- ▶ 180 degree point angle enables drilling of flat, inclined and curved surfaces.
- ▶ Slope surface needs pilot drilling with YG-1 flat bottom drill(2XD) and flat surface needs pilot drilling with YG-1 dream drill general.
- ▶ Optimized flute shape for excellent chip evacuation.
- ▶ High strength cutting edge to improve tool life and versatility drilling.
- ▶ For through holes, minimized burrs at entrance and exit when drilling thin plate.
- ▶ Double margin provides good alignments with hole straightness and roundness to improve tool life and versatility drilling.


5×D

Unit : mm				
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN-Coating	D1	D2	L1	L2
DH450170	17.0	18	93	143
DH450175	17.5	18	93	143
DH450180	18.0	18	93	143
DH450185	18.5	20	101	153



Cutting Diameter (mm)	Corner Chamfer (mm)
Ø3.0 ~ Ø6.0	0.06
Ø6.1 ~ Ø10.0	0.12
Ø10.1 ~ Ø14.0	0.18
Ø14.1 ~ Ø20.0	0.26

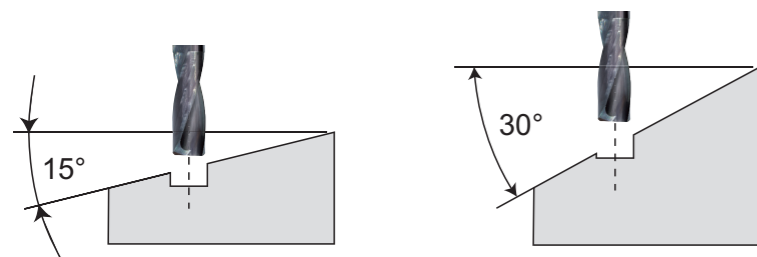
P					H	M	K	N			S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
-HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	◎	○		○	◎	○	○			

X-COATED SOLID CARBIDE DREAM DRILLS
Flat Bottom without Coolant Holes

DPP447 SERIES

WORK MATERIAL	P								M		K		N	
	STRUCTURAL STEELS		CARBON STEELS ALLOY STEELS		PREHARDENED STEELS		HARDENED STEELS		STAINLESS STEELS		CAST IRON		ALUMINUM	
STRENGTH			<HB225		HRC30 ~ 40		HRC40 ~ 50		~ 200 HB					
DRILLING SPEED	80 m/min		70 m/min		38 m/min		25 m/min		30 m/min		68 m/min		165 m/min	
DRILLING DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
3.0	8350	0.05	7250	0.05	3890	0.05	2790	0.03	3180	0.02	7250	0.04	17850	0.06
4.0	6250	0.07	5410	0.07	2940	0.06	2100	0.04	2380	0.03	5410	0.06	13130	0.08
5.0	5040	0.08	4360	0.08	2310	0.08	1680	0.05	1910	0.04	4360	0.07	10500	0.10
6.0	4200	0.10	3630	0.10	1890	0.09	1370	0.06	1590	0.05	3630	0.09	8930	0.12
8.0	3150	0.14	2730	0.13	1470	0.12	1050	0.08	1190	0.06	2730	0.12	6670	0.16
10.0	2520	0.17	2160	0.17	1160	0.15	840	0.10	955	0.08	2160	0.15	5360	0.20
12.0	2100	0.21	1790	0.21	1000	0.18	690	0.12	796	0.10	1790	0.18	4470	0.24
16.0	1580	0.28	1370	0.28	740	0.24	530	0.16	597	0.12	1370	0.24	3360	0.32
20.0	1260	0.35	1110	0.34	580	0.31	420	0.20	477	0.15	1110	0.30	2680	0.40

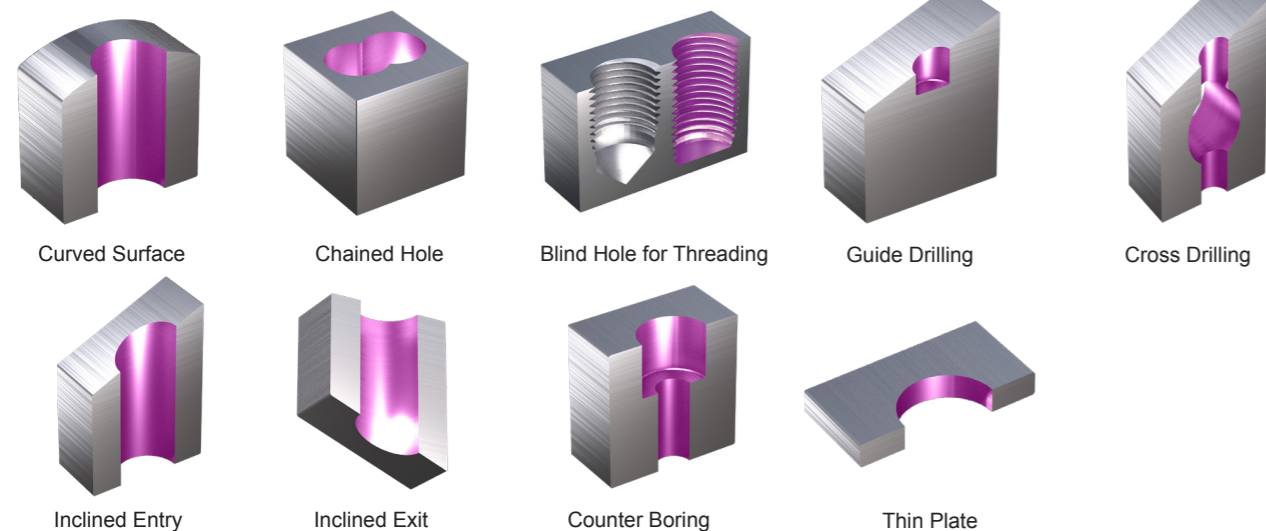
RPM = rev./min.
FEED = mm/rev.



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

- ▶ 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.

VARIETY OF DRILLING



TiAIN-COATED SOLID CARBIDE DREAM DRILLS
Flat Bottom with Coolant Holes

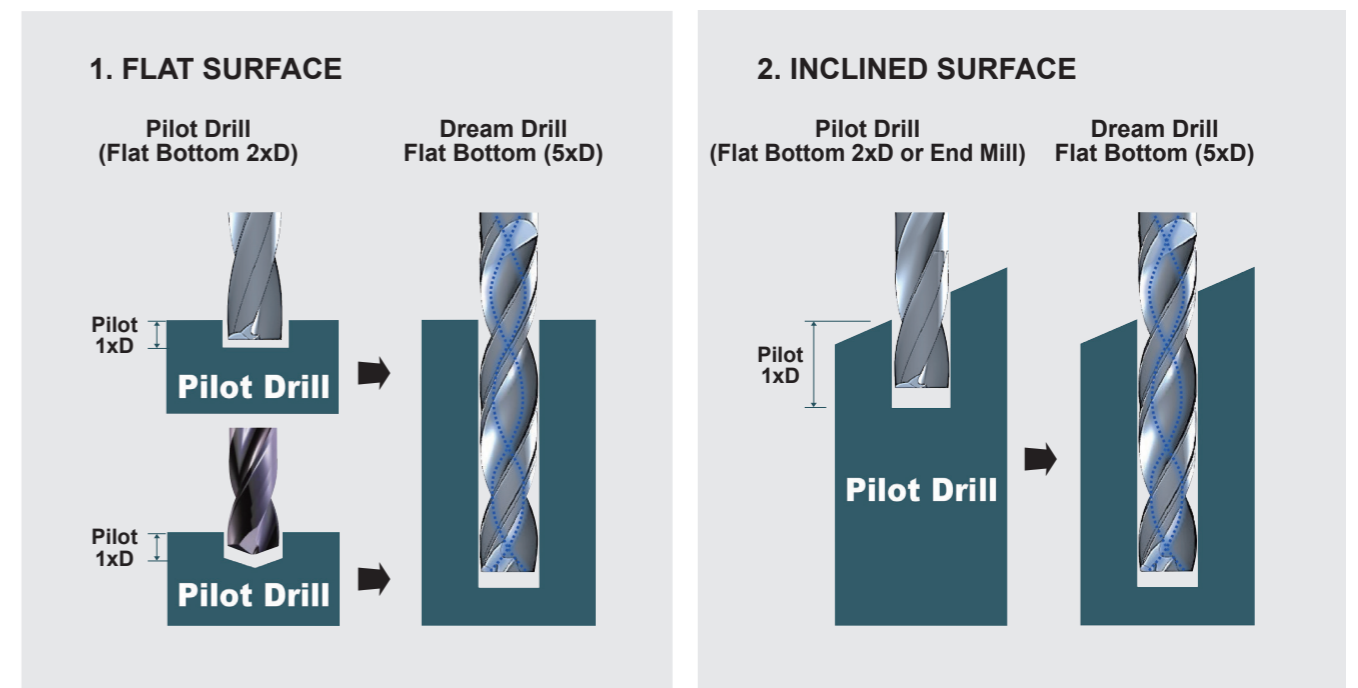
DH450 SERIES

WORK MATERIAL	P								M		K		N	
	STRUCTURAL STEELS		CARBON STEELS ALLOY STEELS		PREHARDENED STEELS		HARDENED STEELS		STAINLESS STEELS		CAST IRON		ALUMINUM	
STRENGTH			<HB225		HRC30 ~ 40		HRC40 ~ 50		~ 200 HB					
DRILLING SPEED	147 m/min		105 m/min		73 m/min		63 m/min		104 m/min		105 m/min		172 m/min	
DRILLING DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
3.0	15540	0.09	11130	0.06	7770	0.04	6690	0.04	11030	0.06	11130	0.05	17850	0.09
4.0	11660	0.12	8300	0.08	5830	0.06	5020	0.06	8300	0.08	8300	0.06	14390	0.11
5.0	9350	0.15	6620	0.10	4670	0.07	4010	0.07	6620	0.10	6620	0.08	10710	0.15
6.0	7770	0.18	5570	0.12	3890	0.09	3340	0.09	5570	0.12	5570	0.09	9980	0.16
8.0	5850	0.24	4150	0.16	2930	0.12	2510	0.12	4150	0.16	4150	0.12	6690	0.24
10.0	4680	0.30	3310	0.20	2340	0.15	2000	0.15	3310	0.20	3310	0.15	5360	0.30
12.0	3890	0.36	2780	0.24	1950	0.18	1670	0.18	2780	0.24	2780	0.18	4450	0.36
16.0	2930	0.48	2090	0.32	1460	0.24	1250	0.24	2090	0.32	2090	0.24	3340	0.48
20.0	2340	0.60	1660	0.40	1170	0.30	1000	0.30	1660	0.40	1660	0.30	2740	0.59

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

- ▶ Required pilot hole of the same diameter before using the 5xD Flat bottom Drills.
- ▶ The above table values is for under 5xD depth with pilot drilling operation.

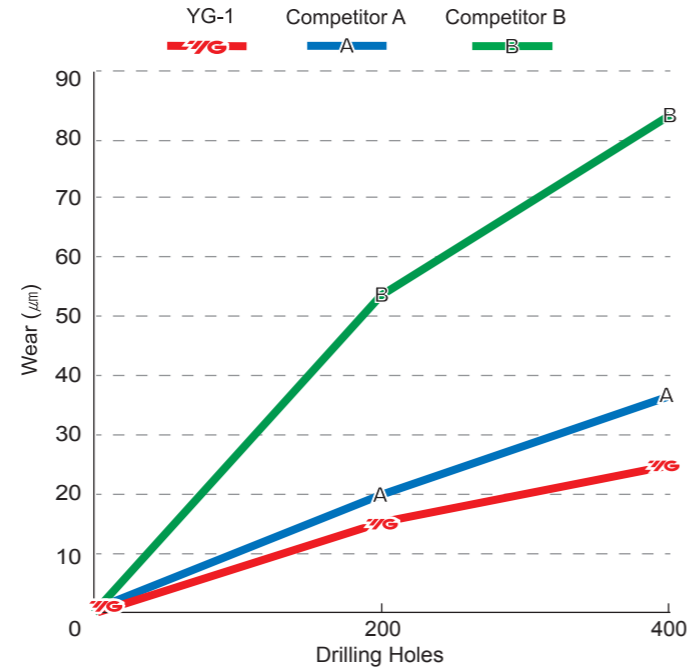
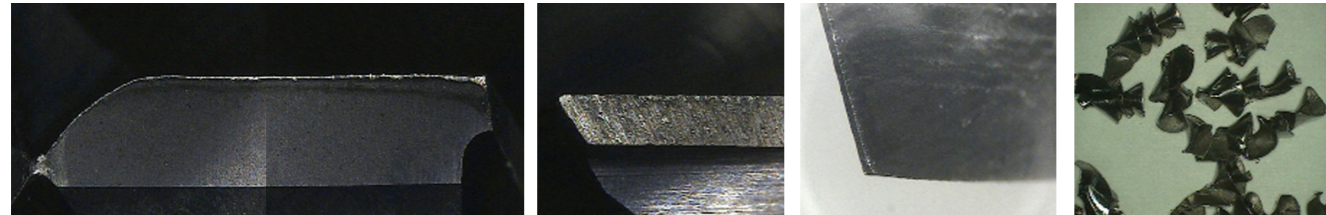
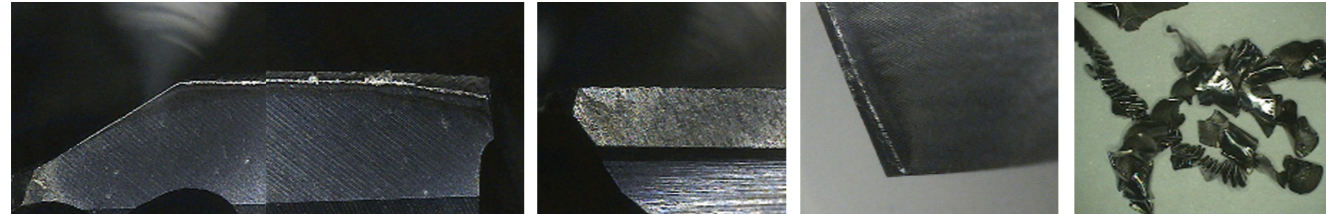
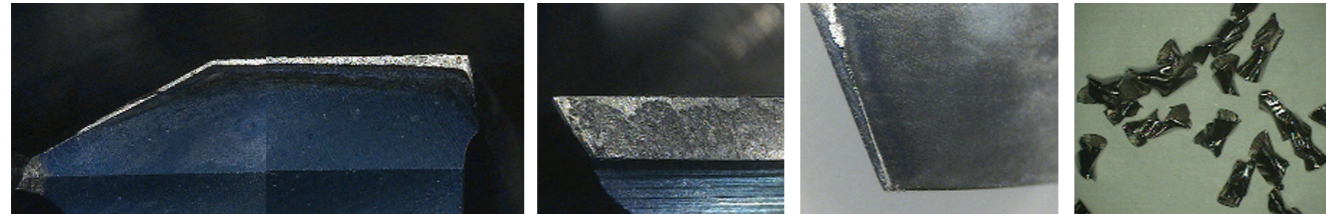
DREAM DRILLS · FLAT BOTTOM - Pilot Drilling for 5 X D



- ▶ For Flat bottom 5xD drilling depth, Slope surface needs Pilot Drilling with YG-1 Flat Bottom Drill (2XD) and Flat surface needs Pilot Drilling with YG-1 Dream Drill General.
- ▶ Pilot Drilling Depth : around 1XD
- ▶ Pilot Drilling Diameter : same size diameter

CASE STUDY
► SOLID CARBIDE DREAM DRILLS - INOX with Coolant Holes

CUTTING CONDITION	
Tool	DH452060 (DREAM DRILL-INOX)
Size	Ø6x Ø6 x 44 x 82
Work Material	<ul style="list-style-type: none"> • DIN: X5CrNi1810 (X4CrNi18-10) • WR: 1.4301 • JIS: SUS304
RPM	3,700 rev./min.
Feed	0.07 mm/rev.
Drilling Depth	24 mm
Coolant	Wet Cut


► YG-1 (Total Drilling 400 Holes)

► Competitor A (Total Drilling 400 Holes)

► Competitor B (Total Drilling 400 Holes)

TiAIN-COATED SOLID CARBIDE DREAM DRILLS INOX with Coolant Holes (3XD)
SHORT 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
- TiAIN coating for better surface finishes and longer tool life


3 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH451030	3.0	6	20	62
DH451031	3.1	6	20	62
DH451032	3.2	6	20	62
DH451033	3.3	6	20	62
DH451034	3.4	6	20	62
DH451035	3.5	6	20	62
DH451036	3.6	6	20	62
DH451037	3.7	6	20	62
DH451038	3.8	6	24	66
DH451039	3.9	6	24	66
DH451040	4.0	6	24	66
DH451041	4.1	6	24	66
DH451042	4.2	6	24	66
DH451043	4.3	6	24	66
DH451044	4.4	6	24	66
DH451045	4.5	6	24	66
DH451046	4.6	6	24	66
DH451047	4.7	6	24	66
DH451048	4.8	6	28	66
DH451049	4.9	6	28	66

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH451050	5.0	6	28	66
DH451051	5.1	6	28	66
DH451052	5.2	6	28	66
DH451053	5.3	6	28	66
DH451054	5.4	6	28	66
DH451055	5.5	6	28	66
DH451056	5.6	6	28	66
DH451057	5.7	6	28	66
DH451058	5.8	6	28	66
DH451059	5.9	6	28	66
DH451060	6.0	6	28	66
DH451061	6.1	8	34	79
DH451062	6.2	8	34	79
DH451063	6.3	8	34	79
DH451064	6.4	8	34	79
DH451065	6.5	8	34	79
DH451066	6.6	8	34	79
DH451067	6.7	8	34	79
DH451068	6.8	8	34	79
DH451069	6.9	8	34	79

► Other shank types are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P			H	M	K	N			S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55							
◎	◎	○		◎		○				○

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


3 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	
				L ₁	L ₂
TiAlN	D ₁	D ₂	L ₁	L ₂	
DH451070	7.0	8	34	79	
DH451071	7.1	8	41	79	
DH451072	7.2	8	41	79	
DH451073	7.3	8	41	79	
DH451074	7.4	8	41	79	
DH451075	7.5	8	41	79	
DH451076	7.6	8	41	79	
DH451077	7.7	8	41	79	
DH451078	7.8	8	41	79	
DH451079	7.9	8	41	79	
DH451080	8.0	8	41	79	
DH451081	8.1	10	47	89	
DH451082	8.2	10	47	89	
DH451083	8.3	10	47	89	
DH451084	8.4	10	47	89	
DH451085	8.5	10	47	89	
DH451086	8.6	10	47	89	
DH451087	8.7	10	47	89	
DH451088	8.8	10	47	89	
DH451089	8.9	10	47	89	

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			◎		○				○

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


3 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	
				L ₁	L ₂
TiAlN	D ₁	D ₂	L ₁	L ₂	
DH451110	11.0	12	55	102	
DH451111	11.1	12	55	102	
DH451112	11.2	12	55	102	
DH451113	11.3	12	55	102	
DH451114	11.4	12	55	102	
DH451115	11.5	12	55	102	
DH451116	11.6	12	55	102	
DH451117	11.7	12	55	102	
DH451118	11.8	12	55	102	
DH451119	11.9	12	55	102	
DH451120	12.0	12	55	102	
DH451125	12.5	14	60	107	
DH451130	13.0	14	60	107	
DH451135	13.5	14	60	107	

▶ Other shank types are available on your request.

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	
				L ₁	L ₂
TiAlN	D ₁	D ₂	L ₁	L ₂	
DH451140	14.0	14	60	107	
DH451145	14.5	16	65	115	
DH451150	15.0	16	65	115	
DH451155	15.5	16	65	115	
DH451160	16.0	16	65	115	
DH451165	16.5	18	73	123	
DH451170	17.0	18	73	123	
DH451175	17.5	18	73	123	
DH451180	18.0	18	73	123	
DH451185	18.5	20	79	131	
DH451190	19.0	20	79	131	
DH451195	19.5	20	79	131	
DH451200	20.0	20	79	131	

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			◎		○				○

**TiAIN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (5XD)**
**LONG
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
- ▶ TiAIN coating for better surface finishes and longer tool life


5 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D ₁	D ₂	L ₁	L ₂
TiAIN	D ₁	D ₂	L ₁	L ₂
DH452010	1.0	3	8	55
DH452011	1.1	3	12	55
DH452012	1.2	3	12	55
DH452013	1.3	3	12	55
DH452014	1.4	3	12	55
DH452015	1.5	3	16	55
DH452016	1.6	3	16	55
DH452017	1.7	3	16	55
DH452018	1.8	3	16	55
DH452019	1.9	3	16	55
DH452020	2.0	4	21	57
DH452021	2.1	4	21	57
DH452022	2.2	4	21	57
DH452023	2.3	4	21	57
DH452024	2.4	4	21	57
DH452025	2.5	4	21	57
DH452026	2.6	4	21	57
DH452027	2.7	4	21	57
DH452028	2.8	4	21	57
DH452029	2.9	4	21	57
DH452030	3.0	6	28	66
DH452031	3.1	6	28	66
DH452032	3.2	6	28	66
DH452033	3.3	6	28	66
DH452034	3.4	6	28	66

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○		◎		○				○	

**TiAIN-COATED SOLID CARBIDE DREAM DRILLS
INOX with Coolant Holes (5XD)**
**LONG
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
- ▶ TiAIN coating for better surface finishes and longer tool life


5 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D ₁	D ₂	L ₁	L ₂
TiAIN	D ₁	D ₂	L ₁	L ₂
DH452060	6.0	6	44	82
DH452061	6.1	8	53	91
DH452062	6.2	8	53	91
DH452063	6.3	8	53	91
DH452064	6.4	8	53	91
DH452065	6.5	8	53	91
DH452066	6.6	8	53	91
DH452067	6.7	8	53	91
DH452068	6.8	8	53	91
DH452069	6.9	8	53	91
DH452070	7.0	8	53	91
DH452071	7.1	8	53	91
DH452072	7.2	8	53	91
DH452073	7.3	8	53	91
DH452074	7.4	8	53	91
DH452075	7.5	8	53	91
DH452076	7.6	8	53	91
DH452077	7.7	8	53	91
DH452078	7.8	8	53	91
DH452079	7.9	8	53	91
DH452080	8.0	8	53	91
DH452081	8.1	10	61	103
DH452082	8.2	10	61	103
DH452083	8.3	10	61	103
DH452084	8.4	10	61	103

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○		◎		○				○	

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


5 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DH452110	11.0	12	71	118
DH452111	11.1	12	71	118
DH452112	11.2	12	71	118
DH452113	11.3	12	71	118
DH452114	11.4	12	71	118
DH452115	11.5	12	71	118
DH452116	11.6	12	71	118
DH452117	11.7	12	71	118
DH452118	11.8	12	71	118
DH452119	11.9	12	71	118
DH452120	12.0	12	71	118
DH452125	12.5	14	77	124
DH452130	13.0	14	77	124
DH452135	13.5	14	77	124

▶ Other shank types are available on your request.

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DH452140	14.0	14	77	124
DH452145	14.5	16	83	133
DH452150	15.0	16	83	133
DH452155	15.5	16	83	133
DH452160	16.0	16	83	133
DH452165	16.5	18	93	143
DH452170	17.0	18	93	143
DH452175	17.5	18	93	143
DH452180	18.0	18	93	143
DH452185	18.5	20	101	153
DH452190	19.0	20	101	153
DH452195	19.5	20	101	153
DH452200	20.0	20	101	153

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			◎		○				○

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


8 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DH453030	3.0	6	34	72
DH453031	3.1	6	34	72
DH453032	3.2	6	34	72
DH453033	3.3	6	34	72
DH453034	3.4	6	34	72
DH453035	3.5	6	34	72
DH453036	3.6	6	34	72
DH453037	3.7	6	34	72
DH453038	3.8	6	43	81
DH453039	3.9	6	43	81
DH453040	4.0	6	43	81
DH453041	4.1	6	43	81
DH453042	4.2	6	43	81
DH453043	4.3	6	43	81
DH453044	4.4	6	43	81
DH453045	4.5	6	43	81
DH453046	4.6	6	43	81
DH453047	4.7	6	43	81
DH453048	4.8	6	57	95
DH453049	4.9	6	57	95
DH453050	5.0	6	57	95
DH453051	5.1	6	57	95
DH453052	5.2	6	57	95
DH453053	5.3	6	57	95
DH453054	5.4	6	57	95
DH453055	5.5	6	57	95

▶ Other shank types are available on your request.

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DH453056	5.6	6	57	95
DH453057	5.7	6	57	95
DH453058	5.8	6	57	95
DH453059	5.9	6	57	95
DH453060	6.0	6	57	95
DH453061	6.1	8	76	114
DH453062	6.2	8	76	114
DH453063	6.3	8	76	114
DH453064	6.4	8	76	114
DH453065	6.5	8	76	114
DH453066	6.6	8	76	114
DH453067	6.7	8	76	114
DH453068	6.8	8	76	114
DH453069	6.9	8	76	114
DH453070	7.0	8	76	114
DH453071	7.1	8	76	114
DH453072	7.2	8	76	114
DH453073	7.3	8	76	114
DH453074	7.4	8	76	114
DH453075	7.5	8	76	114
DH453076	7.6	8	76	114
DH453077	7.7	8	76	114
DH453078	7.8	8	76	114
DH453079	7.9	8	76	114
DH453080	8.0	8	76	114
DH453081	8.1	10	95	142

▶ NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			◎		○				○

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

EXTRA LONG 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



8 x D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH453082	8.2	10	95	142
DH453083	8.3	10	95	142
DH453084	8.4	10	95	142
DH453085	8.5	10	95	142
DH453086	8.6	10	95	142
DH453087	8.7	10	95	142
DH453088	8.8	10	95	142
DH453089	8.9	10	95	142
DH453090	9.0	10	95	142
DH453091	9.1	10	95	142
DH453092	9.2	10	95	142
DH453093	9.3	10	95	142
DH453094	9.4	10	95	142
DH453095	9.5	10	95	142
DH453096	9.6	10	95	142
DH453097	9.7	10	95	142
DH453098	9.8	10	95	142
DH453099	9.9	10	95	142
DH453100	10.0	10	95	142
DH453101	10.1	12	114	162
DH453102	10.2	12	114	162
DH453103	10.3	12	114	162

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH453104	10.4	12	114	162
DH453105	10.5	12	114	162
DH453106	10.6	12	114	162
DH453107	10.7	12	114	162
DH453108	10.8	12	114	162
DH453109	10.9	12	114	162
DH453110	11.0	12	114	162
DH453111	11.1	12	114	162
DH453112	11.2	12	114	162
DH453113	11.3	12	114	162
DH453114	11.4	12	114	162
DH453115	11.5	12	114	162
DH453116	11.6	12	114	162
DH453117	11.7	12	114	162
DH453118	11.8	12	114	162
DH453119	11.9	12	114	162
DH453120	12.0	12	114	162
DH453125	12.5	14	133	178
DH453130	13.0	14	133	178
DH453135	13.5	14	133	178
DH453140	14.0	14	133	178

Unit : mm

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N			S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			◎		○				○

RECOMMENDED CUTTING CONDITIONS

DREAM DRILLS · INOX

TiAIN-COATED SOLID CARBIDE DREAM DRILLS INOX with Coolant Holes

DH451 | DH452 | DH453 SERIES

WORK MATERIAL	P		M				N				S			
	CARBON STEELS		STAINLESS STEELS		STAINLESS STEELS		ALUMINUM		ALUMINUM		NON FRERROUS		TITANIUM TI ALLOYS	
STRENGTH			< 800 N/mm ²		> 800 N/mm ²		< 10% Si		> 10% Si					
DRILLING SPEED	105 ~ 125 m/min		60 ~ 70 m/min		35 ~ 45 m/min		200 ~ 220 m/min		155 ~ 175 m/min		105 ~ 125 m/min		40 ~ 50 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1.0	26000	0.02	12000	0.02	6200	0.02	48000	0.04	38000	0.03	38000	0.02	8100	0.01
1.5	18000	0.03	9000	0.03	5400	0.02	43000	0.05	32000	0.04	25500	0.03	7500	0.01
2.5	10800	0.05	7000	0.04	4200	0.03	25500	0.08	19500	0.06	15500	0.05	4500	0.02
3.0	13000	0.04	7400	0.04	4700	0.02	23000	0.12	18500	0.10	16000	0.08	5300	0.03
4.0	10000	0.05	5600	0.05	3600	0.03	17500	0.18	13900	0.15	11900	0.10	4000	0.04
5.0	8000	0.05	4400	0.05	2800	0.03	14000	0.20	11000	0.18	9500	0.12	3200	0.05
6.0	6600	0.06	3700	0.06	2400	0.04	11700	0.25	9300	0.25	8000	0.15	2650	0.06
8.0	5000	0.08	2800	0.08	1800	0.06	8800	0.30	7000	0.30	6000	0.18	2000	0.07
10.0	4000	0.10	2200	0.10	1400	0.08	7000	0.40	5600	0.35	4800	0.22	1600	0.08
12.0	3300	0.12	1900	0.12	1200	0.10	5800	0.50	4600	0.40	4000	0.26	1300	0.10
14.0	2800	0.15	1600	0.15	1000	0.12	5000	0.60	4000	0.50	3400	0.30	1100	0.12
16.0	2500	0.20	1400	0.20	900	0.15	4380	0.80	3500	0.60	3000	0.40	1000	0.14
18.0	2200	0.22	1250	0.22	800	0.17	3900	1.00	3100	0.70	2650	0.45	900	0.16
20.0	2000	0.24	1120	0.24	720	0.19	3500	1.20	2800	0.80	2400	0.50	800	0.18

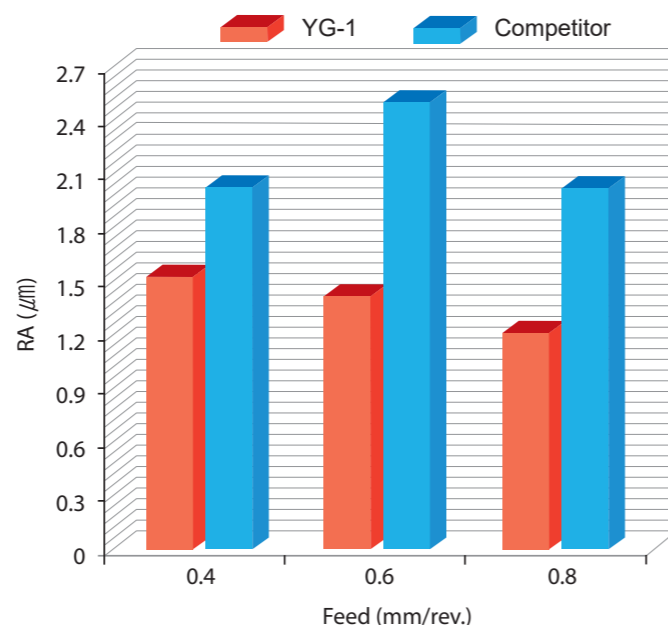
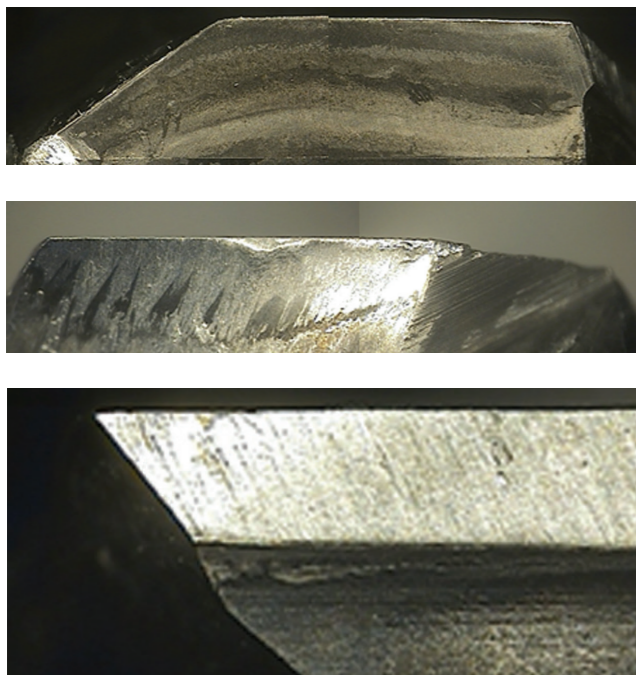
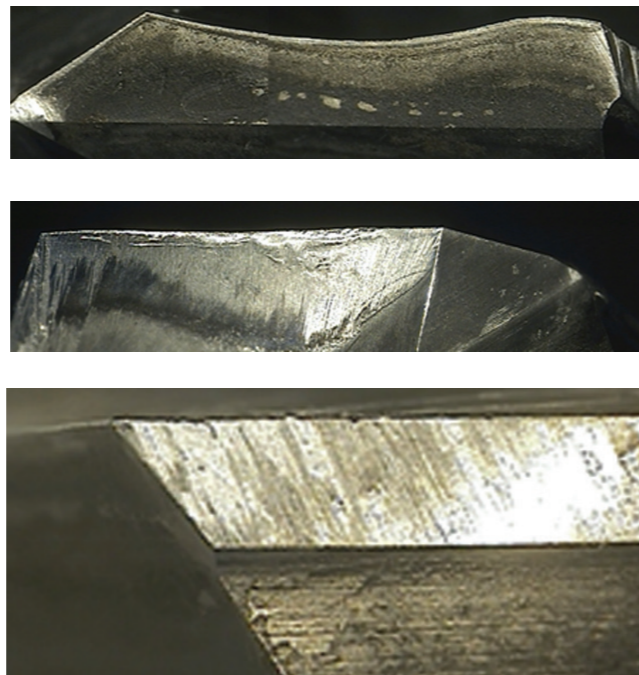
▶ Recommend to reduce the feed rate as following

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

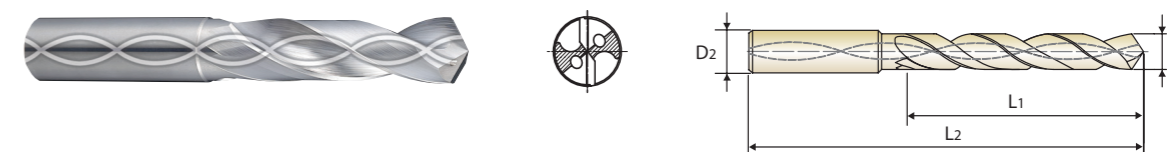
Feed 100% : DH451(3xD), DH452(5xD)
Feed 85% : DH453(8xD)

CASE STUDY
► SOLID CARBIDE DREAM DRILLS - ALU with Coolant Holes

CUTTING CONDITION	
Tool	D5433100 (DREAM DRILLS-ALU)
Size	Ø10.0×Ø10×61×103
Work Material	<ul style="list-style-type: none"> • DIN: AlMgSiCu • AISI: 6061 • JIS: A6061
RPM	0.4 ~ 0.8 mm/rev.
Feed	.0157 ~ .0315 inch/rev.
Drilling Depth	45 mm
Coolant	Wet cut


► YG-1 (Total Drilling 820 Holes)

► Competitor A (Total Drilling 820 Holes)

**SOLID CARBIDE DREAM DRILLS
ALU with Coolant Holes (3XD)**
**SHORT
D5432 SERIES**

- Optimized thinning 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


3 × D

EDP No.	Drill Diameter		Shank Diameter		Flute Length		Overall Length	
	D1	D2	D1	D2	L1	L2	L1	L2
D5432030	3.0	6	6	6	20	62		
D5432031	3.1	6	6	6	20	62		
D5432032	3.2	6	6	6	20	62		
D5432033	3.3	6	6	6	20	62		
D5432034	3.4	6	6	6	20	62		
D5432035	3.5	6	6	6	20	62		
D5432036	3.6	6	6	6	20	62		
D5432037	3.7	6	6	6	20	62		
D5432038	3.8	6	6	6	24	66		
D5432039	3.9	6	6	6	24	66		
D5432040	4.0	6	6	6	24	66		
D5432041	4.1	6	6	6	24	66		
D5432042	4.2	6	6	6	24	66		
D5432043	4.3	6	6	6	24	66		
D5432044	4.4	6	6	6	24	66		
D5432045	4.5	6	6	6	24	66		
D5432046	4.6	6	6	6	24	66		
D5432047	4.7	6	6	6	24	66		
D5432048	4.8	6	6	6	28	66		
D5432049	4.9	6	6	6	28	66		
D5432050	5.0	6	6	6	28	66		
D5432051	5.1	6	6	6	28	66		
D5432052	5.2	6	6	6	28	66		
D5432053	5.3	6	6	6	28	66		
D5432054	5.4	6	6	6	28	66		
D5432055	5.5	6	6	6	28	66		
D5432056	5.6	6	6	6	28	66		
D5432057	5.7	6	6	6	28	66		
D5432058	5.8	6	6	6	28	66		
D5432059	5.9	6	6	6	28	66		
D5432060	6.0	6	6	6	28	66		
D5432061	6.1	8	8	8	34	79		
D5432062	6.2	8	8	8	34	79		
D5432063	6.3	8	8	8	34	79		
D5432064	6.4	8	8	8	34	79		
D5432065	6.5	8	8	8	34	79		
D5432066	6.6	8	8	8	34	79		
D5432067	6.7	8	8	8	34	79		
D5432068	6.8	8	8	8	34	79		
D5432069	6.9	8	8	8	34	79		
D5432070	7.0	8	8	8	34	79		
D5432071	7.1	8	8	8	41	79		
D5432072	7.2	8	8	8	41	79		
D5432073	7.3	8	8	8	41	79		
D5432074	7.4	8	8	8	41	79		
D5432075	7.5	8	8	8	41	79		
D5432076	7.6	8	8	8	41	79		
D5432077	7.7	8	8	8	41	79		
D5432078	7.8	8	8	8	41	79		
D5432079	7.9	8	8	8	41	79		
D5432080	8.0	8	8	8	41	79		
D5432081	8.1	10	10	10	47	89		
D5432082	8.2	10	10	10	47	89		
D5432083	8.3	10	10	10	47	89		

- DLC coating is available on your request.
- Other shank types are available on your request.

► NEXT PAGE

◎ : Excellent ○ : Good

P			H	M	K	N			S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55							
									◎	

**SOLID CARBIDE DREAM DRILLS
ALU with Coolant Holes (3XD)**
**SHORT
D5432 SERIES**

- ▶ Optimized thinning 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


3 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1	D2	L1	L2
D5432084	8.4	10	47	89
D5432085	8.5	10	47	89
D5432086	8.6	10	47	89
D5432087	8.7	10	47	89
D5432088	8.8	10	47	89
D5432089	8.9	10	47	89
D5432090	9.0	10	47	89
D5432091	9.1	10	47	89
D5432092	9.2	10	47	89
D5432093	9.3	10	47	89
D5432094	9.4	10	47	89
D5432095	9.5	10	47	89
D5432096	9.6	10	47	89
D5432097	9.7	10	47	89
D5432098	9.8	10	47	89
D5432099	9.9	10	47	89
D5432100	10.0	10	47	89
D5432101	10.1	12	55	102
D5432102	10.2	12	55	102
D5432103	10.3	12	55	102
D5432104	10.4	12	55	102
D5432105	10.5	12	55	102
D5432106	10.6	12	55	102
D5432107	10.7	12	55	102
D5432108	10.8	12	55	102
D5432109	10.9	12	55	102
D5432110	11.0	12	55	102

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1	D2	L1	L2
D5432111	11.1	12	55	102
D5432112	11.2	12	55	102
D5432113	11.3	12	55	102
D5432114	11.4	12	55	102
D5432115	11.5	12	55	102
D5432116	11.6	12	55	102
D5432117	11.7	12	55	102
D5432118	11.8	12	55	102
D5432119	11.9	12	55	102
D5432120	12.0	12	55	102
D5432125	12.5	14	60	107
D5432130	13.0	14	60	107
D5432135	13.5	14	60	107
D5432140	14.0	14	60	107
D5432145	14.5	16	65	115
D5432150	15.0	16	65	115
D5432155	15.5	16	65	115
D5432160	16.0	16	65	115
D5432165	16.5	18	73	123
D5432170	17.0	18	73	123
D5432175	17.5	18	73	123
D5432180	18.0	18	73	123
D5432185	18.5	20	79	131
D5432190	19.0	20	79	131
D5432195	19.5	20	79	131
D5432200	20.0	20	79	131

- ▶ DLC coating is available on your request.
- ▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
-HB225	HB225~325	HRC30~45	HRC45~55 HRC55~								
					◎						

**SOLID CARBIDE DREAM DRILLS
ALU with Coolant Holes (5XD)**
**LONG
D5433 SERIES**

- ▶ Optimized thinning 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


5 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1	D2	L1	L2
D5433030	3.0	6	28	66
D5433031	3.1	6	28	66
D5433032	3.2	6	28	66
D5433033	3.3	6	28	66
D5433034	3.4	6	28	66
D5433035	3.5	6	28	66
D5433036	3.6	6	28	66
D5433037	3.7	6	28	66
D5433038	3.8	6	36	74
D5433039	3.9	6	36	74
D5433040	4.0	6	36	74
D5433041	4.1	6	36	74
D5433042	4.2	6	36	74
D5433043	4.3	6	36	74
D5433044	4.4	6	36	74
D5433045	4.5	6	36	74
D5433046	4.6	6	36	74
D5433047	4.7	6	36	74
D5433048	4.8	6	44	82
D5433049	4.9	6	44	82
D5433050	5.0	6	44	82
D5433051	5.1	6	44	82
D5433052	5.2	6	44	82
D5433053	5.3	6	44	82
D5433054	5.4	6	44	82
D5433055	5.5	6	44	82
D5433056	5.6	6	44	82
D5433057	5.7	6	44	82

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1	D2	L1	L2
D5433058	5.8	6	44	82
D5433059	5.9	6	44	82
D5433060	6.0	6	44	82
D5433061	6.1	8	53	91
D5433062	6.2	8	53	91
D5433063	6.3	8	53	91
D5433064	6.4	8	53	91
D5433065	6.5	8	53	91
D5433066	6.6	8	53	91
D5433067	6.7	8	53	91
D5433068	6.8	8	53	91
D5433069	6.9	8	53	91
D5433070	7.0	8	53	91
D5433071	7.1	8	53	91
D5433072	7.2	8	53	91
D5433073	7.3	8	53	91
D5433074	7.4	8	53	91
D5433075	7.5	8	53	91
D5433076	7.6	8	53	91
D5433077	7.7	8	53	91
D5433078	7.8	8	53	91
D5433079	7.9	8	53	91
D5433080	8.0	8	53	91
D5433081	8.1	10	61	103
D5433082	8.2	10	61	103
D5433083	8.3	10	61	103
D5433084	8.4	10	61	103
D5433085	8.5	10	61	103

- ▶ DLC coating is available on your request.
- ▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
-HB225	HB225~325	HRC30~45	HRC45~55 HRC55~								
					◎						

**SOLID CARBIDE DREAM DRILLS
ALU with Coolant Holes (5XD)**
**LONG
D5433 SERIES**

- ▶ Optimized thinning 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


5 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D ₁	D ₂	L ₁	L ₂
D5433086	8.6	10	61	103
D5433087	8.7	10	61	103
D5433088	8.8	10	61	103
D5433089	8.9	10	61	103
D5433090	9.0	10	61	103
D5433091	9.1	10	61	103
D5433092	9.2	10	61	103
D5433093	9.3	10	61	103
D5433094	9.4	10	61	103
D5433095	9.5	10	61	103
D5433096	9.6	10	61	103
D5433097	9.7	10	61	103
D5433098	9.8	10	61	103
D5433099	9.9	10	61	103
D5433100	10.0	10	61	103
D5433101	10.1	12	71	118
D5433102	10.2	12	71	118
D5433103	10.3	12	71	118
D5433104	10.4	12	71	118
D5433105	10.5	12	71	118
D5433106	10.6	12	71	118
D5433107	10.7	12	71	118
D5433108	10.8	12	71	118
D5433109	10.9	12	71	118
D5433110	11.0	12	71	118
D5433111	11.1	12	71	118

- ▶ DLC coating is available on your request.
- ▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N			S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55 HRC55~							
					◎					

**SOLID CARBIDE DREAM DRILLS
ALU with Coolant Holes (8XD)**
**EXTRA LONG
D5434 SERIES**

- ▶ Optimized thinning 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


8 × D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D ₁	D ₂	L ₁	L ₂
D5434030	3.0	6	34	72
D5434031	3.1	6	34	72
D5434032	3.2	6	34	72
D5434033	3.3	6	34	72
D5434034	3.4	6	34	72
D5434035	3.5	6	34	72
D5434036	3.6	6	34	72
D5434037	3.7	6	34	72
D5434038	3.8	6	43	81
D5434039	3.9	6	43	81
D5434040	4.0	6	43	81
D5434041	4.1	6	43	81
D5434042	4.2	6	43	81
D5434043	4.3	6	43	81
D5434044	4.4	6	43	81
D5434045	4.5	6	43	81
D5434046	4.6	6	43	81
D5434047	4.7	6	43	81
D5434048	4.8	6	57	95
D5434049	4.9	6	57	95
D5434050	5.0	6	57	95
D5434051	5.1	6	57	95
D5434052	5.2	6	57	95
D5434053	5.3	6	57	95
D5434054	5.4	6	57	95
D5434055	5.5	6	57	95
D5434056	5.6	6	57	95
D5434057	5.7	6	57	95

- ▶ DLC coating is available on your request.
- ▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N			S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55 HRC55~							
					◎					

SOLID CARBIDE DREAM DRILLS ALU with Coolant Holes (8XD)

EXTRA LONG D5434 SERIES

- ▶ Optimized thinning 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



8 × D

EDP No.	Drill Diameter		Overall Length	
	D ₁	D ₂	L ₁	L ₂
D5434086	8.6	10	95	142
D5434087	8.7	10	95	142
D5434088	8.8	10	95	142
D5434089	8.9	10	95	142
D5434090	9.0	10	95	142
D5434091	9.1	10	95	142
D5434092	9.2	10	95	142
D5434093	9.3	10	95	142
D5434094	9.4	10	95	142
D5434095	9.5	10	95	142
D5434096	9.6	10	95	142
D5434097	9.7	10	95	142
D5434098	9.8	10	95	142
D5434099	9.9	10	95	142
D5434100	10.0	10	95	142
D5434101	10.1	12	114	162
D5434102	10.2	12	114	162
D5434103	10.3	12	114	162
D5434104	10.4	12	114	162
D5434105	10.5	12	114	162

Unit : mm

EDP No.	Drill Diameter		Overall Length	
	D ₁	D ₂	L ₁	L ₂
D5434106	10.6	12	114	162
D5434107	10.7	12	114	162
D5434108	10.8	12	114	162
D5434109	10.9	12	114	162
D5434110	11.0	12	114	162
D5434111	11.1	12	114	162
D5434112	11.2	12	114	162
D5434113	11.3	12	114	162
D5434114	11.4	12	114	162
D5434115	11.5	12	114	162
D5434116	11.6	12	114	162
D5434117	11.7	12	114	162
D5434118	11.8	12	114	162
D5434119	11.9	12	114	162
D5434120	12.0	12	114	162
D5434125	12.5	14	133	178
D5434130	13.0	14	133	178
D5434135	13.5	14	133	178
D5434140	14.0	14	133	178

- ▶ DLC coating is available on your request.
- ▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N			S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~			◎				

RECOMMENDED CUTTING CONDITIONS

DREAM DRILLS · ALU

SOLID CARBIDE DREAM DRILLS ALU with Coolant Holes

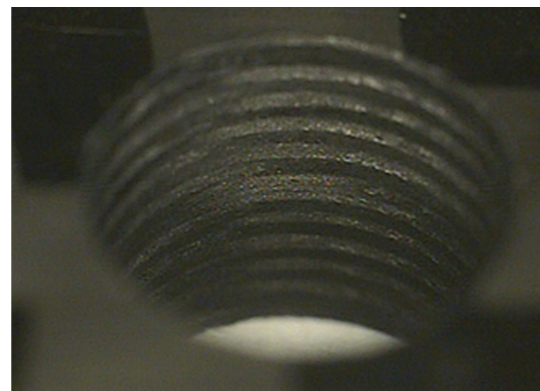
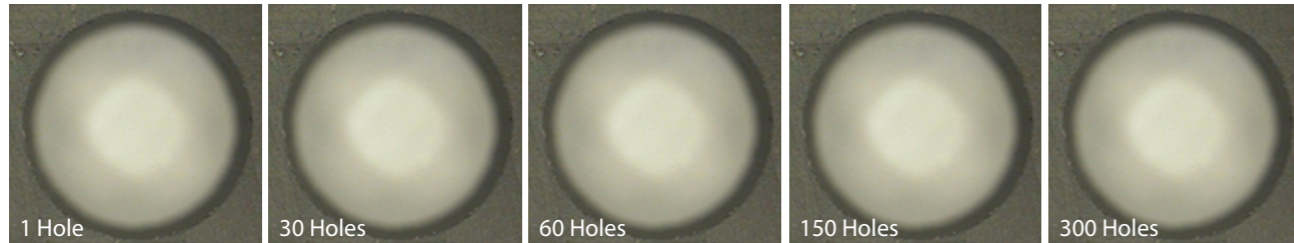
D5432 | D5433 | D5434 SERIES

WORK MATERIAL	N					
	ALUMINIUM ALLOY CASTING ALUMINIUM DIE CASTING			WROUGHT ALUMINIUM ALLOYS		
DIAMETER	RPM	SPEED	FEED	RPM	SPEED	FEED
3.0 ~ 6.0	8,000~15,000	80~150	0.2~0.5	8,000~15,000	80~150	0.15~0.3
~10.0	6,000~10,500	100~200	0.3~1.0	6,000~10,500	100~200	0.2~0.4
~14.0	4,500~5,800	150~250	0.3~1.0	4,500~5,800	150~250	0.2~0.4
~20.0	3,200~4,600	150~200	0.3~1.0	3,200~4,600	150~200	0.2~0.4

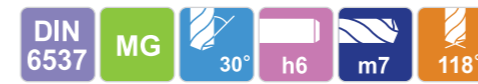
RPM = rev./min.
SPEED = m/min.
FEED = mm/rev.

CASE STUDY
▶ SOLID CARBIDE DREAM DRILLS - CFRP without Coolant Holes

CUTTING CONDITION	
Tool	DI473060 (DREAM DRILLS - CFRP)
Size	82×44×6×6Ø
Work Material	CFRP
RPM	6,366 rev./min.
Feed	254.64 mm/min.
Drilling Depth	6 mm, Through Hole
Coolant	Dry Cut


**DIAMOND-COATED SOLID CARBIDE DREAM DRILLS
CFRP without Coolant Holes**
DI473 SERIES

- ▶ Special point type to improve hole quality for Composite Materials
- ▶ Minimized burr and delamination at entry / exit hole
- ▶ Outstanding performance
- ▶ Long tool life and increased product by Diamond Coating



EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
DIAMOND COATED	D1	D2	L1	L2
DI473025	2.5	6	24	66
DI473030	3.0	6	28	66
DI473040	4.0	6	36	74
DI473050	5.0	6	44	82
DI473060	6.0	6	44	82
DI473080	8.0	8	53	91
DI473090	9.0	10	61	103
DI473100	10.0	10	61	103
DI473110	11.0	12	71	118
DI473120	12.0	12	71	118

Unit : mm

CUTTING CONDITIONS

WORK MATERIAL	N		
	CFRP		
DIAMETER	SPEED	RPM	FEED
2.5	100 ~ 150	12,700 ~ 19,000	0.03 ~ 0.07
3.0		10,600 ~ 15,900	
4.0		8,000 ~ 11,900	
5.0		6,370 ~ 9,500	
6.0		5,300 ~ 8,000	
8.0		4,000 ~ 6,000	
9.0		3,500 ~ 5,300	
10.0		3,200 ~ 4,700	
11.0		2,900 ~ 4,300	
12.0		2,700 ~ 3,900	

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

◎ : Excellent ○ : Good

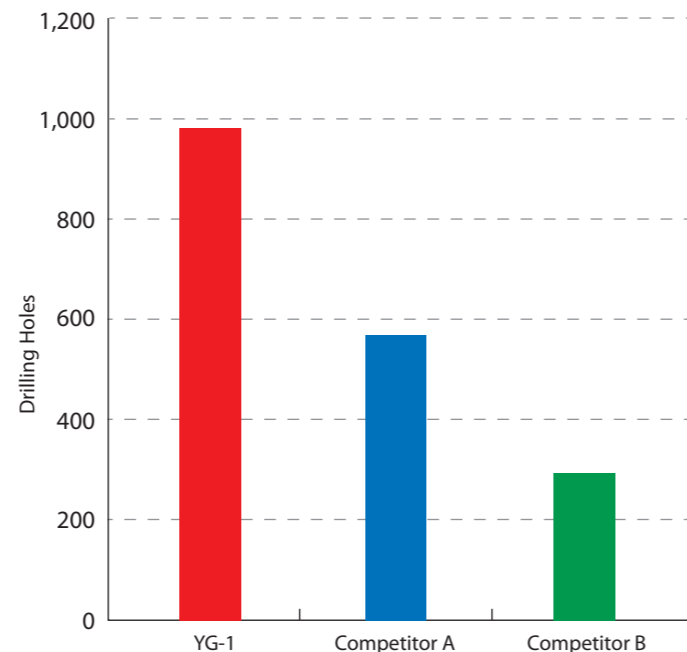
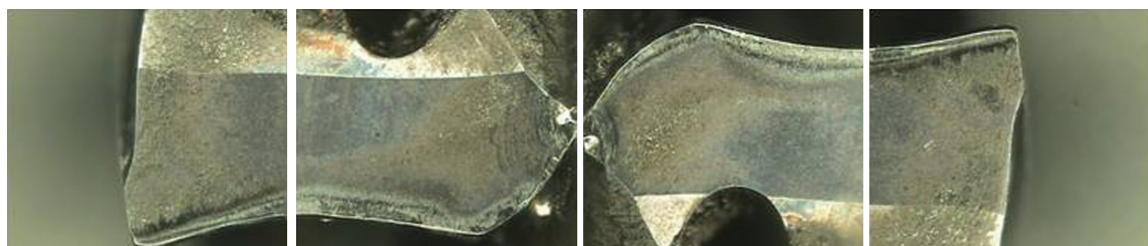
P		H	M	K	N			S		
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~					◎	

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

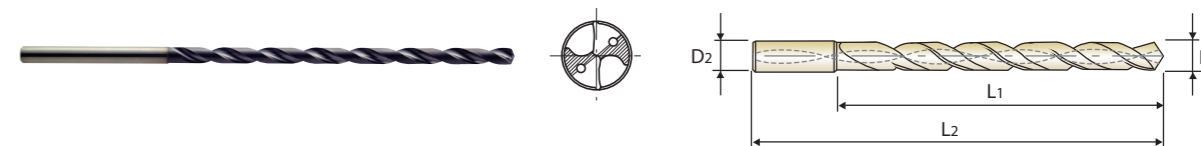
► SOLID CARBIDE DREAM DRILLS - MQL Type with Coolant Holes

CUTTING CONDITION	
Tool	DH520060 (DREAM DRILL- MQL TYPE, 20×D)
Size	Ø6×6×138×193
Work Material	• DIN: C45 • WR: 1.0503 • JIS: S45C(HRc25)
RPM	3,528 rev./min.
Feed	0.19 mm/rev.
Drilling Depth	80 mm
Coolant	Oil Mist (MQL Techniques)


► YG-1 (After Drilling 1,000 Holes)

► Competitor A (After Drilling 546 Holes)

**TiAIN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (10XD)**
**EXTRA LONG
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 TiAIN nano layer full coating
- MQL system compatible (Minimum Quantity Lubrication)


10×D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH510030	3.0	3	39	90
DH510033	3.3	4	46	97
DH510035	3.5	4	46	97
DH510040	4.0	4	52	103
DH510042	4.2	5	59	112
DH510045	4.5	5	59	112
DH510050	5.0	5	65	118
DH510055	5.5	6	72	127
DH510060	6.0	6	78	133
DH510065	6.5	7	85	141
DH510068	6.8	7	91	147
DH510070	7.0	7	91	147
DH510075	7.5	8	98	155

Unit : mm

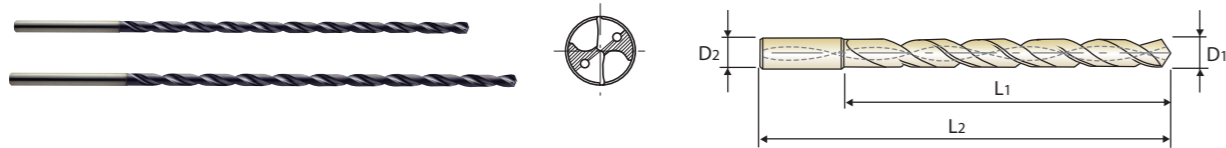
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH510080	8.0	8	104	161
DH510085	8.5	9	111	169
DH510090	9.0	9	117	175
DH510095	9.5	10	124	182
DH510100	10.0	10	130	188
DH510105	10.5	11	137	201
DH510110	11.0	11	143	207
DH510115	11.5	12	150	215
DH510120	12.0	12	156	221
DH510125	12.5	13	163	229
DH510130	13.0	13	169	235
DH510135	13.5	14	176	243
DH510140	14.0	14	182	249

◎ : Excellent ○ : Good

P			H	M	K	N			S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55							
◎	◎	○			○					

**TiAIN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (15XD, 20XD)**
EXTRA LONG
DH515 SERIES
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 TiAIN nano layer full coating
- ▶ MQL system compatible (Minimum Quantity Lubrication)



15×D (DH515)	20×D (DH520)
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DH515

EDP No.	Drill Diameter		Overall Length	
	D ₁	D ₂	L ₁	L ₂
DH515030	3.0	3	54	105
DH515035	3.5	4	63	114
DH515040	4.0	4	72	123
DH515045	4.5	5	81	134
DH515050	5.0	5	90	143
DH515055	5.5	6	99	154
DH515060	6.0	6	108	163
DH515070	7.0	7	126	182
DH515080	8.0	8	144	201
DH515090	9.0	9	162	220
DH515100	10.0	10	180	238
DH515110	11.0	11	198	262
DH515120	12.0	12	216	281

DH520

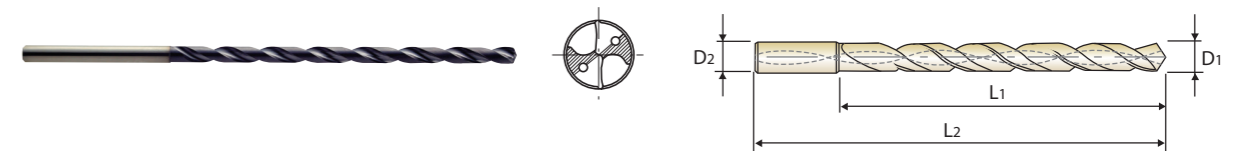
EDP No.	Drill Diameter		Overall Length	
	D ₁	D ₂	L ₁	L ₂
DH520030	3.0	3	69	120
DH520035	3.5	4	81	132
DH520040	4.0	4	92	143
DH520045	4.5	5	104	157
DH520050	5.0	5	115	168
DH520055	5.5	6	127	182
DH520060	6.0	6	138	193
DH520070	7.0	7	161	217
DH520080	8.0	8	184	241
DH520090	9.0	9	207	265
DH520100	10.0	10	230	288
DH520120	12.0	12	276	341

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○				○					

**TiAIN-COATED SOLID CARBIDE DREAM DRILLS
MQL with Coolant Holes (10XD, 15XD, 20XD)**
EXTRA LONG
DHM10 SERIES
DHM15 SERIES
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 TiAIN nano layer full coating
- ▶ MQL system compatible (Minimum Quantity Lubrication)



10×D (DHM10)	15×D (DHM15)	20×D (DHM20)
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DHM10

EDP No.	Drill Diameter		Overall Length	
	D ₁	D ₂	L ₁	L ₂
DHM10030	3.0	6	40	80
DHM10033	3.3	6	47	87
DHM10035	3.5	6	47	87
DHM10040	4.0	6	53	93
DHM10042	4.2	6	60	100
DHM10045	4.5	6	60	100
DHM10050	5.0	6	66	106
DHM10055	5.5	6	73	113
DHM10060	6.0	6	79	119
DHM10065	6.5	8	86	126
DHM10068	6.8	8	92	132
DHM10070	7.0	8	92	132
DHM10075	7.5	8	99	139
DHM10080	8.0	8	105	145
DHM10085	8.5	10	112	156
DHM10090	9.0	10	118	162
DHM10095	9.5	10	126	170
DHM10100	10.0	10	132	176
DHM10105	10.5	12	139	188
DHM10110	11.0	12	145	194
DHM10115	11.5	12	152	201
DHM10120	12.0	12	158	207
DHM10125	12.5	14	165	214
DHM10130	13.0	14	171	220
DHM10135	13.5	14	178	227
DHM10140	14.0	14	184	233

DHM15

EDP No.	Drill Diameter		Overall Length	
	D ₁	D ₂	L ₁	L ₂
DHM15030	3.0	6	55	95
DHM15035	3.5	6	64	104
DHM15040	4.0	6	73	113
DHM15045	4.5	6	82	122
DHM15050	5.0	6	91	131
DHM15055	5.5	6	100	140
DHM15060	6.0	6	109	149
DHM15070	7.0	8	127	167
DHM15080	8.0	8	145	185
DHM15090	9.0	10	163	207
DHM15100	10.0	10	182	226
DHM15110	11.0	12	200	249
DHM15120	12.0	12	218	267

DHM20

EDP No.	Drill Diameter		Overall Length	
	D ₁	D ₂	L ₁	L ₂
DHM20030	3.0	6	70	110
DHM20035	3.5	6	82	122
DHM20040	4.0	6	93	133
DHM20045	4.5	6	105	145
DHM20050	5.0	6	116	156
DHM20055	5.5	6	128	168
DHM20060	6.0	6	139	179
DHM20070	7.0	8	162	202
DHM20080	8.0	8	185	225
DHM20090	9.0	10	208	252
DHM20100	10.0	10	232	276
DHM20110	11.0	12	255	304
DHM20120	12.0	12	278	327

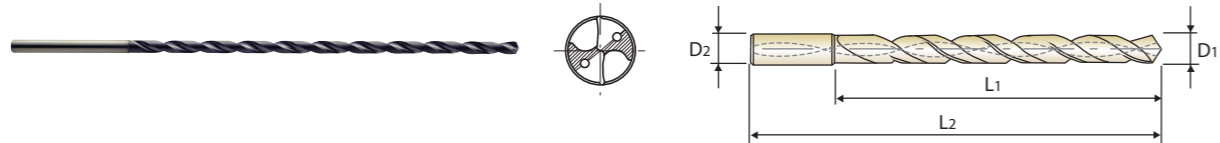
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○				○					

TiAlN-COATED SOLID CARBIDE DREAM DRILLS MQL with Coolant Holes (25XD, 30XD)

EXTRA LONG
DHM25 SERIES
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 TiAlN nano layer full coating
- ▶ MQL system compatible (Minimum Quantity Lubrication)



25 × D (DHM25) 30 × D (DHM30)

DHM25				
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DHM25030	3.0	6.0	85	125
DHM25035	3.5	6.0	99	139
DHM25040	4.0	6.0	113	153
DHM25045	4.5	6.0	127	167
DHM25050	5.0	6.0	141	181
DHM25055	5.5	6.0	155	195
DHM25060	6.0	6.0	169	209
DHM25070	7.0	8.0	197	237
DHM25080	8.0	8.0	225	265
DHM25090	9.0	10.0	253	297
DHM25100	10.0	10.0	282	326

DHM30				
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2
DHM30030	3.0	6.0	100	140
DHM30035	3.5	6.0	117	157
DHM30040	4.0	6.0	133	173
DHM30045	4.5	6.0	150	190
DHM30050	5.0	6.0	166	206
DHM30055	5.5	6.0	183	223
DHM30060	6.0	6.0	199	239
DHM30070	7.0	8.0	232	272
DHM30080	8.0	8.0	265	305

- ▶ Other shank types are available on your request.
- ▶ 35xD, 40xD are available on your request(Ø3~6)

◎ : Excellent ○ : Good

P				H	M	K	N			S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
-HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○				○					

RECOMMENDED CUTTING CONDITIONS

TiAlN-COATED SOLID CARBIDE DREAM DRILLS MQL with Coolant Holes

DH510 | DH515 | DH520 | DHM10 | DHM15 | DHM20 SERIES

WORK MATERIAL	P		K			
	CARBON STEELS ALLOY STEELS		CAST IRON		DUCTILE CAST IRON	
STRENGTH	~ 1060 N/mm ²		250 ~ 350 N/mm ²		400 ~ 500 N/mm ²	
DRILLING SPEED	63 ~ 125 m/min		63 ~ 125 m/min		60 ~ 80 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
3.0	7500	0.06~0.12	7500	0.06~0.12	7500	0.06~0.12
4.0	6400	0.08~0.16	6400	0.08~0.16	5600	0.08~0.16
5.0	5800	0.10~0.20	5800	0.10~0.20	4500	0.10~0.20
6.0	4800	0.12~0.24	4800	0.12~0.24	3800	0.12~0.24
8.0	3600	0.16~0.28	3600	0.16~0.28	2800	0.16~0.28
10.0	2900	0.20~0.35	2900	0.20~0.35	2300	0.20~0.35
12.0	2400	0.24~0.42	2400	0.24~0.42	1900	0.24~0.42
14.0	2050	0.28~0.46	2050	0.28~0.46	1600	0.28~0.46

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

DHM25 | DHM30 SERIES

WORK MATERIAL	P		K			
	CARBON STEELS ALLOY STEELS		CAST IRON		DUCTILE CAST IRON	
STRENGTH	~ 1060 N/mm ²		250 ~ 350 N/mm ²		400 ~ 500 N/mm ²	
DRILLING SPEED	50 ~ 110 m/min		50 ~ 110 m/min		40 ~ 70 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
3.0	6400	0.06~0.12	6400	0.06~0.12	6400	0.06~0.12
4.0	5500	0.08~0.16	5500	0.08~0.16	4700	0.08~0.16
5.0	4900	0.10~0.20	4900	0.10~0.20	3800	0.10~0.20
6.0	4200	0.12~0.24	4200	0.12~0.24	3200	0.12~0.24
8.0	3000	0.16~0.28	3000	0.16~0.28	2400	0.16~0.28
10.0	2500	0.20~0.35	2500	0.20~0.35	1900	0.20~0.35

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

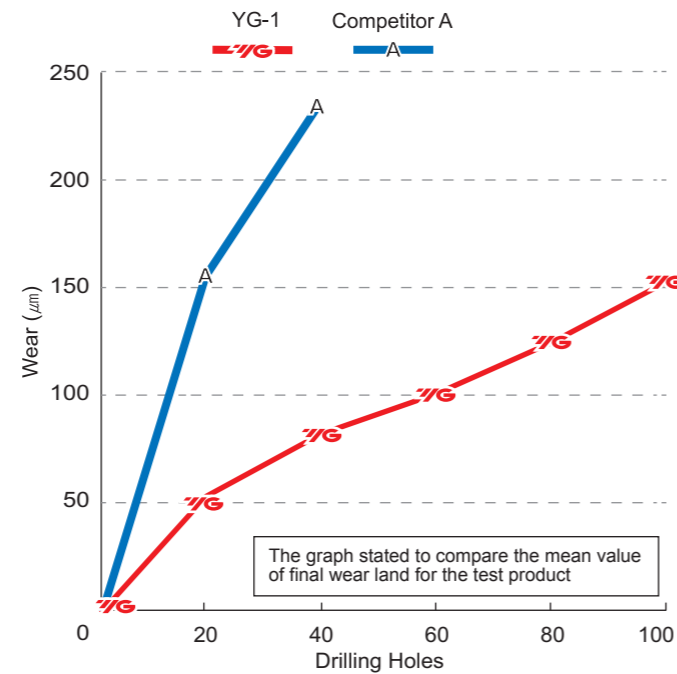
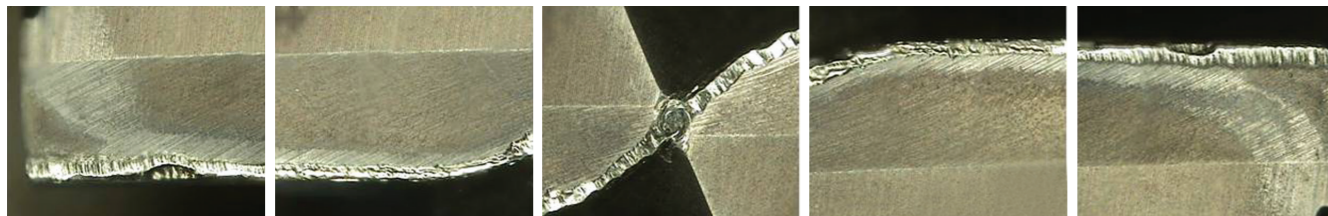
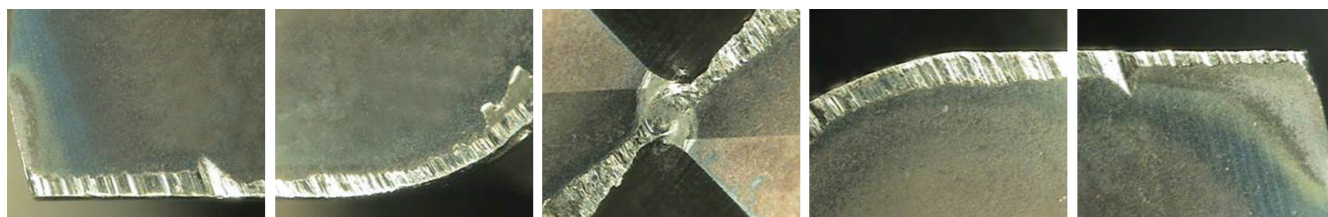
1. Guide Drilling should be done as Diameter+0.1mm between 3xD and 5xD depth.
2. For Main Drilling, proceed with low RPM at Guide Drilling segment. (RPM 300, FEED 400mm/min)
3. Just before the end of Guide Drilling segment, reduce feed to zero and increase the RPM according to Recommended Cutting Condition chart (See above).
4. After then, proceed main drilling by increasing feed without step drilling.
5. When coming out from Guide Drilling start point after drilling, RPM should be reduced as 300 and feed should be 1000 mm/min.
6. When coming out from Guide Drilling segment to the outside, the feed should be decreased as 50%.

CASE STUDY

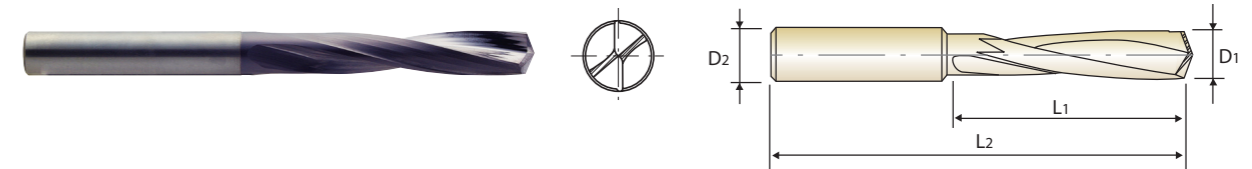
- Low Helix Angle to maximize tools' rigidity.
- Special Point Thinning to improve chip evacuation.
- Excellent Coating and Surface Treatment for improved surface and better chip evacuation.

► SOLID CARBIDE DREAM DRILLS for HIGH HARDENED STEELS (HRc50~70)

CUTTING CONDITION	
Tool	DH500100 (Dream Drills for High Hardened Steels)
Size	Ø10×10×63×111
Work Material	• DIN: X155CrV-Mo12-1 • WR: 1.2379 • JIS: SKD11(HRc60)
RPM	380 rev./min.
Feed	0.04 mm/rev.
Drilling Depth	25 mm(2.5xD)
Coolant	Wet Cut


► YG-1 (After Drilling 100 Holes)

► Competitor A (After Drilling 40 Holes)

TiAIN-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
- Minimum of cutting load through special thinning
- Performing good chip removal and powerful drilling



EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH500026	2.6	3	14	44
DH500030	3.0	3	16	46
DH500033	3.3	4	18	48
DH500034	3.4	4	20	50
DH500035	3.5	4	20	50
DH500040	4.0	4	22	52
DH500042	4.2	6	25	65
DH500043	4.3	6	28	68
DH500044	4.4	6	28	68
DH500045	4.5	6	28	68
DH500050	5.0	6	32	72
DH500051	5.1	6	32	72
DH500052	5.2	6	32	72
DH500055	5.5	6	35	75
DH500060	6.0	6	35	75
DH500065	6.5	8	40	80
DH500068	6.8	8	45	85
DH500069	6.9	8	45	85

Unit: mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2
DH500070	7.0	8	45	85
DH500075	7.5	8	45	85
DH500080	8.0	8	50	98
DH500085	8.5	10	50	98
DH500086	8.6	10	57	105
DH500088	8.8	10	57	105
DH500090	9.0	10	57	105
DH500095	9.5	10	57	105
DH500100	10.0	10	63	111
DH500102	10.2	12	63	111
DH500103	10.3	12	63	111
DH500105	10.5	12	63	111
DH500108	10.8	12	71	119
DH500110	11.0	12	71	119
DH500115	11.5	12	71	119
DH500120	12.0	12	71	119
DH500140	14.0	14	77	125

◎ : Excellent ○ : Good

P			H	M	K	N			S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55 HRc55~							
			◎	◎						

TiAlN-COATED SOLID CARBIDE DREAM DRILLS for High Hardened Steels

DH500 SERIES

WORK MATERIAL	P		H			
	HARDENED STEELS		HIGH HARDENED STEELS			
HARDNESS	HRc 50~55		HRc 55~60		HRc 60~70	
DRILLING SPEED	14 ~ 22 m/min		10 ~ 16 m/min		8 ~ 13 m/min	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
3.0	1900	0.04	1330	0.04	1250	0.04
4.0	1430	0.04	1000	0.04	950	0.04
5.0	1150	0.04	800	0.04	750	0.04
6.0	960	0.04	670	0.04	630	0.04
8.0	720	0.04	500	0.04	480	0.04
10.0	570	0.04	400	0.04	380	0.04
12.0	480	0.04	330	0.04	320	0.04
14.0	438	0.04	282	0.04	272	0.04

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



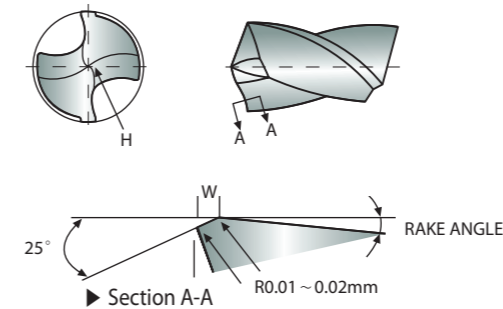
CHARACTERISTIC OF DREAM DRILLS

- 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

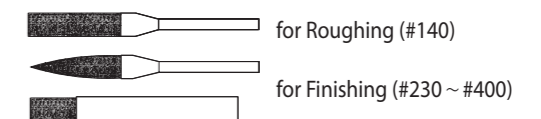


HONING GUIDE OF DREAM DRILLS

Dimension of Honing



Scraper

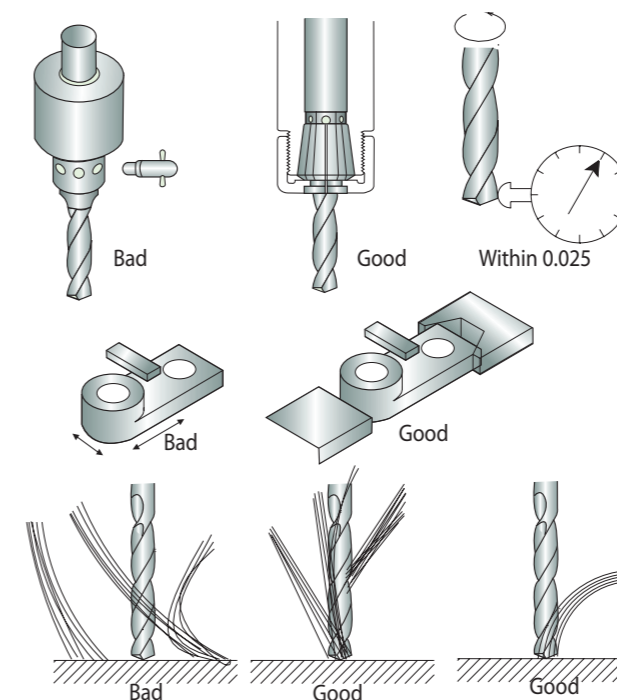


Work Material	Alloy Steels	Mild Steels	Cast Iron
W(mm)	0.15 ~ 0.2	0.1 ~ 0.15	0.03

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



USE OF DREAM DRILLS

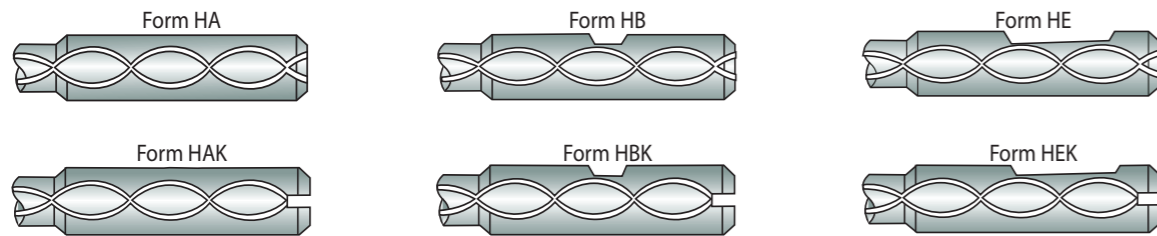


- ▶ Chucking with spring collet correctly.
- ▶ Radial run out at cutting lip must not exceed 0.025 mm.

▶ Tighten clamp of work piece.

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

SHANK TYPE DREAM DRILLS WITH COOLANT HOLES



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

ISO TOLERANCE

$\mu\text{m} = 1/1000\text{mm}$

Diameter (mm)	1 - 3 from to	3 - 6 over to	6 - 10 over to	10 - 18 over to	18 - 30 over to	30 - 50 over to
Tolerance range in μm / Toleranzwerte in μm						
h6	0 - 6	0 - 8	0 - 9	0 - 11	0 - 13	0 - 16
h7	0 - 10	0 - 12	0 - 15	0 - 18	0 - 21	0 - 25
h8	0 - 14	0 - 18	0 - 22	0 - 27	0 - 33	0 - 39
m7	+ 12 + 2	+ 16 + 4	+ 21 + 6	+ 25 + 7	+ 29 + 8	+ 34 + 9

HIGH QUALITY PRODUCTS and ON TIME DELIVERY for WORLD-WIDE CUSTOMERS

Since 1982, YG-1 has been committed to quality, innovation and the unique customer experience. Our performance and experience have granted YG-1 the global impression of one of the leading manufacturers of high quality cutting tool solutions. This global footprint expands over 75 countries, with international logistic centers, pledging to our customers to give the best service available today - and tomorrow.

EUROPE



ASIA PACIFIC



AMERICAS



AFRICA



YG-1 CO., LTD.

* For the more information on sales network, please contact the head office as below;

YG-1 HEAD OFFICE

211, Sewolcheon-ro, Bupyeong-gu, Incheon, South Korea
 Phone : +82-32-526-0909
 E-mail : yg1@yg1.kr
 www.yg1.kr