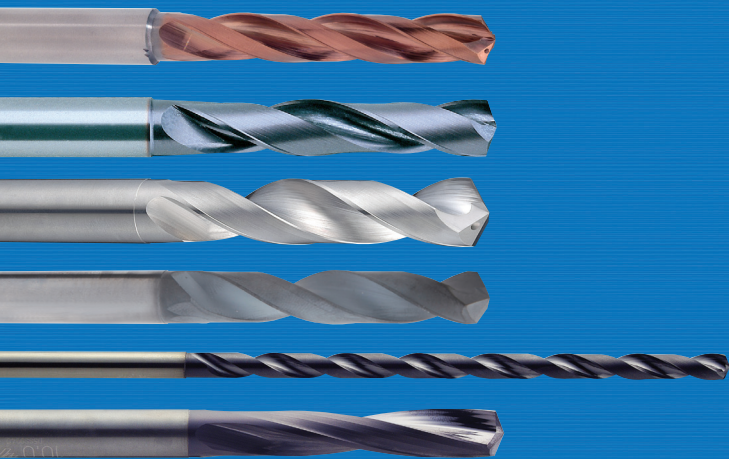


# SOLID CARBIDE **DREAM DRILLS**



**YG** YG-1 CO., LTD.

## HEAD OFFICE

211, SEWOLCHEON-RO, BUPYEONG-GU, INCHEON, KOREA

PHONE: +82-32-526-0909, FAX: +82-32-526-4373

[Http://www.yg1.kr](http://www.yg1.kr)

E-mail: [yg1@yg1.kr](mailto:yg1@yg1.kr)

Tool specifications are subject to change without notice.

**YE-DD15**



Registered  
ISO 9001:2008 / ISO 14001:2004



GLOBAL  
BRAND 2012

# SOLID CARBIDE

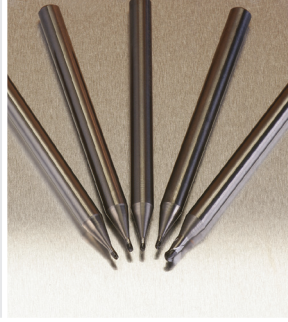
# DREAM DRILLS

- CARBIDE DREAM DRILLS - GENERAL  
(with/without COOLANT HOLES)
- NEW** • CARBIDE DREAM DRILLS - HIGH FEED  
(with COOLANT HOLES)
- CARBIDE DREAM DRILLS - INOX  
(with COOLANT HOLES)
- CARBIDE DREAM DRILLS - ALU  
(with COOLANT HOLES)
- CARBIDE DREAM DRILLS - CFRP
- CARBIDE DREAM DRILLS - MQL(10×D ~ 30×D)  
(with COOLANT HOLES)
- CARBIDE DREAM DRILLS  
for HIGH HARDENED STEELS  
(HRc50~70)





**CBN Ball End Mill**



**V7 Mill**



**X5070 End Mill**



**D-Power End Mill**



**Multi-1 Drill**



**Dream Drill**



**Tank-Power End Mill**



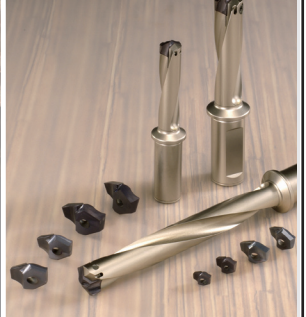
**HSS End Mill**



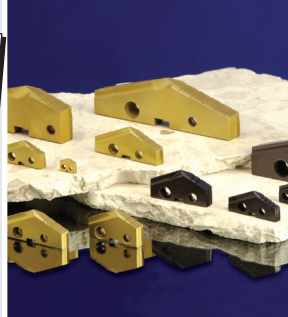
**X-mill**



**i-Dream Drill**



**Spade Drill Inserts**



**Certificate of Registration**  
This is to certify that:  
**YG-1 Co., Ltd.**  
211, Seodang-ro, Bupyeong-gu, Incheon, Korea.

Has been assessed by International Certification Registrar Ltd., in respect of their Quality Management Systems and found to comply with  
**ISO 9001:2008**

Approval is hereby granted for registration providing the rules and conditions relating to certification are observed at all times.

Certification Scope  
Design, Development, Manufacture and Servicing of  
Endmill, Drill, Rotary Drills, Insert, Holder

Certificate Issue Date : 06th February 2015    Initial issued date : 20th February 2009  
Expiration Date : 06th February 2018    Certificate No. : Q10427009

The Seal of ICR Limited was here to affixed in the presence of:  
*[Signature]*  
President

**Certificate of Registration**  
This is to certify that:  
**YG-1 Co., Ltd.**  
211, Seodang-ro, Bupyeong-gu, Incheon, Korea.

Has been assessed by International Certification Registrar Ltd., in respect of their Environmental Management Systems and found to comply with  
**ISO 14001:2004**

Approval is hereby granted for registration providing the rules and conditions relating to certification are observed at all times.

Certification Scope  
Design, Development, Manufacture and Servicing of  
Endmill, Drill, Rotary Drills, Insert, Holder

Certificate Issue Date : 06th February 2015    Initial issued date : 20th February 2009  
Expiration Date : 06th February 2018    Certificate No. : E14006399

The Seal of ICR Limited was here to affixed in the presence of:  
*[Signature]*  
President

**Combo Tap**



## SOLID CARBIDE DREAM DRILLS

### with / without COOLANT HOLES (3XD, 5XD, 8XD)

- ▶ Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.
- ▶ Advantage : Self centering - Center drilling is not required  
 Excellent positioning - Bush is not necessary  
 Special design - Reaming is not required  
 - Good chip removal  
 - Powerful drilling



**DH406, DH408, DH421 (with coolant holes)**

**P. 4~8**

**DH404, DH423, DH424 (without coolant holes)**

**P. 10~14**

## CARBIDE DREAM DRILLS **HIGH FEED**

### with COOLANT HOLES (3XD, 5XD)

- ▶ Application : Carbon Steels, Alloy Steels (~ HRC35), Cast Iron
- ▶ Advantage : Increases 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



**DGR493, DGR495**

**P. 18~19**



## SOLID CARBIDE DREAM DRILLS **INOX**

### with COOLANT HOLES (3XD, 5XD, 8XD)

- ▶ The tool has the special flute shape and geometry for suitable machining of stainless steels.
- ▶ Excellent chip evacuation due to better surface treatment.
- ▶ Point R-thinning makes the superior centering and chip curl.
- ▶ Applied TiAlN coating, achieves the better surface finish of material to be cut and longer tool life.

**DH451, DH452, DH453**

**P. 22~26**

## SOLID CARBIDE DREAM DRILLS **ALU**

### with COOLANT HOLES (3XD, 5XD, 8XD)

- ▶ Good chip treatment due to flute geometry & chip space
- ▶ Better finish & built-up edge preventive

**D5432, D5433, D5434**

**P. 30~34**

## SOLID CARBIDE DREAM DRILLS **CFRP**

- ▶ Special Point Type improve hole quality for Composite Material  
 -> Minimized Burr and Delamination at Entry / Exit Hole.
- ▶ Outstanding Performance
- ▶ Long tool life and increased Productivity by Diamond coating.



**DI473**

**P. 38**

## SOLID CARBIDE DREAM DRILLS **MQL TYPE**

### with COOLANT HOLES (10XD, 15XD, 20XD, 25XD, 30XD)

- ▶ Application : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.
- ▶ Advantage : Non step drilling up to 10 times of drill diameter.  
 Available for processing MQL (Minimum Quantity Lubrication).  
 Excellent positioning - Bush is not necessary.  
 Special design - Good chip removal  
 Powerful drilling



**DH510, DH515, DH520**

**P. 40~43**

**DHM10, DHM15, DHM20, DHM25, DHM30**

## SOLID CARBIDE DREAM DRILLS for HIGH HARDENED STEELS (HRC50~70)

- ▶ Application : Drilling for High Hardened Steels (Quenched Steels, Tempered Steels (Under HRC 70))
- ▶ Advantage : Special Design  
 Minimum of cutting load through special thinning  
 Good chip removal  
 Powerful Drilling

**DH500**

**P. 46**



# SOLID CARBIDE DREAM DRILLS APPLICATION TABLE

ITEM	LENGTH	PAGE	P					M	K	N	S		
			Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Mild Steels	Stainless Steels	Cast Iron	Aluminum	CFRP	Titanium
			~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~						

## SOLID CARBIDE DREAM DRILLS - GENERAL (with coolant holes)

DH406	SHORT (3xD)	p.4	○	◎	◎				○	○			
DH408	LONG (5xD)	p.6	○	◎	◎				○	○			
DH421	EXTRA LONG (8xD)	p.8	○	◎	◎				○	○			

## SOLID CARBIDE DREAM DRILLS - GENERAL (without coolant holes)

DH404	STUB (3xD)	p.10	○	◎	◎				○	○			
DH423	SHORT (3xD)	p.12	○	◎	◎				○	○			
DH424	LONG (5xD)	p.14	○	◎	◎				○	○			

## CARBIDE DREAM DRILLS - HIGH FEED (with coolant holes)

DGR493	SHORT (3xD)	p.18	◎	◎	○			○		◎			
DGR495	LONG (5xD)	p.19	◎	◎	○			○		◎			

## SOLID CARBIDE DREAM DRILLS - INOX (with coolant holes)

DH451	SHORT (3xD)	p.22	◎	◎	○			○	◎		○		○
DH452	LONG (5xD)	p.24	◎	◎	○			○	◎		○		○
DH453	EXTRA LONG (8xD)	p.26	◎	◎	○			○	◎		○		○

## SOLID CARBIDE DREAM DRILLS - ALU (with coolant holes)

D5432	SHORT (3xD)	p.30									◎		
D5433	LONG (5xD)	p.32									◎		
D5434	EXTRA LONG (8xD)	p.34									◎		

## SOLID CARBIDE DREAM DRILLS - CFRP

DI473	-	p.38										◎	
-------	---	------	--	--	--	--	--	--	--	--	--	---	--

## SOLID CARBIDE DREAM DRILLS - MQL TYPE (with coolant holes)

DH510	EXTRA LONG (10xD)	p.40	◎	◎	○			○		○			
DHM10		p.42											
DH515	EXTRA LONG (15xD)	p.41	◎	◎	○			○		○			
DHM15		p.42											
DH520	EXTRALONG (20xD)	p.41	◎	◎	○			○		○			
DHM20		p.42											
DHM25	EXTRA LONG (25xD)	p.43	◎	◎	○			○		○			
DHM30	EXTRA LONG (30xD)	p.43	◎	◎	○			○		○			

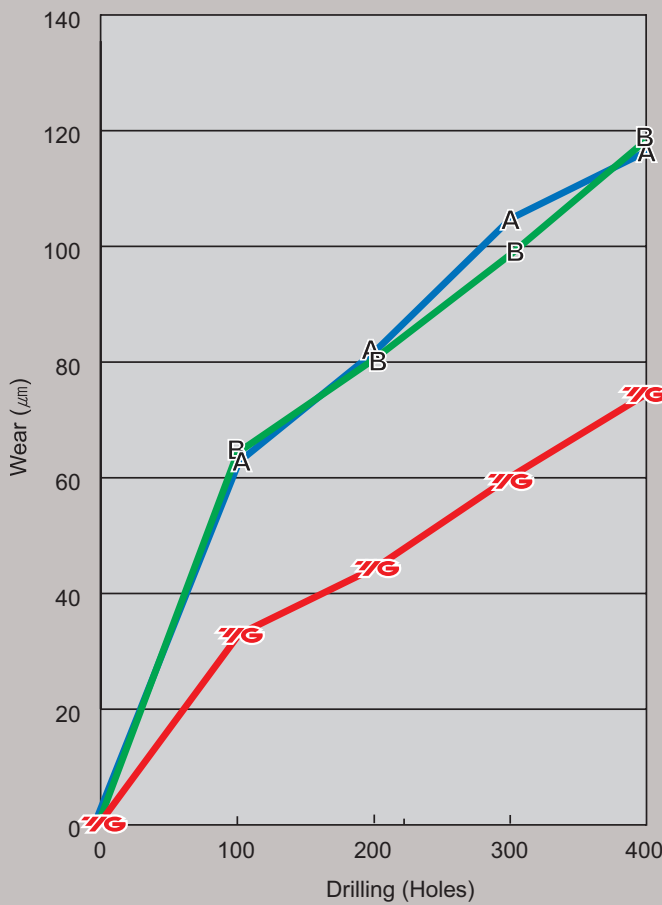
## SOLID CARBIDE DREAM DRILLS for HIGH HARDENED STEELS

DH500	-	p.46				◎	◎						
-------	---	------	--	--	--	---	---	--	--	--	--	--	--

\* Call for availability of micro-sized drills(Ø0.3 ~ Ø0.9 / for general purpose) and drills for inconel

# SOLID CARBIDE DREAM DRILLS - **Test Report**

## with COOLANT HOLES



— YG-1 YG-1  
— A Competitor A  
— B Competitor B

### Cutting Condition

**Tools** : DH408015 (Dream Drill with Coolant Holes)

**Size** : Ø 1.5 x 3 x 15 x 55

**Work Material** : • JIS:SKD61 (HRc30)

• DIN:X40GrMoV51

• WR: 1.2344

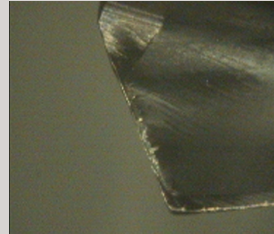
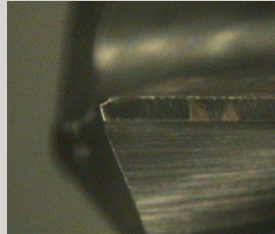
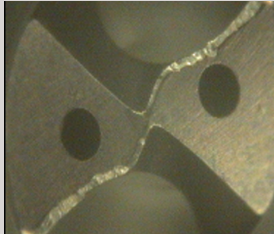
**R.P.M** : 14,856 rev./min.

**Feed** : 0.05 mm/rev.

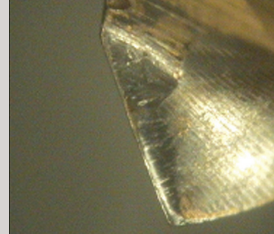
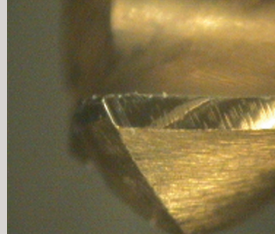
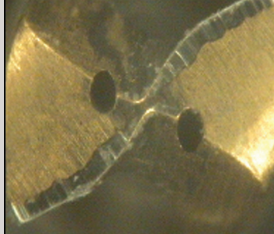
**Drilling Depth** : 7.5 mm

**Coolant** : Wet Cut

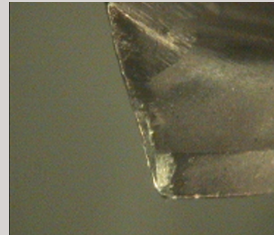
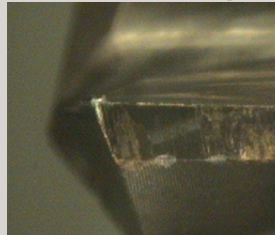
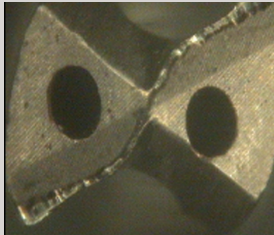
### YG-1 (Total Drilling 400 Holes)



### COMPETITOR A (Total Drilling 400 Holes)



### COMPETITOR B (Total Drilling 400 Holes)

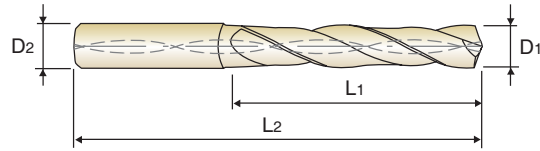






### SOLID CARBIDE DREAM DRILLS with COOLANT HOLES

- ▶ Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics..
- ▶ Advantage : Self centering - Center drilling is not required  
 Excellent positioning - Bush is not necessary  
 Special design - Reaming is not required  
 - Good chip removal  
 - Powerful drilling



DIN 6537
MG
h6
m7
140°
20 bar
P.16

## DREAM DRILLS | 3×D

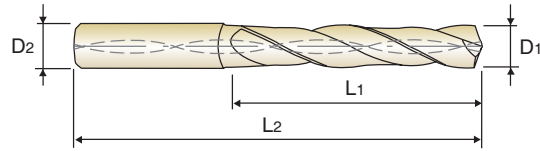
Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2	TiAIN	D1	D2	L1	L2
DH406030	3.0	6	20	62	DH406061	6.1	8	34	79
DH406031	3.1	6	20	62	DH406062	6.2	8	34	79
DH406032	3.2	6	20	62	DH406063	6.3	8	34	79
DH406033	3.3	6	20	62	DH406064	6.4	8	34	79
DH406034	3.4	6	20	62	DH406065	6.5	8	34	79
DH406035	3.5	6	20	62	DH406066	6.6	8	34	79
DH406036	3.6	6	20	62	DH406067	6.7	8	34	79
DH406037	3.7	6	20	62	DH406068	6.8	8	34	79
DH406038	3.8	6	24	66	DH406069	6.9	8	34	79
DH406039	3.9	6	24	66	DH406070	7.0	8	34	79
DH406040	4.0	6	24	66	DH406071	7.1	8	41	79
DH406041	4.1	6	24	66	DH406072	7.2	8	41	79
DH406042	4.2	6	24	66	DH406073	7.3	8	41	79
DH406043	4.3	6	24	66	DH406074	7.4	8	41	79
DH406044	4.4	6	24	66	DH406075	7.5	8	41	79
DH406045	4.5	6	24	66	DH406076	7.6	8	41	79
DH406046	4.6	6	24	66	DH406077	7.7	8	41	79
DH406047	4.7	6	24	66	DH406078	7.8	8	41	79
DH406048	4.8	6	28	66	DH406079	7.9	8	41	79
DH406049	4.9	6	28	66	DH406080	8.0	8	41	79
DH406050	5.0	6	28	66	DH406081	8.1	10	47	89
DH406051	5.1	6	28	66	DH406082	8.2	10	47	89
DH406052	5.2	6	28	66	DH406083	8.3	10	47	89
DH406053	5.3	6	28	66	DH406084	8.4	10	47	89
DH406054	5.4	6	28	66	DH406085	8.5	10	47	89
DH406055	5.5	6	28	66	DH406086	8.6	10	47	89
DH406056	5.6	6	28	66	DH406087	8.7	10	47	89
DH406057	5.7	6	28	66	DH406088	8.8	10	47	89
DH406058	5.8	6	28	66	DH406089	8.9	10	47	89
DH406059	5.9	6	28	66	DH406090	9.0	10	47	89
DH406060	6.0	6	28	66	DH406091	9.1	10	47	89



### SOLID CARBIDE DREAM DRILLS with COOLANT HOLES

- ▶ Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics..
- ▶ Advantage :
  - Self centering - Center drilling is not required
  - Excellent positioning - Bush is not necessary
  - Special design - Reaming is not required
  - Good chip removal
  - Powerful drilling



DIN 6537
MG
h6
m7
140°
20 bar
P.16

## DREAM DRILLS | 3×D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH406092	9.2	10	47	89	DH406115	11.5	12	55	102
DH406093	9.3	10	47	89	DH406116	11.6	12	55	102
DH406094	9.4	10	47	89	DH406117	11.7	12	55	102
DH406095	9.5	10	47	89	DH406118	11.8	12	55	102
DH406096	9.6	10	47	89	DH406119	11.9	12	55	102
DH406097	9.7	10	47	89	DH406120	12.0	12	55	102
DH406098	9.8	10	47	89	DH406125	12.5	14	60	107
DH406099	9.9	10	47	89	DH406130	13.0	14	60	107
DH406100	10.0	10	47	89	DH406135	13.5	14	60	107
DH406101	10.1	12	55	102	DH406140	14.0	14	60	107
DH406102	10.2	12	55	102	DH406145	14.5	16	65	115
DH406103	10.3	12	55	102	DH406150	15.0	16	65	115
DH406104	10.4	12	55	102	DH406155	15.5	16	65	115
DH406105	10.5	12	55	102	DH406160	16.0	16	65	115
DH406106	10.6	12	55	102	DH406165	16.5	18	73	123
DH406107	10.7	12	55	102	DH406170	17.0	18	73	123
DH406108	10.8	12	55	102	DH406175	17.5	18	73	123
DH406109	10.9	12	55	102	DH406180	18.0	18	73	123
DH406110	11.0	12	55	102	DH406185	18.5	20	79	131
DH406111	11.1	12	55	102	DH406190	19.0	20	79	131
DH406112	11.2	12	55	102	DH406195	19.5	20	79	131
DH406113	11.3	12	55	102	DH406200	20.0	20	79	131
DH406114	11.4	12	55	102					

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

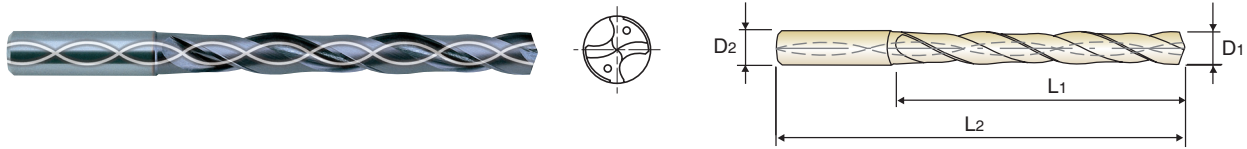
P					M	K	N		S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Mild Steels	Stainless Steels	Cast Iron	Aluminum	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~						
○	◎	◎				○	○			





### SOLID CARBIDE DREAM DRILLS with COOLANT HOLES

- ▶ Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics..
- ▶ Advantage : Self centering - Center drilling is not required  
 Excellent positioning - Bush is not necessary  
 Special design - Reaming is not required  
 - Good chip removal  
 - Powerful drilling



### DREAM DRILLS | 5 × D

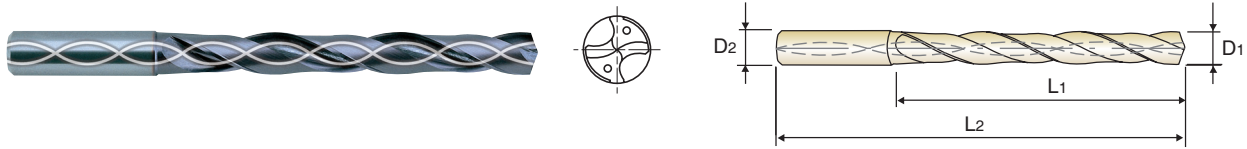
Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2	TiAIN	D1	D2	L1	L2
DH408010	1.0	3	8	55	DH408046	4.6	6	36	74
DH408011	1.1	3	12	55	DH408047	4.7	6	36	74
DH408012	1.2	3	12	55	DH408048	4.8	6	44	82
DH408013	1.3	3	12	55	DH408049	4.9	6	44	82
DH408014	1.4	3	12	55	DH408050	5.0	6	44	82
DH408015	1.5	3	16	55	DH408051	5.1	6	44	82
DH408016	1.6	3	16	55	DH408052	5.2	6	44	82
DH408017	1.7	3	16	55	DH408053	5.3	6	44	82
DH408018	1.8	3	16	55	DH408054	5.4	6	44	82
DH408019	1.9	3	16	55	DH408055	5.5	6	44	82
DH408020	2.0	4	21	57	DH408056	5.6	6	44	82
DH408021	2.1	4	21	57	DH408057	5.7	6	44	82
DH408022	2.2	4	21	57	DH408058	5.8	6	44	82
DH408023	2.3	4	21	57	DH408059	5.9	6	44	82
DH408024	2.4	4	21	57	DH408060	6.0	6	44	82
DH408025	2.5	4	21	57	DH408061	6.1	8	53	91
DH408026	2.6	4	21	57	DH408062	6.2	8	53	91
DH408027	2.7	4	21	57	DH408063	6.3	8	53	91
DH408028	2.8	4	21	57	DH408064	6.4	8	53	91
DH408029	2.9	4	21	57	DH408065	6.5	8	53	91
DH408030	3.0	6	28	66	DH408066	6.6	8	53	91
DH408031	3.1	6	28	66	DH408067	6.7	8	53	91
DH408032	3.2	6	28	66	DH408068	6.8	8	53	91
DH408033	3.3	6	28	66	DH408069	6.9	8	53	91
DH408034	3.4	6	28	66	DH408070	7.0	8	53	91
DH408035	3.5	6	28	66	DH408071	7.1	8	53	91
DH408036	3.6	6	28	66	DH408072	7.2	8	53	91
DH408037	3.7	6	28	66	DH408073	7.3	8	53	91
DH408038	3.8	6	36	74	DH408074	7.4	8	53	91
DH408039	3.9	6	36	74	DH408075	7.5	8	53	91
DH408040	4.0	6	36	74	DH408076	7.6	8	53	91
DH408041	4.1	6	36	74	DH408077	7.7	8	53	91
DH408042	4.2	6	36	74	DH408078	7.8	8	53	91
DH408043	4.3	6	36	74	DH408079	7.9	8	53	91
DH408044	4.4	6	36	74	DH408080	8.0	8	53	91
DH408045	4.5	6	36	74	DH408081	8.1	10	61	103



### SOLID CARBIDE DREAM DRILLS with COOLANT HOLES

- ▶ Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics..
- ▶ Advantage :
  - Self centering - Center drilling is not required
  - Excellent positioning - Bush is not necessary
  - Special design - Reaming is not required
  - Good chip removal
  - Powerful drilling



## DREAM DRILLS | 5 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2	TiAIN	D1	D2	L1	L2
DH408082	8.2	10	61	103	DH408110	11.0	12	71	118
DH408083	8.3	10	61	103	DH408111	11.1	12	71	118
DH408084	8.4	10	61	103	DH408112	11.2	12	71	118
DH408085	8.5	10	61	103	DH408113	11.3	12	71	118
DH408086	8.6	10	61	103	DH408114	11.4	12	71	118
DH408087	8.7	10	61	103	DH408115	11.5	12	71	118
DH408088	8.8	10	61	103	DH408116	11.6	12	71	118
DH408089	8.9	10	61	103	DH408117	11.7	12	71	118
DH408090	9.0	10	61	103	DH408118	11.8	12	71	118
DH408091	9.1	10	61	103	DH408119	11.9	12	71	118
DH408092	9.2	10	61	103	DH408120	12.0	12	71	118
DH408093	9.3	10	61	103	DH408125	12.5	14	77	124
DH408094	9.4	10	61	103	DH408130	13.0	14	77	124
DH408095	9.5	10	61	103	DH408135	13.5	14	77	124
DH408096	9.6	10	61	103	DH408140	14.0	14	77	124
DH408097	9.7	10	61	103	DH408145	14.5	16	83	133
DH408098	9.8	10	61	103	DH408150	15.0	16	83	133
DH408099	9.9	10	61	103	DH408155	15.5	16	83	133
DH408100	10.0	10	61	103	DH408160	16.0	16	83	133
DH408101	10.1	12	71	118	DH408165	16.5	18	93	143
DH408102	10.2	12	71	118	DH408170	17.0	18	93	143
DH408103	10.3	12	71	118	DH408175	17.5	18	93	143
DH408104	10.4	12	71	118	DH408180	18.0	18	93	143
DH408105	10.5	12	71	118	DH408185	18.5	20	101	153
DH408106	10.6	12	71	118	DH408190	19.0	20	101	153
DH408107	10.7	12	71	118	DH408195	19.5	20	101	153
DH408108	10.8	12	71	118	DH408200	20.0	20	101	153
DH408109	10.9	12	71	118					

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

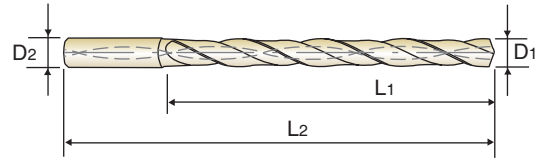
P					M	K	N	S		
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Mild Steels	Stainless Steels	Cast Iron	Aluminum	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~						
○	◎	◎			○	○				





### SOLID CARBIDE DREAM DRILLS with COOLANT HOLES

- ▶ Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics..
- ▶ Advantage : Self centering - Center drilling is not required  
 Excellent positioning - Bush is not necessary  
 Special design - Reaming is not required  
 - Good chip removal  
 - Powerful drilling



DIN 6537
MG
h6
m7
140°
20 bar
P.16

## DREAM DRILLS | 8 × D

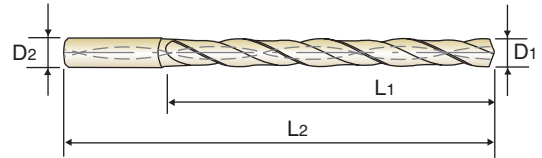
Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2	TiAIN	D1	D2	L1	L2
DH421030	3.0	6	34	72	DH421057	5.7	6	57	95
DH421031	3.1	6	34	72	DH421058	5.8	6	57	95
DH421032	3.2	6	34	72	DH421059	5.9	6	57	95
DH421033	3.3	6	34	72	DH421060	6.0	6	57	95
DH421034	3.4	6	34	72	DH421061	6.1	8	76	114
DH421035	3.5	6	34	72	DH421062	6.2	8	76	114
DH421036	3.6	6	34	72	DH421063	6.3	8	76	114
DH421037	3.7	6	34	72	DH421064	6.4	8	76	114
DH421038	3.8	6	43	81	DH421065	6.5	8	76	114
DH421039	3.9	6	43	81	DH421066	6.6	8	76	114
DH421040	4.0	6	43	81	DH421067	6.7	8	76	114
DH421041	4.1	6	43	81	DH421068	6.8	8	76	114
DH421042	4.2	6	43	81	DH421069	6.9	8	76	114
DH421043	4.3	6	43	81	DH421070	7.0	8	76	114
DH421044	4.4	6	43	81	DH421071	7.1	8	76	114
DH421045	4.5	6	43	81	DH421072	7.2	8	76	114
DH421046	4.6	6	43	81	DH421073	7.3	8	76	114
DH421047	4.7	6	43	81	DH421074	7.4	8	76	114
DH421048	4.8	6	57	95	DH421075	7.5	8	76	114
DH421049	4.9	6	57	95	DH421076	7.6	8	76	114
DH421050	5.0	6	57	95	DH421077	7.7	8	76	114
DH421051	5.1	6	57	95	DH421078	7.8	8	76	114
DH421052	5.2	6	57	95	DH421079	7.9	8	76	114
DH421053	5.3	6	57	95	DH421080	8.0	8	76	114
DH421054	5.4	6	57	95	DH421081	8.1	10	95	142
DH421055	5.5	6	57	95	DH421082	8.2	10	95	142
DH421056	5.6	6	57	95	DH421083	8.3	10	95	142



### SOLID CARBIDE DREAM DRILLS with COOLANT HOLES

- ▶ Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics..
- ▶ Advantage :
  - Self centering - Center drilling is not required
  - Excellent positioning - Bush is not necessary
  - Special design - Reaming is not required
  - Good chip removal
  - Powerful drilling



DIN 6537
MG
h6
m7
140°
20 bar
P.16

## DREAM DRILLS | 8 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2	TiAIN	D1	D2	L1	L2
DH421084	8.4	10	95	142	DH421105	10.5	12	114	162
DH421085	8.5	10	95	142	DH421106	10.6	12	114	162
DH421086	8.6	10	95	142	DH421107	10.7	12	114	162
DH421087	8.7	10	95	142	DH421108	10.8	12	114	162
DH421088	8.8	10	95	142	DH421109	10.9	12	114	162
DH421089	8.9	10	95	142	DH421110	11.0	12	114	162
DH421090	9.0	10	95	142	DH421111	11.1	12	114	162
DH421091	9.1	10	95	142	DH421112	11.2	12	114	162
DH421092	9.2	10	95	142	DH421113	11.3	12	114	162
DH421093	9.3	10	95	142	DH421114	11.4	12	114	162
DH421094	9.4	10	95	142	DH421115	11.5	12	114	162
DH421095	9.5	10	95	142	DH421116	11.6	12	114	162
DH421096	9.6	10	95	142	DH421117	11.7	12	114	162
DH421097	9.7	10	95	142	DH421118	11.8	12	114	162
DH421098	9.8	10	95	142	DH421119	11.9	12	114	162
DH421099	9.9	10	95	142	DH421120	12.0	12	114	162
DH421100	10.0	10	95	142	DH421125	12.5	14	133	178
DH421101	10.1	12	114	162	DH421130	13.0	14	133	178
DH421102	10.2	12	114	162	DH421135	13.5	14	133	178
DH421103	10.3	12	114	162	DH421140	14.0	14	133	178
DH421104	10.4	12	114	162					

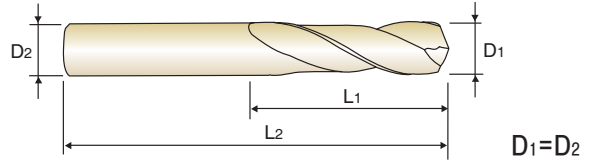
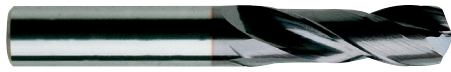
▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

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

### SOLID CARBIDE DREAM DRILLS without COOLANT HOLES

- ▶ Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics..
- ▶ Advantage : Self centering - Center drilling is not required  
 Excellent positioning - Bush is not necessary  
 Special design - Reaming is not required  
 - Good chip removal  
 - Powerful drilling



DIN 6539
MG
h6
h7
140°
P.16

DREAM DRILLS | 3 × D

Unit : mm

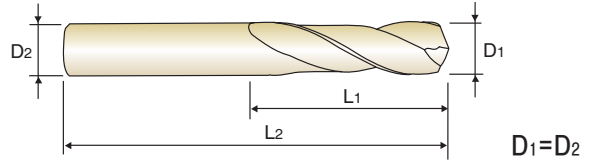
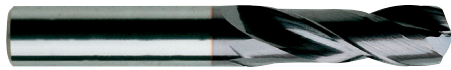
EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
TiAIN	D1	L1	L2	TiAIN	D1	L1	L2
DH404030	3.0	16	46	DH404057	5.7	28	66
DH404031	3.1	18	49	DH404058	5.8	28	66
DH404032	3.2	18	49	DH404059	5.9	28	66
DH404033	3.3	18	49	DH404060	6.0	28	66
DH404034	3.4	20	52	DH404061	6.1	31	70
DH404035	3.5	20	52	DH404062	6.2	31	70
DH404036	3.6	20	52	DH404063	6.3	31	70
DH404037	3.7	20	52	DH404064	6.4	31	70
DH404038	3.8	22	55	DH404065	6.5	31	70
DH404039	3.9	22	55	DH404066	6.6	31	70
DH404040	4.0	22	55	DH404067	6.7	31	70
DH404041	4.1	22	55	DH404068	6.8	34	74
DH404042	4.2	22	55	DH404069	6.9	34	74
DH404043	4.3	24	58	DH404070	7.0	34	74
DH404044	4.4	24	58	DH404071	7.1	34	74
DH404045	4.5	24	58	DH404072	7.2	34	74
DH404046	4.6	24	58	DH404073	7.3	34	74
DH404047	4.7	24	58	DH404074	7.4	34	74
DH404048	4.8	26	62	DH404075	7.5	34	74
DH404049	4.9	26	62	DH404076	7.6	37	79
DH404050	5.0	26	62	DH404077	7.7	37	79
DH404051	5.1	26	62	DH404078	7.8	37	79
DH404052	5.2	26	62	DH404079	7.9	37	79
DH404053	5.3	26	62	DH404080	8.0	37	79
DH404054	5.4	28	66	DH404081	8.1	37	79
DH404055	5.5	28	66	DH404082	8.2	37	79
DH404056	5.6	28	66	DH404083	8.3	37	79





### SOLID CARBIDE DREAM DRILLS without COOLANT HOLES

- ▶ Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics..
- ▶ Advantage :
  - Self centering - Center drilling is not required
  - Excellent positioning - Bush is not necessary
  - Special design - Reaming is not required
  - Good chip removal
  - Powerful drilling



DIN 6539
MG
h6
h7
140°
P.16

DREAM DRILLS | 3×D

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Flute Length	Overall Length
TiAIN	D1	L1	L2	TiAIN	D1	L1	L2
DH404084	8.4	37	79	DH404110	11.0	47	95
DH404085	8.5	37	79	DH404115	11.5	47	95
DH404086	8.6	40	84	DH404120	12.0	51	102
DH404087	8.7	40	84	DH404130	13.0	51	102
DH404088	8.8	40	84	DH404135	13.5	54	107
DH404089	8.9	40	84	DH404140	14.0	54	107
DH404090	9.0	40	84	DH404145	14.5	56	111
DH404091	9.1	40	84	DH404150	15.0	56	111
DH404092	9.2	40	84	DH404155	15.5	58	115
DH404093	9.3	40	84	DH404160	16.0	58	115
DH404094	9.4	40	84	DH404165	16.5	60	119
DH404095	9.5	40	84	DH404170	17.0	60	119
DH404096	9.6	43	89	DH404175	17.5	62	123
DH404097	9.7	43	89	DH404180	18.0	62	123
DH404098	9.8	43	89	DH404185	18.5	64	127
DH404099	9.9	43	89	DH404190	19.0	64	127
DH404100	10.0	43	89	DH404195	19.5	66	131
DH404102	10.2	43	89	DH404200	20.0	66	131
DH404105	10.5	43	89				

▶ Other shank types are available on your request.

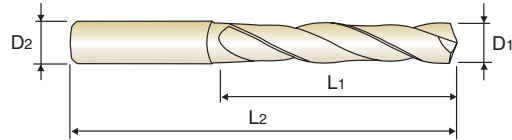
◎ : Excellent ○ : Good

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



### SOLID CARBIDE DREAM DRILLS without COOLANT HOLES

- ▶ Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics..
- ▶ Advantage : Self centering - Center drilling is not required  
 Excellent positioning - Bush is not necessary  
 Special design - Reaming is not required  
 - Good chip removal  
 - Powerful drilling



DIN 6537

MG

h6

m7

140°



P.16

## DREAM DRILLS | 3×D

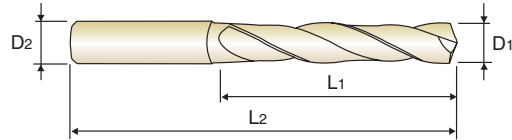
Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2	TiAIN	D1	D2	L1	L2
DH423030	3.0	6	20	62	DH423061	6.1	8	34	79
DH423031	3.1	6	20	62	DH423062	6.2	8	34	79
DH423032	3.2	6	20	62	DH423063	6.3	8	34	79
DH423033	3.3	6	20	62	DH423064	6.4	8	34	79
DH423034	3.4	6	20	62	DH423065	6.5	8	34	79
DH423035	3.5	6	20	62	DH423066	6.6	8	34	79
DH423036	3.6	6	20	62	DH423067	6.7	8	34	79
DH423037	3.7	6	20	62	DH423068	6.8	8	34	79
DH423038	3.8	6	24	66	DH423069	6.9	8	34	79
DH423039	3.9	6	24	66	DH423070	7.0	8	34	79
DH423040	4.0	6	24	66	DH423071	7.1	8	41	79
DH423041	4.1	6	24	66	DH423072	7.2	8	41	79
DH423042	4.2	6	24	66	DH423073	7.3	8	41	79
DH423043	4.3	6	24	66	DH423074	7.4	8	41	79
DH423044	4.4	6	24	66	DH423075	7.5	8	41	79
DH423045	4.5	6	24	66	DH423076	7.6	8	41	79
DH423046	4.6	6	24	66	DH423077	7.7	8	41	79
DH423047	4.7	6	24	66	DH423078	7.8	8	41	79
DH423048	4.8	6	28	66	DH423079	7.9	8	41	79
DH423049	4.9	6	28	66	DH423080	8.0	8	41	79
DH423050	5.0	6	28	66	DH423081	8.1	10	47	89
DH423051	5.1	6	28	66	DH423082	8.2	10	47	89
DH423052	5.2	6	28	66	DH423083	8.3	10	47	89
DH423053	5.3	6	28	66	DH423084	8.4	10	47	89
DH423054	5.4	6	28	66	DH423085	8.5	10	47	89
DH423055	5.5	6	28	66	DH423086	8.6	10	47	89
DH423056	5.6	6	28	66	DH423087	8.7	10	47	89
DH423057	5.7	6	28	66	DH423088	8.8	10	47	89
DH423058	5.8	6	28	66	DH423089	8.9	10	47	89
DH423059	5.9	6	28	66	DH423090	9.0	10	47	89
DH423060	6.0	6	28	66	DH423091	9.1	10	47	89



### SOLID CARBIDE DREAM DRILLS without COOLANT HOLES

- ▶ Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics..
- ▶ Advantage :
  - Self centering - Center drilling is not required
  - Excellent positioning - Bush is not necessary
  - Special design - Reaming is not required
  - Good chip removal
  - Powerful drilling



DIN 6537
MG
h6
m7
140°
P.16

## DREAM DRILLS | 3×D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2	TiAIN	D1	D2	L1	L2
DH423092	9.2	10	47	89	DH423119	11.9	12	55	102
DH423093	9.3	10	47	89	DH423120	12.0	12	55	102
DH423094	9.4	10	47	89	DH423123	12.3	14	60	107
DH423095	9.5	10	47	89	DH423125	12.5	14	60	107
DH423096	9.6	10	47	89	DH423128	12.8	14	60	107
DH423097	9.7	10	47	89	DH423130	13.0	14	60	107
DH423098	9.8	10	47	89	DH423135	13.5	14	60	107
DH423099	9.9	10	47	89	DH423138	13.8	14	60	107
DH423100	10.0	10	47	89	DH423140	14.0	14	60	107
DH423101	10.1	12	55	102	DH423145	14.5	16	65	115
DH423102	10.2	12	55	102	DH423148	14.8	16	65	115
DH423103	10.3	12	55	102	DH423150	15.0	16	65	115
DH423104	10.4	12	55	102	DH423155	15.5	16	65	115
DH423105	10.5	12	55	102	DH423158	15.8	16	65	115
DH423106	10.6	12	55	102	DH423160	16.0	16	65	115
DH423107	10.7	12	55	102	DH423165	16.5	18	73	123
DH423108	10.8	12	55	102	DH423168	16.8	18	73	123
DH423109	10.9	12	55	102	DH423170	17.0	18	73	123
DH423110	11.0	12	55	102	DH423175	17.5	18	73	123
DH423111	11.1	12	55	102	DH423178	17.8	18	73	123
DH423112	11.2	12	55	102	DH423180	18.0	18	73	123
DH423113	11.3	12	55	102	DH423185	18.5	20	79	131
DH423114	11.4	12	55	102	DH423190	19.0	20	79	131
DH423115	11.5	12	55	102	DH423195	19.5	20	79	131
DH423116	11.6	12	55	102	DH423198	19.8	20	79	131
DH423117	11.7	12	55	102	DH423200	20.0	20	79	131
DH423118	11.8	12	55	102					

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

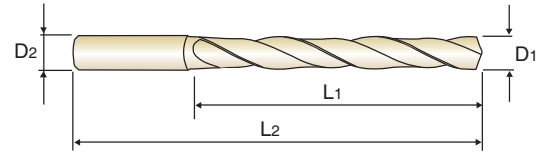
P					M	K	N	S		
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Mild Steels	Stainless Steels	Cast Iron	Aluminum	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~						
○	◎	◎			○	○				





### SOLID CARBIDE DREAM DRILLS without COOLANT HOLES

- ▶ Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics..
- ▶ Advantage : Self centering - Center drilling is not required  
 Excellent positioning - Bush is not necessary  
 Special design - Reaming is not required  
 - Good chip removal  
 - Powerful drilling



DIN 6537
MG
h6
m7
140°
P.16

## DREAM DRILLS | 5 × D

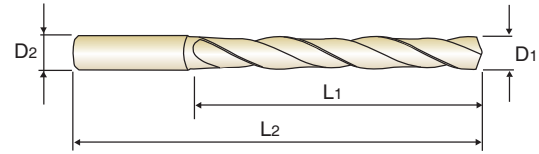
Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2	TiAIN	D1	D2	L1	L2
DH424010	1.0	3	8	55	DH424046	4.6	6	36	74
DH424011	1.1	3	12	55	DH424047	4.7	6	36	74
DH424012	1.2	3	12	55	DH424048	4.8	6	44	82
DH424013	1.3	3	12	55	DH424049	4.9	6	44	82
DH424014	1.4	3	12	55	DH424050	5.0	6	44	82
DH424015	1.5	3	16	55	DH424051	5.1	6	44	82
DH424016	1.6	3	16	55	DH424052	5.2	6	44	82
DH424017	1.7	3	16	55	DH424053	5.3	6	44	82
DH424018	1.8	3	16	55	DH424054	5.4	6	44	82
DH424019	1.9	3	16	55	DH424055	5.5	6	44	82
DH424020	2.0	4	21	57	DH424056	5.6	6	44	82
DH424021	2.1	4	21	57	DH424057	5.7	6	44	82
DH424022	2.2	4	21	57	DH424058	5.8	6	44	82
DH424023	2.3	4	21	57	DH424059	5.9	6	44	82
DH424024	2.4	4	21	57	DH424060	6.0	6	44	82
DH424025	2.5	4	21	57	DH424061	6.1	8	53	91
DH424026	2.6	4	21	57	DH424062	6.2	8	53	91
DH424027	2.7	4	21	57	DH424063	6.3	8	53	91
DH424028	2.8	4	21	57	DH424064	6.4	8	53	91
DH424029	2.9	4	21	57	DH424065	6.5	8	53	91
DH424030	3.0	6	28	66	DH424066	6.6	8	53	91
DH424031	3.1	6	28	66	DH424067	6.7	8	53	91
DH424032	3.2	6	28	66	DH424068	6.8	8	53	91
DH424033	3.3	6	28	66	DH424069	6.9	8	53	91
DH424034	3.4	6	28	66	DH424070	7.0	8	53	91
DH424035	3.5	6	28	66	DH424071	7.1	8	53	91
DH424036	3.6	6	28	66	DH424072	7.2	8	53	91
DH424037	3.7	6	28	66	DH424073	7.3	8	53	91
DH424038	3.8	6	36	74	DH424074	7.4	8	53	91
DH424039	3.9	6	36	74	DH424075	7.5	8	53	91
DH424040	4.0	6	36	74	DH424076	7.6	8	53	91
DH424041	4.1	6	36	74	DH424077	7.7	8	53	91
DH424042	4.2	6	36	74	DH424078	7.8	8	53	91
DH424043	4.3	6	36	74	DH424079	7.9	8	53	91
DH424044	4.4	6	36	74	DH424080	8.0	8	53	91
DH424045	4.5	6	36	74	DH424081	8.1	10	61	103



### SOLID CARBIDE DREAM DRILLS without COOLANT HOLES

- ▶ Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics..
- ▶ Advantage : Self centering - Center drilling is not required  
 Excellent positioning - Bush is not necessary  
 Special design - Reaming is not required  
 - Good chip removal  
 - Powerful drilling



DIN 6537
MG
h6
m7
140°
P.16

## DREAM DRILLS | 5 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2	TiAIN	D1	D2	L1	L2
DH424082	8.2	10	61	103	DH424110	11.0	12	71	118
DH424083	8.3	10	61	103	DH424111	11.1	12	71	118
DH424084	8.4	10	61	103	DH424112	11.2	12	71	118
DH424085	8.5	10	61	103	DH424113	11.3	12	71	118
DH424086	8.6	10	61	103	DH424114	11.4	12	71	118
DH424087	8.7	10	61	103	DH424115	11.5	12	71	118
DH424088	8.8	10	61	103	DH424116	11.6	12	71	118
DH424089	8.9	10	61	103	DH424117	11.7	12	71	118
DH424090	9.0	10	61	103	DH424118	11.8	12	71	118
DH424091	9.1	10	61	103	DH424119	11.9	12	71	118
DH424092	9.2	10	61	103	DH424120	12.0	12	71	118
DH424093	9.3	10	61	103	DH424125	12.5	14	77	124
DH424094	9.4	10	61	103	DH424130	13.0	14	77	124
DH424095	9.5	10	61	103	DH424135	13.5	14	77	124
DH424096	9.6	10	61	103	DH424140	14.0	14	77	124
DH424097	9.7	10	61	103	DH424145	14.5	16	83	133
DH424098	9.8	10	61	103	DH424150	15.0	16	83	133
DH424099	9.9	10	61	103	DH424155	15.5	16	83	133
DH424100	10.0	10	61	103	DH424160	16.0	16	83	133
DH424101	10.1	12	71	118	DH424165	16.5	18	93	143
DH424102	10.2	12	71	118	DH424170	17.0	18	93	143
DH424103	10.3	12	71	118	DH424175	17.5	18	93	143
DH424104	10.4	12	71	118	DH424180	18.0	18	93	143
DH424105	10.5	12	71	118	DH424185	18.5	20	101	153
DH424106	10.6	12	71	118	DH424190	19.0	20	101	153
DH424107	10.7	12	71	118	DH424195	19.5	20	101	153
DH424108	10.8	12	71	118	DH424200	20.0	20	101	153
DH424109	10.9	12	71	118					

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

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



## SOLID CARBIDE DREAM DRILLS with COOLANT HOLES, TiAIN COATED

### DH406, DH408, DH421 Series

Unit : mm

WORK MATERIAL	P						K					
	NON-ALLOY STEELS			ALLOY STEELS			SOFT GREY CAST IRON			HARD GREY CAST IRON		
STRENGTH	< 700 N/mm <sup>2</sup>			< 1000 N/mm <sup>2</sup>			< HB240, GG25			< HB300, GG40		
DRILLING SPEED	Ø1.0 ~ 2.9 : 50~100 m/min Ø3.0~ : 110 m/min			Ø1.0 ~ 2.9 : 40~90 m/min Ø3.0~ : 83 m/min			Ø1.0 ~ 2.9 : 80~160 m/min Ø3.0~ : 110 m/min			Ø1.0 ~ 2.9 : 50~100 m/min Ø3.0~ : 88 m/min		
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	3290	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.  
 DH406(3xD) : Feed 100%,  
 DH408(5xD) : Feed 85%  
 DH421(8xD) : Feed 70%

N = R.P.M  
S = Feed per Revolution (mm/rev.)

## SOLID CARBIDE DREAM DRILLS, without COOLANT HOLES, TiAIN COATED

### DH404, DH423, DH424 Series

Unit : mm

WORK MATERIAL	P						K					
	NON-ALLOY STEELS			ALLOY STEELS			SOFT GREY CAST IRON			HARD GREY CAST IRON		
STRENGTH	< 700 N/mm <sup>2</sup>			< 1000 N/mm <sup>2</sup>			< HB240, GG25			< HB300, GG40		
DRILLING SPEED	Ø1.0 ~ 2.9 : 40~80 m/min Ø3.0~ : 100 m/min			Ø1.0 ~ 2.9 : 35~70 m/min Ø3.0~ : 75 m/min			Ø1.0 ~ 2.9 : 60~130 m/min Ø3.0~ : 100 m/min			Ø1.0 ~ 2.9 : 40~90 m/min Ø3.0~ : 80 m/min		
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.  
 DH404(3xD), DH423(3xD) : Feed 100%  
 DH424(5xD) : Feed 85%

N = R.P.M  
S = Feed per Revolution (mm/rev.)



# CARBIDE DREAM DRILLS - HIGH FEED - **Test Report**

with COOLANT HOLES

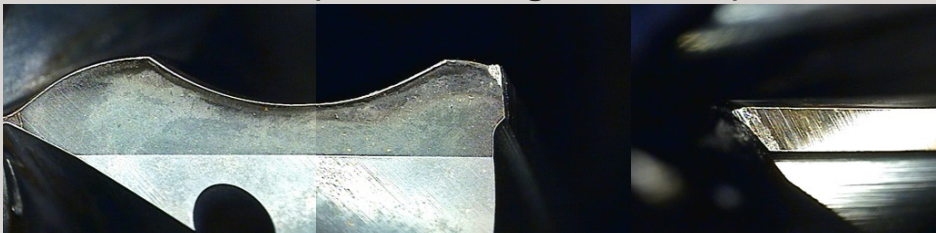
## ● **FEATURES OF DREAM DRILL HIGH FEED**

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

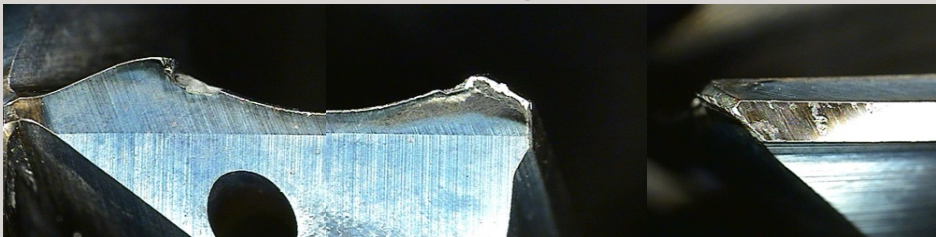
### **YG-1 (Total Drilling 330 Holes)**



### **COMPETITOR A (Total Drilling 330 Holes)**



### **COMPETITOR B (Total Drilling 330 Holes)**



### **Cutting Condition**

**Tools** : DGR495100

(Dream Drill High Feed)

**Size** : Ø10.0 x 10 x 61 x 103

**Work Material** : • JIS : S45C (HRc20)

• DIN: C45

• WR: 1.0503

**R.P.M** : 3,200 rev./min.

**Feed** : .0.5 mm/rev.

**Drilling Depth** : 50 mm (5xD)

**Drilling Method** : Blind Hole

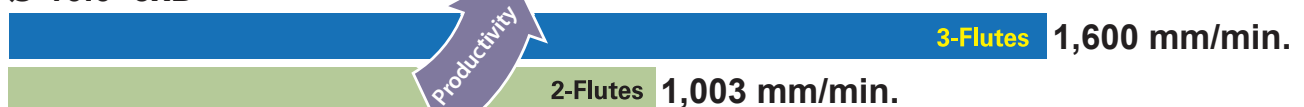
**Coolant** : Wet Cut

**Machine** : Machining Center

### **Productivity (Carbon Steel)**

Ø 10.0 5xD

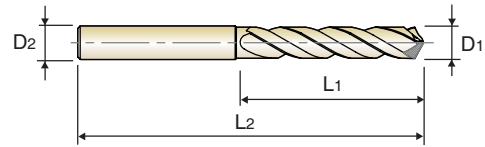
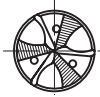
**1.6 times UP**





### CARBIDE DREAM DRILLS - HIGH FEED with COOLANT HOLES

- ▶ Application : Carbon Steels, Alloy Steels (~ HRC35), Cast Iron
- ▶ Advantage : Increases 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



DIN 6537
MG
h6
m7
140°
20 bar
P.20

### DREAM DRILLS HIGH FEED | 3×D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
H-Coating	D1	D2	L1	L2	H-Coating	D1	D2	L1	L2
DGR493050	5.0	6	28	66	DGR493085	8.5	10	47	89
DGR493051	5.1	6	28	66	DGR493090	9.0	10	47	89
DGR493052	5.2	6	28	66	DGR493100	10.0	10	47	89
DGR493053	5.3	6	28	66	DGR493102	10.2	12	55	102
DGR493055	5.5	6	28	66	DGR493105	10.5	12	55	102
DGR493058	5.8	6	28	66	DGR493110	11.0	12	55	102
DGR493060	6.0	6	28	66	DGR493120	12.0	12	55	102
DGR493065	6.5	8	34	79	DGR493130	13.0	14	60	107
DGR493068	6.8	8	34	79	DGR493140	14.0	14	60	107
DGR493070	7.0	8	34	79	DGR493150	15.0	16	65	115
DGR493080	8.0	8	41	79	DGR493160	16.0	16	65	115

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

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



### CARBIDE DREAM DRILLS - HIGH FEED with COOLANT HOLES

- ▶ Application : Carbon Steels, Alloy Steels (~ HRC35), Cast Iron
- ▶ Advantage : Increases 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



DIN 6537
MG
h6
m7
140°
20 bar
P.20

### DREAM DRILLS HIGH FEED | 5 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
H-Coating	D1	D2	L1	L2	H-Coating	D1	D2	L1	L2
DGR495050	5.0	6	44	82	DGR495085	8.5	10	61	103
DGR495051	5.1	6	44	82	DGR495090	9.0	10	61	103
DGR495052	5.2	6	44	82	DGR495100	10.0	10	61	103
DGR495053	5.3	6	44	82	DGR495102	10.2	12	71	118
DGR495055	5.5	6	44	82	DGR495105	10.5	12	71	118
DGR495058	5.8	6	44	82	DGR495110	11.0	12	71	118
DGR495060	6.0	6	44	82	DGR495120	12.0	12	71	118
DGR495065	6.5	8	53	91	DGR495130	13.0	14	77	124
DGR495068	6.8	8	53	91	DGR495140	14.0	14	77	124
DGR495070	7.0	8	53	91	DGR495150	15.0	16	83	133
DGR495080	8.0	8	53	91	DGR495160	16.0	16	83	133

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

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





## SOLID CARBIDE DREAM DRILLS - HIGH FEED with COOLANT HOLES

### DGR493, DGR495 Series

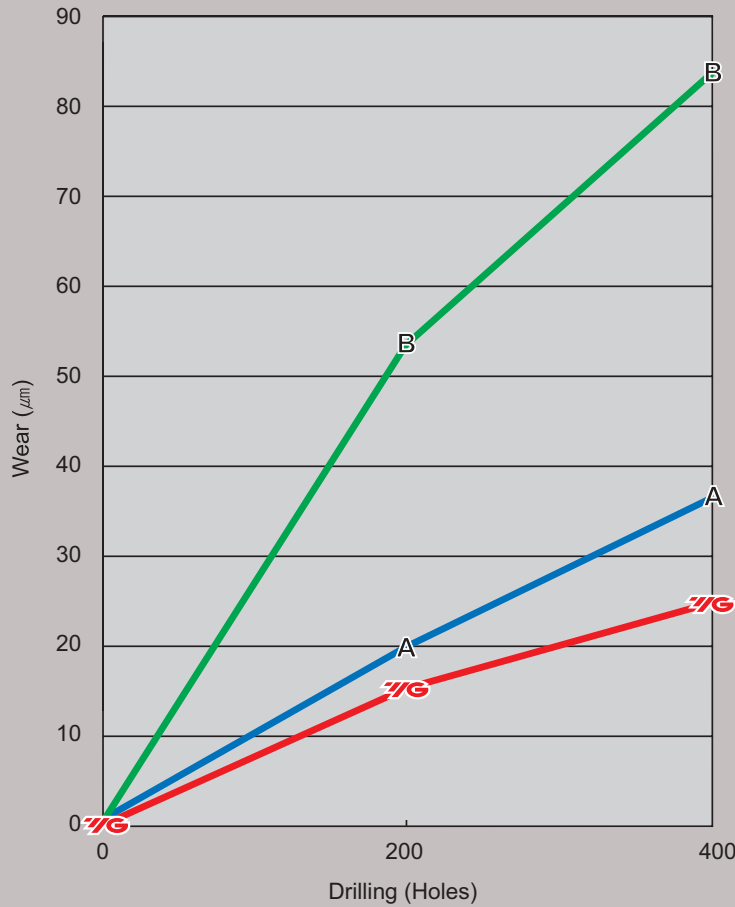
Unit : mm

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		
DIAMETER	RPM	FEED		RPM	FEED		RPM	FEED		RPM	FEED	
		Min	Max		Min	Max		Min	Max		Min	Max
5.0	6370	0.20	0.25	4780	0.20	0.25	6370	0.23	0.30	5100	0.20	0.25
6.0	5310	0.24	0.30	3980	0.24	0.30	5310	0.27	0.36	4250	0.24	0.30
7.0	4550	0.28	0.35	3420	0.28	0.35	4550	0.32	0.42	3640	0.28	0.35
8.0	3980	0.32	0.40	2990	0.32	0.40	3980	0.36	0.48	3190	0.32	0.40
9.0	3540	0.36	0.45	2660	0.36	0.45	3540	0.41	0.54	2840	0.36	0.45
10.0	3190	0.40	0.50	2390	0.40	0.50	3190	0.45	0.60	2550	0.40	0.50
11.0	2900	0.44	0.55	2180	0.44	0.50	2900	0.50	0.66	2320	0.44	0.55
12.0	2660	0.48	0.60	2000	0.48	0.54	2660	0.54	0.72	2130	0.48	0.60
13.0	2450	0.52	0.65	1840	0.52	0.59	2450	0.59	0.78	1960	0.52	0.65
14.0	2280	0.56	0.70	1710	0.56	0.63	2280	0.63	0.84	1820	0.56	0.70
16.0	1990	0.56	0.72	1500	0.56	0.64	1990	0.64	0.80	1600	0.56	0.72

N = R.P.M  
S = Feed per Revolution (mm/rev.)

# SOLID CARBIDE DREAM DRILLS INOX - **Test Report**

## with COOLANT HOLES



 YG-1  
 A Competitor A  
 B Competitor B

### Cutting Condition

**Tools** : DH452060 (DREAM DRILL-INOX)

**Size** : Ø6 x 6 x 44 x 82

**Work Material** : • JIS:SUS304

• DIN:X5CrNi1810

(X4CrNi18-10)

• WR:1.4301

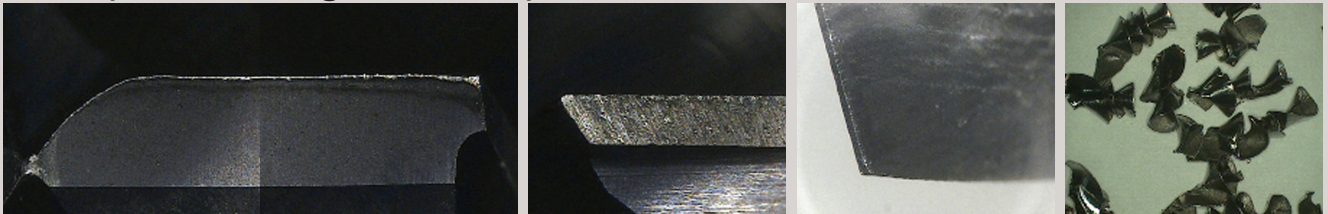
**R.P.M** : 3,700 rev./min.

**Feed** : 0.07 mm/rev.

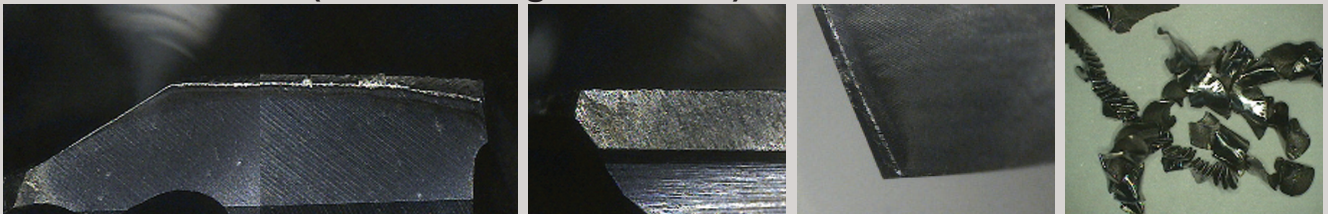
**Drilling Depth** : 24 mm

**Coolant** : Wet Cut

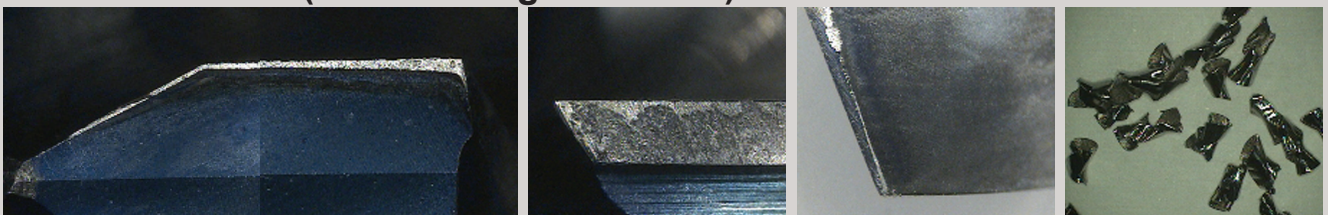
### YG-1 (Total Drilling 400 Holes)



### COMPETITOR A (Total Drilling 400 Holes)



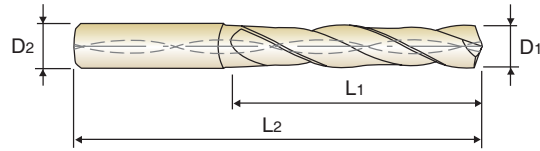
### COMPETITOR B (Total Drilling 400 Holes)





### SOLID CARBIDE DREAM DRILLS INOX with COOLANT HOLES

- ▶ The tool has the special flute shape and geometry for suitable machining of stainless steels.
- ▶ Excellent chip evacuation due to better surface treatment.
- ▶ Point R-thinning makes the superior centering and chip curl.
- ▶ Applied TiAlN coating, achieves the better surface finish of material to be cut and longer tool life.



DIN 6537
MG
h6
m7
140°
20 bar

P.28

### DREAM DRILLS INOX | 3 × D

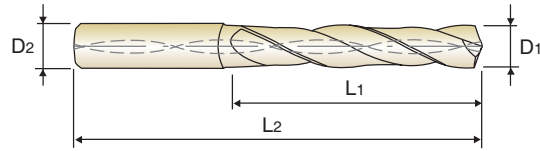
Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH451030	3.0	6	20	62	DH451061	6.1	8	34	79
DH451031	3.1	6	20	62	DH451062	6.2	8	34	79
DH451032	3.2	6	20	62	DH451063	6.3	8	34	79
DH451033	3.3	6	20	62	DH451064	6.4	8	34	79
DH451034	3.4	6	20	62	DH451065	6.5	8	34	79
DH451035	3.5	6	20	62	DH451066	6.6	8	34	79
DH451036	3.6	6	20	62	DH451067	6.7	8	34	79
DH451037	3.7	6	20	62	DH451068	6.8	8	34	79
DH451038	3.8	6	24	66	DH451069	6.9	8	34	79
DH451039	3.9	6	24	66	DH451070	7.0	8	34	79
DH451040	4.0	6	24	66	DH451071	7.1	8	41	79
DH451041	4.1	6	24	66	DH451072	7.2	8	41	79
DH451042	4.2	6	24	66	DH451073	7.3	8	41	79
DH451043	4.3	6	24	66	DH451074	7.4	8	41	79
DH451044	4.4	6	24	66	DH451075	7.5	8	41	79
DH451045	4.5	6	24	66	DH451076	7.6	8	41	79
DH451046	4.6	6	24	66	DH451077	7.7	8	41	79
DH451047	4.7	6	24	66	DH451078	7.8	8	41	79
DH451048	4.8	6	28	66	DH451079	7.9	8	41	79
DH451049	4.9	6	28	66	DH451080	8.0	8	41	79
DH451050	5.0	6	28	66	DH451081	8.1	10	47	89
DH451051	5.1	6	28	66	DH451082	8.2	10	47	89
DH451052	5.2	6	28	66	DH451083	8.3	10	47	89
DH451053	5.3	6	28	66	DH451084	8.4	10	47	89
DH451054	5.4	6	28	66	DH451085	8.5	10	47	89
DH451055	5.5	6	28	66	DH451086	8.6	10	47	89
DH451056	5.6	6	28	66	DH451087	8.7	10	47	89
DH451057	5.7	6	28	66	DH451088	8.8	10	47	89
DH451058	5.8	6	28	66	DH451089	8.9	10	47	89
DH451059	5.9	6	28	66	DH451090	9.0	10	47	89
DH451060	6.0	6	28	66	DH451091	9.1	10	47	89



### SOLID CARBIDE DREAM DRILLS INOX with COOLANT HOLES

- ▶ The tool has the special flute shape and geometry for suitable machining of stainless steels.
- ▶ Excellent chip evacuation due to better surface treatment.
- ▶ Point R-thinning makes the superior centering and chip curl.
- ▶ Applied TiAlN coating, achieves the better surface finish of material to be cut and longer tool life.



DIN 6537
MG
h6
m7
140°
20 bar
P.28

## DREAM DRILLS INOX | 3 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH451092	9.2	10	47	89	DH451115	11.5	12	55	102
DH451093	9.3	10	47	89	DH451116	11.6	12	55	102
DH451094	9.4	10	47	89	DH451117	11.7	12	55	102
DH451095	9.5	10	47	89	DH451118	11.8	12	55	102
DH451096	9.6	10	47	89	DH451119	11.9	12	55	102
DH451097	9.7	10	47	89	DH451120	12.0	12	55	102
DH451098	9.8	10	47	89	DH451125	12.5	14	60	107
DH451099	9.9	10	47	89	DH451130	13.0	14	60	107
DH451100	10.0	10	47	89	DH451135	13.5	14	60	107
DH451101	10.1	12	55	102	DH451140	14.0	14	60	107
DH451102	10.2	12	55	102	DH451145	14.5	16	65	115
DH451103	10.3	12	55	102	DH451150	15.0	16	65	115
DH451104	10.4	12	55	102	DH451155	15.5	16	65	115
DH451105	10.5	12	55	102	DH451160	16.0	16	65	115
DH451106	10.6	12	55	102	DH451165	16.5	18	73	123
DH451107	10.7	12	55	102	DH451170	17.0	18	73	123
DH451108	10.8	12	55	102	DH451175	17.5	18	73	123
DH451109	10.9	12	55	102	DH451180	18.0	18	73	123
DH451110	11.0	12	55	102	DH451185	18.5	20	79	131
DH451111	11.1	12	55	102	DH451190	19.0	20	79	131
DH451112	11.2	12	55	102	DH451195	19.5	20	79	131
DH451113	11.3	12	55	102	DH451200	20.0	20	79	131
DH451114	11.4	12	55	102					

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

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





## SOLID CARBIDE DREAM DRILLS INOX with COOLANT HOLES

- ▶ The tool has the special flute shape and geometry for suitable machining of stainless steels.
- ▶ Excellent chip evacuation due to better surface treatment.
- ▶ Point R-thinning makes the superior centering and chip curl.
- ▶ Applied TiAlN coating, achieves the better surface finish of material to be cut and longer tool life.



## DREAM DRILLS INOX | 5 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH452010	1.0	3	8	55	DH452046	4.6	6	36	74
DH452011	1.1	3	12	55	DH452047	4.7	6	36	74
DH452012	1.2	3	12	55	DH452048	4.8	6	44	82
DH452013	1.3	3	12	55	DH452049	4.9	6	44	82
DH452014	1.4	3	12	55	DH452050	5.0	6	44	82
DH452015	1.5	3	16	55	DH452051	5.1	6	44	82
DH452016	1.6	3	16	55	DH452052	5.2	6	44	82
DH452017	1.7	3	16	55	DH452053	5.3	6	44	82
DH452018	1.8	3	16	55	DH452054	5.4	6	44	82
DH452019	1.9	3	16	55	DH452055	5.5	6	44	82
DH452020	2.0	4	21	57	DH452056	5.6	6	44	82
DH452021	2.1	4	21	57	DH452057	5.7	6	44	82
DH452022	2.2	4	21	57	DH452058	5.8	6	44	82
DH452023	2.3	4	21	57	DH452059	5.9	6	44	82
DH452024	2.4	4	21	57	DH452060	6.0	6	44	82
DH452025	2.5	4	21	57	DH452061	6.1	8	53	91
DH452026	2.6	4	21	57	DH452062	6.2	8	53	91
DH452027	2.7	4	21	57	DH452063	6.3	8	53	91
DH452028	2.8	4	21	57	DH452064	6.4	8	53	91
DH452029	2.9	4	21	57	DH452065	6.5	8	53	91
DH452030	3.0	6	28	66	DH452066	6.6	8	53	91
DH452031	3.1	6	28	66	DH452067	6.7	8	53	91
DH452032	3.2	6	28	66	DH452068	6.8	8	53	91
DH452033	3.3	6	28	66	DH452069	6.9	8	53	91
DH452034	3.4	6	28	66	DH452070	7.0	8	53	91
DH452035	3.5	6	28	66	DH452071	7.1	8	53	91
DH452036	3.6	6	28	66	DH452072	7.2	8	53	91
DH452037	3.7	6	28	66	DH452073	7.3	8	53	91
DH452038	3.8	6	36	74	DH452074	7.4	8	53	91
DH452039	3.9	6	36	74	DH452075	7.5	8	53	91
DH452040	4.0	6	36	74	DH452076	7.6	8	53	91
DH452041	4.1	6	36	74	DH452077	7.7	8	53	91
DH452042	4.2	6	36	74	DH452078	7.8	8	53	91
DH452043	4.3	6	36	74	DH452079	7.9	8	53	91
DH452044	4.4	6	36	74	DH452080	8.0	8	53	91
DH452045	4.5	6	36	74	DH452081	8.1	10	61	103



**SOLID CARBIDE DREAM DRILLS INOX with COOLANT HOLES**

- ▶ The tool has the special flute shape and geometry for suitable machining of stainless steels.
- ▶ Excellent chip evacuation due to better surface treatment.
- ▶ Point R-thinning makes the superior centering and chip curl.
- ▶ Applied TiAlN coating, achieves the better surface finish of material to be cut and longer tool life.



**DREAM DRILLS INOX | 5 × D**

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH452082	8.2	10	61	103	DH452110	11.0	12	71	118
DH452083	8.3	10	61	103	DH452111	11.1	12	71	118
DH452084	8.4	10	61	103	DH452112	11.2	12	71	118
DH452085	8.5	10	61	103	DH452113	11.3	12	71	118
DH452086	8.6	10	61	103	DH452114	11.4	12	71	118
DH452087	8.7	10	61	103	DH452115	11.5	12	71	118
DH452088	8.8	10	61	103	DH452116	11.6	12	71	118
DH452089	8.9	10	61	103	DH452117	11.7	12	71	118
DH452090	9.0	10	61	103	DH452118	11.8	12	71	118
DH452091	9.1	10	61	103	DH452119	11.9	12	71	118
DH452092	9.2	10	61	103	DH452120	12.0	12	71	118
DH452093	9.3	10	61	103	DH452125	12.5	14	77	124
DH452094	9.4	10	61	103	DH452130	13.0	14	77	124
DH452095	9.5	10	61	103	DH452135	13.5	14	77	124
DH452096	9.6	10	61	103	DH452140	14.0	14	77	124
DH452097	9.7	10	61	103	DH452145	14.5	16	83	133
DH452098	9.8	10	61	103	DH452150	15.0	16	83	133
DH452099	9.9	10	61	103	DH452155	15.5	16	83	133
DH452100	10.0	10	61	103	DH452160	16.0	16	83	133
DH452101	10.1	12	71	118	DH452165	16.5	18	93	143
DH452102	10.2	12	71	118	DH452170	17.0	18	93	143
DH452103	10.3	12	71	118	DH452175	17.5	18	93	143
DH452104	10.4	12	71	118	DH452180	18.0	18	93	143
DH452105	10.5	12	71	118	DH452185	18.5	20	101	153
DH452106	10.6	12	71	118	DH452190	19.0	20	101	153
DH452107	10.7	12	71	118	DH452195	19.5	20	101	153
DH452108	10.8	12	71	118	DH452200	20.0	20	101	153
DH452109	10.9	12	71	118					

▶ Other shank types are available on your request.

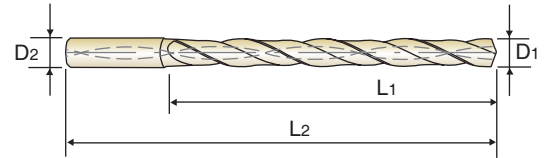
◎ : Excellent ○ : Good

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



## SOLID CARBIDE DREAM DRILLS INOX with COOLANT HOLES

- ▶ The tool has the special flute shape and geometry for suitable machining of stainless steels.
- ▶ Excellent chip evacuation due to better surface treatment.
- ▶ Point R-thinning makes the superior centering and chip curl.
- ▶ Applied TiAlN coating, achieves the better surface finish of material to be cut and longer tool life.



DIN 6537
MG
h6
m7
140°
20 bar
P.28

## DREAM DRILLS INOX | 8 × D

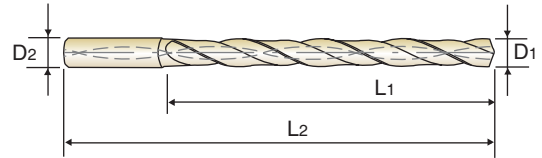
Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH453030	3.0	6	34	72	DH453057	5.7	6	57	95
DH453031	3.1	6	34	72	DH453058	5.8	6	57	95
DH453032	3.2	6	34	72	DH453059	5.9	6	57	95
DH453033	3.3	6	34	72	DH453060	6.0	6	57	95
DH453034	3.4	6	34	72	DH453061	6.1	8	76	114
DH453035	3.5	6	34	72	DH453062	6.2	8	76	114
DH453036	3.6	6	34	72	DH453063	6.3	8	76	114
DH453037	3.7	6	34	72	DH453064	6.4	8	76	114
DH453038	3.8	6	43	81	DH453065	6.5	8	76	114
DH453039	3.9	6	43	81	DH453066	6.6	8	76	114
DH453040	4.0	6	43	81	DH453067	6.7	8	76	114
DH453041	4.1	6	43	81	DH453068	6.8	8	76	114
DH453042	4.2	6	43	81	DH453069	6.9	8	76	114
DH453043	4.3	6	43	81	DH453070	7.0	8	76	114
DH453044	4.4	6	43	81	DH453071	7.1	8	76	114
DH453045	4.5	6	43	81	DH453072	7.2	8	76	114
DH453046	4.6	6	43	81	DH453073	7.3	8	76	114
DH453047	4.7	6	43	81	DH453074	7.4	8	76	114
DH453048	4.8	6	57	95	DH453075	7.5	8	76	114
DH453049	4.9	6	57	95	DH453076	7.6	8	76	114
DH453050	5.0	6	57	95	DH453077	7.7	8	76	114
DH453051	5.1	6	57	95	DH453078	7.8	8	76	114
DH453052	5.2	6	57	95	DH453079	7.9	8	76	114
DH453053	5.3	6	57	95	DH453080	8.0	8	76	114
DH453054	5.4	6	57	95	DH453081	8.1	10	95	142
DH453055	5.5	6	57	95	DH453082	8.2	10	95	142
DH453056	5.6	6	57	95	DH453083	8.3	10	95	142



## SOLID CARBIDE DREAM DRILLS INOX with COOLANT HOLES

- ▶ The tool has the special flute shape and geometry for suitable machining of stainless steels.
- ▶ Excellent chip evacuation due to better surface treatment.
- ▶ Point R-thinning makes the superior centering and chip curl.
- ▶ Applied TiAlN coating, achieves the better surface finish of material to be cut and longer tool life.



DIN 6537
MG
h6
m7
140°
20 bar
P.28

## DREAM DRILLS INOX | 8 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH453084	8.4	10	95	142	DH453105	10.5	12	114	162
DH453085	8.5	10	95	142	DH453106	10.6	12	114	162
DH453086	8.6	10	95	142	DH453107	10.7	12	114	162
DH453087	8.7	10	95	142	DH453108	10.8	12	114	162
DH453088	8.8	10	95	142	DH453109	10.9	12	114	162
DH453089	8.9	10	95	142	DH453110	11.0	12	114	162
DH453090	9.0	10	95	142	DH453111	11.1	12	114	162
DH453091	9.1	10	95	142	DH453112	11.2	12	114	162
DH453092	9.2	10	95	142	DH453113	11.3	12	114	162
DH453093	9.3	10	95	142	DH453114	11.4	12	114	162
DH453094	9.4	10	95	142	DH453115	11.5	12	114	162
DH453095	9.5	10	95	142	DH453116	11.6	12	114	162
DH453096	9.6	10	95	142	DH453117	11.7	12	114	162
DH453097	9.7	10	95	142	DH453118	11.8	12	114	162
DH453098	9.8	10	95	142	DH453119	11.9	12	114	162
DH453099	9.9	10	95	142	DH453120	12.0	12	114	162
DH453100	10.0	10	95	142	DH453125	12.5	14	133	178
DH453101	10.1	12	114	162	DH453130	13.0	14	133	178
DH453102	10.2	12	114	162	DH453135	13.5	14	133	178
DH453103	10.3	12	114	162	DH453140	14.0	14	133	178
DH453104	10.4	12	114	162					

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

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





## SOLID CARBIDE DREAM DRILLS INOX with COOLANT HOLES, TiAIN COATED

### DH451, DH452, DH453 Series

Unit : mm

WORK MATERIAL	M				N				S		P		N	
	STAINLESS STEELS		STAINLESS STEELS		ALUMINUM		ALUMINUM		TITANIUM Ti Alloy		CARBON STEELS ALLOY STEELS		NON FERROUS	
STRENGTH	< 800 N/mm <sup>2</sup>		> 800 N/mm <sup>2</sup>		< 10% Si		> 10% Si							
DRILLING SPEED	60 ~ 70 m/min		35 ~ 45 m/min		200 ~ 220 m/min		155 ~ 175 m/min		40 ~ 50 m/min		105 ~ 125 m/min		130 ~ 150 m/min	
DIAMETER	N	S	N	S	N	S	N	S	N	S	N	S	N	S
	1.0	12000	0.02	6200	0.02	48000	0.04	38000	0.03	8100	0.01	26000	0.02	38000
1.5	9000	0.03	5400	0.02	43000	0.05	32000	0.04	7500	0.01	18000	0.03	25500	0.03
2.5	7000	0.04	4200	0.03	25500	0.08	19500	0.06	4500	0.02	10800	0.05	15500	0.05
3.0	7400	0.04	4700	0.02	23000	0.12	18500	0.10	5300	0.03	13000	0.04	16000	0.08
4.0	5600	0.05	3600	0.03	17500	0.18	13900	0.15	4000	0.04	10000	0.05	11900	0.10
5.0	4400	0.05	2800	0.03	14000	0.20	11000	0.18	3200	0.05	8000	0.05	9500	0.12
6.0	3700	0.06	2400	0.04	11700	0.25	9300	0.25	2650	0.06	6600	0.06	8000	0.15
8.0	2800	0.08	1800	0.06	8800	0.30	7000	0.30	2000	0.07	5000	0.08	6000	0.18
10.0	2200	0.10	1400	0.08	7000	0.40	5600	0.35	1600	0.08	4000	0.10	4800	0.22
12.0	1900	0.12	1200	0.10	5800	0.50	4600	0.40	1300	0.10	3300	0.12	4000	0.26
14.0	1600	0.15	1000	0.12	5000	0.60	4000	0.50	1100	0.12	2800	0.15	3400	0.30
16.0	1400	0.20	900	0.15	4380	0.80	3500	0.60	1000	0.14	2500	0.20	3000	0.40
18.0	1250	0.22	800	0.17	3900	1.00	3100	0.70	900	0.16	2200	0.22	2650	0.45
20.0	1120	0.24	720	0.19	3500	1.20	2800	0.80	800	0.18	2000	0.24	2400	0.50

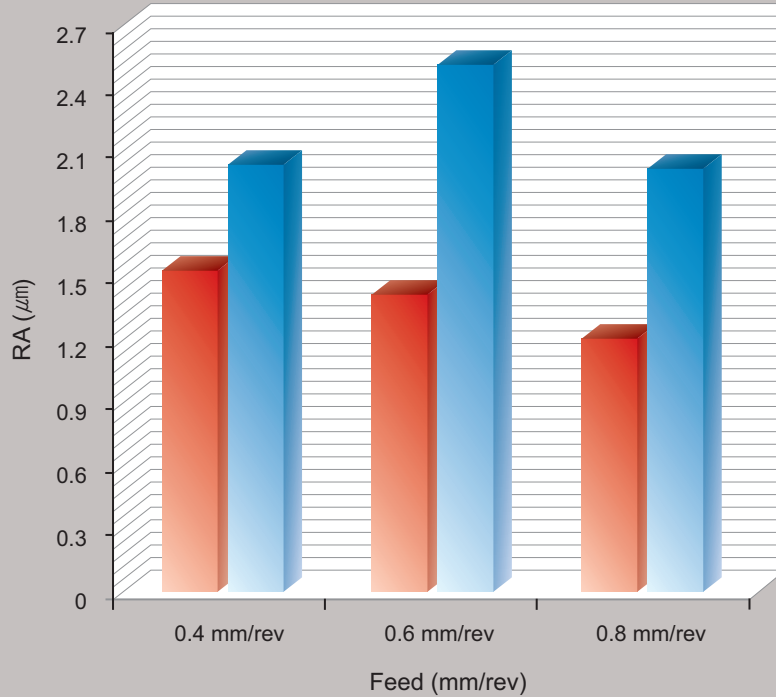
- ▶ Recommend to reduce the feed rate as following.  
 DH451(3xD), DH452(5xD) : Feed 100%  
 DH453(8xD) : Feed 85%

N = R.P.M  
 S = Feed per Revolution (mm/rev.)

# SOLID CARBIDE DREAM DRILLS ALU - **Test Report**

## with COOLANT HOLES

### ● **Surface Roughness of Work Piece**

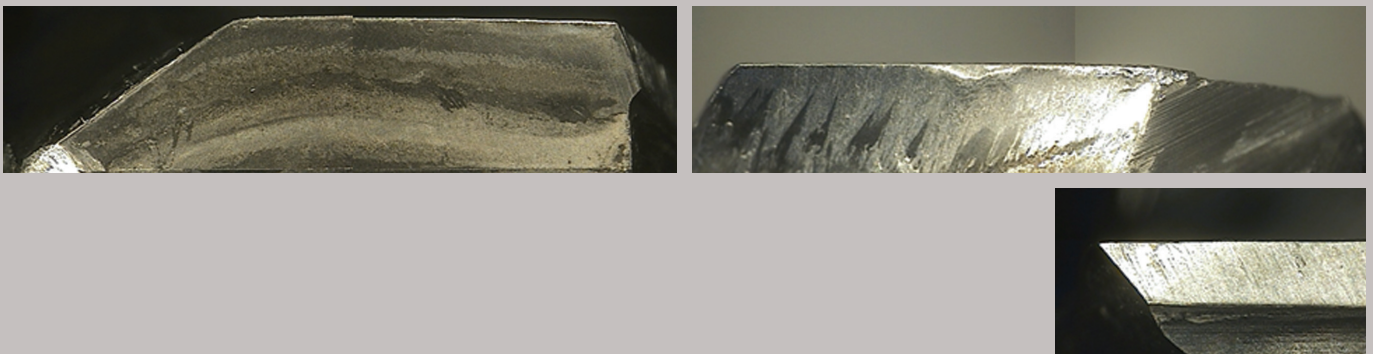


■ YG-1  
■ COMPETITOR

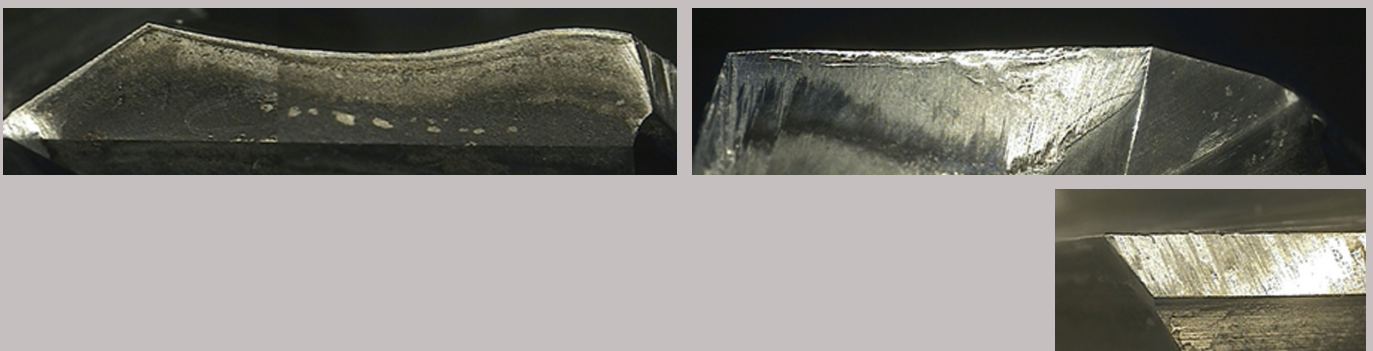
#### **Cutting Condition**

- Tools : D5433100 (DREAM DRILL - ALU)
- Size :  $\varnothing 10.0 \times 10 \times 61 \times 103$
- Work Material :
  - Al(6061)
  - JIS:A6061
  - DIN:AlMgSiCu
- R.P.M : 6,367 rev./min.
- Feed : 0.4 ~ 0.8 mm/rev.
- Drilling Depth : 45mm
- Coolant : Wet cut

#### ▶ **YG-1 (Total Drilling 820 Holes)**



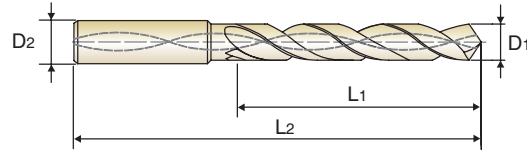
#### ▶ **COMPETITOR (Total Drilling 820 Holes)**





### SOLID CARBIDE DREAM DRILLS ALU with COOLANT HOLES

- ▶ Good chip treatment due to flute geometry & chip space
- ▶ Better finish & built-up edge prevention



DIN 6537
MG
h6
m7
118°
20 bar
P.36

## DREAM DRILLS ALU | 3 × D

Unit : mm

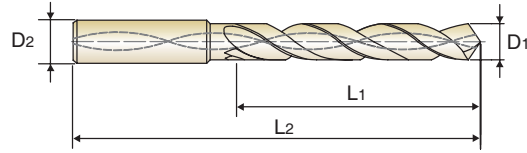
EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1	D2	L1	L2		D1	D2	L1	L2
D5432030	3.0	6	20	62	D5432061	6.1	8	34	79
D5432031	3.1	6	20	62	D5432062	6.2	8	34	79
D5432032	3.2	6	20	62	D5432063	6.3	8	34	79
D5432033	3.3	6	20	62	D5432064	6.4	8	34	79
D5432034	3.4	6	20	62	D5432065	6.5	8	34	79
D5432035	3.5	6	20	62	D5432066	6.6	8	34	79
D5432036	3.6	6	20	62	D5432067	6.7	8	34	79
D5432037	3.7	6	20	62	D5432068	6.8	8	34	79
D5432038	3.8	6	24	66	D5432069	6.9	8	34	79
D5432039	3.9	6	24	66	D5432070	7.0	8	34	79
D5432040	4.0	6	24	66	D5432071	7.1	8	41	79
D5432041	4.1	6	24	66	D5432072	7.2	8	41	79
D5432042	4.2	6	24	66	D5432073	7.3	8	41	79
D5432043	4.3	6	24	66	D5432074	7.4	8	41	79
D5432044	4.4	6	24	66	D5432075	7.5	8	41	79
D5432045	4.5	6	24	66	D5432076	7.6	8	41	79
D5432046	4.6	6	24	66	D5432077	7.7	8	41	79
D5432047	4.7	6	24	66	D5432078	7.8	8	41	79
D5432048	4.8	6	28	66	D5432079	7.9	8	41	79
D5432049	4.9	6	28	66	D5432080	8.0	8	41	79
D5432050	5.0	6	28	66	D5432081	8.1	10	47	89
D5432051	5.1	6	28	66	D5432082	8.2	10	47	89
D5432052	5.2	6	28	66	D5432083	8.3	10	47	89
D5432053	5.3	6	28	66	D5432084	8.4	10	47	89
D5432054	5.4	6	28	66	D5432085	8.5	10	47	89
D5432055	5.5	6	28	66	D5432086	8.6	10	47	89
D5432056	5.6	6	28	66	D5432087	8.7	10	47	89
D5432057	5.7	6	28	66	D5432088	8.8	10	47	89
D5432058	5.8	6	28	66	D5432089	8.9	10	47	89
D5432059	5.9	6	28	66	D5432090	9.0	10	47	89
D5432060	6.0	6	28	66	D5432091	9.1	10	47	89

▶ DLC coating is available on your request.



### SOLID CARBIDE DREAM DRILLS ALU with COOLANT HOLES

- ▶ Good chip treatment due to flute geometry & chip space
- ▶ Better finish & built-up edge prevention



DIN 6537
MG
h6
m7
118°
20 bar

P.36

## DREAM DRILLS ALU | 3 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1					D1			
D5432092	9.2	10	47	89	D5432115	11.5	12	55	102
D5432093	9.3	10	47	89	D5432116	11.6	12	55	102
D5432094	9.4	10	47	89	D5432117	11.7	12	55	102
D5432095	9.5	10	47	89	D5432118	11.8	12	55	102
D5432096	9.6	10	47	89	D5432119	11.9	12	55	102
D5432097	9.7	10	47	89	D5432120	12.0	12	55	102
D5432098	9.8	10	47	89	D5432125	12.5	14	60	107
D5432099	9.9	10	47	89	D5432130	13.0	14	60	107
D5432100	10.0	10	47	89	D5432135	13.5	14	60	107
D5432101	10.1	12	55	102	D5432140	14.0	14	60	107
D5432102	10.2	12	55	102	D5432145	14.5	16	65	115
D5432103	10.3	12	55	102	D5432150	15.0	16	65	115
D5432104	10.4	12	55	102	D5432155	15.5	16	65	115
D5432105	10.5	12	55	102	D5432160	16.0	16	65	115
D5432106	10.6	12	55	102	D5432165	16.5	18	73	123
D5432107	10.7	12	55	102	D5432170	17.0	18	73	123
D5432108	10.8	12	55	102	D5432175	17.5	18	73	123
D5432109	10.9	12	55	102	D5432180	18.0	18	73	123
D5432110	11.0	12	55	102	D5432185	18.5	20	79	131
D5432111	11.1	12	55	102	D5432190	19.0	20	79	131
D5432112	11.2	12	55	102	D5432195	19.5	20	79	131
D5432113	11.3	12	55	102	D5432200	20.0	20	79	131
D5432114	11.4	12	55	102					

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

◎ : Excellent ○ : Good

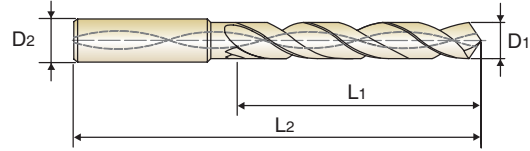
P					M	K	N		S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Mild Steels	Stainless Steels	Cast Iron	Aluminum	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~				◎		





### SOLID CARBIDE DREAM DRILLS ALU with COOLANT HOLES

- ▶ Good chip treatment due to flute geometry & chip space
- ▶ Better finish & built-up edge prevention



DIN 6537
MG
h6
m7
118°
20 bar

P.36

## DREAM DRILLS ALU | 5 × D

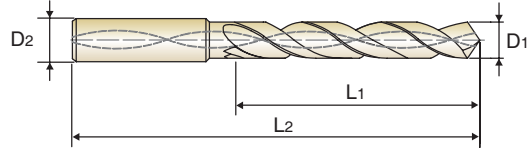
Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1					D2			
D5433030	3.0	6	28	66	D5433061	6.1	8	53	91
D5433031	3.1	6	28	66	D5433062	6.2	8	53	91
D5433032	3.2	6	28	66	D5433063	6.3	8	53	91
D5433033	3.3	6	28	66	D5433064	6.4	8	53	91
D5433034	3.4	6	28	66	D5433065	6.5	8	53	91
D5433035	3.5	6	28	66	D5433066	6.6	8	53	91
D5433036	3.6	6	28	66	D5433067	6.7	8	53	91
D5433037	3.7	6	28	66	D5433068	6.8	8	53	91
D5433038	3.8	6	36	74	D5433069	6.9	8	53	91
D5433039	3.9	6	36	74	D5433070	7.0	8	53	91
D5433040	4.0	6	36	74	D5433071	7.1	8	53	91
D5433041	4.1	6	36	74	D5433072	7.2	8	53	91
D5433042	4.2	6	36	74	D5433073	7.3	8	53	91
D5433043	4.3	6	36	74	D5433074	7.4	8	53	91
D5433044	4.4	6	36	74	D5433075	7.5	8	53	91
D5433045	4.5	6	36	74	D5433076	7.6	8	53	91
D5433046	4.6	6	36	74	D5433077	7.7	8	53	91
D5433047	4.7	6	36	74	D5433078	7.8	8	53	91
D5433048	4.8	6	44	82	D5433079	7.9	8	53	91
D5433049	4.9	6	44	82	D5433080	8.0	8	53	91
D5433050	5.0	6	44	82	D5433081	8.1	10	61	103
D5433051	5.1	6	44	82	D5433082	8.2	10	61	103
D5433052	5.2	6	44	82	D5433083	8.3	10	61	103
D5433053	5.3	6	44	82	D5433084	8.4	10	61	103
D5433054	5.4	6	44	82	D5433085	8.5	10	61	103
D5433055	5.5	6	44	82	D5433086	8.6	10	61	103
D5433056	5.6	6	44	82	D5433087	8.7	10	61	103
D5433057	5.7	6	44	82	D5433088	8.8	10	61	103
D5433058	5.8	6	44	82	D5433089	8.9	10	61	103
D5433059	5.9	6	44	82	D5433090	9.0	10	61	103
D5433060	6.0	6	44	82	D5433091	9.1	10	61	103



### SOLID CARBIDE DREAM DRILLS ALU with COOLANT HOLES

- ▶ Good chip treatment due to flute geometry & chip space
- ▶ Better finish & built-up edge prevention



DIN 6537
MG
h6
m7
118°
20 bar

P.36

## DREAM DRILLS ALU | 5 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1					D1			
D5433092	9.2	10	61	103	D5433115	11.5	12	71	118
D5433093	9.3	10	61	103	D5433116	11.6	12	71	118
D5433094	9.4	10	61	103	D5433117	11.7	12	71	118
D5433095	9.5	10	61	103	D5433118	11.8	12	71	118
D5433096	9.6	10	61	103	D5433119	11.9	12	71	118
D5433097	9.7	10	61	103	D5433120	12.0	12	71	118
D5433098	9.8	10	61	103	D5433125	12.5	14	77	124
D5433099	9.9	10	61	103	D5433130	13.0	14	77	124
D5433100	10.0	10	61	103	D5433135	13.5	14	77	124
D5433101	10.1	12	71	118	D5433140	14.0	14	77	124
D5433102	10.2	12	71	118	D5433145	14.5	16	83	133
D5433103	10.3	12	71	118	D5433150	15.0	16	83	133
D5433104	10.4	12	71	118	D5433155	15.5	16	83	133
D5433105	10.5	12	71	118	D5433160	16.0	16	83	133
D5433106	10.6	12	71	118	D5433165	16.5	18	93	143
D5433107	10.7	12	71	118	D5433170	17.0	18	93	143
D5433108	10.8	12	71	118	D5433175	17.5	18	93	143
D5433109	10.9	12	71	118	D5433180	18.0	18	93	143
D5433110	11.0	12	71	118	D5433185	18.5	20	101	153
D5433111	11.1	12	71	118	D5433190	19.0	20	101	153
D5433112	11.2	12	71	118	D5433195	19.5	20	101	153
D5433113	11.3	12	71	118	D5433200	20.0	20	101	153
D5433114	11.4	12	71	118					

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

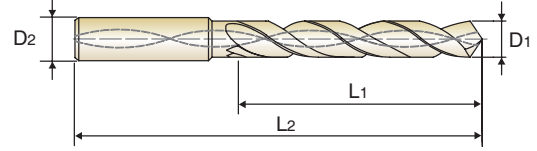
◎ : Excellent ○ : Good

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



### SOLID CARBIDE DREAM DRILLS ALU with COOLANT HOLES

- ▶ Good chip treatment due to flute geometry & chip space
- ▶ Better finish & built-up edge prevention



DIN 6537
MG
h6
m7
118°
20 bar

P.36

## DREAM DRILLS ALU | 8 × D

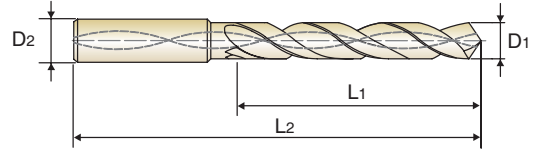
Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1	D2	L1	L2		D1	D2	L1	L2
D5434030	3.0	6	34	72	D5434058	5.8	6	57	95
D5434031	3.1	6	34	72	D5434059	5.9	6	57	95
D5434032	3.2	6	34	72	D5434060	6.0	6	57	95
D5434033	3.3	6	34	72	D5434061	6.1	8	76	114
D5434034	3.4	6	34	72	D5434062	6.2	8	76	114
D5434035	3.5	6	34	72	D5434063	6.3	8	76	114
D5434036	3.6	6	34	72	D5434064	6.4	8	76	114
D5434037	3.7	6	34	72	D5434065	6.5	8	76	114
D5434038	3.8	6	43	81	D5434066	6.6	8	76	114
D5434039	3.9	6	43	81	D5434067	6.7	8	76	114
D5434040	4.0	6	43	81	D5434068	6.8	8	76	114
D5434041	4.1	6	43	81	D5434069	6.9	8	76	114
D5434042	4.2	6	43	81	D5434070	7.0	8	76	114
D5434043	4.3	6	43	81	D5434071	7.1	8	76	114
D5434044	4.4	6	43	81	D5434072	7.2	8	76	114
D5434045	4.5	6	43	81	D5434073	7.3	8	76	114
D5434046	4.6	6	43	81	D5434074	7.4	8	76	114
D5434047	4.7	6	43	81	D5434075	7.5	8	76	114
D5434048	4.8	6	57	95	D5434076	7.6	8	76	114
D5434049	4.9	6	57	95	D5434077	7.7	8	76	114
D5434050	5.0	6	57	95	D5434078	7.8	8	76	114
D5434051	5.1	6	57	95	D5434079	7.9	8	76	114
D5434052	5.2	6	57	95	D5434080	8.0	8	76	114
D5434053	5.3	6	57	95	D5434081	8.1	10	95	142
D5434054	5.4	6	57	95	D5434082	8.2	10	95	142
D5434055	5.5	6	57	95	D5434083	8.3	10	95	142
D5434056	5.6	6	57	95	D5434084	8.4	10	95	142
D5434057	5.7	6	57	95	D5434085	8.5	10	95	142



### SOLID CARBIDE DREAM DRILLS ALU with COOLANT HOLES

- ▶ Good chip treatment due to flute geometry & chip space
- ▶ Better finish & built-up edge prevention



DIN 6537
MG
h6
m7
118°
20 bar

P.36

## DREAM DRILLS ALU | 8 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
	D1	D2	L1	L2		D1	D2	L1	L2
D5434086	8.6	10	95	142	D5434106	10.6	12	114	162
D5434087	8.7	10	95	142	D5434107	10.7	12	114	162
D5434088	8.8	10	95	142	D5434108	10.8	12	114	162
D5434089	8.9	10	95	142	D5434109	10.9	12	114	162
D5434090	9.0	10	95	142	D5434110	11.0	12	114	162
D5434091	9.1	10	95	142	D5434111	11.1	12	114	162
D5434092	9.2	10	95	142	D5434112	11.2	12	114	162
D5434093	9.3	10	95	142	D5434113	11.3	12	114	162
D5434094	9.4	10	95	142	D5434114	11.4	12	114	162
D5434095	9.5	10	95	142	D5434115	11.5	12	114	162
D5434096	9.6	10	95	142	D5434116	11.6	12	114	162
D5434097	9.7	10	95	142	D5434117	11.7	12	114	162
D5434098	9.8	10	95	142	D5434118	11.8	12	114	162
D5434099	9.9	10	95	142	D5434119	11.9	12	114	162
D5434100	10.0	10	95	142	D5434120	12.0	12	114	162
D5434101	10.1	12	114	162	D5434125	12.5	14	133	178
D5434102	10.2	12	114	162	D5434130	13.0	14	133	178
D5434103	10.3	12	114	162	D5434135	13.5	14	133	178
D5434104	10.4	12	114	162	D5434140	14.0	14	133	178
D5434105	10.5	12	114	162					

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

◎ : Excellent ○ : Good

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





## SOLID CARBIDE DREAM DRILLS ALU with COOLANT HOLES

### D5432, D5433, D5434 Series

Unit : mm

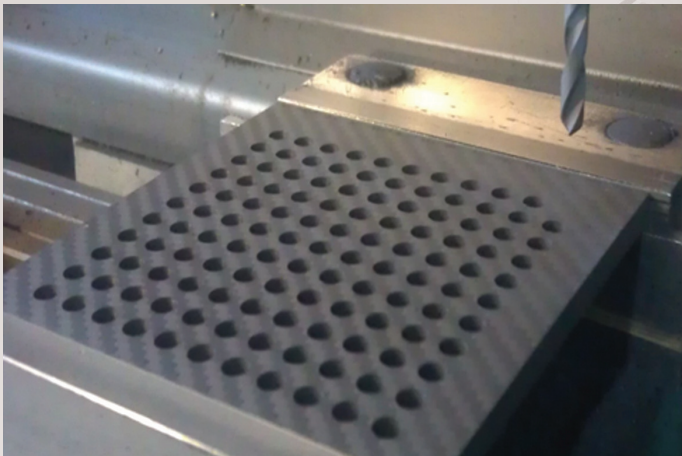
WORK MATERIAL	N			
	Aluminium Alloy Casting Aluminium Die Casting		Wrought Aluminium Alloy	
DIAMETER	N	S	N	S
Ø3.0 ~ Ø6.0	8000~15000	0.2~0.5	8000~15000	0.15~0.3
~ Ø10.0	6000~10500	0.3~1.0	6000~10500	0.2~0.4
~ Ø14.0	4500~5800	0.3~1.0	4500~5800	0.2~0.4
~ Ø20.0	3200~4600	0.3~1.0	3200~4600	0.2~0.4

N = R.P.M(min<sup>-1</sup>)  
S = Feed per Revolution (mm/rev.)

# SOLID CARBIDE DREAM DRILL CFRP - **Test Report**

## ● Solid Carbide Drill for Composite Material

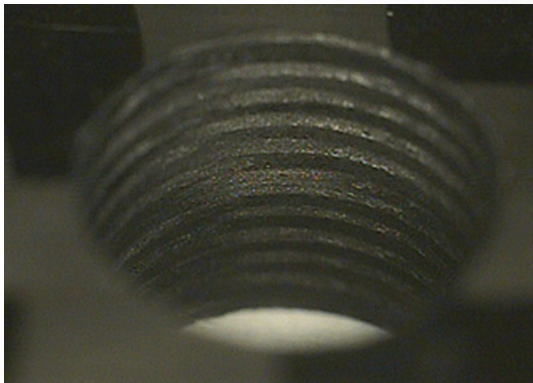
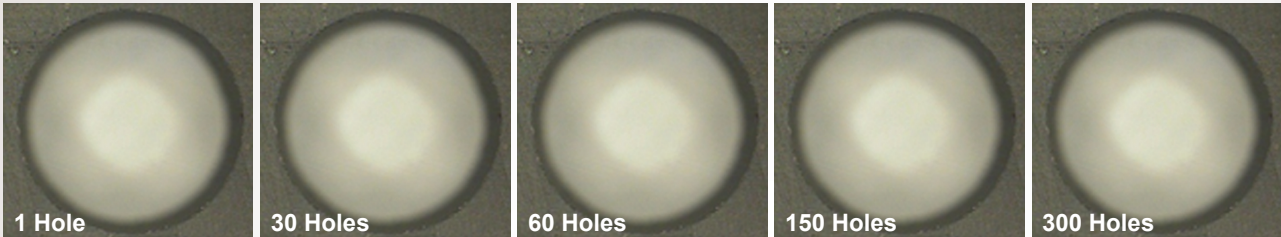
### ▶ Drilling Test of Composite Material(CFRP)



#### **Working condition**

- Tools : DI473060 (DREAM DRILL - CFRP)
- Size :  $\varnothing 6.0 \times 6 \times 44 \times 82$
- Work Material : CFRP
- R.P.M : 6,366 rev./min.
- Feed : 254.64 mm/min.
- Drilling Depth : 6mm, Through Hole
- Coolant : Dry Cut

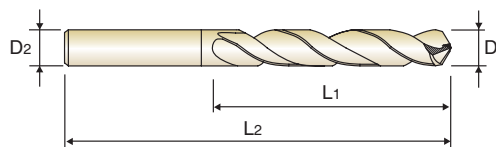
#### **YG-1**





## SOLID CARBIDE DREAM DRILL CFRP

- ▶ Special Point Type improve hole quality for Composite Material  
-> Minimized Burr and Delamination at Entry / Exit Hole.
- ▶ Outstanding Performance
- ▶ Long tool life and increased Productivity by Diamond coating.



Unit : mm

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

### CUTTING CONDITIONS

WORK MATERIAL	N		
	CFRP		
DIAMETER	Speed (m/min)	RPM	Feed (mm/rev)
2.5	100 ~ 150	12700 ~ 19000	0.03 ~ 0.07
3.0	100 ~ 150	10600 ~ 15900	0.03 ~ 0.07
4.0	100 ~ 150	8000 ~ 11900	0.03 ~ 0.07
5.0	100 ~ 150	6370 ~ 9500	0.03 ~ 0.07
6.0	100 ~ 150	5300 ~ 8000	0.03 ~ 0.07
8.0	100 ~ 150	4000 ~ 6000	0.03 ~ 0.07
9.0	100 ~ 150	3500 ~ 5300	0.03 ~ 0.07
10.0	100 ~ 150	3200 ~ 4700	0.03 ~ 0.07
11.0	100 ~ 150	2900 ~ 4300	0.03 ~ 0.07
12.0	100 ~ 150	2700 ~ 3900	0.03 ~ 0.07

◎ : Excellent ○ : Good

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

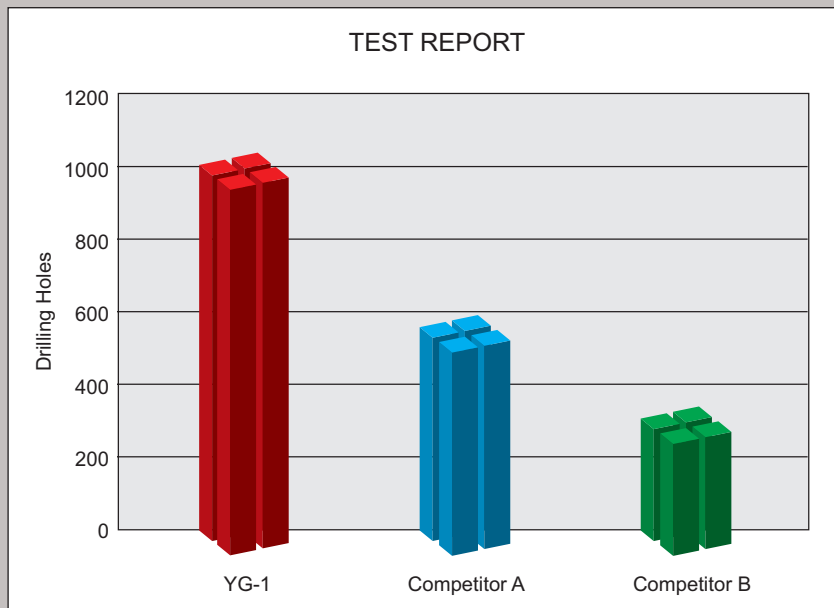
# SOLID CARBIDE DREAM DRILLS MQL TYPE - **Test Report**

## with COOLANT HOLES

### ● **FEATURES OF DREAM DRILL MQL TYPE**

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

### ● **TEST RESULT AGAINST COMPETITOR'S DRILL**



#### **Cutting Condition**

- Tools : DH520060 (DREAM DRILL - MQL)
- Size :  $\text{Ø}6.0 \times 6 \times 138 \times 193$
- Work Material :
  - JIS:S45C (HRc 25)
  - DIN:C45
  - WR:1.0503
- R.P.M : 3,528 rev./min.
- Drilling Depth : 80mm
- Feed : 0.19mm/rev.
- Coolant : Oil Mist (MQL Techniques)

#### ▶ **YG-1 (After drilling 1,000 holes)**



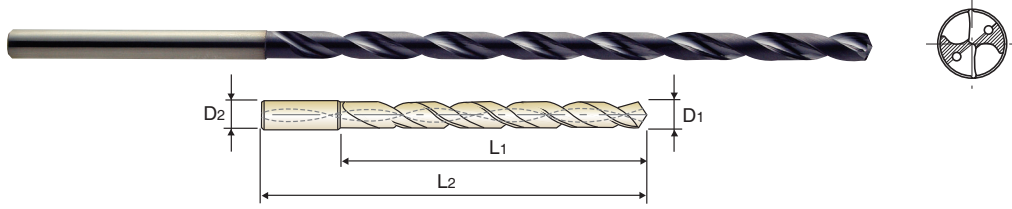
#### ▶ **COMPETITOR A (After drilling 546 holes)**





### SOLID CARBIDE DREAM DRILL MQL TYPE with COOLANT HOLES

- ▶ Application : Drilling steels in general, cast steels, cast iron, non-ferrous heavy metals, non-ferrous light metals.
- ▶ Advantage : Non step drilling up to 10 times of drill diameter. Available for processing MQL(Minimum Quantity Lubrication).  
 Excellent positioning - Bush is not necessary.  
 Special design - Good chip removal  
 Powerful drilling



MG N<sub>30</sub> h6 h7 140° 45 bar P.44

## MQL TYPE | 10 × D

### 10 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DH510030	3.0	3	39	90	DH510080	8.0	8	104	161
DH510033	3.3	4	46	97	DH510085	8.5	9	111	169
DH510035	3.5	4	46	97	DH510090	9.0	9	117	175
DH510040	4.0	4	52	103	DH510095	9.5	10	124	182
DH510042	4.2	5	59	112	DH510100	10.0	10	130	188
DH510045	4.5	5	59	112	DH510105	10.5	11	137	201
DH510050	5.0	5	65	118	DH510110	11.0	11	143	207
DH510055	5.5	6	72	127	DH510115	11.5	12	150	215
DH510060	6.0	6	78	133	DH510120	12.0	12	156	221
DH510065	6.5	7	85	141	DH510125	12.5	13	163	229
DH510068	6.8	7	91	147	DH510130	13.0	13	169	235
DH510070	7.0	7	91	147	DH510135	13.5	14	176	243
DH510075	7.5	8	98	155	DH510140	14.0	14	182	249

◎ : Excellent ○ : Good

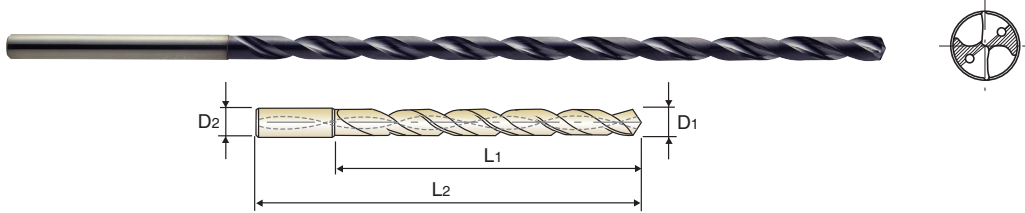
P					M	K	N	S		
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Mild Steels	Stainless Steels	Cast Iron	Aluminum	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~						
◎	◎	○			○		○			





### SOLID CARBIDE DREAM DRILL MQL TYPE with COOLANT HOLES

- ▶ Application : Drilling steels in general, cast steels, cast iron, non-ferrous heavy metals, non-ferrous light metals.
- ▶ Advantage : Non step drilling up to 10 times of drill diameter. Available for processing MQL(Minimum Quantity Lubrication).
  - Excellent positioning - Bush is not necessary.
  - Special design - Good chip removal
  - Powerful drilling



MG

### MQL TYPE | 15 × D, 20 × D

#### 15 × D

#### 20 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	TiAIN	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>
DH515030	3.0	3	54	105	DH520030	3.0	3	69	120
DH515035	3.5	4	63	114	DH520035	3.5	4	81	132
DH515040	4.0	4	72	123	DH520040	4.0	4	92	143
DH515045	4.5	5	81	134	DH520045	4.5	5	104	157
DH515050	5.0	5	90	143	DH520050	5.0	5	115	168
DH515055	5.5	6	99	154	DH520055	5.5	6	127	182
DH515060	6.0	6	108	163	DH520060	6.0	6	138	193
DH515070	7.0	7	126	182	DH520070	7.0	7	161	217
DH515080	8.0	8	144	201	DH520080	8.0	8	184	241
DH515090	9.0	9	162	220	DH520090	9.0	9	207	265
DH515100	10.0	10	180	238	DH520100	10.0	10	230	288
DH515110	11.0	11	198	262	DH520120	12.0	12	276	341
DH515120	12.0	12	216	281					

◎ : Excellent ○ : Good

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

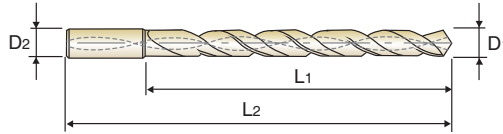


# MQL TYPE

# DHM10, DHM15, DHM20 Series

## SOLID CARBIDE DREAM DRILL MQL TYPE with COOLANT HOLES

- ▶ Application : Drilling steels in general, cast steels, cast iron, non-ferrous heavy metals, non-ferrous light metals.
- ▶ Advantage : Non step drilling up to 10 times of drill diameter. Available for processing MQL (Minimum Quantity Lubrication).
  - Excellent positioning - Bush is not necessary.
  - Special design - Good chip removal
  - Powerful drilling



## MQL TYPE | 10×D, 15×D, 20×D

### 10×D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>
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

### 15×D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>
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

### 20×D

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D <sub>1</sub>	D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>
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

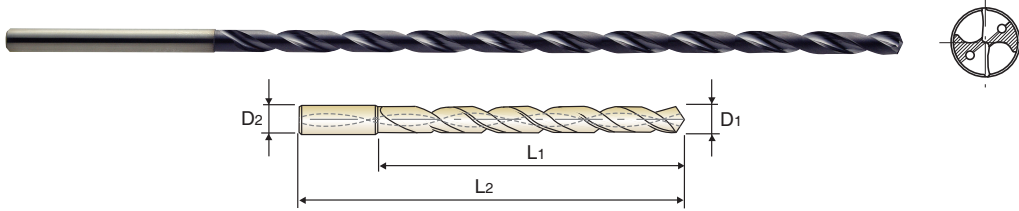
◎ : Excellent ○ : Good

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



### SOLID CARBIDE DREAM DRILL MQL TYPE with COOLANT HOLES

- ▶ Application : Drilling steels in general, cast steels, cast iron, non-ferrous heavy metals, non-ferrous light metals.
- ▶ Advantage : Non step drilling up to 10 times of drill diameter. Available for processing MQL (Minimum Quantity Lubrication).
  - Excellent positioning - Bush is not necessary.
  - Special design - Good chip removal
  - Powerful drilling



MG
N 30°
h6
h7
140°
45 bar
P.44

### MQL TYPE | 25 × D, 30 × D

#### 25 × D

#### 30 × D

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAlN	D1	D2	L1	L2	TiAlN	D1	D2	L1	L2
DHM25030	3.0	6.0	85	125	DHM30030	3.0	6.0	100	140
DHM25035	3.5	6.0	99	139	DHM30035	3.5	6.0	117	157
DHM25040	4.0	6.0	113	153	DHM30040	4.0	6.0	133	173
DHM25045	4.5	6.0	127	167	DHM30045	4.5	6.0	150	190
DHM25050	5.0	6.0	141	181	DHM30050	5.0	6.0	166	206
DHM25055	5.5	6.0	155	195	DHM30055	5.5	6.0	183	223
DHM25060	6.0	6.0	169	209	DHM30060	6.0	6.0	199	239
DHM25070	7.0	8.0	197	237	DHM30070	7.0	8.0	232	272
DHM25080	8.0	8.0	225	265	DHM30080	8.0	8.0	265	305
DHM25090	9.0	10.0	253	297					
DHM25100	10.0	10.0	282	326					

◎ : Excellent ○ : Good

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



## SOLID CARBIDE DREAM DRILL MQL TYPE, TiAIN COATED

### DH510, DH515, DH520, DHM10, DHM15, DHM20 Series

Unit : mm

WORK MATERIAL	P		K			
	CARBON STEELS ALLOY STEELS		CAST IRON		DUCTILE CAST IRON	
STRENGTH	~ 1060 N/mm <sup>2</sup>		250 ~ 350 N/mm <sup>2</sup>		400 ~ 500 N/mm <sup>2</sup>	
DRILLING SPEED	63 ~ 125 m/min		63 ~ 125 m/min		60 ~ 80 m/min	
DIAMETER	N	S	N	S	N	S
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

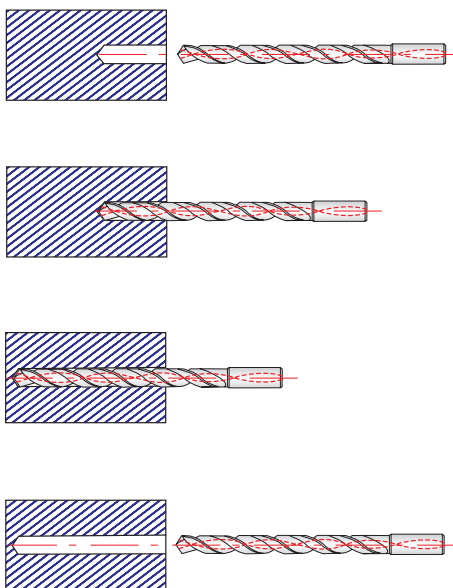
N = R.P.M  
S = Feed per Revolution(mm/rev.)

### DHM25, DHM30 Series

Unit : mm

WORK MATERIAL	P		K			
	CARBON STEELS ALLOY STEELS		CAST IRON		DUCTILE CAST IRON	
STRENGTH	~ 1060 N/mm <sup>2</sup>		250 ~ 350 N/mm <sup>2</sup>		400 ~ 500 N/mm <sup>2</sup>	
DRILLING SPEED	50 ~ 110 m/min		50 ~ 110 m/min		40 ~ 70 m/min	
DIAMETER	N	S	N	S	N	S
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

N = R.P.M  
S = Feed per Revolution(mm/rev.)



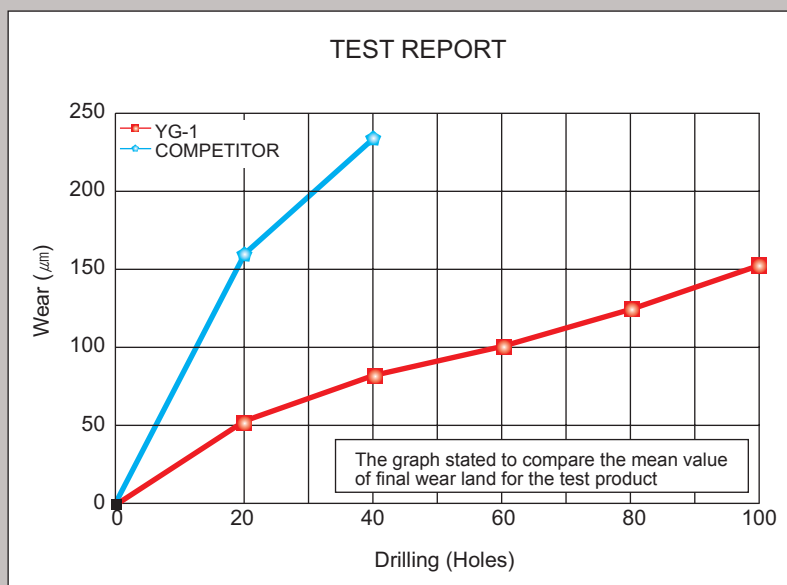
1. Guide Drilling should be done as Diameter+0.1mm between 3xD and 5xD depth.
2. For Main Drilling, proceed with low RPM at Guide Drilling segment.  
(RPM 300, FEED 400mm/min)
3. Just before the end of Guide Drilling segment, reduce feed to zero and increase the RPM according to Recommended Cutting Condition 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%.

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

## FEATURES OF DREAM DRILL HARDENED STEELS

- 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.

## TEST RESULT AGAINST COMPETITOR'S DRILL



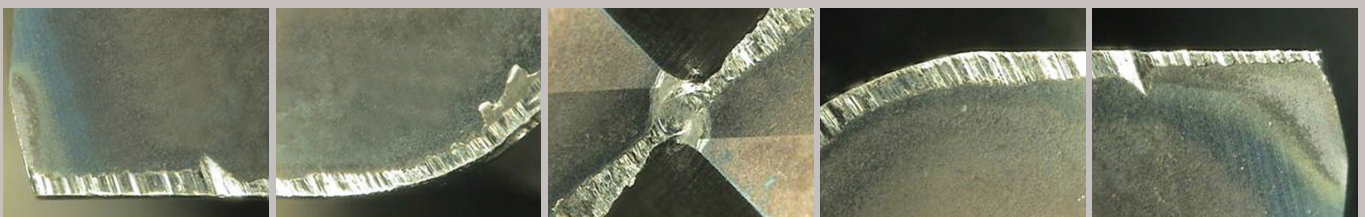
### Cutting Condition

- Tools : DH500100  
(Dream Drill for High Hardened Steels)
- Size :  $\varnothing 10.0 \times 10 \times 63 \times 111$
- Work Material : • JIS:SKD11 (HRc 60)  
• DIN:X155CrV-Mo12.1  
• WR:1.2379
- R.P.M : 380 rev./min.
- Drilling Depth : 25mm (2.5D)
- Feed : 0.04 mm/rev.
- Coolant : Wet Cut

### YG-1 (After drilling 100 holes)



### COMPETITOR (After drilling 40 holes)

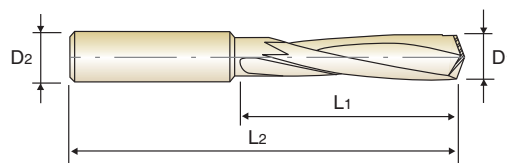
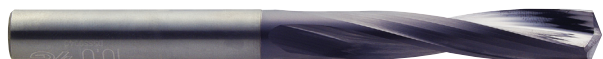






### SOLID CARBIDE DREAM DRILL for HIGH HARDENED STEELS (HRc50~70)

- ▶ Application : Drilling for High Hardened Steels[Quenched Steels, Tempered Steels (Under HRc 70)]
- ▶ Advantage : Special Design
  - Minimum of cutting load through special thinning
  - Good chip removal
  - Powerful Drilling



for HIGH HARDENED STEELS

Unit : mm

EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter	Shank Diameter	Flute Length	Overall Length
TiAIN	D1	D2	L1	L2	TiAIN	D1	D2	L1	L2
DH500026	2.6	3	14	44	DH500070	7.0	8	45	85
DH500030	3.0	3	16	46	DH500075	7.5	8	45	85
DH500033	3.3	4	18	48	DH500080	8.0	8	50	98
DH500034	3.4	4	20	50	DH500085	8.5	10	50	98
DH500035	3.5	4	20	50	DH500086	8.6	10	57	105
DH500040	4.0	4	22	52	DH500088	8.8	10	57	105
DH500042	4.2	6	25	65	DH500090	9.0	10	57	105
DH500043	4.3	6	28	68	DH500095	9.5	10	57	105
DH500044	4.4	6	28	68	DH500100	10.0	10	63	111
DH500045	4.5	6	28	68	DH500102	10.2	12	63	111
DH500050	5.0	6	32	72	DH500103	10.3	12	63	111
DH500051	5.1	6	32	72	DH500105	10.5	12	63	111
DH500052	5.2	6	32	72	DH500108	10.8	12	71	119
DH500055	5.5	6	35	75	DH500110	11.0	12	71	119
DH500060	6.0	6	35	75	DH500115	11.5	12	71	119
DH500065	6.5	8	40	80	DH500120	12.0	12	71	119
DH500068	6.8	8	45	85	DH500140	14.0	14	77	125
DH500069	6.9	8	45	85					

◎ : Excellent ○ : Good

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



## SOLID CARBIDE DREAM DRILL for HIGH HARDENED STEELS HRc50~HRc70, TiAlN COATED

### DH500 Series

Unit : mm

WORK MATERIAL	P					
	HARDENED STEELS					
	HRc 50 ~ 55		HRc 55 ~ 60		HRc 60 ~ 70	
DRILLING SPEED	14 ~ 22 m/min		10 ~ 16 m/min		8 ~ 13 m/min	
DIAMETER DIAMETER	N	S	N	S	N	S
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

N = R.P.M  
S = Feed per Revolution(mm/rev.)



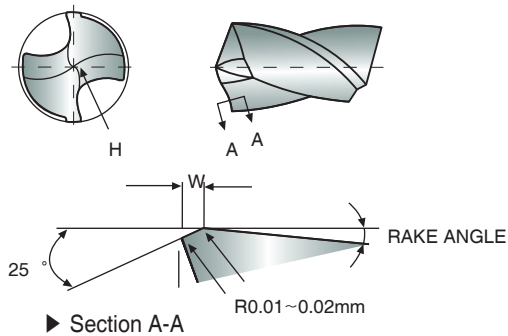
## Characteristic of DREAM DRILL

- 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, 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 due to TiAlN coating.
- Self-centering

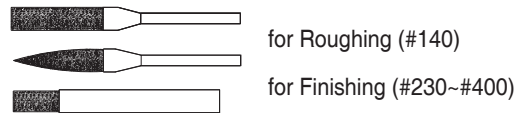


## Honing Guide of DREAM DRILL

### Dimension of Honing



### Scraper

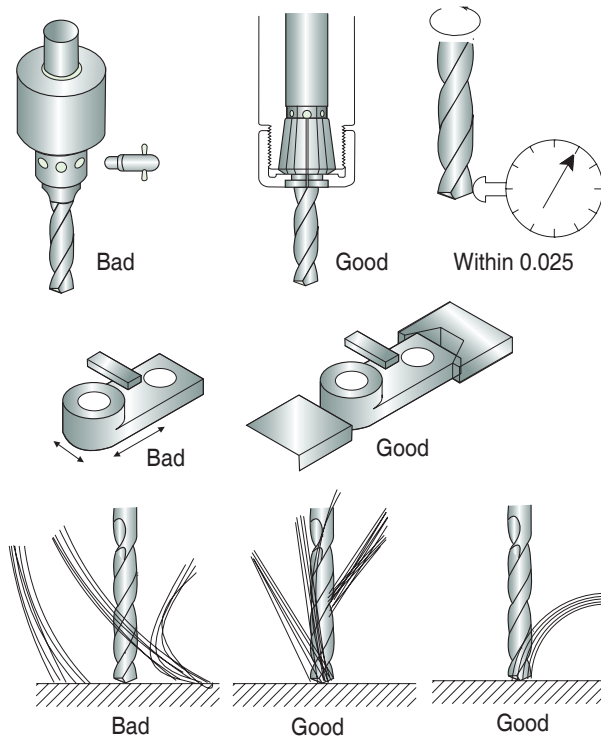


Work Material	Alloy Steels	Mild Steels	Cast Iron
W(mm)	0.15~0.2	0.1~0.15	0.03

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



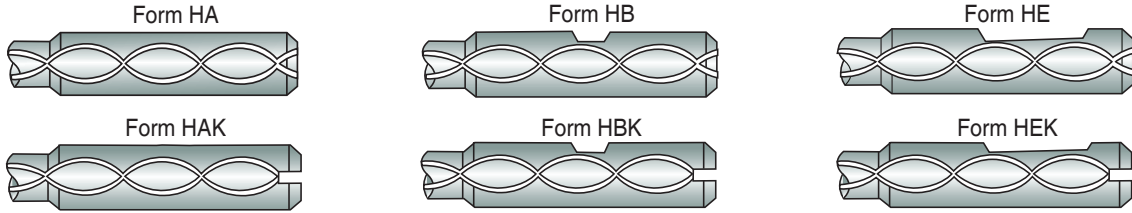
## Use of DREAM DRILL



- ▶ 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.

## 4

### Shank Type DREAM DRILL with Coolant Holes



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

## 5

### 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 $\mu\text{m}$						
<b>h6</b>	0 - 6	0 - 8	0 - 9	0 - 11	0 - 13	0 - 16
<b>h7</b>	0 - 10	0 - 12	0 - 15	0 - 18	0 - 21	0 - 25
<b>h8</b>	0 - 14	0 - 18	0 - 22	0 - 27	0 - 33	0 - 39
<b>m7</b>	+ 12 + 2	+ 16 + 4	+ 21 + 6	+ 25 + 7	+ 29 + 8	+ 34 + 9