



CUTTING TOOLS





DRILLING

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DRILLING

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DRILLING

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MILLING

	PRODUCTS	DESCRIPTION	
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MILLING

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MILLING

	PRODUCTS	DESCRIPTION	PAGE
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OTHER TOOLS

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	TOOL HOLDERS	- According to CAT + BT Standards	1305

CASE STUDY ♦ i-DREAM DRILL (Reference page : p.41 ~ p.54)

● i-DREAM DRILL - GENERAL

TOOL

HOLDER	ZB0302
INSERT	Y03B07

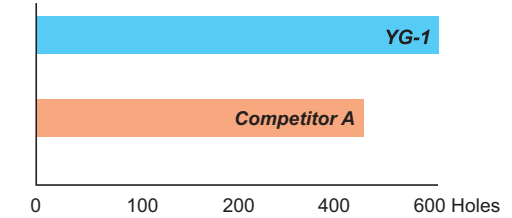
WORKPIECE - Structural Steels

ASTM	A36
DIN	St37-2
JIS	SS400

CONDITIONS

Cutting Speed	262 ft/min.
Feed	.0094 inch/rev.
Feedrate	16.59 inch/min.
RPM	1756 rev./min.
Drilling	1.89"
Coolant	Internal
Machine type	Vertical Machining Center

RESULT



YG-1 (Total Drilling 600 Holes)



Competitor A (Total Drilling 470 Holes)



● i-DREAM DRILL - INOX

TOOL

HOLDER	ZB0301
INSERT	YI3B01

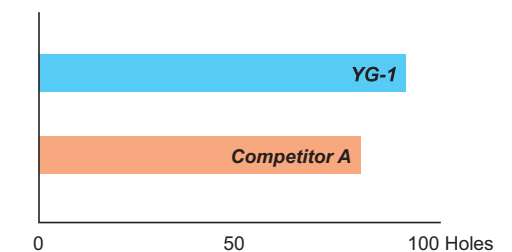
WORKPIECE - Stainless Steels

AISI	304
DIN	X5CrNi189
JIS	SUS304

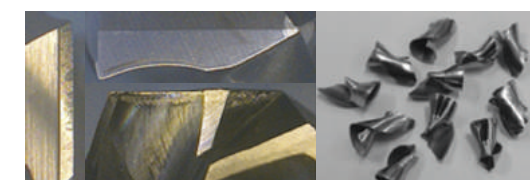
CONDITIONS

Cutting Speed	180 ft/min.
Feed	.0059 inch/rev.
Feedrate	7.402 inch/min.
RPM	1250 rev./min.
Drilling	1.97"
Coolant	Internal
Machine type	Vertical Machining Center

RESULT



YG-1 (Total Drilling 100 Holes)



Competitor A (Total Drilling 80 Holes)



● **FEATURES OF DREAM DRILLS-HIGH FEED**

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

YG-1 (Total Drilling 330 Holes)



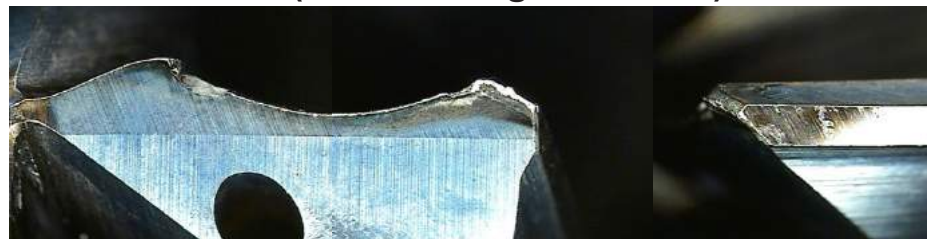
Cutting Condition

- Tools** : DGR495100
(Dream Drills High Feed)
- Size** : Ø10 x 10 x 61 x 103
- Work Material** : • AISI : 1045
 - JIS : S45C (HRc20)
 - DIN : C45
- R.P.M** : 3,200 rev./min.
- Feed** : .0197 inch/rev.
- Drilling Depth** : 1.97" (5xD)
- Drilling Method** : Blind Hole
- Coolant** : Wet Cut
- Machine** : Machining Center

COMPETITOR A (Total Drilling 330 Holes)



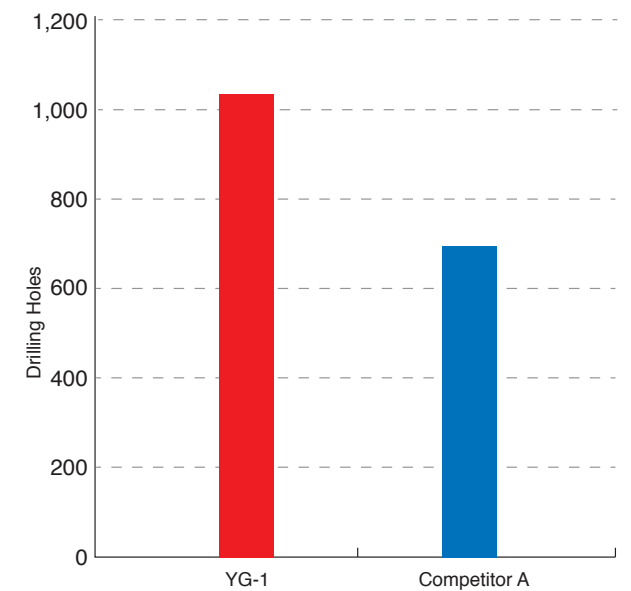
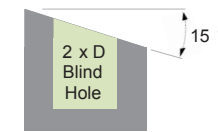
COMPETITOR B (Total Drilling 330 Holes)



● **SOLID CARBIDE DREAM DRILLS - Flat Bottom without Coolant Holes**

CUTTING CONDITION

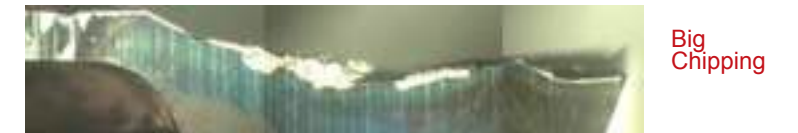
- **Tool** : Dream Drills Flat Bottom
- **Size** : Ø6.0 (.2362 inch)
- **Work Material** : • AISI : 1045
 - JIS : S45C
 - DIN : C45
- **Hardness** : HRc 20 (HB 228)
- **Cutting Speed** : 75.4 m/min (244.4 ft/min.)
- **RPM** : 4,000 rev/min
- **Feed** : 0.1 mm/rev (.0039 in/rev.)
- **Drilling Depth** : 12.0 mm (2XD)
 - Blind Hole / without Pecking
- **Coolant** : External Cooling Water Soluble (9% Emulsion)
- Machine** : Vertical Machining Center



▶ **YG-1**



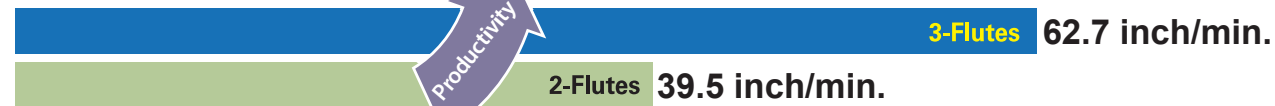
▶ **COMPETITOR A**



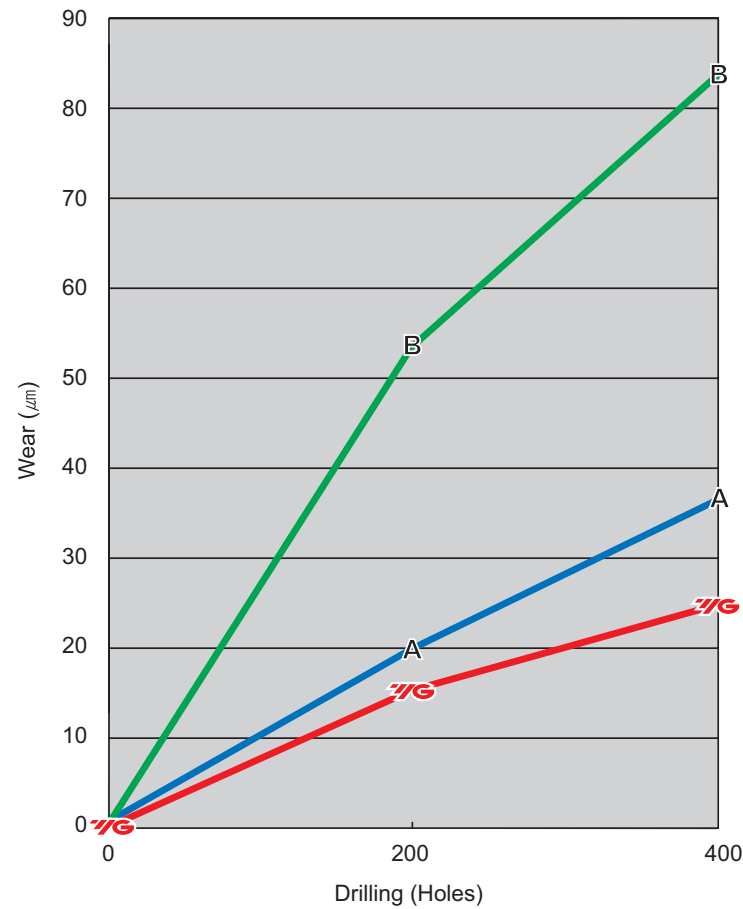
Productivity (Carbon Steel)

Ø 10 5xD

1.6 times UP



CASE STUDY **DREAM DRILLS-INOX** (Reference page : p.111 ~ p.131)

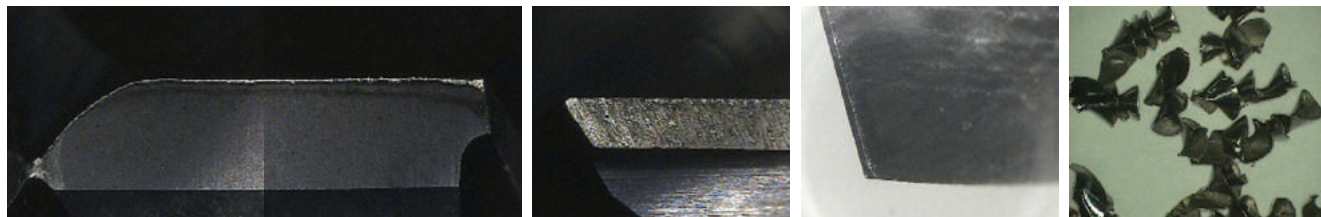


— YG-1
— A Competitor A
— B Competitor B

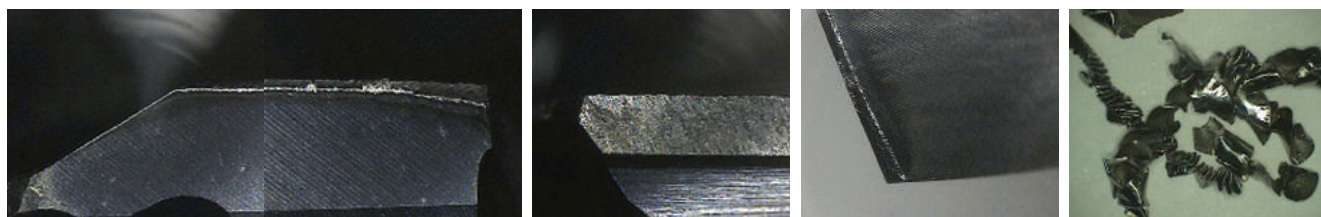
CUTTING CONDITION

Tools : DREAM DRILLS-INOX
Size : Ø6 x Ø6 x 44 x 82
Work Material : • AISI : 304
 • JIS : SUS304
 • DIN : X5CrNi1810 (X4CrNi18-10)
R.P.M : 3,700 rev./min.
SFM : 229 ft/min.
Feed : .0028 inch/rev.
Drilling Depth : .94"
Coolant : Wet Cut

YG-1 (Total Drilling 400 Holes)



COMPETITOR A (Total Drilling 400 Holes)

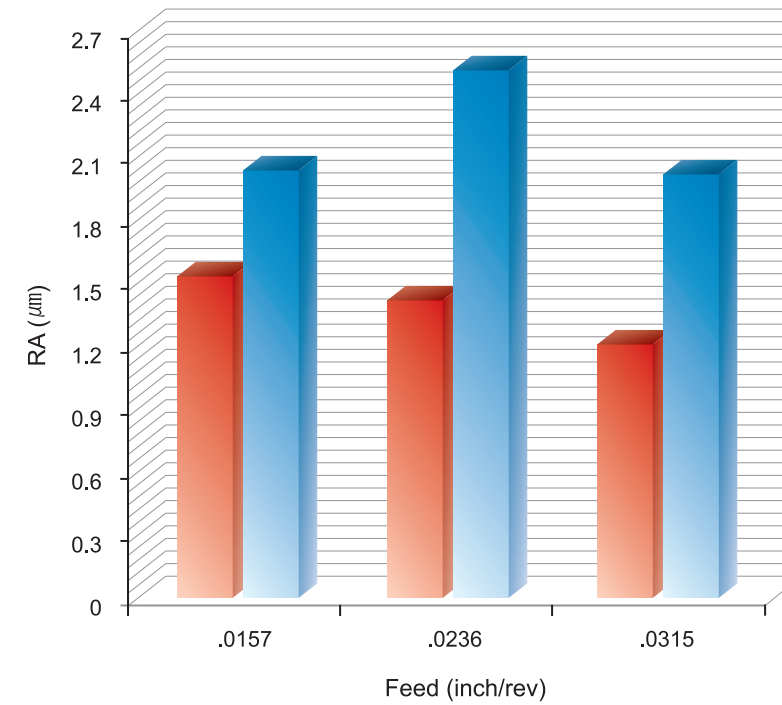


COMPETITOR B (Total Drilling 400 Holes)



CASE STUDY **DREAM DRILLS-ALU** (Reference page : p.133 ~ p.141)

Surface Roughness of Work Piece

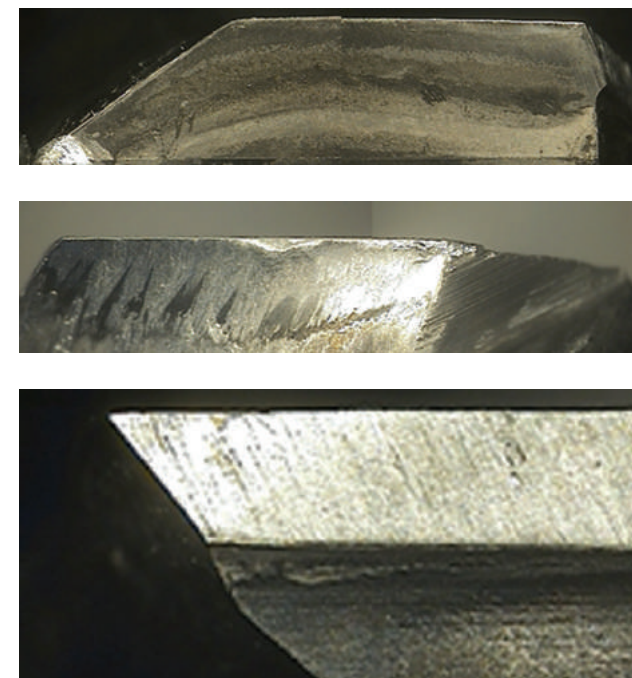


■ YG-1
■ COMPETITOR

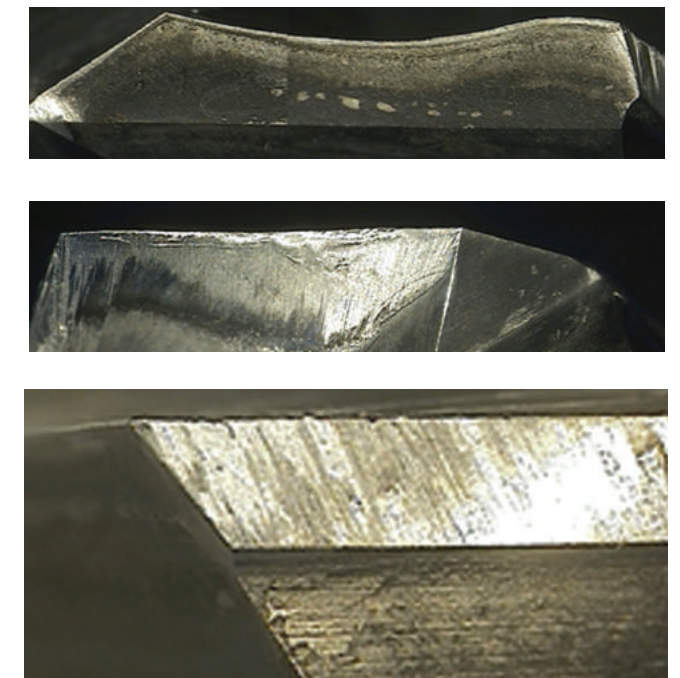
CUTTING CONDITION

Tools : DREAM DRILLS-ALU
Size : Ø10
Work Material : • AISI : 6061
 • JIS : A6061
 • DIN : AlMgSiCu
R.P.M : 6,367 rev./min.
SFM : 656 ft/min.
Feed : .0157 ~ .0315 inch/rev.
Drilling Depth : 1.77"
Coolant : Wet cut

► YG-1 (Total Drilling 820 Holes)



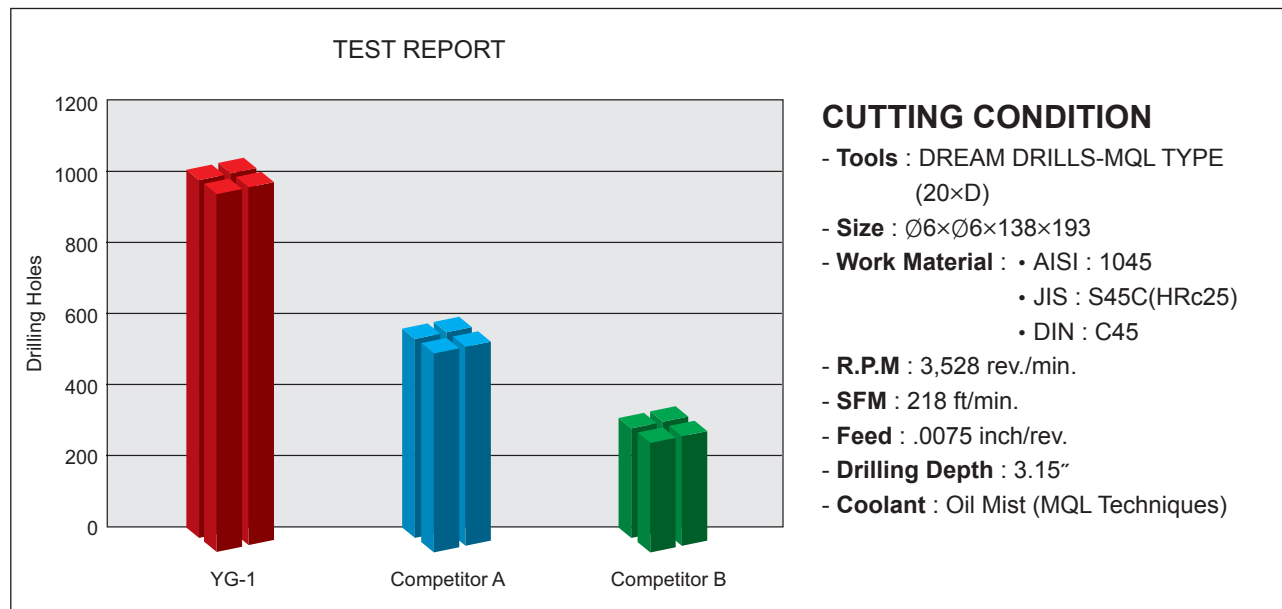
► Competitor (Total Drilling 820 Holes)



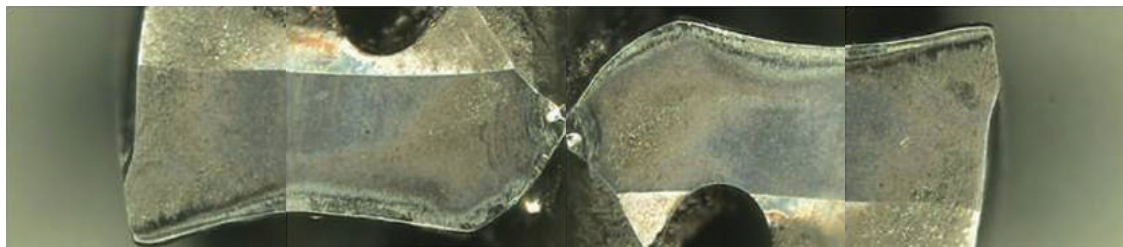
● FEATURES OF DREAM DRILLS-MQL TYPE

- 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 DRILLS



YG-1 (After Drilling 1,000 Holes)



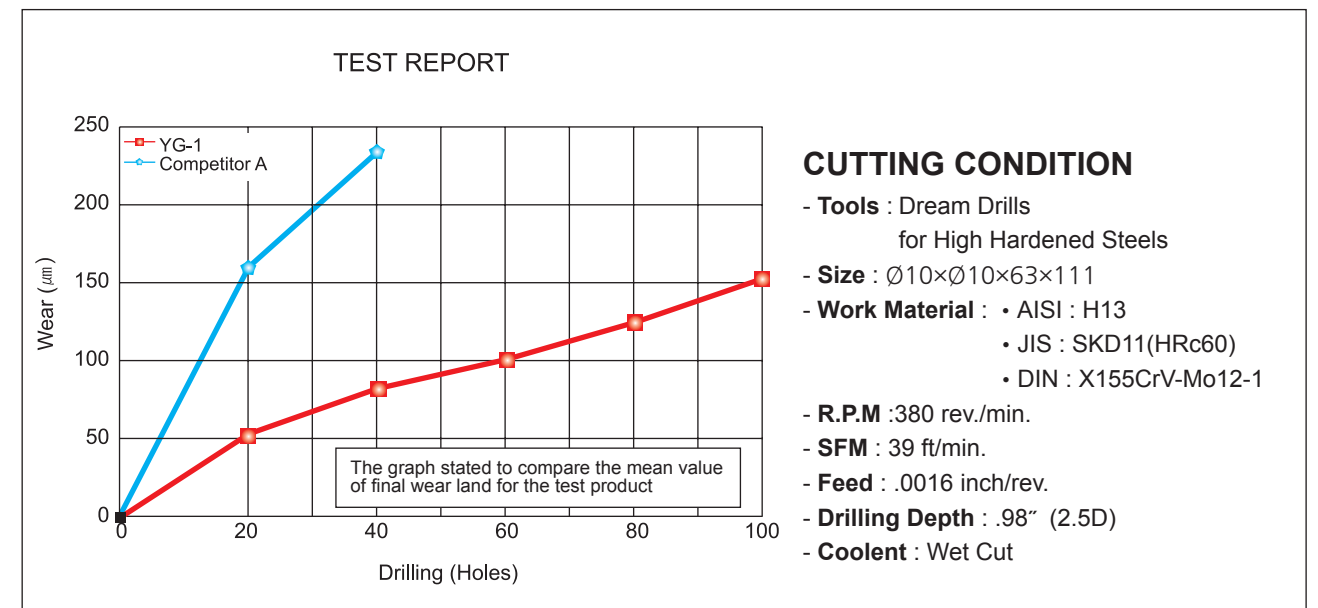
COMPETITOR A (After Drilling 546 Holes)



● FEATURES OF DREAM DRILLS F H 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.

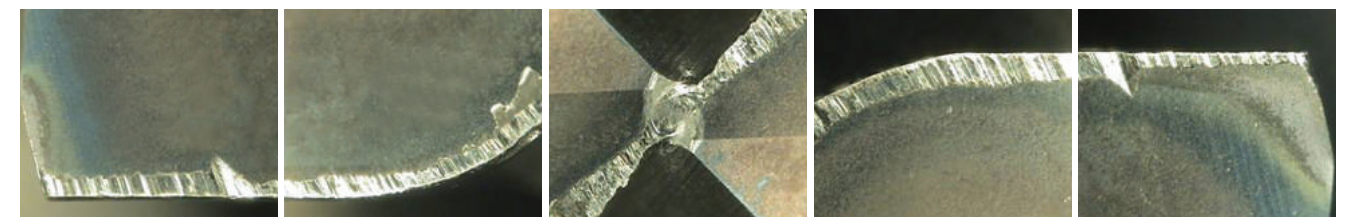
● TEST RESULT AGAINST COMPETITOR'S DRILLS



YG-1 (After Drilling 100 Holes)



COMPETITOR A (After Drilling 40 Holes)



● Comparison of edge wear - Test I

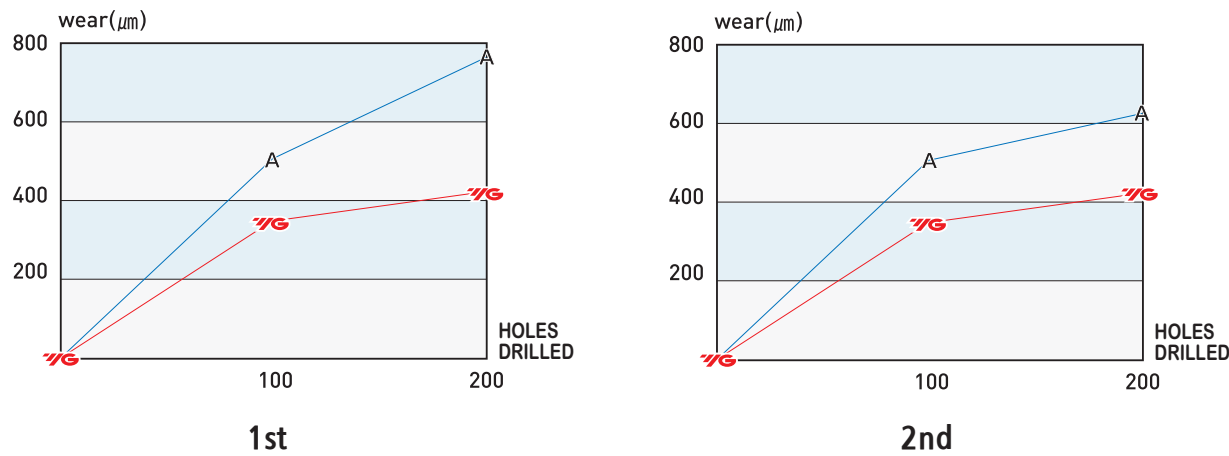


CUTTING CONDITION

- Work material : • AISI : 316
- JIS : SUS316
- DIN : X3CrNiMo17-13-3

- Drilling Depth : .94"
- Total Drilling(hole) : 300 Holes
- R.P.M : 600 rev./min.
- Feed : 4.3307 inch/min.

● Comparison of edge wear - Test II

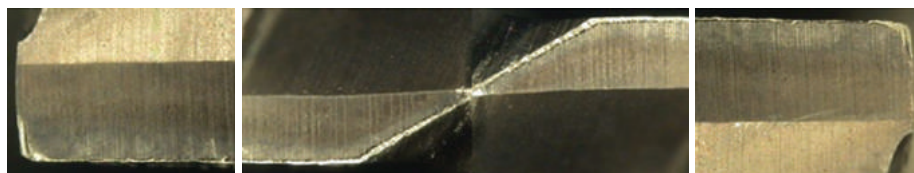


CUTTING CONDITION

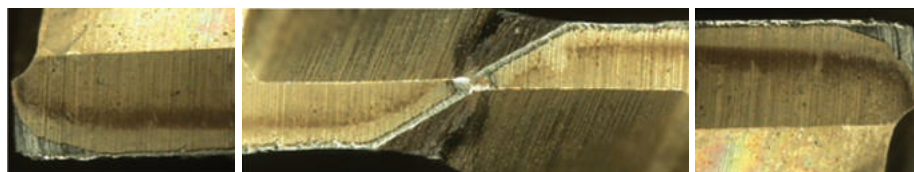
- Work material : • AISI : D2
- JIS : SKD11
- DIN : X155CrVMo12-1

- Drilling Depth : .94"
- Total Drilling(hole) : 200 Holes
- R.P.M : 600 rev./min.
- Feed : 4.3307 inch/min.

YG-1



COMPETITOR A



● COMBO - SPIRAL FLUTE

Cutting Condition

- Tools : Combo Spiral Flute Tap
- Size : M8×1.25
- Work Material : • AISI : 1045
- JIS : S45C(HRc35)
- DIN : C45
- Tapping Depth : .79"
- Coolant : Water Soluble Oil
- SFM (Tapping Speed) : 33 ft/min.

YG-1(Total Tapping 204 Holes)



COMPETITOR A (Total Tapping 159 Holes)



COMPETITOR B (Total Tapping 204 Holes)



● COMBO - SPIRAL POINT

Cutting Condition

- Tools : Combo Spiral Point Tap
- Size : M2×0.4
- Work Material : • AISI : 1045
- JIS : S45C(HRc35)
- DIN : C45
- Tapping Depth : .24"
- Coolant : Tapping Oil
- SFM (Tapping Speed) : 33 ft/min.

YG-1(Total Tapping 450 Holes)



COMPETITOR A (Total Tapping 318 Holes)

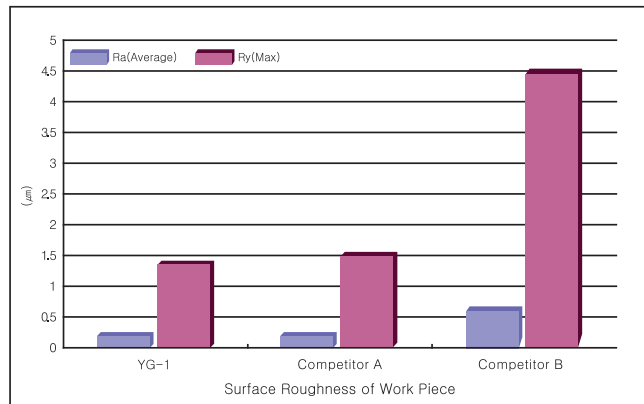
Tool was broken after tapping 318 holes

COMPETITOR B (Total Tapping 103 Holes)

Tool was broken after tapping 103 holes

● **TEST I (Total Milling Length : 787 ft)**

▶ **Surface Roughness of Work Piece**

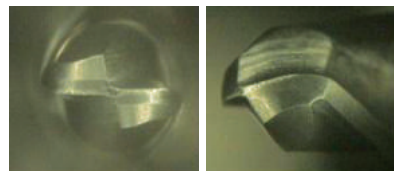


CUTTING CONDITION (Ø1mm)

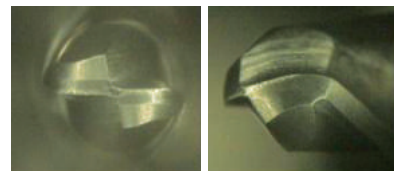
Tools : 2Flute, CBN Ball Nose End mill
Size : Ø1×Ø4×0.6×50
Work Material : • JIS : SKD11(HRc60)
 • DIN : X155CrV-Mo12-1
 • AISI : H13
Cutting Speed : 309 ft/min.
R.P.M : 30,000 rev./min.
Feed : 59.06 inch/min.
Milling Depth : .0004"
Coolant : Oil Mist
Machine : Machining Center

▶ **Maximum Wear (μm)**

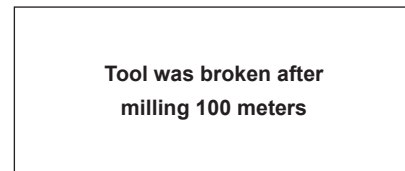
YG-1 (19.611 μm)



COMPETITOR A (32.249 μm)

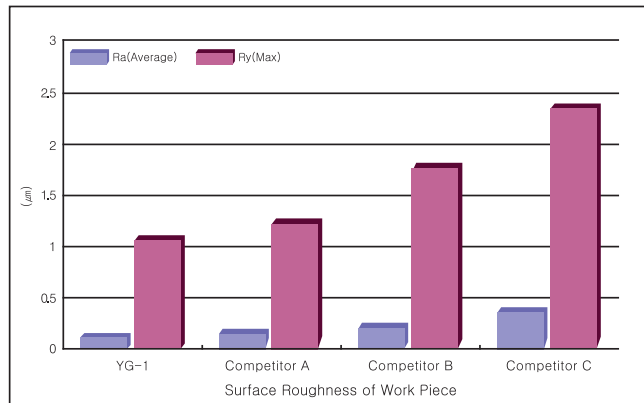


COMPETITOR B



● **TEST II (Total Milling Length : 2,460 ft)**

▶ **Surface Roughness of Work Piece**

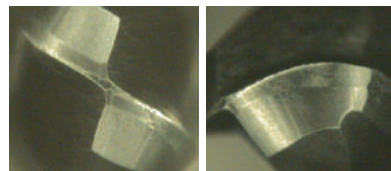


CUTTING CONDITION (Ø2mm)

Tools : 2Flute, CBN Ball Nose End mill
Size : Ø2×Ø4×1.8×50
Work Material : • JIS : SKD11(HRc60)
 • DIN : X155CrV-Mo12-1
 • AISI : H13
Cutting Speed : 618 ft/min.
R.P.M : 30,000 rev./min.
Feed : 78.74 inch/min.
Milling Depth : .0004"
Coolant : Oil Mist
Machine : Machining Center

▶ **Maximum Wear (μm)**

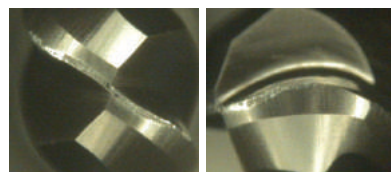
YG-1 (57.630 μm)



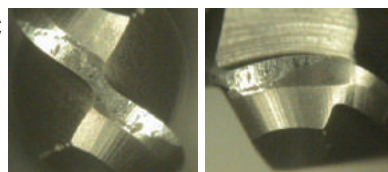
COMPETITOR A (100.314 μm)



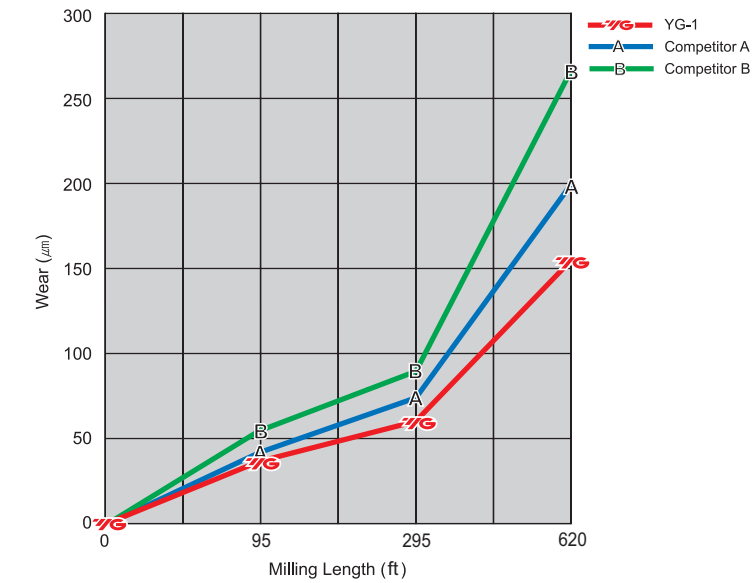
COMPETITOR B (71.471 μm)



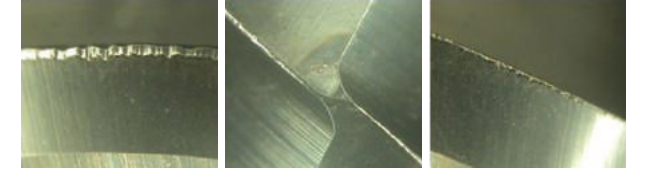
COMPETITOR C (170.200 μm)



● **i-Xmill - BALL**



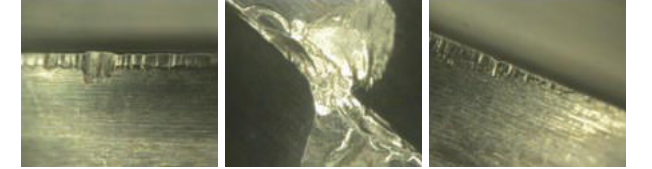
YG-1 i-Xmill (Total Milling Length 620 ft)



COMPETITOR A (Total Milling Length 620 ft)



COMPETITOR B (Total Milling Length 620 ft)



CUTTING CONDITION

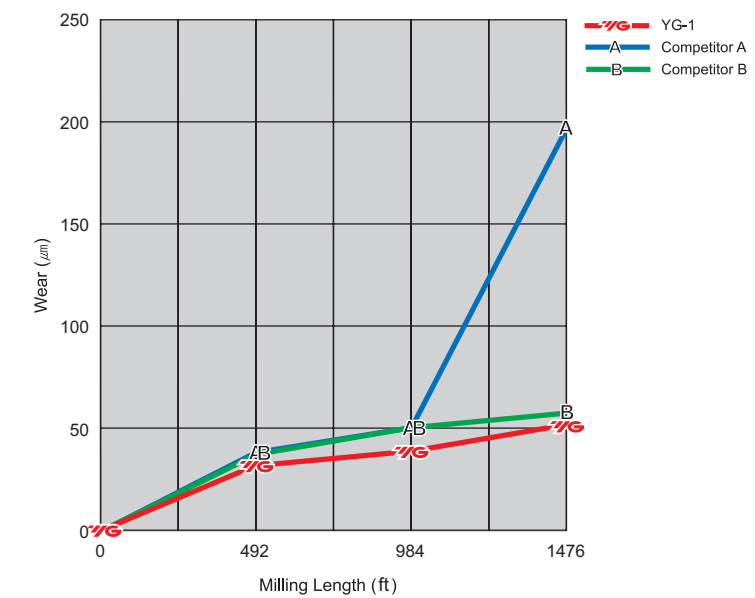
Tools : i-Xmill Ball
Size : Ø16×R8.0
Work Material : JIS : SKD61 (HRc50),
 DIN : X40GrMoV51(1.2344)
 AISI : H13

Cutting Speed : 264 ft/min.
R.P.M : 1,600 rev./min.
Feed : 15.35 inch/min.
Feed per tooth : .0047 inch/tooth
Milling Method : Side Cutting

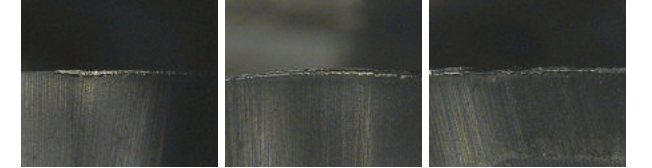
Milling Depth : Axial : .0315"
 Radial : .0630"

Coolant : Oil Mist
Overhang : YG-1, Competitor B : 1.89"
 Competitor A : 2.20"
Machine : Machining Center

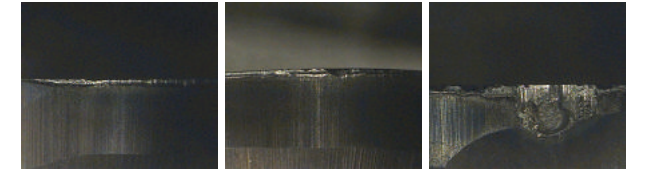
● **i-Xmill - CORNER RADIUS**



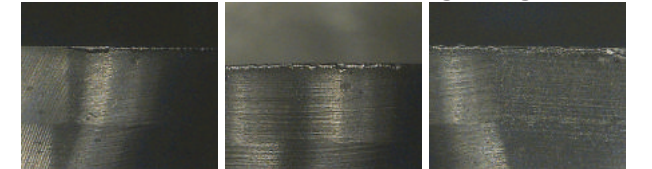
YG-1 i-Xmill (Total Milling Length 1476 ft)



COMPETITOR A (Total Milling Length 1476 ft)



COMPETITOR B (Total Milling Length 1476 ft)



CUTTING CONDITION

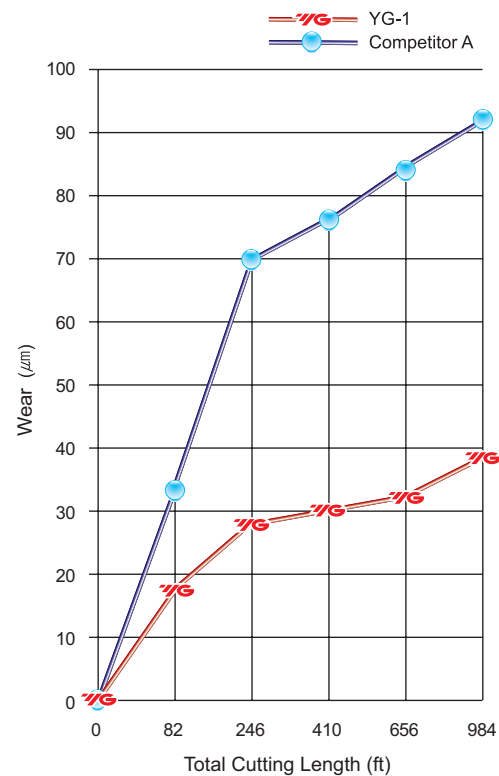
Tools : i-Xmill Corner Radius
Size : Ø16 x R2.0
Work Material : KS : KP4M (Mold steels HRc35)
 DIN : 40CrMnNiMo8-6-4(1.2738)
 AISI : P20+Ni

Cutting Speed : 918 ft/min.
R.P.M : 5,570 rev./min.
Feed : 87.80 inch/min.
Feed per tooth : .0079 inch/tooth
Milling Method : Side Cutting

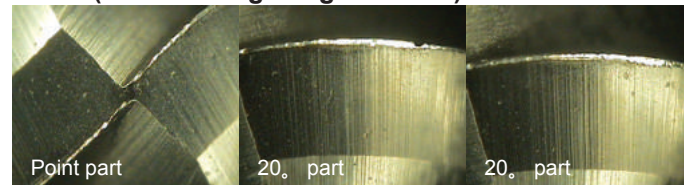
Milling Depth : Axial : .1181"
 Radial : .0079"

Coolant : Oil Mist
Overhang : 2.76"
Machine : Machining Center

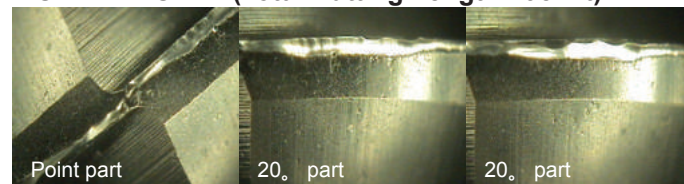
● **TEST REPORT (Ball)**



YG-1 (Total Cutting Length : 984 ft)



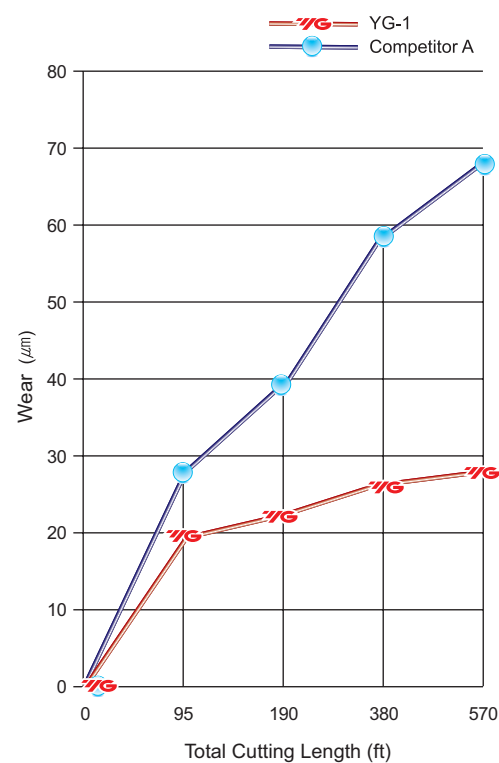
COMPETITOR A (Total Cutting Length : 984 ft)



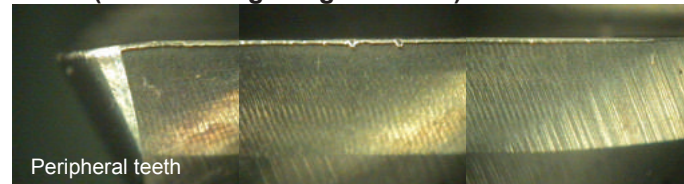
CUTTING CONDITION

Tool : 2Flute, Carbide Ball End Mill
 Size : Ø6×6×12×90
 Work Material : KP4M (HRc35 / AISI P20+Ni DIN 1.2738 Improved)
 Cutting Speed : 426.7 ft/min.
 R.P.M : 6,900 rev./min.
 Feed : 32.68 inch/min.
 Feed per tooth : .0024 inch/tooth
 Milling Method : Profiling
 Milling Depth : Axial : .0079"
 Radial : .0472"
 Coolant : Oil Mist
 Overhang : 1.024"

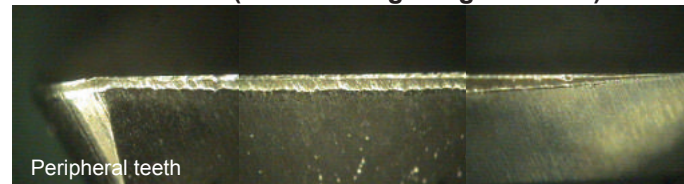
● **TEST REPORT (Corner Radius)**



YG-1 (Total Cutting Length : 570 ft)



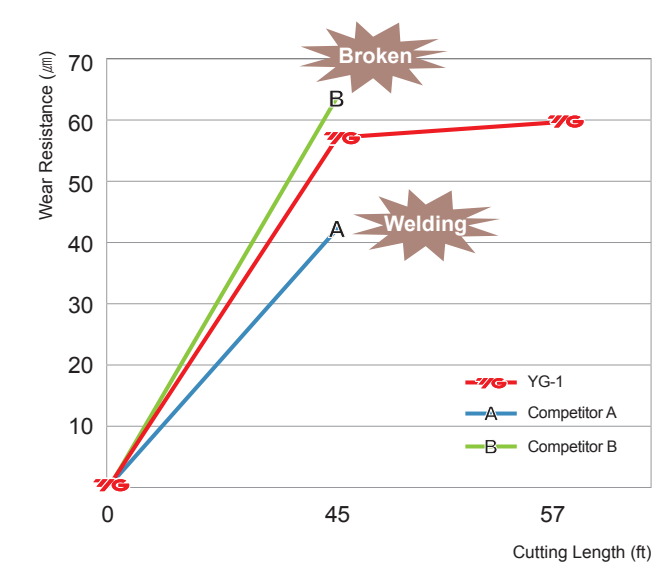
COMPETITOR A (Total Cutting Length : 570 ft)



CUTTING CONDITION

Tool : 4Flute, Carbide Corner Radius End Mill
 Size : Ø10(R0.5)×10×25×100
 Work Material : KP4M (HRc35 / AISI P20+Ni DIN 1.2738 Improved)
 Cutting Speed : 169 ft/min.
 R.P.M : 1,640 rev./min.
 Feed : 7.09 inch/min.
 Feed per tooth : .0011 inch/tooth
 Milling Method : Down & Side Cutting
 Milling Depth : Axial : .9842"
 Radial : .0197"
 Coolant : Oil Mist
 Overhang : 1.614"

● Test Report-1 ♦ Y-Coated Solid Carbide 4 Flutes with Double Core End Mills



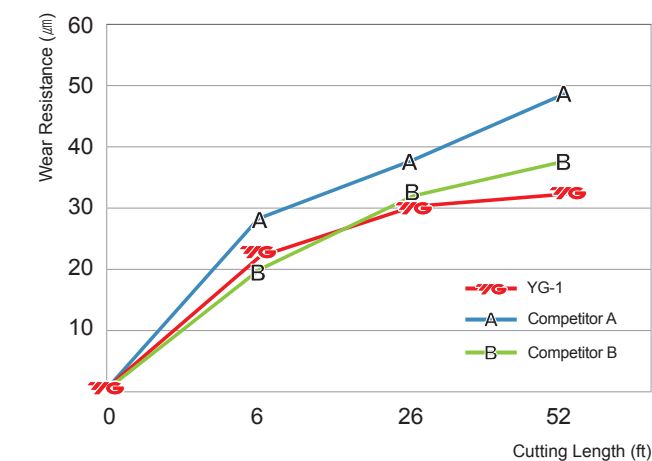
CUTTING CONDITION

Size : Ø12(R1) x Ø12 x 26 x 80
 Work Material : DIN : TiAV6V4 (Titanium)
 Cutting Depth : .470" (Axial Depth)
 R.P.M : 1,591 rev./min.
 Feed : 10 inch/min.

Milling Method : Slotting
 Coolant : Wet Cut
 Overhang : 1.41"
 Machine : Machining Center



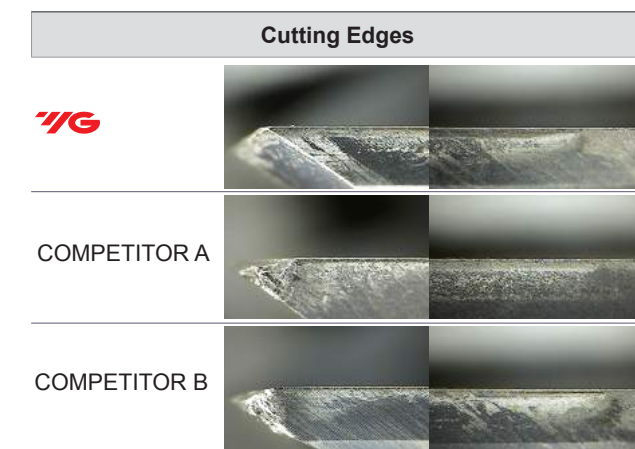
● Test Report-2 ♦ Y-Coated Solid Carbide 5 Flutes End Mills



CUTTING CONDITION

Size : Ø12 x Ø12 x 26 x 83
 Work Material : DIN : TiAV6V4 (Titanium)
 Cutting Depth : .470" (Axial Depth)
 R.P.M : 1,591 rev./min.
 Feed : 15.669 inch/min.

Milling Method : Down & Side Cutting
 Axial Depth : .710"
 Radial Depth : .141"
 Coolant : Wet Cut
 Machine : Machining Center

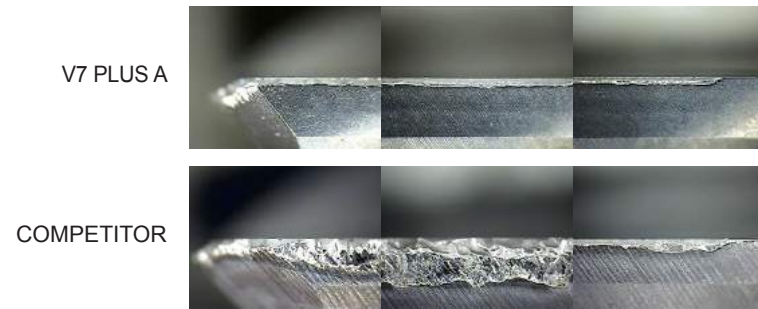
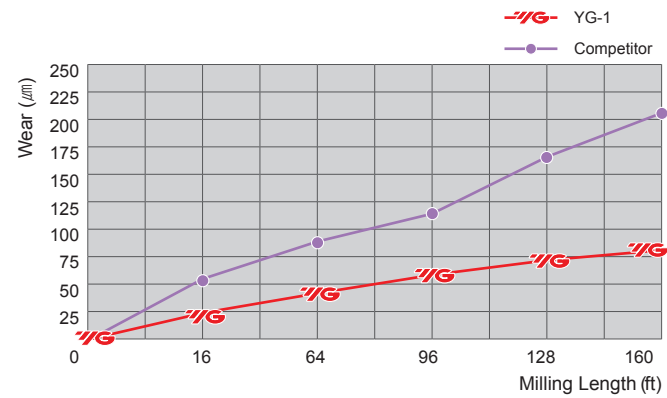


CASE STUDY ♦ V7 PLUS A END MILLS (Reference page : p.977 ~ p.1015)

● TEST I - 4 Flute vs Competitor

CUTTING CONDITION

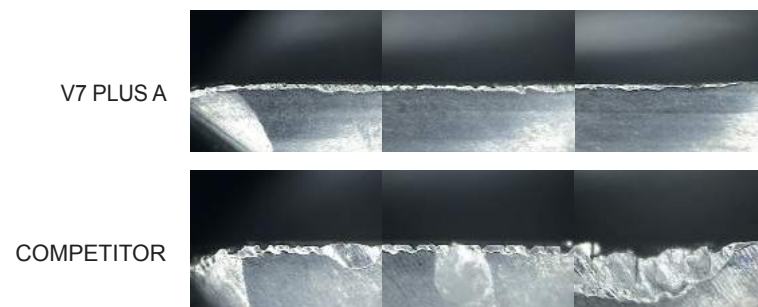
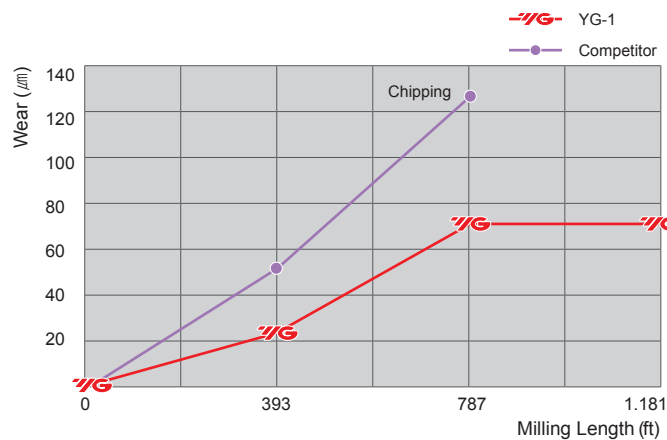
Tools : 4 Flute, V7 PLUS A
 Wear(μm) : V7 PLUS A 83.518
 Competitor 203.381
 Milling Length(inch) : 160
 Size : Ø10 x Ø10 x 22 x 72
 Work Material : - AISI : 1045
 - JIS : S45C(HRc30)
 - DIN : C45
 Cutting Speed : 754 ft/min.
 R.P.M : 7,324 rev/min.
 Feed : 57.64 inch/min.
 Feed per tooth : .002 inch/tooth
 Milling Method : Down & Side Cutting
 Milling Depth : Axial : .394"
 Radial : .118"
 Coolant : Wet Cut
 Overhang : 1.339"
 Machine : Machining Center



● TEST II - 6 Flute vs Competitor

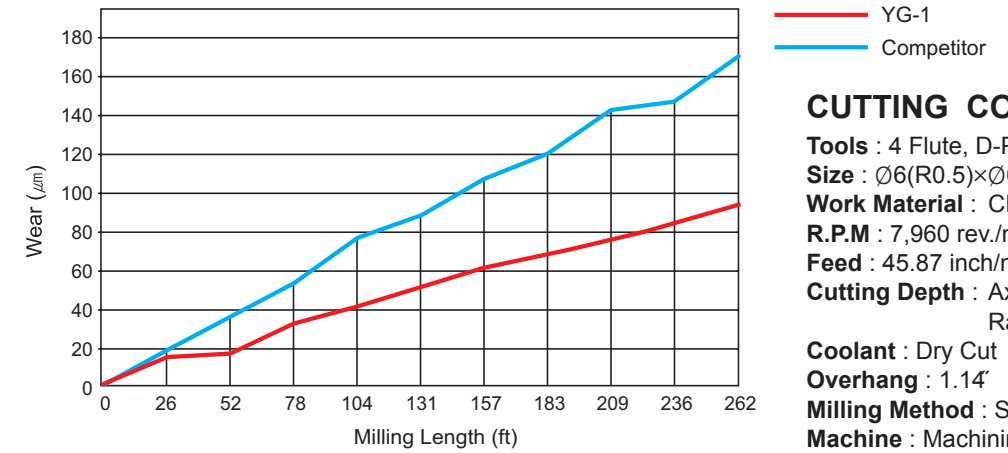
CUTTING CONDITION

Tools : 6 Flute, V7 PLUS A
 Wear(μm) : V7 PLUS A 70.855
 Competitor 76.498
 Milling Length(inch) : 1,181
 Size : Ø12(R1) x Ø2 x 26 x 83
 Work Material : - AISI : 1045
 - JIS : S45C(HRc30)
 - DIN : C45
 Cutting Speed : 914 ft/min.
 R.P.M : 7,392 rev/min.
 Feed : 295.08 inch/min.
 Feed per tooth : .007 inch/tooth
 Milling Method : Trochoidal Cutting
 Milling Depth : Axial : .945"
 Radial : .024"
 Coolant : Wet Cut
 Overhang : 1.417"
 Machine : Machining Center



CASE STUDY ♦ D-POWER CFRP END MILLS (Reference page : p.1107 ~ p.1112)

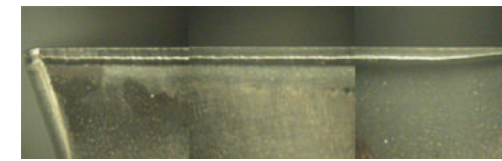
● TEST I - DUAL HELIX



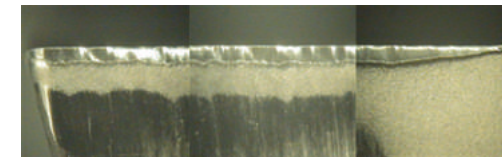
CUTTING CONDITION

Tools : 4 Flute, D-Power Dual Helix
 Size : Ø6(R0.5)×Ø6×12×65
 Work Material : CFRP
 R.P.M : 7,960 rev./min.
 Feed : 45.87 inch/min.
 Cutting Depth : Axial : .24"
 Radial : .09"
 Coolant : Dry Cut
 Overhang : 1.14"
 Milling Method : Side Cutting
 Machine : Machining Center

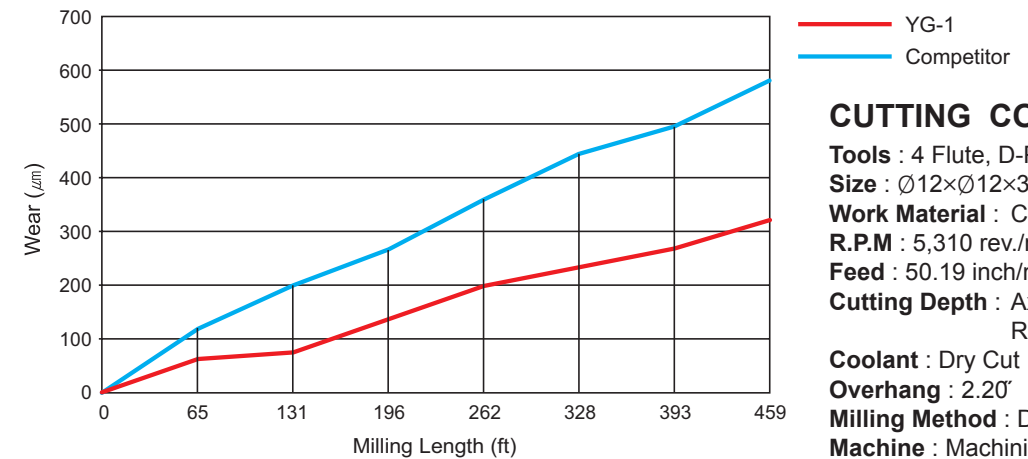
YG-1
(Total Milling Length 262ft)



COMPETITOR
(Total Milling Length 262ft)



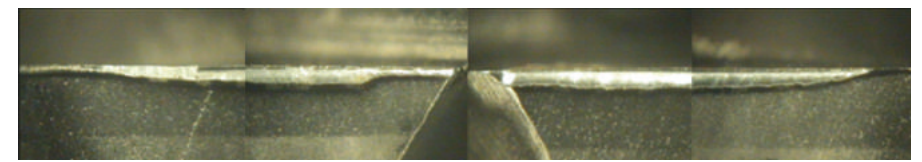
● TEST II - 4 FLUTE, FINISH



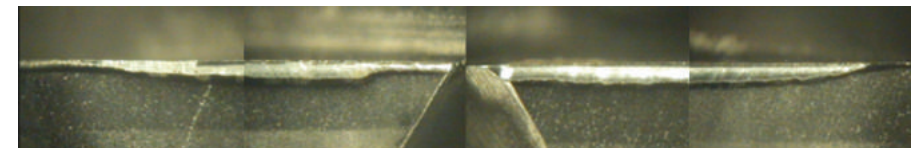
CUTTING CONDITION

Tools : 4 Flute, D-Power
 Size : Ø12×Ø12×36×100
 Work Material : CFRP
 R.P.M : 5,310 rev./min.
 Feed : 50.19 inch/min.
 Cutting Depth : Axial : .47"
 Radial : .05"
 Coolant : Dry Cut
 Overhang : 2.20"
 Milling Method : Down & Side Cutting
 Machine : Machining Center

YG-1
(Total Milling Length 459ft)



COMPETITOR
(Total Milling Length 459ft)



CASE STUDY ♦ **ONLY ONE COATED PM60 END MILLS** (Reference page : p.1171~ p.1186)

● **4 Flute Square End Mill, S45C**

CUTTING CONDITION

Tool : Only One Coated PM60/Coated Normal Carbide

Size : $\varnothing 10 \times \varnothing 10 \times 22 \times 72 / \varnothing 10 \times \varnothing 10 \times 22 \times 70$

Work Material : - AISI : 1045
 - JIS : S45C
 - KS : SM45C
 - DIN : C45

R.P.M : 2,750 rev/min.

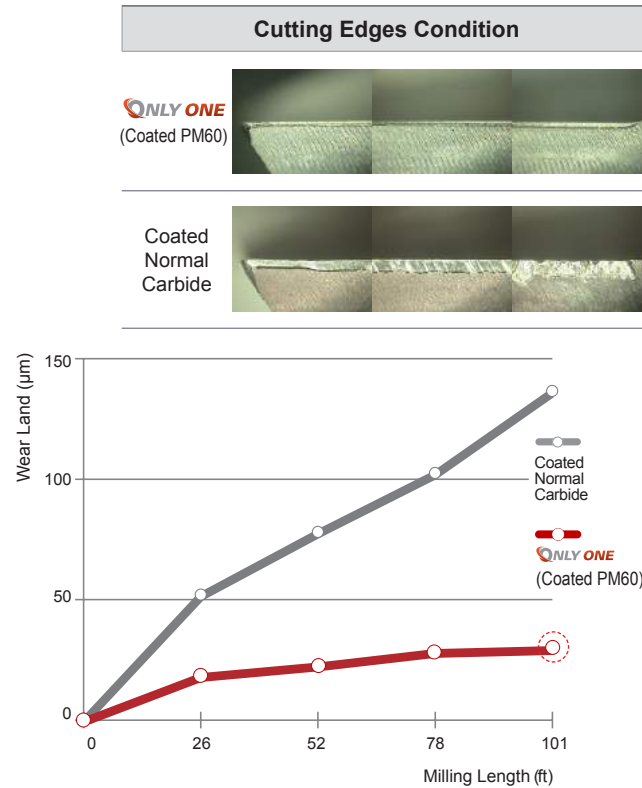
Feed : 20.47 inch/min.

Milling Method : Down & Side Cutting

Milling Depth : Axial : 12"
 Radial : .04"

Coolant : Wet Cut

Machine : Machining Center



● **4 Flute Square End Mill, S45C**

CUTTING CONDITION

Tool : Only One Coated PM60/Coated Normal Carbide

Size : $\varnothing 10 \times \varnothing 10 \times 22 \times 72 / \varnothing 10 \times \varnothing 10 \times 22 \times 70$

Work Material : - AISI : 1045
 - JIS : S45C
 - KS : SM45C
 - DIN : C45

R.P.M : 2,750 rev/min.

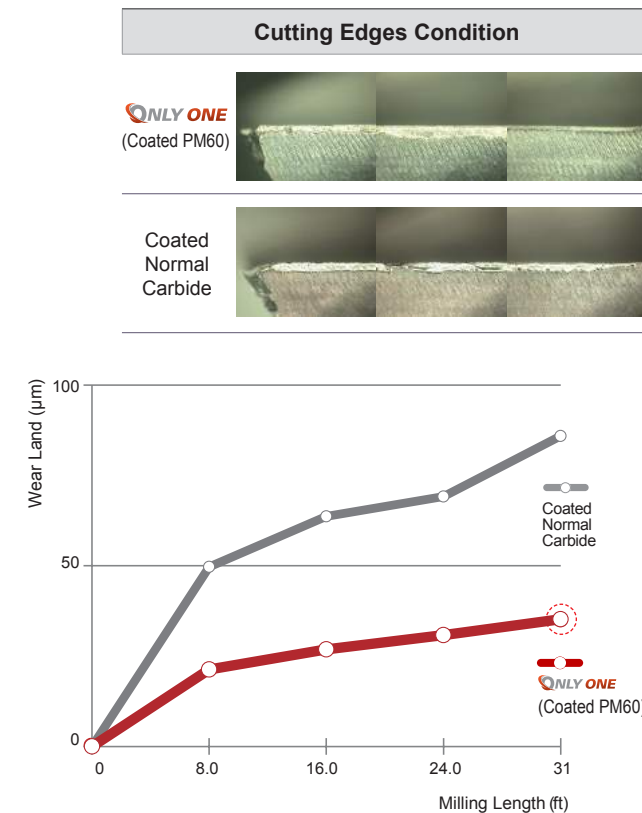
Feed : 20.47 inch/min.

Milling Method : Down & Side Cutting

Milling Depth : Axial : .39"
 Radial : .04"

Coolant : Wet Cut

Machine : Machining Center



CASE STUDY ♦ **SINE-POWER END MILLS** (Reference page : p.1187 ~ p.1191)

● **HSS Co 8% 6 FLUTE END MILLS**

SINE-POWER

Material	HSS Co8%
Dimension	$\varnothing 2'' (R.125'') \times \varnothing 2'' \times 4'' \times 7-3/4''$
No. of Flute	6
Coating	Uncoated

CUTTING CONDITIONS

Milling Method	Slotting	Profiling
Material	Ti6Al4V (Titanium)	
Coolant	Wet Cut	
RPM	100 rev./min.	100 rev./min.
Feed	2 IPM	3.15 ~ 4.2 IPM
Axial Depth	1-1/2 inch	1-1/2 inch
Radial Depth	2 inch	0.1 ~ 0.2 inch
Feed/Tooth	.0018 inch/tooth	.0053 ~ .007 inch/tooth

The above cutting conditions achieved 5 hours of machining

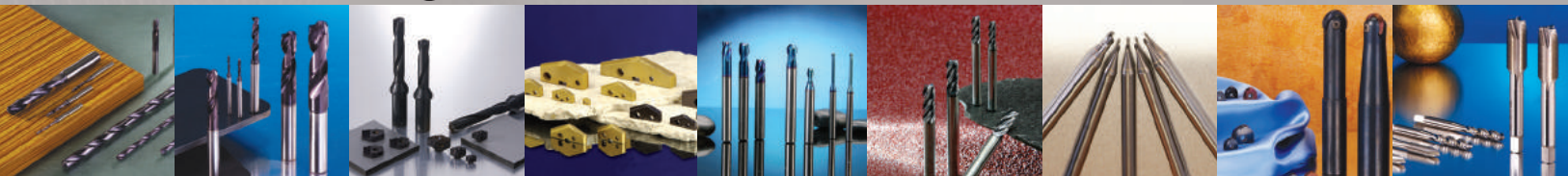


SINE-POWER SPECIFIC GEOMETRY DESIGN HELPS OUR CUSTOMERS TO INCREASE THEIR PRODUCTIVITY BY 15% IN TITANIUM MACHINING.

DRILLING TOOLS



Global Cutting Tool Leader **YG-1**



i-DREAM DRILLS, CARBIDE INSERTS
SOLID CARBIDE DREAM DRILLS - GENERAL
(with & without Coolant Holes)
SOLID CARBIDE DREAM DRILLS - HIGH FEED
(with Coolant Holes)
SOLID CARBIDE DREAM DRILLS - FLAT BOTTOM
(without Coolant Holes)
SOLID CARBIDE DREAM DRILLS - INOX
(with Coolant Holes)
SOLID CARBIDE DREAM DRILLS - ALU
(with Coolant Holes)
SOLID CARBIDE DREAM DRILLS - MQL TYPE
(with Coolant Holes)
SOLID CARBIDE DREAM DRILLS FOR HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
HSS-PM MULTI-1 DRILLS
PREMIUM HSS HPD STRAIGHT SHANK DRILLS
HSS GOLD-P DRILLS
HSS STRAIGHT SHANK DRILLS
HSS AIRCRAFT DRILLS
HSS SILVER & DEMING DRILLS
HSS MORSE TAPER SHANK DRILLS
HSS (8% Cobalt) NC SPOTTING DRILLS
HSS COMBINATION DRILL & COUNTER SINK / CENTER DRILL
CARBIDE & HSS-PM SPADE DRILLS
TECHNICAL DATA

YG-1 YG-1 CO., LTD.

Contents

DRILLING TOOLS

Contents / DRILLING TOOLS

CARBIDE INSERT DRILLS

SOLID CARBIDE DRILLS

HSS DRILLS

CARBIDE & HSS-PM SPADE DRILLS

TECHNICAL DATA

i-DREAM DRILLS

For General Steels and Stainless Steels

i-DREAM
DRILLS

SOLID CARBIDE DREAM DRILLS - GENERAL (with & without Coolant Holes)

For General Purpose HRc30 to HRc50

DREAM
DRILLS
-GENERAL

SOLID CARBIDE DREAM DRILLS - HIGH FEED (with Coolant Holes)

For Carbon Steels, Alloy Steels and Cast Iron

DREAM
DRILLS
-HIGH FEED

SOLID CARBIDE DREAM DRILLS - FLAT BOTTOM (without Coolant Holes)

Just ONE Drill - 180 Degree Point Angle for Horizontal Surface and Sloped Surface

DREAM
DRILLS
-FLAT BOTTOM

SOLID CARBIDE DREAM DRILLS - INOX (with Coolant Holes)

For Tough Materials - Stainless Steels, Nickel Alloys and Titanium up to HRc35

DREAM
DRILLS
-INOX

SOLID CARBIDE DREAM DRILLS - ALU (with Coolant Holes)

For Aluminum and Aluminum Alloys

DREAM
DRILLS
-ALU

SOLID CARBIDE DREAM DRILLS - MQL TYPE (with Coolant Holes)

Minimum Quantity Lubrication Drilling Deep Holes (10×D ~ 30×D)

DREAM
DRILLS
-MQL TYPE

SOLID CARBIDE DREAM DRILLS for HIGH HARDENED STEELS

For High Hardened Steels HRc50 to HRc70

DREAM DRILLS
for HIGH
HARDENED
STEELS

STANDARD CARBIDE DRILLS

For General Purpose, 118° Point

STANDARD
CARBIDE
DRILLS

HSS-PM MULTI-1 DRILLS

For Multi Purpose Particularly for Stainless Steels and Titanium

MULTI-1
DRILLS

HPD DRILLS

For General Steels and Stainless Steels

HPD DRILLS

HSS GOLD-P DRILLS

Gold-P Coating

GOLD-P
DRILLS

HSS STRAIGHT SHANK DRILLS

For General Purpose

STRAIGHT
SHANK
DRILLS

AIRCRAFT DRILLS

6 and 12 inch Length Drills

AIRCRAFT
DRILLS

SILVER & DEMING DRILLS

118° Split Point, 3 Flat Black and Gold

SILVER &
DEMING
DRILLS

HSS MORSE TAPER SHANK DRILLS

For General Purpose, Standard Length

TAPER
SHANK
DRILLS

HSS (8% Cobalt) NC SPOTTING DRILLS

Centering and Chamfering of Holes

NC SPOTTING
DRILLS

HSS COMBINATION DRILLS & COUNTER SINK / CENTER DRILL

Regular and Long Lengths

COMBINATION
DRILLS
& COUNTERSINK

CARBIDE & HSS-PM SPADE DRILLS

Carbide for Long Tool Life, and HSS-PM for General Machines and Large Diameters
Higher Productivity than Other Drilling Tools

SPADE
DRILLS

TECHNICAL DATA





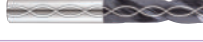

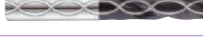

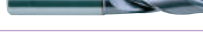
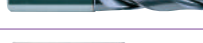
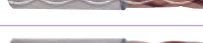
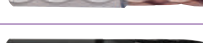
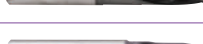
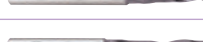





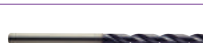







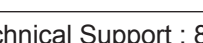
TECHNICAL
DATA

◎ : Excellent ○ : Good

	ITEM	MODEL	DESCRIPTION	SIZE		PAGE
				MIN	MAX	
i-Dream Drills	Y03 *		Insert for General Purpose	.4724 (#A)	1.2500 (#J)	44~49
	Y13 *		Insert for Stainless Steels	.4724 (#A)	1.2500 (#J)	44~49
Spade Drills	S01~S08		HSS M4 Insert	.7031 (#1)	4.5000 (#8)	272~275
	S06~S08 (SM08)		Super Cobalt T15 Insert	.3740 (#Y)	4.5000 (#8)	276~282 292~295
	S11~S14		Primium cobalt M48 Insert	.3740 (#Y)	1.3780 (#2)	283~285
	S21~S23		Carbide C2, C5, C3 Insert	.3740 (#Y)	1.8750 (#3)	286~290
	S26~S28 (SM28)		Carbide C5 Insert (P40)	.3740 (#Y)	1.8750 (#3)	286~290 296~297
	S16~S18		Carbide C3 Insert (K10)	.3740 (#Y)	1.3780 (#2)	286~290
	SF05 SF15		Super Cobalt T15 Flat Bottom	.3750 (#Y)	1.3750 (#2)	298

Non-alloyed Steels, Free Machining Steels	P										M	K	N		
	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		◎	◎		
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												◎	◎		
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

◎ : Excellent ○ : Good

	ITEM	MODEL	INCH / METRIC	LENGTH	SIZE		PAGE
					MIN	MAX	
DREAM DRILLS-GENERAL	DH416 DH711		Inch	Short(3XD)	D1/8	D5/8	58
	DH418 DH712		Inch	Long(5XD)	D13/64	D1/2	60
	DH414		Inch	Stub(3XD)	D1/8	D5/8	61
	DH722		Inch	Long(5XD)	D13/64	D1/2	62
	DH406		Metric	Short(3XD)	D3.0	D20.0	63
	DH408		Metric	Long(5XD)	D1.0	D20.0	67
	DH421		Metric	Extra Long(8XD)	D3.0	D20.0	72
	DH404		Metric	Stub(3XD)	D3.0	D20.0	76
	DH423		Metric	Short(3XD)	D3.0	D20.0	78
	DH424		Metric	Long(5XD)	D1.0	D20.0	83
DREAM DRILLS-HIGH FEED	DGR493 DGR496		Inch	Short(3XD)	.1969	.7874	94
	DGR495 DGR497		Inch	Long(5XD)	.1969	.7874	98
DREAM DRILLS-FLAT BOTTOM	DPP447		Metric	Short(2×D)	D3.0	D20.0	106
DREAM DRILLS-INOX	DH463 DH714		Inch	Stub(3XD)	D1/8	D5/8	114
	DH464 DH715		Inch	Long(5XD)	D13/64	D1/2	116
	DH451		Metric	Short(3XD)	.1181	.7874	117
	DH452		Metric	Long(5XD)	.0394	.7874	122
	DH453		Metric	Extra Long(8XD)	.1181	.7874	127
DREAM DRILLS-ALU	DGE466 DGE718		Inch	Long(5XD)	D13/64	D1/2	136
	DGE433		Metric	Long(5XD)	.1181	.7874	137
DREAM DRILLS-MQL TYPE	DH510		Metric	Extra Long(10XD)	D3.0	D14.0	146
	DH515		Metric	Extra Long(15XD)	D3.0	D12.0	149
	DH520		Metric	Extra Long(20XD)	D3.0	D12.0	152
	DHM10		Metric	Extra Long(10XD)	D3.0	D14.0	155
	DHM15		Metric	Extra Long(15XD)	D3.0	D12.0	155
	DHM20		Metric	Extra Long(20XD)	D3.0	D12.0	156
	DHM25		Metric	Extra Long(25XD)	D3.0	D10.0	158
	DHM30		Metric	Extra Long(30XD)	D3.0	D8.0	129

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

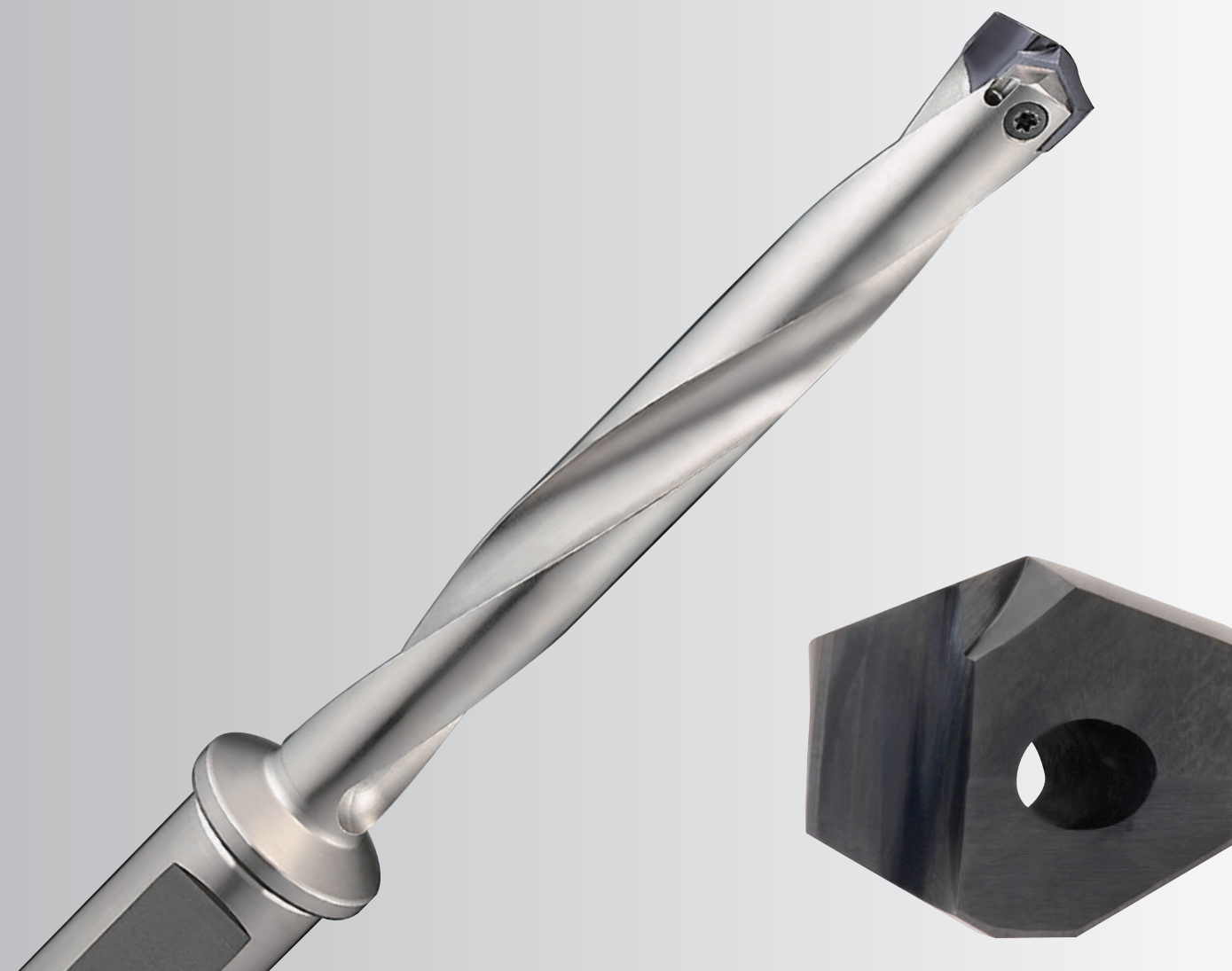
	ITEM	MODEL	INCH / METRIC	LENGTH	SIZE		PAGE
					MIN	MAX	
STRAIGHT SHANK DRILLS	DN516		Inch	Screw Machine	A	Z	226
	DN515		Inch	Screw Machine	#47	#1	227
	DL517 DX517		Inch	Taper Length	D5/64	D1/2	228
	D4107		Metric	Screw Machine	D1.0	D31.0	229
AIRCRAFT DRILLS	DL601 DL604		Inch	Extension Length	D5/64	D1/2	240
	DL602 DL605		Inch	Extension Length	A	Z	241
	DL603 DL606		Inch	Extension Length	#43	#1	242
	D1631 D1634		Inch	Extension Length	D5/64	D1/2	243
	D1632 D1635		Inch	Extension Length	A	Z	244
	D1633 D1636		Inch	Extension Length	#43	#1	245
	SILVER & DEMING DRILLS	D1191		Inch	—	D1/2	D1-1/2
MORSE TAPER SHANK DRILLS	D1211		Inch	—	D1/2	D2-1/2	256
NC SPOTTING DRILLS	D2N90(90°)		Inch	—	D1/8	D1	262
	D2N90(120°)		Inch	—	D1/8	D1	262
COMBINATION DRILL & COUNTER SINK / CENTER DRILL	D1C90		Inch	—	D3/64	D7/32	268

P			H	M	K	N			S	
Carbon Steels ~HB225	Alloy Steels HB225~325	Prehardened Steels HRC30~45	Hardened Steels HRc45~55 HRc55~	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
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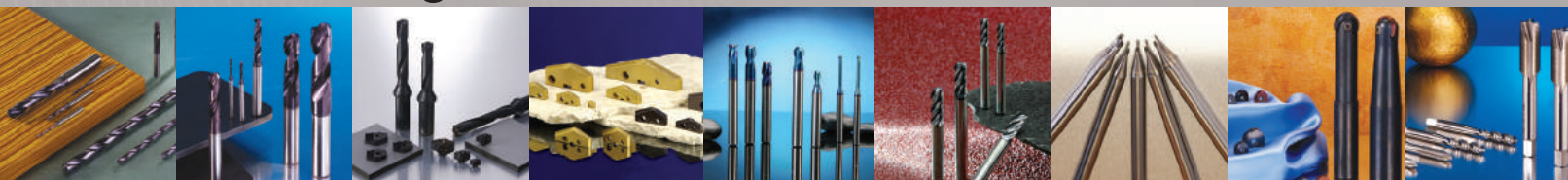


Being the best through innovation

CARBIDE INSERT















Global Cutting Tool Leader **YG-1**



i - Dream Drills

- For Steels and Stainless Steel Alloys

ITEM	MODEL	DESCRIPTION	PAGE
Y03A / Y03B		<i>i-Dream Drills</i> General	44
YI3A / YI3B		<i>i-Dream Drills</i> INOX	44
Y03B / Y03C		<i>i-Dream Drills</i> General	45
YI3B / YI3C		<i>i-Dream Drills</i> INOX	45
Y03C / Y03D		<i>i-Dream Drills</i> General	46
YI3C / YI3D		<i>i-Dream Drills</i> INOX	46
Y03E / Y03F		<i>i-Dream Drills</i> General	47
YI3E / YI3F		<i>i-Dream Drills</i> INOX	47
Y03G / Y03H		<i>i-Dream Drills</i> General	48
YI3G / YI3H		<i>i-Dream Drills</i> INOX	48
Y03I / Y03J		<i>i-Dream Drills</i> General	49
YI3I / YI3J		<i>i-Dream Drills</i> INOX	49
RECOMMENDED CUTTING CONDITIONS			50

◎ : Excellent ○ : Good

Non-alloyed Steels, Free Machining Steels	P										M	K	N		
	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)
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Comparison with Split Point Drill, Spade Drill & Dream Drill





Y03A / YI3A SERIES
Y03B / YI3B SERIES

i-DREAM DRILL INSERTS & HOLDERS

- Features of i-Dream Drill Inserts

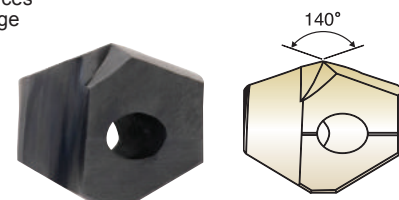
- Secure and accurate seating resulting in accurate repeatability and concentricity.

i-Dream Drill General

- For most steel materials

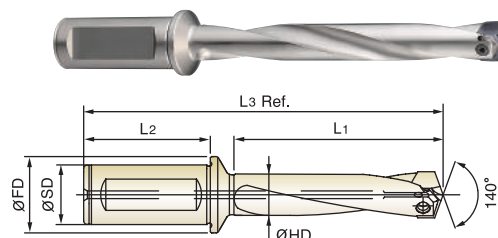
i-Dream Drill INOX

- For tough, ductile materials and stainless steels
- Light, sharp cutting edge
- Minimize cutting forces
- Reduce built-up edge



- Features of i-Dream Drill Holders

- Special Alloy Steels that maintains its hardness and toughness under high temperatures with generous coolant holes for effective coolant flow.
- Innovative surface treatment that improves wear resistance and reduces corrosion.
- High Performance flute design allowing maximum chip evacuation and minimum interference.



cutting conditions : p.50-51

Series Range	Insert EDP No.		Insert O.D.		Length	Holder EDP No.	Diameter	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	Torx Screw No.
	TiAIN	TiCN	h7										
	General	INOX	dec.	inch / mm									
A Ø12.00 to Ø13.99 3.6mm Thick	Y03A01	YI3A01	.4724	12.00	3D 5D 7D	ZA0301 ZA0501 ZA0701	.4528	3/4	2	1	1-27/64 2-23/64 3-5/16	4-29/64 5-13/32 6-11/32	TA1213
	Y03A02	YI3A02	.4764	12.10									
	Y03A03	YI3A03	.4803	12.20									
	Y03A04	YI3A04	.4844	31/64									
	Y03A05	YI3A05	.4921	12.50									
	Y03A06	YI3A06	.4961	12.60									
	Y03A07	YI3A07	.5000	1/2									
	Y03A08	YI3A08	.5039	12.80									
	Y03A09	YI3A09	.5079	12.90									
	Y03A10	YI3A10	.5118	13.00									
	Y03A11	YI3A11	.5156	33/64									
	Y03A12	YI3A12	.5197	13.20									
	Y03A13	YI3A13	.5312	17/32									
	Y03A14	YI3A14	.5315	13.50									
	Y03A15	YI3A15	.5354	13.60									
	Y03A16	YI3A16	.5394	13.70									
	Y03A17	YI3A17	.5433	13.80									
	Y03A18	YI3A18	.5469	35/64									
B Ø14.00 to Ø15.99 4mm Thick	Y03B01	YI3B01	.5512	14.00	3D 5D 7D	ZB0301 ZB0501 ZB0701	.5315	3/4	2	1	1-21/32 2-3/4 3-55/64	4-23/32 5-13/16 6-59/64	TB1415
	Y03B02	YI3B02	.5551	14.10									
	Y03B03	YI3B03	.5591	14.20									
	Y03B04	YI3B04	.5625	9/16									
	Y03B05	YI3B05	.5630	14.30									
	Y03B06	YI3B06	.5669	14.40									

◎ : Excellent ○ : Good

	P										M	K	N			
	Non-alloyed Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	~HRc28 (~HB275)	~HRc28 (~HB275)	~HRc28 (~HB275)	~HRc37 (~HB350)	~HRc37 (~HB350)	~HRc24 (~HB250)	~HRc24 (~HB250)	~HRc13 (~HB200)	~HRc13 (~HB200)	~HRc28 (~HB275)	~HRc19 (~HB220)	~HRc19 (~HB220)	~HRc8 (~HB180)	~HB110
Y03 *	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
YI3 *	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○



Y03B / YI3B SERIES
Y03C / YI3C SERIES

i-DREAM DRILL INSERTS & HOLDERS

- Features of i-Dream Drill Inserts

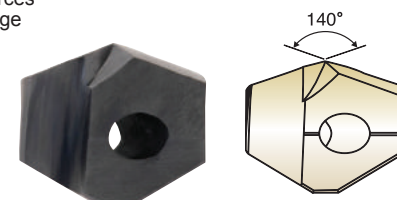
- Secure and accurate seating resulting in accurate repeatability and concentricity.

i-Dream Drill General

- For most steel materials

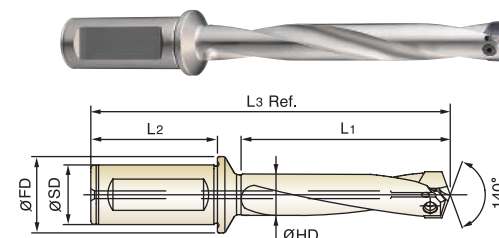
i-Dream Drill INOX

- For tough, ductile materials and stainless steels
- Light, sharp cutting edge
- Minimize cutting forces
- Reduce built-up edge



- Features of i-Dream Drill Holders

- Special Alloy Steels that maintains its hardness and toughness under high temperatures with generous coolant holes for effective coolant flow.
- Innovative surface treatment that improves wear resistance and reduces corrosion.
- High Performance flute design allowing maximum chip evacuation and minimum interference.



cutting conditions : p.50-51

Series Range	Insert EDP No.		Insert O.D.		Length	Holder EDP No.	Diameter	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	Torx Screw No.
	TiAIN	TiCN	h7										
	General	INOX	dec.	inch / mm									
B Ø14.00 to Ø15.99 4mm Thick	Y03B07	YI3B07	.5709	14.50	3D 5D 7D	ZB0302 ZB0502 ZB0702	.5512	3/4	2	1	1-23/32 2-55/64 4	4-51/64 5-15/16 7-5/64	TB1415
	Y03B08	YI3B08	.5748	14.60									
	Y03B09	YI3B09	.5781	37/64									
	Y03B10	YI3B10	.5827	14.80									
	Y03B11	YI3B11	.5906	15.00									
	Y03B12	YI3B12	.5938	19/32									
	Y03B13	YI3B13	.5945	15.10									
	Y03B14	YI3B14	.5984	15.20									
	Y03B15	YI3B15	.6024	15.30									
	Y03B16	YI3B16	.6094	39/64									
	Y03B17	YI3B17	.6102	15.50									
	Y03B18	YI3B18	.6142	15.60									
Y03B19	YI3B19	.6181	15.70										
Y03B20	YI3B20	.6220	15.80										
Y03B21	YI3B21	.6250	5/8										
C Ø16.00 to Ø17.99 4.5mm Thick	Y03C01	YI3C01	.6299	16.00	3D 5D 7D	ZC0301 ZC0501 ZC0701	.6102	3/4	2	1	1-57/64 3-5/32 4-13/32	4-61/64 6-7/32 7-15/32	TC1617
	Y03C02	YI3C02	.6335	16.09									
	Y03C03	YI3C03	.6378	16.20									
	Y03C04	YI3C04	.6406	41/64									
	Y03C05	YI3C05	.6417	16.30									
	Y03C06	YI3C06	.6496	16.50									
	Y03C07	YI3C07	.6562	21/32									
	Y03C08	YI3C08	.6614	16.80									

◎ : Excellent ○ : Good

	P										M	K	N			
	Non-alloyed Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	~HRc28 (~HB275)	~HRc28 (~HB275)	~HRc28 (~HB275)	~HRc37 (~HB350)	~HRc37 (~HB350)	~HRc24 (~HB250)	~HRc24 (~HB250)	~HRc13 (~HB200)	~HRc13 (~HB200)	~HRc28 (~HB275)	~HRc19 (~HB220)	~HRc19 (~HB220)	~HRc8 (~HB180)	~HB110
Y03 *	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
YI3 *	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○



Y03C / YI3C SERIES
Y03D / YI3D SERIES

i-DREAM DRILL INSERTS & HOLDERS

- Features of i-Dream Drill Inserts

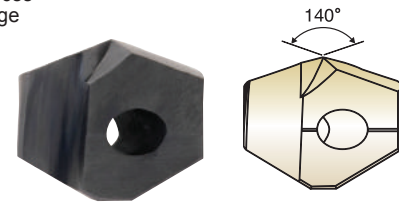
- Secure and accurate seating resulting in accurate repeatability and concentricity.

i-Dream Drill General

- For most steel materials

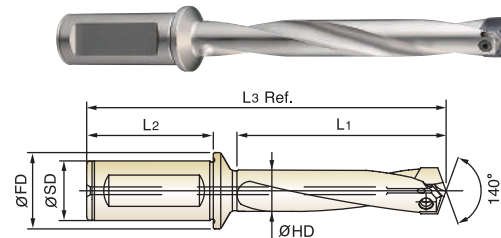
i-Dream Drill INOX

- For tough, ductile materials and stainless steels
- Light, sharp cutting edge
- Minimize cutting forces
- Reduce built-up edge



- Features of i-Dream Drill Holders

- Special Alloy Steels that maintains its hardness and toughness under high temperatures with generous coolant holes for effective coolant flow.
- Innovative surface treatment that improves wear resistance and reduces corrosion.
- High Performance flute design allowing maximum chip evacuation and minimum interference.



cutting conditions : p.50-51

Series Range	Insert EDP No.		Insert O.D.		Length	Holder EDP No.	Diameter	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	Torx Screw No.
	TiAlN	TiCN	h7										
	General	INOX	dec.	inch / mm									
C Ø16.00 to Ø17.99 4.5mm Thick	Y03C09	YI3C09	.6693	17.00	3D	ZC0303	.6496	3/4	2	1	2-1/64	5-5/64	TC1718
	Y03C10	YI3C10	.6919	43/64	5D	ZC0503					3-11/32	6-13/32	
	Y03C11	YI3C11	.6875	11/16	7D	ZC0703					4-11/16	7-3/4	
	Y03C12	YI3C12	.6890	17.50	3D	ZC0304					2-1/16	5-5/32	
	Y03C13	YI3C13	.7008	17.80	5D	ZC0504					3-7/16	6-17/32	
	Y03C14	YI3C14	.7031	45/64	7D	ZC0704					4-53/64	7-29/32	
D Ø18.00 to Ø19.99 5mm Thick	Y03D01	YI3D01	.7087	18.00	3D	ZD0301	.6890	1	2-3/16	1-1/4	2-1/8	5-1/2	TD1819
	Y03D02	YI3D02	.7188	23/32	5D	ZD0501					3-35/64	6-59/64	
	Y03D03	YI3D03	.7283	18.50	3D	ZD0302					4-61/64	8-11/32	
	Y03D04	YI3D04	.7344	47/64	5D	ZD0502					2-3/16	5-35/64	
	Y03D05	YI3D05	.7402	18.80	7D	ZD0702					3-41/64	7	
	Y03D06	YI3D06	.7480	19.00	3D	ZD0303					5-3/32	8-29/64	
F Ø22.00 to Ø23.99 6mm Thick	Y03F01	YI3F01	.8661	22.00	3D	ZF0301	.8425	1	2-3/16	1-1/4	2-19/32	5-63/64	TF2223
	Y03F02	YI3F02	.8750	7/8	5D	ZF0501					4-21/64	7-23/32	
	Y03F03	YI3F03	.8858	22.50	3D	ZF0302					6-1/16	9-29/64	
	Y03F04	YI3F04	.8906	57/64	5D	ZF0502					2-21/32	6-1/32	
	Y03F05	YI3F05	.8937	22.70	7D	ZF0702					4-27/64	7-51/64	
	Y03F06	YI3F06	.9055	23.00	3D	ZF0303					6-13/64	9-9/16	
E Ø20.00 to Ø21.99 5.5mm Thick	Y03E01	YI3E01	.7874	20.00	3D	ZE0301	.7835	1	2-3/16	1-1/4	2-23/64	5-23/32	TE2021
	Y03E02	YI3E02	.7969	51/64	5D	ZE0501					3-15/16	7-9/32	
	Y03E03	YI3E03	.8071	20.50	3D	ZE0302					5-33/64	8-55/64	
	Y03E04	YI3E04	.8125	13/16	5D	ZE0502					2-27/64	5-51/64	
	Y03E05	YI3E05	.8150	20.70	7D	ZE0702					4-1/32	7-13/32	
	Y03E06	YI3E06	.8268	21.00	3D	ZE0303					5-21/32	9-1/64	
G Ø24.00 to Ø25.99 7mm Thick	Y03G01	YI3G01	.8811	24.00	3D	ZG0301	.8622	1	2-3/16	1-1/4	2-31/64	5-7/8	TE2122
	Y03G02	YI3G02	.8906	24.50	5D	ZG0501					4-9/64	7-33/64	
	Y03G03	YI3G03	.9011	25.00	3D	ZG0302					5-25/32	9-11/64	
	Y03G04	YI3G04	.9116	25.50	5D	ZG0502					2-35/64	5-29/32	
	Y03G05	YI3G05	.9221	26.00	7D	ZG0702					4-15/64	7-19/32	
	Y03G06	YI3G06	.9326	26.50	3D	ZG0303					5-59/64	9-19/64	

Unit : Inch

◎ : Excellent ○ : Good

	P										M	K	N			
	Non-alloy Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275)	~HRc28 (~HB275)	HRc28~ (~HB275)	~HRc37 (~HB350)	HRc37~ (~HB350)	~HRc24 (~HB250)	HRc24~ (~HB250)	~HRc13 (~HB200)	HRc13~ (~HB200)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220)	~HRc8 (~HB180)	~HB110
Y03 *	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
YI3 *	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○



Y03E / YI3E SERIES
Y03F / YI3F SERIES

i-DREAM DRILL INSERTS & HOLDERS

- Features of i-Dream Drill Inserts

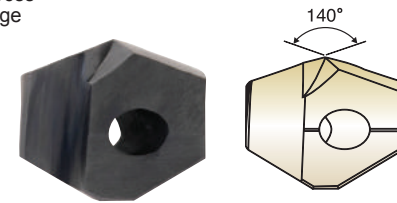
- Secure and accurate seating resulting in accurate repeatability and concentricity.

i-Dream Drill General

- For most steel materials

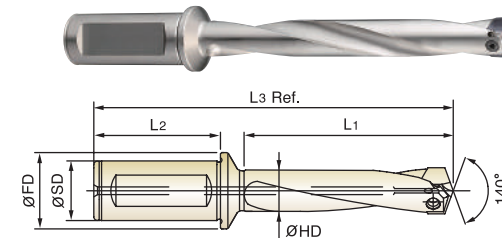
i-Dream Drill INOX

- For tough, ductile materials and stainless steels
- Light, sharp cutting edge
- Minimize cutting forces
- Reduce built-up edge



- Features of i-Dream Drill Holders

- Special Alloy Steels that maintains its hardness and toughness under high temperatures with generous coolant holes for effective coolant flow.
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- High Performance flute design allowing maximum chip evacuation and minimum interference.



cutting conditions : p.50-51

Series Range	Insert EDP No.		Insert O.D.		Length	Holder EDP No.	Diameter	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	Torx Screw No.
	TiAlN	TiCN	h7										
	General	INOX	dec.	inch / mm									
E Ø20.00 to Ø21.99 5.5mm Thick	Y03E01	YI3E01	.7874	20.00	3D	ZE0301	.7835	1	2-3/16	1-1/4	2-23/64	5-23/32	TE2021
	Y03E02	YI3E02	.7969	51/64	5D	ZE0501					3-15/16	7-9/32	
	Y03E03	YI3E03	.8071	20.50	3D	ZE0302					5-33/64	8-55/64	
	Y03E04	YI3E04	.8125	13/16	5D	ZE0502					2-27/64	5-51/64	
	Y03E05	YI3E05	.8150	20.70	7D	ZE0702					4-1/32	7-13/32	
	Y03E06	YI3E06	.8268	21.00	3D	ZE0303					5-21/32	9-1/64	
G Ø24.00 to Ø25.99 7mm Thick	Y03G01	YI3G01	.8811	24.00	3D	ZG0301	.8622	1	2-3/16	1-1/4	2-31/64	5-7/8	TE2122
	Y03G02	YI3G02	.8906	24.50	5D	ZG0501					4-9/64	7-33/64	
	Y03G03	YI3G03	.9011	25.00	3D	ZG0302					5-25/32	9-11/64	
	Y03G04	YI3G04	.9116	25.50	5D	ZG0502					2-35/64	5-29/32	
	Y03G05	YI3G05	.9221	26.00	7D	ZG0702					4-15/64	7-19/32	
	Y03G06	YI3G06	.9326	26.50	3D	ZG0303					5-59/64	9-19/64	
F Ø22.00 to Ø23.99 6mm Thick	Y03F01	YI3F01	.8661	22.00	3D	ZF0301	.8425	1	2-3/16	1-1/4	2-19/32	5-63/64	TF2223
	Y03F02	YI3F02	.8750	7/8	5D	ZF0501					4-21/64	7-23/32	
	Y03F03	YI3F03	.8858	22.50	3D	ZF0302					6-1/16	9-29/64	
	Y03F04	YI3F04	.8906	57/64	5D	ZF0502					2-21/32	6-1/32	
	Y03F05	YI3F05	.8937	22.70	7D	ZF0702					4-27/64	7-51/64	
	Y03F06	YI3F06	.9055	23.00	3D	ZF0303					6-13/64	9-9/16	
H Ø26.00 to Ø27.99 8mm Thick	Y03H01	YI3H01	.9011	26.00	3D	ZH0301	.8819	1	2-3/16	1-1/4	2-23/32	6-7/64	TF2324
	Y03H02	YI3H02	.9116	26.50	5D	ZH0501					4-17/32	7-29/32	
	Y03H03	YI3H03	.9221	27.00	3D	ZH0302					6-11/32	9-23/32	
	Y03H04	YI3H04	.9326	27.50	5D	ZH0502					2-25/32	6-3/16	
	Y03H05	YI3H05	.9431	28.00	7D	ZH0702					4-5/8	8-1/32	
	Y03H06	YI3H06	.9536	28.50	3D	ZH0303					6-15/32	9-7/8	

◎ : Excellent ○ : Good

	P										M	K	N			
	Non-alloy Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275)	~HRc28 (~HB275)	HRc28~ (~HB275)	~HRc37 (~HB350)	HRc37~ (~HB350)	~HRc24 (~HB250)	HRc24~ (~HB250)	~HRc13 (~HB200)	HRc13~ (~HB200)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220)	~HRc8 (~HB180)	~HB110
Y03 *	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
YI3 *	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

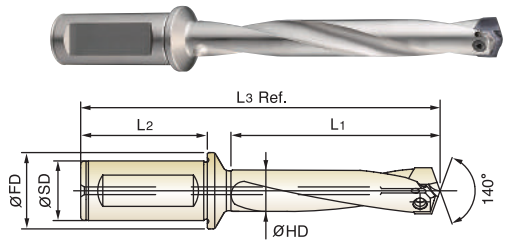
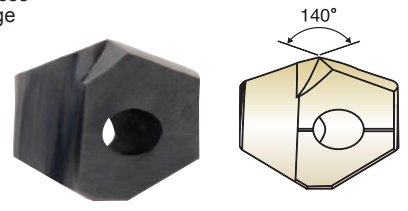


Y03G / YI3G SERIES
Y03H / YI3H SERIES

i-DREAM DRILL INSERTS & HOLDERS

- Features of *i-Dream Drill Inserts*
 - Secure and accurate seating resulting in accurate repeatability and concentricity.
- i-Dream Drill General**
 - For most steel materials
- i-Dream Drill INOX**
 - For tough, ductile materials and stainless steels
 - Light, sharp cutting edge
 - Minimize cutting forces
 - Reduce built-up edge

- Features of *i-Dream Drill Holders*
 - Special Alloy Steels that maintains its hardness and toughness under high temperatures with generous coolant holes for effective coolant flow.
 - Innovative surface treatment that improves wear resistance and reduces corrosion.
 - High Performance flute design allowing maximum chip evacuation and minimum interference.



cutting conditions : p.50-51

Series Range	Insert EDP No.		Insert O.D.		Length	Holder EDP No.	Diameter	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	Torx Screw No.			
	TiAIN	TiCN	h7													
	General	INOX	dec.	inch / mm												
G Ø24.00 to Ø25.99 6.5mm Thick	Y03G01	YI3G01	.9449	24.00	3D	ZG0301	.9213	1-1/4	2-3/8	1-15/32	2-53/64	6-1/2	TG2425			
	Y03G02	YI3G02	.9531	61/64	5D	ZG0501					4-23/32	8-25/64				
	Y03G03	YI3G03	.9646	24.50	7D	ZG0701					6-39/64	10-9/32				
	Y03G04	YI3G04	.9688	31/32	3D	ZG0302	.9409	1-1/4	2-3/8	1-15/32	2-57/64	6-17/32		TG2526		
	Y03G05	YI3G05	.9724	24.70	5D	ZG0502					4-53/64	8-15/32				
	Y03G06	YI3G06	.9843	63/64	7D	ZG0702					6-3/4	10-25/64				
	Y03G07	YI3G07	1.0000	1	3D	ZG0303	.9606	1-1/4	2-3/8	1-15/32	2-61/64	6-39/64			TG2526	
	Y03G08	YI3G08	1.0039	25.50	5D	ZG0503					4-59/64	8-37/64				
	Y03G09	YI3G09	1.0106	25.67	7D	ZG0703					6-57/64	10-35/64				
	Y03G10	YI3G10	1.0118	25.70	3D	ZG0304	.9803	1-1/4	2-3/8	1-15/32	3-1/64	6-47/64				TG2526
	Y03G11	YI3G11	1.0156	1-1/64	5D	ZG0504					5-1/64	8-47/64				
Y03G12	YI3G12	1.0188	25.70	7D	ZG0704	7-1/32					10-3/4					
H Ø26.00 to Ø27.99 7.1mm Thick	Y03H01	YI3H01	1.0236	26.00	3D	ZH0301	1.0000	1-1/4	2-3/8	1-15/32	3-5/64	6-3/4	TH2627			
	Y03H02	YI3H02	1.0312	1-1/32	5D	ZH0501					5-1/8	8-51/64				
	Y03H03	YI3H03	1.0433	26.50	7D	ZH0701					7-11/64	10-27/32				
	Y03H04	YI3H04	1.0469	1-3/64	3D	ZH0302	1.0197	1-1/4	2-3/8	1-15/32	3-1/8	6-51/64		TH2627		
	Y03H05	YI3H05	1.0625	1-1/16	5D	ZH0502					5-7/32	8-7/8				
	Y03H06	YI3H06	1.0630	27.00	7D	ZH0702					7-19/64	10-31/32				
	Y03H07	YI3H07	1.0827	27.50	3D	ZH0303	1.0394	1-1/4	2-3/8	1-15/32	3-3/16	6-7/8			TH2728	
	Y03H08	YI3H08	1.0938	1-3/32	5D	ZH0503					5-5/16	9				
Y03H09	YI3H09	1.0630	27.00	7D	ZH0703	7-7/16					11-1/8					
Y03H10	YI3H10	1.0827	27.50	3D	ZH0304	1.0591	1-1/4	2-3/8	1-15/32	3-1/4	6-29/32	TH2728				
Y03H11	YI3H11	1.0827	27.50	5D	ZH0504					5-13/32	9-5/64					
Y03H12	YI3H12	1.0938	1-3/32	7D	ZH0704					7-37/64	11-15/64					

◎ : Excellent ○ : Good

Series	P										M	K	N			
	Non-alloy Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	~HRc28 (~HB275)	~HRc28 (~HB275)	~HRc28 (~HB275)	~HRc37 (~HB350)	~HRc37 (~HB350)	~HRc24 (~HB250)	~HRc24 (~HB250)	~HRc13 (~HB200)	~HRc13 (~HB200)	~HRc28 (~HB275)	~HRc19 (~HB220)	~HRc19 (~HB220)	~HRc8 (~HB180)	~HB110
Y03 *	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
YI3 *	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

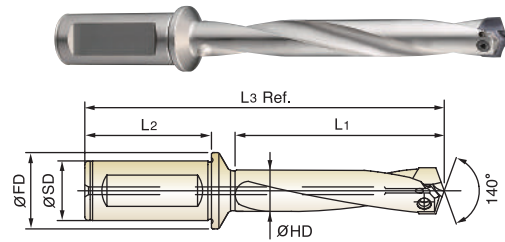
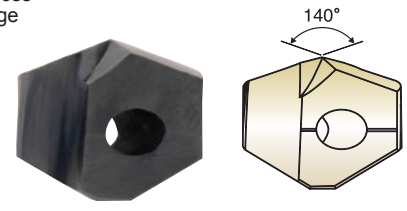


Y03I / YI3I SERIES
Y03J / YI3J SERIES

i-DREAM DRILL INSERTS & HOLDERS

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 - For most steel materials
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 - For tough, ductile materials and stainless steels
 - Light, sharp cutting edge
 - Minimize cutting forces
 - Reduce built-up edge

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 - Special Alloy Steels that maintains its hardness and toughness under high temperatures with generous coolant holes for effective coolant flow.
 - Innovative surface treatment that improves wear resistance and reduces corrosion.
 - High Performance flute design allowing maximum chip evacuation and minimum interference.



cutting conditions : p.50-51

Series Range	Insert EDP No.		Insert O.D.		Length	Holder EDP No.	Diameter	Shank Dia.	Shank Length	Flange Dia.	Drilling Depth	Overall Length	Torx Screw No.		
	TiAIN	TiCN	h7												
	General	INOX	dec.	inch / mm											
I Ø28.00 to Ø29.99 7.7mm Thick	Y03I01	YI3I01	1.1024	28.00	3D	ZI0301	1.0748	1-1/4	2-3/8	1-15/32	3-5/16	7	TI2829		
	Y03I02	YI3I02	1.1094	1-7/64	5D	ZI0501					5-33/64	9-15/64			
	Y03I03	YI3I03	1.1220	28.50	7D	ZI0701					7-23/32	11-7/16			
	Y03I04	YI3I04	1.1250	1-1/8	3D	ZI0302	1.0945	1-1/4	2-3/8	1-15/32	3-23/64	7-1/16		TI2930	
	Y03I05	YI3I05	1.1417	29.00	5D	ZI0502					5-39/64	9-5/16			
	Y03I06	YI3I06	1.1562	1-5/32	7D	ZI0702					7-55/64	11-9/16			
	Y03I07	YI3I07	1.1614	29.50	3D	ZI0303	1.1142	1-1/4	2-3/8	1-15/32	3-27/64	7-3/16			TI2930
	Y03I08	YI3I08	1.1719	1-11/64	5D	ZI0503					5-45/64	9-15/32			
Y03I09	YI3I09	1.1614	29.50	7D	ZI0703	7-63/64					11-3/4				
Y03I10	YI3I10	1.1614	29.50	3D	ZI0304	1.1339	1-1/4	2-3/8	1-15/32	3-31/64	7-7/32	TI2930			
Y03I11	YI3I11	1.1614	29.50	5D	ZI0504					5-13/16	9-35/64				
Y03I12	YI3I12	1.1719	1-11/64	7D	ZI0704					8-1/8	11-7/8				
J Ø30.00 to Ø31.99 8mm Thick	Y03J01	YI3J01	1.1811	30.00	3D	ZJ0301	1.1535	1-1/4	2-3/8	1-15/32	3-35/64		7-21/64	TJ2831	
	Y03J02	YI3J02	1.1875	1-3/16	5D	ZJ0501					5-29/32		9-45/64		
	Y03J03	YI3J03	1.2008	30.50	7D	ZJ0701					8-17/64		12-1/16		
	Y03J04	YI3J04	1.2031	1-13/64	3D	ZJ0302	1.1732	1-1/4	2-3/8	1-15/32	3-39/64		7-3/8		TJ3132
	Y03J05	YI3J05	1.2188	1-7/32	5D	ZJ0502					6		9-25/32		
	Y03J06	YI3J06	1.2205	31.00	7D	ZJ0702					8-13/32	12-11/64			
	Y03J07	YI3J07	1.2205	31.00	3D	ZJ0303	1.1929	1-1/4	2-3/8	1-15/32	3-21/32	7-13/32	TJ3132		
	Y03J08	YI3J08	1.2205	31.00	5D	ZJ0503					6-7/64	9-55/64			
Y03J09	YI3J09	1.2205	31.00	7D	ZJ0703	8-35/64					12-19/64				
Y03J10	YI3J10	1.2402	31.50	3D	ZJ0304	1.2126	1-1/4	2-3/8	1-15/32	3-23/32	7-17/32	TJ3132			
Y03J11	YI3J11	1.2402	31.50	5D	ZJ0504					6-13/64	10-1/64				
Y03J12	YI3J12	1.2500	1-1/4	7D	ZJ0704					8-11/16	12-31/64				

◎ : Excellent ○ : Good

Series	P										M	K	N			
	Non-alloy Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	~HRc28 (~HB275)	~HRc28 (~HB275)	~HRc28 (~HB275)	~HRc37 (~HB350)	~HRc37 (~HB350)	~HRc24 (~HB250)	~HRc24 (~HB250)	~HRc13 (~HB200)	~HRc13 (~HB200)	~HRc28 (~HB275)	~HRc19 (~HB220)	~HRc19 (~HB220)	~HRc8 (~HB180)	~HB110
Y03 *	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
YI3 *	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○



RECOMMENDED CUTTING CONDITIONS

INCH

ISO	Material	Tensile Strength		Hardness		Cutting Speed Vc [SFM]	Feed [IPR]				
		MPa	HB	HRc	Ø31/64 ~Ø37/64		Ø19/32 ~Ø45/64	Ø23/32 ~Ø55/64	Ø7/8 ~Ø1-1/16	Ø1-3/32 ~Ø1-1/4	
P	Non-alloyed steels, Cast steels Free-machining steels	1213, 13L13, 1215, 12L14, 1118 etc	~500	100-150		312-394	.006~.011	.008~.014	.011~.016	.013~.020	.015~.022
			500-850	150-250	~24	262-344	.006~.009	.008~.014	.011~.016	.013~.020	.015~.022
	Low-alloyed steels, Cast steels (<5%) Carbon steels	1015, 1020, 1140, 1025, 1035, 1050, 1045, 1055 etc	~450	85-125		295-377	.006~.010	.008~.013	.010~.015	.012~.019	.013~.020
			450-755	125-225	~19	230-295	.005~.008	.007~.011	.009~.013	.012~.018	.013~.019
			755-900	225-265	19-27	197-262	.005~.008	.007~.011	.009~.013	.012~.018	.013~.019
	Alloyed steels	8620, 4130, 4137, 4140, 6150 etc	~600	125-175	~7	262-328	.006~.009	.007~.011	.009~.013	.012~.018	.013~.020
			600-800	175-235	7-22	230-295	.005~.008	.007~.011	.009~.013	.012~.018	.013~.020
			800-950	235-280	22-29	197-262	.005~.008	.006~.010	.009~.013	.012~.018	.013~.020
			950-1110	280-330	29-35	180-230	.004~.006	.005~.008	.008~.012	.010~.015	.011~.017
			1110-1230	330-360	35-39	148-197	.003~.005	.005~.008	.008~.012	.010~.015	.011~.017
	High-alloyed steels	A355, 9840, 4340 etc	~600	125-175	~7	262-328	.006~.009	.007~.011	.009~.013	.012~.018	.013~.020
			600-800	175-235	7-22	230-295	.005~.008	.007~.011	.009~.013	.012~.018	.013~.020
800-950			235-280	22-29	197-262	.005~.008	.006~.010	.009~.013	.012~.018	.013~.020	
Structural steels	A36, A516, A182 etc	500-850	150-250	~24	197-246	.005~.008	.008~.013	.009~.013	.010~.015	.011~.017	
		850-1200	250-355	24-38	164-213	.004~.006	.007~.011	.008~.012	.008~.012	.009~.014	
Tool steels	H13, H21, A2, S1 etc	500-705	150-210	~16	164-213	.004~.006	.005~.008	.007~.010	.008~.012	.009~.014	
		705-950	210-280	16-29	131-164	.004~.006	.005~.008	.007~.010	.008~.012	.009~.014	
M	Stainless steels	Austenitic and Austenitic/ferritic	450-610	135-185	~9	145-197	.004~.006	.005~.007	.006~.008	.006~.011	.007~.011
		610-930	185-275	9-28	89-145	.003~.005	.004~.006	.004~.006	.005~.008	.006~.009	
K	Grey cast iron	Pearlitic, Ferritic	500-700	150-210	~16	328-410	.006~.010	.008~.015	.011~.017	.014~.020	.016~.022
		Pearlitic	700-850	210-250	16-24	246-312	.004~.008	.006~.011	.008~.012	.010~.014	.011~.016
K	Cast iron nodular	Ferritic	540	165	4	312-394	.005~.009	.007~.012	.008~.013	.011~.016	.013~.017
		Pearlitic	850	250	24	246-312	.004~.008	.006~.010	.007~.011	.010~.014	.011~.016
K	Malleable cast iron	Ferritic	450	125		328-410	.005~.009	.007~.012	.008~.013	.011~.016	.013~.017
		Pearlitic	780	230	21	246-312	.004~.007	.006~.010	.007~.011	.010~.014	.011~.016
N	Aluminum alloys (Wrought)	not heat treatable		65		820-1083	.0118~.0157	.0138~.0177	.0157~.0197	.0177~.0217	.0197~.0236
		hardened		150		656-820	.0118~.0157	.0138~.0177	.0157~.0197	.0177~.0217	.0197~.0236
	Aluminum alloys (Cast)	≤12% Si, not heat treatable		75		656-820	.0098~.0138	.0118~.0157	.0138~.0177	.0157~.0197	.0177~.0217
	≤12% Si, hardened		90		492-722	.0098~.0138	.0118~.0157	.0138~.0177	.0157~.0197	.0177~.0217	
N	Copper alloys	Free machining (Pb>1%)		110		377-476	.006~.011	.009~.014	.011~.014	.015~.018	.016~.019
		Brass		90		476-607	.007~.011	.009~.015	.012~.015	.015~.018	.017~.019
		Electrolytic copper		100		312-394	.002~.004	.004~.005	.004~.005	.006~.007	.007~.009
N	Non ferrous material	Duroplastics									
		Fiber plastics Hard rubber									

*Formulas:

$$SFM = \frac{(RPM) \cdot \pi \cdot (DIA.)}{12}$$

$$IPM = (RPM) \cdot (IPR)$$

$$RPM = \frac{(SFM) \cdot 12}{(\pi) \cdot (DIA.)}$$

- ▶ The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.
- ▶ Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.
- ▶ Recommend you to reduce the feed rate to 85%, 70% when you use 5xD, 7xD holders.
- ▶ For use of 7xD holder, we recommend to drill a centering pre-hole with equal to or larger than 140° point angle to min. 2/3 cutting diameter.
- ▶ The use of the centering pre-hole improves hole location, roundness and surface finish.



RECOMMENDED CUTTING CONDITIONS

METRIC

ISO	Material	Tensile Strength		Hardness		Cutting Speed Vc [M/min]	Feed [mm/rev]				
		[N/mm²]	HB	HRc	Ø12.00 ~Ø14.99		Ø15.00 ~Ø17.99	Ø18.00 ~Ø21.99	Ø22.00 ~Ø26.99	Ø27.00 ~Ø31.99	
P	Non-alloyed steels, Cast steels Free-machining steels	95Mn28, 95MnPb28, 10SPb20 etc	~500	100-150		95-120	0.16-0.28	0.21-0.35	0.27-0.40	0.34-0.52	0.37-0.55
			500-850	150-250	~24	80-105	0.14-0.24	0.21-0.35	0.27-0.40	0.34-0.52	0.37-0.55
	Low-alloyed steels, Cast steels (<5%) Carbon steels	C15, C22, 20Mn5, Ck45, C45 etc	~450	85-125		90-115	0.14-0.25	0.20-0.33	0.25-0.39	0.31-0.47	0.34-0.50
			450-755	125-225	~19	70-90	0.12-0.20	0.17-0.28	0.22-0.32	0.30-0.46	0.33-0.49
			755-900	225-265	19-27	60-80	0.12-0.20	0.17-0.28	0.22-0.32	0.30-0.46	0.33-0.49
	Alloyed steels	45CrMo4, 42CrMo4, 16MnCr5, Ck75, 35CrMo4, 16MnCr5 etc	~600	125-175	~7	80-100	0.14-0.24	0.17-0.28	0.22-0.32	0.30-0.46	0.34-0.50
			600-800	175-235	7-22	70-90	0.12-0.20	0.17-0.28	0.22-0.32	0.30-0.46	0.34-0.50
			800-950	235-280	22-29	60-80	0.12-0.20	0.15-0.25	0.22-0.32	0.30-0.46	0.34-0.50
			950-1110	280-330	29-35	55-70	0.10-0.16	0.13-0.21	0.21-0.30	0.25-0.38	0.29-0.43
			1110-1230	330-360	35-39	45-60	0.08-0.12	0.13-0.21	0.21-0.30	0.25-0.38	0.29-0.43
	High-alloyed steels	36CrNiMo4, 41CrAlMo7 etc	~600	125-175	~7	80-100	0.14-0.24	0.17-0.28	0.22-0.32	0.30-0.46	0.34-0.50
			600-800	175-235	7-22	70-90	0.12-0.20	0.17-0.28	0.22-0.32	0.30-0.46	0.34-0.50
800-950			235-280	22-29	60-80	0.12-0.20	0.15-0.25	0.22-0.32	0.30-0.46	0.34-0.50	
Structural steels	Ss33, Ss37-2, St44-2, St52, St60 etc	500-850	150-250	~24	60-75	0.12-0.20	0.20-0.33	0.22-0.32	0.25-0.38	0.29-0.43	
		850-1200	250-355	24-38	50-65	0.10-0.16	0.17-0.28	0.21-0.30	0.21-0.32	0.26-0.38	
Tool steels	102Cr6, 105WCr6, C75W etc	500-705	150-210	~16	50-65	0.10-0.16	0.13-0.21	0.18-0.26	0.20-0.31	0.24-0.35	
		705-950	210-280	16-29	40-50	0.10-0.16	0.13-0.21	0.18-0.26	0.20-0.31	0.24-0.35	
M	Stainless steels	Austenitic and Austenitic/Ferritic	450-610	135-185	~9	45-60	0.10-0.16	0.12-0.18	0.14-0.20	0.15-0.26	0.18-0.28
		610-930	185-275	9-28	30-45	0.08-0.14	0.09-0.15	0.10-0.16	0.12-0.20	0.14-0.22	
K	Grey cast iron	Pearlitic, Ferritic A48-76, 20B, 25B, 30B etc	500-700	150-210	~16	100-125	0.15-0.26	0.20-0.37	0.27-0.42	0.36-0.51	0.40-0.55
		Pearlitic A48-35B, 40B, 50B, 60B etc	700-850	210-250	16-24	75-95	0.11-0.20	0.16-0.29	0.20-0.30	0.25-0.35	0.29-0.40
K	Cast iron nodular	Ferritic 60-40-18, 80-55-06 etc	540	165	4	95-120	0.13-0.22	0.17-0.31	0.21-0.32	0.28-0.40	0.32-0.44
		Pearlitic 100-70-03 etc	850	250	24	75-95	0.11-0.20	0.14-0.26	0.19-0.29	0.25-0.35	0.29-0.40
K	Malleable cast iron	Ferritic A48-74, A220-76, 32510 etc	450	125		100-125	0.13-0.22	0.17-0.31	0.21-0.32	0.28-0.40	0.32-0.44
		Pearlitic 50005, 70003 etc	780	230	21	75-95	0.11-0.18	0.14-0.26	0.19-0.29	0.25-0.35	0.29-0.40
N	Aluminum alloys (Wrought)	not heat treatable		65		250-330	0.30-0.40	0.35-0.45	0.40-0.50	0.45-0.55	0.50-0.60
		hardened		150		200-250	0.30-0.40	0.35-0.45	0.40-0.50	0.45-0.55	0.50-0.60
	Aluminum alloys (Cast)	≤12% Si, not heat treatable		75		200-50	0.25-0.35	0.30-0.40	0.35-0.45	0.40-0.50	0.45-0.55
	≤12% Si, hardened		90		150-220	0.25-0.35	0.30-0.40	0.35-0.45	0.40-0.50	0.45-0.55	
N	Copper alloys	Free machining (Pb>1%)		110		115-145	0.16-0.28	0.23-0.36	0.29-0.36	0.37-0.45	0.41-0.48
		Brass		90		145-185	0.17-0.29	0.24-0.37	0.30-0.38	0.38-0.46	0.42-0.49
		Electrolytic copper		100		95-120	0.06-0.09	0.09-0.13	0.11-0.13	0.15-0.18	0.19-0.22
N	Non ferrous material	Duroplastics									
		Fiber plastics Hard rubber									

*Formulas :

$$M/min = \frac{(RPM) \cdot \pi \cdot (DIA.)}{1000}$$

$$mm/min = (RPM) \cdot (mm/rev)$$

$$RPM = \frac{(M/min) \cdot 1000}{(\pi) \cdot (DIA.)}$$

- ▶ The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.
- ▶ Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.
- ▶ Recommend you to reduce the feed rate to 85%, 70% when you use 5xD, 7xD holders.
- ▶ For use of 7xD holder, we recommend to drill a centering pre-hole with equal to or larger than 140° point angle to min. 2/3 cutting diameter.
- ▶ The use of the centering pre-hole improves hole location, roundness and surface finish.

Assembly of *i*-Dream Drills



Make sure to clean the insert and insert seat.



Slide the drill insert into the slot of the holder and press down the insert to touch the bottom of the slot.

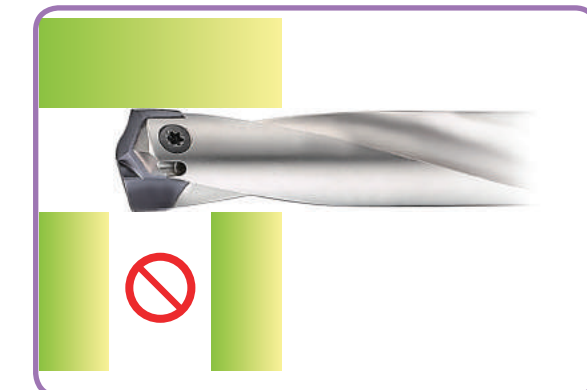


After confirming the insert is pressed down to the bottom of the slot, tighten the screw using anti-seize compound.

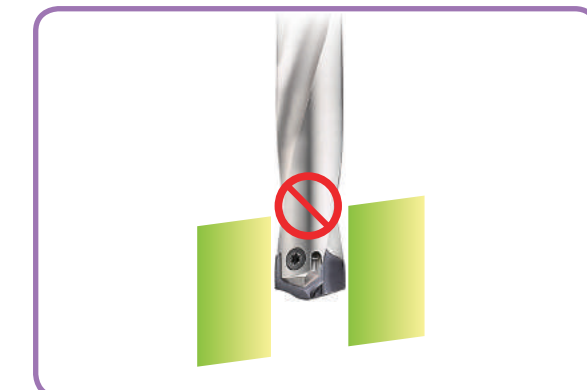
WRENCH TYPE	PRODUCT No.	T-HANDLE No.	SERIES
 WING TYPE	TWWT08	—	A
			B
			C
 TORX BIT TYPE	TWBT15 TWBT20 TWBT25	TWH600 	D
			E, F, G
			H, I, J

Use the wing type or T-type wrench.
 ▶ Need to use appropriate wrenches and screws as indicated.
 ▶ It's important to tighten up the screw properly.

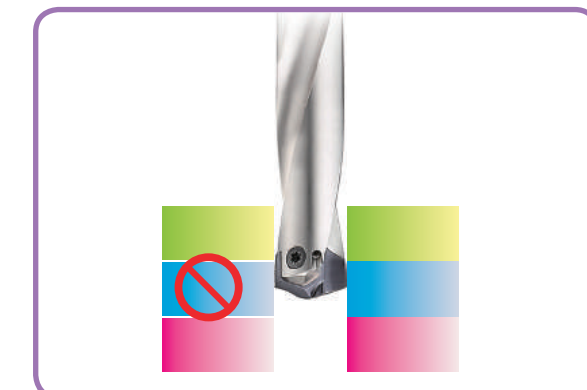
CAUTION-NOT RECOMMENDABLE APPLICATION



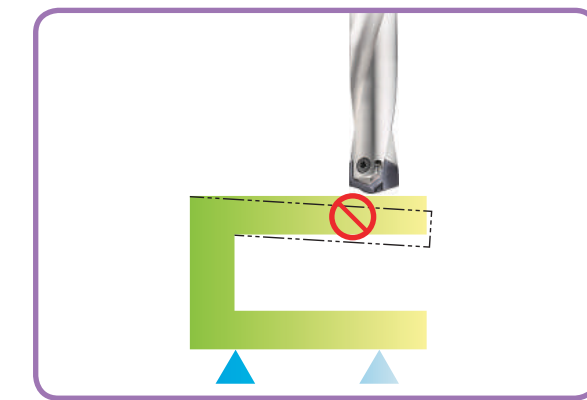
Intersecting cross hole is bigger than the drill insert's Margin Length.



Material with slanting entrance and exit over 7 degree. (If drilling 7 degree or under slanting surface, reduce the feed about 30-50 %)



For drilling stacked plates, minimize the space between the plates. The space stacked plates can cause insert breakage or poor chip control.

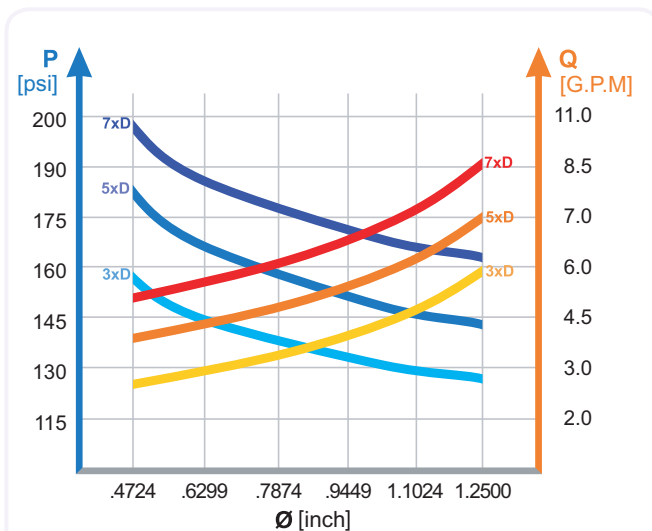


The material needs to be fixtured securely before drilling.

- i-DREAM DRILLS
- DREAM DRILLS -GENERAL
- DREAM DRILLS -HIGH FEED
- DREAM DRILLS -FLAT BOTTOM
- DREAM DRILLS -INOX
- DREAM DRILLS -ALU
- DREAM DRILLS -MQL TYPE
- DREAM DRILLS for HIGH HARDENED STEELS
- STANDARD CARBIDE DRILLS
- MULTI-1 DRILLS
- HPD DRILLS
- GOLD-P DRILLS
- STRAIGHT SHANK DRILLS
- AIRCRAFT DRILLS
- SILVER & DEMING DRILLS
- TAPER SHANK DRILLS
- NC SPOTTING DRILLS
- COMBINATION DRILLS & COUNTERSIN
- SPADE DRILLS
- TECHNICAL DATA






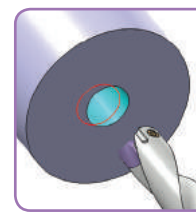
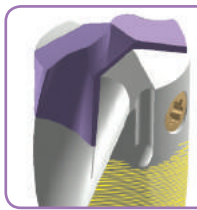
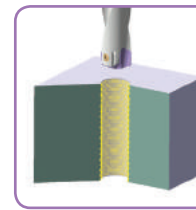
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- COMBINATION DRILLS & COUNTERSIN
- SPADE DRILLS
- TECHNICAL DATA

RECOMMENDED COOLANT PRESSURE AND FLOW RATE ON VERTICAL DRILLING



- Recommended emulsion mix is 6% - 8%.
- For Drilling in Stainless and High Strength steels, a mix of 10% is recommended.
- For horizontal drilling, 30% reduction on the coolant pressure and flow rate is possible.
- Dry drilling is possible for 1-2xD drilling. But not recommended.

TROUBLE SHOOTING

 <p>1) Heavy flank wear / Fast flank wear - Reduce cutting speed - Increase feed</p>	 <p>2) Chipping on cutting edge - Reduce feed - Check the rigidity of spindle and chuck - Rigid clamping of workpiece</p>
 <p>3) Build up on cutting edge - Increase cutting speed - Use a coated insert</p>	 <p>4) Chipping or break down on outer corner - Reduce feed - Rigid clamping of workpiece</p>
 <p>5) Wear of land margin - Rigid clamping of workpiece - Reduce cutting speed - Increase coolant flow</p>	 <p>6) Unsatisfactory positioning of the hole - Rigid clamping of workpiece - Reduce feed during entrance or exit</p>
 <p>7) Scratching on holder - Rigid clamping of workpiece - Reduce feed - Increase coolant flow</p>	 <p>8) Unsatisfactory surface finish - Rigid clamping of workpiece - Increase coolant flow and pressure</p>

CARBIDE



Being the best through innovation





DREAM DRILLS -GENERAL

WITH & WITHOUT COOLANT HOLES
- General Purpose HRc30 to HRc50 Alloys

SELECTION GUIDE

SOLID CARBIDE DREAM DRILLS-HIGH FEED

SOLID CARBIDE DREAM DRILLS - HIGH FEED (with Coolant Holes)
 - for Carbon Steels, Alloy Steels (up to HRC35) and Cast Iron

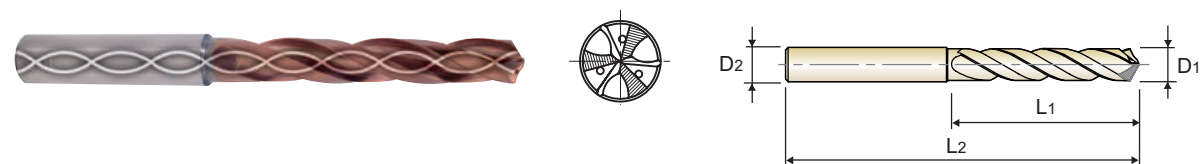
ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
3xD DGR493 DGR496		CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES	SHORT	.1969 .7874	94
5xD DGR495 DGR497		CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES	LONG	.1969 .7874	98
RECOMMENDED CUTTING CONDITIONS					102

◎ : Excellent ○ : Good

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

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES SHORT

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



DIN 6537 MG h6 m7 140° 20 bar P.102 3 x D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2	H-coating	D1			D2	L1	L2
DGR493050	5.00		.1969	6	28	66	DGR496017	6.75	17/64	.2656	5/16	34	79
DGR493051	5.10		.2008	6	28	66	DGR493068	6.80		.2677	8	34	79
DGR496013	5.16	13/64	.2031	1/4	28	66	DGR493069	6.90		.2717	8	34	79
DGR493052	5.20		.2047	6	28	66	DGR496209	6.91	I	.2720	5/16	34	79
DGR493053	5.30		.2087	6	28	66	DGR493070	7.00		.2756	8	34	79
DGR493054	5.40		.2126	6	28	66	DGR493071	7.10		.2795	8	41	79
DGR496103	5.41	#3	.2130	1/4	28	66	DGR496018	7.14	9/32	.2813	5/16	41	79
DGR493055	5.50		.2165	6	28	66	DGR493072	7.20		.2835	8	41	79
DGR496014	5.56	7/32	.2188	1/4	28	66	DGR493073	7.30		.2874	8	41	79
DGR493056	5.60		.2205	6	28	66	DGR493074	7.40		.2913	8	41	79
DGR496102	5.61	#2	.2210	1/4	28	66	DGR493075	7.50		.2953	8	41	79
DGR493057	5.70		.2244	6	28	66	DGR496019	7.54	19/64	.2969	5/16	41	79
DGR496101	5.79	#1	.2280	1/4	28	66	DGR493076	7.60		.2992	8	41	79
DGR493058	5.80		.2283	6	28	66	DGR493077	7.70		.3031	8	41	79
DGR493059	5.90		.2323	6	28	66	DGR493078	7.80		.3071	8	41	79
DGR496015	5.95	15/64	.2344	1/4	28	66	DGR493079	7.90		.3110	8	41	79
DGR493060	6.00		.2362	6	28	66	DGR496020	7.94	5/16	.3125	5/16	41	79
DGR493061	6.10		.2402	8	34	79	DGR493080	8.00		.3150	8	41	79
DGR493062	6.20		.2441	8	34	79	DGR493081	8.10		.3189	10	47	89
DGR493063	6.30		.2480	8	34	79	DGR493082	8.20	P	.3228	10	47	89
DGR496016	6.35	1/4	.2500	1/4	34	79	DGR493083	8.30		.3268	10	47	89
DGR493064	6.40		.2520	8	34	79	DGR496021	8.33	21/64	.3281	3/8	47	89
DGR493065	6.50		.2559	8	34	79	DGR493084	8.40		.3307	10	47	89
DGR496206	6.53	F	.2570	5/16	34	79	DGR496217	8.43	Q	.3320	3/8	47	89
DGR493066	6.60		.2598	8	34	79	DGR493085	8.50		.3346	10	47	89
DGR493067	6.70		.2638	8	34	79	DGR493086	8.60		.3386	10	47	89

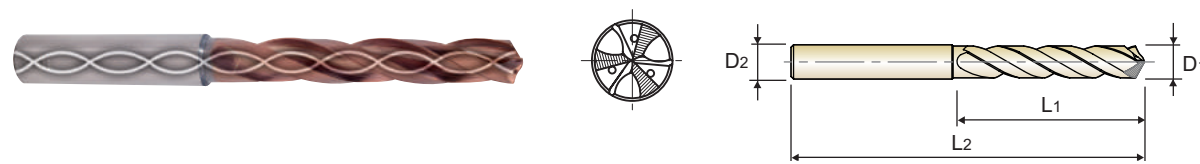
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◎ : Excellent ○ : Good

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

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES SHORT

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



DIN 6537 MG h6 m7 140° 20 bar P.102 3 x D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2	H-coating	D1			D2	L1	L2
DGR493087	8.70		.3425	10	47	89	DGR493107	10.70		.4213	12	55	102
DGR496022	8.73	11/32	.3437	3/8	47	89	DGR496027	10.72	27/64	.4219	7/16	55	102
DGR493088	8.80		.3465	10	47	89	DGR493108	10.80		.4252	12	55	102
DGR493089	8.90		.3504	10	47	89	DGR493109	10.90		.4291	12	55	102
DGR493090	9.00		.3543	10	47	89	DGR493110	11.00		.4331	12	55	102
DGR493091	9.10		.3583	10	47	89	DGR493111	11.10		.4370	12	55	102
DGR496023	9.13	23/64	.3594	3/8	47	89	DGR496028	11.11	7/16	.4375	7/16	55	102
DGR493092	9.20		.3622	10	47	89	DGR493112	11.20		.4409	12	55	102
DGR493093	9.30		.3661	10	47	89	DGR493113	11.30		.4449	12	55	102
DGR496221	9.35	U	.3680	3/8	47	89	DGR493114	11.40		.4488	12	55	102
DGR493094	9.40		.3701	10	47	89	DGR493115	11.50		.4528	12	55	102
DGR493095	9.50		.3740	10	47	89	DGR496029	11.51	29/64	.4531	1/2	55	102
DGR496024	9.53	3/8	.3750	3/8	47	89	DGR493116	11.60		.4567	12	55	102
DGR493096	9.60		.3780	10	47	89	DGR493117	11.70		.4606	12	55	102
DGR493097	9.70		.3819	10	47	89	DGR493118	11.80		.4646	12	55	102
DGR493098	9.80	W	.3858	10	47	89	DGR493119	11.90		.4685	12	55	102
DGR493099	9.90		.3898	10	47	89	DGR496030	11.91	15/32	.4688	1/2	55	102
DGR496025	9.92	25/64	.3906	7/16	47	89	DGR493120	12.00		.4724	12	55	102
DGR493100	10.00		.3937	10	47	89	DGR493121	12.10		.4764	14	60	107
DGR493101	10.10		.3976	12	55	102	DGR493122	12.20		.4803	14	60	107
DGR493102	10.20		.4016	12	55	102	DGR493123	12.30		.4843	14	60	107
DGR493103	10.30		.4055	12	55	102	DGR496031	12.30	31/64	.4844	1/2	60	107
DGR496026	10.32	13/32	.4063	7/16	55	102	DGR493124	12.40		.4882	14	60	107
DGR493104	10.40		.4094	12	55	102	DGR493125	12.50		.4921	14	60	107
DGR493105	10.50		.4134	12	55	102	DGR493126	12.60		.4961	14	60	107
DGR493106	10.60		.4173	12	55	102	DGR496032	12.70	1/2	.5000	1/2	60	107

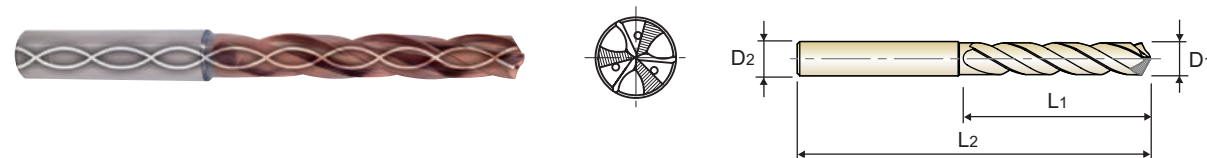
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P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			◎						

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES *SHORT*

- ▶ Drilling for Carbon Steels, Alloy Steels(-HRC35) and Cast Iron
- ▶ Higher productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
- ▶ Multi-Layer coating delivers much better productivity and reliability
- ▶ Self centering and chip breaking by R-thinning and coolant holes



DIN 6537
MG
h6
m7
140°
20 bar
P.102
3 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2	H-coating	D1			D2	L1	L2
DGR493127	12.70		.5000	14	60	107	DGR493149	14.90		.5866	16	65	115
DGR493128	12.80		.5039	14	60	107	DGR493150	15.00		.5906	16	65	115
DGR493129	12.90		.5079	14	60	107	DGR496038	15.08	19/32	.5938	5/8	65	115
DGR493130	13.00		.5118	14	60	107	DGR493151	15.10		.5945	16	65	115
DGR493131	13.10	33/64	.5156	14	60	107	DGR493152	15.20		.5984	16	65	115
DGR493132	13.20		.5197	14	60	107	DGR493153	15.30		.6024	16	65	115
DGR493133	13.30		.5236	14	60	107	DGR493154	15.40		.6063	16	65	115
DGR493134	13.40		.5276	14	60	107	DGR496039	15.48	39/64	.6094	5/8	65	115
DGR496034	13.49	17/32	.5312	9/16	60	107	DGR493155	15.50		.6102	16	65	115
DGR493135	13.50		.5315	14	60	107	DGR493156	15.60		.6142	16	65	115
DGR493136	13.60		.5354	14	60	107	DGR493157	15.70		.6181	16	65	115
DGR493137	13.70		.5394	14	60	107	DGR493158	15.80		.6220	16	65	115
DGR493138	13.80		.5433	14	60	107	DGR496040	15.88	5/8	.6250	5/8	65	115
DGR496035	13.89	35/64	.5469	9/16	60	107	DGR493159	15.90		.6260	16	65	115
DGR493139	13.90		.5472	14	60	107	DGR493160	16.00		.6299	16	65	115
DGR493140	14.00		.5512	14	60	107	DGR493161	16.10		.6339	18	73	123
DGR493141	14.10		.5551	16	65	115	DGR496041	16.27	41/64	.6406	11/16	73	123
DGR493142	14.20		.5591	16	65	115	DGR493165	16.50		.6496	18	73	123
DGR496036	14.29	9/16	.5625	9/16	65	115	DGR496042	16.67	21/32	.6563	11/16	73	123
DGR493143	14.30		.5630	16	65	115	DGR493170	17.00		.6693	18	73	123
DGR493144	14.40		.5669	16	65	115	DGR496043	17.07	43/64	.6719	11/16	73	123
DGR493145	14.50		.5709	16	65	115	DGR496044	17.46	11/16	.6875	11/16	73	123
DGR493146	14.60		.5748	16	65	115	DGR493175	17.50		.6890	18	73	123
DGR496037	14.68	37/64	.5781	5/8	65	115	DGR496045	17.86	45/64	.7031	3/4	73	123
DGR493147	14.70		.5787	16	65	115	DGR493180	18.00		.7087	18	73	123
DGR493148	14.80		.5827	16	65	115	DGR496046	18.26	23/32	.7188	3/4	79	131

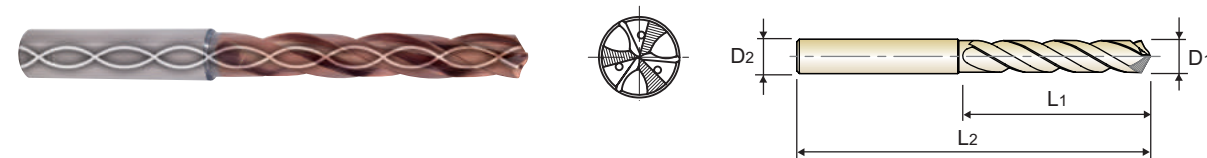
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◎ : Excellent ○ : Good

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

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES *SHORT*

- ▶ Drilling for Carbon Steels, Alloy Steels(-HRC35) and Cast Iron
- ▶ Higher productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
- ▶ Multi-Layer coating delivers much better productivity and reliability
- ▶ Self centering and chip breaking by R-thinning and coolant holes



DIN 6537
MG
h6
m7
140°
20 bar
P.102
3 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2	H-coating	D1			D2	L1	L2
DGR493185	18.50		.7283	20	79	131	DGR496048	19.05	3/4	.7500	3/4	79	131
DGR496047	18.65	47/64	.7344	3/4	79	131	DGR493195	19.50		.7677	20	79	131
DGR493190	19.00		.7480	20	79	131	DGR493200	20.00		.7874	20	79	131

◎ : Excellent ○ : Good

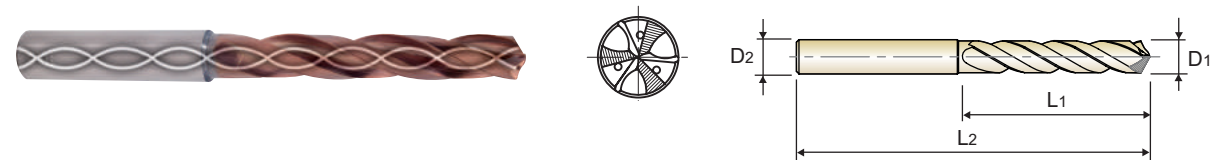
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			◎						



DGR495 SERIES
DGR497 SERIES

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES LONG

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



DIN 6537 MG h6 m7 140° 20 bar P.102 5 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2	H-coating	D1			D2	L1	L2
DGR495050	5.00		.1969	6	44	82	DGR497017	6.75	17/64	.2656	5/16	53	91
DGR495051	5.10		.2008	6	44	82	DGR495068	6.80		.2677	8	53	91
DGR497013	5.16	13/64	.2031	1/4	44	82	DGR495069	6.90		.2717	8	53	91
DGR495052	5.20		.2047	6	44	82	DGR497209	6.91	I	.2720	5/16	53	91
DGR495053	5.30		.2087	6	44	82	DGR495070	7.00		.2756	8	53	91
DGR495054	5.40		.2126	6	44	82	DGR495071	7.10		.2795	8	53	91
DGR497103	5.41	#3	.2130	1/4	44	82	DGR497018	7.14	9/32	.2813	5/16	53	91
DGR495055	5.50		.2165	6	44	82	DGR495072	7.20		.2835	8	53	91
DGR497014	5.56	7/32	.2188	1/4	44	82	DGR495073	7.30		.2874	8	53	91
DGR495056	5.60		.2205	6	44	82	DGR495074	7.40		.2913	8	53	91
DGR497102	5.61	#2	.2210	1/4	44	82	DGR495075	7.50		.2953	8	53	91
DGR495057	5.70		.2244	6	44	82	DGR497019	7.54	19/64	.2969	5/16	53	91
DGR497101	5.79	#1	.2280	1/4	44	82	DGR495076	7.60		.2992	8	53	91
DGR495058	5.80		.2283	6	44	82	DGR495077	7.70		.3031	8	53	91
DGR495059	5.90		.2323	6	44	82	DGR495078	7.80		.3071	8	53	91
DGR497015	5.95	15/64	.2344	1/4	44	82	DGR495079	7.90		.3110	8	53	91
DGR495060	6.00		.2362	6	44	82	DGR497020	7.94	5/16	.3125	5/16	53	91
DGR495061	6.10		.2402	8	53	91	DGR495080	8.00		.3150	8	53	91
DGR495062	6.20		.2441	8	53	91	DGR495081	8.10		.3189	10	61	103
DGR495063	6.30		.2480	8	53	91	DGR495082	8.20	P	.3228	10	61	103
DGR497016	6.35	1/4	.2500	1/4	53	91	DGR495083	8.30		.3268	10	61	103
DGR495064	6.40		.2520	8	53	91	DGR497021	8.33	21/64	.3281	3/8	61	103
DGR495065	6.50		.2559	8	53	91	DGR495084	8.40		.3307	10	61	103
DGR497206	6.53	F	.2570	5/16	53	91	DGR497217	8.43	Q	.3320	3/8	61	103
DGR495066	6.60		.2598	8	53	91	DGR495085	8.50		.3346	10	61	103
DGR495067	6.70		.2638	8	53	91	DGR495086	8.60		.3386	10	61	103

▶ NEXT PAGE

◎ : Excellent ○ : Good

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



DGR495 SERIES
DGR497 SERIES

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES LONG

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



DIN 6537 MG h6 m7 140° 20 bar P.102 5 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2	H-coating	D1			D2	L1	L2
DGR495087	8.70		.3425	10	61	103	DGR497026	10.32	13/32	.4063	7/16	71	118
DGR497022	8.73	11/32	.3437	3/8	61	103	DGR495104	10.40		.4094	12	71	118
DGR495088	8.80		.3465	10	61	103	DGR495105	10.50		.4134	12	71	118
DGR495089	8.90		.3504	10	61	103	DGR495106	10.60		.4173	12	71	118
DGR495090	9.00		.3543	10	61	103	DGR495107	10.70		.4213	12	71	118
DGR495091	9.10		.3583	10	61	103	DGR497027	10.72	27/64	.4219	7/16	71	118
DGR497023	9.13	23/64	.3594	3/8	61	103	DGR495108	10.80		.4252	12	71	118
DGR495092	9.20		.3622	10	61	103	DGR495109	10.90		.4291	12	71	118
DGR495093	9.30		.3661	10	61	103	DGR495110	11.00		.4331	12	71	118
DGR497221	9.35	U	.3680	3/8	61	103	DGR495111	11.10		.4370	12	71	118
DGR495094	9.40		.3701	10	61	103	DGR497028	11.11	7/16	.4375	7/16	71	118
DGR495095	9.50		.3740	10	61	103	DGR495112	11.20		.4409	12	71	118
DGR497024	9.53	3/8	.3750	3/8	61	103	DGR495113	11.30		.4449	12	71	118
DGR495096	9.60		.3780	10	61	103	DGR495114	11.40		.4488	12	71	118
DGR495097	9.70		.3819	10	61	103	DGR495115	11.50		.4528	12	71	118
DGR495098	9.80	W	.3858	10	61	103	DGR497029	11.51	29/64	.4531	1/2	71	118
DGR495099	9.90		.3898	10	61	103	DGR495116	11.60		.4567	12	71	118
DGR497025	9.92	25/64	.3906	7/16	61	103	DGR495117	11.70		.4606	12	71	118
DGR495100	10.00		.3937	10	61	103	DGR495118	11.80		.4646	12	71	118
DGR495101	10.10		.3976	12	71	118	DGR495119	11.90		.4685	12	71	118
DGR495102	10.20		.4016	12	71	118	DGR497030	11.91	15/32	.4688	1/2	71	118
DGR495103	10.30		.4055	12	71	118	DGR495120	12.00		.4724	12	71	118

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◎ : Excellent ○ : Good

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

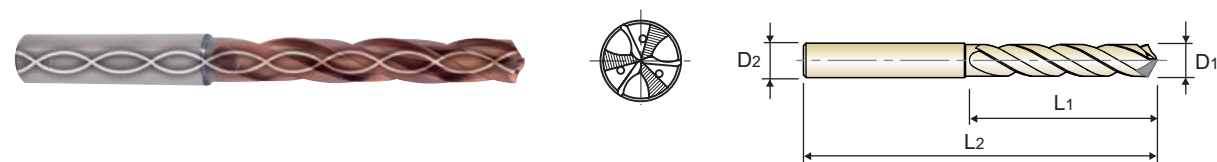


DGR495 SERIES

DGR497 SERIES

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES LONG

- ▶ Drilling for Carbon Steels, Alloy Steels(-HRc35) and Cast Iron
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DIN 6537 MG h6 m7 140° 20 bar P.102 5 × D

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

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◎ : Excellent ○ : Good

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

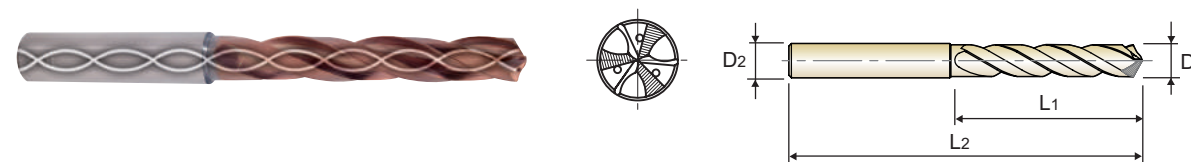


DGR495 SERIES

DGR497 SERIES

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES LONG

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



DIN 6537 MG h6 m7 140° 20 bar P.102 5 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2	H-coating	D1			D2	L1	L2
DGR495157	15.70		.6181	16	83	133	DGR497044	17.46	11/16	.6875	11/16	93	143
DGR495158	15.80		.6220	16	83	133	DGR495175	17.50		.6890	18	93	143
DGR497040	15.88	5/8	.6250	5/8	83	133	DGR497045	17.86	45/64	.7031	3/4	93	143
DGR495159	15.90		.6260	16	83	133	DGR495180	18.00		.7087	18	93	143
DGR495160	16.00		.6299	16	83	133	DGR497046	18.26	23/32	.7188	3/4	101	153
DGR495161	16.10		.6339	18	93	143	DGR495185	18.50		.7283	20	101	153
DGR497041	16.27	41/64	.6406	11/16	93	143	DGR497047	18.65	47/64	.7344	3/4	101	153
DGR495165	16.50		.6496	18	93	143	DGR495190	19.00		.7480	20	101	153
DGR497042	16.67	21/32	.6563	11/16	93	143	DGR497048	19.05	3/4	.7500	3/4	101	153
DGR495170	17.00		.6693	18	93	143	DGR495195	19.50		.7677	20	101	153
DGR497043	17.07	43/64	.6719	11/16	93	143	DGR495200	20.00		.7874	20	101	153

◎ : Excellent ○ : Good

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

CARBIDE

HSS

i-DREAM DRILLS

DREAM DRILLS -GENERAL

DREAM DRILLS -HIGH FEED

DREAM DRILLS -FLAT BOTTOM

DREAM DRILLS -INOX

DREAM DRILLS -ALU

DREAM DRILLS -MQL TYPE

DREAM DRILLS for HIGH HARDENED STEELS

STANDARD CARBIDE DRILLS

MULTI-1 DRILLS

HPD DRILLS

GOLD-P DRILLS

STRAIGHT SHANK DRILLS

AIRCRAFT DRILLS

SILVER & DEMING DRILLS

TAPER SHANK DRILLS

NC SPOTTING DRILLS

COMBINATION DRILLS & COUNTERSIN

SPADE DRILLS

TECHNICAL DATA



DREAM DRILLS -HIGH FEED

RECOMMENDED CUTTING CONDITIONS

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES, H-COATED

DGR493, DGR496, DGR495, DGR497 SERIES

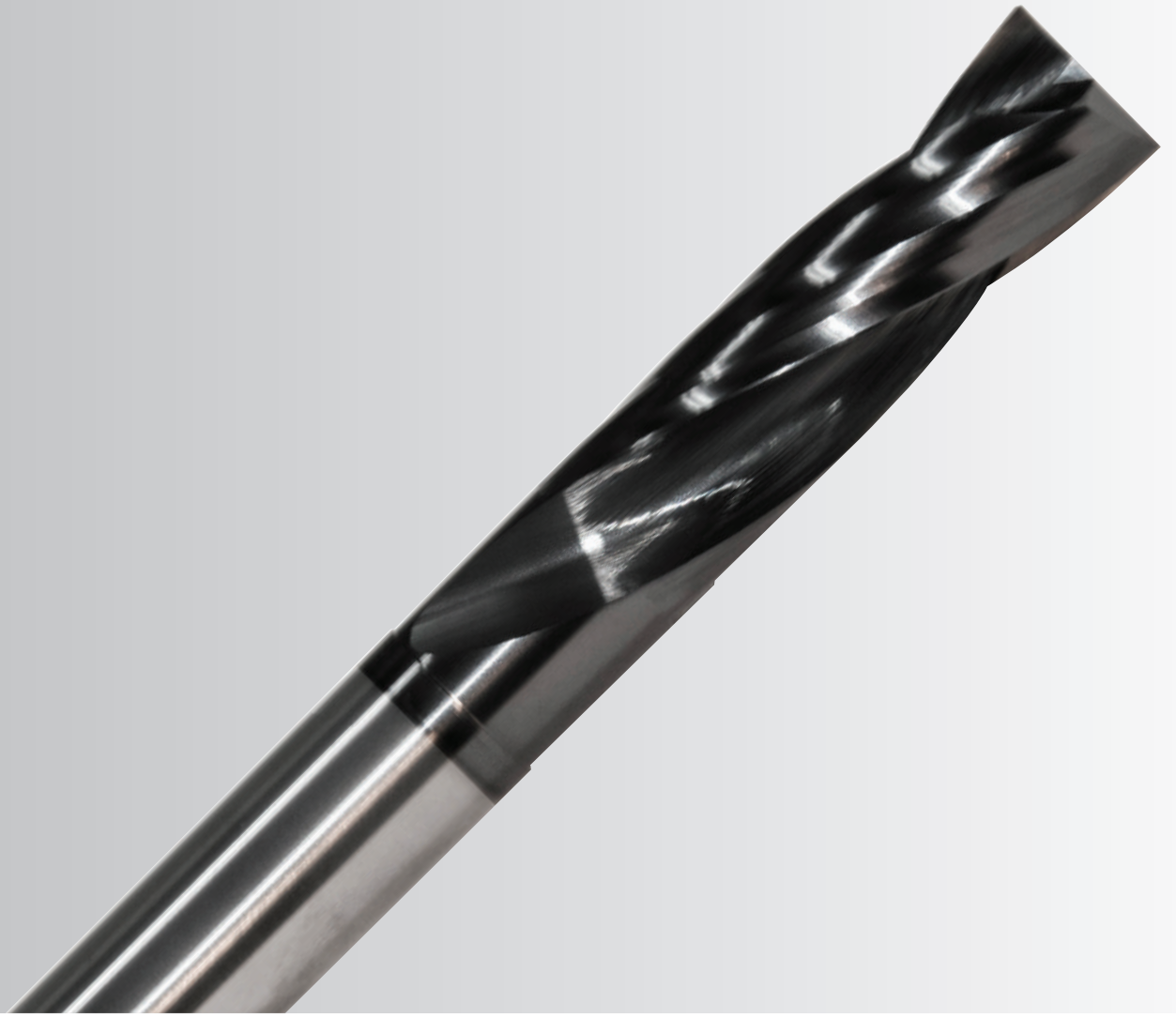
WORK MATERIAL	P						K										
	CARBON STEELS ALLOY STEELS			ALLOY STEELS			CAST IRON			DUCTILE CAST IRON							
	~ HRC20						HRC20 ~ 35										
DRILLING SPEED																	
329 ft/min																	
247 ft/min																	
329 ft/min																	
264 ft/min																	
DIAMETER																	
Metric(mm)		Decimal		RPM		IPR		RPM		IPR		RPM		IPR			
						Min		Max		Min		Max		Min		Max	
5.0	.1969	6370	.0079	.0098	4780	.0079	.0098	6370	.0091	.0118	5100	.0079	.0098				
6.0	.2362	5310	.0094	.0118	3980	.0094	.0118	5310	.0106	.0142	4250	.0094	.0118				
7.0	.2756	4550	.0110	.0138	3420	.0110	.0138	4550	.0126	.0165	3640	.0110	.0138				
8.0	.3150	3980	.0126	.0157	2990	.0126	.0157	3980	.0142	.0189	3190	.0126	.0157				
9.0	.3543	3540	.0142	.0177	2660	.0142	.0177	3540	.0161	.0213	2840	.0142	.0177				
10.0	.3937	3190	.0157	.0197	2390	.0157	.0197	3190	.0177	.0236	2550	.0157	.0197				
12.0	.4724	2660	.0189	.0236	2000	.0189	.0213	2660	.0213	.0283	2130	.0189	.0236				
14.0	.5512	2280	.0220	.0276	1710	.0220	.0248	2280	.0248	.0331	1820	.0220	.0276				
16.0	.6299	1990	.0220	.0283	1500	.0220	.0252	1990	.0252	.0315	1600	.0220	.0283				
18.0	.7087	1770	.0248	.0319	1330	.0248	.0283	1770	.0283	.0354	1420	.0248	.0319				
20.0	.7874	1600	.0276	.0346	1190	.0268	.0319	1600	.0315	.0386	1280	.0276	.0354				

RPM = rev./min.
IPR = inch/rev.



Leading Through Innovation

CARBIDE



DREAM DRILLS -FLAT BOTTOM


- WITHOUT COOLANT HOLES**
- For holes on various angled surfaces
 - 180 degree point angle enables drilling of flat, inclined and curved surfaces

SELECTION GUIDE

SOLID CARBIDE DREAM DRILLS-FIAT BOTTOM

SOLID CARBIDE DREAM DRILLS - FLAT BOTTOM (without Coolant Holes)

- For holes on various angled surfaces
- 180 degree point angle enables drilling of flat, inclined and curved surfaces

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
2xD DPP447		CARBIDE, DREAM DRILLS - FLAT BOTTOM without COOLANT HOLES	SHORT	D3.0 D20.0	106
		RECOMMENDED CUTTING CONDITIONS			

◎ : Excellent ○ : Good

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

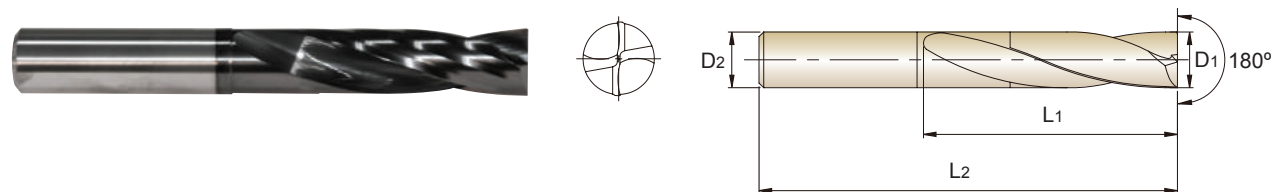
YG DREAM DRILLS -FLAT BOTTOM

DPP447 SERIES

CARBIDE, DREAM DRILLS - FLAT BOTTOM without COOLANT HOLES

SHORT

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



2 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
X-Coating	D1			D2	L1	L2	X-Coating	D1			D2	L1	L2
DPP447030	3		.1181	6	16	50	DPP447051	5.1		.2008	6	24	60
DPP447031	3.1		.1220	6	16	50	DPP447052	5.2		.2047	6	24	60
DPP447008F	3.175	1/8	.1250	6	16	50	DPP447053	5.3		.2087	6	24	60
DPP447032	3.2		.1260	6	16	50	DPP447054	5.4		.2126	6	24	60
DPP447033	3.3		.1299	6	16	50	DPP447055	5.5		.2165	6	24	60
DPP447034	3.4		.1339	6	18	50	DPP447014F	5.556	7/32	.2188	6	24	60
DPP447035	3.5		.1378	6	18	50	DPP447056	5.6		.2205	6	24	60
DPP447036	3.6		.1417	6	18	50	DPP447057	5.7		.2244	6	26	60
DPP447037	3.7		.1457	6	18	50	DPP447058	5.8		.2283	6	26	60
DPP447038	3.8		.1496	6	18	50	DPP447059	5.9		.2323	6	26	60
DPP447039	3.9		.1535	6	18	50	DPP447060	6		.2362	6	26	60
DPP447010F	3.969	5/32	.1563	6	18	50	DPP447061	6.1		.2402	8	28	70
DPP447040	4		.1575	6	18	50	DPP447062	6.2		.2441	8	28	70
DPP447041	4.1		.1614	6	20	60	DPP447063	6.3		.2480	8	28	70
DPP447042	4.2		.1654	6	20	60	DPP447016F	6.35	1/4	.2500	8	30	70
DPP447043	4.3		.1693	6	20	60	DPP447064	6.4		.2520	8	30	70
DPP447044	4.4		.1732	6	20	60	DPP447065	6.5		.2559	8	30	70
DPP447045	4.5		.1772	6	22	60	DPP447066	6.6		.2598	8	30	70
DPP447046	4.6		.1811	6	22	60	DPP447067	6.7		.2638	8	30	70
DPP447047	4.7		.1850	6	22	60	DPP447068	6.8		.2677	8	30	70
DPP447012F	4.763	3/16	.1875	6	22	60	DPP447069	6.9		.2717	8	30	70
DPP447048	4.8		.1890	6	22	60	DPP447070	7		.2756	8	30	70
DPP447049	4.9		.1929	6	22	60	DPP447071	7.1		.2795	8	34	70
DPP447050	5		.1969	6	22	60	DPP447018F	7.144	9/32	.2812	8	34	70

▶ Other shank types are available on your request.

▶ NEXT PAGE

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~								
◎	◎	◎	○		○	◎	○	○	○			

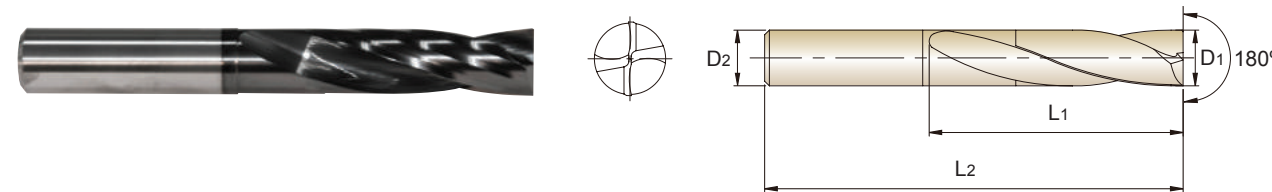
YG DREAM DRILLS -FLAT BOTTOM

DPP447 SERIES

CARBIDE, DREAM DRILLS - FLAT BOTTOM without COOLANT HOLES

SHORT

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



2 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
X-Coating	D1			D2	L1	L2	X-Coating	D1			D2	L1	L2
DPP447072	7.2		.2835	8	34	70	DPP447093	9.3		.3661	10	42	80
DPP447073	7.3		.2874	8	34	70	DPP447094	9.4		.3701	10	42	80
DPP447074	7.4		.2913	8	34	70	DPP447095	9.5		.3740	10	42	80
DPP447075	7.5		.2953	8	34	70	DPP447024F	9.525	3/8	.3750	10	42	80
DPP447076	7.6		.2992	8	34	70	DPP447096	9.6		.3780	10	42	80
DPP447077	7.7		.3031	8	34	70	DPP447097	9.7		.3819	10	45	80
DPP447078	7.8		.3071	8	34	70	DPP447098	9.8		.3858	10	45	80
DPP447079	7.9		.3110	8	34	70	DPP447099	9.9		.3898	10	45	80
DPP447020F	7.938	5/16	.3125	8	34	70	DPP447100	10		.3937	10	45	80
DPP447080	8		.3150	8	34	70	DPP447101	10.1		.3976	12	46	90
DPP447081	8.1		.3189	10	38	80	DPP447102	10.2		.4016	12	46	90
DPP447082	8.2		.3228	10	38	80	DPP447103	10.3		.4055	12	46	90
DPP447083	8.3		.3268	10	38	80	DPP447026F	10.319	13/32	.4062	12	46	90
DPP447021F	8.334	21/64	.3281	10	38	80	DPP447104	10.4		.4094	12	48	90
DPP447084	8.4		.3307	10	38	80	DPP447105	10.5		.4134	12	48	90
DPP447085	8.5		.3346	10	38	80	DPP447106	10.6		.4173	12	48	90
DPP447086	8.6		.3386	10	38	80	DPP447107	10.7		.4212	12	48	90
DPP447087	8.7		.3425	10	40	80	DPP447108	10.8		.4252	12	48	90
DPP447088	8.8		.3465	10	40	80	DPP447109	10.9		.4291	12	48	90
DPP447089	8.9		.3504	10	40	80	DPP447110	11		.4330	12	48	90
DPP447090	9		.3543	10	40	80	DPP447111	11.1		.4370	12	50	90
DPP447091	9.1		.3583	10	42	80	DPP447028F	11.113	7/16	.4375	12	50	90
DPP447023F	9.128	23/64	.3594	10	42	80	DPP447112	11.2		.4409	12	50	90
DPP447092	9.2		.3622	10	42	80	DPP447113	11.3		.4448	12	50	90

▶ Other shank types are available on your request.

▶ NEXT PAGE

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~								
◎	◎	◎	○		○	◎	○	○	○			

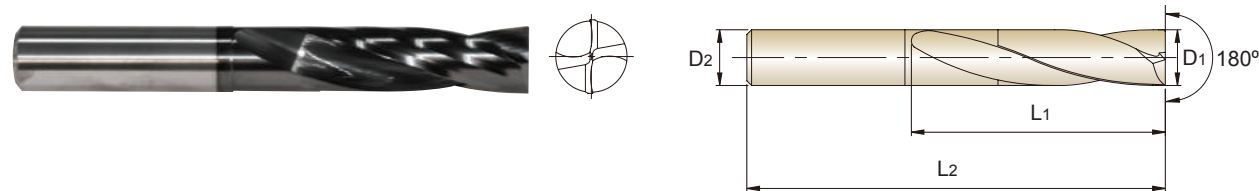
YG DREAM DRILLS -FLAT BOTTOM

DPP447 SERIES

CARBIDE, DREAM DRILLS - FLAT BOTTOM without COOLANT HOLES

SHORT

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MG 20° h6 h7 180° P.110 2 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
X-Coating	D1			D2	L1	L2	X-Coating	D1			D2	L1	L2
DPP447114	11.4		.4488	12	50	90	DPP447136	13.6		.5354	14	58	100
DPP447115	11.5		.4527	12	50	90	DPP447137	13.7		.5394	14	58	100
DPP447029F	11.509	29/64	.4531	12	50	90	DPP447138	13.8		.5433	14	58	100
DPP447116	11.6		.4566	12	50	90	DPP447139	13.9		.5472	14	58	100
DPP447117	11.7		.4606	12	52	90	DPP447140	14		.5512	14	58	100
DPP447118	11.8		.4645	12	52	90	DPP447141	14.1		.5551	16	62	105
DPP447119	11.9		.4685	12	52	90	DPP447142	14.2		.5591	16	62	105
DPP447030F	11.906	15/32	.4688	12	52	90	DPP447036F	14.288	9/16	.5625	16	62	105
DPP447120	12		.4724	12	52	90	DPP447143	14.3		.5630	16	62	105
DPP447121	12.1		.4764	14	54	100	DPP447144	14.4		.5669	16	62	105
DPP447122	12.2		.4803	14	54	100	DPP447145	14.5		.5709	16	62	105
DPP447123	12.3		.4843	14	54	100	DPP447146	14.6		.5748	16	62	105
DPP447124	12.4		.4882	14	54	100	DPP447147	14.7		.5787	16	62	105
DPP447125	12.5		.4921	14	54	100	DPP447148	14.8		.5827	16	62	105
DPP447126	12.6		.4961	14	54	100	DPP447149	14.9		.5866	16	62	105
DPP447127	12.7		.5000	14	56	100	DPP447150	15		.5905	16	62	105
DPP447128	12.8		.5039	14	56	100	DPP447151	15.1		.5945	16	64	115
DPP447129	12.9		.5079	14	56	100	DPP447152	15.2		.5984	16	64	115
DPP447130	13		.5118	14	56	100	DPP447153	15.3		.6024	16	64	115
DPP447131	13.1		.5157	14	58	100	DPP447154	15.4		.6063	16	64	115
DPP447132	13.2		.5197	14	58	100	DPP447155	15.5		.6102	16	64	115
DPP447133	13.3		.5236	14	58	100	DPP447156	15.6		.6142	16	64	115
DPP447134	13.4		.5276	14	58	100	DPP447157	15.7		.6181	16	64	115
DPP447135	13.5		.5314	14	58	100	DPP447158	15.8		.6220	16	64	115

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

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

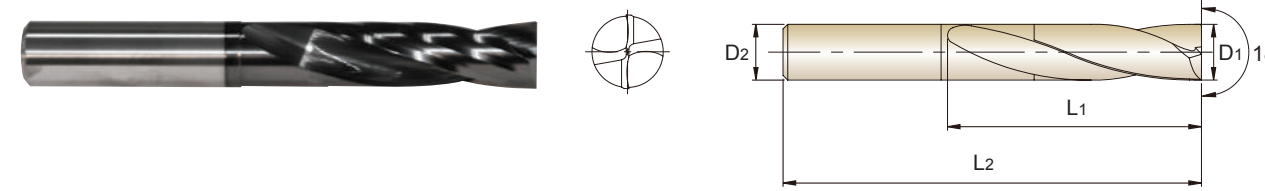
YG DREAM DRILLS -FLAT BOTTOM

DPP447 SERIES

CARBIDE, DREAM DRILLS - FLAT BOTTOM without COOLANT HOLES

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MG 20° h6 h7 180° P.110 2 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
X-Coating	D1			D2	L1	L2	X-Coating	D1			D2	L1	L2
DPP447040F	15.875	5/8	.6250	16	64	115	DPP447180	18		.7087	18	70	125
DPP447159	15.9		.6260	16	64	115	DPP447185	18.5		.7283	20	75	135
DPP447160	16		.6299	16	64	115	DPP447190	19		.7480	20	75	135
DPP447165	16.5		.6496	18	70	125	DPP447048F	19.05	3/4	.7500	20	75	135
DPP447170	17		.6693	18	70	125	DPP447195	19.5		.7677	20	75	145
DPP447044F	17.463	11/16	.6875	18	70	125	DPP447200	20		.7874	20	75	145
DPP447175	17.5		.6890	18	70	125							

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

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

Y/G DREAM DRILLS -FLAT BOTTOM

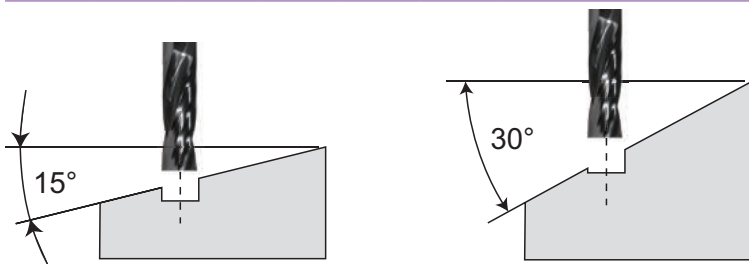
RECOMMENDED CUTTING CONDITIONS

CARBIDE, DREAM DRILL - FLAT BOTTOM without COOLANT HOLES, X-COATED

DPP447 SERIES

WORK MATERIAL	P								M		K		N			
	STRUCTURAL STEELS		CARBON STEELS ALLOY STEELS		PREHARDENED STEELS		HARDEND STEELS		STAINLESS STEELS		CAST IRON		ALUMINUM			
STRENGTH	<HB225								HRC30 ~ 40		HRC40 ~ 50		~ 200 HB			
DRILLING SPEED	80 m/min		70 m/min		38 m/min		25 m/min		30 m/min		68 m/min		165 m/min			
DIAMETER	RPM		FEED		RPM		FEED		RPM		FEED		RPM		FEED	
	Metric(mm)	Decimal														
3.0	.1181	8350	0.05	7250	0.05	3890	0.05	2790	0.03	3180	0.02	7250	0.04	17850	0.06	
4.0	.1575	6250	0.07	5410	0.07	2940	0.06	2100	0.04	2380	0.03	5410	0.06	13130	0.08	
5.0	.1969	5040	0.08	4360	0.08	2310	0.08	1680	0.05	1910	0.04	4360	0.07	10500	0.10	
6.0	.2362	4200	0.10	3630	0.10	1890	0.09	1370	0.06	1590	0.05	3630	0.09	8930	0.12	
8.0	.3150	3150	0.14	2730	0.13	1470	0.12	1050	0.08	1190	0.06	2730	0.12	6670	0.16	
10.0	.3937	2520	0.17	2160	0.17	1160	0.15	840	0.10	955	0.08	2160	0.15	5360	0.20	
12.0	.4724	2100	0.21	1790	0.21	1000	0.18	690	0.12	796	0.10	1790	0.18	4470	0.24	
16.0	.6299	1580	0.28	1370	0.28	740	0.24	530	0.16	597	0.12	1370	0.24	3360	0.32	
20.0	.7874	1260	0.35	1110	0.34	580	0.31	420	0.20	477	0.15	1110	0.30	2680	0.40	

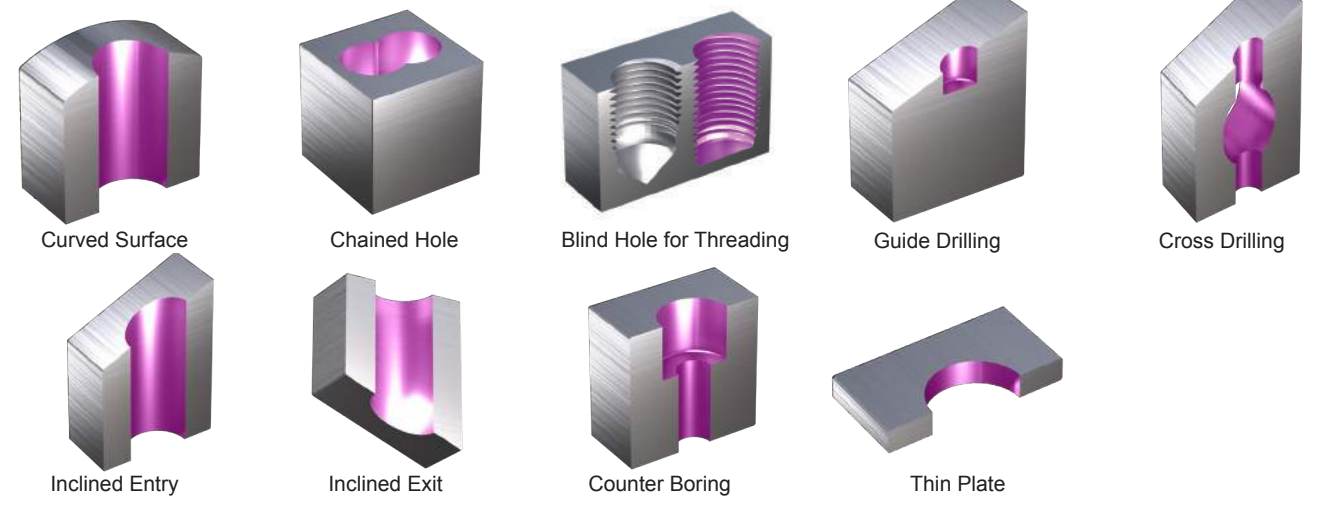
RPM = rev./min.
FEED = mm/rev.



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

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

VARIETY OF DRILLING



CARBIDE



Being the best through innovation













DREAM DRILLS -INOX

WITH COOLANT HOLES
- Stainless Steels, Nickel Alloys and Titanium up to HRC35

SELECTION GUIDE

SOLID CARBIDE DREAM DRILLS-GENERAL

SOLID CARBIDE DREAM DRILLS-GENERAL (with & without Coolant Holes)
General Purpose HRc30 to HRc50 Alloys

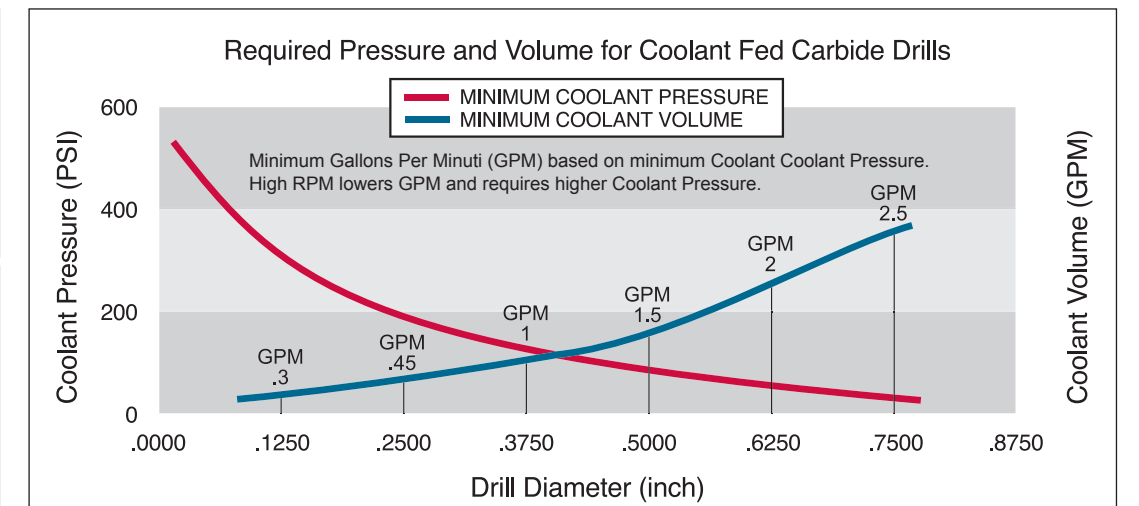
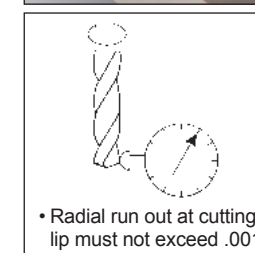
ITEM	MODEL	DESCRIPTION		SIZE		PAGE
				MIN	MAX	
INCH						
3xD DH416 DH711		CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES	SHORT	D1/8	D5/8	58
5xD DH418 DH712		CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES	LONG	D13/64	D1/2	60
3xD DH414		CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES	STUB	D1/8	D5/8	61
5xD DH722		CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES	LONG	D13/64	D1/2	62
METRIC						
3xD DH406		CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES	SHORT	D3.0	D20.0	63
5xD DH408		CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES	LONG	D1.0	D20.0	67
8xD DH421		CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES	EXTRA LONG	D3.0	D20.0	72
3xD DH404		CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES	STUB	D3.0	D20.0	76
3xD DH423		CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES	SHORT	D3.0	D20.0	78
5xD DH424		CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES	LONG	D1.0	D20.0	83
RECOMMENDED CUTTING CONDITIONS						88

◎ : Excellent ○ : Good

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

◎	◎	◎			○	○						
◎	◎	◎			○	○						
◎	◎	◎			○	○						
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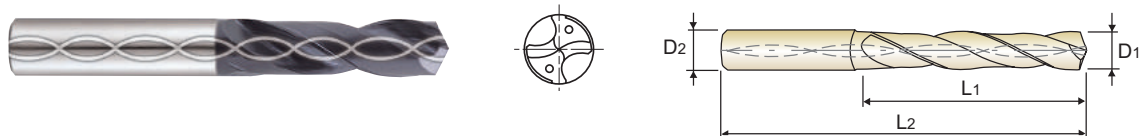




DH416 SERIES
DH711 SERIES

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES SHORT

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation
- ▶ Tolerance : Dia. Tolerance $\varnothing D1$: See page 57
Shank Tolerance $\varnothing D2$: -.0001 -.0005



MG h6 140° 20 bar P.88 3 × D

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

▶ Other shank types are available on your request. ▶ NEXT PAGE

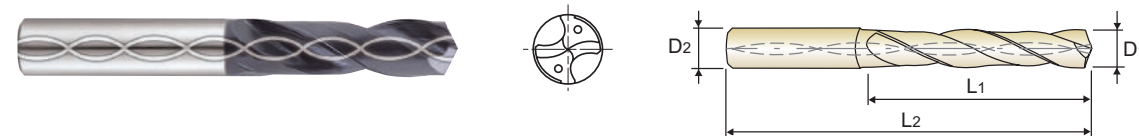
P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~								
◎	◎	◎			○	○						



DH416 SERIES
DH711 SERIES

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES SHORT

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation
- ▶ Tolerance : Dia. Tolerance $\varnothing D1$: See page 57
Shank Tolerance $\varnothing D2$: -.0001 -.0005



MG h6 140° 20 bar P.88 3 × D

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

▶ Other shank types are available on your request.

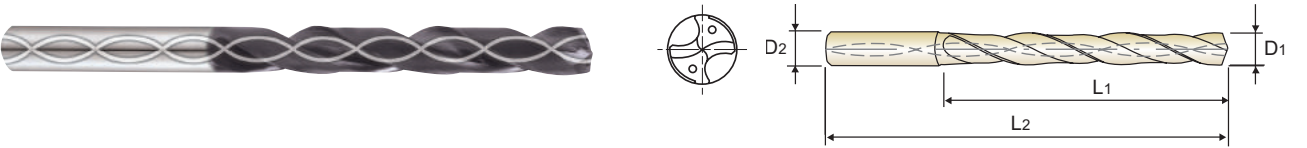
P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~								
◎	◎	◎			○	○						



DH418 SERIES
DH712 SERIES

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation
- ▶ Tolerance : Dia. Tolerance ØD1 : See page 57
Shank Tolerance ØD2: -.0001 -.0005



MG h6 140° 20 bar P.88 5 × D

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal					Fractional	Decimal			
TiAlN	D1		D2	L1	L2	TiAlN	D1		D2	L1	L2
0131CTF	13/64	.2031	15/64	1-3/4	3-15/16	DH712022	11/32	.3438	3/8	2-27/32	5
DH712013	13/64	.2031	1/4	1-3/4	3-15/16	DH712023	23/64	.3594	3/8	3	5-23/64
0141CTF	7/32	.2188	15/64	1-57/64	3-15/16	0231CTF	23/64	.3594	25/64	3	5-23/64
DH712014	7/32	.2188	1/4	1-57/64	3-15/16	DH712221	U	.3680	3/8	3	5-23/64
0151CTF	15/64	.2344	15/64	1-57/64	3-15/16	2211CTF	U	.3680	25/64	3	5-23/64
DH712015	15/64	.2344	1/4	1-57/64	3-15/16	DH712024	3/8	.3750	3/8	3-5/32	5-23/64
DH712016	1/4	.2500	1/4	2-3/64	4-19/64	0241CTF	3/8	.3750	25/64	3-5/32	5-23/64
0161CTF	1/4	.2500	17/64	2-3/64	4-19/64	0251CTF	25/64	.3906	25/64	3-5/32	5-23/64
2061CTF	F	.2570	17/64	2-13/64	4-19/64	DH712025	25/64	.3906	7/16	3-5/32	5-23/64
DH712206	F	.2570	5/16	2-13/64	4-19/64	0261CTF	13/32	.4062	27/64	3-5/16	5-7/8
0171CTF	17/64	.2656	17/64	2-13/64	4-19/64	DH712026	13/32	.4062	7/16	3-5/16	5-7/8
DH712017	17/64	.2656	5/16	2-13/64	4-19/64	0271CTF	27/64	.4219	27/64	3-15/32	5-7/8
2091CTF	I	.2720	.2720	2-13/64	4-19/64	DH712027	27/64	.4219	7/16	3-15/32	5-7/8
DH712209	I	.2720	5/16	2-13/64	4-19/64	DH712028	7/16	.4375	7/16	3-5/8	6-7/32
0181CTF	9/32	.2812	5/16	2-23/64	4-41/64	0281CTF	7/16	.4375	15/32	3-5/8	6-7/32
0191CTF	19/64	.2969	5/16	2-33/64	4-41/64	0291CTF	29/64	.4531	15/32	3-25/32	6-7/32
0201CTF	5/16	.3125	5/16	2-33/64	4-41/64	DH712029	29/64	.4531	1/2	3-25/32	6-7/32
0211CTF	21/64	.3281	11/32	2-43/64	5	0301CTF	15/32	.4688	15/32	3-25/32	6-7/32
DH712021	21/64	.3281	3/8	2-43/64	5	DH712030	15/32	.4688	1/2	3-25/32	6-7/32
2171CTF	Q	.3320	11/32	2-43/64	5	0311CTF	31/64	.4844	1/2	3-15/16	6-37/64
DH712217	Q	.3320	3/8	2-43/64	5	0321CTF	1/2	.5000	1/2	4-3/32	6-37/64
0221CTF	11/32	.3438	11/32	2-27/32	5						

▶ Other shank types are available on your request.

© : Excellent ○ : Good

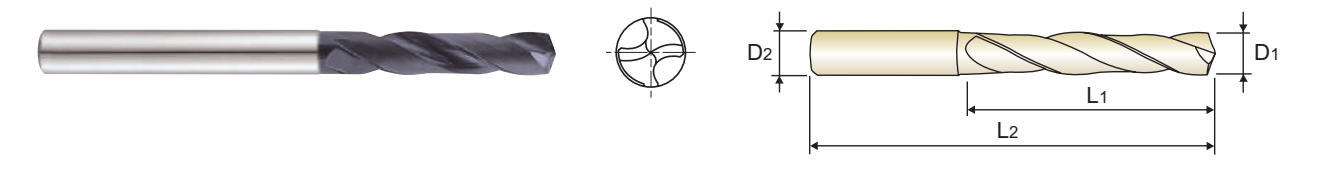
P			H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55 HRC55~							
◎	◎	◎		○	○					



DH414 SERIES

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES STUB

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation
- ▶ Tolerance : Dia. Tolerance ØD1 : See page 57
Shank Tolerance ØD2: -.0001 -.0005



MG h6 140° P.88 D1=D2 3 × D

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

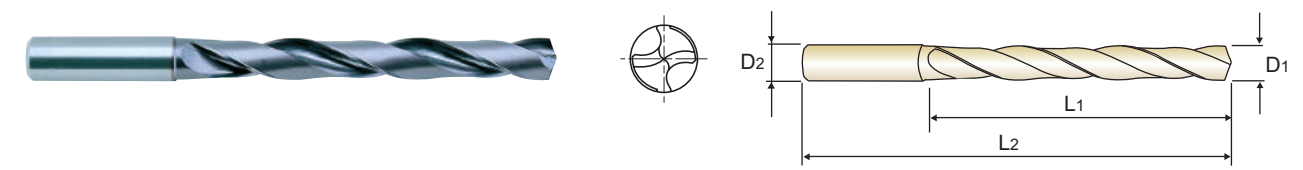
▶ Other shank types are available on your request.

© : Excellent ○ : Good

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

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation
- ▶ Tolerance : Dia. Tolerance ØD1 : See page 57
Shank Tolerance ØD2: -.0001 -.0005



MG h6 140° P.88 5 × D

Unit : inch

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

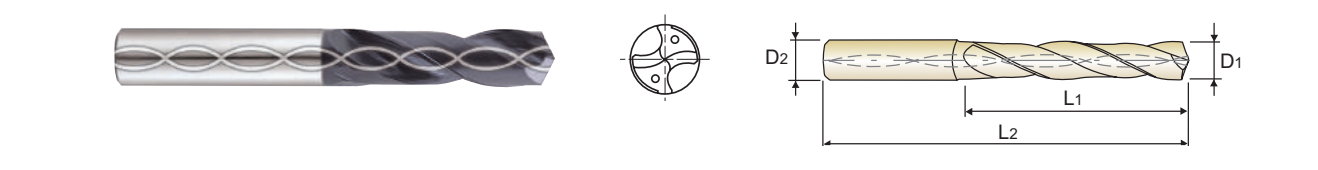
▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

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

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES SHORT

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537 MG h6 m7 140° 20 bar P.89 3 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH406030	3.0		.1181	6	20	62	DH406051	5.1		.2008	6	28	66
DH406031	3.1		.1220	6	20	62	DH406013F	5.159	13/64	.2031	6	28	66
DH406008F	3.175	1/8	.1250	6	20	62	DH406052	5.2		.2047	6	28	66
DH406032	3.2		.1260	6	20	62	DH406053	5.3		.2087	6	28	66
DH406033	3.3		.1299	6	20	62	DH406054	5.4		.2126	6	28	66
DH406034	3.4		.1339	6	20	62	DH406055	5.5		.2165	6	28	66
DH406035	3.5		.1378	6	20	62	DH406014F	5.556	7/32	.2188	6	28	66
DH406009F	3.572	9/64	.1406	6	20	62	DH406056	5.6		.2205	6	28	66
DH406036	3.6		.1417	6	20	62	DH406057	5.7		.2244	6	28	66
DH406037	3.7		.1457	6	20	62	DH406058	5.8		.2283	6	28	66
DH406038	3.8		.1496	6	24	66	DH406059	5.9		.2323	6	28	66
DH406039	3.9		.1535	6	24	66	DH406015F	5.953	15/64	.2344	6	28	66
DH406010F	3.969	5/32	.1563	6	24	66	DH406060	6.0		.2362	6	28	66
DH406040	4.0		.1575	6	24	66	DH406061	6.1		.2402	8	34	79
DH406041	4.1		.1614	6	24	66	DH406062	6.2		.2441	8	34	79
DH406042	4.2		.1654	6	24	66	DH406063	6.3		.2480	8	34	79
DH406043	4.3		.1693	6	24	66	DH406016F	6.350	1/4	.2500	8	34	79
DH406011F	4.366	11/64	.1719	6	24	66	DH406064	6.4		.2520	8	34	79
DH406044	4.4		.1732	6	24	66	DH406065	6.5		.2559	8	34	79
DH406045	4.5		.1772	6	24	66	DH406006L	6.528	F	.2570	8	34	79
DH406046	4.6		.1811	6	24	66	DH406066	6.6		.2598	8	34	79
DH406047	4.7		.1850	6	24	66	DH406067	6.7		.2638	8	34	79
DH406012F	4.763	3/16	.1875	6	24	66	DH406017F	6.747	17/64	.2656	8	34	79
DH406048	4.8		.1890	6	28	66	DH406068	6.8		.2677	8	34	79
DH406049	4.9		.1929	6	28	66	DH406069	6.9		.2717	8	34	79
DH406050	5.0		.1969	6	28	66	DH406009L	6.909	I	.2720	8	34	79

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

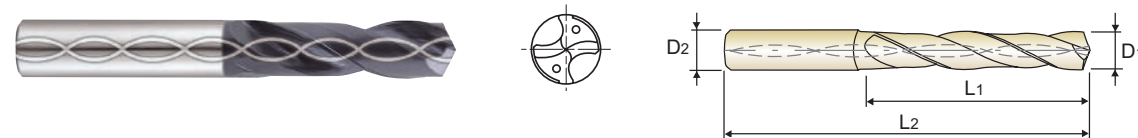
P			H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55 HRc55~							
◎	◎	◎		○	○					



DH406 SERIES

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES *SHORT*

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537
MG
h6
m7
140°
20 bar
P.89
3 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH406070	7.0		.2756	8	34	79	DH406090	9.0		.3543	10	47	89
DH406071	7.1		.2795	8	41	79	DH406091	9.1		.3583	10	47	89
DH406018F	7.144	9/32	.2812	8	41	79	DH406023F	9.128	23/64	.3594	10	47	89
DH406072	7.2		.2835	8	41	79	DH406092	9.2		.3622	10	47	89
DH406073	7.3		.2874	8	41	79	DH406093	9.3		.3661	10	47	89
DH406074	7.4		.2913	8	41	79	DH406021L	9.347	U	.3680	10	47	89
DH406075	7.5		.2953	8	41	79	DH406094	9.4		.3701	10	47	89
DH406019F	7.541	19/64	.2969	8	41	79	DH406095	9.5		.3740	10	47	89
DH406076	7.6		.2992	8	41	79	DH406024F	9.525	3/8	.3750	10	47	89
DH406077	7.7		.3031	8	41	79	DH406096	9.6		.3780	10	47	89
DH406078	7.8		.3071	8	41	79	DH406097	9.7		.3819	10	47	89
DH406079	7.9		.3110	8	41	79	DH406098	9.8		.3858	10	47	89
DH406020F	7.938	5/16	.3125	8	41	79	DH406099	9.9		.3898	10	47	89
DH406080	8.0		.3150	8	41	79	DH406025F	9.922	25/64	.3906	10	47	89
DH406081	8.1		.3189	10	47	89	DH406100	10.0		.3937	10	47	89
DH406082	8.2		.3228	10	47	89	DH406101	10.1		.3976	12	55	102
DH406083	8.3		.3268	10	47	89	DH406102	10.2		.4016	12	55	102
DH406021F	8.334	21/64	.3281	10	47	89	DH406103	10.3		.4055	12	55	102
DH406084	8.4		.3307	10	47	89	DH406026F	10.319	13/32	.4062	12	55	102
DH406017L	8.433	Q	.3320	10	47	89	DH406104	10.4		.4094	12	55	102
DH406085	8.5		.3346	10	47	89	DH406105	10.5		.4134	12	55	102
DH406086	8.6		.3386	10	47	89	DH406106	10.6		.4173	12	55	102
DH406087	8.7		.3425	10	47	89	DH406107	10.7		.4212	12	55	102
DH406022F	8.731	11/32	.3438	10	47	89	DH406027F	10.716	27/64	.4219	12	55	102
DH406088	8.8		.3465	10	47	89	DH406108	10.8		.4252	12	55	102
DH406089	8.9		.3504	10	47	89	DH406109	10.9		.4291	12	55	102

▶ Other shank types are available on your request. ▶ NEXT PAGE

◎ : Excellent ○ : Good

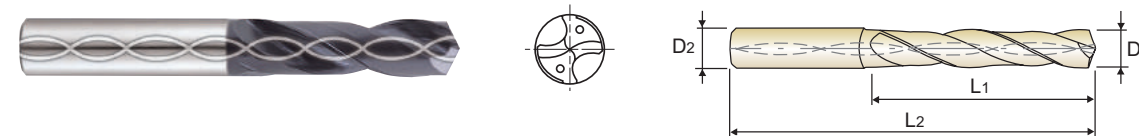
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○					



DH406 SERIES

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES *SHORT*

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537
MG
h6
m7
140°
20 bar
P.89
3 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH406110	11.0		.4330	12	55	102	DH406132	13.2		.5197	14	60	107
DH406111	11.1		.4370	12	55	102	DH406133	13.3		.5236	14	60	107
DH406028F	11.113	7/16	.4375	12	55	102	DH406134	13.4		.5276	14	60	107
DH406112	11.2		.4409	12	55	102	DH406135	13.5		.5314	14	60	107
DH406113	11.3		.4448	12	55	102	DH406136	13.6		.5354	14	60	107
DH406114	11.4		.4488	12	55	102	DH406137	13.7		.5394	14	60	107
DH406115	11.5		.4527	12	55	102	DH406138	13.8		.5433	14	60	107
DH406029F	11.509	29/64	.4531	12	55	102	DH406139	13.9		.5472	14	60	107
DH406116	11.6		.4566	12	55	102	DH406140	14.0		.5512	14	60	107
DH406117	11.7		.4606	12	55	102	DH406141	14.1		.5551	16	65	115
DH406118	11.8		.4645	12	55	102	DH406142	14.2		.5591	16	65	115
DH406119	11.9		.4685	12	55	102	DH406036F	14.288	9/16	.5625	16	65	115
DH406030F	11.906	15/32	.4688	12	55	102	DH406143	14.3		.5630	16	65	115
DH406120	12.0		.4724	12	55	102	DH406144	14.4		.5669	16	65	115
DH406121	12.1		.4764	14	60	107	DH406145	14.5		.5708	16	65	115
DH406122	12.2		.4803	14	60	107	DH406146	14.6		.5748	16	65	115
DH406123	12.3		.4843	14	60	107	DH406147	14.7		.5787	16	65	115
DH406031F	12.303	31/64	.4844	14	60	107	DH406148	14.8		.5827	16	65	115
DH406124	12.4		.4882	14	60	107	DH406149	14.9		.5866	16	65	115
DH406125	12.5		.4921	14	60	107	DH406150	15.0		.5905	16	65	115
DH406126	12.6		.4961	14	60	107	DH406151	15.1		.5945	16	65	115
DH406032F	12.7	1/2	.5000	14	60	107	DH406152	15.2		.5984	16	65	115
DH406128	12.8		.5039	14	60	107	DH406153	15.3		.6024	16	65	115
DH406129	12.9		.5079	14	60	107	DH406154	15.4		.6063	16	65	115
DH406130	13.0		.5118	14	60	107	DH406155	15.5		.6102	16	65	115
DH406131	13.1		.5157	14	60	107	DH406156	15.6		.6142	16	65	115

▶ Other shank types are available on your request. ▶ NEXT PAGE

◎ : Excellent ○ : Good

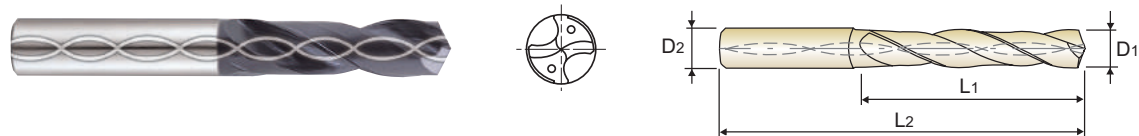
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○					



DH406 SERIES

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES SHORT

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537
MG
h6
m7
140°
20 bar
P.89
3 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH406157	15.7		.6181	16	65	115	DH406179	17.9		.7047	18	73	123
DH406158	15.8		.6220	16	65	115	DH406180	18.0		.7087	18	73	123
DH406040F	15.875	5/8	.6250	16	65	115	DH406181	18.1		.7126	20	79	131
DH406159	15.9		.6260	16	65	115	DH406182	18.2		.7165	20	79	131
DH406160	16.0		.6299	16	65	115	DH406183	18.3		.7205	20	79	131
DH406161	16.1		.6339	18	73	123	DH406184	18.4		.7244	20	79	131
DH406162	16.2		.6378	18	73	123	DH406185	18.5		.7283	20	79	131
DH406163	16.3		.6417	18	73	123	DH406186	18.6		.7323	20	79	131
DH406164	16.4		.6457	18	73	123	DH406187	18.7		.7362	20	79	131
DH406165	16.5		.6495	18	73	123	DH406188	18.8		.7402	20	79	131
DH406166	16.6		.6535	18	73	123	DH406189	18.9		.7441	20	79	131
DH406167	16.7		.6575	18	73	123	DH406190	19.0		.7480	20	79	131
DH406168	16.8		.6614	18	73	123	DH406048F	19.050	3/4	.7500	20	79	131
DH406169	16.9		.6654	18	73	123	DH406191	19.1		.7520	20	79	131
DH406170	17.0		.6692	18	73	123	DH406192	19.2		.7559	20	79	131
DH406171	17.1		.6732	18	73	123	DH406193	19.3		.7598	20	79	131
DH406172	17.2		.6772	18	73	123	DH406194	19.4		.7638	20	79	131
DH406173	17.3		.6811	18	73	123	DH406195	19.5		.7676	20	79	131
DH406174	17.4		.6850	18	73	123	DH406196	19.6		.7717	20	79	131
DH406044F	17.463	11/16	.6875	18	73	123	DH406197	19.7		.7756	20	79	131
DH406175	17.5		.6889	18	73	123	DH406198	19.8		.7795	20	79	131
DH406176	17.6		.6929	18	73	123	DH406199	19.9		.7835	20	79	131
DH406177	17.7		.6968	18	73	123	DH406200	20.0		.7874	20	79	131
DH406178	17.8		.7008	18	73	123							

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

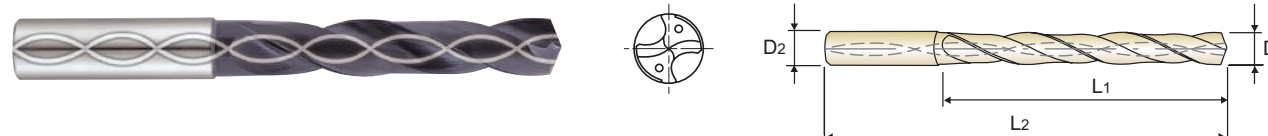
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○					



DH408 SERIES

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537
MG
h6
m7
140°
20 bar
P.89
5 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH408010	1.0		.0394	3	8	55	DH408008F	3.175	1/8	.1250	6	28	66
DH408011	1.1		.0433	3	12	55	DH408032	3.2		.1260	6	28	66
DH408012	1.2		.0472	3	12	55	DH408033	3.3		.1299	6	28	66
DH408013	1.3		.0512	3	12	55	DH408034	3.4		.1339	6	28	66
DH408014	1.4		.0551	3	12	55	DH408035	3.5		.1378	6	28	66
DH408015	1.5		.0591	3	16	55	DH408009F	3.572	9/64	.1406	6	28	66
DH408004F	1.588	1/16	.0625	3	16	55	DH408036	3.6		.1417	6	28	66
DH408016	1.6		.0630	3	16	55	DH408037	3.7		.1457	6	28	66
DH408017	1.7		.0669	3	16	55	DH408038	3.8		.1496	6	36	74
DH408018	1.8		.0709	3	16	55	DH408039	3.9		.1535	6	36	74
DH408019	1.9		.0748	3	16	55	DH408010F	3.969	5/32	.1563	6	36	74
DH408005F	1.984	5/64	.0781	3	16	55	DH408040	4.0		.1575	6	36	74
DH408020	2.0		.0787	4	21	57	DH408041	4.1		.1614	6	36	74
DH408021	2.1		.0827	4	21	57	DH408042	4.2		.1654	6	36	74
DH408022	2.2		.0866	4	21	57	DH408043	4.3		.1693	6	36	74
DH408023	2.3		.0906	4	21	57	DH408011F	4.366	11/64	.1719	6	36	74
DH408006F	2.381	3/32	.0938	4	21	57	DH408044	4.4		.1732	6	36	74
DH408024	2.4		.0945	4	21	57	DH408045	4.5		.1772	6	36	74
DH408025	2.5		.0984	4	21	57	DH408046	4.6		.1811	6	36	74
DH408026	2.6		.1024	4	21	57	DH408047	4.7		.1850	6	36	74
DH408027	2.7		.1063	4	21	57	DH408012F	4.763	3/16	.1875	6	36	74
DH408007F	2.778	7/64	.1094	4	21	57	DH408048	4.8		.1890	6	44	82
DH408028	2.8		.1102	4	21	57	DH408049	4.9		.1929	6	44	82
DH408029	2.9		.1142	4	21	57	DH408050	5.0		.1969	6	44	82
DH408030	3.0		.1181	6	28	66	DH408051	5.1		.2008	6	44	82
DH408031	3.1		.1220	6	28	66	DH408013F	5.159	13/64	.2031	6	44	82

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

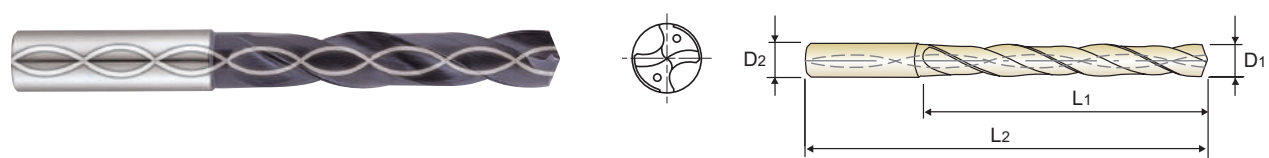
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○					



DH408 SERIES

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
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- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537 MG h6 m7 140° 20 bar P.89 5 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH408052	5.2		.2047	6	44	82	DH408018F	7.144	9/32	.2812	8	53	91
DH408053	5.3		.2087	6	44	82	DH408072	7.2		.2835	8	53	91
DH408054	5.4		.2126	6	44	82	DH408073	7.3		.2874	8	53	91
DH408055	5.5		.2165	6	44	82	DH408074	7.4		.2913	8	53	91
DH408014F	5.556	7/32	.2188	6	44	82	DH408075	7.5		.2953	8	53	91
DH408056	5.6		.2205	6	44	82	DH408019F	7.541	19/64	.2969	8	53	91
DH408057	5.7		.2244	6	44	82	DH408076	7.6		.2992	8	53	91
DH408058	5.8		.2283	6	44	82	DH408077	7.7		.3031	8	53	91
DH408059	5.9		.2323	6	44	82	DH408078	7.8		.3071	8	53	91
DH408015F	5.953	15/64	.2344	6	44	82	DH408079	7.9		.3110	8	53	91
DH408060	6.0		.2362	6	44	82	DH408020F	7.938	5/16	.3125	8	53	91
DH408061	6.1		.2402	8	53	91	DH408080	8.0		.3150	8	53	91
DH408062	6.2		.2441	8	53	91	DH408081	8.1		.3189	10	61	103
DH408063	6.3		.2480	8	53	91	DH408082	8.2		.3228	10	61	103
DH408016F	6.350	1/4	.2500	8	53	91	DH408083	8.3		.3268	10	61	103
DH408064	6.4		.2520	8	53	91	DH408021F	8.334	21/64	.3281	10	61	103
DH408065	6.5		.2559	8	53	91	DH408084	8.4		.3307	10	61	103
DH408006L	6.528	F	.2570	8	53	91	DH408017L	8.433	Q	.3320	10	61	103
DH408066	6.6		.2598	8	53	91	DH408085	8.5		.3346	10	61	103
DH408067	6.7		.2638	8	53	91	DH408086	8.6		.3386	10	61	103
DH408017F	6.747	17/64	.2656	8	53	91	DH408087	8.7		.3425	10	61	103
DH408068	6.8		.2677	8	53	91	DH408022F	8.731	11/32	.3438	10	61	103
DH408069	6.9		.2717	8	53	91	DH408088	8.8		.3465	10	61	103
DH408009L	6.909	I	.2720	8	53	91	DH408089	8.9		.3504	10	61	103
DH408070	7.0		.2756	8	53	91	DH408090	9.0		.3543	10	61	103
DH408071	7.1		.2795	8	53	91	DH408091	9.1		.3583	10	61	103

▶ Other shank types are available on your request. ▶ NEXT PAGE

◎ : Excellent ○ : Good

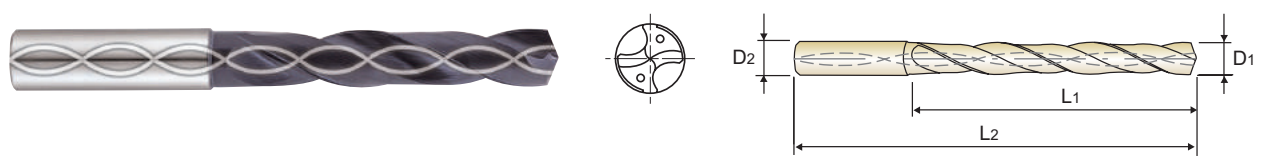
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○					



DH408 SERIES

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537 MG h6 m7 140° 20 bar P.89 5 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH408023F	9.128	23/64	.3594	10	61	103	DH408028F	11.113	7/16	.4375	12	71	118
DH408092	9.2		.3622	10	61	103	DH408112	11.2		.4409	12	71	118
DH408093	9.3		.3661	10	61	103	DH408113	11.3		.4448	12	71	118
DH408021L	9.347	U	.3680	10	61	103	DH408114	11.4		.4488	12	71	118
DH408094	9.4		.3701	10	61	103	DH408115	11.5		.4527	12	71	118
DH408095	9.5		.3740	10	61	103	DH408029F	11.509	29/64	.4531	12	71	118
DH408024F	9.525	3/8	.3750	10	61	103	DH408116	11.6		.4566	12	71	118
DH408096	9.6		.3780	10	61	103	DH408117	11.7		.4606	12	71	118
DH408097	9.7		.3819	10	61	103	DH408118	11.8		.4645	12	71	118
DH408098	9.8		.3858	10	61	103	DH408119	11.9		.4685	12	71	118
DH408099	9.9		.3898	10	61	103	DH408030F	11.906	15/32	.4688	12	71	118
DH408025F	9.922	25/64	.3906	10	61	103	DH408120	12.0		.4724	12	71	118
DH408100	10.0		.3937	10	61	103	DH408121	12.1		.4764	14	77	124
DH408101	10.1		.3976	12	71	118	DH408122	12.2		.4803	14	77	124
DH408102	10.2		.4016	12	71	118	DH408123	12.3		.4843	14	77	124
DH408103	10.3		.4055	12	71	118	DH408031F	12.303	31/64	.4844	14	77	124
DH408026F	10.319	13/32	.4062	12	71	118	DH408124	12.4		.4882	14	77	124
DH408104	10.4		.4094	12	71	118	DH408125	12.5		.4921	14	77	124
DH408105	10.5		.4134	12	71	118	DH408126	12.6		.4961	14	77	124
DH408106	10.6		.4173	12	71	118	DH408032F	12.7	1/2	.5000	14	77	124
DH408107	10.7		.4212	12	71	118	DH408128	12.8		.5039	14	77	124
DH408027F	10.716	27/64	.4219	12	71	118	DH408129	12.9		.5079	14	77	124
DH408108	10.8		.4252	12	71	118	DH408130	13.0		.5118	14	77	124
DH408109	10.9		.4291	12	71	118	DH408131	13.1		.5157	14	77	124
DH408110	11.0		.4330	12	71	118	DH408132	13.2		.5197	14	77	124
DH408111	11.1		.4370	12	71	118	DH408133	13.3		.5236	14	77	124

▶ Other shank types are available on your request. ▶ NEXT PAGE

◎ : Excellent ○ : Good

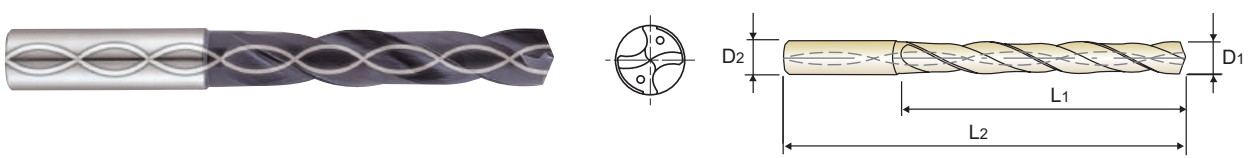
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○					



DH408 SERIES

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537
MG
h6
m7
140°
20 bar
P.89
5 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH408134	13.4		.5276	14	77	124	DH408040F	15.875	5/8	.6250	16	83	133
DH408135	13.5		.5314	14	77	124	DH408159	15.9		.6260	16	83	133
DH408136	13.6		.5354	14	77	124	DH408160	16.0		.6299	16	83	133
DH408137	13.7		.5394	14	77	124	DH408161	16.1		.6339	18	93	143
DH408138	13.8		.5433	14	77	124	DH408162	16.2		.6378	18	93	143
DH408139	13.9		.5472	14	77	124	DH408163	16.3		.6417	18	93	143
DH408140	14.0		.5512	14	77	124	DH408164	16.4		.6457	18	93	143
DH408141	14.1		.5551	16	83	133	DH408165	16.5		.6495	18	93	143
DH408142	14.2		.5591	16	83	133	DH408166	16.6		.6535	18	93	143
DH408036F	14.288	9/16	.5625	16	83	133	DH408167	16.7		.6575	18	93	143
DH408143	14.3		.5630	16	83	133	DH408168	16.8		.6614	18	93	143
DH408144	14.4		.5669	16	83	133	DH408169	16.9		.6654	18	93	143
DH408145	14.5		.5708	16	83	133	DH408170	17.0		.6692	18	93	143
DH408146	14.6		.5748	16	83	133	DH408171	17.1		.6732	18	93	143
DH408147	14.7		.5787	16	83	133	DH408172	17.2		.6772	18	93	143
DH408148	14.8		.5827	16	83	133	DH408173	17.3		.6811	18	93	143
DH408149	14.9		.5866	16	83	133	DH408174	17.4		.6850	18	93	143
DH408150	15.0		.5905	16	83	133	DH408175	17.5		.6889	18	93	143
DH408151	15.1		.5945	16	83	133	DH408176	17.6		.6929	18	93	143
DH408152	15.2		.5984	16	83	133	DH408177	17.7		.6968	18	93	143
DH408153	15.3		.6024	16	83	133	DH408178	17.8		.7008	18	93	143
DH408154	15.4		.6063	16	83	133	DH408179	17.9		.7047	18	93	143
DH408155	15.5		.6102	16	83	133	DH408180	18.0		.7087	18	93	143
DH408156	15.6		.6142	16	83	133	DH408181	18.1		.7126	20	101	153
DH408157	15.7		.6181	16	83	133	DH408182	18.2		.7165	20	101	151
DH408158	15.8		.6220	16	83	133	DH408183	18.3		.7205	20	101	151

▶ Other shank types are available on your request. ▶ NEXT PAGE

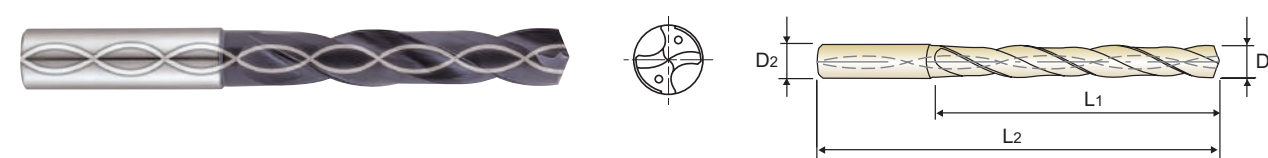
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Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎		○	○						



DH408 SERIES

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537
MG
h6
m7
140°
20 bar
P.89
5 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH408184	18.4		.7244	20	101	153	DH408192	19.2		.7559	20	101	151
DH408185	18.5		.7283	20	101	153	DH408193	19.3		.7598	20	101	151
DH408186	18.6		.7323	20	101	151	DH408194	19.4		.7638	20	101	151
DH408187	18.7		.7362	20	101	153	DH408195	19.5		.7676	20	101	153
DH408188	18.8		.7402	20	101	153	DH408196	19.6		.7717	20	101	151
DH408189	18.9		.7441	20	101	153	DH408197	19.7		.7756	20	101	151
DH408190	19.0		.7480	20	101	153	DH408198	19.8		.7795	20	101	153
DH408048F	19.050	3/4	.7500	20	101	153	DH408199	19.9		.7835	20	101	151
DH408191	19.1		.7520	20	101	151	DH408200	20.0		.7874	20	101	153

▶ Other shank types are available on your request.

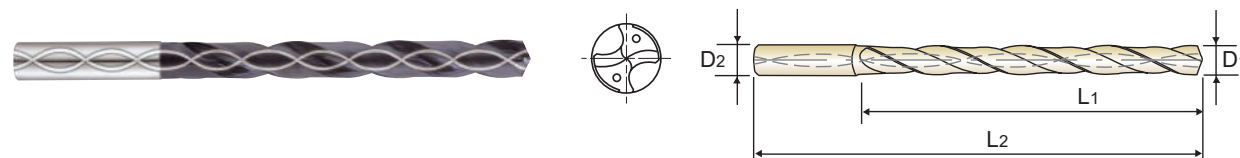
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎		○	○						

YG DREAM DRILLS -GENERAL

DH421 SERIES

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES EXTRA LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537 MG h6 m7 140° 20 bar P.89 8 x D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH421030	3.0		.1181	6	34	72	DH421049	4.9		.1929	6	57	95
DH421031	3.1		.1220	6	34	72	DH421050	5.0		.1969	6	57	95
DH421008F	3.175	1/8	.1250	6	34	72	DH421051	5.1		.2008	6	57	95
DH421032	3.2		.1260	6	34	72	DH421013F	5.159	13/64	.2031	6	57	95
DH421033	3.3		.1299	6	34	72	DH421052	5.2		.2047	6	57	95
DH421034	3.4		.1339	6	34	72	DH421053	5.3		.2087	6	57	95
DH421229G	3.450	#29	.1360	6	34	72	DH421054	5.4		.2126	6	57	95
DH421035	3.5		.1378	6	34	72	DH421055	5.5		.2165	6	57	95
DH421009F	3.572	9/64	.1406	6	34	72	DH421014F	5.556	7/32	.2188	6	57	95
DH421036	3.6		.1417	6	34	72	DH421056	5.6		.2205	6	57	95
DH421037	3.7		.1457	6	34	72	DH421057	5.7		.2244	6	57	95
DH421038	3.8		.1496	6	43	81	DH421058	5.8		.2283	6	57	95
DH421039	3.9		.1535	6	43	81	DH421059	5.9		.2323	6	57	95
DH421010F	3.969	5/32	.1563	6	43	81	DH421015F	5.953	15/64	.2344	6	57	95
DH421040	4.0		.1575	6	43	81	DH421060	6.0		.2362	6	57	95
DH421221G	4.040	#21	.1590	6	43	81	DH421061	6.1		.2402	8	76	114
DH421041	4.1		.1614	6	43	81	DH421062	6.2		.2441	8	76	114
DH421042	4.2		.1654	6	43	81	DH421063	6.3		.2480	8	76	114
DH421043	4.3		.1693	6	43	81	DH421016F	6.350	1/4	.2500	8	76	114
DH421011F	4.366	11/64	.1719	6	43	81	DH421064	6.4		.2520	8	76	114
DH421044	4.4		.1732	6	43	81	DH421065	6.5		.2559	8	76	114
DH421045	4.5		.1772	6	43	81	DH421106L	6.528	F	.2570	8	76	114
DH421046	4.6		.1811	6	43	81	DH421066	6.6		.2598	8	76	114
DH421047	4.7		.1850	6	43	81	DH421067	6.7		.2638	8	76	114
DH421012F	4.763	3/16	.1875	6	57	95	DH421017F	6.747	17/64	.2656	8	76	114
DH421048	4.8		.1890	6	57	95	DH421068	6.8		.2677	8	76	114

▶ Other shank types are available on your request.

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◎ : Excellent ○ : Good

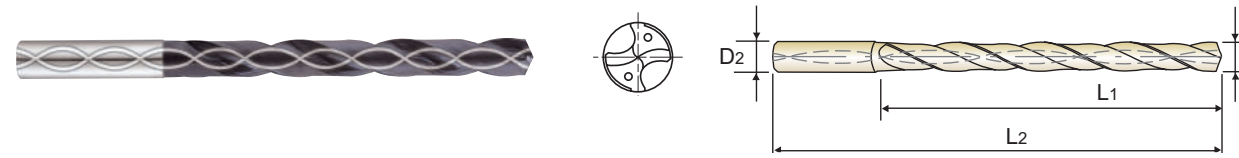
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~							
◎	◎	◎			○	○					

YG DREAM DRILLS -GENERAL

DH421 SERIES

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES EXTRA LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537 MG h6 m7 140° 20 bar P.89 8 x D

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

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

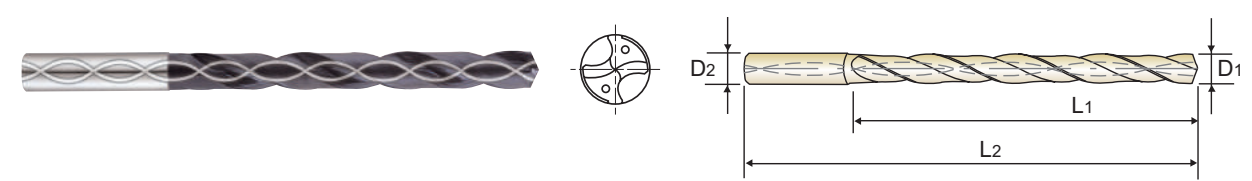
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Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~							
◎	◎	◎			○	○					



DH421 SERIES

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES EXTRA LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537 MG h6 m7 140° 20 bar P.89 8 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH421108	10.8		.4252	12	114	162	DH421130	13.0		.5118	14	133	178
DH421109	10.9		.4291	12	114	162	DH421033F	13.097	33/64	.5156	14	133	178
DH421110	11.0		.4330	12	114	162	DH421131	13.1		.5157	14	133	178
DH421111	11.1		.4370	12	114	162	DH421132	13.2		.5197	14	133	178
DH421028F	11.113	7/16	.4375	12	114	162	DH421133	13.3		.5236	14	133	178
DH421112	11.2		.4409	12	114	162	DH421134	13.4		.5276	14	133	178
DH421113	11.3		.4448	12	114	162	DH421135	13.5		.5314	14	133	178
DH421114	11.4		.4488	12	114	162	DH421136	13.6		.5354	14	133	178
DH421115	11.5		.4527	12	114	162	DH421137	13.7		.5394	14	133	178
DH421029F	11.509	29/64	.4531	12	114	162	DH421138	13.8		.5433	14	133	178
DH421116	11.6		.4566	12	114	162	DH421139	13.9		.5472	14	133	178
DH421117	11.7		.4606	12	114	162	DH421140	14.0		.5512	14	133	178
DH421118	11.8		.4645	12	114	162	DH421141	14.1		.5551	16	152	203
DH421119	11.9		.4685	12	114	162	DH421142	14.2		.5591	16	152	203
DH421030F	11.906	15/32	.4688	12	114	162	DH421036F	14.288	9/16	.5625	16	152	203
DH421120	12.0		.4724	12	114	162	DH421143	14.3		.5630	16	152	203
DH421121	12.1		.4764	14	133	178	DH421144	14.4		.5669	16	152	203
DH421122	12.2		.4803	14	133	178	DH421145	14.5		.5709	16	152	203
DH421123	12.3		.4843	14	133	178	DH421146	14.6		.5748	16	152	203
DH421031F	12.303	31/64	.4844	14	133	178	DH421147	14.7		.5787	16	152	203
DH421124	12.4		.4882	14	133	178	DH421148	14.8		.5827	16	152	203
DH421125	12.5		.4921	14	133	178	DH421149	14.9		.5866	16	152	203
DH421126	12.6		.4961	14	133	178	DH421150	15.0		.5905	16	152	203
DH421032F	12.7	1/2	.5000	14	133	178	DH421151	15.1		.5945	16	152	203
DH421128	12.8		.5039	14	133	178	DH421152	15.2		.5984	16	152	203
DH421129	12.9		.5079	14	133	178	DH421153	15.3		.6024	16	152	203

▶ Other shank types are available on your request. ▶ NEXT PAGE

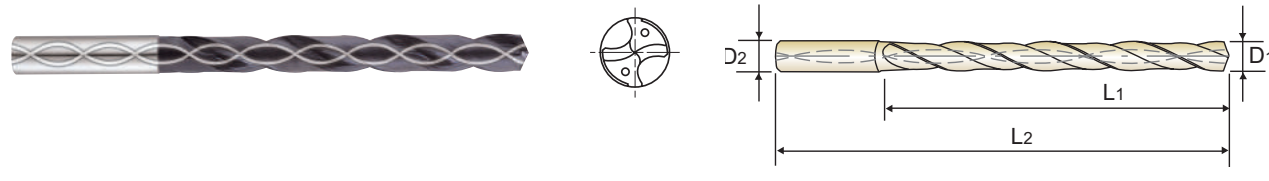
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○					



DH421 SERIES

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES EXTRA LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537 MG h6 m7 140° 20 bar P.89 8 × D

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

▶ Other shank types are available on your request.

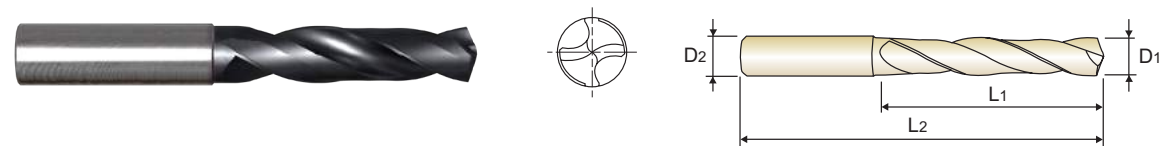
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○					



DH404 SERIES

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES STUB

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



D1=D2
3 × D

Unit : mm

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

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

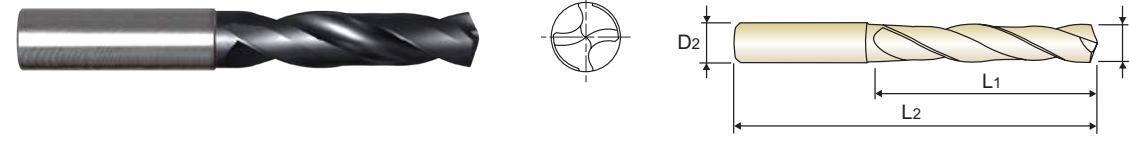
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55								HRC55~
◎	◎	◎		○	○						



DH404 SERIES

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES STUB

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



D1=D2
3 × D

Unit : mm

EDP No.	Drill Diameter		Flute Length	Overall Length	EDP No.	Drill Diameter		Flute Length	Overall Length
	Metric	Inch				Metric	Inch		
TiAlN	D1 = D2		L1	L2	TiAlN	D1 = D2		L1	L2
DH404082	8.2	.3228	37	79	DH404105	10.5	.4134	43	89
DH404083	8.3	.3268	37	79	DH404110	11.0	.4331	47	95
DH404084	8.4	.3307	37	79	DH404115	11.5	.4528	47	95
DH404085	8.5	.3346	37	79	DH404120	12.0	.4724	51	102
DH404086	8.6	.3386	40	84	DH404130	13.0	.5118	51	102
DH404087	8.7	.3425	40	84	DH404135	13.5	.5314	54	107
DH404088	8.8	.3465	40	84	DH404140	14.0	.5512	54	107
DH404089	8.9	.3504	40	84	DH404145	14.5	.5708	56	111
DH404090	9.0	.3543	40	84	DH404150	15.0	.5905	56	111
DH404091	9.1	.3583	40	84	DH404155	15.5	.6102	58	115
DH404092	9.2	.3622	40	84	DH404160	16.0	.6299	58	115
DH404093	9.3	.3661	40	84	DH404165	16.5	.6495	60	119
DH404094	9.4	.3701	40	84	DH404170	17.0	.6692	60	119
DH404095	9.5	.3740	40	84	DH404175	17.5	.6889	62	123
DH404096	9.6	.3780	43	89	DH404180	18.0	.7087	62	123
DH404097	9.7	.3819	43	89	DH404185	18.5	.7283	64	127
DH404098	9.8	.3858	43	89	DH404190	19.0	.7480	64	127
DH404099	9.9	.3898	43	89	DH404195	19.5	.7676	66	131
DH404100	10.0	.3937	43	89	DH404200	20.0	.7874	66	131
DH404102	10.2	.4016	43	89					

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

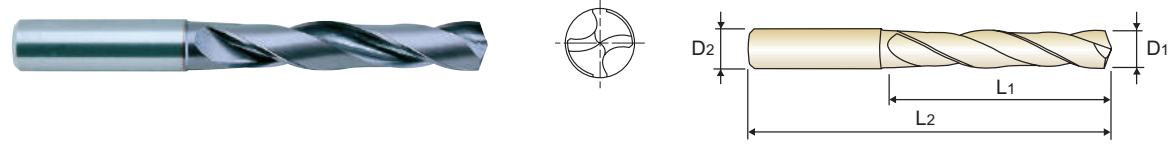
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55								HRC55~
◎	◎	◎		○	○						



DH423 SERIES

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES SHORT

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537
MG
h6
m7
140°
P.90
3 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH423030	3.0		.1181	6	20	62	DH423049	4.9		.1929	6	28	66
DH423031	3.1		.1220	6	20	62	DH423050	5.0		.1969	6	28	66
DH423008F	3.175	1/8	.1250	6	20	62	DH423051	5.1		.2008	6	28	66
DH423032	3.2		.1260	6	20	62	DH423013F	5.159	13/64	.2031	6	28	66
DH423033	3.3		.1299	6	20	62	DH423052	5.2		.2047	6	28	66
DH423034	3.4		.1339	6	20	62	DH423053	5.3		.2087	6	28	66
DH423035	3.5		.1378	6	20	62	DH423054	5.4		.2126	6	28	66
DH423009F	3.572	9/64	.1406	6	20	62	DH423055	5.5		.2165	6	28	66
DH423036	3.6		.1417	6	20	62	DH423014F	5.556	7/32	.2188	6	28	66
DH423037	3.7		.1457	6	20	62	DH423056	5.6		.2205	6	28	66
DH423038	3.8		.1496	6	24	66	DH423057	5.7		.2244	6	28	66
DH423039	3.9		.1535	6	24	66	DH423058	5.8		.2283	6	28	66
DH423010F	3.969	5/32	.1563	6	24	66	DH423059	5.9		.2323	6	28	66
DH423040	4.0		.1575	6	24	66	DH423015F	5.953	15/64	.2344	6	28	66
DH423041	4.1		.1614	6	24	66	DH423060	6.0		.2362	6	28	66
DH423042	4.2		.1654	6	24	66	DH423061	6.1		.2402	8	34	79
DH423043	4.3		.1693	6	24	66	DH423062	6.2		.2441	8	34	79
DH423011F	4.366	11/64	.1719	6	24	66	DH423063	6.3		.2480	8	34	79
DH423044	4.4		.1732	6	24	66	DH423016F	6.350	1/4	.2500	8	34	79
DH423045	4.5		.1772	6	24	66	DH423064	6.4		.2520	8	34	79
DH423046	4.6		.1811	6	24	66	DH423065	6.5		.2559	8	34	79
DH423047	4.7		.1850	6	24	66	DH423006L	6.528	F	.2570	8	34	79
DH423012F	4.763	3/16	.1875	6	24	66	DH423066	6.6		.2598	8	34	79
DH423048	4.8		.1890	6	28	66	DH423067	6.7		.2638	8	34	79

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

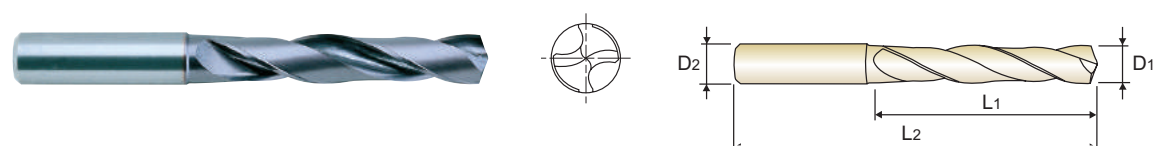
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○					



DH423 SERIES

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES SHORT

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537
MG
h6
m7
140°
P.90
3 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH423017F	6.747	17/64	.2656	8	34	79	DH423085	8.5		.3346	10	47	89
DH423068	6.8		.2677	8	34	79	DH423086	8.6		.3386	10	47	89
DH423069	6.9		.2717	8	34	79	DH423087	8.7		.3425	10	47	89
DH423009L	6.909	I	.2720	8	34	79	DH423022F	8.731	11/32	.3438	10	47	89
DH423070	7.0		.2756	8	34	79	DH423088	8.8		.3465	10	47	89
DH423071	7.1		.2795	8	41	79	DH423089	8.9		.3504	10	47	89
DH423018F	7.144	9/32	.2812	8	41	79	DH423090	9.0		.3543	10	47	89
DH423072	7.2		.2835	8	41	79	DH423091	9.1		.3583	10	47	89
DH423073	7.3		.2874	8	41	79	DH423023F	9.128	23/64	.3594	10	47	89
DH423074	7.4		.2913	8	41	79	DH423092	9.2		.3622	10	47	89
DH423075	7.5		.2953	8	41	79	DH423093	9.3		.3661	10	47	89
DH423019F	7.541	19/64	.2969	8	41	79	DH423021L	9.347	U	.3680	10	47	89
DH423076	7.6		.2992	8	41	79	DH423094	9.4		.3701	10	47	89
DH423077	7.7		.3031	8	41	79	DH423095	9.5		.3740	10	47	89
DH423078	7.8		.3071	8	41	79	DH423024F	9.525	3/8	.3750	10	47	89
DH423079	7.9		.3110	8	41	79	DH423096	9.6		.3780	10	47	89
DH423020F	7.938	5/16	.3125	8	41	79	DH423097	9.7		.3819	10	47	89
DH423080	8.0		.3150	8	41	79	DH423098	9.8		.3858	10	47	89
DH423081	8.1		.3189	10	47	89	DH423099	9.9		.3898	10	47	89
DH423082	8.2		.3228	10	47	89	DH423025F	9.922	25/64	.3906	10	47	89
DH423083	8.3		.3268	10	47	89	DH423100	10.0		.3937	10	47	89
DH423021F	8.334	21/64	.3281	10	47	89	DH423101	10.1		.3976	12	55	102
DH423084	8.4		.3307	10	47	89	DH423102	10.2		.4016	12	55	102
DH423017L	8.433	Q	.3320	10	47	89	DH423103	10.3		.4055	12	55	102

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

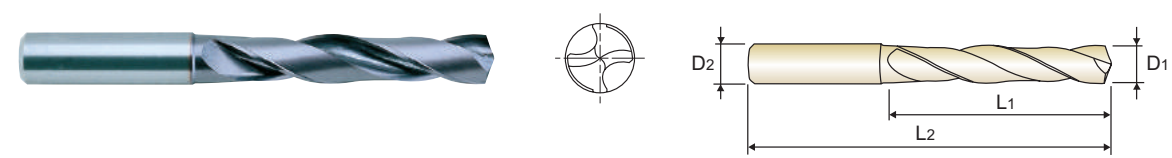
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Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎			○	○					



DH423 SERIES

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES SHORT

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



3 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH423026F	10.319	13/32	.4062	12	55	102	DH423123	12.3		.4843	14	60	107
DH423104	10.4		.4094	12	55	102	DH423031F	12.303	31/64	.4844	14	60	107
DH423105	10.5		.4134	12	55	102	DH423124	12.4		.4882	14	60	107
DH423106	10.6		.4173	12	55	102	DH423125	12.5		.4921	14	60	107
DH423107	10.7		.4213	12	55	102	DH423126	12.6		.4961	14	60	107
DH423027F	10.716	27/64	.4219	12	55	102	DH423032F	12.7	1/2	.5000	14	60	107
DH423108	10.8		.4252	12	55	102	DH423128	12.8		.5039	14	60	107
DH423109	10.9		.4291	12	55	102	DH423129	12.9		.5079	14	60	107
DH423110	11.0		.4331	12	55	102	DH423130	13.0		.5118	14	60	107
DH423111	11.1		.4370	12	55	102	DH423131	13.1		.5157	14	60	107
DH423028F	11.113	7/16	.4375	12	55	102	DH423132	13.2		.5197	14	60	107
DH423112	11.2		.4409	12	55	102	DH423133	13.3		.5236	14	60	107
DH423113	11.3		.4449	12	55	102	DH423134	13.4		.5276	14	60	107
DH423114	11.4		.4488	12	55	102	DH423135	13.5		.5315	14	60	107
DH423115	11.5		.4528	12	55	102	DH423136	13.6		.5354	14	60	107
DH423029F	11.509	29/64	.4531	12	55	102	DH423137	13.7		.5394	14	60	107
DH423116	11.6		.4567	12	55	102	DH423138	13.8		.5433	14	60	107
DH423117	11.7		.4606	12	55	102	DH423139	13.9		.5472	14	60	107
DH423118	11.8		.4646	12	55	102	DH423140	14.0		.5512	14	60	107
DH423119	11.9		.4685	12	55	102	DH423141	14.1		.5551	16	65	115
DH423030F	11.906	15/32	.4688	12	55	102	DH423142	14.2		.5591	16	65	115
DH423120	12.0		.4724	12	55	102	DH423036F	14.288	9/16	.5625	16	65	115
DH423121	12.1		.4764	14	60	107	DH423143	14.3		.5630	16	65	115
DH423122	12.2		.4803	14	60	107	DH423144	14.4		.5669	16	65	115

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

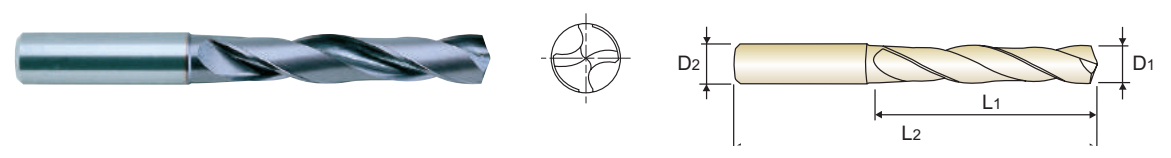
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	◎			○	○					



DH423 SERIES

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES SHORT

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



3 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH423145	14.5		.5708	16	65	115	DH423168	16.8		.6614	18	73	123
DH423146	14.6		.5748	16	65	115	DH423169	16.9		.6654	18	73	123
DH423147	14.7		.5787	16	65	115	DH423170	17.0		.6692	18	73	123
DH423148	14.8		.5827	16	65	115	DH423171	17.1		.6732	18	73	123
DH423149	14.9		.5866	16	65	115	DH423172	17.2		.6772	18	73	123
DH423150	15.0		.5905	16	65	115	DH423173	17.3		.6811	18	73	123
DH423151	15.1		.5945	16	65	115	DH423174	17.4		.6850	18	73	123
DH423152	15.2		.5984	16	65	115	DH423044F	17.463	11/16	.6875	18	73	123
DH423153	15.3		.6024	16	65	115	DH423175	17.5		.6889	18	73	123
DH423154	15.4		.6063	16	65	115	DH423176	17.6		.6929	18	73	123
DH423155	15.5		.6102	16	65	115	DH423177	17.7		.6968	18	73	123
DH423156	15.6		.6142	16	65	115	DH423178	17.8		.7008	18	73	123
DH423157	15.7		.6181	16	65	115	DH423179	17.9		.7047	18	73	123
DH423158	15.8		.6220	16	65	115	DH423180	18.0		.7087	18	73	123
DH423040F	15.875	5/8	.6250	16	65	115	DH423181	18.1		.7126	20	79	131
DH423159	15.9		.6260	16	65	115	DH423182	18.2		.7165	20	79	131
DH423160	16.0		.6299	16	65	115	DH423183	18.3		.7205	20	79	131
DH423161	16.1		.6339	18	73	123	DH423184	18.4		.7244	20	79	131
DH423162	16.2		.6378	18	73	123	DH423185	18.5		.7283	20	79	131
DH423163	16.3		.6417	18	73	123	DH423186	18.6		.7323	20	79	131
DH423164	16.4		.6457	18	73	123	DH423187	18.7		.7362	20	79	131
DH423165	16.5		.6495	18	73	123	DH423188	18.8		.7402	20	79	131
DH423166	16.6		.6535	18	73	123	DH423189	18.9		.7441	20	79	131
DH423167	16.7		.6575	18	73	123	DH423190	19.0		.7480	20	79	131

▶ Other shank types are available on your request.

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◎ : Excellent ○ : Good

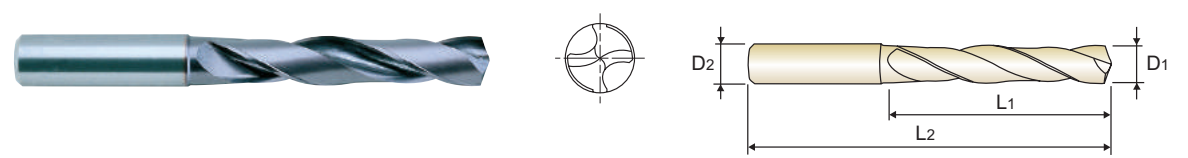
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	◎			○	○					



DH423 SERIES

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES SHORT

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537
MG
h6
m7
140°
P.90
3 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH423048F	19.050	3/4	.7500	20	79	131	DH423196	19.6		.7717	20	79	131
DH423191	19.1		.7520	20	79	131	DH423197	19.7		.7756	20	79	131
DH423192	19.2		.7559	20	79	131	DH423198	19.8		.7795	20	79	131
DH423193	19.3		.7598	20	79	131	DH423199	19.9		.7835	20	79	131
DH423194	19.4		.7638	20	79	131	DH423200	20.0		.7874	20	79	131
DH423195	19.5		.7676	20	79	131							

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

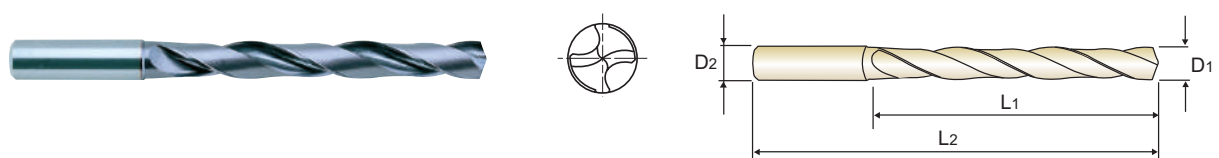
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎		○	○						



DH424 SERIES

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



DIN 6537
MG
h6
m7
140°
P.90
5 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH424010	1.0		.0394	3	8	55	DH424008F	3.175	1/8	.1250	6	28	66
DH424011	1.1		.0433	3	12	55	DH424032	3.2		.1260	6	28	66
DH424012	1.2		.0472	3	12	55	DH424033	3.3		.1299	6	28	66
DH424013	1.3		.0512	3	12	55	DH424034	3.4		.1339	6	28	66
DH424014	1.4		.0551	3	12	55	DH424035	3.5		.1378	6	28	66
DH424015	1.5		.0591	3	16	55	DH424009F	3.572	9/64	.1406	6	28	66
DH424004F	1.588	1/16	.0625	3	16	55	DH424036	3.6		.1417	6	28	66
DH424016	1.6		.0630	3	16	55	DH424037	3.7		.1457	6	28	66
DH424017	1.7		.0669	3	16	55	DH424038	3.8		.1496	6	36	74
DH424018	1.8		.0709	3	16	55	DH424039	3.9		.1535	6	36	74
DH424019	1.9		.0748	3	16	55	DH424010F	3.969	5/32	.1563	6	36	74
DH424005F	1.984	5/64	.0781	3	16	55	DH424040	4.0		.1575	6	36	74
DH424020	2.0		.0787	4	21	57	DH424041	4.1		.1614	6	36	74
DH424021	2.1		.0827	4	21	57	DH424042	4.2		.1654	6	36	74
DH424022	2.2		.0866	4	21	57	DH424043	4.3		.1693	6	36	74
DH424023	2.3		.0906	4	21	57	DH424011F	4.366	11/64	.1719	6	36	74
DH424006F	2.381	3/32	.0938	4	21	57	DH424044	4.4		.1732	6	36	74
DH424024	2.4		.0945	4	21	57	DH424045	4.5		.1772	6	36	74
DH424025	2.5		.0984	4	21	57	DH424046	4.6		.1811	6	36	74
DH424026	2.6		.1024	4	21	57	DH424047	4.7		.1850	6	36	74
DH424027	2.7		.1063	4	21	57	DH424012F	4.763	3/16	.1875	6	36	74
DH424007F	2.778	7/64	.1094	4	21	57	DH424048	4.8		.1890	6	44	82
DH424028	2.8		.1102	4	21	57	DH424049	4.9		.1929	6	44	82
DH424029	2.9		.1142	4	21	57	DH424050	5.0		.1969	6	44	82
DH424030	3.0		.1181	6	28	66	DH424051	5.1		.2008	6	44	82
DH424031	3.1		.1220	6	28	66	DH424013F	5.159	13/64	.2031	6	44	82

▶ Other shank types are available on your request.

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◎ : Excellent ○ : Good

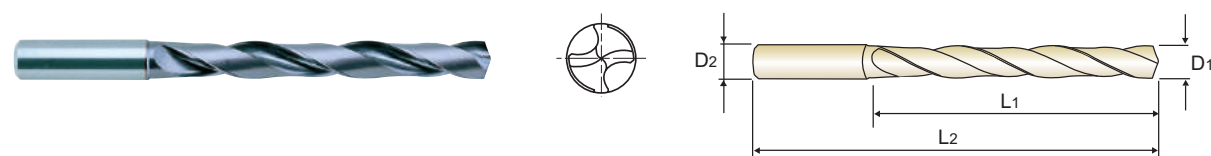
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	◎		○	○						



DH424 SERIES

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



5 x D

Unit : mm

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

▶ Other shank types are available on your request.

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◎ : Excellent ○ : Good

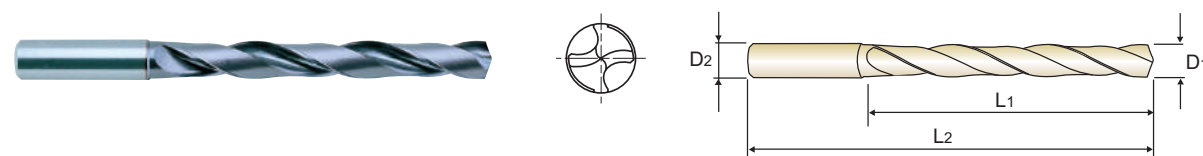
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~							
◎	◎	◎		○	○						



DH424 SERIES

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
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- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



5 x D

Unit : mm

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

▶ Other shank types are available on your request.

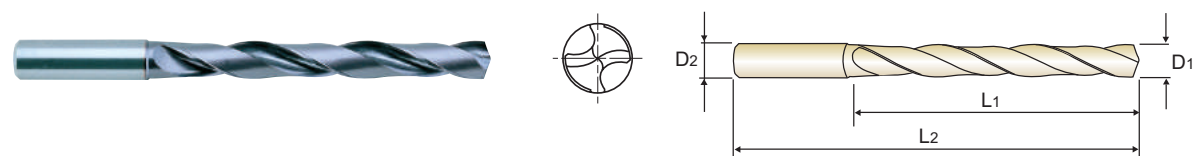
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◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~							
◎	◎	◎		○	○						

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



5 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH424134	13.4		.5276	14	77	124	DH424040F	15.875	5/8	.6250	16	83	133
DH424135	13.5		.5315	14	77	124	DH424159	15.9		.6260	16	83	133
DH424136	13.6		.5354	14	77	124	DH424160	16.0		.6299	16	83	133
DH424137	13.7		.5394	14	77	124	DH424161	16.1		.6339	18	93	143
DH424138	13.8		.5433	14	77	124	DH424162	16.2		.6378	18	93	143
DH424139	13.9		.5472	14	77	124	DH424163	16.3		.6417	18	93	143
DH424140	14.0		.5512	14	77	124	DH424164	16.4		.6457	18	93	143
DH424141	14.1		.5551	16	83	133	DH424165	16.5		.6495	18	93	143
DH424142	14.2		.5591	16	83	133	DH424166	16.6		.6535	18	93	143
DH424036F	14.288	9/16	.5625	16	83	133	DH424167	16.7		.6575	18	93	143
DH424143	14.3		.5630	16	83	133	DH424168	16.8		.6614	18	93	143
DH424144	14.4		.5669	16	83	133	DH424169	16.9		.6654	18	93	143
DH424145	14.5		.5708	16	83	133	DH424170	17.0		.6692	18	93	143
DH424146	14.6		.5748	16	83	133	DH424171	17.1		.6732	18	93	143
DH424147	14.7		.5787	16	83	133	DH424172	17.2		.6772	18	93	143
DH424148	14.8		.5827	16	83	133	DH424173	17.3		.6811	18	93	143
DH424149	14.9		.5866	16	83	133	DH424174	17.4		.6850	18	93	143
DH424150	15.0		.5905	16	83	133	DH424175	17.5		.6889	18	93	143
DH424151	15.1		.5945	16	83	133	DH424176	17.6		.6929	18	93	143
DH424152	15.2		.5984	16	83	133	DH424177	17.7		.6968	18	93	143
DH424153	15.3		.6024	16	83	133	DH424178	17.8		.7008	18	93	143
DH424154	15.4		.6063	16	83	133	DH424179	17.9		.7047	18	93	143
DH424155	15.5		.6102	16	83	133	DH424180	18.0		.7087	18	93	143
DH424156	15.6		.6142	16	83	133	DH424181	18.1		.7126	20	101	153
DH424157	15.7		.6181	16	83	133	DH424182	18.2		.7165	20	101	153
DH424158	15.8		.6220	16	83	133	DH424183	18.3		.7205	20	101	153

▶ Other shank types are available on your request.

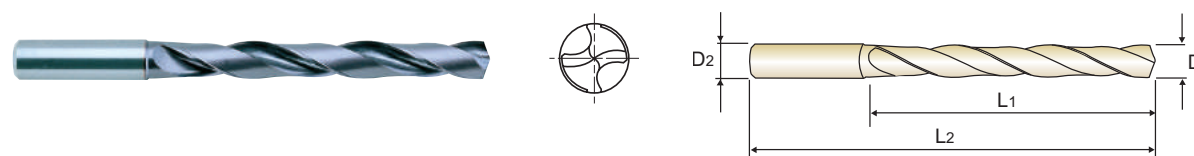
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◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~							
◎	◎	◎			○	○					

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES LONG

- ▶ Drilling for Steel, Cast Steel, Cast Iron, Malleable Cast Iron, Non-Ferrous, Abrasive Plastic
- ▶ Self centering and chip breaking by R-thinning
- ▶ Wave shape and negative land on the cutting edge for low thrust, stable torque and long tool life
- ▶ Optimized flute shape for strength of drilling and smooth chip evacuation



5 × D

Unit : mm

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

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~							
◎	◎	◎			○	○					



RECOMMENDED CUTTING CONDITIONS

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES, TiAIN-COATED

DH416, DH418, DH711, DH712 SERIES

Table with columns for WORK MATERIAL, P (CARBON STEELS, ALLOY STEELS), and K (CAST IRON). Rows include STRENGTH, DRILLING SPEED(SFM), and DIAMETER (Fractional, Metric(mm)) with RPM and IPR values.

Recommend to reduce the feed rate as following
DH416/DH711(3xD) : Feed 100%
DH418/DH712(5xD) : Feed 85%
RPM = rev./min.
IPR = inch/rev.

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES, TiAIN-COATED

DH414, DH722 SERIES

Table with columns for WORK MATERIAL, P (CARBON STEELS, ALLOY STEELS), and K (CAST IRON). Rows include STRENGTH, DRILLING SPEED(SFM), and DIAMETER (Fractional, Metric(mm)) with RPM and IPR values.

Recommend to reduce the feed rate as following
DH414(3xD) : Feed 100%
DH722(5xD) : Feed 85%
RPM = rev./min.
IPR = inch/rev.



RECOMMENDED CUTTING CONDITIONS

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES, TiAIN-COATED

DH406, DH408, DH421 SERIES

Table with columns for WORK MATERIAL, P (NON-ALLOY STEELS, ALLOY STEELS), and K (SOFT GREY CAST IRON, HARD GREY CAST IRON). Rows include STRENGTH, DRILLING SPEED, and DIAMETER (Metric(mm), Decimal) with RPM, FEED, and IPR values.

Recommend to reduce the feed rate as following
DH406(3xD) : Feed 100%, DH408(5xD) : Feed 85%
DH421(8xD) : Feed 70%
RPM = rev./min.
FEED = mm/rev.
IPR = inch/rev.



RECOMMENDED CUTTING CONDITIONS

CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES, TiAlN-COATED

DH404, DH423, DH424 SERIES

WORK MATERIAL		P						K											
		NON-ALLOY STEELS			ALLOY STEELS			SOFT GREY CAST IRON			HARD GREY CAST IRON								
STRENGTH		< HRc 20						> HRc 20											
DRILLING SPEED		130 ~ 400 ft/min						115 ~ 340 ft/min											
DIAMETER		RPM			FEED			IPR			RPM			FEED			IPR		
Metric(mm)	Decimal	RPM	FEED	IPR	RPM	FEED	IPR	RPM	FEED	IPR	RPM	FEED	IPR	RPM	FEED	IPR			
1.0	.0394	13000	0.04	.002	11250	0.04	.002	21300	0.04	.002	14200	0.04	.002						
2.0	.0787	13000	0.06	.002	11250	0.06	.002	21300	0.06	.002	14200	0.06	.002						
3.0	.1181	13000	0.13	.005	11000	0.13	.005	21000	0.13	.005	14000	0.13	.005						
4.0	.1575	9500	0.14	.006	8400	0.14	.006	16000	0.14	.006	10500	0.14	.006						
5.0	.1969	7600	0.15	.006	6700	0.15	.006	13000	0.15	.006	8300	0.15	.006						
6.0	.2362	6400	0.17	.007	5600	0.17	.007	11000	0.17	.007	6900	0.17	.007						
7.0	.2756	5500	0.19	.007	4800	0.19	.007	9100	0.19	.007	5900	0.19	.007						
8.0	.3150	4800	0.21	.008	4200	0.21	.008	8000	0.21	.008	5200	0.21	.008						
9.0	.3543	4200	0.23	.009	3700	0.23	.009	7100	0.23	.009	4600	0.23	.009						
10.0	.3937	3800	0.25	.010	3350	0.25	.010	6400	0.25	.010	4150	0.25	.010						
12.0	.4724	3200	0.27	.011	2800	0.27	.011	5300	0.27	.011	3450	0.27	.011						
14.0	.5512	2750	0.29	.011	2400	0.29	.011	4550	0.29	.011	3000	0.29	.011						
16.0	.6299	2400	0.31	.012	2100	0.31	.012	4000	0.31	.012	2600	0.31	.012						
18.0	.7087	2100	0.33	.013	1850	0.33	.013	3550	0.33	.013	2300	0.33	.013						
20.0	.7874	1900	0.35	.014	1650	0.35	.014	3200	0.35	.014	2100	0.35	.014						

► Recommend to reduce the feed rate as following
 DH404(3xD), DH423(3xD) : Feed 100%
 DH424(5xD) : Feed 85%

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

CARBIDE



Being the best through innovation



DREAM DRILLS - HIGH FEED

WITH COOLANT HOLES
 - for Carbon Steels, Alloy Steels (up to HRc35) and Cast Iron

SELECTION GUIDE

SOLID CARBIDE DREAM DRILLS-HIGH FEED

SOLID CARBIDE DREAM DRILLS - HIGH FEED (with Coolant Holes)
- for Carbon Steels, Alloy Steels (up to HRC35) and Cast Iron

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
3xD DGR493 DGR496		CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES	SHORT	.1969 .7874	94
5xD DGR495 DGR497		CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES	LONG	.1969 .7874	98
RECOMMENDED CUTTING CONDITIONS					102

◎ : Excellent ○ : Good

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

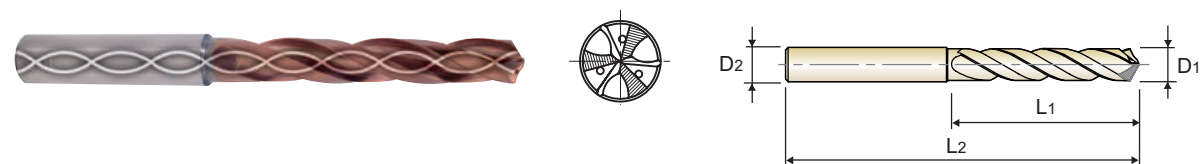


DGR493 SERIES

DGR496 SERIES

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES SHORT

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



DIN 6537 MG h6 m7 140° 20 bar P.102 3 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2	H-coating	D1			D2	L1	L2
DGR493050	5.00		.1969	6	28	66	DGR496017	6.75	17/64	.2656	5/16	34	79
DGR493051	5.10		.2008	6	28	66	DGR493068	6.80		.2677	8	34	79
DGR496013	5.16	13/64	.2031	1/4	28	66	DGR493069	6.90		.2717	8	34	79
DGR493052	5.20		.2047	6	28	66	DGR496209	6.91	I	.2720	5/16	34	79
DGR493053	5.30		.2087	6	28	66	DGR493070	7.00		.2756	8	34	79
DGR493054	5.40		.2126	6	28	66	DGR493071	7.10		.2795	8	41	79
DGR496103	5.41	#3	.2130	1/4	28	66	DGR496018	7.14	9/32	.2813	5/16	41	79
DGR493055	5.50		.2165	6	28	66	DGR493072	7.20		.2835	8	41	79
DGR496014	5.56	7/32	.2188	1/4	28	66	DGR493073	7.30		.2874	8	41	79
DGR493056	5.60		.2205	6	28	66	DGR493074	7.40		.2913	8	41	79
DGR496102	5.61	#2	.2210	1/4	28	66	DGR493075	7.50		.2953	8	41	79
DGR493057	5.70		.2244	6	28	66	DGR496019	7.54	19/64	.2969	5/16	41	79
DGR496101	5.79	#1	.2280	1/4	28	66	DGR493076	7.60		.2992	8	41	79
DGR493058	5.80		.2283	6	28	66	DGR493077	7.70		.3031	8	41	79
DGR493059	5.90		.2323	6	28	66	DGR493078	7.80		.3071	8	41	79
DGR496015	5.95	15/64	.2344	1/4	28	66	DGR493079	7.90		.3110	8	41	79
DGR493060	6.00		.2362	6	28	66	DGR496020	7.94	5/16	.3125	5/16	41	79
DGR493061	6.10		.2402	8	34	79	DGR493080	8.00		.3150	8	41	79
DGR493062	6.20		.2441	8	34	79	DGR493081	8.10		.3189	10	47	89
DGR493063	6.30		.2480	8	34	79	DGR493082	8.20	P	.3228	10	47	89
DGR496016	6.35	1/4	.2500	1/4	34	79	DGR493083	8.30		.3268	10	47	89
DGR493064	6.40		.2520	8	34	79	DGR496021	8.33	21/64	.3281	3/8	47	89
DGR493065	6.50		.2559	8	34	79	DGR493084	8.40		.3307	10	47	89
DGR496206	6.53	F	.2570	5/16	34	79	DGR496217	8.43	Q	.3320	3/8	47	89
DGR493066	6.60		.2598	8	34	79	DGR493085	8.50		.3346	10	47	89
DGR493067	6.70		.2638	8	34	79	DGR493086	8.60		.3386	10	47	89

▶ NEXT PAGE

◎ : Excellent ○ : Good

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

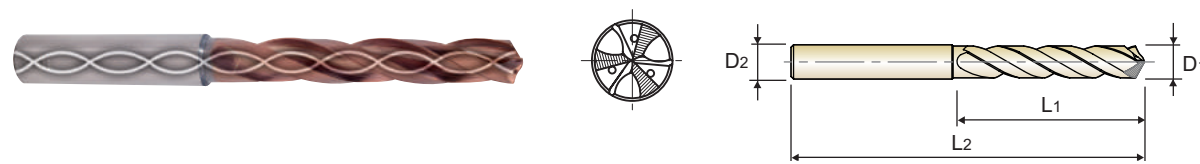


DGR493 SERIES

DGR496 SERIES

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES SHORT

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



DIN 6537 MG h6 m7 140° 20 bar P.102 3 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2	H-coating	D1			D2	L1	L2
DGR493087	8.70		.3425	10	47	89	DGR493107	10.70		.4213	12	55	102
DGR496022	8.73	11/32	.3437	3/8	47	89	DGR496027	10.72	27/64	.4219	7/16	55	102
DGR493088	8.80		.3465	10	47	89	DGR493108	10.80		.4252	12	55	102
DGR493089	8.90		.3504	10	47	89	DGR493109	10.90		.4291	12	55	102
DGR493090	9.00		.3543	10	47	89	DGR493110	11.00		.4331	12	55	102
DGR493091	9.10		.3583	10	47	89	DGR493111	11.10		.4370	12	55	102
DGR496023	9.13	23/64	.3594	3/8	47	89	DGR496028	11.11	7/16	.4375	7/16	55	102
DGR493092	9.20		.3622	10	47	89	DGR493112	11.20		.4409	12	55	102
DGR493093	9.30		.3661	10	47	89	DGR493113	11.30		.4449	12	55	102
DGR496221	9.35	U	.3680	3/8	47	89	DGR493114	11.40		.4488	12	55	102
DGR493094	9.40		.3701	10	47	89	DGR493115	11.50		.4528	12	55	102
DGR493095	9.50		.3740	10	47	89	DGR496029	11.51	29/64	.4531	1/2	55	102
DGR496024	9.53	3/8	.3750	3/8	47	89	DGR493116	11.60		.4567	12	55	102
DGR493096	9.60		.3780	10	47	89	DGR493117	11.70		.4606	12	55	102
DGR493097	9.70		.3819	10	47	89	DGR493118	11.80		.4646	12	55	102
DGR493098	9.80	W	.3858	10	47	89	DGR493119	11.90		.4685	12	55	102
DGR493099	9.90		.3898	10	47	89	DGR496030	11.91	15/32	.4688	1/2	55	102
DGR496025	9.92	25/64	.3906	7/16	47	89	DGR493120	12.00		.4724	12	55	102
DGR493100	10.00		.3937	10	47	89	DGR493121	12.10		.4764	14	60	107
DGR493101	10.10		.3976	12	55	102	DGR493122	12.20		.4803	14	60	107
DGR493102	10.20		.4016	12	55	102	DGR493123	12.30		.4843	14	60	107
DGR493103	10.30		.4055	12	55	102	DGR496031	12.30	31/64	.4844	1/2	60	107
DGR496026	10.32	13/32	.4063	7/16	55	102	DGR493124	12.40		.4882	14	60	107
DGR493104	10.40		.4094	12	55	102	DGR493125	12.50		.4921	14	60	107
DGR493105	10.50		.4134	12	55	102	DGR493126	12.60		.4961	14	60	107
DGR493106	10.60		.4173	12	55	102	DGR496032	12.70	1/2	.5000	1/2	60	107

▶ NEXT PAGE

◎ : Excellent ○ : Good

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



DGR493 SERIES

DGR496 SERIES

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES SHORT

- ▶ Drilling for Carbon Steels, Alloy Steels(-HRC35) and Cast Iron
- ▶ Higher productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
- ▶ Multi-Layer coating delivers much better productivity and reliability
- ▶ Self centering and chip breaking by R-thinning and coolant holes



DIN 6537 MG h6 m7 140° 20 bar P.102 3 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2	H-coating	D1			D2	L1	L2
DGR493127	12.70		.5000	14	60	107	DGR493149	14.90		.5866	16	65	115
DGR493128	12.80		.5039	14	60	107	DGR493150	15.00		.5906	16	65	115
DGR493129	12.90		.5079	14	60	107	DGR496038	15.08	19/32	.5938	5/8	65	115
DGR493130	13.00		.5118	14	60	107	DGR493151	15.10		.5945	16	65	115
DGR493131	13.10	33/64	.5156	14	60	107	DGR493152	15.20		.5984	16	65	115
DGR493132	13.20		.5197	14	60	107	DGR493153	15.30		.6024	16	65	115
DGR493133	13.30		.5236	14	60	107	DGR493154	15.40		.6063	16	65	115
DGR493134	13.40		.5276	14	60	107	DGR496039	15.48	39/64	.6094	5/8	65	115
DGR496034	13.49	17/32	.5312	9/16	60	107	DGR493155	15.50		.6102	16	65	115
DGR493135	13.50		.5315	14	60	107	DGR493156	15.60		.6142	16	65	115
DGR493136	13.60		.5354	14	60	107	DGR493157	15.70		.6181	16	65	115
DGR493137	13.70		.5394	14	60	107	DGR493158	15.80		.6220	16	65	115
DGR493138	13.80		.5433	14	60	107	DGR496040	15.88	5/8	.6250	5/8	65	115
DGR496035	13.89	35/64	.5469	9/16	60	107	DGR493159	15.90		.6260	16	65	115
DGR493139	13.90		.5472	14	60	107	DGR493160	16.00		.6299	16	65	115
DGR493140	14.00		.5512	14	60	107	DGR493161	16.10		.6339	18	73	123
DGR493141	14.10		.5551	16	65	115	DGR496041	16.27	41/64	.6406	11/16	73	123
DGR493142	14.20		.5591	16	65	115	DGR493165	16.50		.6496	18	73	123
DGR496036	14.29	9/16	.5625	9/16	65	115	DGR496042	16.67	21/32	.6563	11/16	73	123
DGR493143	14.30		.5630	16	65	115	DGR493170	17.00		.6693	18	73	123
DGR493144	14.40		.5669	16	65	115	DGR496043	17.07	43/64	.6719	11/16	73	123
DGR493145	14.50		.5709	16	65	115	DGR496044	17.46	11/16	.6875	11/16	73	123
DGR493146	14.60		.5748	16	65	115	DGR493175	17.50		.6890	18	73	123
DGR496037	14.68	37/64	.5781	5/8	65	115	DGR496045	17.86	45/64	.7031	3/4	73	123
DGR493147	14.70		.5787	16	65	115	DGR493180	18.00		.7087	18	73	123
DGR493148	14.80		.5827	16	65	115	DGR496046	18.26	23/32	.7188	3/4	79	131

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◎ : Excellent ○ : Good

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

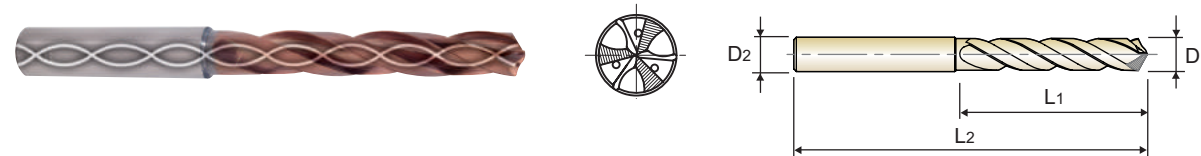


DGR493 SERIES

DGR496 SERIES

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES SHORT

- ▶ Drilling for Carbon Steels, Alloy Steels(-HRC35) and Cast Iron
- ▶ Higher productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill
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DIN 6537 MG h6 m7 140° 20 bar P.102 3 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2	H-coating	D1			D2	L1	L2
DGR493185	18.50		.7283	20	79	131	DGR496048	19.05	3/4	.7500	3/4	79	131
DGR496047	18.65	47/64	.7344	3/4	79	131	DGR493195	19.50		.7677	20	79	131
DGR493190	19.00		.7480	20	79	131	DGR493200	20.00		.7874	20	79	131

◎ : Excellent ○ : Good

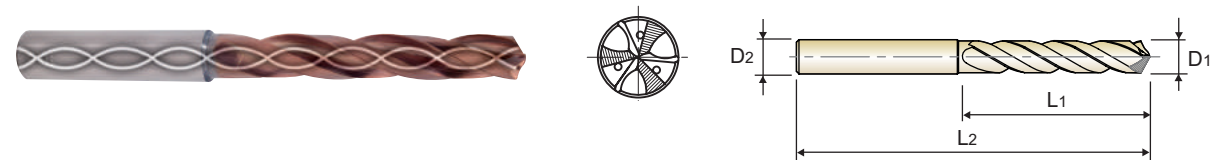
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			◎						



DGR495 SERIES
DGR497 SERIES

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES LONG

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



DIN 6537 MG h6 m7 140° 20 bar P.102 5 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2	H-coating	D1			D2	L1	L2
DGR495050	5.00		.1969	6	44	82	DGR497017	6.75	17/64	.2656	5/16	53	91
DGR495051	5.10		.2008	6	44	82	DGR495068	6.80		.2677	8	53	91
DGR497013	5.16	13/64	.2031	1/4	44	82	DGR495069	6.90		.2717	8	53	91
DGR495052	5.20		.2047	6	44	82	DGR497209	6.91	I	.2720	5/16	53	91
DGR495053	5.30		.2087	6	44	82	DGR495070	7.00		.2756	8	53	91
DGR495054	5.40		.2126	6	44	82	DGR495071	7.10		.2795	8	53	91
DGR497103	5.41	#3	.2130	1/4	44	82	DGR497018	7.14	9/32	.2813	5/16	53	91
DGR495055	5.50		.2165	6	44	82	DGR495072	7.20		.2835	8	53	91
DGR497014	5.56	7/32	.2188	1/4	44	82	DGR495073	7.30		.2874	8	53	91
DGR495056	5.60		.2205	6	44	82	DGR495074	7.40		.2913	8	53	91
DGR497102	5.61	#2	.2210	1/4	44	82	DGR495075	7.50		.2953	8	53	91
DGR495057	5.70		.2244	6	44	82	DGR497019	7.54	19/64	.2969	5/16	53	91
DGR497101	5.79	#1	.2280	1/4	44	82	DGR495076	7.60		.2992	8	53	91
DGR495058	5.80		.2283	6	44	82	DGR495077	7.70		.3031	8	53	91
DGR495059	5.90		.2323	6	44	82	DGR495078	7.80		.3071	8	53	91
DGR497015	5.95	15/64	.2344	1/4	44	82	DGR495079	7.90		.3110	8	53	91
DGR495060	6.00		.2362	6	44	82	DGR497020	7.94	5/16	.3125	5/16	53	91
DGR495061	6.10		.2402	8	53	91	DGR495080	8.00		.3150	8	53	91
DGR495062	6.20		.2441	8	53	91	DGR495081	8.10		.3189	10	61	103
DGR495063	6.30		.2480	8	53	91	DGR495082	8.20	P	.3228	10	61	103
DGR497016	6.35	1/4	.2500	1/4	53	91	DGR495083	8.30		.3268	10	61	103
DGR495064	6.40		.2520	8	53	91	DGR497021	8.33	21/64	.3281	3/8	61	103
DGR495065	6.50		.2559	8	53	91	DGR495084	8.40		.3307	10	61	103
DGR497206	6.53	F	.2570	5/16	53	91	DGR497217	8.43	Q	.3320	3/8	61	103
DGR495066	6.60		.2598	8	53	91	DGR495085	8.50		.3346	10	61	103
DGR495067	6.70		.2638	8	53	91	DGR495086	8.60		.3386	10	61	103

▶ NEXT PAGE

◎ : Excellent ○ : Good

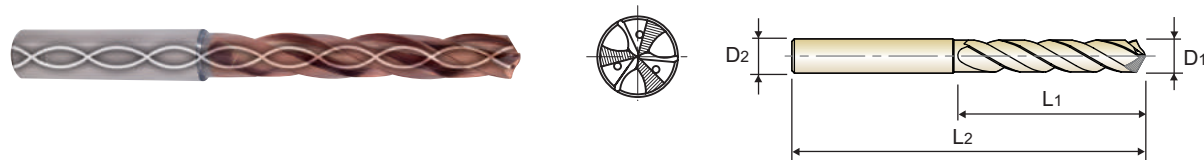
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			◎						



DGR495 SERIES
DGR497 SERIES

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES LONG

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



DIN 6537 MG h6 m7 140° 20 bar P.102 5 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2	H-coating	D1			D2	L1	L2
DGR495087	8.70		.3425	10	61	103	DGR497026	10.32	13/32	.4063	7/16	71	118
DGR497022	8.73	11/32	.3437	3/8	61	103	DGR495104	10.40		.4094	12	71	118
DGR495088	8.80		.3465	10	61	103	DGR495105	10.50		.4134	12	71	118
DGR495089	8.90		.3504	10	61	103	DGR495106	10.60		.4173	12	71	118
DGR495090	9.00		.3543	10	61	103	DGR495107	10.70		.4213	12	71	118
DGR495091	9.10		.3583	10	61	103	DGR497027	10.72	27/64	.4219	7/16	71	118
DGR497023	9.13	23/64	.3594	3/8	61	103	DGR495108	10.80		.4252	12	71	118
DGR495092	9.20		.3622	10	61	103	DGR495109	10.90		.4291	12	71	118
DGR495093	9.30		.3661	10	61	103	DGR495110	11.00		.4331	12	71	118
DGR497221	9.35	U	.3680	3/8	61	103	DGR495111	11.10		.4370	12	71	118
DGR495094	9.40		.3701	10	61	103	DGR497028	11.11	7/16	.4375	7/16	71	118
DGR495095	9.50		.3740	10	61	103	DGR495112	11.20		.4409	12	71	118
DGR497024	9.53	3/8	.3750	3/8	61	103	DGR495113	11.30		.4449	12	71	118
DGR495096	9.60		.3780	10	61	103	DGR495114	11.40		.4488	12	71	118
DGR495097	9.70		.3819	10	61	103	DGR495115	11.50		.4528	12	71	118
DGR495098	9.80	W	.3858	10	61	103	DGR497029	11.51	29/64	.4531	1/2	71	118
DGR495099	9.90		.3898	10	61	103	DGR495116	11.60		.4567	12	71	118
DGR497025	9.92	25/64	.3906	7/16	61	103	DGR495117	11.70		.4606	12	71	118
DGR495100	10.00		.3937	10	61	103	DGR495118	11.80		.4646	12	71	118
DGR495101	10.10		.3976	12	71	118	DGR495119	11.90		.4685	12	71	118
DGR495102	10.20		.4016	12	71	118	DGR497030	11.91	15/32	.4688	1/2	71	118
DGR495103	10.30		.4055	12	71	118	DGR495120	12.00		.4724	12	71	118

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◎ : Excellent ○ : Good

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

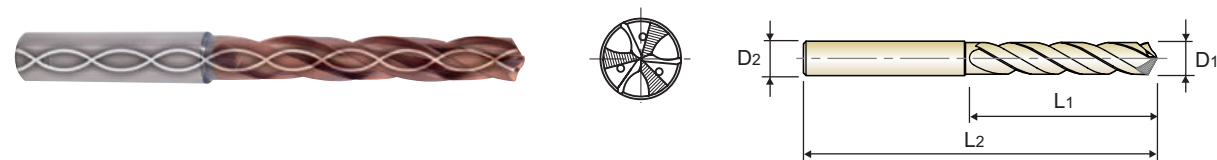


DGR495 SERIES

DGR497 SERIES

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES LONG

- ▶ Drilling for Carbon Steels, Alloy Steels(-HRc35) and Cast Iron
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DIN 6537 MG h6 m7 140° 20 bar P.102 5 × D

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

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◎ : Excellent ○ : Good

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

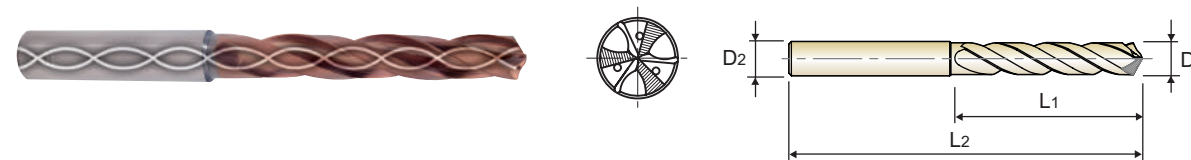


DGR495 SERIES

DGR497 SERIES

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES LONG

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DIN 6537 MG h6 m7 140° 20 bar P.102 5 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
H-coating	D1			D2	L1	L2	H-coating	D1			D2	L1	L2
DGR495157	15.70		.6181	16	83	133	DGR497044	17.46	11/16	.6875	11/16	93	143
DGR495158	15.80		.6220	16	83	133	DGR495175	17.50		.6890	18	93	143
DGR497040	15.88	5/8	.6250	5/8	83	133	DGR497045	17.86	45/64	.7031	3/4	93	143
DGR495159	15.90		.6260	16	83	133	DGR495180	18.00		.7087	18	93	143
DGR495160	16.00		.6299	16	83	133	DGR497046	18.26	23/32	.7188	3/4	101	153
DGR495161	16.10		.6339	18	93	143	DGR495185	18.50		.7283	20	101	153
DGR497041	16.27	41/64	.6406	11/16	93	143	DGR497047	18.65	47/64	.7344	3/4	101	153
DGR495165	16.50		.6496	18	93	143	DGR495190	19.00		.7480	20	101	153
DGR497042	16.67	21/32	.6563	11/16	93	143	DGR497048	19.05	3/4	.7500	3/4	101	153
DGR495170	17.00		.6693	18	93	143	DGR495195	19.50		.7677	20	101	153
DGR497043	17.07	43/64	.6719	11/16	93	143	DGR495200	20.00		.7874	20	101	153

◎ : Excellent ○ : Good

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

CARBIDE

HSS

i-DREAM DRILLS

DREAM DRILLS -GENERAL

DREAM DRILLS -HIGH FEED

DREAM DRILLS -FLAT BOTTOM

DREAM DRILLS -INOX

DREAM DRILLS -ALU

DREAM DRILLS -MQL TYPE

DREAM DRILLS for HIGH HARDENED STEELS

STANDARD CARBIDE DRILLS

MULTI-1 DRILLS

HPD DRILLS

GOLD-P DRILLS

STRAIGHT SHANK DRILLS

AIRCRAFT DRILLS

SILVER & DEMING DRILLS

TAPER SHANK DRILLS

NC SPOTTING DRILLS

COMBINATION DRILLS & COUNTERSIN

SPADE DRILLS

TECHNICAL DATA



DREAM DRILLS -HIGH FEED

RECOMMENDED CUTTING CONDITIONS

CARBIDE, DREAM DRILLS - HIGH FEED with COOLANT HOLES, H-COATED

DGR493, DGR496, DGR495, DGR497 SERIES

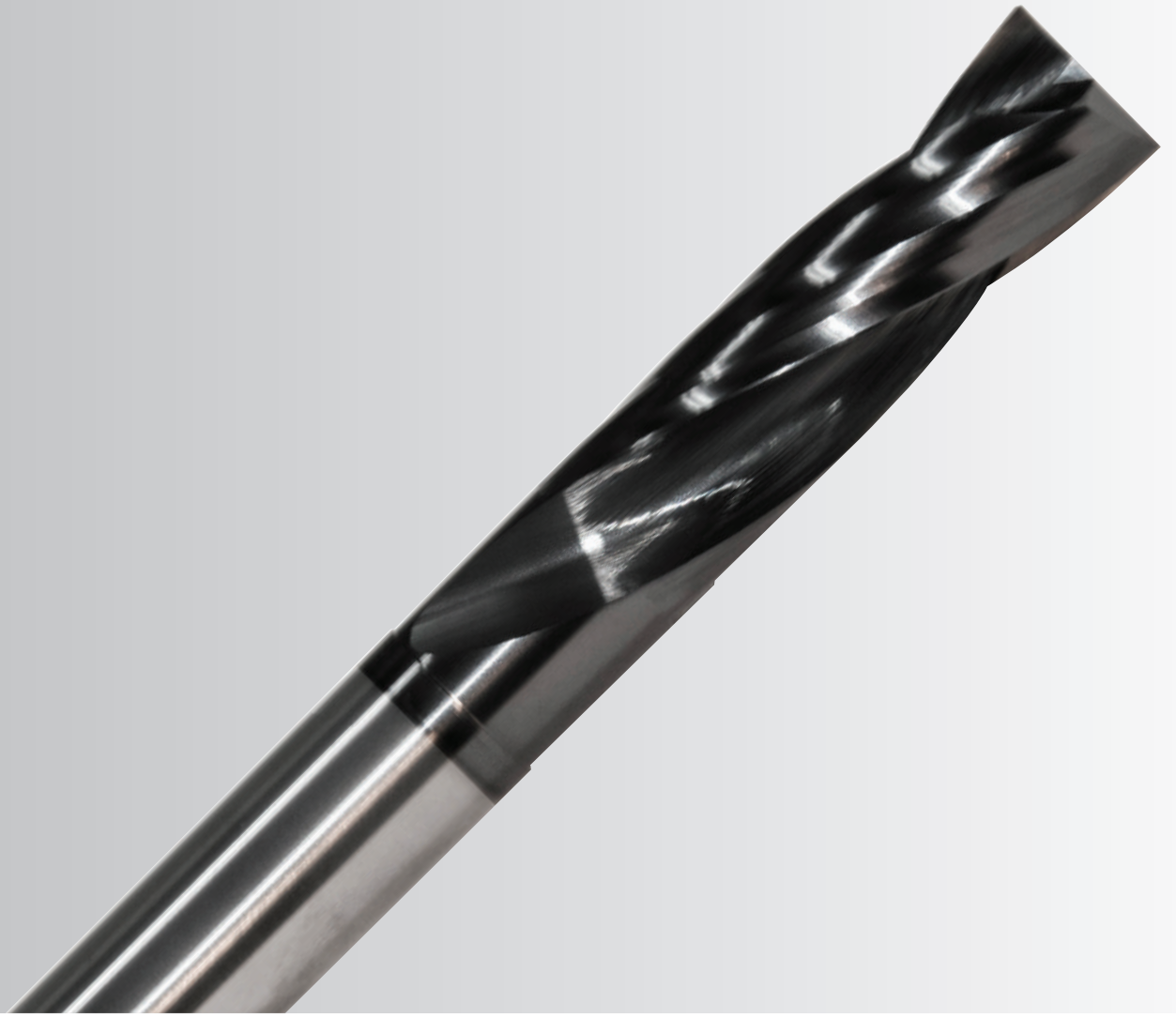
WORK MATERIAL	P						K																		
	CARBON STEELS ALLOY STEELS			ALLOY STEELS			CAST IRON			DUCTILE CAST IRON															
	~ HRC20						HRC20 ~ 35																		
HARDNESS		329 ft/min						247 ft/min						329 ft/min						264 ft/min					
DRILLING SPEED		329 ft/min						247 ft/min						329 ft/min						264 ft/min					
DIAMETER		RPM		IPR		RPM		IPR		RPM		IPR		RPM		IPR									
Metric(mm)	Decimal	RPM	Min	Max	RPM	Min	Max	RPM	Min	Max	RPM	Min	Max	RPM	Min	Max									
5.0	.1969	6370	.0079	.0098	4780	.0079	.0098	6370	.0091	.0118	5100	.0079	.0098												
6.0	.2362	5310	.0094	.0118	3980	.0094	.0118	5310	.0106	.0142	4250	.0094	.0118												
7.0	.2756	4550	.0110	.0138	3420	.0110	.0138	4550	.0126	.0165	3640	.0110	.0138												
8.0	.3150	3980	.0126	.0157	2990	.0126	.0157	3980	.0142	.0189	3190	.0126	.0157												
9.0	.3543	3540	.0142	.0177	2660	.0142	.0177	3540	.0161	.0213	2840	.0142	.0177												
10.0	.3937	3190	.0157	.0197	2390	.0157	.0197	3190	.0177	.0236	2550	.0157	.0197												
12.0	.4724	2660	.0189	.0236	2000	.0189	.0213	2660	.0213	.0283	2130	.0189	.0236												
14.0	.5512	2280	.0220	.0276	1710	.0220	.0248	2280	.0248	.0331	1820	.0220	.0276												
16.0	.6299	1990	.0220	.0283	1500	.0220	.0252	1990	.0252	.0315	1600	.0220	.0283												
18.0	.7087	1770	.0248	.0319	1330	.0248	.0283	1770	.0283	.0354	1420	.0248	.0319												
20.0	.7874	1600	.0276	.0346	1190	.0268	.0319	1600	.0315	.0386	1280	.0276	.0354												

RPM = rev./min.
IPR = inch/rev.



Leading Through Innovation

CARBIDE



DREAM DRILLS -FLAT BOTTOM


- WITHOUT COOLANT HOLES**
- For holes on various angled surfaces
 - 180 degree point angle enables drilling of flat, inclined and curved surfaces

SELECTION GUIDE

SOLID CARBIDE DREAM DRILLS-FIAT BOTTOM

SOLID CARBIDE DREAM DRILLS - FLAT BOTTOM (without Coolant Holes)

- For holes on various angled surfaces
- 180 degree point angle enables drilling of flat, inclined and curved surfaces

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
2xD DPP447		CARBIDE, DREAM DRILLS - FLAT BOTTOM without COOLANT HOLES	SHORT	D3.0 D20.0	106
		RECOMMENDED CUTTING CONDITIONS			

◎ : Excellent ○ : Good

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

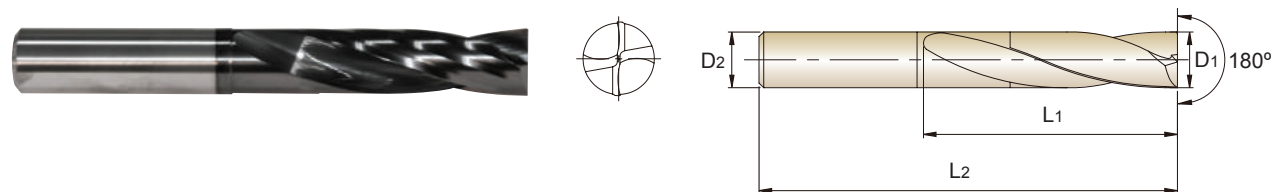
YG DREAM DRILLS -FLAT BOTTOM

DPP447 SERIES

CARBIDE, DREAM DRILLS - FLAT BOTTOM without COOLANT HOLES

SHORT

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



2 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
X-Coating	D1			D2	L1	L2	X-Coating	D1			D2	L1	L2
DPP447030	3		.1181	6	16	50	DPP447051	5.1		.2008	6	24	60
DPP447031	3.1		.1220	6	16	50	DPP447052	5.2		.2047	6	24	60
DPP447008F	3.175	1/8	.1250	6	16	50	DPP447053	5.3		.2087	6	24	60
DPP447032	3.2		.1260	6	16	50	DPP447054	5.4		.2126	6	24	60
DPP447033	3.3		.1299	6	16	50	DPP447055	5.5		.2165	6	24	60
DPP447034	3.4		.1339	6	18	50	DPP447014F	5.556	7/32	.2188	6	24	60
DPP447035	3.5		.1378	6	18	50	DPP447056	5.6		.2205	6	24	60
DPP447036	3.6		.1417	6	18	50	DPP447057	5.7		.2244	6	26	60
DPP447037	3.7		.1457	6	18	50	DPP447058	5.8		.2283	6	26	60
DPP447038	3.8		.1496	6	18	50	DPP447059	5.9		.2323	6	26	60
DPP447039	3.9		.1535	6	18	50	DPP447060	6		.2362	6	26	60
DPP447010F	3.969	5/32	.1563	6	18	50	DPP447061	6.1		.2402	8	28	70
DPP447040	4		.1575	6	18	50	DPP447062	6.2		.2441	8	28	70
DPP447041	4.1		.1614	6	20	60	DPP447063	6.3		.2480	8	28	70
DPP447042	4.2		.1654	6	20	60	DPP447016F	6.35	1/4	.2500	8	30	70
DPP447043	4.3		.1693	6	20	60	DPP447064	6.4		.2520	8	30	70
DPP447044	4.4		.1732	6	20	60	DPP447065	6.5		.2559	8	30	70
DPP447045	4.5		.1772	6	22	60	DPP447066	6.6		.2598	8	30	70
DPP447046	4.6		.1811	6	22	60	DPP447067	6.7		.2638	8	30	70
DPP447047	4.7		.1850	6	22	60	DPP447068	6.8		.2677	8	30	70
DPP447012F	4.763	3/16	.1875	6	22	60	DPP447069	6.9		.2717	8	30	70
DPP447048	4.8		.1890	6	22	60	DPP447070	7		.2756	8	30	70
DPP447049	4.9		.1929	6	22	60	DPP447071	7.1		.2795	8	34	70
DPP447050	5		.1969	6	22	60	DPP447018F	7.144	9/32	.2812	8	34	70

▶ Other shank types are available on your request.

▶ NEXT PAGE

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~								
◎	◎	◎	○		○	◎	○	○	○			

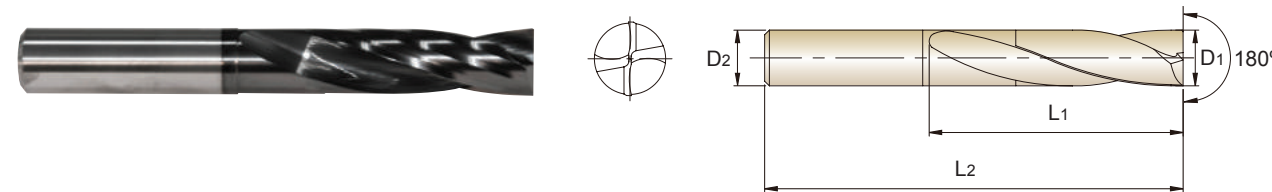
YG DREAM DRILLS -FLAT BOTTOM

DPP447 SERIES

CARBIDE, DREAM DRILLS - FLAT BOTTOM without COOLANT HOLES

SHORT

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



2 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
X-Coating	D1			D2	L1	L2	X-Coating	D1			D2	L1	L2
DPP447072	7.2		.2835	8	34	70	DPP447093	9.3		.3661	10	42	80
DPP447073	7.3		.2874	8	34	70	DPP447094	9.4		.3701	10	42	80
DPP447074	7.4		.2913	8	34	70	DPP447095	9.5		.3740	10	42	80
DPP447075	7.5		.2953	8	34	70	DPP447024F	9.525	3/8	.3750	10	42	80
DPP447076	7.6		.2992	8	34	70	DPP447096	9.6		.3780	10	42	80
DPP447077	7.7		.3031	8	34	70	DPP447097	9.7		.3819	10	45	80
DPP447078	7.8		.3071	8	34	70	DPP447098	9.8		.3858	10	45	80
DPP447079	7.9		.3110	8	34	70	DPP447099	9.9		.3898	10	45	80
DPP447020F	7.938	5/16	.3125	8	34	70	DPP447100	10		.3937	10	45	80
DPP447080	8		.3150	8	34	70	DPP447101	10.1		.3976	12	46	90
DPP447081	8.1		.3189	10	38	80	DPP447102	10.2		.4016	12	46	90
DPP447082	8.2		.3228	10	38	80	DPP447103	10.3		.4055	12	46	90
DPP447083	8.3		.3268	10	38	80	DPP447026F	10.319	13/32	.4062	12	46	90
DPP447021F	8.334	21/64	.3281	10	38	80	DPP447104	10.4		.4094	12	48	90
DPP447084	8.4		.3307	10	38	80	DPP447105	10.5		.4134	12	48	90
DPP447085	8.5		.3346	10	38	80	DPP447106	10.6		.4173	12	48	90
DPP447086	8.6		.3386	10	38	80	DPP447107	10.7		.4212	12	48	90
DPP447087	8.7		.3425	10	40	80	DPP447108	10.8		.4252	12	48	90
DPP447088	8.8		.3465	10	40	80	DPP447109	10.9		.4291	12	48	90
DPP447089	8.9		.3504	10	40	80	DPP447110	11		.4330	12	48	90
DPP447090	9		.3543	10	40	80	DPP447111	11.1		.4370	12	50	90
DPP447091	9.1		.3583	10	42	80	DPP447028F	11.113	7/16	.4375	12	50	90
DPP447023F	9.128	23/64	.3594	10	42	80	DPP447112	11.2		.4409	12	50	90
DPP447092	9.2		.3622	10	42	80	DPP447113	11.3		.4448	12	50	90

▶ Other shank types are available on your request.

▶ NEXT PAGE

P					H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~								
◎	◎	◎	○		○	◎	○	○	○			

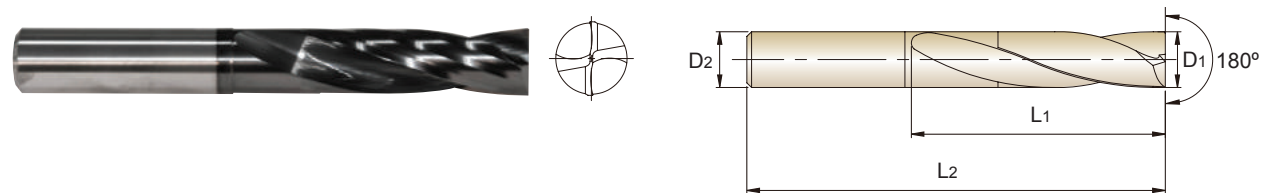
YG DREAM DRILLS -FLAT BOTTOM

DPP447 SERIES

CARBIDE, DREAM DRILLS - FLAT BOTTOM without COOLANT HOLES

SHORT

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



2 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
X-Coating	D1			D2	L1	L2	X-Coating	D1			D2	L1	L2
DPP447114	11.4		.4488	12	50	90	DPP447136	13.6		.5354	14	58	100
DPP447115	11.5		.4527	12	50	90	DPP447137	13.7		.5394	14	58	100
DPP447029F	11.509	29/64	.4531	12	50	90	DPP447138	13.8		.5433	14	58	100
DPP447116	11.6		.4566	12	50	90	DPP447139	13.9		.5472	14	58	100
DPP447117	11.7		.4606	12	52	90	DPP447140	14		.5512	14	58	100
DPP447118	11.8		.4645	12	52	90	DPP447141	14.1		.5551	16	62	105
DPP447119	11.9		.4685	12	52	90	DPP447142	14.2		.5591	16	62	105
DPP447030F	11.906	15/32	.4688	12	52	90	DPP447036F	14.288	9/16	.5625	16	62	105
DPP447120	12		.4724	12	52	90	DPP447143	14.3		.5630	16	62	105
DPP447121	12.1		.4764	14	54	100	DPP447144	14.4		.5669	16	62	105
DPP447122	12.2		.4803	14	54	100	DPP447145	14.5		.5709	16	62	105
DPP447123	12.3		.4843	14	54	100	DPP447146	14.6		.5748	16	62	105
DPP447124	12.4		.4882	14	54	100	DPP447147	14.7		.5787	16	62	105
DPP447125	12.5		.4921	14	54	100	DPP447148	14.8		.5827	16	62	105
DPP447126	12.6		.4961	14	54	100	DPP447149	14.9		.5866	16	62	105
DPP447127	12.7		.5000	14	56	100	DPP447150	15		.5905	16	62	105
DPP447128	12.8		.5039	14	56	100	DPP447151	15.1		.5945	16	64	115
DPP447129	12.9		.5079	14	56	100	DPP447152	15.2		.5984	16	64	115
DPP447130	13		.5118	14	56	100	DPP447153	15.3		.6024	16	64	115
DPP447131	13.1		.5157	14	58	100	DPP447154	15.4		.6063	16	64	115
DPP447132	13.2		.5197	14	58	100	DPP447155	15.5		.6102	16	64	115
DPP447133	13.3		.5236	14	58	100	DPP447156	15.6		.6142	16	64	115
DPP447134	13.4		.5276	14	58	100	DPP447157	15.7		.6181	16	64	115
DPP447135	13.5		.5314	14	58	100	DPP447158	15.8		.6220	16	64	115

▶ Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

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

YG DREAM DRILLS -FLAT BOTTOM

DPP447 SERIES

CARBIDE, DREAM DRILLS - FLAT BOTTOM without COOLANT HOLES

SHORT

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- ▶ Excellent chip evacuation by optimized flute shape
- ▶ High strength cutting edge to improve tool life and versatility drilling
- ▶ Variety of drilling can be used in a variety of drilling applications



2 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
X-Coating	D1			D2	L1	L2	X-Coating	D1			D2	L1	L2
DPP447040F	15.875	5/8	.6250	16	64	115	DPP447180	18		.7087	18	70	125
DPP447159	15.9		.6260	16	64	115	DPP447185	18.5		.7283	20	75	135
DPP447160	16		.6299	16	64	115	DPP447190	19		.7480	20	75	135
DPP447165	16.5		.6496	18	70	125	DPP447048F	19.05	3/4	.7500	20	75	135
DPP447170	17		.6693	18	70	125	DPP447195	19.5		.7677	20	75	145
DPP447044F	17.463	11/16	.6875	18	70	125	DPP447200	20		.7874	20	75	145
DPP447175	17.5		.6890	18	70	125							

▶ Other shank types are available on your request.

◎ : Excellent ○ : Good

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

Y/G DREAM DRILLS -FLAT BOTTOM

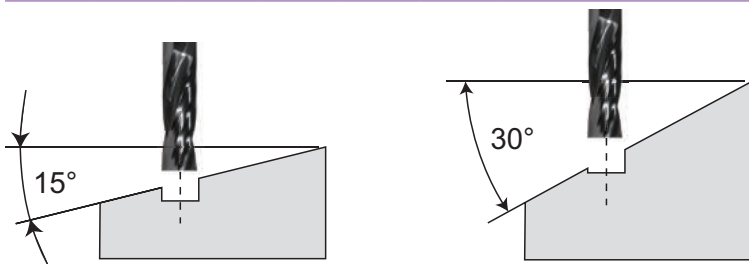
RECOMMENDED CUTTING CONDITIONS

CARBIDE, DREAM DRILL - FLAT BOTTOM without COOLANT HOLES, X-COATED

DPP447 SERIES

WORK MATERIAL	P								M		K		N			
	STRUCTURAL STEELS		CARBON STEELS ALLOY STEELS		PREHARDENED STEELS		HARDEND STEELS		STAINLESS STEELS		CAST IRON		ALUMINUM			
STRENGTH	<HB225								HRC30 ~ 40		HRC40 ~ 50		~ 200 HB			
DRILLING SPEED	80 m/min		70 m/min		38 m/min		25 m/min		30 m/min		68 m/min		165 m/min			
DIAMETER	RPM		FEED		RPM		FEED		RPM		FEED		RPM		FEED	
	Metric(mm)	Decimal														
3.0	.1181	8350	0.05	7250	0.05	3890	0.05	2790	0.03	3180	0.02	7250	0.04	17850	0.06	
4.0	.1575	6250	0.07	5410	0.07	2940	0.06	2100	0.04	2380	0.03	5410	0.06	13130	0.08	
5.0	.1969	5040	0.08	4360	0.08	2310	0.08	1680	0.05	1910	0.04	4360	0.07	10500	0.10	
6.0	.2362	4200	0.10	3630	0.10	1890	0.09	1370	0.06	1590	0.05	3630	0.09	8930	0.12	
8.0	.3150	3150	0.14	2730	0.13	1470	0.12	1050	0.08	1190	0.06	2730	0.12	6670	0.16	
10.0	.3937	2520	0.17	2160	0.17	1160	0.15	840	0.10	955	0.08	2160	0.15	5360	0.20	
12.0	.4724	2100	0.21	1790	0.21	1000	0.18	690	0.12	796	0.10	1790	0.18	4470	0.24	
16.0	.6299	1580	0.28	1370	0.28	740	0.24	530	0.16	597	0.12	1370	0.24	3360	0.32	
20.0	.7874	1260	0.35	1110	0.34	580	0.31	420	0.20	477	0.15	1110	0.30	2680	0.40	

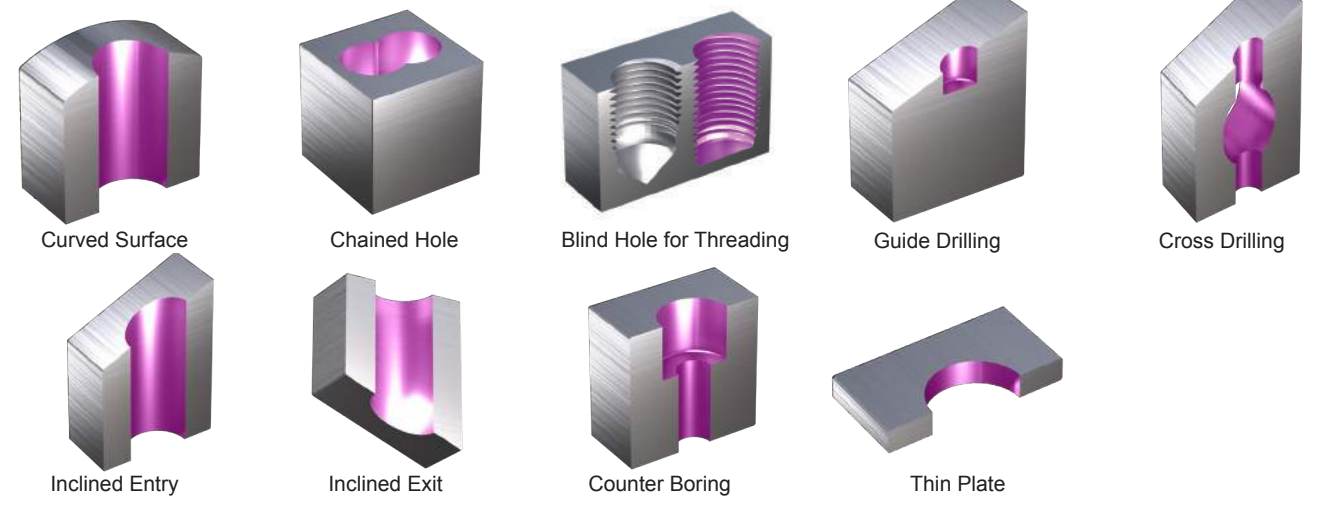
RPM = rev./min.
FEED = mm/rev.



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

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

VARIETY OF DRILLING



CARBIDE



Being the best through innovation



DREAM DRILLS -INOX

WITH COOLANT HOLES
- Stainless Steels, Nickel Alloys and Titanium up to HRC35

SELECTION GUIDE

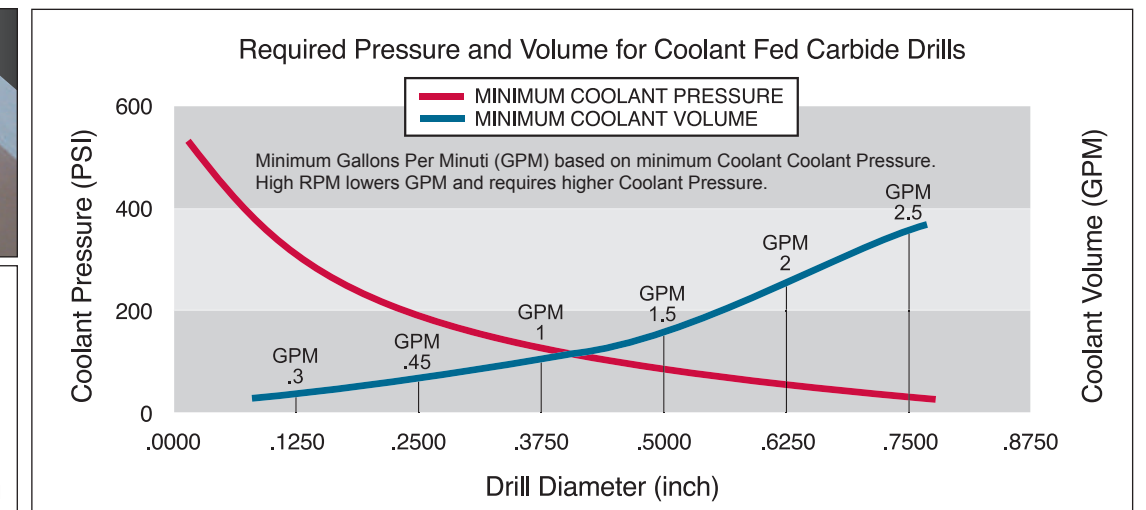
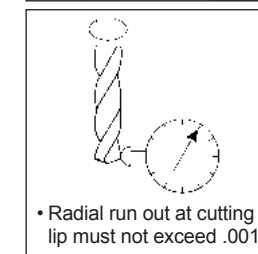
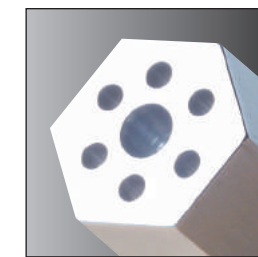
SOLID CARBIDE DREAM DRILLS-INOX

SOLID CARBIDE DREAM DRILLS -INOX (with Coolant Holes)
- Stainless Steels, Nickel Alloys and Titanium up to HRc35

ITEM	MODEL	DESCRIPTION	SIZE		PAGE	
			MIN	MAX		
INCH						
3xD DH463 DH714		CARBIDE, DREAM DRILL - INOX with COOLANT HOLES	STUB	D1/8	D5/8	114
5xD DH464 DH715		CARBIDE, DREAM DRILL - INOX with COOLANT HOLES	LONG	D13/64	D/2	116
METRIC						
3xD DH451		CARBIDE, DREAM DRILL - INOX with COOLANT HOLES	SHORT	.1181	.7874	117
5xD DH452		CARBIDE, DREAM DRILL - INOX with COOLANT HOLES	LONG	.0394	.7874	122
8xD DH453		CARBIDE, DREAM DRILL - INOX with COOLANT HOLES	EXTRA LONG	.1181	.7874	127
RECOMMENDED CUTTING CONDITIONS					131	

◎ : Excellent ○ : Good

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





DH463 SERIES
DH714 SERIES

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES STUB

- ▶ Special flute shape and geometry suitable for machining stainless steel
- ▶ Excellent chip evacuation from better surface treatment
- ▶ Point R-thinning achieves superior centering and chip curling
- ▶ TiAlN coating for better surface finishes and longer tool life
- ▶ Tolerance : Dia. Tolerance ØD1 : See page 113
Shank Tolerance ØD2: -.0001-.0005



3 × D

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal					Fractional	Decimal			
TiAlN	D1		D2	L1	L2	TiAlN	D1		D2	L1	L2
DH714008	1/8	.1250	3/16	1.102	2.992	DH463020	5/16	.3125	5/16	1.575	3.701
DH463008	1/8	.1250	15/64	1.102	2.992	DH463021	21/64	.3281	11/32	1.673	3.937
DH714011	11/64	.1719	3/16	1.417	3.386	DH714021	21/64	.3281	3/8	1.673	3.937
DH463011	11/64	.1719	15/64	1.417	3.386	DH463217	Q	.3320	11/32	1.673	3.937
DH714012	3/16	.1875	3/16	1.575	3.543	DH714217	Q	.3320	3/8	1.673	3.937
DH463012	3/16	.1875	15/64	1.575	3.543	DH463022	11/32	.3438	11/32	1.772	3.937
DH463013	13/64	.2031	15/64	1.082	3.228	DH714022	11/32	.3438	3/8	1.772	3.937
DH714013	13/64	.2031	1/4	1.082	3.228	DH714023	23/64	.3594	3/8	1.870	4.174
DH463014	7/32	.2188	15/64	1.181	3.228	DH463023	23/64	.3594	25/64	1.870	4.174
DH714014	7/32	.2188	1/4	1.181	3.228	DH714221	U	.3680	3/8	1.870	4.174
DH463015	15/64	.2344	15/64	1.181	3.228	DH463221	U	.3680	25/64	1.870	4.174
DH714015	15/64	.2344	1/4	1.181	3.228	DH714024	3/8	.3750	3/8	1.969	4.174
DH714016	1/4	.2500	1/4	1.279	3.465	DH463024	3/8	.3750	25/64	1.969	4.174
DH463016	1/4	.2500	17/64	1.279	3.465	DH463025	25/64	.3906	25/64	1.969	4.174
DH463206	F	.2570	17/64	1.279	3.465	DH714025	25/64	.3906	7/16	1.969	4.174
DH714206	F	.2570	5/16	1.279	3.465	DH463026	13/32	.4062	27/64	2.067	4.567
DH463017	17/64	.2656	17/64	1.378	3.465	DH714026	13/32	.4062	7/16	2.067	4.567
DH714017	17/64	.2656	5/16	1.378	3.465	DH463027	27/64	.4219	27/64	2.165	4.567
DH463209	I	.2720	.2720	1.378	3.465	DH714027	27/64	.4219	7/16	2.165	4.567
DH714209	I	.2720	5/16	1.378	3.465	DH714028	7/16	.4375	7/16	2.264	4.803
DH463018	9/32	.2812	5/16	1.476	3.701	DH463028	7/16	.4375	15/32	2.264	4.803
DH463019	19/64	.2969	5/16	1.476	3.701	DH463029	29/64	.4531	15/32	2.264	4.803

Other shank types are available on your request.

▶ NEXT PAGE

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



DH463 SERIES
DH714 SERIES

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES STUB

- ▶ Special flute shape and geometry suitable for machining stainless steel
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Shank Tolerance ØD2: -.0001-.0005



3 × D

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal					Fractional	Decimal			
TiAlN	D1		D2	L1	L2	TiAlN	D1		D2	L1	L2
DH714029	29/64	.4531	1/2	2.264	4.803	DH463035	35/64	.5469	35/64	2.756	5.276
DH463030	15/32	.4688	15/32	2.362	4.803	DH714035	35/64	.5469	9/16	2.756	5.276
DH714030	15/32	.4688	1/2	2.362	4.803	DH714036	9/16	.5625	9/16	2.854	5.512
DH463031	31/64	.4844	1/2	2.461	5.039	DH463036	9/16	.5625	37/64	2.854	5.512
DH463032	1/2	.5000	1/2	2.559	5.039	DH463037	37/64	.5781	37/64	2.953	5.512
DH463033	33/64	.5156	35/64	2.657	5.276	DH714037	37/64	.5781	5/8	2.953	5.512
DH714033	33/64	.5156	9/16	2.657	5.276	DH463038	19/32	.5937	5/8	3.051	5.709
DH463034	17/32	.5312	35/64	2.756	5.276	DH463039	39/64	.6094	5/8	3.051	5.709
DH714034	17/32	.5312	9/16	2.756	5.276	DH463040	5/8	.6250	5/8	3.150	5.709

Other shank types are available on your request.

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



DH464 SERIES
DH715 SERIES

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES LONG

- ▶ Special flute shape and geometry suitable for machining stainless steel
- ▶ Excellent chip evacuation from better surface treatment
- ▶ Point R-thinning achieves superior centering and chip curling
- ▶ TiAlN coating for better surface finishes and longer tool life
- ▶ Tolerance : Dia. Tolerance ØD1 : See page 113
Shank Tolerance ØD2: -.0001-.0005



MG 140° 20 bar P.131 5 × D

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal					Fractional	Decimal			
TiAlN	D1		D2	L1	L2	TiAlN	D1		D2	L1	L2
DH464013	13/64	.2031	15/64	1-3/4	3-15/16	DH715022	11/32	.3438	3/8	2-27/32	5
DH715013	13/64	.2031	1/4	1-3/4	3-15/16	DH715023	23/64	.3594	3/8	3	5-23/64
DH464014	7/32	.2188	15/64	1-57/64	3-15/16	DH464023	23/64	.3594	25/64	3	5-23/64
DH715014	7/32	.2188	1/4	1-57/64	3-15/16	DH715221	U	.3680	3/8	3	5-23/64
DH464015	15/64	.2344	15/64	1-57/64	3-15/16	DH464221	U	.3680	25/64	3	5-23/64
DH715015	15/64	.2344	1/4	1-57/64	3-15/16	DH715024	3/8	.3750	3/8	3-5/32	5-23/64
DH715016	1/4	.2500	1/4	2-3/64	4-19/64	DH464024	3/8	.3750	25/64	3-5/32	5-23/64
DH464016	1/4	.2500	17/64	2-3/64	4-19/64	DH464025	25/64	.3906	25/64	3-5/32	5-23/64
DH464206	F	.2570	17/64	2-13/64	4-19/64	DH715025	25/64	.3906	7/16	3-5/32	5-23/64
DH715206	F	.2570	5/16	2-13/64	4-19/64	DH464026	13/32	.4062	27/64	3-5/16	5-7/8
DH464017	17/64	.2656	17/64	2-13/64	4-19/64	DH715026	13/32	.4062	7/16	3-5/16	5-7/8
DH715017	17/64	.2656	5/16	2-13/64	4-19/64	DH464027	27/64	.4219	27/64	3-15/32	5-7/8
DH464209	I	.2720	.2720	2-13/64	4-19/64	DH715027	27/64	.4219	7/16	3-15/32	5-7/8
DH715209	I	.2720	5/16	2-13/64	4-19/64	DH715028	7/16	.4375	7/16	3-5/8	6-7/32
DH464018	9/32	.2812	5/16	2-23/64	4-41/64	DH464028	7/16	.4375	15/32	3-5/8	6-7/32
DH464019	19/64	.2969	5/16	2-33/64	4-41/64	DH464029	29/64	.4531	15/32	3-25/32	6-7/32
DH464020	5/16	.3125	5/16	2-33/64	4-41/64	DH715029	29/64	.4531	1/2	3-25/32	6-7/32
DH464021	21/64	.3281	11/32	2-43/64	5	DH464030	15/32	.4688	15/32	3-25/32	6-7/32
DH715021	21/64	.3281	3/8	2-43/64	5	DH715030	15/32	.4688	1/2	3-25/32	6-7/32
DH464217	Q	.3320	11/32	2-43/64	5	DH464031	31/64	.4844	1/2	3-15/16	6-37/64
DH715217	Q	.3320	3/8	2-43/64	5	DH464032	1/2	.5000	1/2	4-3/32	6-37/64
DH464022	11/32	.3438	11/32	2-27/32	5						

Other shank types are available on your request.

◎ : Excellent ○ : Good

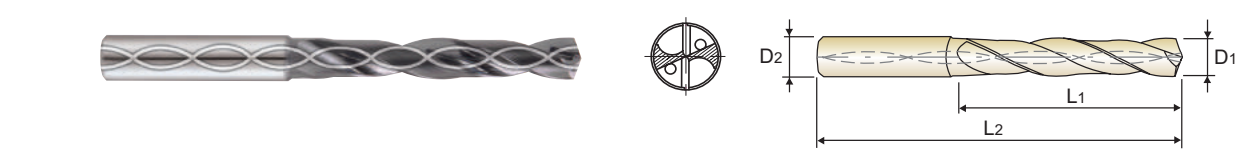
P			H		M	K	N			S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			◎		○				○



DH451 SERIES

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES SHORT

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



DIN 6537 MG h6 m7 140° 20 bar P.131 3 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH451030	3.0		.1181	6	20	62	DH451049	4.9		.1929	6	28	66
DH451031	3.1		.1220	6	20	62	DH451050	5.0		.1969	6	28	66
DH451008F	3.175	1/8	.1250	6	20	62	DH451051	5.1		.2008	6	28	66
DH451032	3.2		.1260	6	20	62	DH451013F	5.159	13/64	.2031	6	28	66
DH451033	3.3		.1299	6	20	62	DH451052	5.2		.2047	6	28	66
DH451034	3.4		.1339	6	20	62	DH451053	5.3		.2087	6	28	66
DH451035	3.5		.1378	6	20	62	DH451054	5.4		.2126	6	28	66
DH451009F	3.572	9/64	.1406	6	20	62	DH451055	5.5		.2165	6	28	66
DH451036	3.6		.1417	6	20	62	DH451014F	5.556	7/32	.2188	6	28	66
DH451037	3.7		.1457	6	20	62	DH451056	5.6		.2205	6	28	66
DH451038	3.8		.1496	6	24	66	DH451057	5.7		.2244	6	28	66
DH451039	3.9		.1535	6	24	66	DH451058	5.8		.2283	6	28	66
DH451010F	3.969	5/32	.1563	6	24	66	DH451059	5.9		.2323	6	28	66
DH451040	4.0		.1575	6	24	66	DH451015F	5.953	15/64	.2344	6	28	66
DH451041	4.1		.1614	6	24	66	DH451060	6.0		.2362	6	28	66
DH451042	4.2		.1654	6	24	66	DH451061	6.1		.2402	8	34	79
DH451043	4.3		.1693	6	24	66	DH451062	6.2		.2441	8	34	79
DH451011F	4.366	11/64	.1719	6	24	66	DH451063	6.3		.2480	8	34	79
DH451044	4.4		.1732	6	24	66	DH451016F	6.350	1/4	.2500	8	34	79
DH451045	4.5		.1772	6	24	66	DH451064	6.4		.2520	8	34	79
DH451046	4.6		.1811	6	24	66	DH451065	6.5		.2559	8	34	79
DH451047	4.7		.1850	6	24	66	DH451006L	6.528	F	.2570	8	34	79
DH451012F	4.763	3/16	.1875	6	24	66	DH451066	6.6		.2598	8	34	79
DH451048	4.8		.1890	6	28	66	DH451067	6.7		.2638	8	34	79

Other shank types are available on your request.

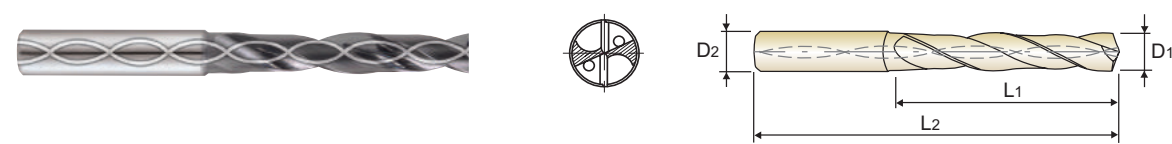
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◎ : Excellent ○ : Good

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

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES SHORT

- ▶ Special flute shape and geometry suitable for machining stainless steel
- ▶ Excellent chip evacuation from better surface treatment
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DIN 6537
MG
h6
m7
140°
20 bar
P.131
3 × D

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

Other shank types are available on your request.

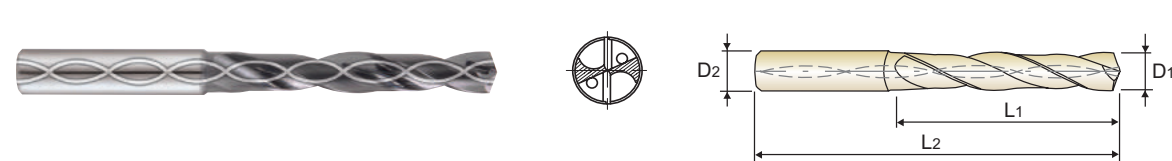
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◎ : Excellent ○ : Good

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

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES SHORT

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DIN 6537
MG
h6
m7
140°
20 bar
P.131
3 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH451026F	10.319	13/32	.4062	12	55	102	DH451123	12.3		.4843	14	60	107
DH451104	10.4		.4094	12	55	102	DH451031F	12.303	31/64	.4844	14	60	107
DH451105	10.5		.4134	12	55	102	DH451124	12.4		.4882	14	60	107
DH451106	10.6		.4173	12	55	102	DH451125	12.5		.4921	14	60	107
DH451107	10.7		.4212	12	55	102	DH451126	12.6		.4961	14	60	107
DH451027F	10.716	27/64	.4219	12	55	102	DH451032F	12.7	1/2	.5000	14	60	107
DH451108	10.8		.4252	12	55	102	DH451128	12.8		.5039	14	60	107
DH451109	10.9		.4291	12	55	102	DH451129	12.9		.5079	14	60	107
DH451110	11.0		.4330	12	55	102	DH451130	13.0		.5118	14	60	107
DH451111	11.1		.4370	12	55	102	DH451131	13.1		.5157	14	60	107
DH451028F	11.113	7/16	.4375	12	55	102	DH451132	13.2		.5197	14	60	107
DH451112	11.2		.4409	12	55	102	DH451133	13.3		.5236	14	60	107
DH451113	11.3		.4448	12	55	102	DH451134	13.4		.5276	14	60	107
DH451114	11.4		.4488	12	55	102	DH451135	13.5		.5314	14	60	107
DH451115	11.5		.4527	12	55	102	DH451136	13.6		.5354	14	60	107
DH451029F	11.509	29/64	.4531	12	55	102	DH451137	13.7		.5394	14	60	107
DH451116	11.6		.4566	12	55	102	DH451138	13.8		.5433	14	60	107
DH451117	11.7		.4606	12	55	102	DH451139	13.9		.5472	14	60	107
DH451118	11.8		.4645	12	55	102	DH451140	14.0		.5512	14	60	107
DH451119	11.9		.4685	12	55	102	DH451141	14.1		.5551	16	65	115
DH451030F	11.906	15/32	.4688	12	55	102	DH451142	14.2		.5591	16	65	115
DH451120	12.0		.4724	12	55	102	DH451036F	14.288	9/16	.5625	16	65	115
DH451121	12.1		.4764	14	60	107	DH451143	14.3		.5630	16	65	115
DH451122	12.2		.4803	14	60	107	DH451144	14.4		.5669	16	65	115

Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

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



DH451 SERIES

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DIN 6537
MG
h6
m7
140°
20 bar
P.131
3 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH451145	14.5		.5708	16	65	115	DH451168	16.8		.6614	18	73	123
DH451146	14.6		.5748	16	65	115	DH451169	16.9		.6654	18	73	123
DH451147	14.7		.5787	16	65	115	DH451170	17.0		.6692	18	73	123
DH451148	14.8		.5827	16	65	115	DH451171	17.1		.6732	18	73	123
DH451149	14.9		.5866	16	65	115	DH451172	17.2		.6772	18	73	123
DH451150	15.0		.5905	16	65	115	DH451173	17.3		.6811	18	73	123
DH451151	15.1		.5945	16	65	115	DH451174	17.4		.6850	18	73	123
DH451152	15.2		.5984	16	65	115	DH451044F	17.463	11/16	.6875	18	73	123
DH451153	15.3		.6024	16	65	115	DH451175	17.5		.6889	18	73	123
DH451154	15.4		.6063	16	65	115	DH451176	17.6		.6929	18	73	123
DH451155	15.5		.6102	16	65	115	DH451177	17.7		.6968	18	73	123
DH451156	15.6		.6142	16	65	115	DH451178	17.8		.7008	18	73	123
DH451157	15.7		.6181	16	65	115	DH451179	17.9		.7047	18	73	123
DH451158	15.8		.6220	16	65	115	DH451180	18.0		.7087	18	73	123
DH451040F	15.875	5/8	.6250	16	65	115	DH451181	18.1		.7126	20	79	131
DH451159	15.9		.6260	16	65	115	DH451182	18.2		.7165	20	79	131
DH451160	16.0		.6299	16	65	115	DH451183	18.3		.7205	20	79	131
DH451161	16.1		.6339	18	73	123	DH451184	18.4		.7244	20	79	131
DH451162	16.2		.6378	18	73	123	DH451185	18.5		.7283	20	79	131
DH451163	16.3		.6417	18	73	123	DH451186	18.6		.7323	20	79	131
DH451164	16.4		.6457	18	73	123	DH451187	18.7		.7362	20	79	131
DH451165	16.5		.6495	18	73	123	DH451188	18.8		.7402	20	79	131
DH451166	16.6		.6535	18	73	123	DH451189	18.9		.7441	20	79	131
DH451167	16.7		.6575	18	73	123	DH451190	19.0		.7480	20	79	131

Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

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



DH451 SERIES

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DIN 6537
MG
h6
m7
140°
20 bar
P.131
3 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH451048F	19.050	3/4	.7500	20	79	131	DH451196	19.6		.7717	20	79	131
DH451191	19.1		.7520	20	79	131	DH451197	19.7		.7756	20	79	131
DH451192	19.2		.7559	20	79	131	DH451198	19.8		.7795	20	79	131
DH451193	19.3		.7598	20	79	131	DH451199	19.9		.7835	20	79	131
DH451194	19.4		.7638	20	79	131	DH451200	20.0		.7874	20	79	131
DH451195	19.5		.7676	20	79	131							

Other shank types are available on your request.

◎ : Excellent ○ : Good

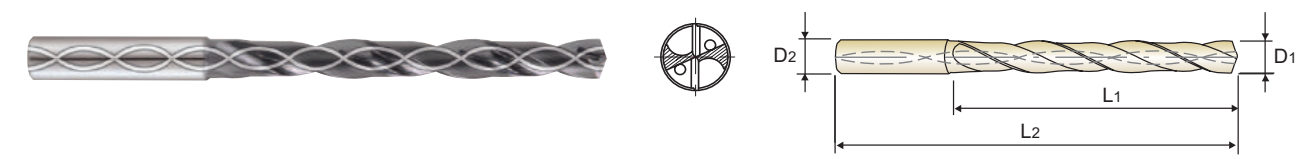
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55								HRC55~
◎	◎	○		◎		○				○	



DH452 SERIES

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES LONG

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



DIN 6537
MG
h6
m7
140°
20 bar
P.131
5 × D

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

Other shank types are available on your request. ▶ NEXT PAGE

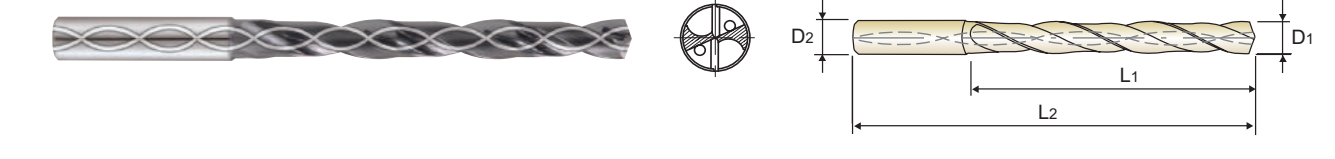
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○		◎		○				○	



DH452 SERIES

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES LONG

- ▶ Special flute shape and geometry suitable for machining stainless steel
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- ▶ TiAlN coating for better surface finishes and longer tool life



DIN 6537
MG
h6
m7
140°
20 bar
P.131
5 × D

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

Other shank types are available on your request. ▶ NEXT PAGE

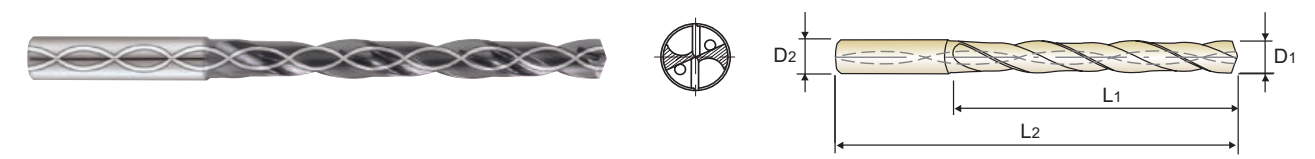
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○		◎		○				○	



DH452 SERIES

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES LONG

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DIN 6537
MG
h6
m7
140°
20 bar
P.131
5 × D

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

© : Excellent ○ : Good

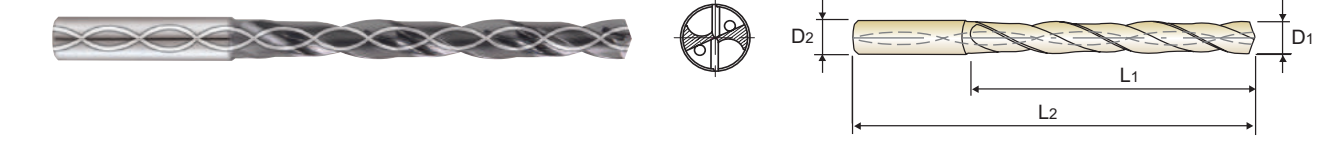
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55								HRC55~
◎	◎	○		◎		○				○	



DH452 SERIES

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DIN 6537
MG
h6
m7
140°
20 bar
P.131
5 × D

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

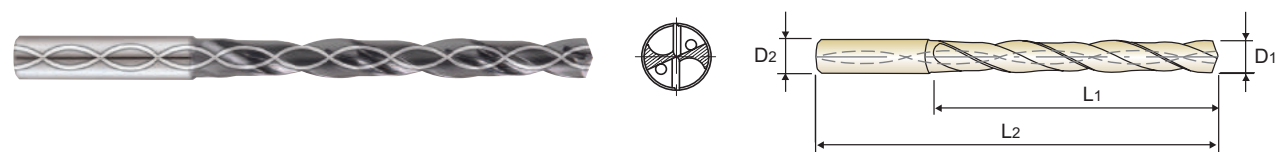
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P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55								HRC55~
◎	◎	○		◎		○				○	

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES

LONG

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

Unit : mm

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

Other shank types are available on your request.

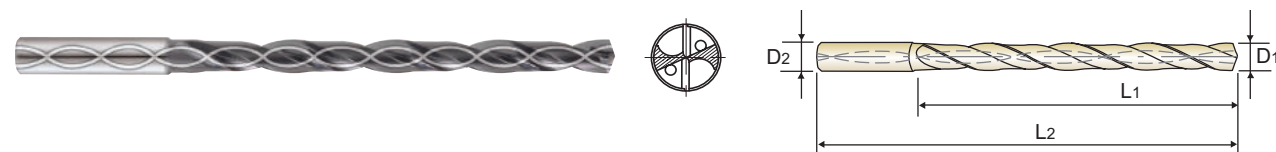
◎ : Excellent ○ : Good

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

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES

EXTRA LONG

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



8 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH453030	3.0		.1181	6	34	72	DH453049	4.9		.1929	6	57	95
DH453031	3.1		.1220	6	34	72	DH453050	5.0		.1969	6	57	95
DH453008F	3.175	1/8	.1250	6	34	72	DH453051	5.1		.2008	6	57	95
DH453032	3.2		.1260	6	34	72	DH453013F	5.159	13/64	.2031	6	57	95
DH453033	3.3		.1299	6	34	72	DH453052	5.2		.2047	6	57	95
DH453034	3.4		.1339	6	34	72	DH453053	5.3		.2087	6	57	95
DH453229G	3.454	#29	.1360	6	34	72	DH453054	5.4		.2126	6	57	95
DH453035	3.5		.1378	6	34	72	DH453055	5.5		.2165	6	57	95
DH453009F	3.572	9/64	.1406	6	34	72	DH453014F	5.556	7/32	.2188	6	57	95
DH453036	3.6		.1417	6	34	72	DH453056	5.6		.2205	6	57	95
DH453037	3.7		.1457	6	34	72	DH453057	5.7		.2244	6	57	95
DH453038	3.8		.1496	6	43	81	DH453058	5.8		.2283	6	57	95
DH453039	3.9		.1535	6	43	81	DH453059	5.9		.2323	6	57	95
DH453010F	3.969	5/32	.1563	6	43	81	DH453015F	5.953	15/64	.2344	6	57	95
DH453040	4.0		.1575	6	43	81	DH453060	6.0		.2362	6	57	95
DH453221G	4.038	#21	.1590	6	43	81	DH453061	6.1		.2402	8	76	114
DH453041	4.1		.1614	6	43	81	DH453062	6.2		.2441	8	76	114
DH453042	4.2		.1654	6	43	81	DH453063	6.3		.2480	8	76	114
DH453043	4.3		.1693	6	43	81	DH453016F	6.350	1/4	.2500	8	76	114
DH453011F	4.366	11/64	.1719	6	43	81	DH453064	6.4		.2520	8	76	114
DH453044	4.4		.1732	6	43	81	DH453065	6.5		.2559	8	76	114
DH453045	4.5		.1772	6	43	81	DH453106L	6.527	F	.2570	8	76	114
DH453046	4.6		.1811	6	43	81	DH453066	6.6		.2598	8	76	114
DH453047	4.7		.1850	6	43	81	DH453067	6.7		.2638	8	76	114
DH453012F	4.763	3/16	.1875	6	57	95	DH453017F	6.747	17/64	.2656	8	76	114
DH453048	4.8		.1890	6	57	95	DH453068	6.8		.2677	8	76	114

Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

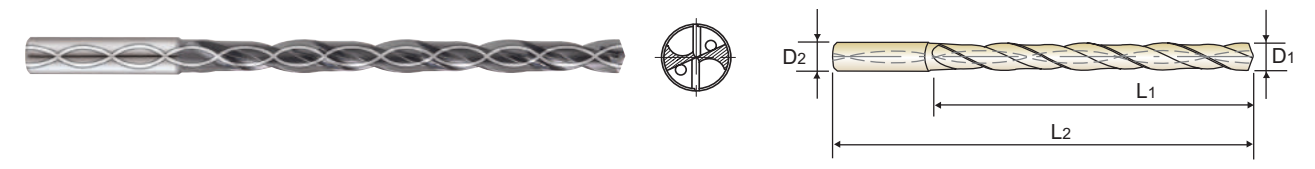
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○		◎		○				○	



DH453 SERIES

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES EXTRA LONG

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



DIN 6537
MG
h6
m7
140°
20 bar
P.131
8 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH453069	6.9		.2717	8	76	114	DH453088	8.8		.3465	10	95	142
DH453009L	6.909	I	.2720	8	76	114	DH453089	8.9		.3504	10	95	142
DH453070	7.0		.2756	8	76	114	DH453090	9.0		.3543	10	95	142
DH453071	7.1		.2795	8	76	114	DH453091	9.1		.3583	10	95	142
DH453018F	7.144	9/32	.2813	8	76	114	DH453023F	9.128	23/64	.3594	10	95	142
DH453072	7.2		.2835	8	76	114	DH453092	9.2		.3622	10	95	142
DH453073	7.3		.2874	8	76	114	DH453093	9.3		.3661	10	95	142
DH453074	7.4		.2913	8	76	114	DH453121L	9.347	U	.3680	10	95	142
DH453075	7.5		.2953	8	76	114	DH453094	9.4		.3701	10	95	142
DH453019F	7.541	19/64	.2969	8	76	114	DH453095	9.5		.3740	10	95	142
DH453076	7.6		.2992	8	76	114	DH453024F	9.525	3/8	.3750	10	95	142
DH453077	7.7		.3031	8	76	114	DH453096	9.6		.3780	10	95	142
DH453078	7.8		.3071	8	76	114	DH453097	9.7		.3819	10	95	142
DH453079	7.9		.3110	8	76	114	DH453098	9.8		.3858	10	95	142
DH453020F	7.938	5/16	.3125	8	76	114	DH453099	9.9		.3898	10	95	142
DH453080	8.0		.3150	8	76	114	DH453025F	9.922	25/64	.3906	10	95	142
DH453081	8.1		.3189	10	95	142	DH453100	10.0		.3937	10	95	142
DH453082	8.2		.3228	10	95	142	DH453101	10.1		.3976	12	114	162
DH453083	8.3		.3268	10	95	142	DH453102	10.2		.4016	12	114	162
DH453021F	8.334	21/64	.3281	10	95	142	DH453103	10.3		.4055	12	114	162
DH453084	8.4		.3307	10	95	142	DH453026F	10.319	13/32	.4063	12	114	162
DH453117L	8.432	Q	.3320	10	95	142	DH453104	10.4		.4094	12	114	162
DH453085	8.5		.3346	10	95	142	DH453105	10.5		.4134	12	114	162
DH453086	8.6		.3386	10	95	142	DH453106	10.6		.4173	12	114	162
DH453087	8.7		.3425	10	95	142	DH453107	10.7		.4212	12	114	162
DH453022F	8.731	11/32	.3438	10	95	142	DH453027F	10.716	27/64	.4219	12	114	162

Other shank types are available on your request. ▶ NEXT PAGE

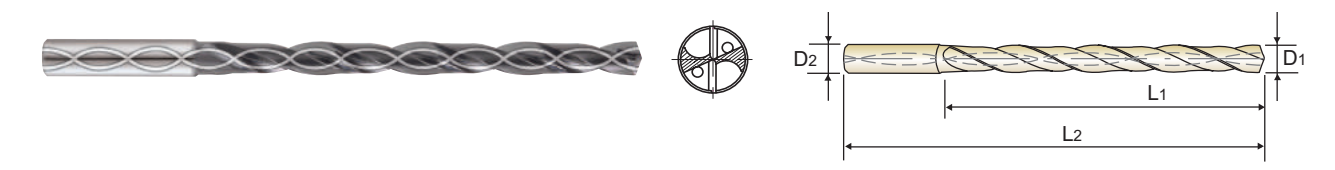
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~							
◎	◎	○		◎		○				○	



DH453 SERIES

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES EXTRA LONG

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



DIN 6537
MG
h6
m7
140°
20 bar
P.131
8 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH453108	10.8		.4252	12	114	162	DH453130	13.0		.5118	14	133	178
DH453109	10.9		.4291	12	114	162	DH453033F	13.097	33/64	.5156	14	133	178
DH453110	11.0		.4330	12	114	162	DH453131	13.1		.5157	14	133	178
DH453111	11.1		.4370	12	114	162	DH453132	13.2		.5197	14	133	178
DH453028F	11.113	7/16	.4375	12	114	162	DH453133	13.3		.5236	14	133	178
DH453112	11.2		.4409	12	114	162	DH453134	13.4		.5276	14	133	178
DH453113	11.3		.4448	12	114	162	DH453135	13.5		.5314	14	133	178
DH453114	11.4		.4488	12	114	162	DH453136	13.6		.5354	14	133	178
DH453115	11.5		.4527	12	114	162	DH453137	13.7		.5394	14	133	178
DH453029F	11.509	29/64	.4531	12	114	162	DH453138	13.8		.5433	14	133	178
DH453116	11.6		.4566	12	114	162	DH453139	13.9		.5472	14	133	178
DH453117	11.7		.4606	12	114	162	DH453140	14.0		.5512	14	133	178
DH453118	11.8		.4645	12	114	162	DH453141	14.1		.5551	16	152	203
DH453119	11.9		.4685	12	114	162	DH453142	14.2		.5591	16	152	203
DH453030F	11.906	15/32	.4688	12	114	162	DH453036F	14.288	9/16	.5625	16	152	203
DH453120	12.0		.4724	12	114	162	DH453143	14.3		.5630	16	152	203
DH453121	12.1		.4764	14	133	178	DH453144	14.4		.5669	16	152	203
DH453122	12.2		.4803	14	133	178	DH453145	14.5		.5709	16	152	203
DH453123	12.3		.4843	14	133	178	DH453146	14.6		.5748	16	152	203
DH453031F	12.303	31/64	.4844	14	133	178	DH453147	14.7		.5787	16	152	203
DH453124	12.4		.4882	14	133	178	DH453148	14.8		.5827	16	152	203
DH453125	12.5		.4921	14	133	178	DH453149	14.9		.5866	16	152	203
DH453126	12.6		.4961	14	133	178	DH453150	15.0		.5905	16	152	203
DH453032F	12.7	1/2	.5000	14	133	178	DH453151	15.1		.5945	16	152	203
DH453128	12.8		.5039	14	133	178	DH453152	15.2		.5984	16	152	203
DH453129	12.9		.5079	14	133	178	DH453153	15.3		.6024	16	152	203

Other shank types are available on your request. ▶ NEXT PAGE

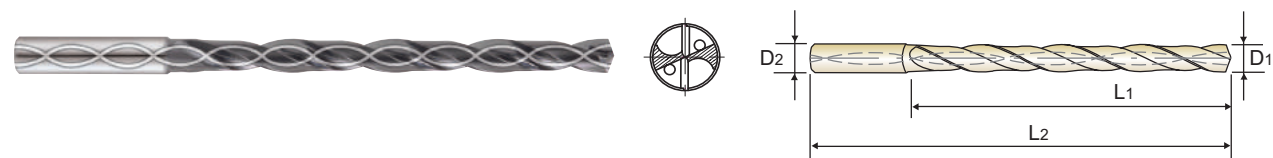
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~							
◎	◎	○		◎		○				○	



DH453 SERIES

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES EXTRA LONG

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



DIN 6537
MG
h6
m7
140°
20 bar
P.131
8 × D

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

Other shank types are available on your request.

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



RECOMMENDED CUTTING CONDITIONS

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES, TiAlN-COATED

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

WORK MATERIAL	P			M			N							
	CARBON STEELS ALLOY STEELS			STAINLESS STEELS			STAINLESS STEELS			ALUMINUM				
STRENGTH				< 800 N/mm ²			> 800 N/mm ²			< 10% Si				
DRILLING SPEED(SFM)	260 ~ 410 ft/min			120 ~ 230 ft/min			60 ~ 140 ft/min			490 ~ 720 ft/min				
DIAMETER			RPM	FEED	IPR	RPM	FEED	IPR	RPM	FEED	IPR	RPM	FEED	IPR
Metric(mm)	Decimal	Fractional												
1.0	.0394		26000	0.02	.001	12000	0.02	.001	6200	0.02	.001	48000	0.04	.002
1.5	.0591		18000	0.03	.001	9000	0.03	.001	5400	0.02	.001	43000	0.05	.002
2.5	.0984		10800	0.05	.002	7000	0.04	.002	4200	0.03	.001	25500	0.08	.003
3.0	.1181	1/8	13000	0.04	.002	7400	0.04	.002	4700	0.02	.001	23000	0.12	.005
4.0	.1575	5/32	10000	0.05	.002	5600	0.05	.002	3600	0.03	.001	17500	0.18	.007
5.0	.1969	13/64	8000	0.05	.002	4400	0.05	.002	2800	0.03	.001	14000	0.20	.008
6.0	.2362	15/64	6600	0.06	.002	3700	0.06	.002	2400	0.04	.002	11700	0.25	.010
8.0	.3150	5/16	5000	0.08	.003	2800	0.08	.003	1800	0.06	.002	8800	0.30	.012
10.0	.3937	25/64	4000	0.10	.004	2200	0.10	.004	1400	0.08	.003	7000	0.40	.016
12.0	.4724	15/32	3300	0.12	.005	1900	0.12	.005	1200	0.10	.004	5800	0.50	.020
14.0	.5512	35/64	2800	0.15	.006	1600	0.15	.006	1000	0.12	.005	5000	0.60	.024
16.0	.6299	5/8	2500	0.20	.008	1400	0.20	.008	900	0.15	.006	4380	0.80	.031
18.0	.7087	45/64	2200	0.22	.009	1250	0.22	.009	800	0.17	.007	3900	1.00	.039
20.0	.7874	25/32	2000	0.24	.009	1120	0.24	.009	720	0.19	.007	3500	1.20	.047

WORK MATERIAL	N			S							
	ALUMINUM			NON FERROUS			TITANIUM TITANIUM ALLOYS				
STRENGTH	< 10% Si										
DRILLING SPEED(SFM)	390 ~ 570 ft/min			390 ~ 490 ft/min			80 ~ 160 ft/min				
DIAMETER			RPM	FEED	IPR	RPM	FEED	IPR	RPM	FEED	IPR
Metric(mm)	Decimal	Fractional									
1.0	.0394		38000	0.03	.001	38000	0.02	.001	8100	0.01	.0004
1.5	.0591		32000	0.04	.002	25500	0.03	.001	7500	0.01	.0004
2.5	.0984		19500	0.06	.002	15500	0.05	.002	4500	0.02	.001
3.0	.1181	1/8	18500	0.10	.004	16000	0.08	.003	5300	0.03	.001
4.0	.1575	5/32	13900	0.15	.006	11900	0.10	.004	4000	0.04	.002
5.0	.1969	13/64	11000	0.18	.007	9500	0.12	.005	3200	0.05	.002
6.0	.2362	15/64	9300	0.25	.010	8000	0.15	.006	2650	0.06	.002
8.0	.3150	5/16	7000	0.30	.012	6000	0.18	.007	2000	0.07	.003
10.0	.3937	25/64	5600	0.35	.014	4800	0.22	.009	1600	0.08	.003
12.0	.4724	15/32	4600	0.40	.016	4000	0.26	.010	1300	0.10	.004
14.0	.5512	35/64	4000	0.50	.020	3400	0.30	.012	1100	0.12	.005
16.0	.6299	5/8	3500	0.60	.024	3000	0.40	.016	1000	0.14	.006
18.0	.7087	45/64	3100	0.70	.028	2650	0.45	.018	900	0.16	.006
20.0	.7874	25/32	2800	0.80	.031	2400	0.50	.020	800	0.18	.007

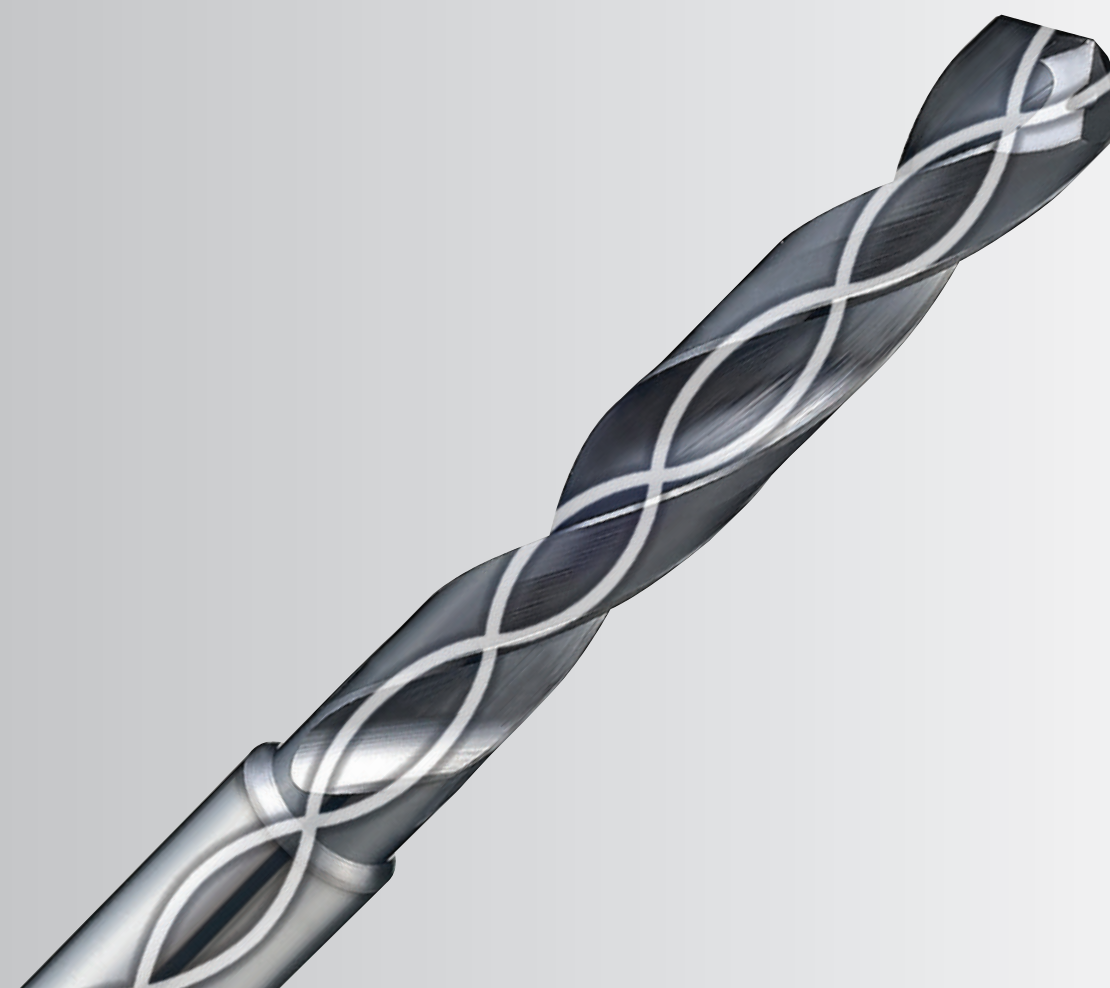
- ▶ Recommend to reduce the feed rate as following
- DH463/DH714/DH451(3xD), DH464/DH714/DH452(5xD) : Feed 100%
- DH453(8xD) : Feed 85%

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



Being the best through innovation

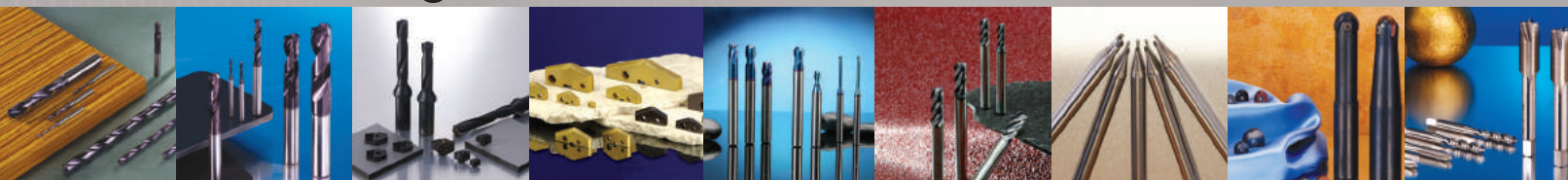
CARBIDE



DREAM DRILLS -ALU

WITH COOLANT HOLES
- for Aluminum & Aluminum Alloys



Global Cutting Tool Leader **YG-1**



SELECTION GUIDE

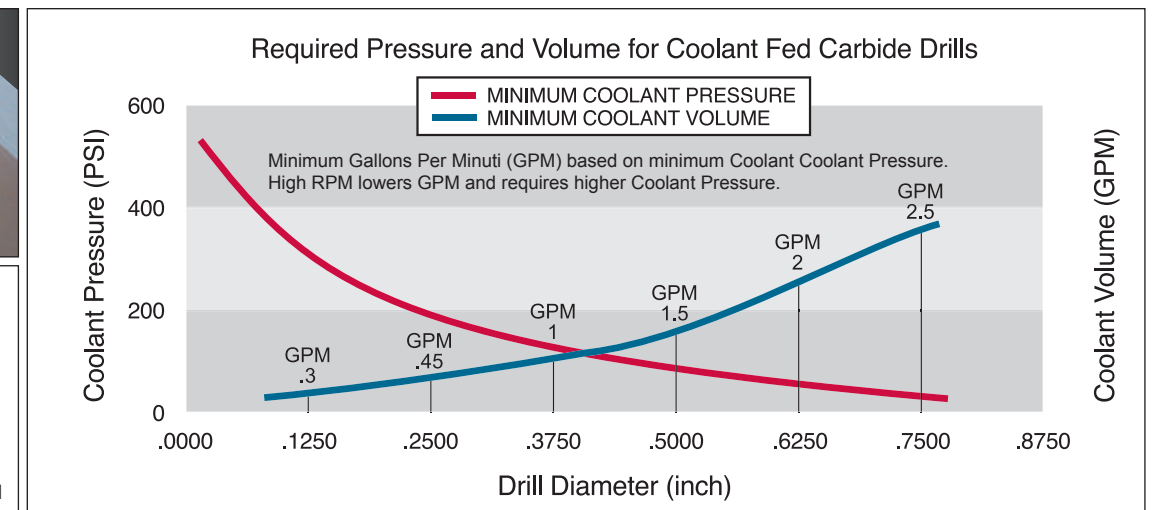
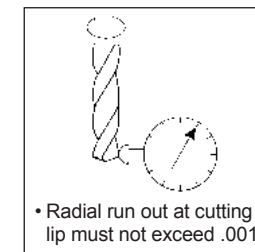
SOLID CARBIDE DREAM DRILLS-ALU

SOLID CARBIDE DREAM DRILLS - ALU (with Coolant Holes)
- for Aluminum & Aluminum Alloys

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
INCH					
5xD DGE466 DGE718		CARBIDE, DREAM DRILL - ALU with COOLANT HOLES	LONG	D13/64 D1/2	136
METRIC					
5xD DGE433		CARBIDE, DREAM DRILL - ALU with COOLANT HOLES	LONG	.1181 .7874	137
RECOMMENDED CUTTING CONDITIONS					141

◎ : Excellent ○ : Good

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



CARBIDE, DREAM DRILL - ALU with COOLANT HOLES

LONG

- ▶ Optimized thinning for Aluminum & Aluminum Alloys to prevent any clogging from chip welding
- ▶ Wider and deeper flute gullets for maximum chip removal
- ▶ Special geometry and smooth coating reduces built up edge and improves finishes
- ▶ Tolerance : Dia. Tolerance ØD1 : See page 135
Shank Tolerance ØD2: -.0001 -.0005



MG h6 118° 20 bar P.141 5 × D

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal					Fractional	Decimal			
DLC	D1		D2	L1	L2	DLC	D1		D2	L1	L2
DGE466013	13/64	.2031	15/64	1-3/4	3-15/16	DGE718022	11/32	.3438	3/8	2-27/32	5
DGE718013	13/64	.2031	1/4	1-3/4	3-15/16	DGE718023	23/64	.3594	3/8	3	5-23/64
DGE466014	7/32	.2188	15/64	1-57/64	3-15/16	DGE466023	23/64	.3594	25/64	3	5-23/64
DGE718014	7/32	.2188	1/4	1-57/64	3-15/16	DGE718221	U	.3680	3/8	3	5-23/64
DGE466015	15/64	.2344	15/64	1-57/64	3-15/16	DGE466221	U	.3680	25/64	3	5-23/64
DGE718015	15/64	.2344	1/4	1-57/64	3-15/16	DGE718024	3/8	.3750	3/8	3-5/32	5-23/64
DGE718016	1/4	.2500	1/4	2-3/64	4-19/64	DGE466024	3/8	.3750	25/64	3-5/32	5-23/64
DGE466016	1/4	.2500	17/64	2-3/64	4-19/64	DGE466025	25/64	.3906	25/64	3-5/32	5-23/64
DGE466206	F	.2570	17/64	2-13/64	4-19/64	DGE718025	25/64	.3906	7/16	3-5/32	5-23/64
DGE718206	F	.2570	5/16	2-13/64	4-19/64	DGE466026	13/32	.4062	27/64	3-5/16	5-7/8
DGE466017	17/64	.2656	17/64	2-13/64	4-19/64	DGE718026	13/32	.4062	7/16	3-5/16	5-7/8
DGE718017	17/64	.2656	5/16	2-13/64	4-19/64	DGE466027	27/64	.4219	27/64	3-15/32	5-7/8
DGE466209	I	.2720	.272	2-13/64	4-19/64	DGE718027	27/64	.4219	7/16	3-15/32	5-7/8
DGE718209	I	.2720	5/16	2-13/64	4-19/64	DGE718028	7/16	.4375	7/16	3-5/8	6-7/32
DGE466018	9/32	.2812	5/16	2-23/64	4-41/64	DGE466028	7/16	.4375	15/32	3-5/8	6-7/32
DGE466019	19/64	.2969	5/16	2-33/64	4-41/64	DGE466029	29/64	.4531	15/32	3-25/32	6-7/32
DGE466020	5/16	.3125	5/16	2-33/64	4-41/64	DGE718029	29/64	.4531	1/2	3-25/32	6-7/32
DGE466021	21/64	.3281	11/32	2-43/64	5	DGE466030	15/32	.4688	15/32	3-25/32	6-7/32
DGE718021	21/64	.3281	3/8	2-43/64	5	DGE718030	15/32	.4688	1/2	3-25/32	6-7/32
DGE466217	Q	.3320	11/32	2-43/64	5	DGE466031	31/64	.4844	1/2	3-15/16	6-37/64
DGE718217	Q	.3320	3/8	2-43/64	5	DGE466032	1/2	.5000	1/2	4-3/32	6-37/64
DGE466022	11/32	.3438	11/32	2-27/32	5						

Other shank types are available on your request.

◎ : Excellent ○ : Good

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

CARBIDE, DREAM DRILL - ALU with COOLANT HOLES

LONG

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



DIN 6537 MG h6 m7 118° 20 bar P.141 5 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
DLC	D1			D2	L1	L2	DLC	D1			D2	L1	L2
DGE433030	3.0		.1181	6	28	66	DGE433049	4.9		.1929	6	44	82
DGE433031	3.1		.1220	6	28	66	DGE433050	5.0		.1969	6	44	82
DGE433008F	3.175	1/8	.1250	6	28	66	DGE433051	5.1		.2008	6	44	82
DGE433032	3.2		.1260	6	28	66	DGE433013F	5.159	13/64	.2031	6	44	82
DGE433033	3.3		.1299	6	28	66	DGE433052	5.2		.2047	6	44	82
DGE433034	3.4		.1339	6	28	66	DGE433053	5.3		.2087	6	44	82
DGE433035	3.5		.1378	6	28	66	DGE433054	5.4		.2126	6	44	82
DGE433009F	3.572	9/64	.1406	6	28	66	DGE433055	5.5		.2165	6	44	82
DGE433036	3.6		.1417	6	28	66	DGE433014F	5.556	7/32	.2188	6	44	82
DGE433037	3.7		.1457	6	28	66	DGE433056	5.6		.2205	6	44	82
DGE433038	3.8		.1496	6	36	74	DGE433057	5.7		.2244	6	44	82
DGE433039	3.9		.1535	6	36	74	DGE433058	5.8		.2283	6	44	82
DGE433010F	3.969	5/32	.1563	6	36	74	DGE433059	5.9		.2323	6	44	82
DGE433040	4.0		.1575	6	36	74	DGE433015F	5.953	15/64	.2344	6	44	82
DGE433041	4.1		.1614	6	36	74	DGE433060	6.0		.2362	6	44	82
DGE433042	4.2		.1654	6	36	74	DGE433061	6.1		.2402	8	53	91
DGE433043	4.3		.1693	6	36	74	DGE433062	6.2		.2441	8	53	91
DGE433011F	4.366	11/64	.1719	6	36	74	DGE433063	6.3		.2480	8	53	91
DGE433044	4.4		.1732	6	36	74	DGE433016F	6.350	1/4	.2500	8	53	91
DGE433045	4.5		.1772	6	36	74	DGE433064	6.4		.2520	8	53	91
DGE433046	4.6		.1811	6	36	74	DGE433065	6.5		.2559	8	53	91
DGE433047	4.7		.1850	6	36	74	DGE433006L	6.528	F	.2570	8	53	9
DGE433012F	4.763	3/16	.1875	6	36	74	DGE433066	6.6		.2598	8	53	91
DGE433048	4.8		.1890	6	44	82	DGE433067	6.7		.2638	8	53	91

Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

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

CARBIDE, DREAM DRILL - ALU with COOLANT HOLES

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



DIN 6537 MG h6 m7 118° 20 bar P.141

5 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
DLC	D1			D2	L1	L2	DLC	D1			D2	L1	L2
DGE433017F	6.747	17/64	.2656	8	53	91	DGE433087	8.7		.3425	10	61	103
DGE433068	6.8		.2677	8	53	91	DGE433022F	8.731	11/32	.3438	10	61	103
DGE433069	6.9		.2717	8	53	91	DGE433088	8.8		.3465	10	61	103
DGE433009L	6.909	I	.2720	8	53	91	DGE433089	8.9		.3504	10	61	103
DGE433070	7.0		.2756	8	53	91	DGE433090	9.0		.3543	10	61	103
DGE433071	7.1		.2795	8	53	91	DGE433091	9.1		.3583	10	61	103
DGE433018F	7.144	9/32	.2812	8	53	91	DGE433023F	9.128	23/64	.3594	10	61	103
DGE433072	7.2		.2835	8	53	91	DGE433092	9.2		.3622	10	61	103
DGE433073	7.3		.2874	8	53	91	DGE433093	9.3		.3661	10	61	103
DGE433074	7.4		.2913	8	53	91	DGE433021L	9.347	U	.3680	10	61	103
DGE433075	7.5		.2953	8	53	91	DGE433094	9.4		.3701	10	61	103
DGE433019F	7.541	19/64	.2969	8	53	91	DGE433095	9.5		.3740	10	61	103
DGE433076	7.6		.2992	8	53	91	DGE433024F	9.525	3/8	.3750	10	61	103
DGE433077	7.7		.3031	8	53	91	DGE433096	9.6		.3780	10	61	103
DGE433078	7.8		.3071	8	53	91	DGE433097	9.7		.3819	10	61	103
DGE433079	7.9		.3110	8	53	91	DGE433098	9.8		.3858	10	61	103
DGE433020F	7.938	5/16	.3125	8	53	91	DGE433099	9.9		.3898	10	61	103
DGE433080	8.0		.3150	8	53	91	DGE433025F	9.922	25/64	.3906	10	61	103
DGE433081	8.1		.3189	10	61	103	DGE433100	10.0		.3937	10	61	103
DGE433082	8.2		.3228	10	61	103	DGE433101	10.1		.3976	12	71	118
DGE433083	8.3		.3268	10	61	103	DGE433102	10.2		.4016	12	71	118
DGE433021F	8.334	21/64	.3281	10	61	103	DGE433103	10.3		.4055	12	71	118
DGE433084	8.4		.3307	10	61	103	DGE433026F	10.319	13/32	.4062	12	71	118
DGE433017L	8.433	Q	.3320	10	61	103	DGE433104	10.4		.4094	12	71	118
DGE433085	8.5		.3346	10	61	103	DGE433105	10.5		.4134	12	71	118
DGE433086	8.6		.3386	10	61	103	DGE433106	10.6		.4173	12	71	118

Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

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

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DIN 6537 MG h6 m7 118° 20 bar P.141

5 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
DLC	D1			D2	L1	L2	DLC	D1			D2	L1	L2
DGE433107	10.7		.4212	12	71	118	DGE433128	12.8		.5039	14	77	124
DGE433027F	10.716	27/64	.4219	12	71	118	DGE433129	12.9		.5079	14	77	124
DGE433108	10.8		.4252	12	71	118	DGE433130	13.0		.5118	14	77	124
DGE433109	10.9		.4291	12	71	118	DGE433131	13.1		.5157	14	77	124
DGE433110	11.0		.4330	12	71	118	DGE433132	13.2		.5197	14	77	124
DGE433111	11.1		.4370	12	71	118	DGE433133	13.3		.5236	14	77	124
DGE433028F	11.113	7/16	.4375	12	71	118	DGE433134	13.4		.5276	14	77	124
DGE433112	11.2		.4409	12	71	118	DGE433135	13.5		.5314	14	77	124
DGE433113	11.3		.4448	12	71	118	DGE433136	13.6		.5354	14	77	124
DGE433114	11.4		.4488	12	71	118	DGE433137	13.7		.5394	14	77	124
DGE433115	11.5		.4527	12	71	118	DGE433138	13.8		.5433	14	77	124
DGE433029F	11.509	29/64	.4531	12	71	118	DGE433139	13.9		.5472	14	77	124
DGE433116	11.6		.4566	12	71	118	DGE433140	14.0		.5512	14	77	124
DGE433117	11.7		.4606	12	71	118	DGE433141	14.1		.5551	16	83	133
DGE433118	11.8		.4645	12	71	118	DGE433142	14.2		.5591	16	83	133
DGE433119	11.9		.4685	12	71	118	DGE433036F	14.288	9/16	.5625	16	83	133
DGE433030F	11.906	15/32	.4688	12	71	118	DGE433143	14.3		.5630	16	83	133
DGE433120	12.0		.4724	12	71	118	DGE433144	14.4		.5669	16	83	133
DGE433121	12.1		.4764	14	77	124	DGE433145	14.5		.5708	16	83	133
DGE433122	12.2		.4803	14	77	124	DGE433146	14.6		.5748	16	83	133
DGE433123	12.3		.4843	14	77	124	DGE433147	14.7		.5787	16	83	133
DGE433031F	12.303	31/64	.4844	14	77	124	DGE433148	14.8		.5827	16	83	133
DGE433124	12.4		.4882	14	77	124	DGE433149	14.9		.5866	16	83	133
DGE433125	12.5		.4921	14	77	124	DGE433150	15.0		.5905	16	83	133
DGE433126	12.6		.4961	14	77	124	DGE433151	15.1		.5945	16	83	133
DGE433032F	12.7	1/2	.5000	14	77	124	DGE433152	15.2		.5984	16	83	133

Other shank types are available on your request.

▶ NEXT PAGE

◎ : Excellent ○ : Good

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

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DIN 6537
MG
h6
m7
118°
20 bar
P.141
5 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Fractional	Decimal					Metric	Fractional	Decimal			
DLC	D1			D2	L1	L2	DLC	D1			D2	L1	L2
DGE433153	15.3		.6024	16	83	133	DGE433177	17.7		.6968	18	93	143
DGE433154	15.4		.6063	16	83	133	DGE433178	17.8		.7008	18	93	143
DGE433155	15.5		.6102	16	83	133	DGE433179	17.9		.7047	18	93	143
DGE433156	15.6		.6142	16	83	133	DGE433180	18.0		.7087	18	93	143
DGE433157	15.7		.6181	16	83	133	DGE433181	18.1		.7126	20	101	153
DGE433158	15.8		.6220	16	83	133	DGE433182	18.2		.7165	20	101	153
DGE433040F	15.875	5/8	.6250	16	83	133	DGE433183	18.3		.7205	20	101	153
DGE433159	15.9		.6260	16	83	133	DGE433184	18.4		.7244	20	101	153
DGE433160	16.0		.6299	16	83	133	DGE433185	18.5		.7283	20	101	153
DGE433161	16.1		.6339	18	93	143	DGE433186	18.6		.7323	20	101	153
DGE433162	16.2		.6378	18	93	143	DGE433187	18.7		.7362	20	101	153
DGE433163	16.3		.6417	18	93	143	DGE433188	18.8		.7402	20	101	153
DGE433164	16.4		.6457	18	93	143	DGE433189	18.9		.7441	20	101	153
DGE433165	16.5		.6495	18	93	143	DGE433190	19.0		.7480	20	101	153
DGE433166	16.6		.6535	18	93	143	DGE433048F	19.050	3/4	.7500	20	101	153
DGE433167	16.7		.6575	18	93	143	DGE433191	19.1		.7520	20	101	153
DGE433168	16.8		.6614	18	93	143	DGE433192	19.2		.7559	20	101	153
DGE433169	16.9		.6654	18	93	143	DGE433193	19.3		.7598	20	101	153
DGE433170	17.0		.6692	18	93	143	DGE433194	19.4		.7638	20	101	153
DGE433171	17.1		.6732	18	93	143	DGE433195	19.5		.7676	20	101	153
DGE433172	17.2		.6772	18	93	143	DGE433196	19.6		.7717	20	101	153
DGE433173	17.3		.6811	18	93	143	DGE433197	19.7		.7756	20	101	153
DGE433174	17.4		.6850	18	93	143	DGE433198	19.8		.7795	20	101	153
DGE433175	17.5		.6889	18	93	143	DGE433199	19.9		.7835	20	101	153
DGE433176	17.6		.6929	18	93	143	DGE433200	20.0		.7874	20	101	153

! Other shank types are available on your request.

◎ : Excellent ○ : Good

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

CARBIDE, DREAM DRILLS - ALU with COOLANT HOLES, DLC-COATED

DGE466, DGE718, DGE433 SERIES

WORK MATERIAL	N						
	ALUMINUM ALLOY CASTING ALUMINUM DIE CASTING			WROUGHT ALUMINUM ALLOY			
DRILLING SPEED(SFM)	240 ~ 650 ft/min			240 ~ 650 ft/min			
DIAMETER		RPM	FEED	IPR	RPM	FEED	IPR
Metric(mm)	Decimal						
3.0~6.0	.1181 ~ .2362	8000 ~ 15000	0.2 ~ 0.5	.008 .020	8000 ~ 15000	0.15 ~ 0.3	.006 .012
~10.0	~.3937	6000 ~ 10500	0.3 ~ 1.0	.012 .039	6000 ~ 10500	0.20 ~ 0.4	.008 .016
~14.0	~.5512	4500 ~ 5800	0.3 ~ 1.0	.012 .039	4500 ~ 5800	0.20 ~ 0.4	.008 .016
~20.0	~.7874	3200 ~ 4600	0.3 ~ 1.0	.012 .039	3200 ~ 4600	0.30 ~ 1.0	.012 .039

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



Being the best through innovation

CARBIDE

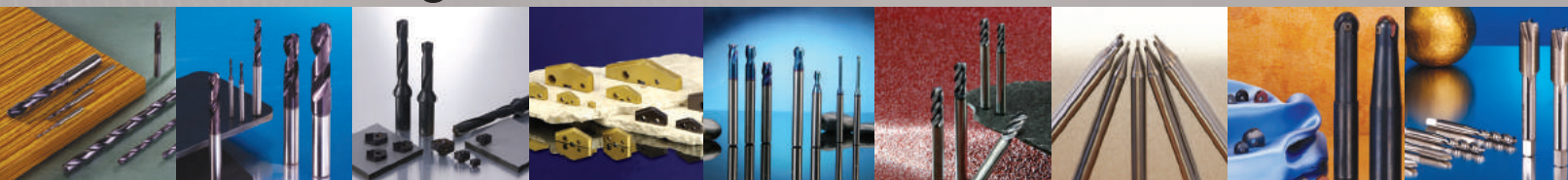


DREAM DRILLS -MQL TYPE

WITH COOLANT HOLES
- Minimum Quantity Lubrication
- Drilling Deep Holes, 10D, 15D, 20D, 25D & 30D



Global Cutting Tool Leader **YG-1**











SELECTION GUIDE

SOLID CARBIDE DREAM DRILLS-MQL TYPE

SOLID CARBIDE DREAM DRILLS - MQL TYPE (with Coolant Holes)

- Minimum Quantity Lubrication
- Drilling Deep Holes, 10D, 15D, 20D, 25D & 30D

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
10xD DH510		CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES <i>EXTRA LONG</i>	D3.0	D14.0	146
15xD DH515		CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES <i>EXTRA LONG</i>	D3.0	D14.0	149
20xD DH520		CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES <i>EXTRA LONG</i>	D3.0	D12.0	152
10xD DHM10		CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES <i>EXTRA LONG</i>	D3.0	D12.0	155
15xD DHM15		CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES <i>EXTRA LONG</i>	D3.0	D12.0	155
20xD DHM20		CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES <i>EXTRA LONG</i>	D3.0	D12.0	155
25xD DHM25		CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES <i>EXTRA LONG</i>	D3.0	D10.0	156
30xD DHM30		CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES <i>EXTRA LONG</i>	D3.0	D8.0	158
RECOMMENDED CUTTING CONDITIONS					160

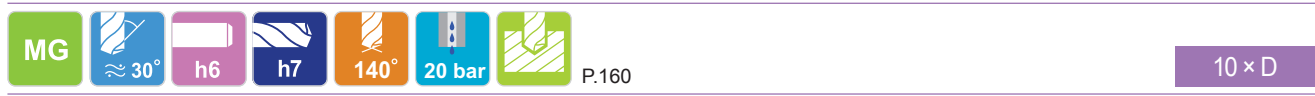
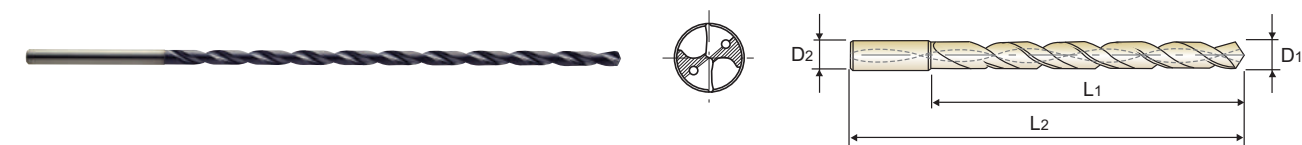
◎ : Excellent ○ : Good

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

CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES

EXTRA LONG

- ▶ 4-Facet Point for good centering capability
- ▶ Optimized special flutes are ideal for removing chips and for productive drilling
- ▶ Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶ MQL system compatible (Minimum Quantity Lubrication)



EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH510030	3.0		.1181	3	39	90	DH510055	5.5		.2165	6	72	127
DH510031	3.1		.1220	4	46	97	DH510056	5.6		.2205	6	78	133
DH510008F	3.175	1/8	.1250	4	46	97	DH510057	5.7		.2244	6	78	133
DH510032	3.2		.1260	4	46	97	DH510058	5.8		.2283	6	78	133
DH510033	3.3		.1299	4	46	97	DH510059	5.9		.2323	6	78	133
DH510034	3.4		.1339	4	46	97	DH510060	6.0		.2362	6	78	133
DH510035	3.5		.1378	4	46	97	DH510061	6.1		.2402	7	85	141
DH510036	3.6		.1417	4	52	103	DH510062	6.2		.2441	7	85	141
DH510037	3.7		.1457	4	52	103	DH510063	6.3		.2480	7	85	141
DH510038	3.8		.1496	4	52	103	DH510016F	6.350	1/4	.2500	7	85	141
DH510039	3.9		.1535	4	52	103	DH510064	6.4		.2520	7	85	141
DH510040	4.0		.1575	4	52	103	DH510065	6.5		.2559	7	85	141
DH510041	4.1		.1614	5	59	112	DH510206L	6.528	F	.2570	7	91	147
DH510042	4.2		.1654	5	59	112	DH510066	6.6		.2598	7	91	147
DH510043	4.3		.1693	5	59	112	DH510067	6.7		.2638	7	91	147
DH510044	4.4		.1732	5	59	112	DH510017F	6.746	17/64	.2656	7	91	147
DH510045	4.5		.1772	5	59	112	DH510068	6.8		.2677	7	91	147
DH510046	4.6		.1811	5	65	118	DH510069	6.9		.2717	7	91	147
DH510047	4.7		.1850	5	65	118	DH510209L	6.909	I	.2720	7	91	147
DH510048	4.8		.1890	5	65	118	DH510070	7.0		.2756	7	91	147
DH510049	4.9		.1929	5	65	118	DH510071	7.1		.2795	8	98	155
DH510050	5.0		.1969	5	65	118	DH510018F	7.142	9/32	.2812	8	98	155
DH510051	5.1		.2008	6	72	127	DH510072	7.2		.2835	8	98	155
DH510052	5.2		.2047	6	72	127	DH510073	7.3		.2874	8	98	155
DH510053	5.3		.2087	6	72	127	DH510074	7.4		.2913	8	98	155
DH510054	5.4		.2126	6	72	127	DH510075	7.5		.2953	8	98	155

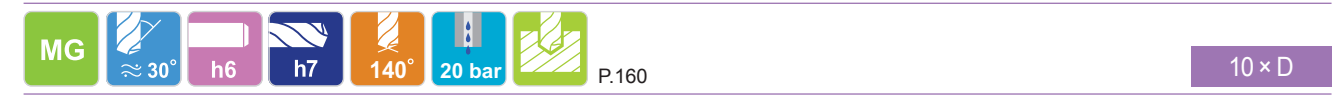
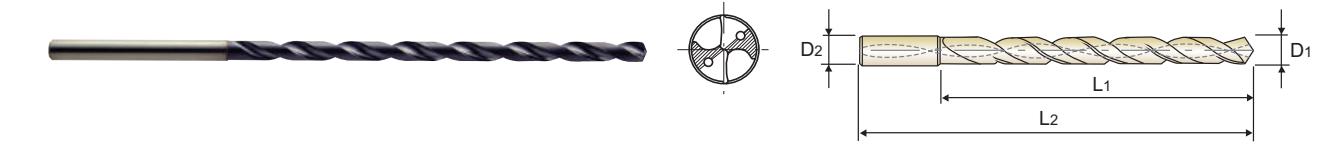
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P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			○						

CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES

EXTRA LONG

- ▶ 4-Facet Point for good centering capability
- ▶ Optimized special flutes are ideal for removing chips and for productive drilling
- ▶ Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶ MQL system compatible (Minimum Quantity Lubrication)



EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH510019F	7.541	19/64	.2969	8	104	161	DH510095	9.5		.3740	10	124	182
DH510076	7.6		.2992	8	104	161	DH510024F	9.525	3/8	.3750	10	130	188
DH510077	7.7		.3031	8	104	161	DH510096	9.6		.3780	10	130	188
DH510078	7.8		.3071	8	104	161	DH510097	9.7		.3819	10	130	188
DH510079	7.9		.3110	8	104	161	DH510098	9.8		.3858	10	130	188
DH510020F	7.938	5/16	.3125	8	104	161	DH510099	9.9		.3898	10	130	188
DH510080	8.0		.3150	8	104	161	DH510025F	9.921	25/64	.3906	10	130	188
DH510081	8.1		.3189	9	111	169	DH510100	10.0		.3937	10	130	188
DH510082	8.2		.3228	9	111	169	DH510101	10.1		.3976	11	137	201
DH510083	8.3		.3268	9	111	169	DH510102	10.2		.4016	11	137	201
DH510021F	8.334	21/64	.3281	9	111	169	DH510103	10.3		.4055	11	137	201
DH510084	8.4		.3307	9	111	169	DH510026F	10.318	13/32	.4062	11	137	201
DH510217L	8.433	Q	.3320	9	111	169	DH510104	10.4		.4094	11	137	201
DH510085	8.5		.3346	9	111	169	DH510105	10.5		.4134	11	137	201
DH510086	8.6		.3386	9	117	175	DH510106	10.6		.4173	11	143	207
DH510087	8.7		.3425	9	117	175	DH510107	10.7		.4213	11	143	207
DH510022F	8.733	11/32	.3438	9	117	175	DH510027F	10.716	27/64	.4219	11	143	207
DH510088	8.8		.3465	9	117	175	DH510108	10.8		.4252	11	143	207
DH510089	8.9		.3504	9	117	175	DH510109	10.9		.4291	11	143	207
DH510090	9.0		.3543	9	117	175	DH510110	11.0		.4331	11	143	207
DH510091	9.1		.3583	10	124	182	DH510111	11.1		.4370	12	150	215
DH510023F	9.129	23/64	.3594	10	124	182	DH510028F	11.113	7/16	.4375	12	150	215
DH510092	9.2		.3622	10	124	182	DH510112	11.2		.4409	12	150	215
DH510093	9.3		.3661	10	124	182	DH510113	11.3		.4449	12	150	215
DH510221L	9.347	U	.3680	10	124	182	DH510114	11.4		.4488	12	150	215
DH510094	9.4		.3701	10	124	182	DH510115	11.5		.4528	12	150	215

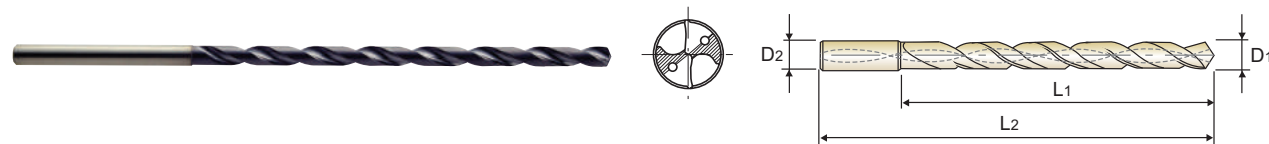
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P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			○						

CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES

EXTRA LONG

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- ▶ MQL system compatible (Minimum Quantity Lubrication)



10 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH510029F	11.509	29/64	.4531	12	156	221	DH510127	12.7	1/2	.5000	13	169	235
DH510116	11.6		.4567	12	156	221	DH510128	12.8		.5039	13	169	235
DH510117	11.7		.4606	12	156	221	DH510129	12.9		.5079	13	169	235
DH510118	11.8		.4646	12	156	221	DH510130	13.0		.5118	13	169	235
DH510119	11.9		.4685	12	156	221	DH510131	13.1		.5157	14	176	243
DH510030F	11.908	15/32	.4688	12	156	221	DH510132	13.2		.5197	14	176	243
DH510120	12.0		.4724	12	156	221	DH510133	13.3		.5236	14	176	243
DH510121	12.1		.4764	13	163	229	DH510134	13.4		.5276	14	176	243
DH510122	12.2		.4803	13	163	229	DH510135	13.5		.5315	14	176	243
DH510123	12.3		.4843	13	163	229	DH510136	13.6		.5354	14	182	249
DH510031F	12.304	31/64	.4844	13	163	229	DH510137	13.7		.5394	14	182	249
DH510124	12.4		.4882	13	163	229	DH510138	13.8		.5433	14	182	249
DH510125	12.5		.4921	13	163	229	DH510139	13.9		.5472	14	182	249
DH510126	12.6		.4961	13	169	235	DH510140	14.0		.5512	14	182	249

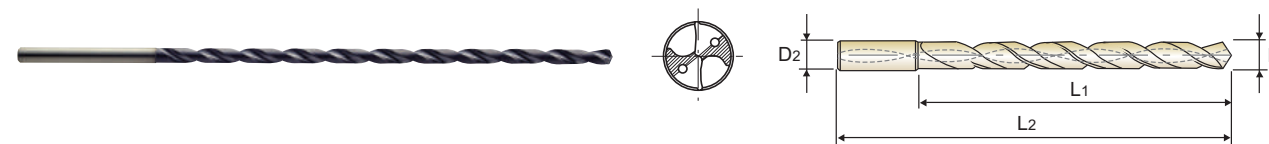
◎ : Excellent ○ : Good

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

CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES

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15 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH515030	3.0		.1181	3	54	105	DH515055	5.5		.2165	6	99	154
DH515031	3.1		.1220	4	63	114	DH515056	5.6		.2205	6	108	163
DH515008F	3.175	1/8	.1250	4	63	114	DH515057	5.7		.2244	6	108	163
DH515032	3.2		.1260	4	63	114	DH515058	5.8		.2283	6	108	163
DH515033	3.3		.1299	4	63	114	DH515059	5.9		.2323	6	108	163
DH515034	3.4		.1339	4	63	114	DH515060	6.0		.2362	6	108	163
DH515035	3.5		.1378	4	63	114	DH515061	6.1		.2402	7	117	173
DH515036	3.6		.1417	4	72	123	DH515062	6.2		.2441	7	117	173
DH515037	3.7		.1457	4	72	123	DH515063	6.3		.2480	7	117	173
DH515038	3.8		.1496	4	72	123	DH515016F	6.350	1/4	.2500	7	117	173
DH515039	3.9		.1535	4	72	123	DH515064	6.4		.2520	7	117	173
DH515040	4.0		.1575	4	72	123	DH515065	6.5		.2559	7	117	173
DH515041	4.1		.1614	5	81	134	DH515206L	6.528	F	.2570	7	126	182
DH515042	4.2		.1654	5	81	134	DH515066	6.6		.2598	7	126	182
DH515043	4.3		.1693	5	81	134	DH515067	6.7		.2638	7	126	182
DH515044	4.4		.1732	5	81	134	DH515017F	6.746	17/64	.2656	7	126	182
DH515045	4.5		.1772	5	81	134	DH515068	6.8		.2677	7	126	182
DH515046	4.6		.1811	5	90	143	DH515069	6.9		.2717	7	126	182
DH515047	4.7		.1850	5	90	143	DH515209L	6.909	I	.2720	7	126	182
DH515048	4.8		.1890	5	90	143	DH515070	7.0		.2756	7	126	182
DH515049	4.9		.1929	5	90	143	DH515071	7.1		.2795	8	135	192
DH515050	5.0		.1969	5	90	143	DH515018F	7.142	9/32	.2812	8	135	192
DH515051	5.1		.2008	6	99	154	DH515072	7.2		.2835	8	135	192
DH515052	5.2		.2047	6	99	154	DH515073	7.3		.2874	8	135	192
DH515053	5.3		.2087	6	99	154	DH515074	7.4		.2913	8	135	192
DH515054	5.4		.2126	6	99	154	DH515075	7.5		.2953	8	135	192

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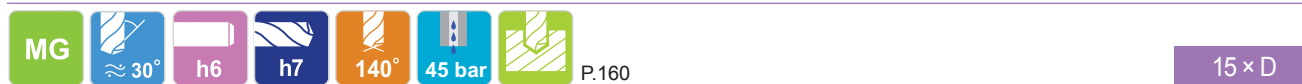
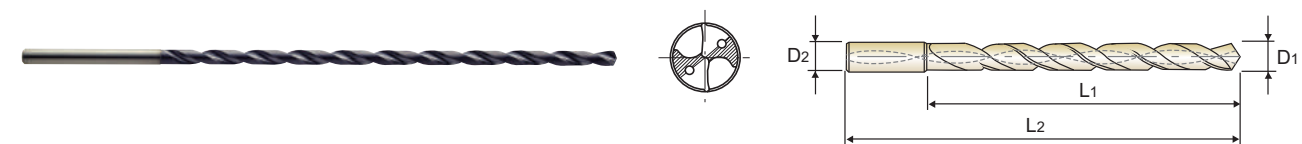
◎ : Excellent ○ : Good

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

CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES

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EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH515019F	7.541	19/64	.2969	8	144	201	DH515095	9.5		.3740	10	171	229
DH515076	7.6		.2992	8	144	201	DH515024F	9.525	3/8	.3750	10	180	238
DH515077	7.7		.3031	8	144	201	DH515096	9.6		.3780	10	180	238
DH515078	7.8		.3071	8	144	201	DH515097	9.7		.3819	10	180	238
DH515079	7.9		.3110	8	144	201	DH515098	9.8		.3858	10	180	238
DH515020F	7.938	5/16	.3125	8	144	201	DH515099	9.9		.3898	10	180	238
DH515080	8.0		.3150	8	144	201	DH515025F	9.921	25/64	.3906	10	180	238
DH515081	8.1		.3189	9	153	211	DH515100	10.0		.3937	10	180	238
DH515082	8.2		.3228	9	153	211	DH515101	10.1		.3976	11	189	253
DH515083	8.3		.3268	9	153	211	DH515102	10.2		.4016	11	189	253
DH515021F	8.334	21/64	.3281	9	153	211	DH515103	10.3		.4055	11	189	253
DH515084	8.4		.3307	9	153	211	DH515026F	10.318	13/32	.4062	11	189	253
DH515217L	8.433	Q	.3320	9	153	211	DH515104	10.4		.4094	11	189	253
DH515085	8.5		.3346	9	153	211	DH515105	10.5		.4134	11	189	253
DH515086	8.6		.3386	9	162	220	DH515106	10.6		.4173	11	198	262
DH515087	8.7		.3425	9	162	220	DH515107	10.7		.4213	11	198	262
DH515022F	8.733	11/32	.3438	9	162	220	DH515027F	10.716	27/64	.4219	11	198	262
DH515088	8.8		.3465	9	162	220	DH515108	10.8		.4252	11	198	262
DH515089	8.9		.3504	9	162	220	DH515109	10.9		.4291	11	198	262
DH515090	9.0		.3543	9	162	220	DH515110	11.0		.4331	11	198	262
DH515091	9.1		.3583	10	171	229	DH515111	11.1		.4370	12	207	272
DH515023F	9.129	23/64	.3594	10	171	229	DH515028F	11.113	7/16	.4375	12	207	272
DH515092	9.2		.3622	10	171	229	DH515112	11.2		.4409	12	207	272
DH515093	9.3		.3661	10	171	229	DH515113	11.3		.4449	12	207	272
DH515221L	9.347	U	.3680	10	171	229	DH515114	11.4		.4488	12	207	272
DH515094	9.4		.3701	10	171	229	DH515115	11.5		.4527	12	207	272

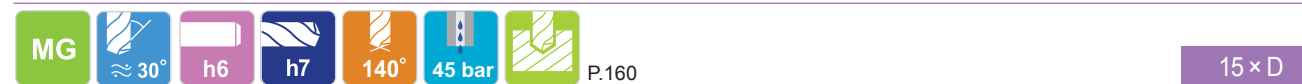
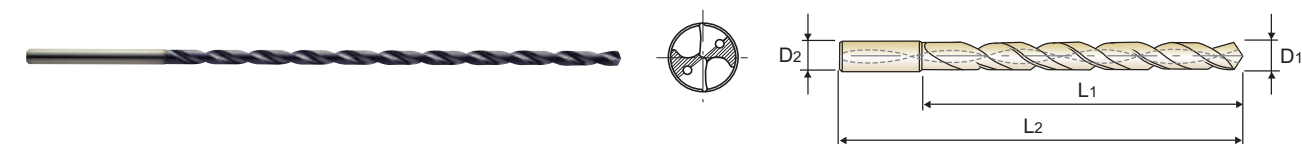
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P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55								HRC55~
◎	◎	○			○						

CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES

EXTRA LONG

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EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH515029F	11.509	29/64	.4531	12	216	281	DH515127	12.7	1/2	.5000	13	234	300
DH515116	11.6		.4567	12	216	281	DH515128	12.8		.5039	13	234	300
DH515117	11.7		.4606	12	216	281	DH515129	12.9		.5079	13	234	300
DH515118	11.8		.4646	12	216	281	DH515130	13.0		.5118	13	234	300
DH515119	11.9		.4685	12	216	281	DH515131	13.1		.5157	14	243	310
DH515030F	11.908	15/32	.4688	12	216	281	DH515132	13.2		.5197	14	243	310
DH515120	12.0		.4724	12	216	281	DH515133	13.3		.5236	14	243	310
DH515121	12.1		.4764	13	225	291	DH515134	13.4		.5276	14	243	310
DH515122	12.2		.4803	13	225	291	DH515135	13.5		.5314	14	243	310
DH515123	12.3		.4843	13	225	291	DH515136	13.6		.5354	14	252	319
DH515031F	12.304	31/64	.4844	13	225	291	DH515137	13.7		.5394	14	252	319
DH515124	12.4		.4882	13	225	291	DH515138	13.8		.5433	14	252	319
DH515125	12.5		.4921	13	225	291	DH515139	13.9		.5472	14	252	319
DH515126	12.6		.4961	13	234	300	DH515140	14.0		.5512	14	252	319

◎ : Excellent ○ : Good

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

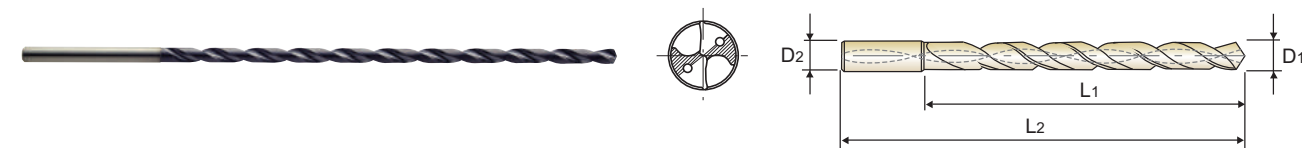


DH520 SERIES

CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES

EXTRA LONG

- ▶ 4-Facet Point for good centering capability
- ▶ Optimized special flutes are ideal for removing chips and for productive drilling
- ▶ Enhanced chip evacuation by polished flute upgraded TiAIN nano layer full coating
- ▶ MQL system compatible (Minimum Quantity Lubrication)



20 × D

Unit : mm

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

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◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55								HRc55~
◎	◎	○			○						

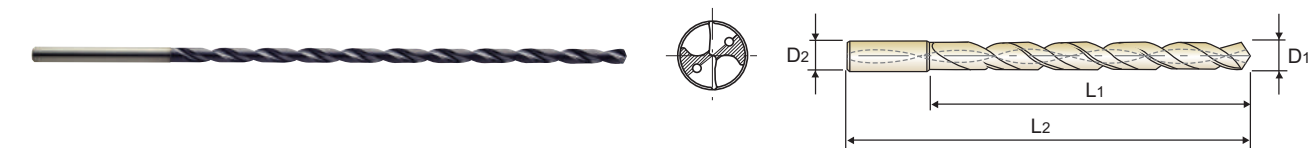


DH520 SERIES

CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES

EXTRA LONG

- ▶ 4-Facet Point for good centering capability
- ▶ Optimized special flutes are ideal for removing chips and for productive drilling
- ▶ Enhanced chip evacuation by polished flute upgraded TiAIN nano layer full coating
- ▶ MQL system compatible (Minimum Quantity Lubrication)



20 × D

Unit : mm

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
TiAIN	D1			D2	L1	L2	TiAIN	D1			D2	L1	L2
DH520019F	7.541	19/64	.2969	8	184	241	DH520095	9.5		.3740	10	219	277
DH520076	7.6		.2992	8	184	241	DH520024F	9.525	3/8	.3750	10	219	277
DH520077	7.7		.3031	8	184	241	DH520096	9.6		.3780	10	230	288
DH520078	7.8		.3071	8	184	241	DH520097	9.7		.3819	10	230	288
DH520079	7.9		.3110	8	184	241	DH520098	9.8		.3858	10	230	288
DH520020F	7.938	5/16	.3125	8	184	241	DH520099	9.9		.3898	10	230	288
DH520080	8.0		.3150	8	184	241	DH520025F	9.921	25/64	.3906	10	230	288
DH520081	8.1		.3189	9	196	254	DH520100	10.0		.3937	10	230	288
DH520082	8.2		.3228	9	196	254	DH520101	10.1		.3976	11	242	306
DH520083	8.3		.3268	9	196	254	DH520102	10.2		.4016	11	242	306
DH520021F	8.334	21/64	.3281	9	196	254	DH520103	10.3		.4055	11	242	306
DH520084	8.4		.3307	9	196	254	DH520026F	10.318	13/32	.4062	11	242	306
DH520217L	8.433	Q	.3320	9	196	254	DH520104	10.4		.4094	11	242	306
DH520085	8.5		.3346	9	196	254	DH520105	10.5		.4134	11	242	306
DH520086	8.6		.3386	9	207	265	DH520106	10.6		.4173	11	253	317
DH520087	8.7		.3425	9	207	265	DH520107	10.7		.4213	11	253	317
DH520022F	8.733	11/32	.3438	9	207	265	DH520027F	10.716	27/64	.4219	11	253	317
DH520088	8.8		.3465	9	207	265	DH520108	10.8		.4252	11	253	317
DH520089	8.9		.3504	9	207	265	DH520109	10.9		.4291	11	253	317
DH520090	9.0		.3543	9	207	265	DH520110	11.0		.4331	11	253	317
DH520091	9.1		.3583	10	219	277	DH520111	11.1		.4370	12	265	330
DH520023F	9.129	23/64	.3594	10	219	277	DH520028F	11.113	7/16	.4375	12	265	330
DH520092	9.2		.3622	10	219	277	DH520112	11.2		.4409	12	265	330
DH520093	9.3		.3661	10	219	277	DH520113	11.3		.4449	12	265	330
DH520221L	9.347	U	.3680	10	219	277	DH520114	11.4		.4488	12	265	330
DH520094	9.4		.3701	10	219	277	DH520115	11.5		.4527	12	265	330

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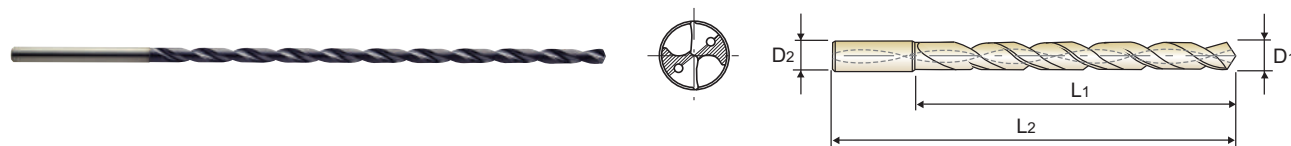
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55								HRc55~
◎	◎	○			○						

CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES

EXTRA LONG

- ▶ 4-Facet Point for good centering capability
- ▶ Optimized special flutes are ideal for removing chips and for productive drilling
- ▶ Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶ MQL system compatible (Minimum Quantity Lubrication)



MG $\approx 30^\circ$ h6 h7 140° 45 bar P.160 20 x D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DH520029F	11.509	29/64	.4531	12	276	341	DH520119	11.9		.4685	12	276	341
DH520116	11.6		.4567	12	276	341	DH520030F	11.908	15/32	.4688	12	276	341
DH520117	11.7		.4606	12	276	341	DH520120	12.0		.4724	12	276	341
DH520118	11.8		.4646	12	276	341							

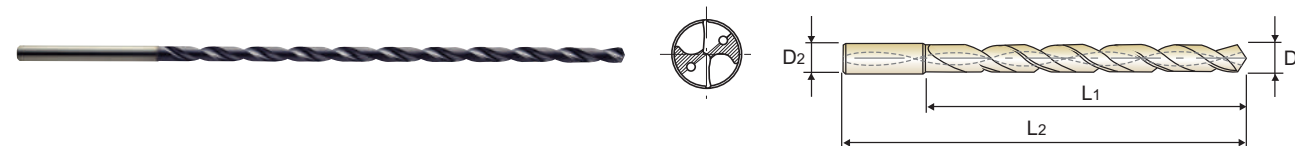
◎ : Excellent ○ : Good

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

CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES

EXTRA LONG

- ▶ 4-Facet Point for good centering capability
- ▶ Optimized special flutes are ideal for removing chips and for productive drilling
- ▶ Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶ MQL system compatible (Minimum Quantity Lubrication)



MG $\approx 30^\circ$ h6 h7 140° 20 bar 45 bar P.160 10 x D (DHM10) 15 x D (DHM15) 20 x D (DHM20)

10 x D						15 x D					
EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Metric	Decimal					Metric	Decimal			
TiAlN	D1		D2	L1	L2	TiAlN	D1		D2	L1	L2
DHM10030	3.0	.1181	6	40	80	DHM15030	3.0	.1181	6	55	95
DHM10033	3.3	.1299	6	47	87	DHM15035	3.5	.1378	6	64	104
DHM10035	3.5	.1378	6	47	87	DHM15040	4.0	.1575	6	73	113
DHM10040	4.0	.1575	6	53	93	DHM15045	4.5	.1772	6	82	122
DHM10042	4.2	.1654	6	60	100	DHM15050	5.0	.1969	6	91	131
DHM10045	4.5	.1772	6	60	100	DHM15055	5.5	.2165	6	100	140
DHM10050	5.0	.1969	6	66	106	DHM15060	6.0	.2362	6	109	149
DHM10055	5.5	.2165	6	73	113	DHM15070	7.0	.2756	8	127	167
DHM10060	6.0	.2362	6	79	119	DHM15080	8.0	.3150	8	145	185
DHM10065	6.5	.2559	8	86	126	DHM15090	9.0	.3543	10	163	207
DHM10068	6.8	.2677	8	92	132	DHM15100	10.0	.3937	10	182	226
DHM10070	7.0	.2756	8	92	132	DHM15110	11.0	.4330	12	200	249
DHM10075	7.5	.2953	8	99	139	DHM15120	12.0	.4724	12	218	267
DHM10080	8.0	.3150	8	105	145						
DHM10085	8.5	.3346	10	112	156						
DHM10090	9.0	.3543	10	118	162						
DHM10095	9.5	.3740	10	126	170						
DHM10100	10.0	.3937	10	132	176						
DHM10105	10.5	.4134	12	139	188						
DHM10110	11.0	.4330	12	145	194						
DHM10115	11.5	.4527	12	152	201						
DHM10120	12.0	.4724	12	158	207						
DHM10125	12.5	.4921	14	165	214						
DHM10130	13.0	.5118	14	171	220						
DHM10135	13.5	.5314	14	178	227						
DHM10140	14.0	.5512	14	184	233						

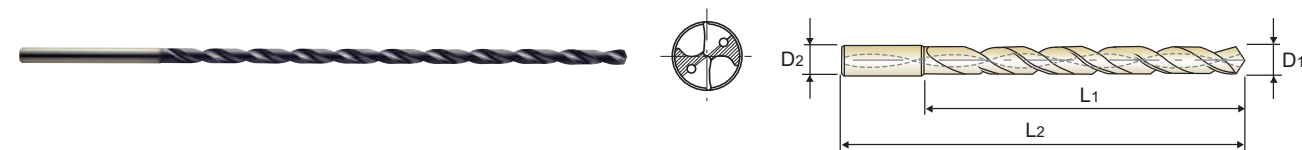
◎ : Excellent ○ : Good

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

CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES

EXTRA LONG

- ▶ 4-Facet Point for good centering capability
- ▶ Optimized special flutes are ideal for removing chips and for productive drilling
- ▶ Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶ MQL system compatible (Minimum Quantity Lubrication)



25 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DHM25030	3.0		.1181	6	85	125	DHM25055	5.5		.2165	6	155	195
DHM25031	3.1		.1220	6	99	139	DHM25056	5.6		.2205	6	169	209
DHM25008F	3.175	1/8	.1250	6	99	139	DHM25057	5.7		.2244	6	169	209
DHM25032	3.2		.1260	6	99	139	DHM25058	5.8		.2283	6	169	209
DHM25033	3.3		.1299	6	99	139	DHM25059	5.9		.2323	6	169	209
DHM25034	3.4		.1339	6	99	139	DHM25060	6.0		.2362	6	169	209
DHM25035	3.5		.1378	6	99	139	DHM25061	6.1		.2402	8	183	223
DHM25036	3.6		.1417	6	113	153	DHM25062	6.2		.2441	8	183	223
DHM25037	3.7		.1457	6	113	153	DHM25063	6.3		.2480	8	183	223
DHM25038	3.8		.1496	6	113	153	DHM25016F	6.350	1/4	.2500	8	183	223
DHM25039	3.9		.1535	6	113	153	DHM25064	6.4		.2520	8	183	223
DHM25040	4.0		.1575	6	113	153	DHM25065	6.5		.2559	8	183	223
DHM25041	4.1		.1614	6	127	167	DHM25066	6.6		.2598	8	197	237
DHM25042	4.2		.1654	6	127	167	DHM25067	6.7		.2638	8	197	237
DHM25043	4.3		.1693	6	127	167	DHM25068	6.8		.2677	8	197	237
DHM25044	4.4		.1732	6	127	167	DHM25069	6.9		.2717	8	197	237
DHM25045	4.5		.1772	6	127	167	DHM25070	7.0		.2756	8	197	237
DHM25046	4.6		.1811	6	141	181	DHM25071	7.1		.2795	8	211	251
DHM25047	4.7		.1850	6	141	181	DHM25018F	7.142	9/32	.2812	8	211	251
DHM25048	4.8		.1890	6	141	181	DHM25072	7.2		.2835	8	211	251
DHM25049	4.9		.1929	6	141	181	DHM25073	7.3		.2874	8	211	251
DHM25050	5.0		.1969	6	141	181	DHM25074	7.4		.2913	8	211	251
DHM25051	5.1		.2008	6	155	195	DHM25075	7.5		.2953	8	211	251
DHM25052	5.2		.2047	6	155	195							
DHM25053	5.3		.2087	6	155	195							
DHM25054	5.4		.2126	6	155	195							

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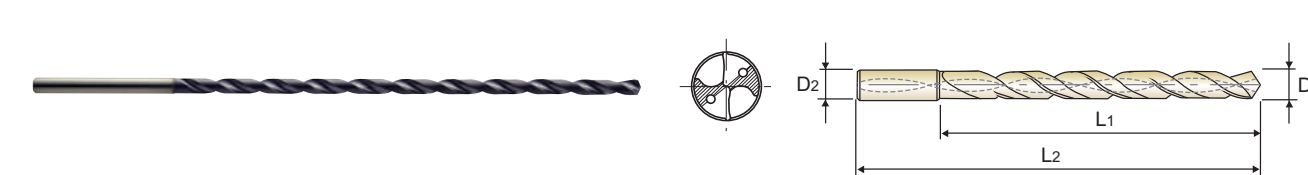
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~							
◎	◎	○			○						

CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES

EXTRA LONG

- ▶ 4-Facet Point for good centering capability
- ▶ Optimized special flutes are ideal for removing chips and for productive drilling
- ▶ Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶ MQL system compatible (Minimum Quantity Lubrication)



25 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DHM25019F	7.541	19/64	.2969	8	225	265	DHM25088	8.8		.3465	10	253	297
DHM25076	7.6		.2992	8	225	265	DHM25089	8.9		.3504	10	253	297
DHM25077	7.7		.3031	8	225	265	DHM25090	9.0		.3543	10	253	297
DHM25078	7.8		.3071	8	225	265	DHM25091	9.1		.3583	10	268	312
DHM25079	7.9		.3110	8	225	265	DHM25023F	9.129	23/64	.3594	10	268	312
DHM25020F	7.938	5/16	.3125	8	225	265	DHM25092	9.2		.3622	10	268	312
DHM25080	8.0		.3150	8	225	265	DHM25093	9.3		.3661	10	268	312
DHM25081	8.1		.3189	10	239	283	DHM25221L	9.347	U	.3680	10	268	312
DHM25082	8.2		.3228	10	239	283	DHM25094	9.4		.3701	10	268	312
DHM25083	8.3		.3268	10	239	283	DHM25095	9.5		.3740	10	268	312
DHM25021F	8.334	21/64	.3281	10	239	283	DHM25024F	9.525	3/8	.3750	10	282	326
DHM25084	8.4		.3307	10	239	283	DHM25096	9.6		.3780	10	282	326
DHM25217L	8.433	Q	.3320	10	239	283	DHM25097	9.7		.3819	10	282	326
DHM25085	8.5		.3346	10	239	283	DHM25098	9.8		.3858	10	282	326
DHM25086	8.6		.3386	10	253	297	DHM25099	9.9		.3898	10	282	326
DHM25087	8.7		.3425	10	253	297	DHM25025F	9.921	25/64	.3906	10	282	326
DHM25022F	8.733	11/32	.3438	10	253	297	DHM25100	10.0		.3937	10	282	326

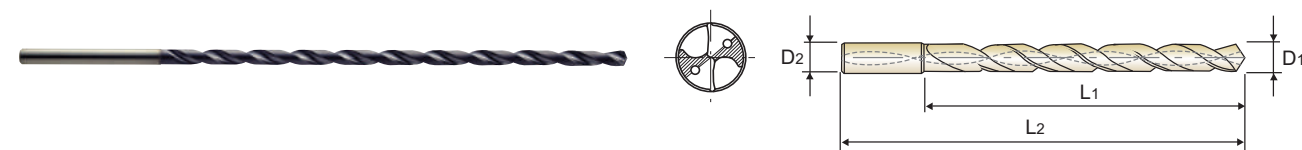
◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~							
◎	◎	○			○						

CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES

EXTRA LONG

- ▶ 4-Facet Point for good centering capability
- ▶ Optimized special flutes are ideal for removing chips and for productive drilling
- ▶ Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶ MQL system compatible (Minimum Quantity Lubrication)



MG $\approx 30^\circ$ h6 h7 140° 45 bar P.160 30 × D

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

▶ NEXT PAGE

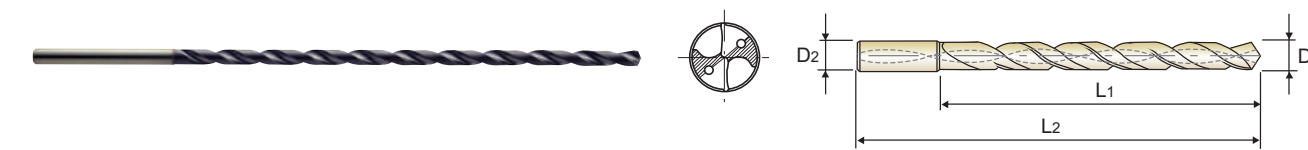
© : Excellent ○ : Good

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

CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES

EXTRA LONG

- ▶ 4-Facet Point for good centering capability
- ▶ Optimized special flutes are ideal for removing chips and for productive drilling
- ▶ Enhanced chip evacuation by polished flute upgraded TiAlN nano layer full coating
- ▶ MQL system compatible (Minimum Quantity Lubrication)



MG $\approx 30^\circ$ h6 h7 140° 45 bar P.160 30 × D

EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter			Shank Diameter	Flute Length	Overall Length
	Metric	Inch	Decimal					Metric	Inch	Decimal			
TiAlN	D1			D2	L1	L2	TiAlN	D1			D2	L1	L2
DHM30072	7.2		.2835	8	249	289	DHM30077	7.7		.3031	8	265	305
DHM30073	7.3		.2874	8	249	289	DHM30078	7.8		.3071	8	265	305
DHM30074	7.4		.2913	8	249	289	DHM30079	7.9		.3110	8	265	305
DHM30075	7.5		.2953	8	249	289	DHM30020F	7.938	5/16	.3125	8	265	305
DHM30019F	7.541	19/64	.2969	8	265	305	DHM30080	8.0		.3150	8	265	305
DHM30076	7.6		.2992	8	265	305							

© : Excellent ○ : Good

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

Y/G DREAM DRILLS -MQL TYPE

RECOMMENDED CUTTING CONDITIONS

CARBIDE, DREAM DRILLS - MQL TYPE with COOLANT HOLES, TiAIN-COATED

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

WORK MATERIAL	P						K						
	CARBON STEELS						CAST IRON			DUCTILE CAST IRON			
STRENGTH	~ 1060 N/mm ²						250 ~ 350 N/mm ²			400 ~ 500 N/mm ²			
DRILLING SPEED(SFM)	230 ~ 290 ft/min						230 ~ 290 ft/min			220 ~ 240 ft/min			
DIAMETER	RPM		FEED		IPR		RPM		FEED		IPR		
	Metric(mm)	Decimal											
3.0	.1181	7500	0.06~0.12	.0024	.0047	7500	0.06~0.12	.0024	.0047	7500	0.06~0.12	.0024	.0047
4.0	.1575	6400	0.08~0.16	.0031	.0063	6400	0.08~0.16	.0031	.0063	5600	0.08~0.16	.0031	.0063
5.0	.1969	5800	0.10~0.20	.0039	.0079	5800	0.10~0.20	.0039	.0079	4500	0.10~0.20	.0039	.0079
6.0	.2362	4800	0.12~0.24	.0047	.0094	4800	0.12~0.24	.0047	.0094	3800	0.12~0.24	.0047	.0094
8.0	.3150	3600	0.16~0.28	.0063	.0110	3600	0.16~0.28	.0063	.0110	2800	0.16~0.28	.0063	.0110
10.0	.3937	2900	0.20~0.35	.0079	.0138	2900	0.20~0.35	.0079	.0138	2300	0.20~0.35	.0079	.0138
12.0	.4724	2400	0.24~0.42	.0094	.0165	2400	0.24~0.42	.0094	.0165	1900	0.24~0.42	.0094	.0165
14.0	.5512	2050	0.28~0.46	.0110	.0181	2050	0.28~0.46	.0110	.0181	1600	0.28~0.46	.0110	.0181


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

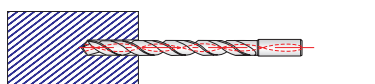
DHM25, DHM30 SERIES

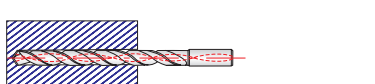
WORK MATERIAL	P						K						
	CARBON STEELS						CAST IRON			DUCTILE CAST IRON			
STRENGTH	~ 1060 N/mm ²						250 ~ 350 N/mm ²			400 ~ 500 N/mm ²			
DRILLING SPEED(SFM)	230 ~ 290 ft/min						230 ~ 290 ft/min			220 ~ 240 ft/min			
DIAMETER	RPM		FEED		IPR		RPM		FEED		IPR		
	Metric(mm)	Decimal											
3.0	.1181	6400	0.06~0.12	.0024	.0047	6400	0.06~0.12	.0024	.0047	6400	0.06~0.12	.0024	.0047
4.0	.1575	5500	0.08~0.16	.0031	.0063	5500	0.08~0.16	.0031	.0063	4700	0.08~0.16	.0031	.0063
5.0	.1969	4900	0.10~0.20	.0039	.0079	4900	0.10~0.20	.0039	.0079	3800	0.10~0.20	.0039	.0079
6.0	.2362	4200	0.12~0.24	.0047	.0094	4200	0.12~0.24	.0047	.0094	3200	0.12~0.24	.0047	.0094
8.0	.3150	3000	0.16~0.28	.0063	.0110	3000	0.16~0.28	.0063	.0110	2400	0.16~0.28	.0063	.0110
10.0	.3937	2500	0.20~0.35	.0079	.0138	2500	0.20~0.35	.0079	.0138	1900	0.20~0.35	.0079	.0138

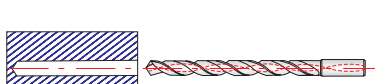
RPM = rev./min.
FEED = mm/rev.
IPR = inch/rev.

► Coolant Pressure : 900 PSI

- 

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

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

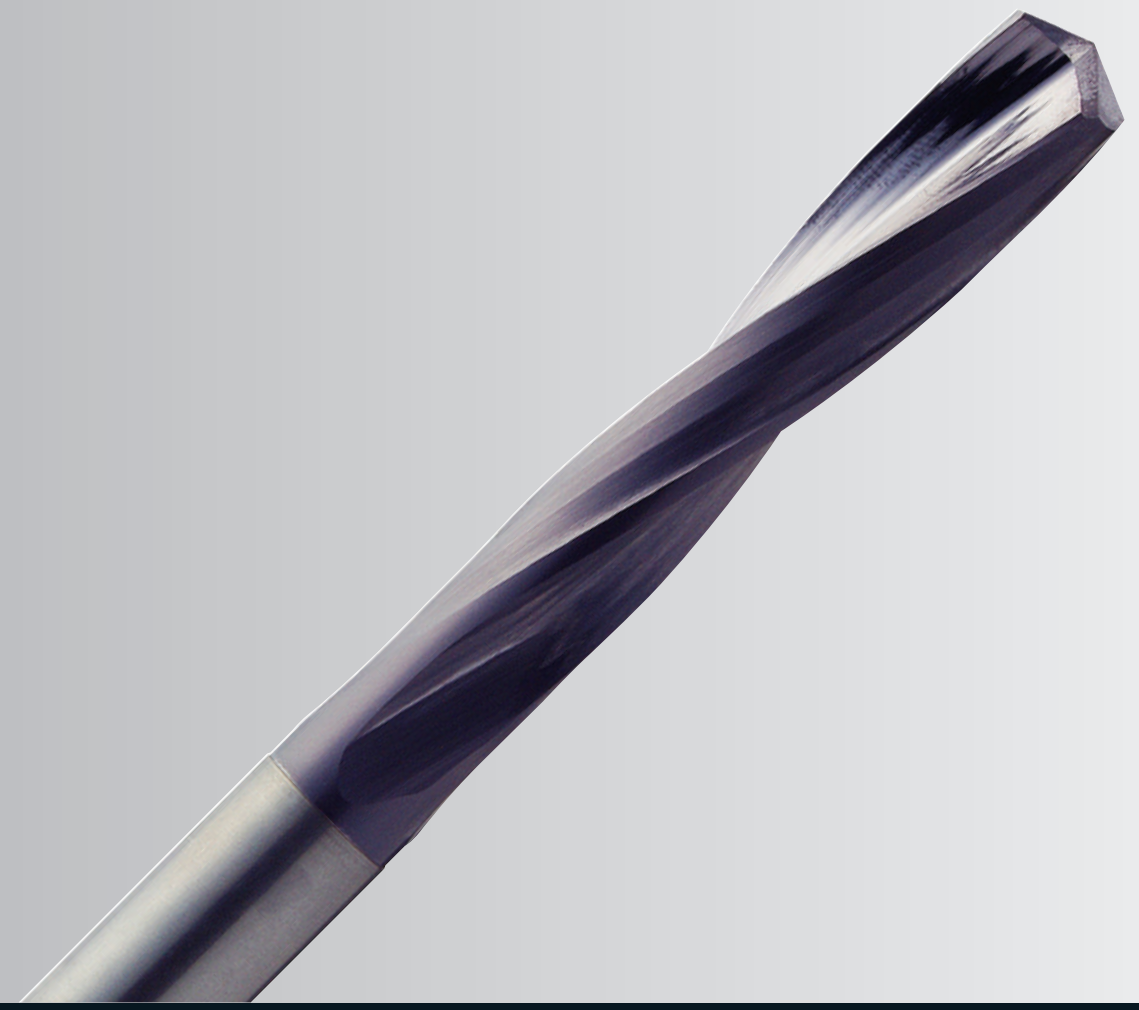
3. Before hitting the bottom of the guide hole, Increase SFM and feed rate for normal drilling.
- 

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

CARBIDE



Being the best through innovation





DREAM DRILLS - For HIGH HARDENED STEELS

- HIGH HARDENED STEELS, HRc50~HRc70

SELECTION GUIDE

SOLID CARBIDE DREAM DRILLS for HIGH HARDENED STEELS

SOLID CARBIDE DREAM DRILLS for HIGH HARDENED STEELS
- High Hardened Steels, HRc50~HRc70

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
INCH					
DH501		CARBIDE, DREAM DRILLS for HIGH HARDENED STEELS (HRc50~70)	D1/8	D3/4	164
METRIC					
DH500		CARBIDE, DREAM DRILLS for HIGH HARDENED STEELS (HRc50~70)	D1.0	D14.0	166
		RECOMMENDED CUTTING CONDITIONS			167

◎ : Excellent ○ : Good

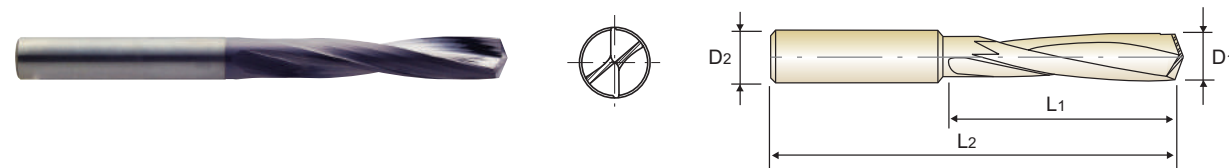
P			H		M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
			◎	◎							
			◎	◎							

YG DREAM DRILLS for HIGH HARDENED STEELS

DH501 SERIES

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

- ▶ Drilling for High Hardened Steels; Quenched Steels, Tempered Steels (under HRc 70)
- ▶ Special geometry design for Hardened Steels
- ▶ Minimum of cutting load through special thinning
- ▶ Performing good chip removal and powerful drilling
- ▶ Tolerance : Dia. Tolerance ØD1 : See page 135
Shank Tolerance ØD2: -.0001 -.0005



EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal					Fractional	Decimal			
TiAIN	D1		D2	L1	L2	TiAIN	D1		D2	L1	L2
DH501001	1/8	.1250	1/8	21/32	2	DH501027	#4	.2090	1/4	1-9/32	2-7/8
DH501002	#30	.1285	3/16	23/32	2	DH501028	#3	.2130	1/4	1-13/32	3
DH501003	#29	.1360	3/16	13/16	2	DH501029	7/32	.2188	1/4	1-13/32	3
DH501004	#28	.1405	3/16	13/16	2	DH501030	#2	.2210	1/4	1-13/32	3
DH501005	9/64	.1406	3/16	13/16	2	DH501031	#1	.2280	1/4	1-13/32	3
DH501006	#27	.1440	3/16	13/16	2	DH501032	15/64	.2344	1/4	1-13/32	3
DH501007	#26	.1470	3/16	13/16	2	DH501033	B	.2380	1/4	1-19/32	3-1/8
DH501008	#25	.1495	3/16	7/8	2-1/16	DH501034	C	.2420	1/4	1-19/32	3-1/8
DH501009	#24	.1520	3/16	7/8	2-1/16	DH501035	D	.2460	1/4	1-19/32	3-1/8
DH501010	#23	.1540	3/16	7/8	2-1/16	DH501036	1/4	.2500	1/4	1-19/32	3-1/8
DH501011	5/32	.1562	3/16	7/8	2-1/16	DH501037	F	.2570	3/8	1-19/32	3-1/8
DH501012	#22	.1570	3/16	7/8	2-1/16	DH501038	G	.2610	3/8	1-19/32	3-1/8
DH501013	#21	.1590	3/16	7/8	2-1/16	DH501039	17/64	.2656	3/8	1-19/32	3-1/8
DH501014	#20	.1610	3/16	1	2-1/2	DH501040	I	.2720	3/8	1-25/32	3-3/8
DH501015	#19	.1660	3/16	1	2-1/2	DH501041	J	.2770	3/8	1-25/32	3-3/8
DH501016	11/64	.1719	3/16	1-1/8	2-3/4	DH501042	9/32	.2812	3/8	1-25/32	3-3/8
DH501017	#15	.1800	3/16	1-1/8	2-3/4	DH501043	L	.2900	3/8	1-25/32	3-3/8
DH501018	#14	.1820	3/16	1-1/8	2-3/4	DH501044	M	.2950	3/8	1-25/32	3-3/8
DH501019	3/16	.1875	3/16	1-1/8	2-3/4	DH501045	19/64	.2969	3/8	1-25/32	3-3/8
DH501020	#10	.1935	1/4	1-9/32	2-7/8	DH501046	N	.3020	3/8	1-31/32	3-7/8
DH501021	#9	.1960	1/4	1-9/32	2-7/8	DH501047	5/16	.3125	3/8	1-31/32	3-7/8
DH501022	#8	.1990	1/4	1-9/32	2-7/8	DH501048	O	.3160	3/8	1-31/32	3-7/8
DH501023	#7	.2010	1/4	1-9/32	2-7/8	DH501049	21/64	.3281	3/8	1-31/32	3-7/8
DH501024	13/64	.2031	1/4	1-9/32	2-7/8	DH501050	Q	.3320	3/8	1-31/32	3-7/8
DH501025	#6	.2040	1/4	1-9/32	2-7/8	DH501051	R	.3390	3/8	2-1/4	4-1/8
DH501026	#5	.2055	1/4	1-9/32	2-7/8	DH501052	11/32	.3438	3/8	2-1/4	4-1/8

▶ NEXT PAGE

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55 HRc55~								
			◎	◎							

YG DREAM DRILLS for HIGH HARDENED STEELS

DH501 SERIES

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

- ▶ Drilling for High Hardened Steels; Quenched Steels, Tempered Steels (under HRc 70)
- ▶ Special geometry design for Hardened Steels
- ▶ Minimum of cutting load through special thinning
- ▶ Performing good chip removal and powerful drilling
- ▶ Tolerance : Dia. Tolerance ØD1 : See page 135
Shank Tolerance ØD2: -.0001 -.0005



EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal					Fractional	Decimal			
TiAIN	D1		D2	L1	L2	TiAIN	D1		D2	L1	L2
DH501053	23/64	.3594	3/8	2-1/4	4-1/8	DH501069	17/32	.5312	5/8	3-1/16	5
DH501054	U	.3680	3/8	2-1/4	4-1/8	DH501070	35/64	.5469	5/8	3-1/16	5
DH501055	3/8	.3750	3/8	2-1/4	4-1/8	DH501071	9/16	.5625	5/8	3-1/16	5
DH501056	V	.3770	1/2	2-1/2	4-3/8	DH501072	37/64	.5781	5/8	3-9/32	5-1/4
DH501057	25/64	.3906	1/2	2-1/2	4-3/8	DH501073	19/32	.5937	5/8	3-9/32	5-1/4
DH501058	X	.3970	1/2	2-1/2	4-3/8	DH501074	39/64	.6094	5/8	3-9/32	5-1/4
DH501059	Y	.4040	1/2	2-1/2	4-3/8	DH501075	5/8	.6250	5/8	3-9/32	5-1/4
DH501060	13/32	.4062	1/2	2-1/2	4-3/8	DH501076	41/64	.6406	3/4	3-9/32	5-1/4
DH501061	Z	.4130	1/2	2-1/2	4-3/8	DH501077	21/32	.6563	3/4	3-11/16	5-5/8
DH501062	27/64	.4219	1/2	2-13/16	4-5/8	DH501078	43/64	.6719	3/4	3-11/16	5-5/8
DH501063	7/16	.4375	1/2	2-13/16	4-5/8	DH501079	11/16	.6875	3/4	3-11/16	5-5/8
DH501064	29/64	.4531	1/2	2-13/16	4-5/8	DH501080	45/64	.7031	3/4	3-11/16	5-5/8
DH501065	15/32	.4688	1/2	2-13/16	4-5/8	DH501081	23/32	.7188	3/4	3-3/4	6
DH501066	31/64	.4844	1/2	2-13/16	4-5/8	DH501082	47/64	.7344	3/4	3-3/4	6
DH501067	1/2	.5000	1/2	3-1/16	5	DH501083	3/4	.7500	3/4	3-3/4	6
DH501068	33/64	.5156	5/8	3-1/16	5						

◎ : Excellent ○ : Good

P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRc45~55 HRc55~								
			◎	◎							

YG DREAM DRILLS
for HIGH HARDENED STEELS

DH500 SERIES

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

- ▶ Drilling for High Hardened Steels; Quenched Steels, Tempered Steels (under HRc 70)
- ▶ Special geometry design for Hardened Steels
- ▶ Minimum of cutting load through special thinning
- ▶ Performing good chip removal and powerful drilling



Unit : mm

EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.	Drill Diameter		Shank Diameter	Flute Length	Overall Length
	Metric	Decimal					Metric	Decimal			
	D1		D2	L1	L2		D1		D2	L1	L2
	TiAlN						TiAlN				
DH500010	1.0	.0394	3	6	40	DH500051	5.1	.2008	6	32	72
DH500011	1.1	.0433	3	6	40	DH500052	5.2	.2047	6	32	72
DH500012	1.2	.0472	3	6	40	DH500053	5.3	.2087	6	32	72
DH500013	1.3	.0512	3	8	40	DH500055	5.5	.2165	6	35	75
DH500014	1.4	.0551	3	8	40	DH500060	6.0	.2362	6	35	75
DH500015	1.5	.0591	3	8	40	DH500062	6.2	.2441	8	40	80
DH500016	1.6	.0630	3	10	40	DH500065	6.5	.2559	8	40	80
DH500017	1.7	.0669	3	10	40	DH500068	6.8	.2677	8	45	85
DH500018	1.8	.0709	3	10	40	DH500069	6.9	.2717	8	45	85
DH500019	1.9	.0748	3	10	40	DH500070	7.0	.2756	8	45	85
DH500020	2.0	.0787	3	12	42	DH500075	7.5	.2953	8	45	85
DH500025	2.5	.0984	3	14	44	DH500080	8.0	.3150	8	50	98
DH500026	2.6	.1024	3	16	44	DH500085	8.5	.3346	10	50	98
DH500028	2.8	.1102	3	16	46	DH500086	8.6	.3386	10	57	105
DH500030	3.0	.1181	3	18	46	DH500088	8.8	.3465	10	57	105
DH500033	3.3	.1299	4	18	48	DH500090	9.0	.3543	10	57	105
DH500034	3.4	.1339	4	20	50	DH500093	9.3	.3661	10	57	105
DH500035	3.5	.1378	4	20	50	DH500095	9.5	.3740	10	57	105
DH500038	3.8	.1496	4	22	52	DH500100	10.0	.3937	10	63	111
DH500040	4.0	.1575	4	22	52	DH500102	10.2	.4016	12	63	111
DH500041	4.1	.1614	6	25	65	DH500103	10.3	.4055	12	63	111
DH500042	4.2	.1654	6	25	65	DH500105	10.5	.4134	12	71	111
DH500043	4.3	.1693	6	28	68	DH500108	10.8	.4252	12	71	119
DH500044	4.4	.1732	6	28	68	DH500110	11.0	.4331	12	71	119
DH500045	4.5	.1772	6	28	68	DH500115	11.5	.4528	12	71	119
DH500046	4.6	.1811	6	28	68	DH500120	12.0	.4724	12	71	119
DH500048	4.8	.1890	6	32	72	DH500121	12.1	.4764	14	77	125
DH500049	4.9	.1929	6	32	72	DH500140	14.0	.5512	14	77	125
DH500050	5.0	.1969	6	32	72						

◎ : Excellent ○ : Good

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

YG DREAM DRILLS
for HIGH HARDENED STEELS

RECOMMENDED CUTTING CONDITIONS

CARBIDE, DREAM DRILLS for HIGH HARDENED STEELS (HRC50~70), TiAlN-COATED

DH501 SERIES

WORK MATERIAL	P			H							
	HARDENED STEELS			HIGH HARDENED STEELS							
	HRc 50~55			HRc 55~60			HRc 60~70				
DRILLING SPEED(SFM)			45 ~ 72 ft/min			32 ~ 52 ft/min			26 ~ 42 ft/min		
DIAMETER			RPM	FEED	IPR	RPM	FEED	IPR	RPM	FEED	IPR
Inch	Metric(mm)	Decimal									
5/64	1.984	.0781	2860	0.04	.0015	2000	0.04	.0015	1900	0.04	.0015
1/8	3.175	.1250	1900	0.04	.0015	1330	0.04	.0015	1250	0.04	.0015
5/32	3.969	.1563	1430	0.04	.0015	1000	0.04	.0015	950	0.04	.0015
13/64	5.159	.2031	1150	0.04	.0015	800	0.04	.0015	750	0.04	.0015
15/64	5.953	.2344	960	0.04	.0015	670	0.04	.0015	630	0.04	.0015
5/16	7.938	.3125	720	0.04	.0015	500	0.04	.0015	480	0.04	.0015
25/64	9.922	.3906	570	0.04	.0015	400	0.04	.0015	380	0.04	.0015
15/32	11.906	.4688	480	0.04	.0015	330	0.04	.0015	320	0.04	.0015
9/16	14.288	.5625	435	0.04	.0015	280	0.04	.0015	270	0.04	.0015
41/64	16.272	.6406	380	0.04	.0015	250	0.04	.0015	240	0.04	.0015
11/16	17.463	.6875	325	0.04	.0015	235	0.04	.0015	190	0.04	.0015
47/64	18.653	.7344	310	0.04	.0015	220	0.04	.0015	180	0.04	.0015

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

DH500 SERIES

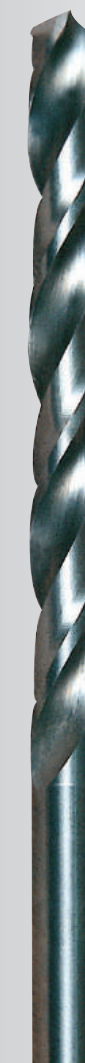
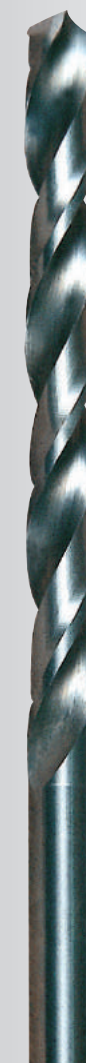
WORK MATERIAL	P			H							
	HARDENED STEELS			HIGH HARDENED STEEL S							
	HRc 50~55			HRc 55~60			HRc 60~70				
DRILLING SPEED(SFM)			45 ~ 72 ft/min			32 ~ 52 ft/min			26 ~ 42 ft/min		
DIAMETER		RPM	FEED	IPR	RPM	FEED	IPR	RPM	FEED	IPR	
Metric(mm)	Inch										
1.0	.0394	5600	0.04	.0015	4000	0.04	.0015	3700	0.04	.0015	
2.0	.0787	2900	0.04	.0015	2100	0.04	.0015	1900	0.04	.0015	
3.0	.1181	1900	0.04	.0015	1330	0.04	.0015	1250	0.04	.0015	
4.0	.1575	1430	0.04	.0015	1000	0.04	.0015	950	0.04	.0015	
5.0	.1969	1150	0.04	.0015	800	0.04	.0015	750	0.04	.0015	
6.0	.2362	960	0.04	.0015	670	0.04	.0015	630	0.04	.0015	
8.0	.3150	720	0.04	.0015	500	0.04	.0015	480	0.04	.0015	
10.0	.3937	570	0.04	.0015	400	0.04	.0015	380	0.04	.0015	
12.0	.4724	480	0.04	.0015	330	0.04	.0015	320	0.04	.0015	
14.0	.5512	438	0.04	.0015	282	0.04	.0015	272	0.04	.0015	

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



Being the best through innovation

CARBIDE

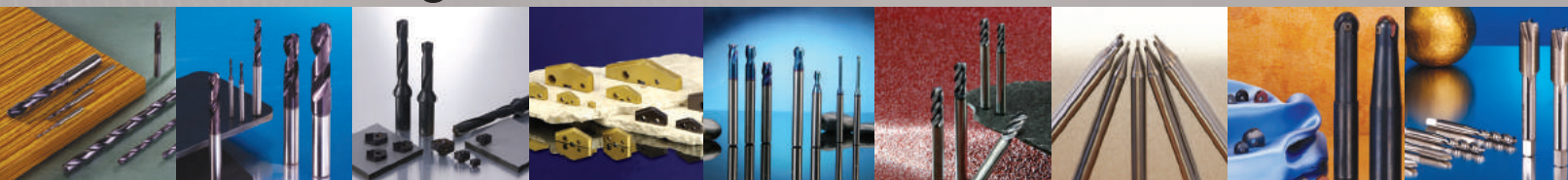


STANDARD CARBIDE DRILLS

- General Purpose
- 118° Point



Global Cutting Tool Leader **YG-1**





SELECTION GUIDE

STANDARD SOLID CARBIDE DRILLS

STANDARD SOLID CARBIDE DRILLS

- General Purpose
- 118° Point

ITEM	MODEL	DESCRIPTION	SIZE		PAGE	
			MIN	MAX		
INCH						
D5412 DH412		CARBIDE DRILLS / Wire gauge sizes	JOBBER	#56	#1	172
D5413 DH413		CARBIDE DRILLS / Letter sizes	JOBBER	A	Z	173
D5417 DH417		CARBIDE DRILLS / Fractional sizes	JOBBER	D3/64	D1/2	174
RECOMMENDED CUTTING CONDITIONS					175	

◎ : Excellent ○ : Good

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

YG STANDARD CARBIDE DRILLS

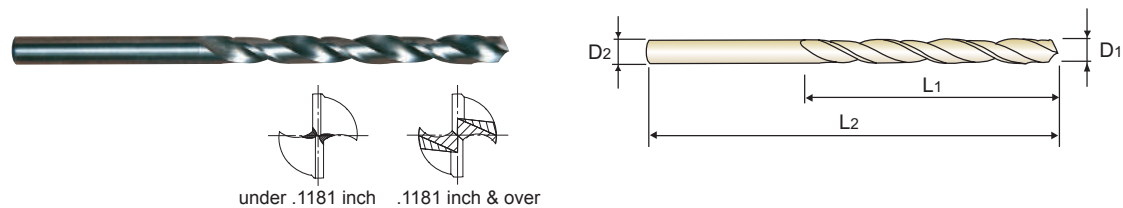
DH412 SERIES

D5412 SERIES

CARBIDE DRILLS

JOBBER

► **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.



under .1181 inch .1181 inch & over



D₁=D₂

► **Wire gauge sizes**

Unit : Inch

EDP No.		Diameter		Flute Length	Overall Length	EDP No.		Diameter		Flute Length	Overall Length
Bright Finish	TiAIN	Wire gauge	Decimal	L ₁	L ₂	Bright Finish	TiAIN	Wire gauge	Decimal	L ₁	L ₂
		D ₁ = D ₂						D ₁ = D ₂			
D5412101	DH412101	1	.2280	1-3/4	3	D5412129	DH412129	29	.1360	1-3/8	2-1/2
D5412102	DH412102	2	.2210	1-3/4	3	D5412130	DH412130	30	.1285	1-1/4	2-1/4
D5412103	DH412103	3	.2130	1-3/4	3	D5412131	DH412131	31	.1200	1-1/4	2-1/4
D5412104	DH412104	4	.2090	1-3/4	3	D5412132	DH412132	32	.1160	1-1/4	2-1/4
D5412105	DH412105	5	.2055	1-3/4	3	D5412133	DH412133	33	.1130	1-1/4	2-1/4
D5412106	DH412106	6	.2040	1-3/4	3	D5412134	DH412134	34	.1110	1-1/4	2-1/4
D5412107	DH412107	7	.2010	1-3/4	3	D5412135	DH412135	35	.1100	1-1/4	2-1/4
D5412108	DH412108	8	.1990	1-3/4	3	D5412136	DH412136	36	.1065	1-1/4	2-1/4
D5412109	DH412109	9	.1960	1-3/4	3	D5412137	DH412137	37	.1040	1-1/4	2-1/4
D5412110	DH412110	10	.1935	1-5/8	2-3/4	D5412138	DH412138	38	.1015	1-1/4	2-1/4
D5412111	DH412111	11	.1910	1-5/8	2-3/4	D5412139	DH412139	39	.0995	1-1/4	2-1/4
D5412112	DH412112	12	.1890	1-5/8	2-3/4	D5412140	DH412140	40	.0980	1	2
D5412113	DH412113	13	.1850	1-5/8	2-3/4	D5412141	DH412141	41	.0960	1	2
D5412114	DH412114	14	.1820	1-5/8	2-3/4	D5412142	DH412142	42	.0935	1	2
D5412115	DH412115	15	.1800	1-5/8	2-3/4	D5412143	DH412143	43	.0890	1	2
D5412116	DH412116	16	.1770	1-5/8	2-3/4	D5412144	DH412144	44	.0860	1	2
D5412117	DH412117	17	.1730	1-5/8	2-3/4	D5412145	DH412145	45	.0820	7/8	1-3/4
D5412118	DH412118	18	.1695	1-5/8	2-3/4	D5412146	DH412146	46	.0810	7/8	1-3/4
D5412119	DH412119	19	.1660	1-5/8	2-3/4	D5412147	DH412147	47	.0785	7/8	1-3/4
D5412120	DH412120	20	.1610	1-3/8	2-1/2	D5412148	DH412148	48	.0760	7/8	1-3/4
D5412121	DH412121	21	.1590	1-3/8	2-1/2	D5412149	DH412149	49	.0730	7/8	1-3/4
D5412122	DH412122	22	.1570	1-3/8	2-1/2	D5412150	DH412150	50	.0700	7/8	1-3/4
D5412123	DH412123	23	.1540	1-3/8	2-1/2	D5412151	DH412151	51	.0670	3/4	1-1/2
D5412124	DH412124	24	.1520	1-3/8	2-1/2	D5412152	DH412152	52	.0635	3/4	1-1/2
D5412125	DH412125	25	.1495	1-3/8	2-1/2	D5412153	DH412153	53	.0595	3/4	1-1/2
D5412126	DH412126	26	.1470	1-3/8	2-1/2	D5412154	DH412154	54	.0550	3/4	1-1/2
D5412127	DH412127	27	.1440	1-3/8	2-1/2	D5412155	DH412155	55	.0520	3/4	1-1/2
D5412128	DH412128	28	.1405	1-3/8	2-1/2	D5412156	DH412156	56	.0465	3/4	1-1/2

► Other coating is available on you request.

◎ : Excellent ○ : Good

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

YG STANDARD CARBIDE DRILLS

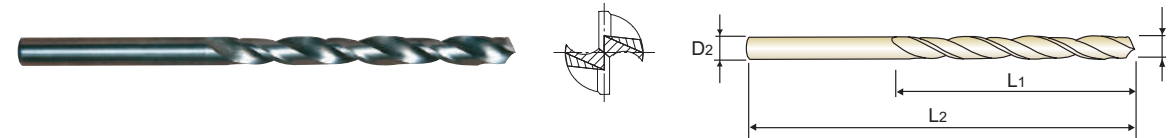
DH413 SERIES

D5413 SERIES

CARBIDE DRILLS

JOBBER

► **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.



D₁=D₂

► **Letter sizes**

Unit : Inch

EDP No.		Diameter		Flute Length	Overall Length	EDP No.		Diameter		Flute Length	Overall Length
Bright Finish	TiAIN	Letter	Decimal	L ₁	L ₂	Bright Finish	TiAIN	Letter	Decimal	L ₁	L ₂
		D ₁ = D ₂						D ₁ = D ₂			
D5413201	DH413201	A	.2340	2	3-1/4	D5413214	DH413214	N	.3020	2-3/8	3-3/4
D5413202	DH413202	B	.2380	2	3-1/4	D5413215	DH413215	O	.3160	2-3/8	3-3/4
D5413203	DH413203	C	.2420	2	3-1/4	D5413216	DH413216	P	.3230	2-3/8	3-3/4
D5413204	DH413204	D	.2460	2	3-1/4	D5413217	DH413217	Q	.3320	2-1/2	4
D5413205	DH413205	E	.2500	2	3-1/4	D5413218	DH413218	R	.3390	2-1/2	4
D5413206	DH413206	F	.2570	2	3-1/4	D5413219	DH413219	S	.3480	2-1/2	4
D5413207	DH413207	G	.2610	2-1/8	3-1/2	D5413220	DH413220	T	.3580	2-3/4	4-1/4
D5413208	DH413208	H	.2660	2-1/8	3-1/2	D5413221	DH413221	U	.3680	2-3/4	4-1/4
D5413209	DH413209	I	.2720	2-1/8	3-1/2	D5413222	DH413222	V	.3770	2-3/4	4-1/4
D5413210	DH413210	J	.2770	2-1/8	3-1/2	D5413223	DH413223	W	.3860	2-7/8	4-1/2
D5413211	DH413211	K	.2810	2-1/8	3-1/2	D5413224	DH413224	X	.3970	2-7/8	4-1/2
D5413212	DH413212	L	.2900	2-1/8	3-1/2	D5413225	DH413225	Y	.4040	2-7/8	4-1/2
D5413213	DH413213	M	.2950	2-3/8	3-3/4	D5413226	DH413226	Z	.4130	2-7/8	4-1/2

► Other coating is available on you request.

◎ : Excellent ○ : Good

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

STANDARD CARBIDE DRILLS

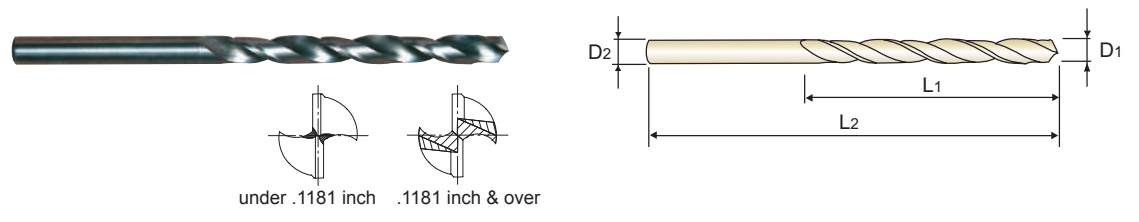
DH417 SERIES

D5417 SERIES

CARBIDE DRILLS

JOBBER

► **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.



D₁=D₂

► **Fractional sizes**

Unit : Inch

EDP No.		Diameter		Flute Length	Overall Length	EDP No.		Diameter		Flute Length	Overall Length
Bright Finish	TiAlN	Fractional	Decimal			Bright Finish	TiAlN	Fractional	Decimal		
		D ₁ = D ₂		L ₁	L ₂	D ₁ = D ₂		L ₁	L ₂		
D5417003	DH417003	3/64	.0469	3/4	1-1/2	D5417018	DH417018	9/32	.2813	2-1/8	3-1/2
D5417004	DH417004	1/16	.0625	3/4	1-1/2	D5417019	DH417019	19/64	.2969	2-3/8	3-3/4
D5417005	DH417005	5/64	.0781	7/8	1-3/4	D5417020	DH417020	5/16	.3125	2-3/8	3-3/4
D5417006	DH417006	3/32	.0938	1	2	D5417021	DH417021	21/64	.3281	2-1/2	4
D5417007	DH417007	7/64	.1094	1-1/4	2-1/4	D5417022	DH417022	11/32	.3438	2-1/2	4
D5417008	DH417008	1/8	.1250	1-1/4	2-1/4	D5417023	DH417023	23/64	.3594	2-3/4	4-1/4
D5417009	DH417009	9/64	.1406	1-3/8	2-1/2	D5417024	DH417024	3/8	.3750	2-3/4	4-1/4
D5417010	DH417010	5/32	.1563	1-3/8	2-1/2	D5417025	DH417025	25/64	.3906	2-7/8	4-1/2
D5417011	DH417011	11/64	.1719	1-5/8	2-3/4	D5417026	DH417026	13/32	.4063	2-7/8	4-1/2
D5417012	DH417012	3/16	.1875	1-5/8	2-3/4	D5417027	DH417027	27/64	.4219	2-7/8	4-1/2
D5417013	DH417013	13/64	.2031	1-3/4	3	D5417028	DH417028	7/16	.4375	2-7/8	4-1/2
D5417014	DH417014	7/32	.2188	1-3/4	3	D5417029	DH417029	29/64	.4531	3	4-3/4
D5417015	DH417015	15/64	.2344	2	3-1/4	D5417030	DH417030	15/32	.4688	3	4-3/4
D5417016	DH417016	1/4	.2500	2	3-1/4	D5417031	DH417031	31/64	.4844	3	4-3/4
D5417017	DH417017	17/64	.2656	2-1/8	3-1/2	D5417032	DH417032	1/2	.5000	3	4-3/4

► Other coating is available on you request.

◎ : Excellent ○ : Good

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

STANDARD CARBIDE DRILLS

RECOMMENDED CUTTING CONDITIONS

CARBIDE DRILLS

D5412, DH412, D5413, DH413, D5417, DH417 SERIES

WORK MATERIAL	P				K			
	NON-ALLOY STEELS		ALLOY STEELS		SOFT GREY CAST IRON		HARD GREY CAST IRON	
DIAMETER	N	S	N	S	N	S	N	S
3/64	23000	.0012	17200	.0012	32000	.0016	23000	.0016
5/64	11500	.0016	8600	.0016	16000	.0020	11500	.0020
1/8	7800	.0020	5750	.0020	10500	.0024	7600	.0024
5/32	5800	.0024	4300	.0024	7800	.0028	5700	.0028
13/64	4700	.0028	3450	.0028	6200	.0031	4550	.0031
15/64	3900	.0031	2850	.0031	5200	.0035	3800	.0035
9/32	3350	.0035	2450	.0035	4500	.0039	3250	.0039
5/16	2900	.0039	2150	.0039	3900	.0047	2850	.0047
23/64	2600	.0043	1900	.0043	3450	.0055	2550	.0055
25/64	2350	.0047	1700	.0047	3100	.0063	2300	.0063
7/16	2150	.0051	1600	.0051	2850	.0071	2100	.0071
15/32	1950	.0055	1450	.0055	2600	.0079	1900	.0079
33/64	1800	.0063	1350	.0063	2400	.0079	1750	.0079

WORK MATERIAL	M		N					
	STAINLESS STEELS		Al-Si ALLOY, Si<10%		Al-Si ALLOY, Si>10%		Ti, Ni ALLOY STEELS	
DIAMETER	N	S	N	S	N	S	N	S
3/64	12000	.0016	54000	.0020	42000	.0020	11800	.0008
5/64	6000	.0012	27000	.0024	21000	.0024	5900	.0012
1/8	4000	.0016	18000	.0028	14000	.0028	3900	.0016
5/32	3000	.0020	13000	.0031	10500	.0031	2950	.0020
13/64	2400	.0024	10500	.0035	8500	.0035	2350	.0024
15/64	2000	.0028	8800	.0043	7100	.0043	1950	.0028
9/32	1700	.0031	7600	.0051	6100	.0051	1700	.0031
5/16	1500	.0035	6600	.0059	5350	.0059	1450	.0035
23/64	1350	.0039	5900	.0067	4750	.0067	1300	.0039
25/64	1200	.0043	5300	.0075	4250	.0075	1200	.0043
7/16	1100	.0047	4850	.0083	3900	.0083	1050	.0047
15/32	1000	.0051	4450	.0091	3550	.0091	980	.0051
33/64	950	.0051	4100	.0098	3300	.0098	905	.0051

N = R.P.M
S = Inch per Revolution(inch/rev.)

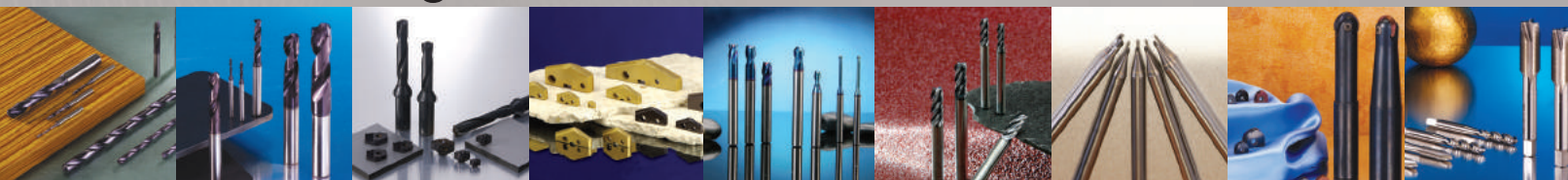


Being the best through innovation

HSS



Global Cutting Tool Leader **YG-1**



MULTI-1 DRILLS

HSS-PM MULTI-1 DRILLS



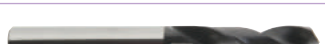
- Multi Purpose Drilling. Particularly for Stainless Steels, Titanium

SELECTION GUIDE

HSS-PM MULTI-1 DRILLS

PREMIUM HSS-PM MULTI-1 DRILLS

Premium HSS-PM Drills for wide range of applications
- Carbon Steels, Alloy Steels, Stainless steels, Titanium etc.

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
INCH					
CDRA05		PREMIUM HSS-PM MULTI-1 DRILLS / M15 Fractional sizes	D3/32	D1/2	180
CDRA06		PREMIUM HSS-PM MULTI-1 DRILLS / M16 Wire gauge sizes	#45	#1	181
CDRA07		PREMIUM HSS-PM MULTI-1 DRILLS / M17 Letter sizes	B	Z	182
		RECOMMENDED CUTTING CONDITIONS			183

◎ : Excellent ○ : Good

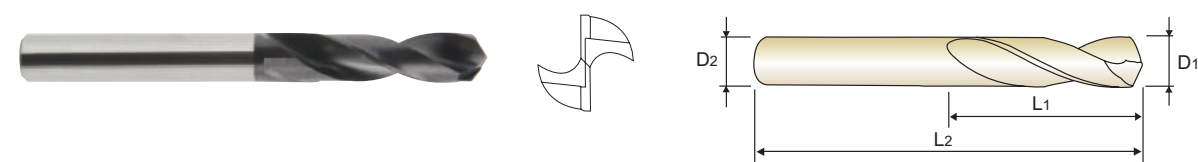
P			H	M	K	N				S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			○	○	○				◎
◎	◎	○			○	○	○				◎
◎	◎	○			○	○	○				◎

YG MULTI-1 DRILLS

CDRA05 SERIES

PREMIUM HSS-PM, MULTI-1 DRILLS

- **Features :** Excellent wear resistance by using Premium powder metallurgy materials. With special point geometry, no centering required. Minimal drill wandering and improved hole tolerances. Better tool life with excellent coating.
- **Application :** Applicable to various materials including aluminum and stainless steel, as well carbon steel and structural steel.



► **M15 / Fractional sizes**

Unit : Inch

EDP No.	Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.	Diameter		Shank Diameter	Flute Length	Overall Length
	Fractional	Decimal					Fractional	Decimal			
TiAlN	D1		D2	L1	L2	TiAlN	D1		D2	L1	L2
M15006	3/32	.0938	1/8	1/2	1-3/4	M15020	5/16	.3125	3/8	1-1/2	3-3/8
M15007	7/64	.1094	1/8	5/8	1-7/8	M15021	21/64	.3281	3/8	1-1/2	3-3/8
M15008	1/8	.1250	1/8	3/4	2	M15022	11/32	.3438	3/8	1-5/8	3-1/2
M15009	9/64	.1406	3/16	13/16	2-1/8	M15023	23/64	.3594	3/8	1-5/8	3-1/2
M15010	5/32	.1563	3/16	13/16	2-1/8	M15024	3/8	.3750	3/8	1-5/8	3-1/2
M15011	11/64	.1719	3/16	1	2-3/8	M15025	25/64	.3906	1/2	1-11/16	3-7/8
M15012	3/16	.1875	3/16	1	2-3/8	M15026	13/32	.4063	1/2	1-11/16	3-7/8
M15013	13/64	.2031	1/4	1-1/8	2-7/8	M15027	27/64	.4219	1/2	1-7/8	4-1/8
M15014	7/32	.2188	1/4	1-1/8	2-7/8	M15028	7/16	.4375	1/2	1-7/8	4-1/8
M15015	15/64	.2344	1/4	1-1/4	3	M15029	29/64	.4531	1/2	1-7/8	4-1/8
M15016	1/4	.2500	1/4	1-1/4	3	M15030	15/32	.4688	1/2	2	4-1/4
M15017	17/64	.2656	3/8	1-3/8	3-3/16	M15031	31/64	.4844	1/2	2	4-1/4
M15018	9/32	.2813	3/8	1-3/8	3-3/16	M15032	1/2	.5000	1/2	2	4-1/4
M15019	19/64	.2969	3/8	1-3/8	3-3/16						

◎ : Excellent ○ : Good

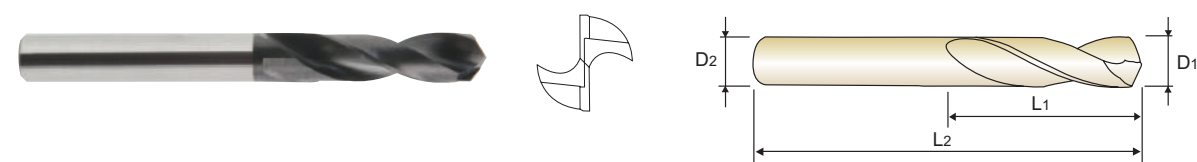
P			H	M	K	N				S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			○	○	○				◎

YG MULTI-1 DRILLS

CDRA06 SERIES

PREMIUM HSS-PM, MULTI-1 DRILLS

- **Features :** Excellent wear resistance by using Premium powder metallurgy materials. With special point geometry, no centering required. Minimal drill wandering and improved hole tolerances. Better tool life with excellent coating.
- **Application :** Applicable to various materials including aluminum and stainless steel, as well carbon steel and structural steel.



► **M16 / Wire gauge sizes**

Unit : Inch

EDP No.	Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.	Diameter		Shank Diameter	Flute Length	Overall Length
	Wire gauge	Decimal					Wire gauge	Decimal			
TiAlN	D1		D2	L1	L2	TiAlN	D1		D2	L1	L2
M16045	45	.0820	1/8	3/4	2	M16022	22	.1570	3/16	1-1/16	2-1/2
M16044	44	.0860	1/8	3/4	2	M16021	21	.1590	3/16	1-1/16	2-1/2
M16043	43	.0890	1/8	3/4	2	M16020	20	.1610	3/16	1-1/16	2-1/2
M16042	42	.0935	1/8	3/4	2	M16019	19	.1660	3/16	1-1/16	2-1/2
M16041	41	.0960	1/8	13/16	2-1/16	M16018	18	.1695	3/16	1-1/16	2-1/2
M16040	40	.0980	1/8	13/16	2-1/16	M16017	17	.1730	3/16	1-1/8	2-9/16
M16039	39	.0995	1/8	13/16	2-1/4	M16016	16	.1770	3/16	1-1/8	2-9/16
M16038	38	.1015	1/8	13/16	2-1/4	M16015	15	.1800	3/16	1-1/8	2-9/16
M16037	37	.1040	1/8	13/16	2-1/4	M16014	14	.1820	3/16	1-1/8	2-9/16
M16036	36	.1065	1/8	13/16	2-1/4	M16013	13	.1850	3/16	1-1/8	2-9/16
M16035	35	.1100	1/8	7/8	2-5/16	M16012	12	.1890	1/4	1-3/16	3
M16034	34	.1110	1/8	7/8	2-5/16	M16011	11	.1910	1/4	1-3/16	3
M16033	33	.1130	1/8	7/8	2-5/16	M16010	10	.1935	1/4	1-3/16	3
M16032	32	.1160	1/8	7/8	2-5/16	M16009	9	.1960	1/4	1-3/16	3
M16031	31	.1120	1/8	7/8	2-5/16	M16008	8	.1990	1/4	1-3/16	3
M16030	30	.1285	3/16	15/16	2-3/8	M16007	7	.2010	1/4	1-3/16	3
M16029	29	.1360	3/16	15/16	2-3/8	M16006	6	.2040	1/4	1-1/4	3-1/16
M16028	28	.1405	3/16	15/16	2-3/8	M16005	5	.2055	1/4	1-1/4	3-1/16
M16027	27	.1440	3/16	1	2-7/16	M16004	4	.2090	1/4	1-1/4	3-1/16
M16026	26	.1470	3/16	1	2-7/16	M16003	3	.2130	1/4	1-1/4	3-1/16
M16025	25	.1495	3/16	1	2-7/16	M16002	2	.2210	1/4	1-5/16	3-1/8
M16024	24	.1520	3/16	1	2-7/16	M16001	1	.2280	1/4	1-5/16	3-1/8
M16023	23	.1540	3/16	1	2-7/16						

◎ : Excellent ○ : Good

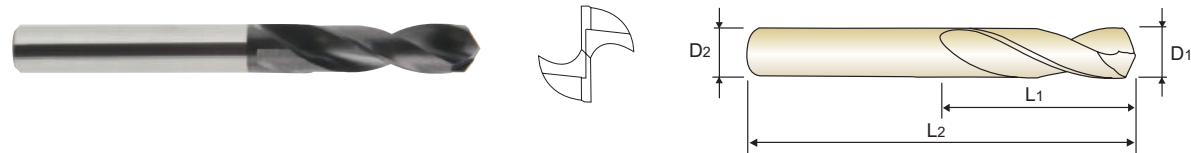
P			H	M	K	N				S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			○	○	○				◎

YG MULTI-1 DRILLS

CDRA07 SERIES

PREMIUM HSS-PM, MULTI-1 DRILLS

- **Features :** Excellent wear resistance by using Premium powder metallurgy materials. With special point geometry, no centering required. Minimal drill wandering and improved hole tolerances. Better tool life with excellent coating.
- **Application :** Applicable to various materials including aluminum and stainless steel, as well carbon steel and structural steel.



► M17 / Letter sizes

EDP No.		Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.		Diameter		Shank Diameter	Flute Length	Overall Length
TiAIN	D1	Letter	Decimal				TiAIN	D1	Letter	Decimal			
M1700B	B	.2380	1/4	1-3/8	3-3/16	M1700N	N	.3020	3/8	1-5/8	3-7/16		
M1700C	C	.2420	1/4	1-3/8	3-3/16	M1700O	O	.3160	3/8	1-11/16	3-1/2		
M1700D	D	.2460	1/4	1-3/8	3-3/16	M1700Q	Q	.3320	3/8	1-11/16	3-1/2		
M1700F	F	.2570	3/8	1-7/16	3-1/4	M1700R	R	.3390	3/8	1-11/16	3-1/2		
M1700G	G	.2610	3/8	1-7/16	3-1/4	M1700U	U	.3680	3/8	1-13/16	3-5/8		
M1700I	I	.2720	3/8	1-1/2	3-5/16	M1700V	V	.3770	1/2	1-7/8	3-31/32		
M1700J	J	.2770	3/8	1-1/2	3-5/16	M1700X	X	.3970	1/2	1-15/16	4-1/32		
M1700L	L	.2900	3/8	1-9/16	3-3/8	M1700Y	Y	.4040	1/2	1-15/16	4-1/32		
M1700M	M	.2950	3/8	1-9/16	3-3/8	M1700Z	Z	.4130	1/2	2	4-1/32		

Unit : Inch

◎ : Excellent ○ : Good

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

YG MULTI-1 DRILLS

RECOMMENDED CUTTING CONDITIONS

PREMIUM HSS-PM, MULTI-1 DRILLS

CDRA05, CDRA06, CDRA07 SERIES

WORK MATERIAL	P								
	STRUCTURAL STEEL CARBON STEEL			ALLOY STEEL			MOLD STEEL		
	DIAMETER	RPM	FEED		RPM	FEED		RPM	FEED
(IPR)			(inch/min)	(IPR)		(inch/min)	(IPR)		(inch/min)
3/32	5000	.0030	15.00	4000	.0030	12.00	1800	.0030	5.40
1/8	3800	.0050	19.00	3000	.0040	12.00	1400	.0040	5.60
5/32	3000	.0060	18.00	2400	.0050	12.00	1100	.0040	4.40
3/16	2500	.0070	17.50	2000	.0050	10.00	900	.0040	3.60
1/4	1900	.0080	15.20	1500	.0070	10.50	700	.0050	3.50
5/16	1500	.0090	13.50	1200	.0080	9.60	550	.0070	3.85
3/8	1250	.0100	12.50	1000	.0090	9.00	450	.0080	3.60
1/2	950	.0110	10.45	750	.0100	7.50	350	.0090	3.15

WORK MATERIAL	M			K			N		
	STAINLESS STEEL			CAST IRON			ALUMINIUM ALLOY COPPER ALLOY NONFERROUS ALLOY		
	DIAMETER	RPM	FEED		RPM	FEED		RPM	FEED
(IPR)			(inch/min)	(IPR)		(inch/min)	(IPR)		(inch/min)
3/32	1800	.0030	5.40	5700	.0040	22.80	8700	.0040	34.80
1/8	1400	.0040	5.60	4250	.0060	25.50	6500	.0060	39.00
5/32	1100	.0040	4.40	3400	.0070	23.80	5200	.0070	36.40
3/16	900	.0040	3.60	2850	.0080	22.80	4300	.0080	34.40
1/4	700	.0050	3.50	2100	.0100	21.00	3200	.0090	28.80
5/16	550	.0070	3.85	1750	.0120	21.00	2600	.0110	28.60
3/8	450	.0080	3.60	1450	.0120	17.40	2200	.0130	28.60
1/2	350	.0090	3.15	1100	.0150	16.50	1650	.0150	24.75

WORK MATERIAL	S		
	NICKEL ALLOY TITANIUM ALLOY		
	DIAMETER	RPM	FEED
(IPR)			(inch/min)
3/32	800	.0010	0.80
1/8	600	.0020	1.20
5/32	500	.0020	1.00
3/16	400	.0020	0.80
1/4	300	.0030	0.90
5/16	250	.0030	0.75
3/8	200	.0040	0.80
1/2	150	.0050	0.75

N = R.P.M
S = Inch per Revolution(inch/rev.)



Being the best through innovation

HSS

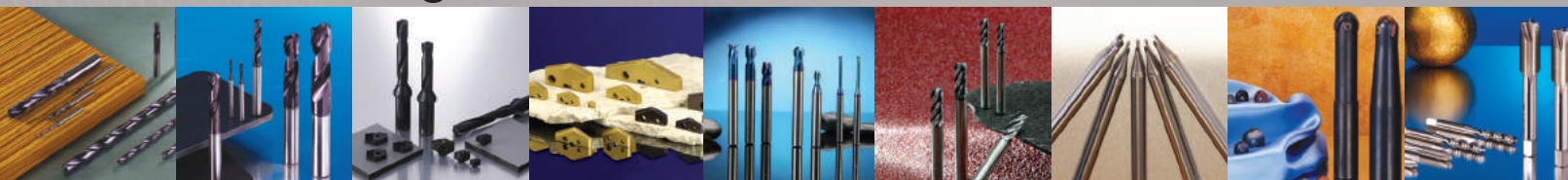


HPD DRILLS

HSS-EX HPD STRAIGHT SHANK DRILLS
- for Stainless Steels





Global Cutting Tool Leader **YG-1**



SELECTION GUIDE

HPD - HIGH PERFORMANCE DRILLS
 HPD-SUS Drills for High precision drilling in Stainless steels

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
METRIC					
DJ543		HSS-EX, HPD-SUS DRILLS	<i>STUB</i>	D2.0 D13.0	188
DJ544		HSS-EX, HPD-SUS DRILLS	<i>JOBBER</i>	D2.0 D20.0	190
		RECOMMENDED CUTTING CONDITIONS			193

PREMIUM HSS HPD STRAIGHT SHANK DRILLS

◎ : Excellent ○ : Good

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

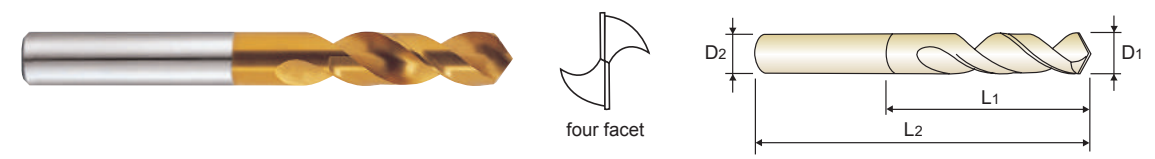


DJ543 SERIES

HSS-EX, HPD-SUS DRILLS

STUB

- ▶ **Application** : Designed for drilling in stainless steels, mild steels, aluminum, aluminum alloy, aluminum die cast, copper, copper alloy, etc.
- ▶ **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
- ▶ **Plain Shank** : DIN6535-HA



D1=D2

EDP No.	Diameter		Flute Length	Overall Length	EDP No.	Diameter		Flute Length	Overall Length
	Metric	Inch				Metric	Inch		
	D1 = D2		L1	L2		D1 = D2		L1	L2
0201JCN	2.0	.0787	12	44	0481JCN	4.8	.1890	26	70
0211JCN	2.1	.0827	12	44	0491JCN	4.9	.1929	26	70
0221JCN	2.2	.0866	13	45	0501JCN	5.0	.1969	26	70
0231JCN	2.3	.0906	13	45	0511JCN	5.1	.2008	26	70
0241JCN	2.4	.0945	14	46	0521JCN	5.2	.2047	26	70
0251JCN	2.5	.0984	14	46	0531JCN	5.3	.2087	26	70
0261JCN	2.6	.1024	14	46	0541JCN	5.4	.2126	28	72
0271JCN	2.7	.1063	16	48	0551JCN	5.5	.2165	28	72
0281JCN	2.8	.1102	16	48	0561JCN	5.6	.2205	28	72
0291JCN	2.9	.1142	16	48	0571JCN	5.7	.2244	28	72
0301JCN	3.0	.1181	16	48	0581JCN	5.8	.2283	28	72
0311JCN	3.1	.1220	18	50	0591JCN	5.9	.2323	28	72
0321JCN	3.2	.1260	18	50	0601JCN	6.0	.2362	28	72
0331JCN	3.3	.1299	18	50	0611JCN	6.1	.2402	31	75
0341JCN	3.4	.1339	20	52	0621JCN	6.2	.2441	31	75
0351JCN	3.5	.1378	20	52	0631JCN	6.3	.2480	31	75
0361JCN	3.6	.1417	20	52	0641JCN	6.4	.2520	31	75
0371JCN	3.7	.1457	20	52	0651JCN	6.5	.2559	31	75
0381JCN	3.8	.1496	22	54	0661JCN	6.6	.2598	31	75
0391JCN	3.9	.1535	22	54	0671JCN	6.7	.2638	31	75
0401JCN	4.0	.1575	22	54	0681JCN	6.8	.2677	34	78
0411JCN	4.1	.1614	22	66	0691JCN	6.9	.2717	34	78
0421JCN	4.2	.1654	22	66	0701JCN	7.0	.2756	34	78
0431JCN	4.3	.1693	24	68	0711JCN	7.1	.2795	34	78
0441JCN	4.4	.1732	24	68	0721JCN	7.2	.2835	34	78
0451JCN	4.5	.1772	24	68	0731JCN	7.3	.2874	34	78
0461JCN	4.6	.1811	24	68	0741JCN	7.4	.2913	34	78
0471JCN	4.7	.1850	24	68	0751JCN	7.5	.2953	34	78

* Individually packaged ▶ NEXT PAGE
 ◎ : Excellent ○ : Good

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

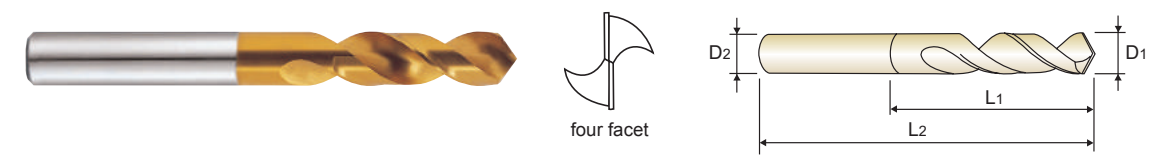


DJ543 SERIES

HSS-EX, HPD-SUS DRILLS

STUB

- ▶ **Application** : Designed for drilling in stainless steels, mild steels, aluminum, aluminum alloy, aluminum die cast, copper, copper alloy, etc.
- ▶ **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
- ▶ **Plain Shank** : DIN6535-HA



D1=D2

EDP No.	Diameter		Flute Length	Overall Length	EDP No.	Diameter		Flute Length	Overall Length
	Metric	Inch				Metric	Inch		
	D1 = D2		L1	L2		D1 = D2		L1	L2
0761JCN	7.6	.2992	37	81	1041JCN	10.4	.4094	43	100
0771JCN	7.7	.3031	37	81	1051JCN	10.5	.4134	43	100
0781JCN	7.8	.3071	37	81	1061JCN	10.6	.4173	43	100
0791JCN	7.9	.3110	37	81	1071JCN	10.7	.4212	47	104
0801JCN	8.0	.3150	37	81	1081JCN	10.8	.4252	47	104
0811JCN	8.1	.3189	37	87	1091JCN	10.9	.4291	47	104
0821JCN	8.2	.3228	37	87	1101JCN	11.0	.4330	47	104
0831JCN	8.3	.3268	37	87	1111JCN	11.1	.4370	47	104
0841JCN	8.4	.3307	37	87	1121JCN	11.2	.4409	47	104
0851JCN	8.5	.3346	37	87	1131JCN	11.3	.4448	47	104
0861JCN	8.6	.3386	40	90	1141JCN	11.4	.4488	47	104
0871JCN	8.7	.3425	40	90	1151JCN	11.5	.4527	47	104
0881JCN	8.8	.3465	40	90	1161JCN	11.6	.4566	47	104
0891JCN	8.9	.3504	40	90	1171JCN	11.7	.4606	47	104
0901JCN	9.0	.3543	40	90	1181JCN	11.8	.4645	47	104
0911JCN	9.1	.3583	40	90	1191JCN	11.9	.4685	51	108
0921JCN	9.2	.3622	40	90	1201JCN	12.0	.4724	51	108
0931JCN	9.3	.3661	40	90	1211JCN	12.1	.4764	51	108
0941JCN	9.4	.3701	40	90	1221JCN	12.2	.4803	51	108
0951JCN	9.5	.3740	40	90	1231JCN	12.3	.4843	51	108
0961JCN	9.6	.3780	43	93	1241JCN	12.4	.4882	51	108
0971JCN	9.7	.3819	43	93	1251JCN	12.5	.4921	51	108
0981JCN	9.8	.3858	43	93	1261JCN	12.6	.4961	51	108
0991JCN	9.9	.3898	43	93	1271JCN	12.7	.5000	51	108
1001JCN	10.0	.3937	43	93	1281JCN	12.8	.5039	51	108
1011JCN	10.1	.3976	43	100	1291JCN	12.9	.5079	51	108
1021JCN	10.2	.4016	43	100	1301JCN	13.0	.5118	51	108
1031JCN	10.3	.4055	43	100					

* Individually packaged ◎ : Excellent ○ : Good

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

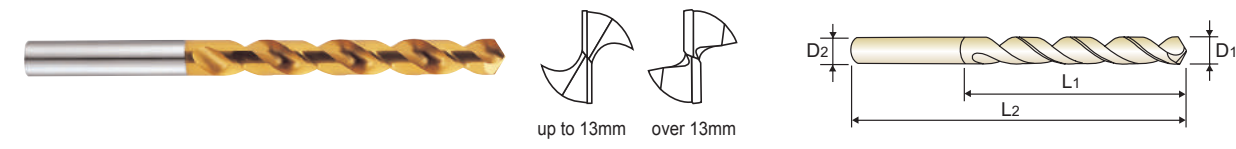


DJ544 SERIES

HSS-EX, HPD-SUS DRILLS

JOBBER

Application: Designed for drilling in stainless steels, mild steels, aluminum, aluminum alloy, aluminum die cast, copper, copper alloy, etc. Advantage: High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling. Wide flute and stub length-increasing chip removal and reducing vibration and deflection. High vanadium HSS-EX material with superior TiN coating - higher speed and feed, longer service life. High quality-good surface finishes, high productivity.



D1=D2

Table with 8 columns: EDP No., Diameter (Metric, Inch), Flute Length (L1, L2), Overall Length. Lists 44 drill bit models from 0201KCN to 0441KCN.

* Individually packaged

▶ NEXT PAGE

◎ : Excellent ○ : Good

Material compatibility table with columns P, H, M, K, N, S and rows for Carbon Steels, Alloy Steels, Prehardened Steels, Hardened Steels, Stainless Steels, Cast Iron, Aluminum, Copper, Bronze, CFRP, Titanium.

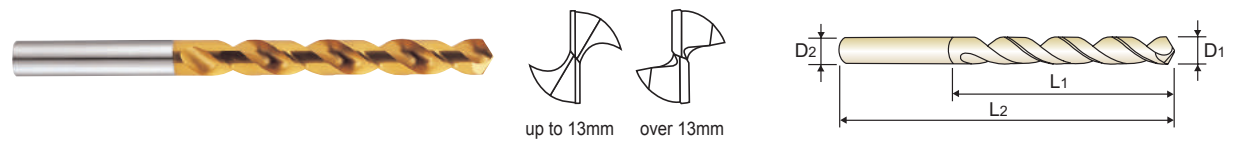


DJ544 SERIES

HSS-EX, HPD-SUS DRILLS

JOBBER

Application: Designed for drilling in stainless steels, mild steels, aluminum, aluminum alloy, aluminum die cast, copper, copper alloy, etc. Advantage: High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling. Wide flute and stub length-increasing chip removal and reducing vibration and deflection. High vanadium HSS-EX material with superior TiN coating - higher speed and feed, longer service life. High quality-good surface finishes, high productivity.



D1=D2

Table with 8 columns: EDP No., Diameter (Metric, Inch), Flute Length (L1, L2), Overall Length. Lists 44 drill bit models from 0701KCN to 1191KCN.

* Individually packaged

▶ NEXT PAGE

◎ : Excellent ○ : Good

Material compatibility table with columns P, H, M, K, N, S and rows for Carbon Steels, Alloy Steels, Prehardened Steels, Hardened Steels, Stainless Steels, Cast Iron, Aluminum, Copper, Bronze, CFRP, Titanium.

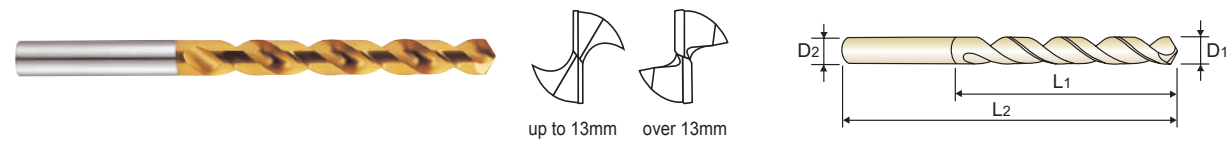


DJ544 SERIES

HSS-EX, HPD-SUS DRILLS

JOBBER

- ▶ **Application** : Designed for drilling in stainless steels, mild steels, aluminum, aluminum alloy, aluminum die cast, copper, copper alloy, etc.
- ▶ **Advantage** : High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling
Wide flute and stub length-increasing chip removal and reducing vibration and deflection.
High vanadium HSS-EX material with superior TiN coating - higher speed and feed, longer service life
High quality-good surface finishes, high productivity.



D₁=D₂

EDP No.	Diameter		Flute Length L ₁	Overall Length L ₂	EDP No.	Diameter		Flute Length L ₁	Overall Length L ₂
	Metric D ₁ = D ₂	Inch				Metric D ₁ = D ₂	Inch		
TiN					TiN				
1201KCN	12.0	.4724	101	158	1501KCN	15.0	.5905	109	169
1211KCN	12.1	.4764	101	158	1551KCN	15.5	.6102	112	172
1221KCN	12.2	.4803	101	158	1561KCN	15.6	.6141	112	172
1231KCN	12.3	.4843	101	158	1601KCN	16.0	.6299	112	172
1241KCN	12.4	.4882	101	158	1651KCN	16.5	.6495	115	181
1251KCN	12.5	.4921	101	158	1701KCN	17.0	.6692	115	181
1261KCN	12.6	.4961	101	158	1751KCN	17.5	.6889	118	184
1271KCN	12.7	.5000	101	158	1761KCN	17.6	.6929	118	184
1281KCN	12.8	.5039	101	158	1801KCN	18.0	.7087	118	184
1291KCN	12.9	.5079	101	158	1851KCN	18.5	.7283	122	188
1301KCN	13.0	.5118	101	158	1901KCN	19.0	.7480	122	188
1351KCN	13.5	.5314	106	166	1951KCN	19.5	.7676	125	191
1401KCN	14.0	.5512	106	166	1961KCN	19.6	.7716	125	191
1411KCN	14.1	.5551	109	169	2001KCN	20.0	.7874	125	191
1451KCN	14.5	.5708	109	169					

* Individually packaged

© : Excellent ○ : Good

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



RECOMMENDED CUTTING CONDITIONS

HSS-EX, HPD-SUS DRILLS

DJ543, DJ544 SERIES

Please decrease the feed rate 15% in JOBBERS SERIES.
Please decrease the feed and speed 20% for cast surface.

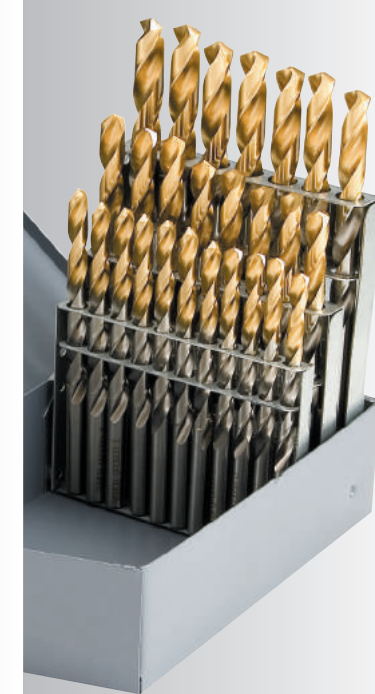
WORK MATERIAL	P		M				N			
	MILD STEELS, LOW CARBON STEELS		STAINLESS STEELS (SUS304, 200)		STAINLESS STEELS (SUS420, 440)		ALUMINUM & ALUMINUM ALLOY		PLASTICS, COPPER, COPPER ALLOYS	
DIAMETER	N	S	N	S	N	S	N	S	N	S
2.0	6300	0.003	2600	0.003	3100	0.003	11000	0.004	5600	0.002
3.0	4200	0.005	1800	0.003	2100	0.003	7350	0.005	3750	0.003
4.0	3200	0.006	1300	0.004	1600	0.004	7050	0.007	2800	0.004
5.0	2500	0.006	1050	0.006	1250	0.006	5500	0.009	2250	0.005
6.0	2100	0.007	900	0.007	1050	0.007	4600	0.010	1850	0.006
8.0	1550	0.009	650	0.009	800	0.009	3500	0.013	1350	0.008
10.0	1250	0.010	550	0.010	630	0.012	2800	0.016	1100	0.010
12.0	1050	0.013	450	0.013	530	0.014	2300	0.020	950	0.012
14.0	900	0.014	400	0.014	450	0.017	2050	0.022	800	0.013
16.0	790	0.016	350	0.016	390	0.019	1750	0.024	700	0.014
18.0	700	0.018	300	0.017	350	0.020	1600	0.028	620	0.016
20.0	620	0.019	260	0.018	320	0.021	1450	0.030	560	0.016

N = R.P.M
S = Inch per Revolution (inch/rev.)

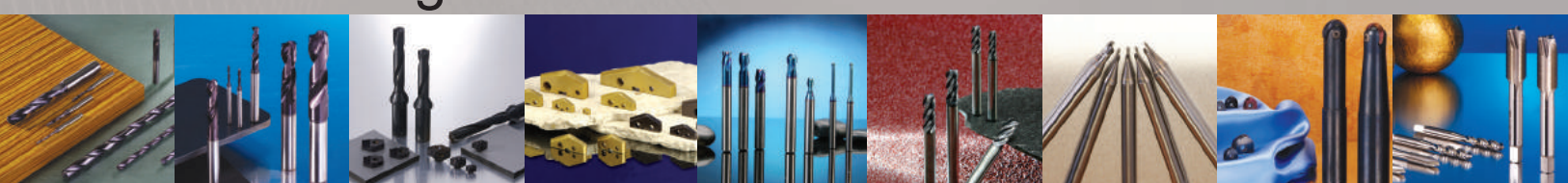


Being the best through innovation

HSS



Global Cutting Tool Leader **YG-1**














GOLD-P DRILLS

GOLD-P COATING
- Competitive price and same performance as full TiN coating

SELECTION GUIDE

HSS GOLD-P DRILLS

GOLD-P DRILLS (GOLD-P COATED)
- Competitive price and same performance as full TiN coating

ITEM	MODEL	DESCRIPTION	JOBBER	SIZE		PAGE
				MIN	MAX	
INCH						
D1GP182 D8182		HSS, STRAIGHT SHANK, GOLD-P COATED / Fractional sizes	JOBBER	D3/64	D3/4	198
D1GP139		HSS, STRAIGHT SHANK, GOLD-P COATED / Letter sizes	JOBBER	A	Z	199
D1GP138		HSS, STRAIGHT SHANK, GOLD-P COATED / Wire gauge sizes	JOBBER	#56	#1	200
D2GP185		HSSCo8, STRAIGHT SHANK, GOLD-P COATED / Fractional sizes	JOBBER	D3/64	D1/2	201
D2GP186		HSSCo8, STRAIGHT SHANK, GOLD-P COATED / Letter sizes	JOBBER	A	Z	202
D2GP187		HSSCo8, STRAIGHT SHANK, GOLD-P COATED / Wire gauge sizes	JOBBER	#56	#1	203
DLGP511		HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED / Fractional sizes	JOBBER	D5/64	D1/2	204
DLGP513		HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED / Letter sizes	JOBBER	A	Z	205
DLGP512		HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED / Wire gauge sizes	JOBBER	#47	#1	206
METRIC						
DLGP195		HSSCo5, STRAIGHT SHANK DRILLS, GOLD-P COATED	JOBBER	D1.0	D13.0	207
DLGP506		HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED	JOBBER	D2.0	D13.0	209
		RECOMMENDED CUTTING CONDITIONS				212

◎ : Excellent ○ : Good

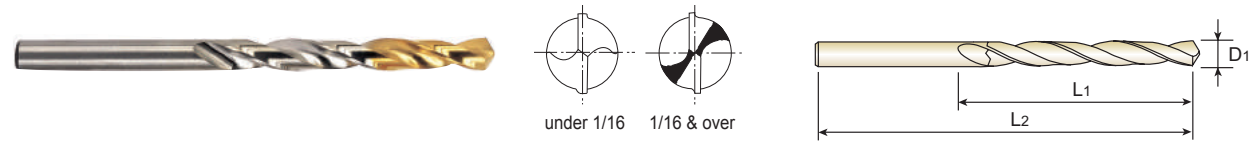
P			H	M	K	N			S		
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~							
◎	◎				○		○				○
◎	◎				○		○				○
◎	◎				○		○				○
◎	◎				○		○				○
◎	◎				○		○				○
◎	◎					○					
◎	◎					○					
◎	◎					○					
◎	◎					○					



D1GP182 SERIES
D8182 SERIES

HSS, STRAIGHT SHANK, GOLD-P COATED JOBBER

- ▶ **Flute Geometry** : Right hand helix, wider flutes
- ▶ **Point Angle** : 135°
under 1/16 : Normal point
1/16 & over : Split point
- ▶ **Surface treatment** : Bright body TiN coating on working part
over TiN coating on flute length
- ▶ **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



▶ **Fractional sizes**

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Fractional	Decimal				Fractional	Decimal		
	D1					D1			
* D1GP113003	3/64	.0469	3/4	1-3/4	** D1GP182025	25/64	.3906	3-3/4	5-1/8
* D1GP182004	1/16	.0625	7/8	1-7/8	** D1GP182026	13/32	.4063	3-7/8	5-1/4
* D1GP182005	5/64	.0781	1	2	** D1GP182027	27/64	.4219	3-15/16	5-3/8
* D1GP182006	3/32	.0938	1-1/4	2-1/4	** D1GP182028	7/16	.4375	4-1/16	5-1/2
* D1GP182007	7/64	.1094	1-1/2	2-5/8	** D1GP182029	29/64	.4531	4-3/16	5-5/8
* D1GP182008	1/8	.1250	1-5/8	2-3/4	** D1GP182030	15/32	.4688	4-5/16	5-3/4
* D1GP182009	9/64	.1406	1-3/4	2-7/8	** D1GP182031	31/64	.4844	4-3/8	5-7/8
* D1GP182010	5/32	.1563	2	3-1/8	** D1GP182032	1/2	.5000	4-1/2	6
* D1GP182011	11/64	.1719	2-1/8	3-1/4	** D8182033	33/64	.5156	4-13/16	6-5/8
* D1GP182012	3/16	.1875	2-5/16	3-1/2	** D8182034	17/32	.5312	4-13/16	6-5/8
* D1GP182013	13/64	.2031	2-7/16	3-5/8	** D8182035	35/64	.5469	4-13/16	6-5/8
* D1GP182014	7/32	.2188	2-1/2	3-3/4	** D8182036	9/16	.5625	4-13/16	6-5/8
* D1GP182015	15/64	.2344	2-5/8	3-7/8	** D8182037	37/64	.5781	4-13/16	6-5/8
* D1GP182016	1/4	.2500	2-3/4	4	** D8182038	19/32	.5937	5-3/16	7-1/8
* D1GP182017	17/64	.2656	2-7/8	4-1/8	** D8182039	39/64	.6094	5-3/16	7-1/8
* D1GP182018	9/32	.2813	2-15/16	4-1/4	** D8182040	5/8	.6250	5-3/16	7-1/8
* D1GP182019	19/64	.2969	3-1/16	4-3/8	** D8182042	21/32	.6563	5-3/16	7-1/8
* D1GP182020	5/16	.3125	3-3/16	4-1/2	** D8182044	11/16	.6875	5-5/8	7-5/8
** D1GP182021	21/64	.3281	3-5/16	4-5/8	** D8182045	45/64	.7031	5-5/8	9-1/2
** D1GP182022	11/32	.3438	3-7/16	4-3/4	** D8182046	23/32	.7188	5-5/8	9-1/2
** D1GP182023	23/64	.3594	3-1/2	4-7/8	** D8182047	47/64	.7344	5-5/8	9-3/4
** D1GP182024	3/8	.3750	3-5/8	5	** D8182048	3/4	.7500	5-7/8	9-3/4

* 10pcs per package
** 5pcs per package
** 3pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

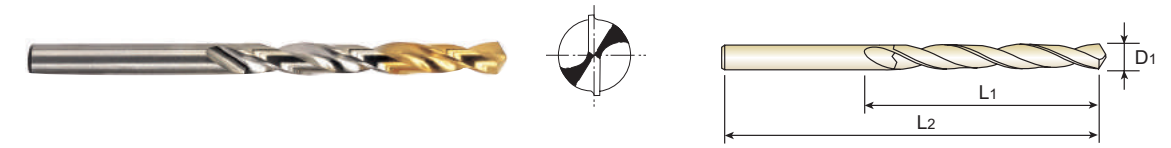
P		H	M	K	N				S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55 HRc55~							
◎	◎			○		○				○



D1GP139 SERIES

HSS, STRAIGHT SHANK, GOLD-P COATED JOBBER

- ▶ **Flute Geometry** : Right hand helix, wider flutes
- ▶ **Point Angle** : 135°:Split point
- ▶ **Surface treatment** : Bright body TiN coating on working part
- ▶ **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



▶ **Letter sizes**

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Letter	Decimal				Letter	Decimal		
	D1					D1			
* D1GP139101	A	.2340	2-5/8	3-7/8	* D1GP139114	N	.3020	3-1/16	4-3/8
* D1GP139102	B	.2380	2-3/4	4	* D1GP139115	O	.3160	3-3/16	4-1/2
* D1GP139103	C	.2420	2-3/4	4	* D1GP139116	P	.3230	3-5/16	4-5/8
* D1GP139104	D	.2460	2-3/4	4	** D1GP139117	Q	.3320	3-7/16	4-3/4
* D1GP139105	E	.2500	2-3/4	4	** D1GP139118	R	.3390	3-7/16	4-3/4
* D1GP139106	F	.2570	2-7/8	4-1/8	** D1GP139119	S	.3480	3-1/2	4-7/8
* D1GP139107	G	.2610	2-7/8	4-1/8	** D1GP139120	T	.3580	3-1/2	4-7/8
* D1GP139108	H	.2660	2-7/8	4-1/8	** D1GP139121	U	.3680	3-5/8	5
* D1GP139109	I	.2720	2-7/8	4-1/8	** D1GP139122	V	.3770	3-5/8	5
* D1GP139110	J	.2770	2-7/8	4-1/8	** D1GP139123	W	.3860	3-3/4	5-1/8
* D1GP139111	K	.2810	2-15/16	4-1/4	** D1GP139124	X	.3970	3-3/4	5-1/8
* D1GP139112	L	.2900	2-15/16	4-1/4	** D1GP139125	Y	.4040	3-7/8	5-1/4
* D1GP139113	M	.2950	3-1/16	4-3/8	** D1GP139126	Z	.4130	3-7/8	5-1/4

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

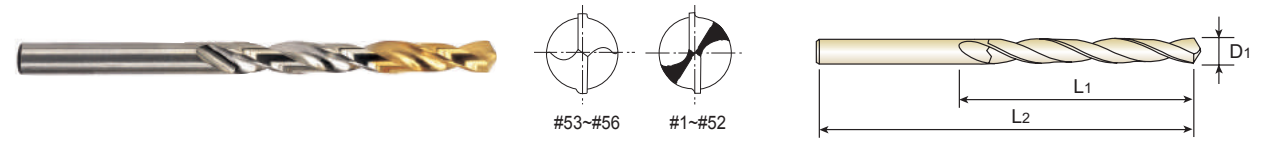
P		H	M	K	N				S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55 HRc55~							
◎	◎			○		○				○

YG GOLD-P DRILLS

D1GP138 SERIES

HSS, STRAIGHT SHANK, GOLD-P COATED JOBBER

- ▶ **Flute Geometry** : Right hand helix, wider flutes
- ▶ **Point Angle** : 135°, Split point
Wire gauge size #53~#56 : Normal point
Wire gauge size #1~#52 : Split point
- ▶ **Surface treatment** : Bright body TiN coating on working part
- ▶ **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



▶ Wire gauge sizes

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Wire gauge	Decimal				Wire gauge	Decimal		
	D1					D1			
* D1GP138256	1	.2280	2-5/8	3-7/8	* D1GP138228	29	.1360	1-3/4	2-7/8
* D1GP138255	2	.2210	2-5/8	3-7/8	* D1GP138227	30	.1285	1-5/8	2-3/4
* D1GP138254	3	.2130	2-1/2	3-3/4	* D1GP138226	31	.1200	1-5/8	2-3/4
* D1GP138253	4	.2090	2-1/2	3-3/4	* D1GP138225	32	.1160	1-5/8	2-3/4
* D1GP138252	5	.2055	2-1/2	3-3/4	* D1GP138224	33	.1130	1-1/2	2-5/8
* D1GP138251	6	.2040	2-1/2	3-3/4	* D1GP138223	34	.1110	1-1/2	2-5/8
* D1GP138250	7	.2010	2-7/16	3-5/8	* D1GP138222	35	.1100	1-1/2	2-5/8
* D1GP138249	8	.1990	2-7/16	3-5/8	* D1GP138221	36	.1065	1-7/16	2-1/2
* D1GP138248	9	.1960	2-7/16	3-5/8	* D1GP138220	37	.1040	1-7/16	2-1/2
* D1GP138247	10	.1935	2-7/16	3-5/8	* D1GP138219	38	.1015	1-7/16	2-1/2
* D1GP138246	11	.1910	2-5/16	3-1/2	* D1GP138218	39	.0995	1-3/8	2-3/8
* D1GP138245	12	.1890	2-5/16	3-1/2	* D1GP138217	40	.0980	1-3/8	2-3/8
* D1GP138244	13	.1850	2-5/16	3-1/2	* D1GP138216	41	.0960	1-3/8	2-3/8
* D1GP138243	14	.1820	2-3/16	3-3/8	* D1GP138215	42	.0935	1-1/4	2-1/4
* D1GP138242	15	.1800	2-3/16	3-3/8	* D1GP138214	43	.0890	1-1/4	2-1/4
* D1GP138241	16	.1770	2-3/16	3-3/8	* D1GP138213	44	.0860	1-1/8	2-1/8
* D1GP138240	17	.1730	2-3/16	3-3/8	* D1GP138212	45	.0820	1-1/8	2-1/8
* D1GP138239	18	.1695	2-1/8	3-1/4	* D1GP138211	46	.0810	1-1/8	2-1/8
* D1GP138238	19	.1660	2-1/8	3-1/4	* D1GP138210	47	.0785	1	2
* D1GP138237	20	.1610	2-1/8	3-1/4	* D1GP138209	48	.0760	1	2
* D1GP138236	21	.1590	2-1/8	3-1/4	* D1GP138208	49	.0730	1	2
* D1GP138235	22	.1570	2	3-1/8	* D1GP138207	50	.0700	1	2
* D1GP138234	23	.1540	2	3-1/8	* D1GP138206	51	.0670	1	2
* D1GP138233	24	.1520	2	3-1/8	* D1GP138205	52	.0635	7/8	1-7/8
* D1GP138232	25	.1495	1-7/8	3	* D1GP134204	53	.0595	7/8	1-7/8
* D1GP138231	26	.1470	1-7/8	3	* D1GP134203	54	.0550	7/8	1-7/8
* D1GP138230	27	.1440	1-7/8	3	* D1GP134202	55	.0520	7/8	1-7/8
* D1GP138229	28	.1405	1-3/4	2-7/8	* D1GP134201	56	.0465	3/4	1-3/4

▶ **Tolerance** : See page 198 * 10pcs per package

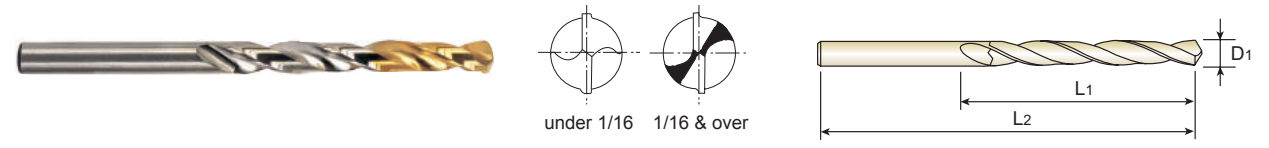
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55 HRc55~								
◎	◎			○		○				○	

YG GOLD-P DRILLS

D2GP185 SERIES

HSSCo8, STRAIGHT SHANK, GOLD-P COATED JOBBER

- ▶ **Flute Geometry** : Right hand helix, wider flutes
- ▶ **Point Angle** : 135°
under 1/16 : Normal point
1/16 & over : Split point
- ▶ **Surface treatment** : Bright body TiN coating on working part
- ▶ **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



▶ Fractional sizes

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Fractional	Decimal				Fractional	Decimal		
	D1					D1			
* D2GP185003	3/64	.0469	3/4	1-3/4	* D2GP185018	9/32	.2813	2-15/16	4-1/4
* D2GP185004	1/16	.0625	7/8	1-7/8	* D2GP185019	19/64	.2969	3-1/16	4-3/8
* D2GP185005	5/64	.0781	1	2	* D2GP185020	5/16	.3125	3-3/16	4-1/2
* D2GP185006	3/32	.0938	1-1/4	2-1/4	** D2GP185021	21/64	.3281	3-5/16	4-5/8
* D2GP185007	7/64	.1094	1-1/2	2-5/8	** D2GP185022	11/32	.3438	3-7/16	4-3/4
* D2GP185008	1/8	.1250	1-5/8	2-3/4	** D2GP185023	23/64	.3594	3-1/2	4-7/8
* D2GP185009	9/64	.1406	1-3/4	2-7/8	** D2GP185024	3/8	.3750	3-5/8	5
* D2GP185010	5/32	.1563	2	3-1/8	** D2GP185025	25/64	.3906	3-3/4	5-1/8
* D2GP185011	11/64	.1719	2-1/8	3-1/4	** D2GP185026	13/32	.4063	3-7/8	5-1/4
* D2GP185012	3/16	.1875	2-5/16	3-1/2	** D2GP185027	27/64	.4219	3-15/16	5-3/8
* D2GP185013	13/64	.2031	2-7/16	3-5/8	** D2GP185028	7/16	.4375	4-1/16	5-1/2
* D2GP185014	7/32	.2188	2-1/2	3-3/4	** D2GP185029	29/64	.4531	4-3/16	5-5/8
* D2GP185015	15/64	.2344	2-5/8	3-7/8	** D2GP185030	15/32	.4688	4-5/16	5-3/4
* D2GP185016	1/4	.2500	2-3/4	4	** D2GP185031	31/64	.4844	4-3/8	5-7/8
* D2GP185017	17/64	.2656	2-7/8	4-1/8	** D2GP185032	1/2	.5000	4-1/2	6

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

* 10pcs per package
** 5pcs per package

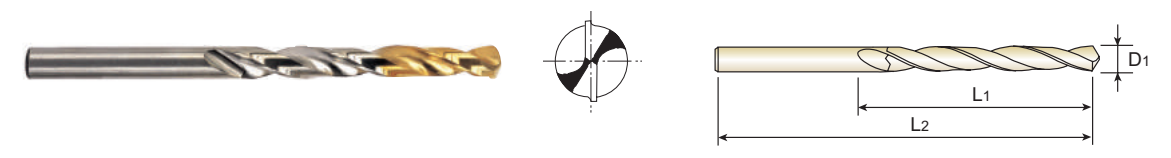
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55 HRc55~								
◎	◎			○		○				○	



D2GP186 SERIES

HSSCo8, STRAIGHT SHANK, GOLD-P COATED JOBBER

- ▶ **Flute Geometry** : Right hand helix, wider flutes
- ▶ **Point Angle** : 135° : Split point
- ▶ **Surface treatment** : Bright body TiN coating on working part
- ▶ **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



▶ Letter sizes

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Letter	Decimal				Letter	Decimal		
	D1					D1			
* D2GP186101	A	.2340	2-5/8	3-7/8	* D2GP186114	N	.3020	3-1/16	4-3/8
* D2GP186102	B	.2380	2-3/4	4	* D2GP186115	O	.3160	3-3/16	4-1/2
* D2GP186103	C	.2420	2-3/4	4	* D2GP186116	P	.3230	3-5/16	4-5/8
* D2GP186104	D	.2460	2-3/4	4	** D2GP186117	Q	.3320	3-7/16	4-3/4
* D2GP185105	E	.2500	2-3/4	4	** D2GP186118	R	.3390	3-7/16	4-3/4
* D2GP186106	F	.2570	2-7/8	4-1/8	** D2GP186119	S	.3480	3-1/2	4-7/8
* D2GP186107	G	.2610	2-7/8	4-1/8	** D2GP186120	T	.3580	3-1/2	4-7/8
* D2GP186108	H	.2660	2-7/8	4-1/8	** D2GP186121	U	.3680	3-5/8	5
* D2GP186109	I	.2720	2-7/8	4-1/8	** D2GP186122	V	.3770	3-5/8	5
* D2GP186110	J	.2770	2-7/8	4-1/8	** D2GP186123	W	.3860	3-3/4	5-1/8
* D2GP186111	K	.2810	2-15/16	4-1/4	** D2GP186124	X	.3970	3-3/4	5-1/8
* D2GP186112	L	.2900	2-15/16	4-1/4	** D2GP186125	Y	.4040	3-7/8	5-1/4
* D2GP186113	M	.2950	3-1/16	4-3/8	** D2GP186126	Z	.4130	3-7/8	5-1/4

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

* 10pcs per package
** 5pcs per package

◎ : Excellent ○ : Good

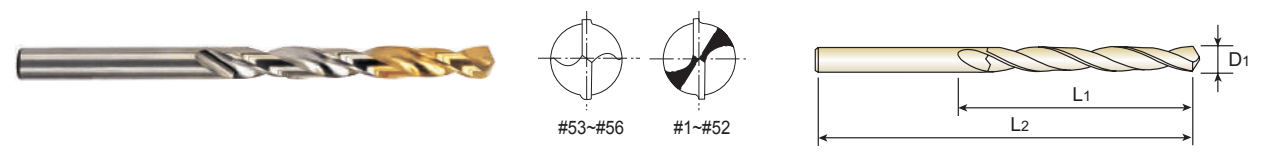
P		H	M	K	N				S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55 HRC55~							
◎	◎			○		○				○



D2GP187 SERIES

HSSCo8, STRAIGHT SHANK, GOLD-P COATED JOBBER

- ▶ **Flute Geometry** : Right hand helix, wider flutes
- ▶ **Point Angle** : 135° : Split point
- Wire gauge size #53~#56 : Normal point
- Wire gauge size #1~#52 : Split point
- ▶ **Surface treatment** : Bright body TiN coating on working part
- ▶ **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



▶ Wire gauge sizes

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Wire gauge	Decimal				Wire gauge	Decimal		
	D1					D1			
* D2GP187256	1	.2280	2-5/8	3-7/8	* D2GP187228	29	.1360	1-3/4	2-7/8
* D2GP187255	2	.2210	2-5/8	3-7/8	* D2GP187227	30	.1285	1-5/8	2-3/4
* D2GP187254	3	.2130	2-1/2	3-3/4	* D2GP187226	31	.1200	1-5/8	2-3/4
* D2GP187253	4	.2090	2-1/2	3-3/4	* D2GP187225	32	.1160	1-5/8	2-3/4
* D2GP187252	5	.2055	2-1/2	3-3/4	* D2GP187224	33	.1130	1-1/2	2-5/8
* D2GP187251	6	.2040	2-1/2	3-3/4	* D2GP187223	34	.1110	1-1/2	2-5/8
* D2GP187250	7	.2010	2-7/16	3-5/8	* D2GP187222	35	.1100	1-1/2	2-5/8
* D2GP187249	8	.1990	2-7/16	3-5/8	* D2GP187221	36	.1065	1-7/16	2-1/2
* D2GP187248	9	.1960	2-7/16	3-5/8	* D2GP187220	37	.1040	1-7/16	2-1/2
* D2GP187247	10	.1935	2-7/16	3-5/8	* D2GP187219	38	.1015	1-7/16	2-1/2
* D2GP187246	11	.1910	2-5/16	3-1/2	* D2GP187218	39	.0995	1-3/8	2-3/8
* D2GP187245	12	.1890	2-5/16	3-1/2	* D2GP187217	40	.0980	1-3/8	2-3/8
* D2GP187244	13	.1850	2-5/16	3-1/2	* D2GP187216	41	.0960	1-3/8	2-3/8
* D2GP187243	14	.1820	2-3/16	3-3/8	* D2GP187215	42	.0935	1-1/4	2-1/4
* D2GP187242	15	.1800	2-3/16	3-3/8	* D2GP187214	43	.0890	1-1/4	2-1/4
* D2GP187241	16	.1770	2-3/16	3-3/8	* D2GP187213	44	.0860	1-1/8	2-1/8
* D2GP187240	17	.1730	2-3/16	3-3/8	* D2GP187212	45	.0820	1-1/8	2-1/8
* D2GP187239	18	.1695	2-1/8	3-1/4	* D2GP187211	46	.0810	1-1/8	2-1/8
* D2GP187238	19	.1660	2-1/8	3-1/4	* D2GP187210	47	.0785	1	2
* D2GP187237	20	.1610	2-1/8	3-1/4	* D2GP187209	48	.0760	1	2
* D2GP187236	21	.1590	2-1/8	3-1/4	* D2GP187208	49	.0730	1	2
* D2GP187235	22	.1570	2	3-1/8	* D2GP187207	50	.0700	1	2
* D2GP187234	23	.1540	2	3-1/8	* D2GP187206	51	.0670	1	2
* D2GP187233	24	.1520	2	3-1/8	* D2GP187205	52	.0635	7/8	1-7/8
* D2GP187232	25	.1495	1-7/8	3	* D2GP187204	53	.0595	7/8	1-7/8
* D2GP187231	26	.1470	1-7/8	3	* D2GP187203	54	.0550	7/8	1-7/8
* D2GP187230	27	.1440	1-7/8	3	* D2GP187202	55	.0520	7/8	1-7/8
* D2GP187229	28	.1405	1-3/4	2-7/8	* D2GP187201	56	.0465	3/4	1-3/4

▶ Tolerance : See page 198

* 10pcs per package

◎ : Excellent ○ : Good

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

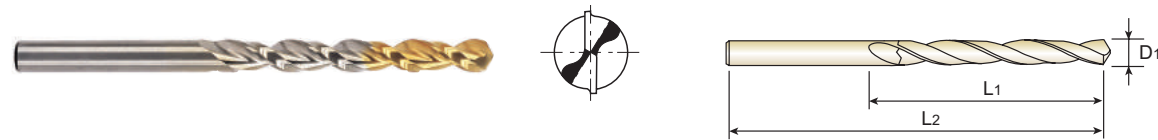
YG GOLD-P DRILLS

DLGP511 SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand spiral, 38° helix, parabolic flute.
- **Point Angle** : 130° : Split point
- **Surface treatment** : Bright body TiN coating on working part
- **Application** : Improved chip removal in most materials, especially in deep drilling applications.



► Fractional sizes

Unit : Inch

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Fractional	Decimal				Fractional	Decimal		
	D1					D1			
* DLGP511005	5/64	.0781	1	2	* DLGP511019	19/64	.2969	3-1/16	4-3/8
* DLGP511006	3/32	.0938	1-1/4	2-1/4	* DLGP511020	5/16	.3125	3-3/16	4-1/2
* DLGP511007	7/64	.1094	1-1/2	2-5/8	** DLGP511021	21/64	.3281	3-5/16	4-5/8
* DLGP511008	1/8	.1250	1-5/8	2-3/4	** DLGP511022	11/32	.3438	3-7/16	4-3/4
* DLGP511009	9/64	.1406	1-3/4	2-7/8	** DLGP511023	23/64	.3594	3-1/2	4-7/8
* DLGP511010	5/32	.1563	2	3-1/8	** DLGP511024	3/8	.3750	3-5/8	5
* DLGP511011	11/64	.1719	2-1/8	3-1/4	** DLGP511025	25/64	.3906	3-3/4	5-1/8
* DLGP511012	3/16	.1875	2-5/16	3-1/2	** DLGP511026	13/32	.4063	3-7/8	5-1/4
* DLGP511013	13/64	.2031	2-7/16	3-5/8	** DLGP511027	27/64	.4219	3-15/16	5-3/8
* DLGP511014	7/32	.2188	2-1/2	3-3/4	** DLGP511028	7/16	.4375	4-1/16	5-1/2
* DLGP511015	15/64	.2344	2-5/8	3-7/8	** DLGP511029	29/64	.4531	4-3/16	5-5/8
* DLGP511016	1/4	.2500	2-3/4	4	** DLGP511030	15/32	.4688	4-5/16	5-3/4
* DLGP511017	17/64	.2656	2-7/8	4-1/8	** DLGP511031	31/64	.4844	4-3/8	5-7/8
* DLGP511018	9/32	.2813	2-15/16	4-1/4	** DLGP511032	1/2	.5000	4-1/2	6

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

P		H	M	K	N				S		
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~							
◎	◎				○						

YG GOLD-P DRILLS

DLGP513 SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand spiral, 38° helix, parabolic flute.
- **Point Angle** : 130° : Split point
- **Surface treatment** : Bright body TiN coating on working part
- **Application** : Improved chip removal in most materials, especially in deep drilling applications.



► Letter sizes

Unit : Inch

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Letter	Decimal				Letter	Decimal		
	D1					D1			
* DLGP513101	A	.2340	2-5/8	3-7/8	* DLGP513114	N	.3020	3-1/16	4-3/8
* DLGP513102	B	.2380	2-3/4	4	* DLGP513115	O	.3160	3-3/16	4-1/2
* DLGP513103	C	.2420	2-3/4	4	* DLGP513116	P	.3230	3-5/16	4-5/8
* DLGP513104	D	.2460	2-3/4	4	** DLGP513117	Q	.3320	3-7/16	4-3/4
* DLGP513105	E	.2500	2-3/4	4	** DLGP513118	R	.3390	3-7/16	4-3/4
* DLGP513106	F	.2570	2-7/8	4-1/8	** DLGP513119	S	.3480	3-1/2	4-7/8
* DLGP513107	G	.2610	2-7/8	4-1/8	** DLGP513120	T	.3580	3-1/2	4-7/8
* DLGP513108	H	.2660	2-7/8	4-1/8	** DLGP513121	U	.3680	3-5/8	5
* DLGP513109	I	.2720	2-7/8	4-1/8	** DLGP513122	V	.3770	3-5/8	5
* DLGP513110	J	.2770	2-7/8	4-1/8	** DLGP513123	W	.3860	3-3/4	5-1/8
* DLGP513111	K	.2810	2-15/16	4-1/4	** DLGP513124	X	.3970	3-3/4	5-1/8
* DLGP513112	L	.2900	2-15/16	4-1/4	** DLGP513125	Y	.4040	3-7/8	5-1/4
* DLGP513113	M	.2950	3-1/16	4-3/8	** DLGP513126	Z	.4130	3-7/8	5-1/4

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

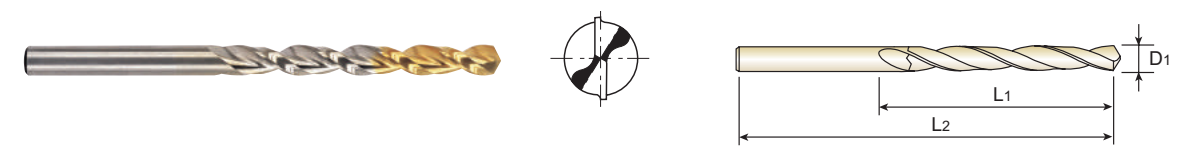
P		H	M	K	N				S		
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRc45~55	HRc55~							
◎	◎				○						

YG GOLD-P DRILLS

DLGP512 SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED JOBBER

- **Flute Geometry** : Right hand spiral, 38° helix, parabolic flute.
- **Point Angle** : 130° : Split point
- **Surface treatment** : Bright body TiN coating on working part
- **Application** : Improved chip removal in most materials, especially in deep drilling applications.



► Wire gauge sizes

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Wire gauge	Decimal				Wire gauge	Decimal		
	D1					D1			
* DLGP512247	1	.2280	2-5/8	3-7/8	* DLGP512223	25	.1495	1-7/8	3
* DLGP512246	2	.2210	2-5/8	3-7/8	* DLGP512222	26	.1470	1-7/8	3
* DLGP512245	3	.2130	2-1/2	3-3/4	* DLGP512221	27	.1440	1-7/8	3
* DLGP512244	4	.2090	2-1/2	3-3/4	* DLGP512220	28	.1405	1-3/4	2-7/8
* DLGP512243	5	.2055	2-1/2	3-3/4	* DLGP512219	29	.1360	1-3/4	2-7/8
* DLGP512242	6	.2040	2-1/2	3-3/4	* DLGP512218	30	.1285	1-5/8	2-3/4
* DLGP512241	7	.2010	2-7/16	3-5/8	* DLGP512217	31	.1200	1-5/8	2-3/4
* DLGP512240	8	.1990	2-7/16	3-5/8	* DLGP512216	32	.1160	1-5/8	2-3/4
* DLGP512239	9	.1960	2-7/16	3-5/8	* DLGP512215	33	.1130	1-1/2	2-5/8
* DLGP512238	10	.1935	2-7/16	3-5/8	* DLGP512214	34	.1110	1-1/2	2-5/8
* DLGP512237	11	.1910	2-5/16	3-1/2	* DLGP512213	35	.1100	1-1/2	2-5/8
* DLGP512236	12	.1890	2-5/16	3-1/2	* DLGP512212	36	.1065	1-7/16	2-1/2
* DLGP512235	13	.1850	2-5/16	3-1/2	* DLGP512211	37	.1040	1-7/16	2-1/2
* DLGP512234	14	.1820	2-3/16	3-3/8	* DLGP512210	38	.1015	1-7/16	2-1/2
* DLGP512233	15	.1800	2-3/16	3-3/8	* DLGP512209	39	.0995	1-3/8	2-3/8
* DLGP512232	16	.1770	2-3/16	3-3/8	* DLGP512208	40	.0980	1-3/8	2-3/8
* DLGP512231	17	.1730	2-3/16	3-3/8	* DLGP512207	41	.0960	1-3/8	2-3/8
* DLGP512230	18	.1695	2-1/8	3-1/4	* DLGP512206	42	.0935	1-1/4	2-1/4
* DLGP512229	19	.1660	2-1/8	3-1/4	* DLGP512205	43	.0890	1-1/4	2-1/4
* DLGP512228	20	.1610	2-1/8	3-1/4	* DLGP512204	44	.0860	1-1/8	2-1/8
* DLGP512227	21	.1590	2-1/8	3-1/4	* DLGP512203	45	.0820	1-1/8	2-1/8
* DLGP512226	22	.1570	2	3-1/8	* DLGP512202	46	.0810	1-1/8	2-1/8
* DLGP512225	23	.1540	2	3-1/8	* DLGP512201	47	.0785	1	2
* DLGP512224	24	.1520	2	3-1/8					

► Tolerance : See page 198 * 10pcs per package

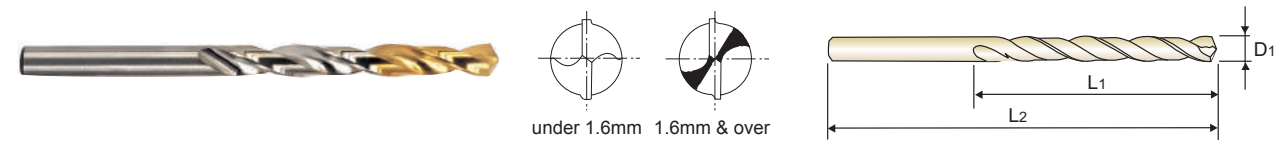
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55 HRC55~								
◎	◎				○						

YG GOLD-P DRILLS

DLGP195 SERIES

HSSCo5, STRAIGHT SHANK DRILLS, GOLD-P COATED JOBBER

- **Flute Geometry** : Right hand helix
- **Point Angle** : 135°
under 1.6mm : Normal point
1.6mm & over : Split point
- **Surface treatment** : Bright body, TiN coating on working area
- **Application** : Drilling to steels, cast steels alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



► Wire gauge sizes

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Metric	Inch				Metric	Inch		
	D1					D1			
* DLGP195010	1.0	.0394	12	34	* DLGP195042	4.2	.1654	43	75
* DLGP195011	1.1	.0433	14	36	* DLGP195043	4.3	.1693	47	80
* DLGP195012	1.2	.0472	16	38	* DLGP195044	4.4	.1732	47	80
* DLGP195013	1.3	.0512	16	38	* DLGP195045	4.5	.1772	47	80
* DLGP195014	1.4	.0551	18	40	* DLGP195046	4.6	.1811	47	80
* DLGP195015	1.5	.0591	18	40	* DLGP195047	4.7	.1850	47	80
* DLGP195016	1.6	.0630	20	43	* DLGP195048	4.8	.1890	52	86
* DLGP195017	1.7	.0669	20	43	* DLGP195049	4.9	.1929	52	86
* DLGP195018	1.8	.0709	22	46	* DLGP195050	5.0	.1969	52	86
* DLGP195019	1.9	.0748	22	46	* DLGP195051	5.1	.2008	52	86
* DLGP195020	2.0	.0787	24	49	* DLGP195052	5.2	.2047	52	86
* DLGP195021	2.1	.0827	24	49	* DLGP195053	5.3	.2087	52	86
* DLGP195022	2.2	.0866	27	53	* DLGP195054	5.4	.2126	57	93
* DLGP195023	2.3	.0906	27	53	* DLGP195055	5.5	.2165	57	93
* DLGP195024	2.4	.0945	30	57	* DLGP195056	5.6	.2205	57	93
* DLGP195025	2.5	.0984	30	57	* DLGP195057	5.7	.2244	57	93
* DLGP195026	2.6	.1024	30	57	* DLGP195058	5.8	.2283	57	93
* DLGP195027	2.7	.1063	33	61	* DLGP195059	5.9	.2323	57	93
* DLGP195028	2.8	.1102	33	61	* DLGP195060	6.0	.2362	57	93
* DLGP195029	2.9	.1142	33	61	* DLGP195061	6.1	.2402	63	101
* DLGP195030	3.0	.1181	33	61	* DLGP195062	6.2	.2441	63	101
* DLGP195031	3.1	.1220	36	65	* DLGP195063	6.3	.2480	63	101
* DLGP195032	3.2	.1260	36	65	* DLGP195064	6.4	.2520	63	101
* DLGP195033	3.3	.1299	36	65	* DLGP195065	6.5	.2559	63	101
* DLGP195034	3.4	.1339	39	70	* DLGP195066	6.6	.2598	63	101
* DLGP195035	3.5	.1378	39	70	* DLGP195067	6.7	.2638	63	101
* DLGP195036	3.6	.1417	39	70	* DLGP195068	6.8	.2677	69	109
* DLGP195037	3.7	.1457	39	70	* DLGP195069	6.9	.2717	69	109
* DLGP195038	3.8	.1496	43	75	* DLGP195070	7.0	.2756	69	109
* DLGP195039	3.9	.1535	43	75	* DLGP195071	7.1	.2795	69	109
* DLGP195040	4.0	.1575	43	75	* DLGP195072	7.2	.2835	69	109
* DLGP195041	4.1	.1614	43	75	* DLGP195073	7.3	.2874	69	109

* 10pcs per package ► NEXT PAGE

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

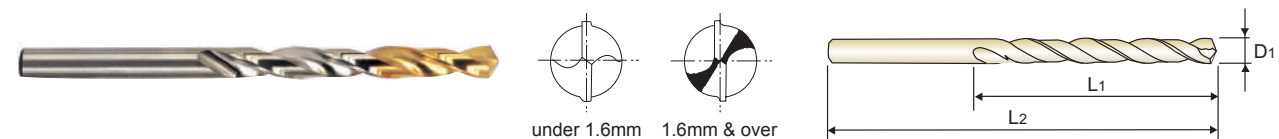
YG GOLD-P DRILLS

DLGP195 SERIES

HSSCo5, STRAIGHT SHANK DRILLS, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand helix
- **Point Angle** : 135°
under 1.6mm : Normal point
1.6mm & over : Split point
- **Surface treatment** : Bright body, TiN coating on working area
- **Application** : Drilling to steels, cast steels alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Metric	Inch				Metric	Inch		
	D1					D1			
* DLGP195074	7.4	.2913	69	109	** DLGP195103	10.3	.4055	87	133
* DLGP195075	7.5	.2953	69	109	** DLGP195104	10.4	.4094	87	133
* DLGP195076	7.6	.2992	75	117	** DLGP195105	10.5	.4134	87	133
* DLGP195077	7.7	.3031	75	117	** DLGP195106	10.6	.4173	87	133
* DLGP195078	7.8	.3071	75	117	** DLGP195107	10.7	.4212	94	142
* DLGP195079	7.9	.3110	75	117	** DLGP195108	10.8	.4252	94	142
* DLGP195080	8.0	.3150	75	117	** DLGP195109	10.9	.4291	94	142
* DLGP195081	8.1	.3189	75	117	** DLGP195110	11.0	.4330	94	142
* DLGP195082	8.2	.3228	75	117	** DLGP195111	11.1	.4370	94	142
* DLGP195083	8.3	.3268	75	117	** DLGP195112	11.2	.4409	94	142
** DLGP195084	8.4	.3307	75	117	** DLGP195113	11.3	.4448	94	142
** DLGP195085	8.5	.3346	75	117	** DLGP195114	11.4	.4488	94	142
** DLGP195086	8.6	.3386	81	125	** DLGP195115	11.5	.4527	94	142
** DLGP195087	8.7	.3425	81	125	** DLGP195116	11.6	.4566	94	142
** DLGP195088	8.8	.3465	81	125	** DLGP195117	11.7	.4606	94	142
** DLGP195089	8.9	.3504	81	125	** DLGP195118	11.8	.4645	94	142
** DLGP195090	9.0	.3543	81	125	** DLGP195119	11.9	.4685	101	151
** DLGP195091	9.1	.3583	81	125	** DLGP195120	12.0	.4724	101	151
** DLGP195092	9.2	.3622	81	125	** DLGP195121	12.1	.4764	101	151
** DLGP195093	9.3	.3661	81	125	** DLGP195122	12.2	.4803	101	151
** DLGP195094	9.4	.3701	81	125	** DLGP195123	12.3	.4843	101	151
** DLGP195095	9.5	.3740	81	125	** DLGP195124	12.4	.4882	101	151
** DLGP195096	9.6	.3780	87	133	** DLGP195125	12.5	.4921	101	151
** DLGP195097	9.7	.3819	87	133	** DLGP195126	12.6	.4961	101	151
** DLGP195098	9.8	.3858	87	133	** DLGP195127	12.7	.5000	101	151
** DLGP195099	9.9	.3898	87	133	** DLGP195128	12.8	.5039	101	151
** DLGP195100	10.0	.3937	87	133	** DLGP195129	12.9	.5079	101	151
** DLGP195101	10.1	.3976	87	133	** DLGP195130	13.0	.5118	101	151
** DLGP195102	10.2	.4016	87	133					

* 10pcs per package
** 5pcs per package

◎ : Excellent ○ : Good

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

YG GOLD-P DRILLS

DLGP506 SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand, 38° helix, Parabolic flutes
- **Point Angle** : 130°, Split point giving higher chip removal.
- **Surface treatment** : Bright body, TiN coating on working area.
- **Application** : Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, Special aluminum or magnesium alloys.



EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Metric	Inch				Metric	Inch		
	D1					D1			
* DLGP506020	2.0	.0787	24	49	* DLGP506048	4.8	.1890	52	86
* DLGP506021	2.1	.0827	24	49	* DLGP506049	4.9	.1929	52	86
* DLGP506022	2.2	.0866	27	53	* DLGP506050	5.0	.1969	52	86
* DLGP506023	2.3	.0906	27	53	* DLGP506051	5.1	.2008	52	86
* DLGP506024	2.4	.0945	30	57	* DLGP506052	5.2	.2047	52	86
* DLGP506025	2.5	.0984	30	57	* DLGP506053	5.3	.2087	52	86
* DLGP506026	2.6	.1024	30	57	* DLGP506054	5.4	.2126	57	93
* DLGP506027	2.7	.1063	33	61	* DLGP506055	5.5	.2165	57	93
* DLGP506028	2.8	.1102	33	61	* DLGP506056	5.6	.2205	57	93
* DLGP506029	2.9	.1142	33	61	* DLGP506057	5.7	.2244	57	93
* DLGP506030	3.0	.1181	33	61	* DLGP506058	5.8	.2283	57	93
* DLGP506031	3.1	.1220	36	65	* DLGP506059	5.9	.2323	57	93
* DLGP506032	3.2	.1260	36	65	* DLGP506060	6.0	.2362	57	93
* DLGP506033	3.3	.1299	36	65	* DLGP506061	6.1	.2402	63	101
* DLGP506034	3.4	.1339	39	70	* DLGP506062	6.2	.2441	63	101
* DLGP506035	3.5	.1378	39	70	* DLGP506063	6.3	.2480	63	101
* DLGP506036	3.6	.1417	39	70	* DLGP506064	6.4	.2520	63	101
* DLGP506037	3.7	.1457	39	70	* DLGP506065	6.5	.2559	63	101
* DLGP506038	3.8	.1496	43	75	* DLGP506066	6.6	.2598	63	101
* DLGP506039	3.9	.1535	43	75	* DLGP506067	6.7	.2638	63	101
* DLGP506040	4.0	.1575	43	75	* DLGP506068	6.8	.2677	69	109
* DLGP506041	4.1	.1614	43	75	* DLGP506069	6.9	.2717	69	109
* DLGP506042	4.2	.1654	43	75	* DLGP506070	7.0	.2756	69	109
* DLGP506043	4.3	.1693	47	80	* DLGP506071	7.1	.2795	69	109
* DLGP506044	4.4	.1732	47	80	* DLGP506072	7.2	.2835	69	109
* DLGP506045	4.5	.1772	47	80	* DLGP506073	7.3	.2874	69	109
* DLGP506046	4.6	.1811	47	80	* DLGP506074	7.4	.2913	69	109
* DLGP506047	4.7	.1850	47	80	* DLGP506075	7.5	.2953	69	109

* 10pcs per package

► NEXT PAGE

◎ : Excellent ○ : Good

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

YG GOLD-P DRILLS

DLGP506 SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED

JOBBER

- **Flute Geometry** : Right hand, 38° helix, Parabolic flutes
- **Point Angle** : 130°, Split point giving higher chip removal.
- **Surface treatment** : Bright body, TiN coating on working area.
- **Application** : Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, Special aluminum or magnesium alloys.



EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Metric	Inch				Metric	Inch		
	D1		D1						
* DLGP506076	7.6	.2992	75	117	** DLGP506104	10.4	.4094	87	133
* DLGP506077	7.7	.3031	75	117	** DLGP506105	10.5	.4134	87	133
* DLGP506078	7.8	.3071	75	117	** DLGP506106	10.6	.4173	87	133
* DLGP506079	7.9	.3110	75	117	** DLGP506107	10.7	.4212	94	142
* DLGP506080	8.0	.3150	75	117	** DLGP506108	10.8	.4252	94	142
* DLGP506081	8.1	.3189	75	117	** DLGP506109	10.9	.4291	94	142
* DLGP506082	8.2	.3228	75	117	** DLGP506110	11.0	.4330	94	142
* DLGP506083	8.3	.3268	75	117	** DLGP506111	11.1	.4370	94	142
** DLGP506084	8.4	.3307	75	117	** DLGP506112	11.2	.4409	94	142
** DLGP506085	8.5	.3346	75	117	** DLGP506113	11.3	.4448	94	142
** DLGP506086	8.6	.3386	81	125	** DLGP506114	11.4	.4488	94	142
** DLGP506087	8.7	.3425	81	125	** DLGP506115	11.5	.4527	94	142
** DLGP506088	8.8	.3465	81	125	** DLGP506116	11.6	.4566	94	142
** DLGP506089	8.9	.3504	81	125	** DLGP506117	11.7	.4606	94	142
** DLGP506090	9.0	.3543	81	125	** DLGP506118	11.8	.4645	94	142
** DLGP506091	9.1	.3583	81	125	** DLGP506119	11.9	.4685	101	151
** DLGP506092	9.2	.3622	81	125	** DLGP506120	12.0	.4724	101	151
** DLGP506093	9.3	.3661	81	125	** DLGP506121	12.1	.4764	101	151
** DLGP506094	9.4	.3701	81	125	** DLGP506122	12.2	.4803	101	151
** DLGP506095	9.5	.3740	81	125	** DLGP506123	12.3	.4843	101	151
** DLGP506096	9.6	.3780	87	133	** DLGP506124	12.4	.4882	101	151
** DLGP506097	9.7	.3819	87	133	** DLGP506125	12.5	.4921	101	151
** DLGP506098	9.8	.3858	87	133	** DLGP506126	12.6	.4961	101	151
** DLGP506099	9.9	.3898	87	133	** DLGP506127	12.7	.5000	101	151
** DLGP506100	10.0	.3937	87	133	** DLGP506128	12.8	.5039	101	151
** DLGP506101	10.1	.3976	87	133	** DLGP506129	12.9	.5079	101	151
** DLGP506102	10.2	.4016	87	133	** DLGP506130	13.0	.5118	101	151
** DLGP506103	10.3	.4055	87	133					

* 10pcs per package
** 5pcs per package

◎ : Excellent ○ : Good

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

YG GOLD-P DRILLS

GOLD-P COATED DRILL SETS



EDP No.	Series No.	Description	SIZE	Q'TY
D1GP138 SET	D1GP SET924	HSS Straight Shank, Split Point (#53 ~#56 : NORMAL point)	# 1~#56(Wire gauge)	56 pcs
D1GP139 SET	D1GP SET925	HSS Straight Shank, Split Point	A~Z(Letter)	26 pcs
D1GP182 SET	D1GP SET926	HSS Straight Shank, Split Point	Ø1/16~Ø1/2(Fractional)	29 pcs
D2GP185 SET	D2GP SET927	HSSCo8 Straight Shank, Split Point	Ø1/16~Ø1/2(Fractional)	29 pcs
D2GP186 SET	D2GP SET928	HSSCo8 Straight Shank, Split Point	A~Z(Letter)	26 pcs
D2GP187 SET	D2GP SET930	HSSCo8 Straight Shank, Split Point (#53 ~#56 : NORMAL point)	# 1~#56(Wire gauge)	56 pcs
DLGP511 SET	DLGP SET931	HSSCo5 Straight Shank, Split Point	Ø5/64~Ø1/2(Fractional)	28 pcs
DLGP512 SET	DLGP SET932	HSSCo5 Straight Shank, Split Point	# 1~#47(Wire gauge)	47 pcs
DLGP513 SET	DLGP SET933	HSSCo5 Straight Shank, Split Point	A~Z(Letter)	26 pcs



RECOMMENDED CUTTING CONDITIONS

HSS, HSSCo5 & HSSCo8 STRAIGHT SHANK, GOLD-P COATED

D1GP182, D1GP139, D1GP138, D2GP185, D2GP186, D2GP187, DLGP195, SERIES

WORK MATERIAL			P				M			
			CARBON STEELS		CARBON STEELS		ALLOY STEELS		STAINLESS STEELS	
HARDNESS					~ HRC23		HRC23 ~ 34		~ HRC23	
STRENGTH			~ 570N/mm ²		~ 830N/mm ²		830~1110N/mm ²		~ 830N/mm ²	
DIAMETER			N	S	N	S	N	S	N	S
Fractional	Decimal	Metric								
3/64	.0469	1.0	14000	.0008	12500	.0008	7700	.0008	7000	.0008
#47	.0785	2.0	7000	.0023	6100	.0024	3850	.0024	3500	.0024
#32	.1160	3.0	4650	.0038	4100	.0031	2550	.0031	2350	.0031
#22	.1570	4.0	3500	.0044	3050	.0043	1950	.0039	1750	.0039
#9	.1960	5.0	2800	.0049	2450	.0043	1550	.0039	1400	.0039
B	.2380	6.0	2350	.0056	2050	.0051	1300	.0047	1150	.0047
J	.2770	7.0	2000	.0064	1750	.0059	1100	.0055	1000	.0055
O	.3160	8.0	1750	.0072	1550	.0071	960	.0059	875	.0059
T	.3580	9.0	1550	.0077	1350	.0087	855	.0071	780	.0071
X	.3970	10.0	1400	.0084	1250	.0087	770	.0071	700	.0071
7/16	.4375	11.0	1250	.0087	1100	.0087	700	.0071	650	.0071
15/32	.4688	12.0	1150	.0090	1000	.0087	650	.0079	585	.0079
1/2	.5000	13.0	1050	.0090	950	.0087	595	.0079	540	.0079

WORK MATERIAL			N				S	
			ALUMINUM ALLOYS, ZINC ALLOYS		MAGNESIUM ALLOYS		TITANIUM ALLOYS	
HARDNESS								
STRENGTH							~410N/mm ²	
DIAMETER			N	S	N	S	N	S
Fractional	Decimal	Metric						
3/64	.0469	1.0	30000	.0008	11500	.0012	8050	.0008
#47	.0785	2.0	15000	.0023	5800	.0035	4050	.0024
#32	.1160	3.0	9900	.0038	3850	.0051	2700	.0031
#22	.1570	4.0	7450	.0044	2900	.0059	2000	.0035
#9	.1960	5.0	5950	.0049	2300	.0067	1600	.0039
B	.2380	6.0	14950	.0056	1950	.0075	1350	.0047
J	.2770	7.0	4250	.0064	1650	.0087	1150	.0055
O	.3160	8.0	3700	.0072	1450	.0094	1000	.0059
T	.3580	9.0	3300	.0079	1280	.0106	895	.0067
X	.3970	10.0	3000	.0090	1150	.0114	805	.0071
7/16	.4375	11.0	2700	.0090	1050	.0118	730	.0071
15/32	.4688	12.0	2480	.0090	960	.0122	670	.0079
1/2	.5000	13.0	2300	.0090	890	.0122	620	.0079

N = R.P.M
S = Inch per Revolution (inch/rev.)



RECOMMENDED CUTTING CONDITIONS

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE, GOLD-P COATED

DLGP511, DLGP513, DLGP512, DLGP506 SERIES

WORK MATERIAL			P				K			
			CARBON STEELS ALLOY STEELS		TOOL STEELS HARDENED STEELS		SOFT GREY CAST IRON		HARD GREY CAST IRON	
HARDNESS			HRC15 ~ 30		HRC20 ~ 40					
STRENGTH			700 ~ 1000N/mm ²		800~1200N/mm ²					
DIAMETER			N	S	N	S	N	S	N	S
Fractional	Decimal	Metric								
3/64	.0469	1.0	8750	.0008	6300	.0008	16000	.0008	9800	.0008
#47	.0785	2.0	4400	.0022	3150	.0022	7900	.0027	4900	.0027
#32	.1160	3.0	2900	.0032	2100	.0032	5250	.0043	3250	.0043
#22	.1570	4.0	2200	.0036	1600	.0036	3950	.0054	2450	.0054
#9	.1960	5.0	1750	.0041	1250	.0041	3150	.0054	1950	.0054
B	.2380	6.0	1450	.0047	1050	.0047	2650	.0069	1650	.0069
J	.2770	7.0	1250	.0054	900	.0054	2250	.0078	1400	.0078
O	.3160	8.0	1100	.0060	790	.0060	1950	.0087	1250	.0087
T	.3580	9.0	975	.0066	700	.0066	1750	.0095	1100	.0095
X	.3970	10.0	875	.0071	630	.0071	1600	.0108	980	.0108
7/16	.4375	11.0	800	.0077	575	.0077	1450	.0108	890	.0108
15/32	.4688	12.0	730	.0077	525	.0077	1300	.0108	815	.0108
1/2	.5000	13.0	675	.0077	485	.0077	1200	.0108	755	.0108

N = R.P.M
S = Inch per Revolution (inch/rev.)



Being the best through innovation

HSS

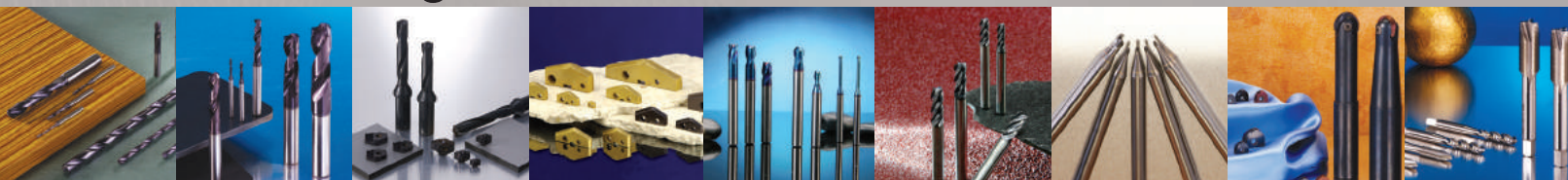


STRAIGHT SHANK DRILLS

- HSS Drills for soft materials & HSS cobalt Drills for tough materials



Global Cutting Tool Leader **YG-1**














SELECTION GUIDE

HSS STRAIGHT SHANK DRILLS

STRAIGHT SHANK TWIST DRILLS

- HSS Drills for soft materials & HSS cobalt Drills for tough materials

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
INCH					
D1118		HSS, STRAIGHT SHANK SCREW MACHINE / Fractional sizes	D3/64	D1/2	218
D1115		HSS, STRAIGHT SHANK SCREW MACHINE / Letter sizes	A	Z	219
D1119		HSS, STRAIGHT SHANK SCREW MACHINE / Wire gauge sizes	#60	#1	220
D2146 D4146		HSSCo8, STRAIGHT SHANK SCREW MACHINE / Fractional sizes	D3/64	D1/2	221
D2147 D4147		HSSCo8, STRAIGHT SHANK SCREW MACHINE / Letter sizes	A	Z	222
D2148 D4148		HSSCo8, STRAIGHT SHANK SCREW MACHINE / Wire gauge sizes	#60	#1	223
DN514		HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE SCREW MACHINE, TiN COATED / Fractional sizes	D3/32	D1/2	225
DN516		HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE SCREW MACHINE, TiN COATED / Letter sizes	A	Z	226
DN515		HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE SCREW MACHINE, TiN COATED / Wire gauge sizes	#47	#1	227
DL517 DX517		HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE TAPER LENGTH / Fractional sizes	D5/64	D1/2	228
METRIC					
D4107		HSSCo8, STRAIGHT SHANK DRILL	<i>STUB</i>	D1.0	D31.0 229
RECOMMENDED CUTTING CONDITIONS					232

◎ : Excellent ○ : Good

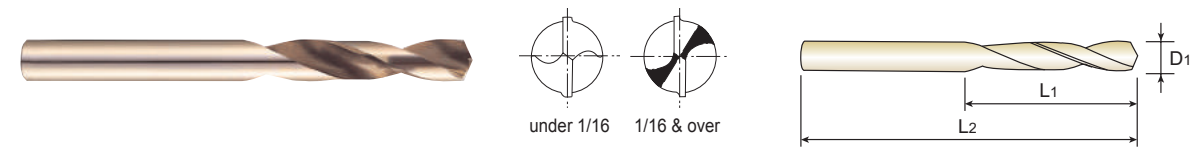
P			H	M	K	N			S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55							
◎	◎			○	○	○				○
◎	◎			○	○	○				○
◎	◎			○	○	○				○
◎	◎			○		○				○
◎	◎			○		○				○
◎	◎				○					
◎	◎				○					
◎	◎	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

YG STRAIGHT SHANK DRILLS

D1118 SERIES

HSS, STRAIGHT SHANK SCREW MACHINE

- ▶ **Flute Geometry** : Right hand spiral, wider flutes
- ▶ **Point Angle** : 135°
under 1/16 : Normal point
1/16 & over : Split point
- ▶ **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



▶ Fractional sizes

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Fractional	Decimal				Fractional	Decimal		
	D1					D1			
* D1118003	3/64	.0469	1/2	1-3/8	* D1118018	9/32	.2813	1-1/2	2-11/16
* D1118004	1/16	.0625	5/8	1-5/8	* D1118019	19/64	.2969	1-9/16	2-3/4
* D1118005	5/64	.0781	11/16	1-11/16	* D1118020	5/16	.3125	1-5/8	2-13/16
* D1118006	3/32	.0938	3/4	1-3/4	* D1118021	21/64	.3281	1-11/16	2-15/16
* D1118007	7/64	.1094	13/16	1-13/16	** D1118022	11/32	.3438	1-11/16	3
* D1118008	1/8	.1250	7/8	1-7/8	** D1118023	23/64	.3594	1-3/4	3-1/16
* D1118009	9/64	.1406	15/16	1-15/16	** D1118024	3/8	.3750	1-13/16	3-1/8
* D1118010	5/32	.1563	1	2-1/16	** D1118025	25/64	.3906	1-7/8	3-1/4
* D1118011	11/64	.1719	1-1/16	2-1/8	** D1118026	13/32	.4063	1-15/16	3-5/16
* D1118012	3/16	.1875	1-1/8	2-3/16	** D1118027	27/64	.4219	2	3-3/8
* D1118013	13/64	.2031	1-3/16	2-1/4	** D1118028	7/16	.4375	2-1/16	3-7/16
* D1118014	7/32	.2188	1-1/4	2-3/8	** D1118029	29/64	.4531	2-1/8	3-9/16
* D1118015	15/64	.2344	1-5/16	2-7/16	** D1118030	15/32	.4688	2-1/8	3-5/8
* D1118016	1/4	.2500	1-3/8	2-1/2	** D1118031	31/64	.4844	2-3/16	3-11/16
* D1118017	17/64	.2656	1-7/16	2-5/8	** D1118032	1/2	.5000	2-1/4	3-3/4

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

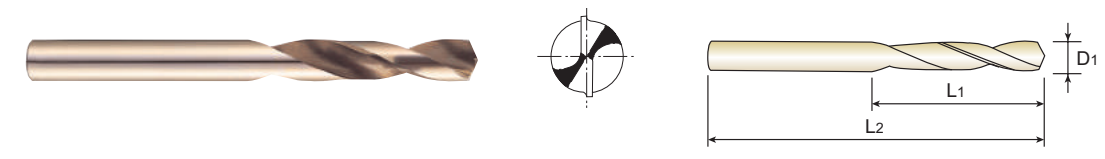
P		H	M	K	N				S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55 HRc55~							
◎	◎			○	○	○				○

YG STRAIGHT SHANK DRILLS

D1115 SERIES

HSS, STRAIGHT SHANK SCREW MACHINE

- ▶ **Flute Geometry** : Right hand spiral, wider flutes
- ▶ **Point Angle** : 135° : Split point
- ▶ **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



▶ Letter sizes

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Letter	Decimal				Letter	Decimal		
	D1					D1			
* D1115201	A	.2340	1-5/16	2-7/16	* D1115214	N	.3020	1-5/8	2-13/16
* D1115202	B	.2380	1-3/8	2-1/2	* D1115215	O	.3160	1-11/16	2-15/16
* D1115203	C	.2420	1-3/8	2-1/2	* D1115216	P	.3230	1-11/16	2-15/16
* D1115204	D	.2460	1-3/8	2-1/2	** D1115217	Q	.3320	1-11/16	3
* D1115205	E	.2500	1-3/8	2-1/2	** D1115218	R	.3390	1-11/16	3
* D1115206	F	.2570	1-7/16	2-5/8	** D1115219	S	.3480	1-3/4	3-1/16
* D1115207	G	.2610	1-7/16	2-5/8	** D1115220	T	.3580	1-3/4	3-1/16
* D1115208	H	.2660	1-1/2	2-11/16	** D1115221	U	.3680	1-13/16	3-1/8
* D1115209	I	.2720	1-1/2	2-11/16	** D1115222	V	.3770	1-7/8	3-1/4
* D1115210	J	.2770	1-1/2	2-11/16	** D1115223	W	.3860	1-7/8	3-1/4
* D1115211	K	.2810	1-1/2	2-11/16	** D1115224	X	.3970	1-15/16	3-5/16
* D1115212	L	.2900	1-9/16	2-3/4	** D1115225	Y	.4040	1-15/16	3-5/16
* D1115213	M	.2950	1-9/16	2-3/4	** D1115226	Z	.4130	2	3-3/8

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

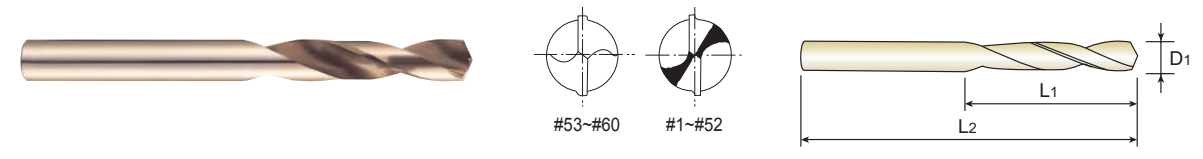
P		H	M	K	N				S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55 HRc55~							
◎	◎			○	○	○				○

STRAIGHT SHANK DRILLS

D1119 SERIES

HSS, STRAIGHT SHANK SCREW MACHINE

- **Flute Geometry** : Right hand spiral, wider flutes
- **Point Angle** : 135° : Split point
Wire gauge size #53~#60 : Normal point
Wire gauge size #1~#52 : Split point
- **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



► Wire gauge sizes

Unit : Inch

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Wire gauge	Decimal				Wire gauge	Decimal		
* D1119201	1	.2280	1-5/16	2-7/16	* D1119231	31	.1200	7/8	1-7/8
* D1119202	2	.2210	1-5/16	2-7/16	* D1119232	32	.1160	7/8	1-7/8
* D1119203	3	.2130	1-1/4	2-3/8	* D1119233	33	.1130	7/8	1-7/8
* D1119204	4	.2090	1-1/4	2-3/8	* D1119234	34	.1110	7/8	1-7/8
* D1119205	5	.2055	1-1/4	2-3/8	* D1119235	35	.1100	7/8	1-7/8
* D1119206	6	.2040	1-1/4	2-3/8	* D1119236	36	.1065	13/16	1-13/16
* D1119207	7	.2010	1-3/16	2-1/4	* D1119237	37	.1040	13/16	1-13/16
* D1119208	8	.1990	1-3/16	2-1/4	* D1119238	38	.1015	13/16	1-13/16
* D1119209	9	.1960	1-3/16	2-1/4	* D1119239	39	.0995	13/16	1-13/16
* D1119210	10	.1935	1-3/16	2-1/4	* D1119240	40	.0980	13/16	1-13/16
* D1119211	11	.1910	1-3/16	2-1/4	* D1119241	41	.0960	13/16	1-13/16
* D1119212	12	.1890	1-3/16	2-1/4	* D1119242	42	.0935	3/4	1-3/4
* D1119213	13	.1850	1-1/8	2-3/16	* D1119243	43	.0890	3/4	1-3/4
* D1119214	14	.1820	1-1/8	2-3/16	* D1119244	44	.0860	3/4	1-3/4
* D1119215	15	.1800	1-1/8	2-3/16	* D1119245	45	.0820	3/4	1-3/4
* D1119216	16	.1770	1-1/8	2-3/16	* D1119246	46	.0810	3/4	1-3/4
* D1119217	17	.1730	1-1/8	2-3/16	* D1119247	47	.0785	11/16	1-11/16
* D1119218	18	.1695	1-1/16	2-1/8	* D1119248	48	.0760	11/16	1-11/16
* D1119219	19	.1660	1-1/16	2-1/8	* D1119249	49	.0730	11/16	1-11/16
* D1119220	20	.1610	1-1/16	2-1/8	* D1119250	50	.0700	11/16	1-11/16
* D1119221	21	.1590	1-1/16	2-1/8	* D1119251	51	.0670	11/16	1-11/16
* D1119222	22	.1570	1-1/16	2-1/8	* D1119252	52	.0635	11/16	1-11/16
* D1119223	23	.1540	1	2-1/16	* D1119253	53	.0595	5/8	1-5/8
* D1119224	24	.1520	1	2-1/16	* D1119254	54	.0550	5/8	1-5/8
* D1119225	25	.1495	1	2-1/16	* D1119255	55	.0520	5/8	1-5/8
* D1119226	26	.1470	1	2-1/16	* D1119256	56	.0465	1/2	1-3/8
* D1119227	27	.1440	1	2-1/16	* D1119257	57	.0430	1/2	1-3/8
* D1119228	28	.1405	15/16	1-15/16	* D1119258	58	.0420	1/2	1-3/8
* D1119229	29	.1360	15/16	1-15/16	* D1119259	59	.0410	1/2	1-3/8
* D1119230	30	.1285	15/16	1-15/16	* D1119260	60	.0400	1/2	1-3/8

► **Tolerance** : See page 218 / * 10pcs per package ◎ : Excellent ○ : Good

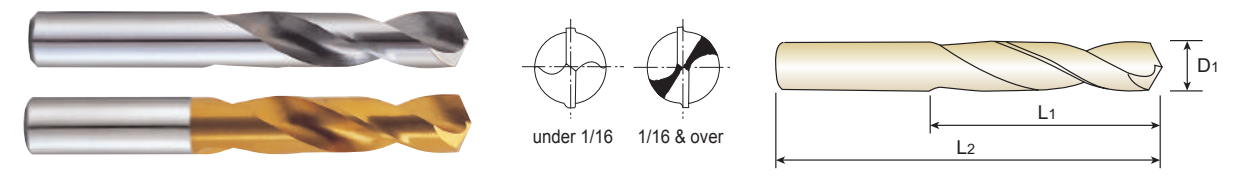
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55 HRc55~								
◎	◎			○	○	○				○	

STRAIGHT SHANK DRILLS

D2146 SERIES UN-COATED D4146 SERIES TIN-COATED

HSSCo8, STRAIGHT SHANK SCREW MACHINE

- **Flute Geometry** : Right hand spiral, wider flutes
- **Point Angle** : 135°
under 1/16 : Normal point
1/16 & over : Split point
- **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



► Fractional sizes

Unit : Inch

EDP No.	Diameter		Flute Length L1	Overall Length L2	
	Fractional	Decimal			
UN-COATED	D1				
TIN-COATED	D1				
* D2146003	D4146003	3/64	.0469	1/2	1-3/8
* D2146004	D4146004	1/16	.0625	5/8	1-5/8
* D2146005	D4146005	5/64	.0781	11/16	1-11/16
* D2146006	D4146006	3/32	.0938	3/4	1-3/4
** D2146007	D4146007	7/64	.1094	13/16	1-13/16
** D2146008	D4146008	1/8	.1250	7/8	1-7/8
** D2146009	D4146009	9/64	.1406	15/16	1-15/16
** D2146010	D4146010	5/32	.1563	1	2-1/16
** D2146011	D4146011	11/64	.1719	1-1/16	2-1/8
** D2146012	D4146012	3/16	.1875	1-1/8	2-3/16
** D2146013	D4146013	13/64	.2031	1-3/16	2-1/4
** D2146014	D4146014	7/32	.2188	1-1/4	2-3/8
** D2146015	D4146015	15/64	.2344	1-5/16	2-7/16
** D2146016	D4146016	1/4	.2500	1-3/8	2-1/2
** D2146017	D4146017	17/64	.2656	1-7/16	2-5/8
** D2146018	D4146018	9/32	.2813	1-1/2	2-11/16
** D2146019	D4146019	19/64	.2969	1-9/16	2-3/4
** D2146020	D4146020	5/16	.3125	1-5/8	2-13/16
** D2146021	D4146021	21/64	.3281	1-11/16	2-15/16
** D2146022	D4146022	11/32	.3438	1-11/16	3
** D2146023	D4146023	23/64	.3594	1-3/4	3-1/16
** D2146024	D4146024	3/8	.3750	1-13/16	3-1/8
** D2146025	D4146025	25/64	.3906	1-7/8	3-1/4
** D2146026	D4146026	13/32	.4063	1-15/16	3-5/16
** D2146027	D4146027	27/64	.4219	2	3-3/8
** D2146028	D4146028	7/16	.4375	2-1/16	3-7/16
** D2146029	D4146029	29/64	.4531	2-1/8	3-9/16
** D2146030	D4146030	15/32	.4688	2-1/8	3-5/8
** D2146031	D4146031	31/64	.4844	2-3/16	3-11/16
** D2146032	D4146032	1/2	.5000	2-1/4	3-3/4

► **Tolerance** : See page 218 / * 10pcs per package ** 5pcs per package ◎ : Excellent ○ : Good

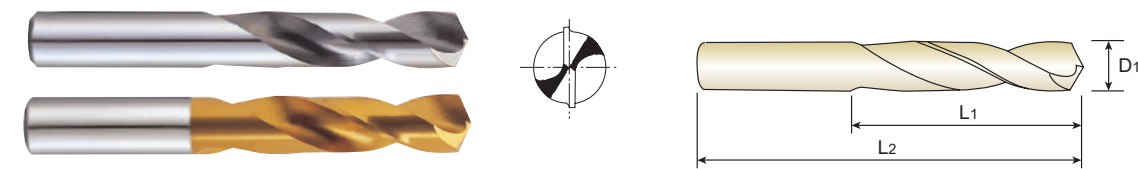
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55 HRc55~								
◎	◎			○	○	○				○	



D2147 SERIES UN-COATED
D4147 SERIES TIN-COATED

HSSCo8, STRAIGHT SHANK SCREW MACHINE

- Flute Geometry : Right hand spiral, wider flutes
Point Angle : 135° : Split point
Application : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



Letter sizes

Table with columns: EDP No. (UN-COATED, TIN-COATED), Diameter (Letter, Decimal), Flute Length (L1), Overall Length (L2). Rows A through Z.

Tolerance : See page 218 / ** 5pcs per package

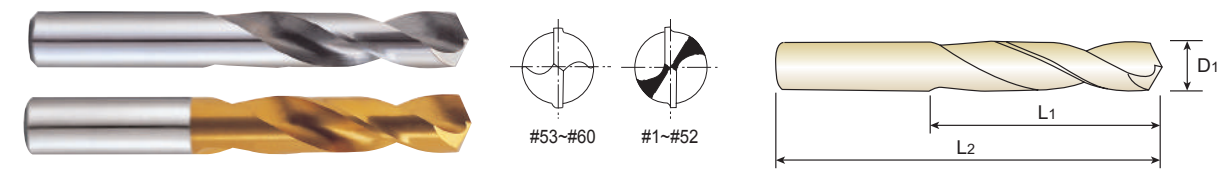
Material compatibility table with columns P, H, M, K, N, S and rows for Carbon Steels, Alloy Steels, Prehardened Steels, Hardened Steels, Stainless Steels, Cast Iron, Aluminum, Copper, Bronze, CFRP, Titanium.



D2148 SERIES UN-COATED
D4148 SERIES TIN-COATED

HSSCo8, STRAIGHT SHANK SCREW MACHINE

- Flute Geometry : Right hand spiral, wider flutes
Point Angle : 135° : Split point
Wire gauge size #53~#60 : Normal point
Wire gauge size #1~#52 : Split point
Application : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



Wire gauge sizes

Table with columns: EDP No. (UN-COATED, TIN-COATED), Diameter (Wire gauge, Decimal), Flute Length (L1), Overall Length (L2). Rows 1 through 30.

Tolerance : See page 218 / ** 5pcs per package

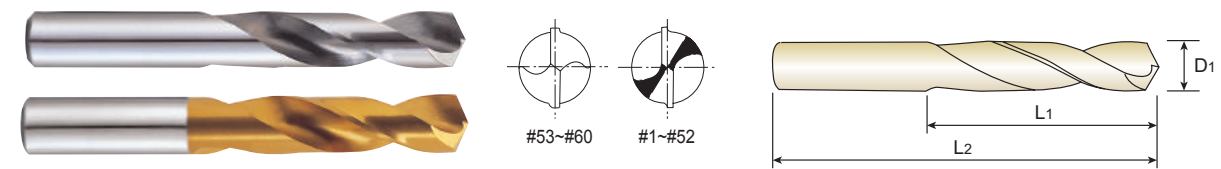
Material compatibility table with columns P, H, M, K, N, S and rows for Carbon Steels, Alloy Steels, Prehardened Steels, Hardened Steels, Stainless Steels, Cast Iron, Aluminum, Copper, Bronze, CFRP, Titanium.

STRAIGHT SHANK DRILLS

D2148 SERIES UN-COATED
D4148 SERIES TIN-COATED

HSSCo8, STRAIGHT SHANK SCREW MACHINE

- **Flute Geometry** : Right hand spiral, wider flutes
- **Point Angle** : 135° : Split point
Wire gauge size #53~#60 : Normal point
Wire gauge size #1~#52 : Split point
- **Application** : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



ANSI HSS Co8 20~30° N ANSI 135° P.232

► Wire gauge sizes

Unit : Inch

EDP No.		Diameter		Flute Length	Overall Length
UN-COATED	TiN-COATED	Wire gauge	Decimal		
		D1		L1	L2
** D2148131	D4148131	31	.1200	7/8	1-7/8
** D2148132	D4148132	32	.1160	7/8	1-7/8
** D2148133	D4148133	33	.1130	7/8	1-7/8
** D2148134	D4148134	34	.1110	7/8	1-7/8
** D2148135	D4148135	35	.1100	7/8	1-7/8
** D2148136	D4148136	36	.1065	13/16	1-13/16
* D2148137	D4148137	37	.1040	13/16	1-13/16
* D2148138	D4148138	38	.1015	13/16	1-13/16
* D2148139	D4148139	39	.0995	13/16	1-13/16
* D2148140	D4148140	40	.0980	13/16	1-13/16
* D2148141	D4148141	41	.0960	13/16	1-13/16
* D2148142	D4148142	42	.0935	3/4	1-3/4
* D2148143	D4148143	43	.0890	3/4	1-3/4
* D2148144	D4148144	44	.0860	3/4	1-3/4
* D2148145	D4148145	45	.0820	3/4	1-3/4
* D2148146	D4148146	46	.0810	3/4	1-3/4
* D2148147	D4148147	47	.0785	11/16	1-11/16
* D2148148	D4148148	48	.0760	11/16	1-11/16
* D2148149	D4148149	49	.0730	11/16	1-11/16
* D2148150	D4148150	50	.0700	11/16	1-11/16
* D2148151	D4148151	51	.0670	11/16	1-11/16
* D2148152	D4148152	52	.0635	11/16	1-11/16
* D2148153	D4148153	53	.0595	5/8	1-5/8
* D2148154	D4148154	54	.0550	5/8	1-5/8
* D2148155	D4148155	55	.0520	5/8	1-5/8
* D2148156	D4148156	56	.0465	1/2	1-3/8
* D2148157	D4148157	57	.0430	1/2	1-3/8
* D2148158	D4148158	58	.0420	1/2	1-3/8
* D2148159	D4148159	59	.0410	1/2	1-3/8
* D2148160	D4148160	60	.0400	1/2	1-3/8

► **Tolerance** : See page 218 / * 10pcs per package ** 5pcs per package

◎ : Excellent ○ : Good

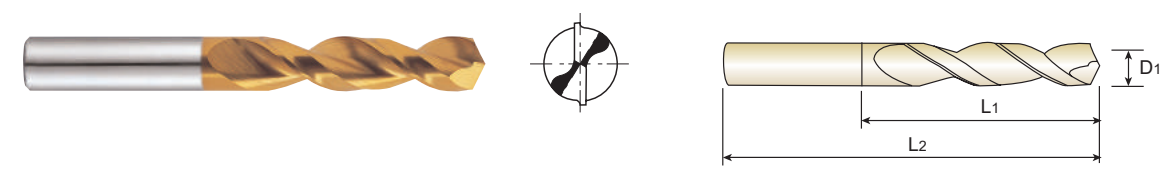
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55 HRc55~								
◎	◎			○		○				○	

STRAIGHT SHANK DRILLS

DN514 SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE SCREW MACHINE, TiN COATED

- **Flute Geometry** : Right hand spiral, Parabolic flute
38° helix
- **Point Angle** : 130° : Split point
- **Application** : Improved chip removal in most materials, especially in deep drilling applications.



ANSI HSS-E W 38° ANSI 130° P.233

► Fractional sizes

Unit : Inch

EDP No.	Diameter		Flute Length	Overall Length	EDP No.	Diameter		Flute Length	Overall Length
	Fractional	Decimal				Fractional	Decimal		
		D1		L1	L2	D1		L1	L2
* DN514006	3/32	.0938	3/4	1-3/4	** DN514020	5/16	.3125	1-5/8	2-13/16
** DN514007	7/64	.1094	13/16	1-13/16	** DN514021	21/64	.3281	1-11/16	2-15/16
** DN514008	1/8	.1250	7/8	1-7/8	** DN514022	11/32	.3438	1-11/16	3
** DN514009	9/64	.1406	15/16	1-15/16	** DN514023	23/64	.3594	1-3/4	3-1/16
** DN514010	5/32	.1563	1	2-1/16	** DN514024	3/8	.3750	1-13/16	3-1/8
** DN514011	11/64	.1719	1-1/16	2-1/8	** DN514025	25/64	.3906	1-7/8	3-1/4
** DN514012	3/16	.1875	1-1/8	2-3/16	** DN514026	13/32	.4063	1-15/16	3-5/16
** DN514013	13/64	.2031	1-3/16	2-1/4	** DN514027	27/64	.4219	2	3-3/8
** DN514014	7/32	.2188	1-1/4	2-3/8	** DN514028	7/16	.4375	2-1/16	3-7/16
** DN514015	15/64	.2344	1-5/16	2-7/16	** DN514029	29/64	.4531	2-1/8	3-9/16
** DN514016	1/4	.2500	1-3/8	2-1/2	** DN514030	15/32	.4688	2-1/8	3-5/8
** DN514017	17/64	.2656	1-7/16	2-5/8	** DN514031	31/64	.4844	2-3/16	3-11/16
** DN514018	9/32	.2813	1-1/2	2-11/16	** DN514032	1/2	.5000	2-1/4	3-3/4
** DN514019	19/64	.2969	1-9/16	2-3/4					

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

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

YG STRAIGHT SHANK DRILLS

DN516 SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE SCREW MACHINE, TIN COATED

- ▶ **Flute Geometry** : Right hand spiral, Parabolic flute
38° helix
- ▶ **Point Angle** : 130° : Split point
- ▶ **Application** : Improved chip removal in most materials, especially in deep drilling applications.



▶ **Letter sizes**

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Letter	Decimal				Letter	Decimal		
TiN	D1				TiN	D1			
** DN516101	A	.2340	1-5/16	2-7/16	** DN516114	N	.3020	1-5/8	2-13/16
** DN516102	B	.2380	1-3/8	2-1/2	** DN516115	O	.3160	1-11/16	2-15/16
** DN516103	C	.2420	1-3/8	2-1/2	** DN516116	P	.3230	1-11/16	2-15/16
** DN516104	D	.2460	1-3/8	2-1/2	** DN516117	Q	.3320	1-11/16	3
** DN516105	E	.2500	1-3/8	2-1/2	** DN516118	R	.3390	1-11/16	3
** DN516106	F	.2570	1-7/16	2-5/8	** DN516119	S	.3480	1-3/4	3-1/16
** DN516107	G	.2610	1-7/16	2-5/8	** DN516120	T	.3580	1-3/4	3-1/16
** DN516108	H	.2660	1-1/2	2-11/16	** DN516121	U	.3680	1-13/16	3-1/8
** DN516109	I	.2720	1-1/2	2-11/16	** DN516122	V	.3770	1-7/8	3-1/4
** DN516110	J	.2770	1-1/2	2-11/16	** DN516123	W	.3860	1-7/8	3-1/4
** DN516111	K	.2810	1-1/2	2-11/16	** DN516124	X	.3970	1-15/16	3-5/16
** DN516112	L	.2900	1-9/16	2-3/4	** DN516125	Y	.4040	1-15/16	3-5/16
** DN516113	M	.2950	1-9/16	2-3/4	** DN516126	Z	.4130	2	3-3/8

** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

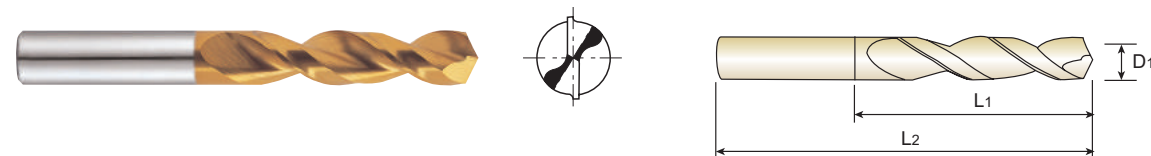
P		H	M	K	N				S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55 HRc55~							
◎	◎				○					

YG STRAIGHT SHANK DRILLS

DN515 SERIES

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE SCREW MACHINE, TIN COATED

- ▶ **Flute Geometry** : Right hand spiral, Parabolic flute
38° helix
- ▶ **Point Angle** : 130° : Split point
- ▶ **Application** : Improved chip removal in most materials, especially in deep drilling applications.



▶ **Wire gauge sizes**

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Wire gauge	Decimal				Wire gauge	Decimal		
TiN	D1				TiN	D1			
** DN515201	1	.2280	1-5/16	2-7/16	** DN515225	25	.1495	1	2-1/16
** DN515202	2	.2210	1-5/16	2-7/16	** DN515226	26	.1470	1	2-1/16
** DN515203	3	.2130	1-1/4	2-3/8	** DN515227	27	.1440	1	2-1/16
** DN515204	4	.2090	1-1/4	2-3/8	** DN515228	28	.1405	15/16	1-15/16
** DN515205	5	.2055	1-1/4	2-3/8	** DN515229	29	.1360	15/16	1-15/16
** DN515206	6	.2040	1-1/4	2-3/8	** DN515230	30	.1285	15/16	1-15/16
** DN515207	7	.2010	1-3/16	2-1/4	** DN515231	31	.1200	7/8	1-7/8
** DN515208	8	.1990	1-3/16	2-1/4	** DN515232	32	.1160	7/8	1-7/8
** DN515209	9	.1960	1-3/16	2-1/4	** DN515233	33	.1130	7/8	1-7/8
** DN515210	10	.1935	1-3/16	2-1/4	** DN515234	34	.1110	7/8	1-7/8
** DN515211	11	.1910	1-3/16	2-1/4	** DN515235	35	.1100	7/8	1-7/8
** DN515212	12	.1890	1-3/16	2-1/4	** DN515236	36	.1065	13/16	1-13/16
** DN515213	13	.1850	1-1/8	2-3/16	** DN515237	37	.1040	13/16	1-13/16
** DN515214	14	.1820	1-1/8	2-3/16	** DN515238	38	.1015	13/16	1-13/16
** DN515215	15	.1800	1-1/8	2-3/16	** DN515239	39	.0995	13/16	1-13/16
** DN515216	16	.1770	1-1/8	2-3/16	** DN515240	40	.0980	13/16	1-13/16
** DN515217	17	.1730	1-1/8	2-3/16	** DN515241	41	.0960	13/16	1-13/16
** DN515218	18	.1695	1-1/16	2-1/8	** DN515242	42	.0935	3/4	1-3/4
** DN515219	19	.1660	1-1/16	2-1/8	** DN515243	43	.0890	3/4	1-3/4
** DN515220	20	.1610	1-1/16	2-1/8	** DN515244	44	.0860	3/4	1-3/4
** DN515221	21	.1590	1-1/16	2-1/8	** DN515245	45	.0820	3/4	1-3/4
** DN515222	22	.1570	1-1/16	2-1/8	** DN515246	46	.0810	3/4	1-3/4
** DN515223	23	.1540	1	2-1/16	** DN515247	47	.0785	11/16	1-11/16
** DN515224	24	.1520	1	2-1/16					

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

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

YG STRAIGHT SHANK DRILLS

DL517 SERIES UN-COATED
DX517 SERIES TiCN-COATED

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE TAPER LENGTH

- ▶ Flute Geometry : Right hand spiral, Parabolic flute
38° helix
- ▶ Point Angle : 130° : Split point
- ▶ Application : Improved chip removal in most materials, especially in deep drilling applications.



▶ Fractional sizes

Unit : Inch

EDP No.		Diameter		Flute Length	Overall Length
UN-COATED	TiCN-COATED	Fractional	Decimal		
		D1		L1	L2
* DL517005	DX517005	5/64	.0781	2	3-3/4
* DL517006	DX517006	3/32	.0938	2-1/4	4-1/4
* DL517007	DX517007	7/64	.1094	2-1/2	4-5/8
* DL517008	DX517008	1/8	.1250	2-3/4	5-1/8
* DL517009	DX517009	9/64	.1406	3	5-3/8
* DL517010	DX517010	5/32	.1563	3	5-3/8
* DL517011	DX517011	11/64	.1719	3-3/8	5-3/4
* DL517012	DX517012	3/16	.1875	3-3/8	5-3/4
* DL517013	DX517013	13/64	.2031	3-5/8	6
* DL517014	DX517014	7/32	.2188	3-5/8	6
* DL517015	DX517015	15/64	.2344	3-3/4	6-1/8
** DL517016	DX517016	1/4	.2500	3-3/4	6-1/8
** DL517017	DX517017	17/64	.2656	3-7/8	6-1/4
** DL517018	DX517018	9/32	.2813	3-7/8	6-1/4
** DL517019	DX517019	19/64	.2969	4	6-3/8
** DL517020	DX517020	5/16	.3125	4	6-3/8
** DL517021	DX517021	21/64	.3281	4-1/8	6-1/2
** DL517022	DX517022	11/32	.3438	4-1/8	6-3/4
** DL517023	DX517023	23/64	.3594	4-1/4	6-3/4
** DL517024	DX517024	3/8	.3750	4-1/4	6-3/4
** DL517025	DX517025	25/64	.3906	4-3/8	7
** DL517026	DX517026	13/32	.4063	4-3/8	7
** DL517027	DX517027	27/64	.4219	4-5/8	7-1/4
** DL517028	DX517028	7/16	.4375	4-5/8	7-1/4
** DL517029	DX517029	29/64	.4531	4-3/4	7-1/2
** DL517030	DX517030	15/32	.4688	4-3/4	7-1/2
** DL517031	DX517031	31/64	.4844	4-3/4	7-3/4
** DL517032	DX517032	1/2	.5000	4-3/4	7-3/4

▶ Tolerance : See page 218 * 10pcs per package ** 5pcs per package

◎ : Excellent ○ : Good

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

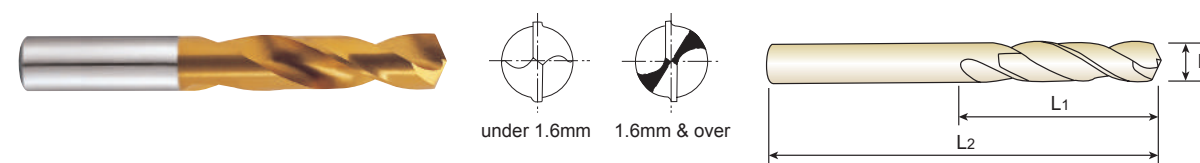
YG STRAIGHT SHANK DRILLS

D4107 SERIES

HSSCo8, STRAIGHT SHANK DRILL

STUB

- ▶ Flute Geometry : Right hand spiral helix
- ▶ Point Angle : 135°
under 1.6mm : Normal point
1.6mm & over : Split point
- ▶ Surface Treatment : TiN Coating
- ▶ Application : Drills suitable for drilling in thin materials with portable drills. Special twist drills for automatic and turret lathes.



EDP No.	Diameter		Flute Length	Overall Length	EDP No.	Diameter		Flute Length	Overall Length
	Metric	Inch				Metric	Inch		
	D1		L1	L2		D1		L1	L2
* D4107010	1.0	.0394	6	26	** D4107035	3.5	.1378	20	52
* D4107011	1.1	.0433	7	28	** D4107036	3.6	.1417	20	52
* D4107012	1.2	.0472	8	30	** D4107037	3.7	.1457	20	52
* D4107013	1.25	.0492	8	30	** D4107038	3.75	.1476	20	52
* D4107014	1.3	.0512	8	30	** D4107039	3.8	.1496	22	55
* D4107015	1.4	.0551	9	32	** D4107040	3.9	.1535	22	55
* D4107016	1.5	.0591	9	32	** D4107041	4.0	.1575	22	55
* D4107017	1.6	.0630	10	34	** D4107042	4.1	.1614	22	55
* D4107018	1.7	.0669	10	34	** D4107043	4.2	.1654	22	55
* D4107019	1.75	.0689	11	36	** D4107044	4.25	.1673	22	55
* D4107020	1.8	.0709	11	36	** D4107045	4.3	.1693	24	58
* D4107021	1.9	.0748	11	36	** D4107046	4.4	.1732	24	58
* D4107022	2.0	.0787	12	38	** D4107047	4.4	.1732	24	58
* D4107023	2.0	.0787	12	38	** D4107048	4.5	.1772	24	58
* D4107024	2.1	.0827	12	38	** D4107049	4.6	.1811	24	58
* D4107025	2.2	.0866	13	40	** D4107050	4.65	.1831	24	58
* D4107026	2.25	.0886	13	40	** D4107051	4.7	.1850	24	58
* D4107027	2.3	.0906	13	40	** D4107052	4.75	.1870	24	58
* D4107028	2.4	.0945	14	43	** D4107053	4.8	.1890	26	62
* D4107029	2.5	.0984	14	43	** D4107054	4.9	.1929	26	62
* D4107030	2.6	.1024	14	43	** D4107055	5.0	.1969	26	62
* D4107031	2.7	.1063	16	46	** D4107056	5.1	.2008	26	62
* D4107032	2.75	.1083	16	46	** D4107057	5.2	.2047	26	62
* D4107033	2.8	.1102	16	46	** D4107058	5.25	.2067	26	62
* D4107034	2.9	.1142	16	46	** D4107059	5.3	.2087	26	62
** D4107035	3.0	.1181	16	46	** D4107060	5.4	.2126	28	66
** D4107036	3.1	.1220	18	49	** D4107061	5.5	.2165	28	66
** D4107037	3.2	.1260	18	49	** D4107062	5.55	.2185	28	66
** D4107038	3.25	.1280	18	49	** D4107063	5.6	.2205	28	66
** D4107039	3.3	.1299	18	49	** D4107064	5.7	.2244	28	66
** D4107040	3.4	.1339	20	52	** D4107065	5.75	.2264	28	66

▶ The HSSCo5(DL107) is available when you need. * 10pcs per package ** 5pcs per package
The TiN(D4107), TiCN(D7107) and TiAlN(DQ107) are available on your request.

◎ : Excellent ○ : Good

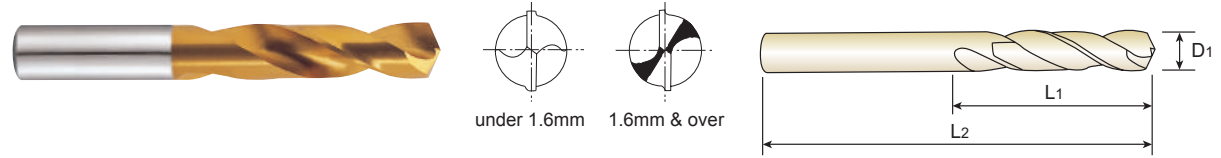
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55 HRC55~								
◎	◎					○					○

YG STRAIGHT SHANK DRILLS

D4107 SERIES

HSSCo8, STRAIGHT SHANK DRILL STUB

- ▶ **Flute Geometry** : Right hand spiral helix
- ▶ **Point Angle** : 135°
under 1.6mm : Normal point
1.6mm & over : Split point
- ▶ **Surface Treatment** : TiN Coating
- ▶ **Application** : Drills suitable for drilling in thin materials with portable drills. Special twist drills for automatic and turret lathes.



DIN 1897 HSS Co8 33° h8 135° P.235

EDP No.	Diameter		Flute Length	Overall Length	EDP No.	Diameter		Flute Length	Overall Length
	Metric	Inch				Metric	Inch		
TiN	D1		L1	L2	TiN	D1		L1	L2
** D4107058	5.8	.2283	28	66	** D4107982	8.25	.3248	37	79
** D4107059	5.9	.2323	28	66	** D4107083	8.3	.3268	37	79
** D4107060	6.0	.2362	28	66	** D4107084	8.4	.3307	37	79
** D4107061	6.1	.2402	31	70	** D4107085	8.5	.3346	37	79
** D4107062	6.2	.2441	31	70	** D4107086	8.6	.3386	40	84
** D4107962	6.25	.2461	31	70	** D4107087	8.7	.3425	40	84
** D4107063	6.3	.2480	31	70	** D4107987	8.75	.3445	40	84
** D4107064	6.4	.2520	31	70	** D4107088	8.8	.3465	40	84
** D4107065	6.5	.2559	31	70	** D4107089	8.9	.3504	40	84
** D4107066	6.6	.2598	31	70	** D4107090	9.0	.3543	40	84
** D4107067	6.7	.2638	31	70	** D4107091	9.1	.3583	40	84
** D4107967	6.75	.2657	34	74	** D4107092	9.2	.3622	40	84
** D4107068	6.8	.2677	34	74	** D4107992	9.25	.3642	40	84
** D4107069	6.9	.2717	34	74	** D4107093	9.3	.3661	40	84
** D4107070	7.0	.2756	34	74	** D4107993	9.35	.3681	40	84
** D4107071	7.1	.2795	34	74	** D4107094	9.4	.3701	40	84
** D4107072	7.2	.2835	34	74	** D4107095	9.5	.3740	40	84
** D4107972	7.25	.2854	34	74	** D4107096	9.6	.3780	43	89
** D4107073	7.3	.2874	34	74	** D4107097	9.7	.3819	43	89
** D4107074	7.4	.2913	34	74	** D4107997	9.75	.3839	43	89
** D4107974	7.45	.2933	34	74	** D4107098	9.8	.3858	43	89
** D4107075	7.5	.2953	34	74	** D4107099	9.9	.3898	43	89
** D4107076	7.6	.2992	37	79	** D4107100	10.0	.3937	43	89
** D4107077	7.7	.3031	37	79	** D4107102	10.2	.4016	43	89
** D4107977	7.75	.3051	37	79	** D4107802	10.25	.4035	43	89
** D4107078	7.8	.3071	37	79	** D4107105	10.5	.4134	43	89
** D4107079	7.9	.3110	37	79	** D4107807	10.75	.4232	47	95
** D4107080	8.0	.3150	37	79	** D4107110	11.0	.4330	47	95
** D4107081	8.1	.3189	37	79	** D4107812	11.25	.4429	47	95
** D4107082	8.2	.3228	37	79	** D4107115	11.5	.4527	47	95

▶ The HSSCo5(DL107) is available when you need. ** 5pcs per package
The TiN(D4107), TiCN(D7107) and TiAlN(DQ107) are available on your request.

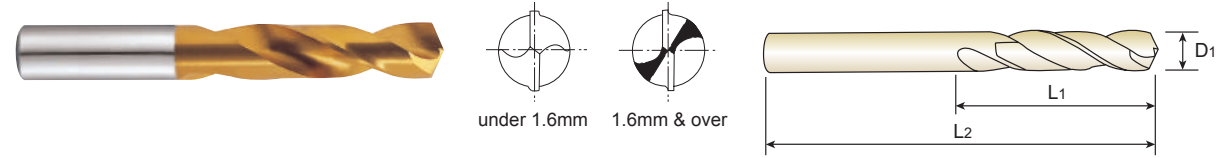
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRC30~45	HRC45~55 HRC55~								
◎	◎			○	○	○				○	

YG STRAIGHT SHANK DRILLS

D4107 SERIES

HSSCo8, STRAIGHT SHANK DRILL STUB

- ▶ **Flute Geometry** : Right hand spiral helix
- ▶ **Point Angle** : 135°
under 1.6mm : Normal point
1.6mm & over : Split point
- ▶ **Surface Treatment** : TiN Coating
- ▶ **Application** : Drills suitable for drilling in thin materials with portable drills. Special twist drills for automatic and turret lathes.



DIN 1897 HSS Co8 33° h8 135° P.235

EDP No.	Diameter		Flute Length	Overall Length	EDP No.	Diameter		Flute Length	Overall Length
	Metric	Inch				Metric	Inch		
TiN	D1		L1	L2	TiN	D1		L1	L2
** D4107817	11.75	.4626	47	95	- D4107877	17.75	.6907	62	123
** D4107118	11.8	.4645	47	95	- D4107180	18.0	.7087	62	123
** D4107120	12.0	.4724	51	102	- D4107882	18.25	.7185	64	127
** D4107822	12.25	.4823	51	102	- D4107185	18.5	.7283	64	127
** D4107125	12.5	.4921	51	102	- D4107887	18.75	.7382	64	127
** D4107827	12.75	.5020	51	102	- D4107190	19.0	.7480	64	127
** D4107130	13.0	.5118	51	102	- D4107892	19.25	.7579	66	131
- D4107832	13.25	.5217	54	107	- D4107195	19.5	.7676	66	131
- D4107135	13.5	.5314	54	107	- D4107897	19.75	.7776	66	131
- D4107837	13.75	.5413	54	107	- D4107200	20.0	.7874	66	131
- D4107138	13.8	.5433	54	107	- D4107205	20.5	.8071	68	136
- D4107140	14.0	.5512	54	107	- D4107210	21.0	.8268	68	136
- D4107842	14.25	.5610	56	111	- D4107215	21.5	.8465	70	141
- D4107145	14.5	.5708	56	111	- D4107220	22.0	.8661	70	141
- D4107847	14.75	.5807	56	111	- D4107225	22.5	.8858	72	146
- D4107150	15.0	.5905	56	111	- D4107230	23.0	.9055	72	146
- D4107852	15.25	.6004	58	115	- D4107235	23.5	.9252	72	146
- D4107155	15.5	.6102	58	115	- D4107240	24.0	.9449	75	151
- D4107857	15.75	.6201	58	115	- D4107245	24.5	.9646	75	151
- D4107160	16.0	.6299	58	115	- D4107250	25.0	.9843	75	151
- D4107862	16.25	.6398	60	119	- D4107260	26.0	1.0236	78	156
- D4107165	16.5	.6495	60	119	- D4107270	27.0	1.0630	81	162
- D4107867	16.75	.6594	60	119	- D4107280	28.0	1.1024	81	162
- D4107170	17.0	.6692	60	119	- D4107290	29.0	1.1417	84	168
- D4107872	17.25	.6791	62	123	- D4107300	30.0	1.1811	84	168
- D4107175	17.5	.6889	62	123	- D4107310	31.0	1.2205	87	174

▶ The HSSCo5(DL107) is available when you need. ** 5pcs per package
The TiN(D4107), TiCN(D7107) and TiAlN(DQ107) are available on your request. - 1pcs per package

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



RECOMMENDED CUTTING CONDITIONS

HSS & HSSCo8, STRAIGHT SHANK SCREW MACHINE DRILLS

D1118, D1115, D1119, D2146, D2147, D2148 SERIES

WORK MATERIAL	P									
	CARBON STEELS		CARBON STEELS		CARBON STEELS		ALLOY STEELS		ALLOY STEELS	
	~ HRC23		~ HRC23 ~ 28		HRC23 ~ 34		HRC34 ~ 38			
HARDNESS	~ 570 N/mm ²		~ 830 N/mm ²		830 ~ 950 N/mm ²		830 ~ 1110 N/mm ²		1110 ~ 1260 N/mm ²	
STRENGTH										
DIAMETER	N	S	N	S	N	S	N	S	N	S
~ 3/32	3380	.0010	2550	.0010	1900	.0006	2380	.0008	1400	.0006
3/32 ~ 5/32	2700	.0020	2000	.0020	1500	.0010	1880	.0020	1100	.0008
11/64 ~ 1/4	1700	.0025	1280	.0025	960	.0015	1190	.0025	700	.0010
17/64 ~ 23/64	1050	.0051	780	.0051	590	.0030	730	.0051	430	.0015
3/8 ~ 37/64	750	.0059	560	.0060	425	.0030	520	.0070	310	.0020
19/32 ~ 1	440	.0090	330	.0090	255	.0051	300	.0090	180	.0020
1 ~	260	.0110	195	.0110	145	.0070	180	.0070	107	.0030

WORK MATERIAL	P		M		K		N			
	TOOL STEELS		STAINLESS STEELS		CAST IRON		ALUMINUM ALLOYS		MAGNESIUM ALLOYS	
	~ 270 N/mm ²		830 N/mm ²		~ HRC21					
HARDNESS			HRC23							
STRENGTH					~ 800 N/mm ²					
DIAMETER	N	S	N	S	N	S	N	S	N	S
~ 3/32	3180	.0016	2550	.0010	2250	.0010	6400	.0015	8600	.0015
3/32 ~ 5/32	2500	.0020	2000	.0020	2000	.0020	5000	.0025	6800	.0025
11/64 ~ 1/4	1590	.0025	1280	.0025	1280	.0025	3200	.0030	4300	.0030
17/64 ~ 23/64	970	.0051	780	.0051	780	.0051	2000	.0070	2600	.0070
3/8 ~ 37/64	700	.0070	560	.0060	560	.0060	1400	.0078	1900	.0078
19/32 ~ 1	440	.0090	330	.0090	330	.0090	820	.0118	1100	.0118
1 ~	240	.1180	195	.0110	195	.0110	490	.0150	660	.0150

WORK MATERIAL	N				S	
	ZINC ALLOYS		PLASTIC		TITANIUM ALLOYS	
					410 N/mm ²	
HARDNESS						
STRENGTH						
DIAMETER	N	S	N	S	N	S
~ 3/32	6400	.0015	3380	.0010	1400	.0008
3/32 ~ 5/32	5000	.0025	2700	.0020	1100	.0010
11/64 ~ 1/4	3200	.0030	1700	.0025	700	.0015
17/64 ~ 23/64	2000	.0070	1050	.0051	430	.0030
3/8 ~ 37/64	1400	.0078	750	.0060	430	.0030
19/32 ~ 1	820	.0118	440	.0090	180	.0051
1 ~	490	.0150	260	.0110	107	.0070

N = R.P.M
S = Inch per Revolution (inch/rev.)



RECOMMENDED CUTTING CONDITIONS

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE SCREW MACHINE, TIN COATED

DN514, DN516, DN515 SERIES

WORK MATERIAL	P				K			
	CARBON STEELS ALLOY STEELS		TOOL STEELS HARDENED STEELS		SOFT GREY CAST IRON		HARD GREY CAST IRON	
	HRC15 ~ 30		HRC20 ~ 40					
HARDNESS	700 ~ 1000 N/mm ²		800 ~ 1200 N/mm ²					
STRENGTH								
DIAMETER	N	S	N	S	N	S	N	S
~ 5/64	2630	.0012	2100	.0010	4200	.0023	1680	.0500
3/32 ~ 7/64	2100	.0015	1680	.0012	3300	.0031	1310	.0023
1/8 ~ 5/32	1680	.0020	1310	.0015	2630	.0039	1050	.0031
11/64 ~ 3/16	1310	.0023	1050	.0019	2100	.0051	840	.0039
13/64 ~ 15/64	1050	.0023	840	.0019	1680	.0051	660	.0039
1/4 ~ 9/32	840	.0031	660	.0023	1310	.0063	530	.0051
19/64 ~ 11/32	660	.0039	530	.0031	1050	.0078	420	.0067
23/64 ~ 7/16	530	.0051	420	.0039	840	.0098	330	.0082
29/64 ~ 9/16	420	.0051	330	.0039	660	.0098	260	.0082
37/64 ~ 45/64	330	.0059	260	.0051	530	.0118	210	.0098
23/32 ~ 7/8	260	.0078	210	.0059	420	.0157	170	.0118
57/64 ~ 1-1/8	210	.0098	170	.0078	330	.0196	130	.0196
1-9/64 ~	170	.0098	130	.0078	260	.0196	110	.0196

N = R.P.M
S = Inch per Revolution (inch/rev.)



STRAIGHT SHANK DRILLS

RECOMMENDED CUTTING CONDITIONS

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE TAPER LENGTH, TiCN COATED

DX517 SERIES

WORK MATERIAL	P				K			
	CARBON STEELS ALLOY STEELS		TOOL STEELS HARDENED STEELS		SOFT GREY CAST IRON		HARD GREY CAST IRON	
	HRC15 ~ 30		HRC20 ~ 40					
STRENGTH	700 ~ 1000 N/mm ²		800 ~ 1200 N/mm ²					
DIAMETER	N	S	N	S	N	S	N	S
~ 5/64	4900	.0023	3400	.0023	8500	.0027	5400	.0027
3/32 ~ 7/64	3000	.0031	2350	.0031	5700	.0043	3500	.0043
1/8 ~ 5/32	2440	.0035	1800	.0035	4300	.0055	2700	.0055
11/64 ~ 15/64	1950	.0039	1400	.0039	3450	.0055	2150	.0055
1/4 ~ 9/32	1400	.0055	1000	.0055	2450	.0078	1550	.0078
19/64 ~ 5/16	1200	.0059	850	.0059	2100	.0086	1350	.0086
21/64 ~ 23/64	1100	.0066	800	.0066	1950	.0094	1200	.0094
3/8 ~ 25/64	950	.0071	660	.0071	1750	.0110	1050	.0110
13/32 ~ 7/16	900	.0078	630	.0078	1600	.0110	960	.0110
29/64 ~ 15/32	800	.0078	575	.0078	1450	.0110	900	.0110
31/64 ~ 1/2	720	.0078	500	.0078	1300	.0110	830	.0110

N = R.P.M
S = Inch per Revolution (inch/rev.)

HSSCo5, STRAIGHT SHANK PARABOLIC FLUTE TAPER LENGTH

DL517 SERIES

WORK MATERIAL	P				K			
	CARBON STEELS ALLOY STEELS		TOOL STEELS HARDENED STEELS		SOFT GREY CAST IRON		HARD GREY CAST IRON	
	HRC15 ~ 30		HRC20 ~ 40					
STRENGTH	700 ~ 1000 N/mm ²		800 ~ 1200 N/mm ²					
DIAMETER	N	S	N	S	N	S	N	S
~ 5/64	3990	.0023	2770	.0023	6920	.0027	4400	.0027
3/32 ~ 7/64	2440	.0031	1910	.0031	4640	.0043	2850	.0043
1/8 ~ 5/32	1990	.0035	1470	.0035	3500	.0055	2200	.0055
11/64 ~ 15/64	1590	.0039	1140	.0039	2810	.0055	1750	.0055
1/4 ~ 9/32	1140	.0055	810	.0055	1990	.0078	1260	.0078
19/64 ~ 5/16	980	.0059	690	.0059	1710	.0086	1100	.0086
21/64 ~ 23/64	900	.0066	650	.0066	1590	.0094	980	.0094
3/8 ~ 25/64	770	.0071	540	.0071	1420	.0110	850	.0110
13/32 ~ 7/16	730	.0078	510	.0078	1300	.0110	780	.0110
29/64 ~ 15/32	650	.0078	470	.0078	1180	.0110	730	.0110
31/64 ~ 1/2	590	.0078	410	.0078	1060	.0110	680	.0110

N = R.P.M
S = Inch per Revolution (inch/rev.)



STRAIGHT SHANK DRILLS

RECOMMENDED CUTTING CONDITIONS

HSSCo8, STRAIGHT SHANK DRILL, STUB

D4107 SERIES

WORK MATERIAL	P										M			
	CARBON STEELS		CARBON STEELS		CARBON STEELS		ALLOY STEELS		ALLOY STEELS		TOOL STEELS		STAINLESS STEELS	
	~ HRC23		~ HRC23 ~ 28		HRC23 ~ 34		HRC34 ~ 38						HRC23	
STRENGTH	~ 570 N/mm ²		~ 830 N/mm ²		830 ~ 950 N/mm ²		830 ~ 1110 N/mm ²		1110 ~ 1260 N/mm ²		~ 270 N/mm ²		830 N/mm ²	
DIAMETER	N	S	N	S	N	S	N	S	N	S	N	S	N	S
2.5	4225	.0010	3200	.0010	2500	.0006	2980	.0008	1750	.0006	3975	.0017	3200	.0010
3.0	3375	.0020	2500	.0020	2000	.0010	2350	.0020	1375	.0008	3125	.0020	2500	.0020
5.0	2125	.0025	1600	.0025	1280	.0015	1500	.0025	875	.0010	2000	.0025	1600	.0025
8.0	1310	.0051	975	.0051	785	.0030	910	.0051	535	.0015	1210	.0051	975	.0051
11.0	935	.0059	700	.0059	565	.0030	650	.0071	385	.0020	875	.0071	700	.0059
19.0	550	.0091	410	.0091	340	.0051	375	.0091	225	.0020	550	.0091	410	.0091
31.0	325	.0110	244	.0110	193	.0071	225	.0071	134	.0030	300	.0118	244	.0110

WORK MATERIAL	K		N						S			
	CAST IRON		ALUMINUM ALLOYS		MAGNESIUM ALLOYS		ZINC ALLOYS		PLASTIC		TITANIUM ALLOYS	
	~ HRC21										410 N/mm ²	
STRENGTH	~ 800 N/mm ²											
DIAMETER	N	S	N	S	N	S	N	S	N	S	N	S
2.5	2800	.0010	7950	.0015	10700	.0015	7950	.0015	4225	.0010	1750	.0008
3.0	2500	.0020	6200	.0025	8450	.0025	6200	.0025	3350	.0020	1375	.0010
5.0	1600	.0025	3950	.0030	5350	.0030	3950	.0030	2125	.0025	875	.0015
8.0	975	.0051	2490	.0071	3240	.0071	2490	.0071	1310	.0051	535	.0030
11.0	700	.0059	1740	.0079	2365	.0079	1740	.0079	935	.0059	535	.0030
19.0	410	.0091	1020	.0118	1370	.0118	1020	.0118	550	.0091	225	.0051
31.0	244	.0110	610	.0150	820	.0150	610	.0150	325	.0110	134	.0071

N = R.P.M
S = Inch per Revolution (inch/rev.)



Being the best through innovation

HSS

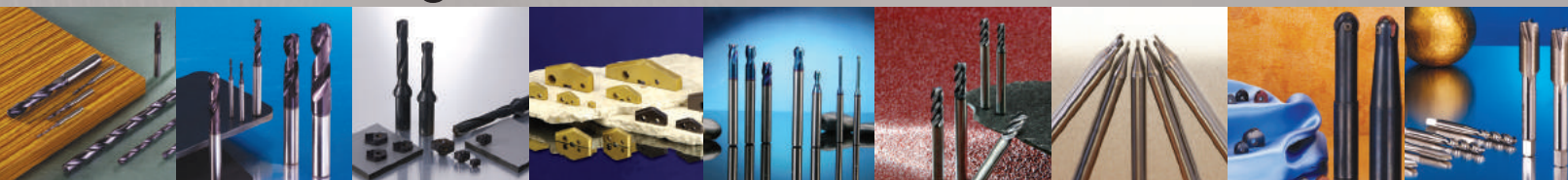


AIRCRAFT DRILLS

- 6 and 12 inch Length Drills



Global Cutting Tool Leader **YG-1**



AIRCRAFT DRILLS - 6 and 12 inch Length Drills

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
INCH					
DL601 DL604		HSSCo5, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT COLORING / Fractional sizes	D5/64	D1/2	240
DL602 DL605		HSSCo5, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT COLORING / Letter sizes	A	Z	241
DL603 DL606		HSSCo5, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT COLORING / Wire gauge sizes	#43	#1	242
D1631 D1634		HSS, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT STEAM OXIDE / Fractional sizes	D5/64	D1/2	243
D1632 D1635		HSS, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT STEAM OXIDE / Letter sizes	A	Z	244
D1633 D1636		HSS, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT STEAM OXIDE / Wire gauge sizes	#43	#1	245
RECOMMENDED CUTTING CONDITIONS					246

◎ : Excellent ○ : Good

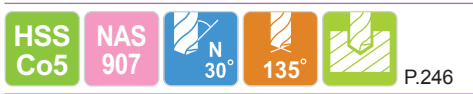
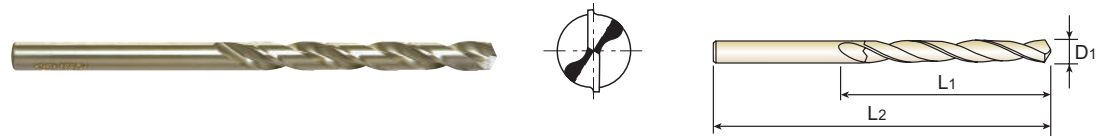
P				H	M	K	N			S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	○				○	○	○	○	○		
◎	○				○	○	○	○	○		
◎	○				○	○	○	○	○		
◎	◎	○			○	○	○	○	○		○
◎	◎	○			○	○	○	○	○		○
◎	◎	○		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



DL601 SERIES
DL604 SERIES

HSSCo5, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT COLORING

- ▶ **Flute Geometry** : Right hand spiral, 30° helix
- ▶ **Point Angle** : 135° : Split point
- ▶ **Application** : Improved chip removal in most materials, especially in deep drilling applications.



▶ Fractional sizes

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Fractional	Decimal				Fractional	Decimal		
	D1					D1			
* DL601005	5/64	.0781	1	6	** DL601029	29/64	.4531	4-3/16	6
* DL601006	3/32	.0938	1-1/4	6	** DL601030	15/32	.4688	4-5/16	6
* DL601007	7/64	.1094	1-1/2	6	** DL601031	31/64	.4844	4-3/8	6
* DL601008	1/8	.1250	1-5/8	6	** DL601032	1/2	.5000	4-1/2	6
* DL601009	9/64	.1406	1-3/4	6	** DL604014	7/32	.2188	2-1/2	12
* DL601010	5/32	.1563	2	6	** DL604015	15/64	.2344	2-5/8	12
* DL601011	11/64	.1719	2-1/8	6	** DL604016	1/4	.2500	2-3/4	12
* DL601012	3/16	.1875	2-5/16	6	** DL604017	17/64	.2656	2-7/8	12
* DL601013	13/64	.2031	2-7/16	6	** DL604018	9/32	.2813	2-15/16	12
* DL601014	7/32	.2188	2-1/2	6	** DL604019	19/64	.2969	3-1/16	12
* DL601015	15/64	.2344	2-5/8	6	** DL604020	5/16	.3125	3-3/16	12
** DL601016	1/4	.2500	2-3/4	6	** DL604021	21/64	.3281	3-5/16	12
** DL601017	17/64	.2656	2-7/8	6	** DL604022	11/32	.3438	3-7/16	12
** DL601018	9/32	.2813	2-15/16	6	** DL604023	23/64	.3594	3-1/2	12
** DL601019	19/64	.2969	3-1/16	6	** DL604024	3/8	.3750	3-5/8	12
** DL601020	5/16	.3125	3-3/16	6	** DL604025	25/64	.3906	3-3/4	12
** DL601021	21/64	.3281	3-5/16	6	** DL604026	13/32	.4063	3-7/8	12
** DL601022	11/32	.3438	3-7/16	6	** DL604027	27/64	.4219	3-15/16	12
** DL601023	23/64	.3594	3-1/2	6	** DL604028	7/16	.4375	4-1/16	12
** DL601024	3/8	.3750	3-5/8	6	** DL604029	29/64	.4531	4-3/16	12
** DL601025	25/64	.3906	3-3/4	6	** DL604030	15/32	.4688	4-5/16	12
** DL601026	13/32	.4063	3-7/8	6	** DL604031	31/64	.4844	4-3/8	12
** DL601027	27/64	.4219	3-15/16	6	** DL604032	1/2	.5000	4-1/2	12
** DL601028	7/16	.4375	4-1/16	6					

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

* 10pcs per package
** 5pcs per package

◎ : Excellent ○ : Good

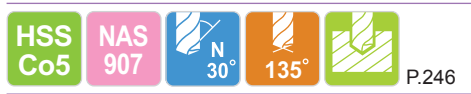
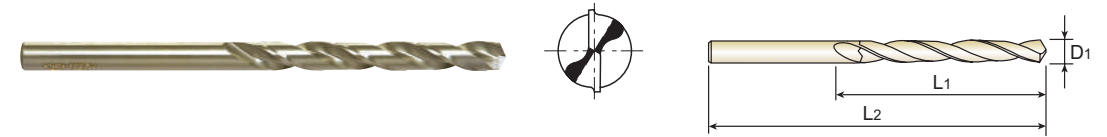
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55 HRc55~								
◎	○				○	○	○	○	○		



DL602 SERIES
DL605 SERIES

HSSCo5, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT COLORING

- ▶ **Flute Geometry** : Right hand spiral, 30° helix
- ▶ **Point Angle** : 135° : Split point
- ▶ **Application** : Improved chip removal in most materials, especially in deep drilling applications.



▶ Letter sizes

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Letter	Decimal				Letter	Decimal		
	D1					D1			
* DL602101	A	.2340	2-5/8	6	* DL605101	A	.2340	2-5/8	12
** DL602102	B	.2380	2-3/4	6	** DL605102	B	.2380	2-3/4	12
** DL602103	C	.2420	2-3/4	6	** DL605103	C	.2420	2-3/4	12
** DL602104	D	.2460	2-3/4	6	** DL605104	D	.2460	2-3/4	12
** DL602105	E	.2500	2-3/4	6	** DL605105	E	.2500	2-3/4	12
** DL602106	F	.2570	2-7/8	6	** DL605106	F	.2570	2-7/8	12
** DL602107	G	.2610	2-7/8	6	** DL605107	G	.2610	2-7/8	12
** DL602108	H	.2660	2-7/8	6	** DL605108	H	.2660	2-7/8	12
** DL602109	I	.2720	2-7/8	6	** DL605109	I	.2720	2-7/8	12
** DL602110	J	.2770	2-7/8	6	** DL605110	J	.2770	2-7/8	12
** DL602111	K	.2810	2-15/16	6	** DL605111	K	.2810	2-15/16	12
** DL602112	L	.2900	2-15/16	6	** DL605112	L	.2900	2-15/16	12
** DL602113	M	.2950	3-1/16	6	** DL605113	M	.2950	3-1/16	12
** DL602114	N	.3020	3-1/16	6	** DL605114	N	.3020	3-1/16	12
** DL602115	O	.3160	3-3/16	6	** DL605115	O	.3160	3-3/16	12
** DL602116	P	.3230	3-5/16	6	** DL605116	P	.3230	3-5/16	12
** DL602117	Q	.3320	3-7/16	6	** DL605117	Q	.3320	3-7/16	12
** DL602118	R	.3390	3-7/16	6	** DL605118	R	.3390	3-7/16	12
** DL602119	S	.3480	3-1/2	6	** DL605119	S	.3480	3-1/2	12
** DL602120	T	.3580	3-1/2	6	** DL605120	T	.3580	3-1/2	12
** DL602121	U	.3680	3-5/8	6	** DL605121	U	.3680	3-5/8	12
** DL602122	V	.3770	3-5/8	6	** DL605122	V	.3770	3-5/8	12
** DL602123	W	.3860	3-3/4	6	** DL605123	W	.3860	3-3/4	12
** DL602124	X	.3970	3-3/4	6	** DL605124	X	.3970	3-3/4	12
** DL602125	Y	.4040	3-7/8	6	** DL605125	Y	.4040	3-7/8	12
** DL602126	Z	.4130	3-7/8	6	** DL605126	Z	.4130	3-7/8	12

▶ Tolerance : See page 240

* 10pcs per package
** 5pcs per package

◎ : Excellent ○ : Good

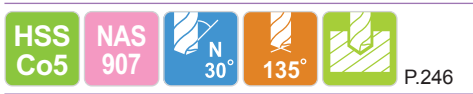
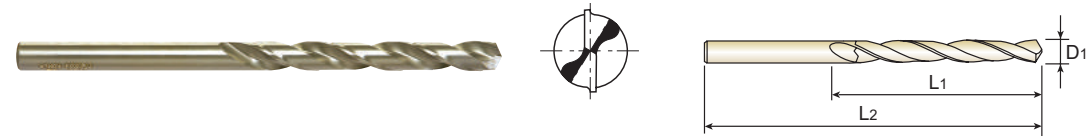
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55 HRc55~								
◎	○				○	○	○	○	○		



DL603 SERIES
DL606 SERIES

HSSCo5, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT COLORING

- ▶ **Flute Geometry** : Right hand spiral, parabolic fute
30° helix
- ▶ **Point Angle** : 135° : Split point
- ▶ **Application** : Improved chip removal in most materials, especially in deep drilling applications.



▶ Wire gauge sizes

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Wire gauge	Decimal				Wire gauge	Decimal		
	D1					D1			
* DL603256	1	.2280	2-5/8	6	* DL603233	24	.1520	2	6
* DL603255	2	.2210	2-5/8	6	* DL603232	25	.1495	1-7/8	6
* DL603254	3	.2130	2-1/2	6	* DL603231	26	.1470	1-7/8	6
* DL603253	4	.2090	2-1/2	6	* DL603230	27	.1440	1-7/8	6
* DL603252	5	.2055	2-1/2	6	* DL603229	28	.1405	1-3/4	6
* DL603251	6	.2040	2-1/2	6	* DL603228	29	.1360	1-3/4	6
* DL603250	7	.2010	2-7/16	6	* DL603227	30	.1280	1-5/8	6
* DL603249	8	.1990	2-7/16	6	* DL603226	31	.1200	1-5/8	6
* DL603248	9	.1960	2-7/16	6	* DL603225	32	.1160	1-5/8	6
* DL603247	10	.1935	2-7/16	6	* DL603224	33	.1130	1-1/2	6
* DL603246	11	.1910	2-5/16	6	* DL603223	34	.1110	1-1/2	6
* DL603245	12	.1890	2-5/16	6	* DL603222	35	.1100	1-1/2	6
* DL603244	13	.1850	2-5/16	6	* DL603221	36	.1065	1-7/16	6
* DL603243	14	.1820	2-3/16	6	* DL603220	37	.1040	1-7/16	6
* DL603242	15	.1800	2-3/16	6	* DL603219	38	.1015	1-7/16	6
* DL603241	16	.1770	2-3/16	6	* DL603218	39	.0995	1-3/8	6
* DL603240	17	.1730	2-3/16	6	* DL603217	40	.0980	1-3/8	6
* DL603239	18	.1695	2-1/8	6	* DL603216	41	.0960	1-3/8	6
* DL603238	19	.1660	2-1/8	6	* DL603215	42	.0935	1-1/4	6
* DL603237	20	.1610	2-1/8	6	* DL603214	43	.0890	1-1/4	6
* DL603236	21	.1590	2-1/8	6	* DL606256	1	.2280	2-5/8	12
* DL603235	22	.1570	2	6	* DL606254	3	.2130	2-1/2	12
* DL603234	23	.1540	2	6					

* 10pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

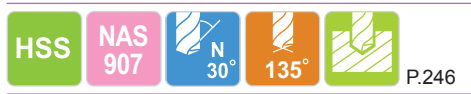
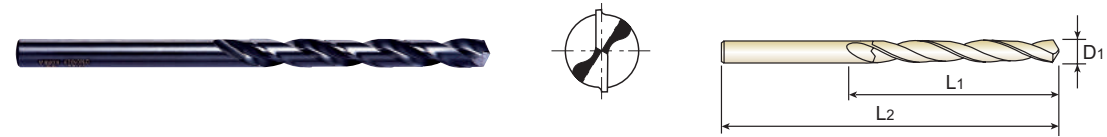
P		H	M	K	N				S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
-HB225	HB225~325	HRC30~45	HRC45~55 HRC55~							
◎	○			○	○	○	○	○		○



D1631 SERIES
D1634 SERIES

HSS, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT STEAM OXIDE

- ▶ **Flute Geometry** : Right hand spiral, 30° helix
- ▶ **Point Angle** : 135° : Split point
- ▶ **Application** : Improved chip removal in most materials, especially in deep drilling applications.



▶ Fractional sizes

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Fractional	Decimal				Fractional	Decimal		
	D1					D1			
* D1631005	5/64	.0781	1	6	** D1631029	29/64	.4531	4-3/16	6
* D1631006	3/32	.0938	1-1/4	6	** D1631030	15/32	.4688	4-5/16	6
* D1631007	7/64	.1094	1-1/2	6	** D1631031	31/64	.4844	4-3/8	6
* D1631008	1/8	.1250	1-5/8	6	** D1631032	1/2	.5000	4-1/2	6
* D1631009	9/64	.1406	1-3/4	6	* D1634014	7/32	.2188	2-1/2	12
* D1631010	5/32	.1563	2	6	* D1634015	15/64	.2344	2-5/8	12
* D1631011	11/64	.1719	2-1/8	6	** D1634016	1/4	.2500	2-3/4	12
* D1631012	3/16	.1875	2-5/16	6	** D1634017	17/64	.2656	2-7/8	12
* D1631013	13/64	.2031	2-7/16	6	** D1634018	9/32	.2813	2-15/16	12
* D1631014	7/32	.2188	2-1/2	6	** D1634019	19/64	.2969	3-1/16	12
* D1631015	15/64	.2344	2-5/8	6	** D1634020	5/16	.3125	3-3/16	12
** D1631016	1/4	.2500	2-3/4	6	** D1634021	21/64	.3281	3-5/16	12
** D1631017	17/64	.2656	2-7/8	6	** D1634022	11/32	.3438	3-7/16	12
** D1631018	9/32	.2813	2-15/16	6	** D1634023	23/64	.3594	3-1/2	12
** D1631019	19/64	.2969	3-1/16	6	** D1634024	3/8	.3750	3-5/8	12
** D1631020	5/16	.3125	3-3/16	6	** D1634025	25/64	.3906	3-3/4	12
** D1631021	21/64	.3281	3-5/16	6	** D1634026	13/32	.4063	3-7/8	12
** D1631022	11/32	.3438	3-7/16	6	** D1634027	27/64	.4219	3-15/16	12
** D1631023	23/64	.3594	3-1/2	6	** D1634028	7/16	.4375	4-1/16	12
** D1631024	3/8	.3750	3-5/8	6	** D1634029	29/64	.4531	4-3/16	12
** D1631025	25/64	.3906	3-3/4	6	** D1634030	15/32	.4688	4-5/16	12
** D1631026	13/32	.4063	3-7/8	6	** D1634031	31/64	.4844	4-3/8	12
** D1631027	27/64	.4219	3-15/16	6	** D1634032	1/2	.5000	4-1/2	12
** D1631028	7/16	.4375	4-1/16	6					

* 10pcs per package
** 5pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

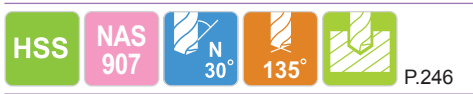
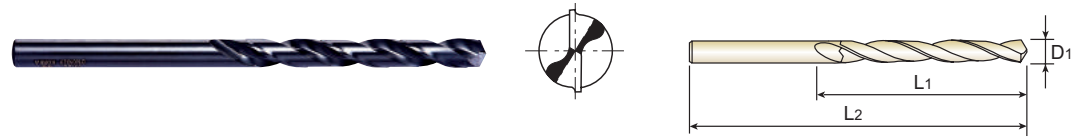
P		H	M	K	N				S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
-HB225	HB225~325	HRC30~45	HRC45~55 HRC55~							
◎	◎	○			○	○	○	○		○



D1632 SERIES
D1635 SERIES

HSS, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT STEAM OXIDE

- ▶ **Flute Geometry** : Right hand spiral, 30° helix
- ▶ **Point Angle** : 135° : Split point
- ▶ **Application** : Improved chip removal in most materials, especially in deep drilling applications.



▶ Letter sizes

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Letter	Decimal				Letter	Decimal		
	D1					D1			
* D1632101	A	.2340	2-5/8	6	* D1635101	A	.2340	2-5/8	12
** D1632102	B	.2380	2-3/4	6	** D1635102	B	.2380	2-3/4	12
** D1632103	C	.2420	2-3/4	6	** D1635103	C	.2420	2-3/4	12
** D1632104	D	.2460	2-3/4	6	** D1635104	D	.2460	2-3/4	12
** D1632105	E	.2500	2-3/4	6	** D1635105	E	.2500	2-3/4	12
** D1632106	F	.2570	2-7/8	6	** D1635106	F	.2570	2-7/8	12
** D1632107	G	.2610	2-7/8	6	** D1635107	G	.2610	2-7/8	12
** D1632108	H	.2660	2-7/8	6	** D1635108	H	.2660	2-7/8	12
** D1632109	I	.2720	2-7/8	6	** D1635109	I	.2720	2-7/8	12
** D1632110	J	.2770	2-7/8	6	** D1635110	J	.2770	2-7/8	12
** D1632111	K	.2810	2-15/16	6	** D1635111	K	.2810	2-15/16	12
** D1632112	L	.2900	2-15/16	6	** D1635112	L	.2900	2-15/16	12
** D1632113	M	.2950	3-1/16	6	** D1635113	M	.2950	3-1/16	12
** D1632114	N	.3020	3-1/16	6	** D1635114	N	.3020	3-1/16	12
** D1632115	O	.3160	3-3/16	6	** D1635115	O	.3160	3-3/16	12
** D1632116	P	.3230	3-5/16	6	** D1635116	P	.3230	3-5/16	12
** D1632117	Q	.3320	3-7/16	6	** D1635117	Q	.3320	3-7/16	12
** D1632118	R	.3390	3-7/16	6	** D1635118	R	.3390	3-7/16	12
** D1632119	S	.3480	3-1/2	6	** D1635119	S	.3480	3-1/2	12
** D1632120	T	.3580	3-1/2	6	** D1635120	T	.3580	3-1/2	12
** D1632121	U	.3680	3-5/8	6	** D1635121	U	.3680	3-5/8	12
** D1632122	V	.3770	3-5/8	6	** D1635122	V	.3770	3-5/8	12
** D1632123	W	.3860	3-3/4	6	** D1635123	W	.3860	3-3/4	12
** D1632124	X	.3970	3-3/4	6	** D1635124	X	.3970	3-3/4	12
** D1632125	Y	.4040	3-7/8	6	** D1635125	Y	.4040	3-7/8	12
** D1632126	Z	.4130	3-7/8	6	** D1635126	Z	.4130	3-7/8	12

▶ Tolerance : See page 240

* 10pcs per package
** 5pcs per package

◎ : Excellent ○ : Good

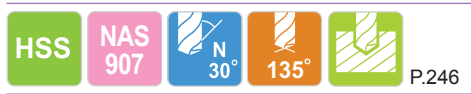
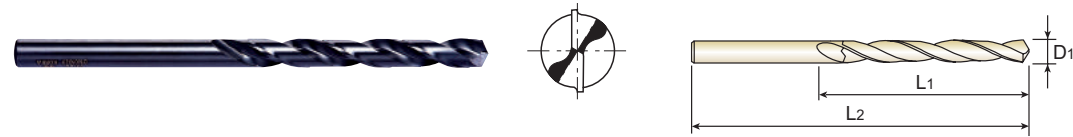
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels	Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium	
~HB225	HB225~325	HRc30~45	HRc45~55 HRc55~								
◎	◎	○		○	○	○	○	○	○	○	



D1633 SERIES
D1636 SERIES

HSS, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT STEAM OXIDE

- ▶ **Flute Geometry** : Right hand spiral, 30° helix
- ▶ **Point Angle** : 135° : Split point
- ▶ **Application** : Improved chip removal in most materials, especially in deep drilling applications.



▶ Wire gauge sizes

EDP No.	Diameter		Flute Length L1	Overall Length L2	EDP No.	Diameter		Flute Length L1	Overall Length L2
	Wire gauge	Decimal				Wire gauge	Decimal		
	D1					D1			
* D1633256	1	.2280	2-5/8	6	* D1633233	24	.1520	2	6
* D1633255	2	.2210	2-5/8	6	* D1633232	25	.1495	1-7/8	6
* D1633254	3	.2130	2-1/2	6	* D1633231	26	.1470	1-7/8	6
* D1633253	4	.2090	2-1/2	6	* D1633230	27	.1440	1-7/8	6
* D1633252	5	.2055	2-1/2	6	* D1633229	28	.1405	1-3/4	6
* D1633251	6	.2040	2-1/2	6	* D1633228	29	.1360	1-3/4	6
* D1633250	7	.2010	2-7/16	6	* D1633227	30	.1280	1-5/8	6
* D1633249	8	.1990	2-7/16	6	* D1633226	31	.1200	1-5/8	6
* D1633248	9	.1960	2-7/16	6	* D1633225	32	.1160	1-5/8	6
* D1633247	10	.1935	2-7/16	6	* D1633224	33	.1130	1-1/2	6
* D1633246	11	.1910	2-5/16	6	* D1633223	34	.1110	1-1/2	6
* D1633245	12	.1890	2-5/16	6	* D1633222	35	.1100	1-1/2	6
* D1633244	13	.1850	2-5/16	6	* D1633221	36	.1065	1-7/16	6
* D1633243	14	.1820	2-3/16	6	* D1633220	37	.1040	1-7/16	6
* D1633242	15	.1800	2-3/16	6	* D1633219	38	.1015	1-7/16	6
* D1633241	16	.1770	2-3/16	6	* D1633218	39	.0995	1-3/8	6
* D1633240	17	.1730	2-3/16	6	* D1633217	40	.0980	1-3/8	6
* D1633239	18	.1695	2-1/8	6	* D1633216	41	.0960	1-3/8	6
* D1633238	19	.1660	2-1/8	6	* D1633215	42	.0935	1-1/4	6
* D1633237	20	.1610	2-1/8	6	* D1633214	43	.0890	1-1/4	6
* D1633236	21	.1590	2-1/8	6	* D1636256	1	.2280	2-5/8	12
* D1633235	22	.1570	2	6	* D1636254	3	.2130	2-1/2	12
* D1633234	23	.1540	2	6					

* 10pcs per package

Tolerance Diameter (Inch)	
up to 1/8(.1250)	0 ~ -.0005
over 1/8(.1250) up to 1/4(.2500)	0 ~ -.0007
over 1/4(.2500) up to 1/2(.5000)	0 ~ -.0010

◎ : Excellent ○ : Good

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

HSS & HSSCo5, AIRCRAFT EXTENSION DRILL 135° SPLIT POINT

DL601, DL602, DL603, D1631, D1632, D1633 SERIES

WORK MATERIAL	P									
	CARBON STEELS		CARBON STEELS		CARBON STEELS		ALLOY STEELS		ALLOY STEELS	
	~ 570 N/mm ²		~ 830 N/mm ²		830 ~ 950 N/mm ²		830 ~ 1110 N/mm ²		1110 ~ 1260 N/mm ²	
HARDNESS			~ HRc23		~ HRc23 ~ 28		HRc23 ~ 34		HRc34 ~ 38	
STRENGTH										
DIAMETER	N	S	N	S	N	S	N	S	N	S
~ 3/32	3380	.0010	2550	.0010	1900	.0006	2380	.0008	1400	.0006
3/32 ~ 5/32	2700	.0020	2000	.0020	1500	.0010	1880	.0020	1100	.0008
11/64 ~ 1/4	1700	.0025	1280	.0025	960	.0015	1190	.0025	700	.0010
17/64 ~ 23/64	1050	.0051	780	.0051	590	.0030	730	.0051	430	.0015
3/8 ~ 37/64	750	.0059	560	.0060	425	.0030	520	.0070	310	.0020
19/32 ~ 1	440	.0090	330	.0090	255	.0051	300	.0090	180	.0020
1 ~	260	.0110	195	.0110	145	.0070	180	.0070	107	.0030

WORK MATERIAL	P		M		K		N			
	TOOL STEELS		STAINLESS STEELS		CAST IRON		ALUMINUM ALLOYS		MAGNESIUM ALLOYS	
	~ 270 N/mm ²		830 N/mm ²		~ HRc21					
HARDNESS			HRc23		~ HRc21					
STRENGTH					~ 800 N/mm ²					
DIAMETER	N	S	N	S	N	S	N	S	N	S
~ 3/32	3180	.0016	2550	.0010	2250	.0010	6400	.0015	8600	.0015
3/32 ~ 5/32	2500	.0020	2000	.0020	2000	.0020	5000	.0025	6800	.0025
11/64 ~ 1/4	1590	.0025	1280	.0025	1280	.0025	3200	.0030	4300	.0030
17/64 ~ 23/64	970	.0051	780	.0051	780	.0051	2000	.0070	2600	.0070
3/8 ~ 37/64	700	.0070	560	.0060	560	.0060	1400	.0078	1900	.0078
19/32 ~ 1	440	.0090	330	.0090	330	.0090	820	.0118	1100	.0118
1 ~	240	.1180	195	.0110	195	.0110	490	.0150	660	.0150

WORK MATERIAL	N				S	
	ZINC ALLOYS		PLASTIC		TITANIUM ALLOYS	
					410 N/mm ²	
HARDNESS						
STRENGTH						
DIAMETER	N	S	N	S	N	S
~ 3/32	6400	.0015	3380	.0010	1400	.0008
3/32 ~ 5/32	5000	.0025	2700	.0020	1100	.0010
11/64 ~ 1/4	3200	.0030	1700	.0025	700	.0015
17/64 ~ 23/64	2000	.0070	1050	.0051	430	.0030
3/8 ~ 37/64	1400	.0078	750	.0060	430	.0030
19/32 ~ 1	820	.0118	440	.0090	180	.0051
1 ~	490	.0150	260	.0110	107	.0070

N = R.P.M
S = Inch per Revolution (inch/rev.)



Being the best through innovation

HSS



SILVER & DEMING DRILLS

- 118° Split Point
- 3 Flats Black and Gold


- i-DREAM DRILLS
- DREAM DRILLS -GENERAL
- DREAM DRILLS -HIGH FEED
- DREAM DRILLS -FLAT BOTTOM
- DREAM DRILLS -INOX
- DREAM DRILLS -ALU
- DREAM DRILLS -MQL TYPE
- DREAM DRILLS for HIGH HARDENED STEELS
- STANDARD CARBIDE DRILLS
- MULTI-1 DRILLS
- HPD DRILLS
- GOLD-P DRILLS
- STRAIGHT SHANK DRILLS
- AIRCRAFT DRILLS
- SILVER & DEMING DRILLS
- TAPER SHANK DRILLS
- NC SPOTTING DRILLS
- COMBINATION DRILLS & COUNTERSIN
- SPADE DRILLS
- TECHNICAL DATA

SELECTION GUIDE

HSS SILVER & DEMING DRILLS

HSS SILVER & DEMING DRILLS

- 118° Split Point
- 3 Flat Black and Gold

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
INCH					
D1191		HSS(M2), 118° SPLIT POINT 3FLAT BLACK&GOLD SILVER & DEMING DRILLS	D1/2	D1-1/2	250
		RECOMMENDED CUTTING CONDITIONS			251

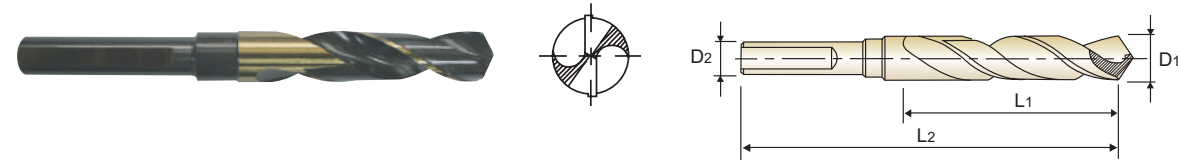
◎ : Excellent ○ : Good

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



D1191 SERIES

HSS(M2), 118° SPLIT POINT 3FLAT BLACK & GOLD SILVER & DEMING DRILLS



Unit : Inch											
EDP No.	Diameter		Shank Diameter	Flute Length	Overall Length	EDP No.	Diameter		Shank Diameter	Flute Length	Overall Length
	D1	D2					L1	L2			
D1191032	1/2	1/2	1/2	3	6	D1191061	61/64	1/2	1/2	3	6
D1191033	33/64	1/2	1/2	3	6	D1191062	31/32	1/2	1/2	3	6
D1191034	17/32	1/2	1/2	3	6	D1191063	63/64	1/2	1/2	3	6
D1191035	35/64	1/2	1/2	3	6	D1191064	1	1/2	1/2	3	6
D1191036	9/16	1/2	1/2	3	6	D1191101	1-1/64	1/2	1/2	3	6
D1191037	37/64	1/2	1/2	3	6	D1191102	1-1/32	1/2	1/2	3	6
D1191038	19/32	1/2	1/2	3	6	D1191103	1-3/64	1/2	1/2	3	6
D1191039	39/64	1/2	1/2	3	6	D1191104	1-1/16	1/2	1/2	3	6
D1191040	5/8	1/2	1/2	3	6	D1191105	1-5/64	1/2	1/2	3	6
D1191041	41/64	1/2	1/2	3	6	D1191106	1-3/32	1/2	1/2	3	6
D1191042	21/32	1/2	1/2	3	6	D1191107	1-7/64	1/2	1/2	3	6
D1191043	43/64	1/2	1/2	3	6	D1191108	1-1/8	1/2	1/2	3	6
D1191044	11/16	1/2	1/2	3	6	D1191109	1-9/64	1/2	1/2	3	6
D1191045	45/64	1/2	1/2	3	6	D1191110	1-5/32	1/2	1/2	3	6
D1191046	23/32	1/2	1/2	3	6	D1191111	1-11/64	1/2	1/2	3	6
D1191047	47/64	1/2	1/2	3	6	D1191112	1-3/16	1/2	1/2	3	6
D1191048	3/4	1/2	1/2	3	6	D1191113	1-13/64	1/2	1/2	3	6
D1191049	49/64	1/2	1/2	3	6	D1191114	1-7/32	1/2	1/2	3	6
D1191050	25/32	1/2	1/2	3	6	D1191115	1-15/64	1/2	1/2	3	6
D1191051	51/64	1/2	1/2	3	6	D1191116	1-1/4	1/2	1/2	3	6
D1191052	13/16	1/2	1/2	3	6	D1191118	1-9/32	1/2	1/2	3	6
D1191053	53/64	1/2	1/2	3	6	D1191120	1-5/16	1/2	1/2	3	6
D1191054	27/32	1/2	1/2	3	6	D1191122	1-11/32	1/2	1/2	3	6
D1191055	55/64	1/2	1/2	3	6	D1191124	1-3/8	1/2	1/2	3	6
D1191056	7/8	1/2	1/2	3	6	D1191126	1-13/32	1/2	1/2	3	6
D1191057	57/64	1/2	1/2	3	6	D1191128	1-7/16	1/2	1/2	3	6
D1191058	29/32	1/2	1/2	3	6	D1191130	1-15/32	1/2	1/2	3	6
D1191059	59/64	1/2	1/2	3	6	D1191132	1-1/2	1/2	1/2	3	6
D1191060	15/16	1/2	1/2	3	6						

* Individually packaged

◎ : Excellent ○ : Good

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



RECOMMENDED CUTTING CONDITIONS

HSS(M2), 118° SPLIT POINT 3FLAT BLACK & GOLD SILVER & DEMING DRILLS

D1191 SERIES

WORK MATERIAL	P											
	CARBON STEELS		CARBON STEELS		CARBON STEELS		ALLOY STEELS		ALLOY STEELS		TOOL STEELS	
HARDNESS			~ HRC23		~ HRC23 ~ 28		HRC23 ~ 34		HRC34 ~ 38			
STRENGTH	~ 570 N/mm ²		~ 830 N/mm ²		830 ~ 950 N/mm ²		830 ~ 1110 N/mm ²		1110 ~ 1260 N/mm ²		~ 270 N/mm ²	
DIAMETER	N	S	N	S	N	S	N	S	N	S	N	S
1/2	645	.0067	480	.0067	370	.0035	440	.0067	265	.0020	645	.0067
3/4	440	.0091	330	.0091	255	.0051	300	.0091	180	.0020	440	.0091
1	325	.0110	245	.0110	185	.0063	220	.0110	133	.0030	325	.0110
1-9/32	260	.0110	195	.0110	145	.0071	180	.0110	107	.0030	240	.0118
1-1/2	220	.0130	165	.0130	120	.0076	150	.0130	90	.0030	198	.0121

WORK MATERIAL	M				N							
	STAINLESS STEELS		CAST IRON		ALUMINUM ALLOYS		MAGNESIUM ALLOYS		ZINC ALLOYS		PLASTIC	
HARDNESS	HRc23		~ HRc21									
STRENGTH	830 N/mm ²		~ 800 N/mm ²									
DIAMETER	N	S	N	S	N	S	N	S	N	S	N	S
1/2	480	.0067	480	.0067	1200	.0100	1600	.0100	1200	.0100	645	.0067
3/4	330	.0091	330	.0091	820	.0118	1100	.0118	820	.0118	440	.0091
1	245	.0110	245	.0110	605	.0146	810	.0150	605	.0146	325	.0110
1-9/32	195	.0110	195	.0110	490	.0150	660	.0150	490	.0150	260	.0110
1-1/2	165	.0130	165	.0130	410	.0172	550	.0180	410	.0172	220	.0130

N = R.P.M
S = Inch per Revolution(inch/rev.)



Being the best through innovation

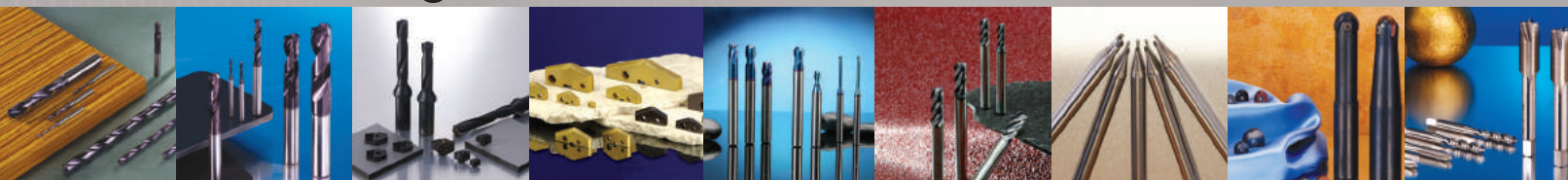
HSS



MORSE TAPER SHANK DRILLS

- General Purpose
- Standard Length

Global Cutting Tool Leader **YG-1**



SELECTION GUIDE

HSS MORSE TAPER SHANK DRILLS

HSS MORSE TAPER SHANK DRILLS

- General Purpose
- Standard Length

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
INCH					
D1211		HSS(M2), MORSE TAPER SHANK TWIST DRILL	D1/2	D2-1/2	256
		RECOMMENDED CUTTING CONDITIONS			258

◎ : Excellent ○ : Good

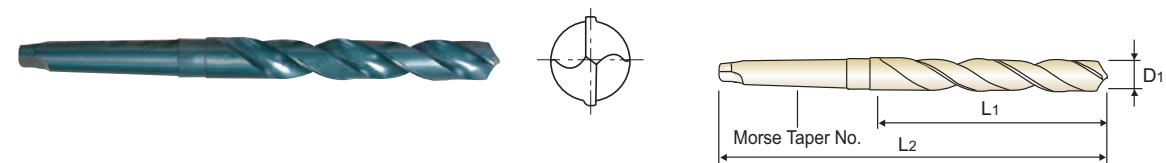
P			H	M	K	N			S		
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRc30~45	HRc45~55	HRc55~							
◎	◎	○			○	○	○				

YG MORSE TAPER SHANK DRILLS

D1211 SERIES

HSS(M2) MORSE TAPER SHANK TWIST DRILL

► **Surface treatment** : Steam Tempered(Black Oxide Finish)
 ► **Application** : Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron, graphite.



ANSI HSS 30~35° 2~5 h8 118° P.258

Unit : Inch

EDP No.	Diameter	Flute Length	Overall Length	Morse Taper No.	EDP No.	Diameter	Flute Length	Overall Length	Morse Taper No.
	D ₁	L ₁	L ₂			D ₁	L ₁	L ₂	
D1211032	1/2	4-3/8	8-1/4	2	D1211061	61/64	6-3/8	11	3
D1211033	33/64	4-5/8	8-1/2	2	D1211062	31/32	6-3/8	11	3
D1211034	17/32	4-5/8	8-1/2	2	D1211063	63/64	6-3/8	11	3
D1211035	35/64	4-7/8	8-3/4	2	D1211100	1	6-3/8	11	3
D1211036	9/16	4-7/8	8-3/4	2	D1211101	1-1/64	6-1/2	11-1/8	3
D1211037	37/64	4-7/8	8-3/4	2	D1211102	1-1/32	6-1/2	11-1/8	3
D1211038	19/32	4-7/8	8-3/4	2	D1211103	1-3/64	6-5/8	11-1/4	3
D1211039	39/64	4-7/8	8-3/4	2	D1211104	1-1/16	6-5/8	11-1/4	3
D1211040	5/8	4-7/8	8-3/4	2	D1211105	1-5/64	6-7/8	12-1/2	4
D1211041	41/64	5-1/8	9	2	D1211106	1-3/32	6-7/8	12-1/2	4
D1211042	21/32	5-1/8	9	2	D1211107	1-7/64	7-1/8	12-3/4	4
D1211043	43/64	5-3/8	9-1/4	2	D1211108	1-1/8	7-1/8	12-3/4	4
D1211044	11/16	5-3/8	9-1/4	2	D1211109	1-9/64	7-1/4	12-7/8	4
D1211045	45/64	5-5/8	9-1/2	2	D1211110	1-5/32	7-1/4	12-7/8	4
D1211046	23/32	5-5/8	9-1/2	2	D1211111	1-11/64	7-3/8	13	4
D1211047	47/64	5-7/8	9-3/4	2	D1211112	1-3/16	7-3/8	13	4
D1211048	3/4	5-7/8	9-3/4	2	D1211113	1-13/64	7-1/2	13-1/8	4
D1211049	49/64	6	9-7/8	2	D1211114	1-7/32	7-1/2	13-1/8	4
D1211050	25/32	6	9-7/8	2	D1211115	1-15/64	7-7/8	13-1/2	4
D1211051	51/64	6-1/8	10-3/4	3	D1211116	1-1/4	7-7/8	13-1/2	4
D1211052	13/16	6-1/8	10-3/4	3	D1211117	1-17/64	8-1/2	14-1/8	4
D1211053	53/64	6-1/8	10-3/4	3	D1211118	1-9/32	8-1/2	14-1/8	4
D1211054	27/32	6-1/8	10-3/4	3	D1211119	1-19/64	8-5/8	14-1/4	4
D1211055	55/64	6-1/8	10-3/4	3	D1211120	1-5/16	8-5/8	14-1/4	4
D1211056	7/8	6-1/8	10-3/4	3	D1211121	1-21/64	8-3/4	14-3/8	4
D1211057	57/64	6-1/8	10-3/4	3	D1211122	1-11/32	8-3/4	14-3/8	4
D1211058	29/32	6-1/8	10-3/4	3	D1211123	1-23/64	8-7/8	14-1/2	4
D1211059	59/64	6-1/8	10-3/4	3	D1211124	1-3/8	8-7/8	14-1/2	4
D1211060	15/16	6-1/8	10-3/4	3	D1211126	1-13/32	9	14-5/8	4

◎ : Excellent ○ : Good

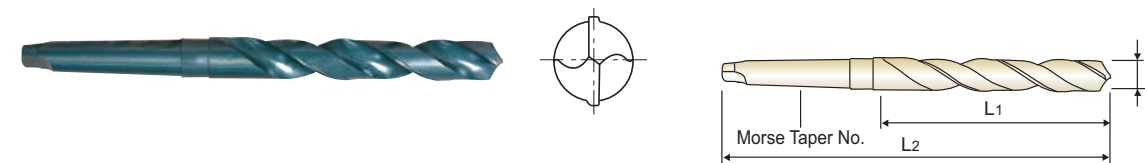
P				H	M	K	N				S
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		Stainless Steels	Cast Iron	Aluminum	Copper	Bronze	CFRP	Titanium
~HB225	HB225~325	HRC30~45	HRC45~55	HRC55~							
◎	◎	○			○	○	○				

YG MORSE TAPER SHANK DRILLS

D1211 SERIES

HSS(M2) MORSE TAPER SHANK TWIST DRILL

► **Surface treatment** : Steam Tempered(Black Oxide Finish)
 ► **Application** : Drilling steels, cast steels alloyed and non-alloyed, grey cast iron, malleable cast iron, graphite.



ANSI HSS 30~35° 2~5 h8 118° P.258

Unit : Inch

EDP No.	Diameter	Flute Length	Overall Length	Morse Taper No.	EDP No.	Diameter	Flute Length	Overall Length	Morse Taper No.
	D ₁	L ₁	L ₂			D ₁	L ₁	L ₂	
D1211128	1-7/16	9-1/8	14-3/4	4	D1211160	1-15/16	10-3/8	17-3/8	5
D1211130	1-15/32	9-1/4	14-7/8	4	D1211162	1-31/32	10-3/8	17-3/8	5
D1211132	1-1/2	9-3/8	15	4	D1211200	2	10-3/8	17-3/8	5
D1211133	1-33/64	9-3/8	16-3/8	4	D1211202	2-1/32	10-3/8	17-3/8	5
D1211134	1-17/32	9-3/8	16-3/8	5	D1211204	2-1/16	10-1/4	17-3/8	5
D1211136	1-9/16	9-5/8	16-5/8	5	D1211206	2-3/32	10-1/4	17-3/8	5
D1211138	1-19/32	9-7/8	16-7/8	5	D1211208	2-1/8	10-1/4	17-3/8	5
D1211140	1-5/8	10	17	5	D1211210	2-5/32	10-1/4	17-3/8	5
D1211142	1-21/32	10-1/8	17-1/8	5	D1211212	2-3/16	10-1/4	17-3/8	5
D1211144	1-11/16	10-1/8	17-1/8	5	D1211214	2-7/32	10-1/8	17-3/8	5
D1211146	1-23/32	10-1/8	17-1/8	5	D1211216	2-1/4	10-1/8	17-3/8	5
D1211148	1-3/4	10-1/8	17-1/8	5	D1211220	2-5/16	10-1/8	17-3/8	5
D1211152	1-13/16	10-1/8	17-1/8	5	D1211224	2-3/8	10-1/8	17-3/8	5
D1211154	1-27/32	10-1/8	17-1/8	5	D1211228	2-7/16	11-1/4	18-3/4	5
D1211156	1-7/8	10-3/8	17-3/8	5	D1211232	2-1/2	11-1/4	18-3/4	5

◎ : Excellent ○ : Good

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



MORSE TAPER SHANK DRILLS

RECOMMENDED CUTTING CONDITIONS

HSS(M2) MORSE TAPER SHANK TWIST DRILL

D1211 SERIES

WORK MATERIAL	P											
	CARBON STEELS		CARBON STEELS		CARBON STEELS		ALLOY STEELS		ALLOY STEELS		TOOL STEELS	
HARDNESS			~ HRC23		~ HRC23 ~ 28		HRC23 ~ 34		HRC34 ~ 38			
STRENGTH	~ 570 N/mm ²		~ 830 N/mm ²		830 ~ 950 N/mm ²		830 ~ 1110 N/mm ²		1110 ~ 1260 N/mm ²		~ 270 N/mm ²	
DIAMETER	N		S		N		S		N		S	
	1/2	645	.0067	480	.0067	370	.0035	440	.0067	265	.0020	645
3/4	440	.0091	330	.0091	255	.0051	300	.0091	180	.0020	440	.0091
1	325	.0110	245	.0110	185	.0063	220	.0110	133	.0030	325	.0110
1-17/64	260	.0110	195	.0110	145	.0071	180	.0110	107	.0030	240	.0118
1-1/2	220	.0130	165	.0130	120	.0076	150	.0130	90	.0030	198	.0121
1-31/32	165	.0130	125	.0130	93	.0079	115	.0130	68	.0030	150	.0169
2-3/8	140	.0157	105	.0157	78	.0091	95	.0157	57	.0039	125	.0188

WORK MATERIAL	M		K		N							
	STAINLESS STEELS		CAST IRON		ALUMINUM ALLOYS		MAGNESIUM ALLOYS		ZINC ALLOYS		PLASTIC	
HARDNESS	HRC23		~ HRC21									
STRENGTH	830 N/mm ²		~ 800 N/mm ²									
DIAMETER	N		S		N		S		N		S	
	1/2	480	.0067	480	.0067	1200	.0100	1600	.0100	1200	.0100	645
3/4	330	.0091	330	.0091	820	.0118	1100	.0118	820	.0118	440	.0091
1	245	.0110	245	.0110	605	.0146	810	.0150	605	.0146	325	.0110
1-17/64	195	.0110	195	.0110	490	.0150	660	.0150	490	.0150	260	.0110
1-1/2	165	.0130	165	.0130	410	.0172	550	.0180	410	.0172	220	.0130
1-31/32	125	.0130	125	.0130	310	.0181	415	.0181	310	.0181	165	.0130
2-3/8	105	.0157	105	.0157	260	.0196	345	.0196	260	.0196	140	.0157

N = R.P.M
S = Inch per Revolution (inch/rev.)

- i-DREAM DRILLS
- DREAM DRILLS -GENERAL
- DREAM DRILLS -HIGH FEED
- DREAM DRILLS -FLAT BOTTOM
- DREAM DRILLS -INOX
- DREAM DRILLS -ALU
- DREAM DRILLS -MQL TYPE
- DREAM DRILLS for HIGH HARDENED STEELS
- STANDARD CARBIDE DRILLS
- MULTI-1 DRILLS
- HPD DRILLS
- GOLD-P DRILLS
- STRAIGHT SHANK DRILLS
- AIRCRAFT DRILLS
- SILVER & DEMING DRILLS
- TAPER SHANK DRILLS
- NC SPOTTING DRILLS
- COMBINATION DRILLS & COUNTERSIN
- SPADE DRILLS
- TECHNICAL DATA



Being the best through innovation



HSS



NC SPOTTING DRILLS

- HSS(8% COBALT)
- Centering and Chamfering of Holes

HSS(8% Cobalt) NC SPOTTING DRILLS - Centering and Chamfering of Holes

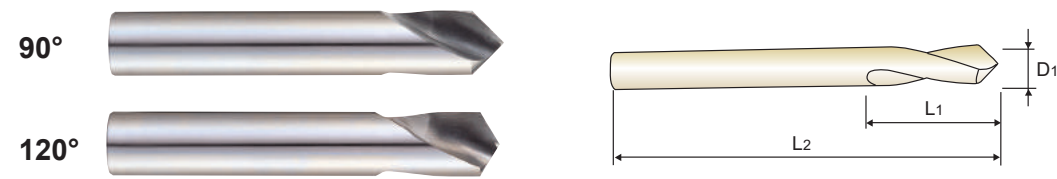
ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
INCH					
D2N90		HSSCo8, NC SPOTTING DRILLS 90°	D1/8	D1	262
		HSSCo8, NC SPOTTING DRILLS 120°	D1/8	D1	262
	RECOMMENDED CUTTING CONDITIONS				263

◎ : Excellent ○ : Good

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

HSSCo8, NC SPOTTING DRILLS

► **Application** : For more precise centering work on NC/CNC machine. A larger diameter in respect to the subsequent drilling tool permit to obtain the centering and chamfering simultaneously.



NC Spotting drills 90°

NC Spotting drills 120°

Unit : Inch

EDP No.	Diameter	Flute Length	Overall Length	EDP No.	Diameter	Flute Length	Overall Length
	D1	L1	L2		D1	L1	L2
0081L	1/8	.472	1.93	2081L	1/8	.472	1.93
0121L	3/16	.590	2.44	2121L	3/16	.590	2.44
0161L	1/4	.669	2.76	2161L	1/4	.669	2.76
0201L	5/16	.984	3.11	2201L	5/16	.984	3.11
0241L	3/8	.827	3.50	2241L	3/8	.827	3.50
0321L	1/2	.984	4.02	2321L	1/2	.984	4.02
0401L	5/8	1.575	4.53	2401L	5/8	1.575	4.53
0481L	3/4	1.968	5.16	2481L	3/4	1.968	5.16
0641L	1	1.968	6.14	2641L	1	1.968	6.14

* Individually packaged

◎ : Excellent ○ : Good

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

HSSCo8, NC SPOTTING DRILLS

D2N90 SERIES

WORK MATERIAL	P				M		N			
	CARBON STEELS		ALLOY STEELS		ALLOY STEELS, TOOL STEELS, HARDENED STEELS		STAINLESS STEELS		ALUMINUM, ALUMINUM ALLOYS	
DIAMETER	N	S	N	S	N	S	N	S	N	S
1/8 ~ 5/32	2460	.002	2110	.002	1080	.002	940	.002	7040	.005
11/64 ~ 3/16	1850	.002	1580	.002	800	.002	700	.002	5280	.006
13/64 ~ 15/64	1510	.003	1300	.003	670	.003	580	.003	4400	.006
1/4 ~ 5/16	1170	.003	1030	.003	540	.003	460	.003	3520	.007
21/64 ~ 25/64	880	.004	790	.004	400	.004	350	.004	2640	.008
13/32 ~ 15/32	700	.004	630	.004	320	.004	290	.004	2110	.009
31/64 ~ 5/8	590	.005	530	.005	260	.005	240	.005	1760	.011
41/64 ~ 47/64	460	.007	400	.007	200	.007	180	.007	1320	.012
3/4 ~ 1	350	.009	320	.009	150	.009	140	.009	1060	.017

N = R.P.M
S = Inch per Revolution (inch/rev.)



Being the best through innovation

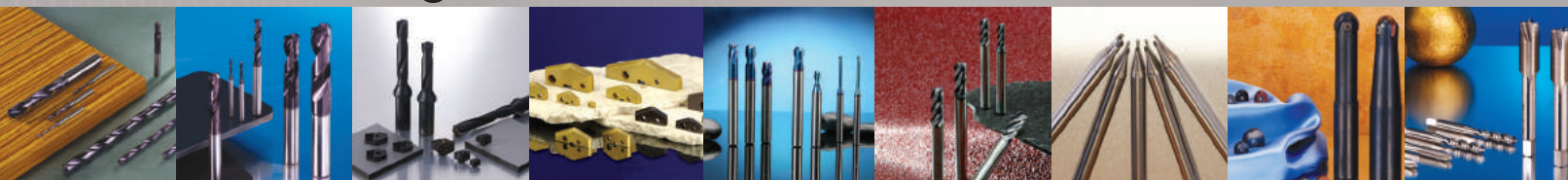
HSS



COMBINATION DRILL & COUNTER SINK / CENTER DRILL

- Regular and Long Length


Global Cutting Tool Leader **YG-1**



SELECTION GUIDE

HSS COMBINATION DRILL & COUNTER SINK / CENTER DRILL

HSS COMBINATION DRILL & COUNTER SINK / CENTER DRILL
- Regular and Long Length

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
INCH					
D1C90		HSS(M2), COMBINATION DRILL & COUNTER SINK / CENTER DRILL	D3/64	D7/32	268
		RECOMMENDED CUTTING CONDITIONS			268

◎ : Excellent ○ : Good

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

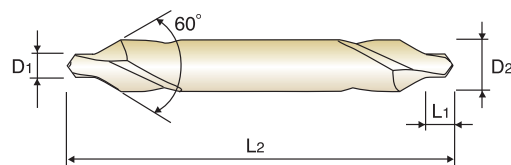
CARBIDE

HSS

COMBINATION DRILL & COUNTER SINK

D1C90 SERIES

HSS(M2), COMBINATION DRILL & COUNTER SINK / CENTER DRILL



HSS
h8
k12
120°
P.268

60°

EDP No.	Size	Diameter	Shank Diameter		Drill Length	Overall Length
		D1	D2	L1	L2	
* D1C90079	1	3/64	1/8	1/16	1-1/2	1-1/2
* D1C90080	2	1/16	3/16	5/64	1-3/4	1-3/4
* D1C90081	3	3/32	1/4	1/8	2	2
* D1C90082	4	1/8	5/16	5/32	2-1/4	2-1/4
* D1C90083	5	3/16	7/16	1/4	2-1/2	2-1/2
* D1C90084	6	7/32	1/2	7/32	3	3

* 10pcs per package
★ Individually package

60°

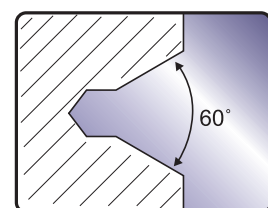
EDP No.	Size	Diameter	Shank Diameter		Drill Length	Overall Length
		D1	D2	L1	L2	
* D1C90141	1	3/64	1/8	3/64	1-1/4	1-1/4
* D1C90142	2	5/64	3/16	5/64	1-7/8	1-7/8
* D1C90143	3	7/64	1/4	7/64	2	2
* D1C90144	4	1/8	5/16	1/8	2-1/8	2-1/8
* D1C90145	5	3/16	7/16	3/16	2-3/4	2-3/4

* 10pcs per package

LONG LENGTH (60°)

Unit : Inch

EDP No.	Size	Diameter	Shank Diameter		Drill Length	Overall Length
		D1	D2	L1	L2	
D1C90085	1	3/64	1/8	3/64	3	3
D1C90086	1	3/64	1/8	3/64	4	4
D1C90087	1	3/64	1/8	3/64	5	5
D1C90088	1	3/64	1/8	3/64	6	6
D1C90089	2	5/64	3/16	5/64	3	3
D1C90090	2	5/64	3/16	5/64	4	4
D1C90091	2	5/64	3/16	5/64	5	5
D1C90092	2	5/64	3/16	5/64	6	6
D1C90093	3	7/64	1/4	7/64	4	4
D1C90094	3	7/64	1/4	7/64	5	5
D1C90095	3	7/64	1/4	7/64	6	6
D1C90096	4	1/8	5/16	1/8	4	4
D1C90097	4	1/8	5/16	1/8	5	5
D1C90098	4	1/8	5/16	1/8	6	6
D1C90099	5	3/16	7/16	3/16	4	4
D1C90100	5	3/16	7/16	3/16	5	5
D1C90101	5	3/16	7/16	3/16	6	6
D1C90102	6	7/32	1/2	7/32	4	4
D1C90103	6	7/32	1/2	7/32	5	5
D1C90104	6	7/32	1/2	7/32	6	6



◎ : Excellent ○ : Good

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



Being the best through innovation










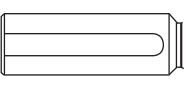
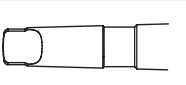
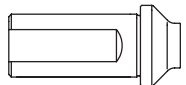
INSERTS & HOLDERS



SPADE DRILLS

- Carbide for Long Tool Life, and HSS-PM for General Machines and Large Diameters Higher Productivity than Other Drilling Tools

◎ : Excellent ○ : Good

ITEM	MODEL	DESCRIPTION	SIZE		PAGE
			MIN	MAX	
SERIES 1~8		SPADE DRILL INSERTS - HSS (M4)	.7031 (#1)	4.5000 (#8)	272
SERIES Y,Z,0,1~8		SPADE DRILL INSERTS - SUPER COBALT (T15)	.3740 (#Y)	4.5000 (#8)	276
SERIES Y,Z,0,1,2		SPADE DRILL INSERTS - PREMIUM COBALT (M48)	.3740 (#Y)	1.3780 (#2)	283
SERIES Y,Z,0,1~3		CARBIDE BLADE INSERTS C2 (K20)	.3740 (#Y)	1.8750 (#3)	286
SERIES Y,Z,0,1~3		CARBIDE BLADE INSERTS C5 (P40)	.3740 (#Y)	1.8750 (#3)	286
SERIES Y,Z,0,1~2		CARBIDE BLADE INSERTS C3 (K10)	.3740 (#Y)	1.3780 (#2)	286
SERIES Y,Z,0,1~8		SM-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)	.3740 (#Y)	4.5000 (#8)	292
SERIES Y,Z,0,1~3		SM-POINT SPADE DRILL INSERTS - CARBIDE C5 (P40)	.3740 (#Y)	1.8750 (#3)	296
SERIES Y,Z,0,1,2		SPADE DRILL FLAT BOTTOM INSERTS - SUPER COBALT (T15)	.3750 (#Y)	1.3750 (#2)	298
STRAIGHT SHANK		STRAIGHT SHANK HOLDER, STRAIGHT FLUTE			299
TAPER SHANK		TAPER SHANK HOLDER, STRAIGHT FLUTE / HELICAL FLUTE			303
FLANGED SHANK		FLANGED STRAIGHT SHANK HOLDER, STRAIGHT FLUTE			305
		HOLDER ACCESSORIES			307
		RECOMMENDED CUTTING CONDITIONS			308

Non-alloyed Steels, Free Machining Steels	P										M	K	N		
	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron		Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)
○	○	○	○		○		○	○			◎	◎	○	◎	◎
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YG SPADE DRILLS

SERIES 1,2

SPADE DRILL INSERTS - HSS (M4)

- ▶ General purpose insert for most materials
- ▶ Not recommended for tool steels and high temperature alloys
- ▶ High toughness for loose or manual machines

POINT ANGLE Series Y~4 : 132 degree
Series 5~8 : 144 degree



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. HSS (M4)		
	Fractional (inch)	Metric (mm)	Decimal (inch)		TiN	TiAlN	Hardslick
1 .690 (17.53) to .960 (24.38)	45/64	17.86	.7031	5/32 (4.0)	S01101	S03101	S04101
		18.00	.7087		S01102	S03102	S04102
	23/32	18.26	.7188		S01103	S03103	S04103
		18.50	.7283		S01104	S03104	S04104
	47/64	18.65	.7344		S01105	S03105	S04105
		19.00	.7480		S01106	S03106	S04106
	3/4	19.05	.7500		S01107	S03107	S04107
		19.45	.7656		S01108	S03108	S04108
	49/64	19.50	.7677		S01109	S03109	S04109
		19.84	.7813		S01110	S03110	S04110
	25/32	20.00	.7874		S01111	S03111	S04111
		20.24	.7969		S01112	S03112	S04112
	51/64	20.50	.8071		S01113	S03113	S04113
		20.64	.8125		S01114	S03114	S04114
	13/16	21.00	.8268		S01115	S03115	S04115
		21.43	.8438		S01116	S03116	S04116
	27/32	21.83	.8594		S01117	S03117	S04117
		22.00	.8661		S01118	S03118	S04118
	55/64	22.23	.8750		S01119	S03119	S04119
		22.62	.8906		S01120	S03120	S04120
2 .961 (24.41) to 1.380 (35.05)	7/8	22.62	.8906	3/16 (4.8)	S01121	S03121	S04121
		22.80	.9000		S01122	S03122	S04122
	57/64	23.00	.9055		S01201	S03201	S04201
		23.02	.9063		S01202	S03202	S04202
	29/32	23.42	.9219		S01203	S03203	S04203
		23.81	.9375		S01204	S03204	S04204
	15/16	24.00	.9449		S01205	S03205	S04205
		24.61	.9688		S01206	S03206	S04206
	31/32	25.00	.9843		S01207	S03207	S04207
		25.40	1.0000		S01208	S03208	S04208
	1	25.80	1.0156				
		26.00	1.0236				
	1-1/64	26.19	1.0313				
		26.59	1.0469				
	1-1/32	26.99	1.0625				
		27.00	1.0630				

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron	Aluminum	Copper Alloys		
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)	~HB110
○	○	○	○	○	○	○	○	○	○	○	◎	◎	○	◎	◎

YG SPADE DRILLS

SERIES 2,3

SPADE DRILL INSERTS - HSS (M4)

- ▶ General purpose insert for most materials
- ▶ Not recommended for tool steels and high temperature alloys
- ▶ High toughness for loose or manual machines

POINT ANGLE Series Y~4 : 132 degree
Series 5~8 : 144 degree



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. HSS (M4)		
	Fractional (inch)	Metric (mm)	Decimal (inch)		TiN	TiAlN	Hardslick
2 .961 (24.41) to 1.380 (35.05)	1-3/32	27.78	1.0938	3/16 (4.8)	S01209	S03209	S04209
		28.00	1.1024		S01210	S03210	S04210
	1-7/64	28.18	1.1094		S01261	S03261	S04261
		28.58	1.1250		S01211	S03211	S04211
	1-1/8	29.00	1.1417		S01212	S03212	S04212
		29.37	1.1563		S01213	S03213	S04213
	1-5/32	30.00	1.1811		S01214	S03214	S04214
		30.16	1.1875		S01215	S03215	S04215
	1-3/16	30.96	1.2188		S01216	S03216	S04216
		31.00	1.2205		S01217	S03217	S04217
	1-1/4	31.75	1.2500		S01218	S03218	S04218
		32.00	1.2598		S01219	S03219	S04219
	1-9/32	32.54	1.2813		S01220	S03220	S04220
		33.00	1.2992		S01221	S03221	S04221
	1-5/16	33.34	1.3125		S01222	S03222	S04222
		34.00	1.3386		S01223	S03223	S04223
	1-11/32	34.13	1.3438		S01224	S03224	S04224
		34.93	1.3750		S01225	S03225	S04225
	1-3/8	35.00	1.3780		S01226	S03226	S04226
		35.72	1.4063		S01301	S03301	S04301
3 1.353 (34.37) to 1.882 (47.80)	1-13/32	36.00	1.4173	1/4 (6.4)	S01302	S03302	S04302
		36.51	1.4375		S01303	S03303	S04303
	1-7/16	37.00	1.4567		S01304	S03304	S04304
		37.31	1.4688		S01305	S03305	S04305
	1-15/32	38.00	1.4961		S01306	S03306	S04306
		38.10	1.5000		S01307	S03307	S04307
	1-1/2	38.89	1.5313		S01308	S03308	S04308
		39.00	1.5354		S01309	S03309	S04309
	1-9/16	39.69	1.5625		S01310	S03310	S04310
		40.00	1.5748		S01311	S03311	S04311
	1-19/32	40.48	1.5938		S01312	S03312	S04312
		41.00	1.6142		S01313	S03313	S04313
	1-5/8	41.28	1.6250		S01314	S03314	S04314
		42.00	1.6535		S01315	S03315	S04315

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron	Aluminum	Copper Alloys		
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)	~HB110
○	○	○	○	○	○	○	○	○	○	○	◎	◎	○	◎	◎

YG SPADE DRILLS

SERIES 3,4

SPADE DRILL INSERTS - HSS (M4)

- ▶ General purpose insert for most materials
- ▶ Not recommended for tool steels and high temperature alloys
- ▶ High toughness for loose or manual machines

POINT ANGLE Series Y~4 : 132 degree
Series 5~8 : 144 degree



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. HSS (M4)		
	Fractional (inch)	Metric (mm)	Decimal (inch)		TiN	TiAlN	Hardslick
3 1.353 (34.37) to 1.882 (47.80)	1-21/32	42.07	1.6563	1/4 (6.4)	S01316	S03316	S04316
	1-11/16	42.86	1.6875		S01317	S03317	S04317
		43.00	1.6929		S01318	S03318	S04318
	1-23/32	43.66	1.7188		S01319	S03319	S04319
		44.00	1.7323		S01320	S03320	S04320
	1-3/4	44.45	1.7500		S01321	S03321	S04321
		45.00	1.7717		S01322	S03322	S04322
	1-25/32	45.24	1.7813		S01323	S03323	S04323
		46.00	1.8110		S01324	S03324	S04324
		46.04	1.8125		S01325	S03325	S04325
4 1.850 (46.99) to 2.570 (65.28)	1-13/16	46.83	1.8438	5/16 (7.9)	S01326	S03326	S04326
		47.00	1.8504		S01327	S03327	S04327
	1-7/8	47.63	1.8750		S01328	S03328	S04328
	1-29/32	48.42	1.9063		S01402	S03402	S04402
	1-15/16	49.21	1.9375		S01404	S03404	S04404
	1-31/32	50.01	1.9688		S01406	S03406	S04406
	2	50.80	2.0000		S01407	S03407	S04407
	2-1/32	51.59	2.0313		S01409	S03409	S04409
	2-3/64	52.00	2.0472		S01410	S03410	S04410
	2-1/16	52.39	2.0625		S01411	S03411	S04411
	2-3/32	53.18	2.0938		S01413	S03413	S04413
	2-1/8	53.98	2.1250		S01414	S03414	S04414
	2-5/32	54.77	2.1563		S01416	S03416	S04416
	2-3/16	55.56	2.1875		S01418	S03418	S04418
	2-7/32	56.36	2.2188		S01420	S03420	S04420
	2-1/4	57.15	2.2500		S01422	S03422	S04422
	2-9/32	57.94	2.2813		S01423	S03423	S04423
	2-5/16	58.74	2.3125		S01425	S03425	S04425
	2-11/32	59.53	2.3438		S01427	S03427	S04427
	2-3/8	60.33	2.3750		S01429	S03429	S04429
2-13/32	61.12	2.4063	S01431	S03431	S04431		
2-7/16	61.91	2.4375	S01432	S03432	S04432		
2-15/32	62.71	2.4688	S01434	S03434	S04434		
2-1/2	63.50	2.5000	S01436	S03436	S04436		

◎ : Excellent ○ : Good

P										M	K	N		
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)
○	○	○	○	○	○	○	○	○	○	○	◎	◎	○	◎

YG SPADE DRILLS

SERIES 4,5,6,7,8

SPADE DRILL INSERTS - HSS (M4)

- ▶ General purpose insert for most materials
- ▶ Not recommended for tool steels and high temperature alloys
- ▶ High toughness for loose or manual machines

POINT ANGLE Series Y~4 : 132 degree
Series 5~8 : 144 degree



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. HSS (M4)		
	Fractional (inch)	Metric (mm)	Decimal (inch)		TiN	TiAlN	Hardslick
4	2-17/32	64.29	2.5313	5/16 (7.9)	S01438	S03438	S04438
	2-9/16	65.09	2.5625		S01440	S03440	S04440
5 2.456 (62.38) to 3.000 (76.20)	2-1/2	63.50	2.5000	7/16 (11.1)	S01501	S03501	S04501
	2-5/8	66.68	2.6250		S01507	S03507	S04507
	2-3/4	69.85	2.7500		S01512	S03512	S04512
	2-25/32	70.64	2.7813		S01514	S03514	S04514
	2-13/16	71.44	2.8125		S01515	S03515	S04515
	2-27/32	72.23	2.8438		S01517	S03517	S04517
	2-7/8	73.03	2.8750		S01518	S03518	S04518
	2-29/32	73.82	2.9063		S01519	S03519	S04519
	2-15/16	74.61	2.9375		S01521	S03521	S04521
	2-31/32	75.41	2.9688		S01522	S03522	S04522
6 3.001(76.23) to 3.507(89.08)	3	76.20	3.0000	7/16 (11.1)	S01524	S03524	S04524
	3-1/16	77.79	3.0625		S01602	S03602	S04602
	3-1/8	79.38	3.1250		S01605	S03605	S04605
	3-1/4	82.55	3.2500		S01611	S03611	S04611
	3-3/8	85.73	3.3750		S01616	S03616	S04616
7 3.455(87.76) to 4.000(101.60)	3-7/16	87.31	3.4375	7/16 (11.1)	S01619	S03619	S04619
	3-1/2	88.90	3.5000		S01622	S03622	S04622
	3-9/16	90.49	3.5625		S01703	S03703	S04703
	3-5/8	92.08	3.6250		S01706	S03706	S04706
	3-3/4	95.25	3.7500		S01711	S03711	S04711
8 4.001(101.63) to 4.507(114.48)	3-7/8	98.43	3.8750	7/16 (11.1)	S01717	S03717	S04717
	4	101.60	4.0000		S01722	S03722	S04722
	4-1/8	104.78	4.1250		S01804	S03804	S04804
	4-1/4	107.95	4.2500		S01807	S03807	S04807
	4-3/8	111.13	4.3750		S01811	S03811	S04811
4-1/2	114.30	4.5000	S01815	S03815	S04815		

◎ : Excellent ○ : Good

P										M	K	N		
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron		Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)
○	○	○	○	○	○	○	○	○	○	○	◎	◎	○	◎

i-DREAM DRILLS
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSIN
SPADE DRILLS
TECHNICAL DATA

i-DREAM DRILLS
DREAM DRILLS -GENERAL
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TAPER SHANK DRILLS
NC SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
TECHNICAL DATA

YG SPADE DRILLS

SERIES Y,Z,0

SPADE DRILL INSERTS - SUPER COBALT (T15)

- ▶ Increase wear resistance over M4
- ▶ For use in medium carbon steel to high temperature alloys
- ▶ Performs best in rigid setups

POINT ANGLE Series Y~4 : 132 degree
Series 5~8 : 144 degree



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No.				
	Fractional (inch)	Metric (mm)	Decimal (inch)		SUPER COBALT (T15)				
					TiN	TiAIN	Hardslck		
Y .374 (9.50) to .436 (11.07)	3/8	9.50	.3740	3/32 (2.4)	*S06Y01	*S08Y01	*S09Y01		
		9.53	.3750		*S06Y02	*S08Y02	*S09Y02		
	25/64	9.80	.3860		*S06Y03	*S08Y03	*S09Y03		
		9.92	.3906		*S06Y04	*S08Y04	*S09Y04		
		10.00	.3937		*S06Y05	*S08Y05	*S09Y05		
		10.20	.4016		*S06Y06	*S08Y06	*S09Y06		
	13/32	10.32	.4063		*S06Y07	*S08Y07	*S09Y07		
		10.50	.4134		*S06Y08	*S08Y08	*S09Y08		
	27/64	10.72	.4219		*S06Y09	*S08Y09	*S09Y09		
		10.80	.4252		*S06Y10	*S08Y10	*S09Y10		
Z .437 (11.11) to .510 (12.95)	7/16	11.11	.4375	3/32 (2.4)	*S06Z01	*S08Z01	*S09Z01		
		11.50	.4528		*S06Z02	*S08Z02	*S09Z02		
	29/64	11.51	.4531		*S06Z03	*S08Z03	*S09Z03		
	15/32	11.91	.4688		*S06Z04	*S08Z04	*S09Z04		
	31/64	12.00	.4724		*S06Z05	*S08Z05	*S09Z05		
		12.30	.4844		*S06Z06	*S08Z06	*S09Z06		
	12.50	.4921	*S06Z07		*S08Z07	*S09Z07			
		12.70	.5000		*S06Z08	*S08Z08	*S09Z08		
	0 .511 (12.98) to .695 (17.65)	33/64	13.00		.5118	1/8 (3.2)	*S06001	*S08001	*S09001
			13.10		.5156		*S06002	*S08002	*S09002
17/32		13.49	.5313	*S06003	*S08003		*S09003		
		13.50	.5315	*S06004	*S08004		*S09004		
		13.89	.5469	*S06060	*S08060		*S09060		
9/16		14.00	.5512	*S06005	*S08005		*S09005		
		14.29	.5625	*S06006	*S08006		*S09006		
37/64		14.50	.5709	*S06007	*S08007		*S09007		
		14.68	.5781	*S06008	*S08008		*S09008		
19/32		15.00	.5906	*S06009	*S08009		*S09009		
	15.08	.5938	*S06010	*S08010	*S09010				
39/64	15.48	.6094	*S06061	*S08061	*S09061				
	15.50	.6102	*S06011	*S08011	*S09011				
5/8	15.88	.6250	*S06012	*S08012	*S09012				

* 2pcs per package

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

YG SPADE DRILLS

SERIES 0,1

SPADE DRILL INSERTS - SUPER COBALT (T15)

- ▶ Increase wear resistance over M4
- ▶ For use in medium carbon steel to high temperature alloys
- ▶ Performs best in rigid setups

POINT ANGLE Series Y~4 : 132 degree
Series 5~8 : 144 degree



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No.				
	Fractional (inch)	Metric (mm)	Decimal (inch)		SUPER COBALT (T15)				
					TiN	TiAIN	Hardslck		
0 .511 (12.98) to .695 (17.65)	41/64	16.00	.6299	1/8 (3.2)	*S06013	*S08013	*S09013		
		16.27	.6406		*S06062	*S08062	*S09062		
		16.50	.6496		*S06014	*S08014	*S09014		
		21/32	16.67		.6563	*S06015	*S08015	*S09015	
		17.00	.6693		*S06016	*S08016	*S09016		
		43/64	17.07		.6719	*S06063	*S08063	*S09063	
	11/16	17.46	.6875		*S06017	*S08017	*S09017		
		17.50	.6890		*S06018	*S08018	*S09018		
	1 .690 (17.53) to .960 (24.38)	45/64	17.86		.7031	5/32 (4.0)	S06101	S08101	S09101
			18.00		.7087		S06102	S08102	S09102
23/32			18.26	.7188	S06103		S08103	S09103	
		18.50	.7283	S06104	S08104		S09104		
		47/64	18.65	.7344	S06105		S08105	S09105	
3/4		19.00	.7480	S06106	S08106		S09106		
		49/64	19.45	.7656	S06107		S08107	S09107	
		19.50	.7677	S06108	S08108		S09108		
		25/32	19.84	.7813	S06109		S08109	S09109	
51/64		20.00	.7874	S06110	S08110		S09110		
	20.24	.7969	S06111	S08111	S09111				
13/16	20.50	.8071	S06112	S08112	S09112				
	20.64	.8125	S06113	S08113	S09113				
	21.00	.8268	S06114	S08114	S09114				
	27/32	21.43	.8438	S06115	S08115	S09115			
55/64	21.83	.8594	S06161	S08161	S09161				
	22.00	.8661	S06116	S08116	S09116				
7/8	22.23	.8750	S06117	S08117	S09117				
	57/64	22.62	.8906	S06162	S08162	S09162			
	23.00	.9055	S06118	S08118	S09118				
	29/32	23.02	.9063	S06119	S08119	S09119			
59/64	23.42	.9219	S06120	S08120	S09120				
	23.81	.9375	S06121	S08121	S09121				
15/16	24.00	.9449	S06122	S08122	S09122				

* 2pcs per package

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

- i-DREAM DRILLS
- DREAM DRILLS -GENERAL
- DREAM DRILLS -HIGH FEED
- DREAM DRILLS -FLAT BOTTOM
- DREAM DRILLS -INOX
- DREAM DRILLS -ALU
- DREAM DRILLS -MQL TYPE
- DREAM DRILLS for HIGH HARDENED STEELS
- STANDARD CARBIDE DRILLS
- MULTI-1 DRILLS
- HPD DRILLS
- GOLD-P DRILLS
- STRAIGHT SHANK DRILLS
- AIRCRAFT DRILLS
- SILVER & DEMING DRILLS
- TAPER SHANK DRILLS
- NC SPOTTING DRILLS
- COMBINATION DRILLS & COUNTERSIN
- SPADE DRILLS
- TECHNICAL DATA

- i-DREAM DRILLS
- DREAM DRILLS -GENERAL
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- SILVER & DEMING DRILLS
- TAPER SHANK DRILLS
- NC SPOTTING DRILLS
- COMBINATION DRILLS & COUNTERSINK
- SPADE DRILLS
- TECHNICAL DATA



SERIES 2,3

SPADE DRILL INSERTS - SUPER COBALT (T15)

- ▶ Increase wear resistance over M4
- ▶ For use in medium carbon steel to high temperature alloys
- ▶ Performs best in rigid setups

POINT ANGLE Series Y~4 : 132 degree
Series 5~8 : 144 degree



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No.		
	Fractional (inch)	Metric (mm)	Decimal (inch)		SUPER COBALT (T15)		
					TiN	TiAIN	Hardslick
2 .961 (24.41) to 1.380 (35.05)	31/32	24.61	.9688	3/16 (4.8)	S06201	S08201	S09201
	63/64	25.00	.9843		S06202	S08202	S09202
	1	25.40	1.0000		S06203	S08203	S09203
	1-1/64	25.80	1.0156		S06204	S08204	S09204
		26.00	1.0236		S06205	S08205	S09205
	1-1/32	26.19	1.0313		S06206	S08206	S09206
	1-3/64	26.59	1.0469		S06260	S08260	S09260
	1-1/16	26.99	1.0625		S06207	S08207	S09207
		27.00	1.0630		S06208	S08208	S09208
	1-3/32	27.78	1.0938		S06209	S08209	S09209
		28.00	1.1024		S06210	S08210	S09210
	1-7/64	28.18	1.1094		S06261	S08261	S09261
	1-1/8	28.58	1.1250		S06211	S08211	S09211
		29.00	1.1417		S06212	S08212	S09212
	1-5/32	29.37	1.1563		S06213	S08213	S09213
		30.00	1.1811		S06214	S08214	S09214
	1-3/16	30.16	1.1875		S06215	S08215	S09215
	1-7/32	30.96	1.2188		S06216	S08216	S09216
		31.00	1.2205		S06217	S08217	S09217
	3	1-1/4	31.75		1.2500	S06218	S08218
		32.00	1.2598	S06219	S08219	S09219	
1-9/32		32.54	1.2813	S06220	S08220	S09220	
		33.00	1.2992	S06221	S08221	S09221	
1-5/16		33.34	1.3125	S06222	S08222	S09222	
		34.00	1.3386	S06223	S08223	S09223	
1-11/32		34.13	1.3438	S06224	S08224	S09224	
1-3/8		34.93	1.3750	S06225	S08225	S09225	
		35.00	1.3780	S06226	S08226	S09226	
1-13/32		35.72	1.4063	S06301	S08301	S09301	
		36.00	1.4173	S06302	S08302	S09302	
1-7/16		36.51	1.4375	S06303	S08303	S09303	
		37.00	1.4567	S06304	S08304	S09304	
1-15/32		37.31	1.4688	S06305	S08305	S09305	

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○



SERIES 3,4

SPADE DRILL INSERTS - SUPER COBALT (T15)

- ▶ Increase wear resistance over M4
- ▶ For use in medium carbon steel to high temperature alloys
- ▶ Performs best in rigid setups

POINT ANGLE Series Y~4 : 132 degree
Series 5~8 : 144 degree



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No.		
	Fractional (inch)	Metric (mm)	Decimal (inch)		SUPER COBALT (T15)		
					TiN	TiAIN	Hardslick
3 1.353 (34.37) to 1.882 (47.80)		38.00	1.4961	1/4 (6.4)	S06306	S08306	S09306
	1-1/2	38.10	1.5000		S06307	S08307	S09307
	1-17/32	38.89	1.5313		S06308	S08308	S09308
		39.00	1.5354		S06309	S08309	S09309
	1-9/16	39.69	1.5625		S06310	S08310	S09310
		40.00	1.5748		S06311	S08311	S09311
	1-19/32	40.48	1.5938		S06312	S08312	S09312
		41.00	1.6142		S06313	S08313	S09313
	1-5/8	41.28	1.6250		S06314	S08314	S09314
		42.00	1.6535		S06315	S08315	S09315
	1-21/32	42.07	1.6563		S06316	S08316	S09316
	1-11/16	42.86	1.6875		S06317	S08317	S09317
		43.00	1.6929		S06318	S08318	S09318
	1-23/32	43.66	1.7188		S06319	S08319	S09319
		44.00	1.7323		S06320	S08320	S09320
	1-3/4	44.45	1.7500		S06321	S08321	S09321
		45.00	1.7717		S06322	S08322	S09322
	1-25/32	45.24	1.7813		S06323	S08323	S09323
		46.00	1.8110		S06324	S08324	S09324
	4 1.850 (46.99) to 2.570 (65.28)	1-13/16	46.04		1.8125	S06325	S08325
1-27/32		46.83	1.8438	S06326	S08326	S09326	
		47.00	1.8504	S06327	S08327	S09327	
1-7/8		47.63	1.8750	S06328	S08328	S09328	
1-29/32		48.42	1.9062	S06402	S08402	S09402	
1-15/16		49.21	1.9375	S06404	S08404	S09404	
1-31/32		50.01	1.9688	S06406	S08406	S09406	
2		50.80	2.0000	S06407	S08407	S09407	
2-1/32		51.59	2.0312	S06409	S08409	S09409	
2-3/64		52.00	2.0472	S06410	S08410	S09410	
2-1/16		52.39	2.0625	S06411	S08411	S09411	
2-3/32		53.18	2.0938	S06413	S08413	S09413	
2-1/8		53.98	2.1250	S06414	S08414	S09414	
2-5/32		54.77	2.1562	S06416	S08416	S09416	

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

- i-DREAM DRILLS
- DREAM DRILLS -GENERAL
- DREAM DRILLS -HIGH FEED
- DREAM DRILLS -FLAT BOTTOM
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- AIRCRAFT DRILLS
- SILVER & DEMING DRILLS
- TAPER SHANK DRILLS
- NC SPOTTING DRILLS
- COMBINATION DRILLS & COUNTERSIN
- SPADE DRILLS
- TECHNICAL DATA

- i-DREAM DRILLS
- DREAM DRILLS -GENERAL
- DREAM DRILLS -HIGH FEED
- DREAM DRILLS -FLAT BOTTOM
- DREAM DRILLS -INOX
- DREAM DRILLS -ALU
- DREAM DRILLS -MQL TYPE
- DREAM DRILLS for HIGH HARDENED STEELS
- STANDARD CARBIDE DRILLS
- MULTI-1 DRILLS
- HPD DRILLS
- GOLD-P DRILLS
- STRAIGHT SHANK DRILLS
- AIRCRAFT DRILLS
- SILVER & DEMING DRILLS
- TAPER SHANK DRILLS
- NC SPOTTING DRILLS
- COMBINATION DRILLS & COUNTERSINK
- SPADE DRILLS
- TECHNICAL DATA

YG SPADE DRILLS

SERIES 4,5

SPADE DRILL INSERTS - SUPER COBALT (T15)

- ▶ Increase wear resistance over M4
- ▶ For use in medium carbon steel to high temperature alloys
- ▶ Performs best in rigid setups

POINT ANGLE Series Y~4 : 132 degree
Series 5~8 : 144 degree



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. SUPER COBALT (T15)		
	Fractional (inch)	Metric (mm)	Decimal (inch)		TiN	TiAlN	Hardslick
4 1.850 (46.99) to 2.570 (65.28)	2-3/16	55.56	2.1875	5/16 (7.9)	S06418	S08418	S09418
	2-7/32	56.36	2.2188		S06420	S08420	S09420
	2-1/4	57.15	2.2500		S06422	S08422	S09422
	2-9/32	57.94	2.2812		S06423	S08423	S09423
	2-5/16	58.74	2.3125		S06425	S08425	S09425
	2-11/32	59.53	2.3438		S06427	S08427	S09427
	2-3/8	60.33	2.3750		S06429	S08429	S09429
	2-13/32	61.12	2.4062		S06431	S08431	S09431
	2-7/16	61.91	2.4375		S06432	S08432	S09432
	2-15/32	62.71	2.4688		S06434	S08434	S09434
	2-1/2	63.50	2.5000		S06436	S08436	S09436
	2-17/32	64.29	2.5312		S06438	S08438	S09438
	2-9/16	65.09	2.5625		S06440	S08440	S09440
	5 2.456 (62.38) to 3.000 (76.20)	2-1/2	63.50		2.5000	7/16 (11.1)	—
		64.00	2.5197	—	—		S09502
2-17/32		64.29	2.5312	—	—		S09503
2-9/16		65.09	2.5625	—	—		S09504
2-19/32		65.88	2.5938	—	—		S09505
		66.00	2.5984	—	—		S09506
2-5/8		66.68	2.6250	—	—		S09507
2-21/32		67.47	2.6562	—	—		S09508
		68.00	2.6772	—	—		S09509
2-11/16		68.26	2.6875	—	—		S09510
2-23/32		69.09	2.7188	—	—		S09511
2-3/4		69.85	2.7500	—	—		S09512
		70.00	2.7559	—	—		S09513
2-25/32		70.64	2.7812	—	—		S09514
2-13/16		71.44	2.8125	—	—		S09515
		72.00	2.8346	—	—		S09516
2-27/32		72.23	2.8438	—	—		S09517
2-7/8		73.03	2.8750	—	—		S09518
2-29/32	73.82	2.9062	—	—	S09519		
	74.00	2.9134	—	—	S09520		

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

YG SPADE DRILLS

SERIES 5,6,7

SPADE DRILL INSERTS - SUPER COBALT (T15)

- ▶ Increase wear resistance over M4
- ▶ For use in medium carbon steel to high temperature alloys
- ▶ Performs best in rigid setups

POINT ANGLE Series Y~4 : 132 degree
Series 5~8 : 144 degree



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. SUPER COBALT (T15)		
	Fractional (inch)	Metric (mm)	Decimal (inch)		TiN	TiAlN	Hardslick
5	2-15/16	74.61	2.9375	7/16 (11.1)	—	—	S09521
	2-31/32	75.41	2.8688		—	—	S09522
		76.00	2.9921		—	—	S09523
	3	76.20	3.0000		—	—	S09524
6 3.001 (76.23) to 3.507 (89.08)	3-1/32	76.99	3.0312	7/16 (11.1)	—	—	S09601
	3-1/16	77.79	3.0625		—	—	S09602
		78.00	3.0709		—	—	S09603
	3-3/32	78.58	3.0938		—	—	S09604
	3-1/8	79.38	3.1250		—	—	S09605
		80.00	3.1496		—	—	S09606
	3-5/32	80.17	3.1562		—	—	S09607
	3-3/16	80.96	3.1875		—	—	S09608
	3-7/32	81.76	3.2188		—	—	S09609
		82.00	3.2283		—	—	S09610
	3-1/4	82.55	3.2500		—	—	S09611
	3-9/32	83.34	3.2812		—	—	S09612
		84.00	3.3071		—	—	S09613
	3-5/16	84.14	3.3125		—	—	S09614
3-11/32	84.93	3.3438	—	—	S09615		
3-3/8	85.73	3.3750	—	—	S09616		
	86.00	3.3858	—	—	S09617		
3-13/32	86.52	3.3062	—	—	S09618		
3-7/16	87.31	3.4375	—	—	S09619		
	88.00	3.4646	—	—	S09620		
3-15/32	88.11	3.4688	—	—	S09621		
3-1/2	88.90	3.5000	—	—	S09622		
7 3.455(87.76) to 4.000(101.60)	3-17/32	89.69	3.5312	7/16 (11.1)	—	—	S09701
		90.00	3.5433		—	—	S09702
	3-9/16	90.49	3.5625		—	—	S09703
	3-19/32	91.28	3.5938		—	—	S09704
		92.00	3.6221		—	—	S09705
	3-5/8	92.08	3.6250		—	—	S09706
	92.87	3.6563	—	—	S09707		

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

YG SPADE DRILLS

SERIES 7,8

SPADE DRILL INSERTS - SUPER COBALT (T15)

- ▶ Increase wear resistance over M4
- ▶ For use in medium carbon steel to high temperature alloys
- ▶ Performs best in rigid setups

POINT ANGLE Series Y~4 : 132 degree
Series 5~8 : 144 degree



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No.		
	Fractional (inch)	Metric (mm)	Decimal (inch)		SUPER COBALT (T15)		
					TiN	TiAlN	Hardslick
7 3.455 (87.76) to 4.000 (101.60)	3-11/16	93.66	3.6875	7/16 (11.1)	—	—	S09708
		94.00	3.7008		—	—	S09709
	3-23/32	94.46	3.7188		—	—	S09710
		3-3/4	95.25		3.7500	—	—
	96.00		3.7795		—	—	S09712
	3-25/32	96.04	3.7812		—	—	S09713
	3-13/16	96.84	3.8125		—	—	S09714
	3-27/32	97.63	3.8438		—	—	S09715
	98.00	3.8583	—		—	—	S09716
	3-7/8	98.43	3.8750		—	—	S09717
	3-29/32	99.22	3.9062		—	—	S09718
	100.00	3.9370	—		—	—	S09719
	3-15/16	100.01	3.9375		—	—	S09720
	3-31/32	100.81	3.9688		—	—	S09721
4	101.60	4.0000	—	—	S09722		
8 4.001 (101.63) to 4.507 (114.48)	4-1/64	102.00	4.0156	7/16 (11.1)	—	—	S09801
		103.19	4.0625		—	—	S09802
	4-3/32	104.00	4.0945		—	—	S09803
	4-1/8	104.78	4.1250		—	—	S09804
	106.00	4.1732	—		—	—	S09805
	4-3/16	106.36	4.1875		—	—	S09806
	4-1/4	107.95	4.2500		—	—	S09807
	108.00	4.2520	—		—	—	S09808
	4-5/16	109.54	4.3125		—	—	S09809
	110.00	4.3307	—		—	—	S09810
	4-3/8	111.13	4.3750		—	—	S09811
	112.00	4.4094	—		—	—	S09812
	4-7/16	112.71	4.4375		—	—	S09813
	114.00	4.4882	—		—	—	S09814
4-1/2	114.30	4.5000	—	—	S09815		

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

YG SPADE DRILLS

SERIES Y,Z,0

SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- ▶ Increased tool life over T15
- ▶ For use in high temperature alloys and materials including medium carbon, Alloy and tool steels
- ▶ Rigid set up needed

POINT ANGLE : 132 degree



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No.		
	Fractional (inch)	Metric (mm)	Decimal (inch)		PREMIUM COBALT (M48)		
					TiN	TiAlN	Hardslick
Y .374 (9.50) to .436 (11.07)	3/8	9.50	.3740	3/32 (2.4)	*S11Y01	*S13Y01	*S14Y01
		9.53	.3750		*S11Y02	*S13Y02	*S14Y02
	25/64	9.80	.3860		*S11Y03	*S13Y03	*S14Y03
		9.92	.3906		*S11Y04	*S13Y04	*S14Y04
	10.00	.3937	*S11Y05		*S13Y05	*S14Y05	
	10.20	.4016	*S11Y06		*S13Y06	*S14Y06	
	13/32	10.32	.4063		*S11Y07	*S13Y07	*S14Y07
	10.50	.4134	*S11Y08		*S13Y08	*S14Y08	
	27/64	10.72	.4219		*S11Y09	*S13Y09	*S14Y09
	10.80	.4252	*S11Y10		*S13Y10	*S14Y10	
	11.00	.4331	*S11Y11		*S13Y11	*S14Y11	
Z .437 (11.11) to .510 (12.95)	7/16	11.11	.4375	3/32 (2.4)	*S11Z01	*S13Z01	*S14Z01
	11.50	.4528	*S11Z02		*S13Z02	*S14Z02	
	29/64	11.51	.4531		*S11Z03	*S13Z03	*S14Z03
	15/32	11.91	.4688		*S11Z04	*S13Z04	*S14Z04
	31/64	12.30	.4844		*S11Z05	*S13Z05	*S14Z05
	12.50	.4921	*S11Z06		*S13Z06	*S14Z06	
	1/2	12.70	.5000		*S11Z07	*S13Z07	*S14Z07
0 .511 (12.98) to .695 (17.65)	13.00	.5118	1/8 (3.2)	*S11001	*S13001	*S14001	
	33/64	.5156		*S11002	*S13002	*S14002	
	17/32	.5313		*S11003	*S13003	*S14003	
	13.50	.5315		*S11004	*S13004	*S14004	
	35/64	.5469		*S11060	*S13060	*S14060	
	14.00	.5512		*S11005	*S13005	*S14005	
	9/16	.5625		*S11006	*S13006	*S14006	
	14.50	.5709		*S11007	*S13007	*S14007	
	37/64	.5781		*S11008	*S13008	*S14008	
	15.00	.5906		*S11009	*S13009	*S14009	
	19/32	.5938		*S11010	*S13010	*S14010	
	39/64	.6094		*S11061	*S13061	*S14061	
	15.50	.6102		*S11011	*S13011	*S14011	
	5/8	.6250		*S11012	*S13012	*S14012	

* 2pcs per package

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	◎	○	○

YG SPADE DRILLS

SERIES 0,1

SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- ▶ Increased tool life over T15
- ▶ For use in high temperature alloys and materials including medium carbon, Alloy and tool steels
- ▶ Rigid set up needed



POINT ANGLE : 132 degree

cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No.		
	Fractional (inch)	Metric (mm)	Decimal (inch)		PREMIUM COBALT (M48)		
					TiN	TiAlN	Hardslick
0 .511 (12.98) to .695 (17.65)	16.00	16.00	.6299	1/8 (3.2)	* S11013	* S13013	* S14013
	41/64		.6406		* S11062	* S13062	* S14062
	16.50	16.50	.6496		* S11014	* S13014	* S14014
	21/32		.6563		* S11015	* S13015	* S14015
	17.00	17.00	.6693		* S11016	* S13016	* S14016
	43/64		.6719		* S11063	* S13063	* S14063
	11/16		.6875		* S11017	* S13017	* S14017
	17.50	17.50	.6890		* S11018	* S13018	* S14018
	45/64	17.86	.7031		S11101	S13101	S14101
	18.00	18.00	.7087		S11102	S13102	S14102
1 .690 (17.53) to .960 (24.38)	23/32	18.26	.7188	5/32 (4.0)	S11103	S13103	S14103
	18.50	18.50	.7283		S11104	S13104	S14104
	47/64	18.65	.7344		S11105	S13105	S14105
	19.00	19.00	.7480		S11106	S13106	S14106
	3/4	19.05	.7500		S11107	S13107	S14107
	49/64	19.45	.7656		S11108	S13108	S14108
	19.50	19.50	.7677		S11109	S13109	S14109
	25/32	19.84	.7812		S11110	S13110	S14110
	20.00	20.00	.7874		S11111	S13111	S14111
	51/64	20.24	.7969		S11112	S13112	S14112
	20.50	20.50	.8071		S11113	S13113	S14113
	13/16	20.64	.8125		S11114	S13114	S14114
	21.00	21.00	.8268		S11115	S13115	S14115
	27/32	21.43	.8438		S11116	S13116	S14116
	55/64	21.83	.8594		S11117	S13117	S14117
	22.00	22.00	.8661		S11118	S13118	S14118
	7/8	22.23	.8750		S11119	S13119	S14119
	57/64	22.62	.8906		S11120	S13120	S14120
	23.00	23.00	.9055		S11121	S13121	S14121
	29/32	23.02	.9062		S11122	S13122	S14122
59/64	23.42	.9219					
15/16	23.81	.9375					
24.00	24.00	.9449					

* 2pcs per package

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron	Aluminum	Copper Alloys		
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275)	~HRc28 (~HB275)	HRc28~ (~HB275)	~HRc37 (~HB350)	HRc37~ (~HB350)	~HRc24 (~HB250)	HRc24~ (~HB250)	~HRc13 (~HB200)	HRc13~ (~HB200)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	◎	○	○

YG SPADE DRILLS

SERIES 2

SPADE DRILL INSERTS - PREMIUM COBALT (M48)

- ▶ Increased tool life over T15
- ▶ For use in high temperature alloys and materials including medium carbon, Alloy and tool steels
- ▶ Rigid set up needed



POINT ANGLE : 132 degree

cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No.		
	Fractional (inch)	Metric (mm)	Decimal (inch)		PREMIUM COBALT (M48)		
					TiN	TiAlN	Hardslick
2 .961 (24.41) to 1.380 (35.05)	31/32	24.61	.9688	3/16 (4.8)	S11201	S13201	S14201
	63/64	25.00	.9843		S11202	S13202	S14202
	1	25.40	1.0000		S11203	S13203	S14203
	1-1/64	25.80	1.0156		S11204	S13204	S14204
		26.00	1.0236		S11205	S13205	S14205
	1-1/32	26.19	1.0312		S11206	S13206	S14206
	1-3/64	26.59	1.0469		S11260	S13260	S14260
	1-1/16	26.99	1.0625		S11207	S13207	S14207
		27.00	1.0630		S11208	S13208	S14208
	1-3/32	27.78	1.0938		S11209	S13209	S14209
		28.00	1.1024		S11210	S13210	S14210
	1-7/64	28.18	1.1094		S11261	S13261	S14261
	1-1/8	28.58	1.1250		S11211	S13211	S14211
		29.00	1.1417		S11212	S13212	S14212
	1-5/32	29.37	1.1562		S11213	S13213	S14213
		30.00	1.1811		S11214	S13214	S14214
	1-3/16	30.16	1.1875		S11215	S13215	S14215
	1-7/32	30.96	1.2188		S11216	S13216	S14216
		31.00	1.2205		S11217	S13217	S14217
	1-1/4	31.75	1.2500		S11218	S13218	S14218
		32.00	1.2598		S11219	S13219	S14219
	1-9/32	32.54	1.2812		S11220	S13220	S14220
		33.00	1.2992		S11221	S13221	S14221
	1-5/16	33.34	1.3125		S11222	S13222	S14222
		34.00	1.3386		S11223	S13223	S14223
	1-11/32	34.13	1.3438		S11224	S13224	S14224
	1-3/8	34.93	1.3750		S11225	S13225	S14225
		35.00	1.3780		S11226	S13226	S14226

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron	Aluminum	Copper Alloys		
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275)	~HRc28 (~HB275)	HRc28~ (~HB275)	~HRc37 (~HB350)	HRc37~ (~HB350)	~HRc24 (~HB250)	HRc24~ (~HB250)	~HRc13 (~HB200)	HRc13~ (~HB200)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	◎	○	○

YG SPADE DRILLS

SERIES Y,Z

CARBIDE BLADE INSERTS C2 (K20), C5 (P40), C3 (K10)

- ▶ High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys. (C3)
- ▶ For general use in carbon steels and alloys steels. (C5)
- ▶ For use in Gray cast iron, nonferrous metals, copper, brass and aluminum. (C2)



POINT ANGLE : 132 degree

cutting conditions : p.309

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No.					
	Fractional (inch)	Metric (mm)	Decimal (inch)		Multi purpose Geometry				Cast Iron Geometry	
					C2 (K20)		C5 (P40)		C3 (K10)	
				TiN	TiAlN	TiN	TiAlN	TiN	TiAlN	
Y .374 (9.50) to .436 (11.07)		9.50	.3740	3/32 (2.4)	*S21Y01	*S23Y01	*S26Y01	*S28Y01	*S16Y01	*S18Y01
	3/8	9.53	.3750		*S21Y02	*S23Y02	*S26Y02	*S28Y02	*S16Y02	*S18Y02
		9.80	.3860		*S21Y03	*S23Y03	*S26Y03	*S28Y03	*S16Y03	*S18Y03
	25/64	9.92	.3906		*S21Y04	*S23Y04	*S26Y04	*S28Y04	*S16Y04	*S18Y04
		10.00	.3937		*S21Y05	*S23Y05	*S26Y05	*S28Y05	*S16Y05	*S18Y05
		10.20	.4016		*S21Y06	*S23Y06	*S26Y06	*S28Y06	*S16Y06	*S18Y06
	13/32	10.32	.4063		*S21Y07	*S23Y07	*S26Y07	*S28Y07	*S16Y07	*S18Y07
		10.50	.4134		*S21Y08	*S23Y08	*S26Y08	*S28Y08	*S16Y08	*S18Y08
	27/64	10.72	.4219		*S21Y09	*S23Y09	*S26Y09	*S28Y09	*S16Y09	*S18Y09
		10.80	.4252		*S21Y10	*S23Y10	*S26Y10	*S28Y10	*S16Y10	*S18Y10
		11.00	.4331		*S21Y11	*S23Y11	*S26Y11	*S28Y11	*S16Y11	*S18Y11
Z .437 (11.11) to .510 (12.95)	7/16	11.11	.4375	3/32 (2.4)	*S21Z01	*S23Z01	*S26Z01	*S28Z01	*S16Z01	*S18Z01
		11.50	.4528		*S21Z02	*S23Z02	*S26Z02	*S28Z02	*S16Z02	*S18Z02
	29/64	11.51	.4531		*S21Z03	*S23Z03	*S26Z03	*S28Z03	*S16Z03	*S18Z03
	15/32	11.91	.4688		*S21Z04	*S23Z04	*S26Z04	*S28Z04	*S16Z04	*S18Z04
		12.00	.4724		*S21Z05	*S23Z05	*S26Z05	*S28Z05	*S16Z05	*S18Z05
	31/64	12.30	.4844		*S21Z06	*S23Z06	*S26Z06	*S28Z06	*S16Z06	*S18Z06
		12.50	.4921		*S21Z07	*S23Z07	*S26Z07	*S28Z07	*S16Z07	*S18Z07
	1/2	12.70	.5000		*S21Z08	*S23Z08	*S26Z08	*S28Z08	*S16Z08	*S18Z08

* 2pcs per package

◎ : Excellent ○ : Good

	P										M	K	N			
	Non-alloyed Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275)	~HRc28 (~HB275)	HRc28~ (~HB275)	~HRc37 (~HB350)	HRc37~ (~HB350)	~HRc24 (~HB250)	HRc24~ (~HB250)	~HRc13 (~HB200)	HRc13~ (~HB200)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220)	~HRc8 (~HB180)	~HB110
C2(K20)	○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎
C5(P40)	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○
C3(K10)													◎	◎		

YG SPADE DRILLS

SERIES 0

CARBIDE BLADE INSERTS C2 (K20), C5 (P40), C3 (K10)

- ▶ High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys. (C3)
- ▶ For general use in carbon steels and alloys steels. (C5)
- ▶ For use in Gray cast iron, nonferrous metals, copper, brass and aluminum. (C2)



POINT ANGLE : 132 degree

cutting conditions : p.309

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No.					
	Fractional (inch)	Metric (mm)	Decimal (inch)		Multi purpose Geometry				Cast Iron Geometry	
					C2 (K20)		C5 (P40)		C3 (K10)	
				TiN	TiAlN	TiN	TiAlN	TiN	TiAlN	
0 .511 (12.98) to .695 (17.65)		13.00	.5118	1/8 (3.2)	*S21001	*S23001	*S26001	*S28001	*S16001	*S18001
	33/64	13.10	.5156		*S21002	*S23002	*S26002	*S28002	*S16002	*S18002
	17/32	13.49	.5313		*S21003	*S23003	*S26003	*S28003	*S16003	*S18003
		13.50	.5315		*S21004	*S23004	*S26004	*S28004	*S16004	*S18004
	35/64	13.89	.5469		*S21060	*S23060	*S26060	*S28060	*S16060	*S18060
		14.00	.5512		*S21005	*S23005	*S26005	*S28005	*S16005	*S18005
	9/16	14.29	.5625		*S21006	*S23006	*S26006	*S28006	*S16006	*S18006
		14.50	.5709		*S21007	*S23007	*S26007	*S28007	*S16007	*S18007
	37/64	14.68	.5781		*S21008	*S23008	*S26008	*S28008	*S16008	*S18008
		15.00	.5906		*S21009	*S23009	*S26009	*S28009	*S16009	*S18009
	19/32	15.08	.5938		*S21010	*S23010	*S26010	*S28010	*S16010	*S18010
	39/64	15.48	.6094		*S21061	*S23061	*S26061	*S28061	*S16061	*S18061
		15.50	.6102		*S21011	*S23011	*S26011	*S28011	*S16011	*S18011
		15.70	.6181		*S21064	*S23064	*S26064	*S28064	*S16064	*S18064
	5/8	15.88	.6250		*S21012	*S23012	*S26012	*S28012	*S16012	*S18012
		16.00	.6299		*S21013	*S23013	*S26013	*S28013	*S16013	*S18013
	41/64	16.27	.6406		*S21062	*S23062	*S26062	*S28062	*S16062	*S18062
		16.50	.6496		*S21014	*S23014	*S26014	*S28014	*S16014	*S18014
21/32	16.67	.6563	*S21015	*S23015	*S26015	*S28015	*S16015	*S18015		
	17.00	.6693	*S21016	*S23016	*S26016	*S28016	*S16016	*S18016		
43/64	17.07	.6719	*S21063	*S23063	*S26063	*S28063	*S16063	*S18063		
11/16	17.46	.6875	*S21017	*S23017	*S26017	*S28017	*S16017	*S18017		
	17.50	.6890	*S21018	*S23018	*S26018	*S28018	*S16018	*S18018		

* 2pcs per package

◎ : Excellent ○ : Good

	P										M	K	N			
	Non-alloyed Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275)	~HRc28 (~HB275)	HRc28~ (~HB275)	~HRc37 (~HB350)	HRc37~ (~HB350)	~HRc24 (~HB250)	HRc24~ (~HB250)	~HRc13 (~HB200)	HRc13~ (~HB200)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220)	~HRc8 (~HB180)	~HB110
C2(K20)	○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎
C5(P40)	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○
C3(K10)													◎	◎		

YG SPADE DRILLS

SERIES 1

CARBIDE BLADE INSERTS C2 (K20), C5 (P40), C3 (K10)

- ▶ High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys. (C3)
- ▶ For general use in carbon steels and alloys steels. (C5)
- ▶ For use in Gray cast iron, nonferrous metals, copper, brass and aluminum. (C2)



POINT ANGLE : 132 degree

cutting conditions : p.309

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No.					
	Fractional (inch)	Metric (mm)	Decimal (inch)		Multi purpose Geometry				Cast Iron Geometry	
					C2 (K20)		C5 (P40)		C3 (K10)	
				TiN	TiAlN	TiN	TiAlN	TiN	TiAlN	
1 .690 (17.53) to .960 (24.38)	45/64	17.86	.7031	5/32 (4.0)	S21101	S23101	S26101	S28101	S16101	S18101
		18.00	.7087		S21102	S23102	S26102	S28102	S16102	S18102
	23/32	18.26	.7188		S21103	S23103	S26103	S28103	S16103	S18103
		18.50	.7283		S21104	S23104	S26104	S28104	S16104	S18104
	47/64	18.65	.7344		S21105	S23105	S26105	S28105	S16105	S18105
		19.00	.7480		S21106	S23106	S26106	S28106	S16106	S18106
	3/4	19.05	.7500		S21107	S23107	S26107	S28107	S16107	S18107
	49/64	19.45	.7656		S21108	S23108	S26108	S28108	S16108	S18108
		19.50	.7677		S21109	S23109	S26109	S28109	S16109	S18109
	25/32	19.84	.7813		S21110	S23110	S26110	S28110	S16110	S18110
		20.00	.7874		S21111	S23111	S26111	S28111	S16111	S18111
	51/64	20.24	.7969		S21112	S23112	S26112	S28112	S16112	S18112
		20.50	.8071		S21113	S23113	S26113	S28113	S16113	S18113
	13/16	20.64	.8125		S21114	S23114	S26114	S28114	S16114	S18114
		21.00	.8268		S21115	S23115	S26115	S28115	S16115	S18115
	27/32	21.43	.8438		S21116	S23116	S26116	S28116	S16116	S18116
		21.83	.8594		S21117	S23117	S26117	S28117	S16117	S18117
	7/8	22.23	.8750		S21118	S23118	S26118	S28118	S16118	S18118
		22.62	.8906		S21119	S23119	S26119	S28119	S16119	S18119
	57/64	23.00	.9055		S21120	S23120	S26120	S28120	S16120	S18120
		23.02	.9063		S21121	S23121	S26121	S28121	S16121	S18121
	29/32	23.42	.9219		S21122	S23122	S26122	S28122	S16122	S18122
	23.81	.9375								
	24.00	.9449								

◎ : Excellent ○ : Good

	P										M	K	N			
	Non-alloyed Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275) (HB275~)	HRc28~ (~HB275) (HB275~)	~HRc28 (~HB275) (HB275~)	HRc28~ (~HB350) (HB350~)	HRc37~ (~HB350) (HB350~)	~HRc24 (~HB250) (HB250~)	HRc24~ (~HB250) (HB250~)	~HRc13 (~HB200) (HB200~)	HRc13~ (~HB200) (HB200~)	~HRc28 (~HB275) (HB275~)	~HRc19 (~HB220) (HB220~)	HRc19~ (~HB180) (~HB180)	~HRc8 (~HB180)	~HB110	
C2(K20)	○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎
C5(P40)	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○
C3(K10)													◎	◎		

YG SPADE DRILLS

SERIES 2

CARBIDE BLADE INSERTS C2 (K20), C5 (P40), C3 (K10)

- ▶ High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys. (C3)
- ▶ For general use in carbon steels and alloys steels. (C5)
- ▶ For use in Gray cast iron, nonferrous metals, copper, brass and aluminum. (C2)



POINT ANGLE : 132 degree

cutting conditions : p.309

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No.					
	Fractional (inch)	Metric (mm)	Decimal (inch)		Multi purpose Geometry				Cast Iron Geometry	
					C2 (K20)		C5 (P40)		C3 (K10)	
				TiN	TiAlN	TiN	TiAlN	TiN	TiAlN	
2 .961 (24.41) to 1.380 (35.05)	31/32	24.61	.9688	3/16 (4.8)	S21201	S23201	S26201	S28201	S16201	S18201
	63/64	25.00	.9843		S21202	S23202	S26202	S28202	S16202	S18202
	1	25.40	1.0000		S21203	S23203	S26203	S28203	S16203	S18203
	1-1/64	25.80	1.0156		S21204	S23204	S26204	S28204	S16204	S18204
		26.00	1.0236		S21205	S23205	S26205	S28205	S16205	S18205
	1-1/32	26.19	1.0313		S21206	S23206	S26206	S28206	S16206	S18206
	1-3/64	26.59	1.0469		S21260	S23260	S26260	S28260	S16260	S18260
	1-1/16	26.99	1.0625		S21207	S23207	S26207	S28207	S16207	S18207
		27.00	1.0630		S21208	S23208	S26208	S28208	S16208	S18208
	1-3/32	27.78	1.0938		S21209	S23209	S26209	S28209	S16209	S18209
		28.00	1.1024		S21210	S23210	S26210	S28210	S16210	S18210
	1-7/64	28.18	1.1094		S21261	S23261	S26261	S28261	S16261	S18261
	1-1/8	28.58	1.1250		S21211	S23211	S26211	S28211	S16211	S18211
		29.00	1.1417		S21212	S23212	S26212	S28212	S16212	S18212
	1-5/32	29.37	1.1563		S21213	S23213	S26213	S28213	S16213	S18213
		30.00	1.1811		S21214	S23214	S26214	S28214	S16214	S18214
	1-3/16	30.16	1.1875		S21215	S23215	S26215	S28215	S16215	S18215
	1-7/32	30.96	1.2188		S21216	S23216	S26216	S28216	S16216	S18216
		31.00	1.2205		S21217	S23217	S26217	S28217	S16217	S18217
	1-1/4	31.75	1.2500		S21218	S23218	S26218	S28218	S16218	S18218
		32.00	1.2598		S21219	S23219	S26219	S28219	S16219	S18219
	1-9/32	32.54	1.2813		S21220	S23220	S26220	S28220	S16220	S18220
		33.00	1.2992		S21221	S23221	S26221	S28221	S16221	S18221
	1-5/16	33.34	1.3125		S21222	S23222	S26222	S28222	S16222	S18222
		34.00	1.3386		S21223	S23223	S26223	S28223	S16223	S18223
	1-11/32	34.13	1.3438		S21224	S23224	S26224	S28224	S16224	S18224
1-3/8	34.93	1.3750	S21225	S23225	S26225	S28225	S16225	S18225		
	35.00	1.3780	S21226	S23226	S26226	S28226	S16226	S18226		

◎ : Excellent ○ : Good

	P										M	K	N			
	Non-alloyed Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels		Stainless Steels	Cast Iron	Aluminum	Copper Alloys
	~HRc24 (~HB250)	~HRc28 (~HB275) (HB275~)	HRc28~ (~HB275) (HB275~)	~HRc28 (~HB275) (HB275~)	HRc28~ (~HB350) (HB350~)	HRc37~ (~HB350) (HB350~)	~HRc24 (~HB250) (HB250~)	HRc24~ (~HB250) (HB250~)	~HRc13 (~HB200) (HB200~)	HRc13~ (~HB200) (HB200~)	~HRc28 (~HB275) (HB275~)	~HRc19 (~HB220) (HB220~)	HRc19~ (~HB180) (~HB180)	~HRc8 (~HB180)	~HB110	
C2(K20)	○	○	○	○	○	◎	◎	○	○	○	○	◎	○	○	◎	◎
C5(P40)	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○
C3(K10)													◎	◎		

CARBIDE BLADE INSERTS C2 (K20), C5 (P40), C3 (K10)

- ▶ High performance on Gray cast iron over 220 Brinell, malleable cast iron with short chips, silicon aluminum and copper alloys. (C3)
- ▶ For general use in carbon steels and alloys steels. (C5)
- ▶ For use in Gray cast iron, nonferrous metals, copper, brass and aluminum. (C2)

POINT ANGLE : 132 degree



cutting conditions : p.309

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No.				Cast Iron Geometry	
	Fractional (inch)	Metric (mm)	Decimal (inch)		Multi purpose Geometry				C3 (K10)	
					C2 (K20)		C5 (P40)		TiN	TiAlN
3 1.353 (34.37) to 1.882 (47.80)	1-13/32	35.72	1.4063	1/4 (6.4)	S21301	S23301	S26301	S28301	Special or non-standard inserts available on request	
		36.00	1.4173		S21302	S23302	S26302	S28302		
	1-7/16	36.51	1.4375		S21303	S23303	S26303	S28303		
		37.00	1.4567		S21304	S23304	S26304	S28304		
	1-15/32	37.31	1.4688		S21305	S23305	S26305	S28305		
		38.00	1.4961		S21306	S23306	S26306	S28306		
	1-1/2	38.10	1.5000		S21307	S23307	S26307	S28307		
	1-17/32	38.89	1.5313		S21308	S23308	S26308	S28308		
		39.00	1.5354		S21309	S23309	S26309	S28309		
	1-9/16	39.69	1.5625		S21310	S23310	S26310	S28310		
		40.00	1.5748		S21311	S23311	S26311	S28311		
	1-19/32	40.48	1.5938		S21312	S23312	S26312	S28312		
		41.00	1.6142		S21313	S23313	S26313	S28313		
	1-5/8	41.28	1.6250		S21314	S23314	S26314	S28314		
		42.00	1.6535		S21315	S23315	S26315	S28315		
	1-21/32	42.07	1.6563		S21316	S23316	S26316	S28316		
		42.86	1.6875		S21317	S23317	S26317	S28317		
	1-11/16	43.00	1.6929		S21318	S23318	S26318	S28318		
		43.66	1.7188		S21319	S23319	S26319	S28319		
	1-23/32	44.00	1.7323		S21320	S23320	S26320	S28320		
		44.45	1.7500		S21321	S23321	S26321	S28321		
	1-3/4	45.00	1.7717		S21322	S23322	S26322	S28322		
		45.24	1.7813		S21323	S23323	S26323	S28323		
	1-25/32	46.00	1.8110		S21324	S23324	S26324	S28324		
46.04		1.8125	S21325	S23325	S26325	S28325				
1-13/16	46.83	1.8438	S21326	S23326	S26326	S28326				
	47.00	1.8504	S21327	S23327	S26327	S28327				
1-7/8	47.63	1.8750	S21328	S23328	S26328	S28328				

◎ : Excellent ○ : Good

	P						M	K	N							
	Non-alloyed Steels, Free Machining Steels		Carbon Steels		Alloy Steels		High Alloyed steels	Structural Steels	Tool Steels	Stainless Steels	Cast Iron	Aluminum	Copper Alloys			
	~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
C2(K20)	○	○	○	○	○	◎	◎	○	○	○	○	○	○	○	○	○
C5(P40)	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○
C3(K10)												◎	◎			



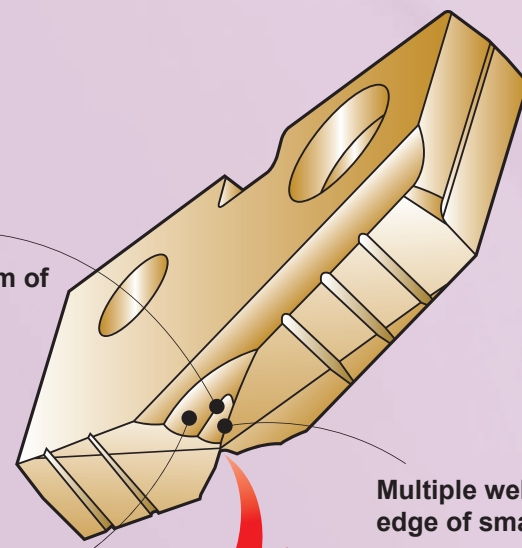
Special features of SM-Point Spade Drill

This "Hybrid Point" combines the strength of the standard point with additional "Web Thinning".

This point increases stability, reduces thrust, improves centering and allows increased speeds and feeds.

Multiple thinning form at the bottom of the large thinning.

- ▶ The optimum thinning for the difference from the cutting speed, the cutting quantity and the cutting load according to the distance from the drill point to the cutting edge.



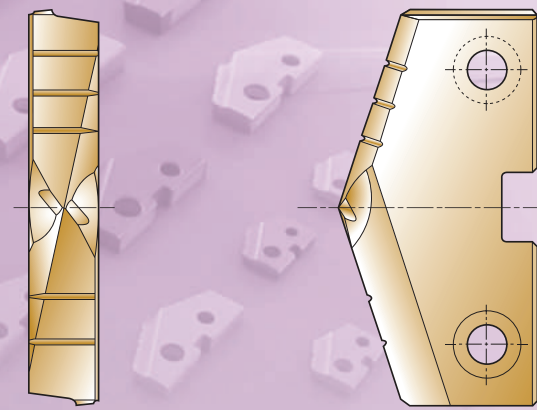
Radius back face
▶ Wide chip space

Multiple web thinning with the cutting edge of small web thinning.

- ▶ Good self-centering
- ▶ Less tool lead off
- ▶ Reduction in bell mouching, thrust
- ▶ Increased stability

Four-facet point

- ▶ Self-centering
- ▶ Less thrust force



Y/G SPADE DRILLS

SERIES Y,Z,0,1

SM-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- ▶ Improved stability and hole straightness by newly developed thinning design.
- ▶ Less thrust force and excellent self-centering.
- ▶ Any non-standard size available.

POINT ANGLE - 132 degree
(Series 5-8 : 144 degree)



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. TiAIN	Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. TiAIN	
	Fractional (inch)	Metric (mm)	Decimal (inch)				Fractional (inch)	Metric (mm)	Decimal (inch)			
Y .374 (9.50) to .436 (11.07)		9.50	.3740	3/32 (2.4)	*SM08Y01	0 .511 (12.98) to .695 (17.65)		16.00	.6299	1/8 (3.2)	*SM08013	
	3/8	9.53	.3750				41/64	16.27	.6406			*SM08062
		9.80	.3858					16.50	.6496			*SM08014
	25/64	9.92	.3906				21/32	16.67	.6562			*SM08015
		10.00	.3937					17.00	.6693			*SM08016
		10.20	.4016				43/64	17.07	.6719			*SM08063
	13/32	10.32	.4062				11/16	17.46	.6875			*SM08017
		10.50	.4134					17.50	.6890			*SM08018
	27/64	10.72	.4219				45/64	17.86	.7031			SM08101
		10.80	.4252					18.00	.7087			SM08102
		11.00	.4331				23/32	18.26	.7188			SM08103
Z .437 (11.11) to .510 (12.95)	7/16	11.11	.4375	3/32 (2.4)	*SM08Z01	1 .690 (17.53) to .960 (24.38)		18.50	.7283	5/32 (4.0)	SM08104	
		11.50	.4528				47/64	18.65	.7344			SM08105
	29/64	11.51	.4531					19.00	.7480			SM08106
	15/32	11.91	.4688				3/4	19.05	.7500			SM08107
		12.00	.4724				49/64	19.45	.7656			SM08108
	31/64	12.30	.4844					19.50	.7677			SM08109
		12.50	.4921				25/32	19.84	.7812			SM08110
	1/2	12.70	.5000					20.00	.7874			SM08111
		13.00	.5118				51/64	20.24	.7969			SM08160
		13.10	.5156					20.50	.8071			SM08112
		13.49	.5312				13/16	20.64	.8125			SM08113
0 .511 (12.98) to .695 (17.65)		13.50	.5315	1/8 (3.2)	*SM08001	0 .511 (12.98) to .695 (17.65)		21.00	.8268	5/32 (4.0)	SM08114	
		13.89	.5469				27/32	21.43	.8438			SM08115
		14.00	.5512				55/64	21.83	.8594			SM08161
	9/16	14.29	.5625					22.00	.8661			SM08116
		14.50	.5709					22.23	.8750			SM08117
	37/64	14.68	.5781				7/8	22.62	.8906			SM08162
		15.00	.5906				57/64	23.00	.9055			SM08118
	19/32	15.08	.5938					23.02	.9062			SM08119
	39/64	15.48	.6094				29/32	23.02	.9062			SM08120
		15.50	.6102				59/64	23.42	.9219			SM08121
	5/8	15.88	.6250				15/16	23.81	.9375			SM08122
				24.00	.9449	SM08122						

* 2pcs per package

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels										Stainless Steels	Cast Iron	Aluminum	Copper Alloys		
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

Y/G SPADE DRILLS

SERIES 2,3

SM-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- ▶ Improved stability and hole straightness by newly developed thinning design.
- ▶ Less thrust force and excellent self-centering.
- ▶ Any non-standard size available.

POINT ANGLE - 132 degree
(Series 5-8 : 144 degree)



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. TiAIN	Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. TiAIN	
	Fractional (inch)	Metric (mm)	Decimal (inch)				Fractional (inch)	Metric (mm)	Decimal (inch)			
2 .961 (24.41) to 1.380 (35.05)	31/32	24.61	.9688	3/16 (4.8)	SM08201	3 1.353 (34.37) to 1.882 (47.80)	1-13/32	35.72	1.4062	1/4 (6.4)	SM08301	
	63/64	25.00	.9843					36.00	1.4173			SM08302
	1	25.40	1.0000					37.00	1.4567			SM08304
	1-1/64	25.80	1.0156					37.31	1.4688			SM08305
		26.00	1.0236					38.00	1.4961			SM08306
	1-1/32	26.19	1.0312					38.10	1.5000			SM08307
	1-3/64	26.59	1.0469					38.89	1.5312			SM08308
	1-1/16	26.99	1.0625					39.00	1.5354			SM08309
		27.00	1.0630					39.69	1.5625			SM08310
	1-3/32	27.78	1.0938					40.00	1.5748			SM08311
		28.00	1.1024					40.48	1.5938			SM08312
	1-7/64	28.18	1.1094					41.00	1.6142			SM08313
	1-1/8	28.58	1.1250					41.28	1.6250			SM08314
		29.00	1.1417					42.00	1.6535			SM08315
	1-5/32	29.37	1.1562					42.07	1.6562			SM08316
		30.00	1.1811					42.86	1.6875			SM08317
	1-3/16	30.16	1.1875					43.00	1.6929			SM08318
	1-7/32	30.96	1.2188					43.66	1.7188			SM08319
		31.00	1.2205					44.00	1.7323			SM08320
	1-1/4	31.75	1.2500					44.45	1.7500			SM08321
		32.00	1.2598					45.00	1.7717			SM08322
	1-9/32	32.54	1.2812					45.24	1.7812			SM08323
	33.00	1.2992		46.00	1.8110	SM08324						
1-5/16	33.34	1.3125		46.04	1.8125	SM08325						
	34.00	1.3386		46.83	1.8438	SM08326						
1-11/32	34.13	1.3438		47.00	1.8504	SM08327						
1-3/8	34.93	1.3750		47.63	1.8750	SM08328						
	35.00	1.3780										

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels										Stainless Steels	Cast Iron	Aluminum	Copper Alloys		
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

i-DREAM DRILLS
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSIN
SPADE DRILLS
TECHNICAL DATA

i-DREAM DRILLS
DREAM DRILLS -GENERAL
DREAM DRILLS -HIGH FEED
DREAM DRILLS -FLAT BOTTOM
DREAM DRILLS -INOX
DREAM DRILLS -ALU
DREAM DRILLS -MQL TYPE
DREAM DRILLS for HIGH HARDENED STEELS
STANDARD CARBIDE DRILLS
MULTI-1 DRILLS
HPD DRILLS
GOLD-P DRILLS
STRAIGHT SHANK DRILLS
AIRCRAFT DRILLS
SILVER & DEMING DRILLS
TAPER SHANK DRILLS
NC SPOTTING DRILLS
COMBINATION DRILLS & COUNTERSINK
SPADE DRILLS
TECHNICAL DATA

YG SPADE DRILLS

SERIES 4,5

SM-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- ▶ Improved stability and hole straightness by newly developed thinning design.
- ▶ Less thrust force and excellent self-centering.
- ▶ Any non-standard size available.

POINT ANGLE - 132 degree
(Series 5-8 : 144 degree)



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. TiAlN	Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. TiAlN
	Fractional (inch)	Metric (mm)	Decimal (inch)				Fractional (inch)	Metric (mm)	Decimal (inch)		
4 1.850 (46.99) to 2.570 (65.28)	1-29/32	48.00	1.8898	5/16 (7.9)	SM08401	4 1.850 (46.99) to 2.570 (65.28)	2-15/32	62.00	2.4409	7/16 (11.1)	SM08433
		48.42	1.9062		62.71			2.4688	SM08434		
		49.00	1.9291		63.00		2.4803	SM08435			
		1-15/16	49.21		1.9375		63.50	2.5000	SM08436		
			50.00		1.9685		64.00	2.5197	SM08437		
		1-31/32	50.01		1.9688		64.29	2.5312	SM08438		
	2		50.80		2.0000		65.00	2.5591	SM08439		
			51.00		2.0079		65.09	2.5625	SM08440		
	2-1/32		51.59		2.0312		65.09	2.5625	SM08501		
		2-3/64	52.00		2.0472		64.00	2.5197	SM08502		
	2-1/16		52.39		2.0625	64.29	2.5312	SM08503			
			53.00		2.0866	65.09	2.5625	SM08504			
	2-3/32		53.18		2.0938	65.88	2.5938	SM08505			
		2-1/8	53.98		2.1250	66.00	2.5984	SM08506			
			54.00		2.1260	66.68	2.6250	SM08507			
		2-5/32	54.77		2.1562	67.47	2.6562	SM08508			
			55.00		2.1654	68.00	2.6772	SM08509			
		2-3/16	55.56		2.1875	68.26	2.6875	SM08510			
			56.00		2.2047	69.05	2.7188	SM08511			
		2-7/32	56.36		2.2188	69.85	2.7500	SM08512			
	57.00		2.2441	70.00	2.7559	SM08513					
	2-1/4	57.15	2.2500	70.64	2.7812	SM08514					
2-9/32		57.94	2.2812	71.44	2.8125	SM08515					
		58.00	2.2835	72.00	2.8346	SM08516					
2-5/16		58.74	2.3125	72.23	2.8438	SM08517					
		59.00	2.3228	73.03	2.8750	SM08518					
2-11/32		59.53	2.3438	73.82	2.9062	SM08519					
		60.00	2.3622	74.00	2.9134	SM08520					
2-3/8		60.33	2.3750	74.61	2.9375	SM08521					
		61.00	2.4016	75.41	2.9688	SM08522					
2-13/32		61.12	2.4062	76.00	2.9921	SM08523					
	2-7/16	61.91	2.4375	76.20	3.0000	SM08524					
				3	76.20	3.0000					

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels										Stainless Steels	Cast Iron	Aluminum	Copper Alloys		
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

YG SPADE DRILLS

SERIES 6,7,8

SM-POINT SPADE DRILL INSERTS - SUPER COBALT (T15)

- ▶ Improved stability and hole straightness by newly developed thinning design.
- ▶ Less thrust force and excellent self-centering.
- ▶ Any non-standard size available.

POINT ANGLE - 132 degree
(Series 5-8 : 144 degree)



cutting conditions : p.308

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. TiAlN	Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. TiAlN
	Fractional (inch)	Metric (mm)	Decimal (inch)				Fractional (inch)	Metric (mm)	Decimal (inch)		
6 3.001 (76.23) to 3.507 (89.08)	3-1/32	76.99	3.0312	7/16 (11.1)	SM08601	7 3.455 (87.76) to 4.000 (101.60)	3-23/32	94.00	3.7008	7/16 (11.1)	SM08709
		3-1/16	77.79		3.0625			94.46	3.7188		SM08710
		78.00	3.0709		95.25		3.7500	SM08711			
		3-3/32	78.58		3.0938		96.00	3.7795	SM08712		
	3-1/8		79.38		3.1250		96.04	3.7812	SM08713		
			80.00		3.1496		96.84	3.8125	SM08714		
	3-5/32		80.17		3.1562		97.63	3.8438	SM08715		
		3-3/16	80.96		3.1875		98.00	3.8583	SM08716		
	3-7/32		81.76		3.2188		98.43	3.8750	SM08717		
			82.00		3.2283		99.22	3.9062	SM08718		
	3-1/4		82.55		3.2500		100.00	3.9370	SM08719		
		3-9/32	83.34		3.2812		100.01	3.9375	SM08720		
			84.00		3.3071		100.81	3.9688	SM08721		
		3-5/16	84.14		3.3125		4	101.60	4.0000		SM08722
	3-11/32		84.93		3.3438		7/16 (11.1)	102.00	4.0156		SM08801
3-3/8		85.73	3.3750	103.19	4.0625	SM08802					
		86.00	3.3858	104.00	4.0945	SM08803					
3-13/32		86.52	3.4063	104.78	4.1250	SM08804					
	3-7/16	87.31	3.4375	106.00	4.1732	SM08805					
		88.00	3.4646	106.36	4.1875	SM08806					
	3-15/32	88.11	3.4688	107.95	4.2500	SM08807					
3-1/2		88.90	3.5000	108.00	4.2520	SM08808					
	3-17/32	89.69	3.5312	109.54	4.3125	SM08809					
		90.00	3.5433	110.00	4.3307	SM08810					
	3-9/16	90.49	3.5625	111.13	4.3750	SM08811					
3-19/32		91.28	3.5938	112.00	4.4094	SM08812					
		92.00	3.6221	112.71	4.4375	SM08813					
3-5/8		92.08	3.6250	114.00	4.4882	SM08814					
	3-21/32	92.87	3.6562	114.30	4.5000	SM08815					
3-11/16		93.66	3.6875								

◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels										Stainless Steels	Cast Iron	Aluminum	Copper Alloys		
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

Y/G SPADE DRILLS

SERIES Y,Z,0,1

SM-POINT SPADE DRILL INSERTS - CARBIDE C5 (P40)

- ▶ Improved stability and hole straightness by newly developed chip thinning design.
- ▶ Less thrust force and excellent self-centering.
- ▶ Any non-standard size available.
- ▶ Increased speeds & feeds



POINT ANGLE : 132 degree

cutting conditions : p.309

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. TiAIN	Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. TiAIN	
	Fractional (inch)	Metric (mm)	Decimal (inch)				Fractional (inch)	Metric (mm)	Decimal (inch)			
Y .374 (9.50) to .436 (11.07)		9.50	.3740	3/32 (2.4)	*	0 .511 (12.98) to .695 (17.65)		16.00	.6299	1/8 (3.2)	*	
	3/8	9.53	.3750				41/64	16.27	.6406			SM28013
		9.80	.3858					16.50	.6496			SM28062
	25/64	9.92	.3906				21/32	16.67	.6562			SM28014
		10.00	.3937					17.00	.6693			SM28015
		10.20	.4016				43/64	17.07	.6719			SM28016
	13/32	10.32	.4062				11/16	17.46	.6875			SM28063
		10.50	.4134					17.50	.6890			SM28017
	27/64	10.72	.4219				45/64	17.86	.7031			SM28018
		10.80	.4252					18.00	.7087			SM28101
		11.00	.4331				23/32	18.26	.7188			SM28102
Z .437 (11.11) to .510 (12.95)	7/16	11.11	.4375	3/32 (2.4)	*	1 .690 (17.53) to .960 (24.38)		18.50	.7283	5/32 (4.0)	*	
		11.50	.4528				47/64	18.65	.7344			SM28103
	29/64	11.51	.4531					19.00	.7480			SM28104
	15/32	11.91	.4688				3/4	19.05	.7500			SM28105
		12.00	.4724				49/64	19.45	.7656			SM28106
	31/64	12.30	.4844					19.50	.7677			SM28107
		12.50	.4921				25/32	19.84	.7812			SM28108
	1/2	12.70	.5000					20.00	.7874			SM28109
		13.00	.5118				51/64	20.24	.7969			SM28110
	33/64	13.10	.5156					20.50	.8071			SM28111
	17/32	13.49	.5312				13/16	20.64	.8125			SM28160
0 .511 (12.98) to .695 (17.65)		13.50	.5315	1/8 (3.2)	*	2 .961 (24.41) to 1.380 (35.05)		21.00	.8268	3/16 (4.8)	*	
	35/64	13.89	.5469					21.00	.8268			SM28112
		14.00	.5512				27/32	21.43	.8438			SM28113
	9/16	14.29	.5625				55/64	21.83	.8594			SM28114
		14.50	.5709					22.00	.8661			SM28115
	37/64	14.68	.5781					22.00	.8661			SM28161
		15.00	.5906				7/8	22.23	.8750			SM28116
	19/32	15.08	.5938				57/64	22.62	.8906			SM28117
	39/64	15.48	.6094					23.00	.9055			SM28118
		15.50	.6102				29/32	23.02	.9062			SM28119
	5/8	15.88	.6250				59/64	23.42	.9219			SM28120
			15/16	23.81	.9375	SM28121						
				24.00	.9449	SM28122						

* 2pcs per package

◎ : Excellent ○ : Good

P										M	K	N	
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron	Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

Y/G SPADE DRILLS

SERIES 2,3

SM-POINT SPADE DRILL INSERTS - CARBIDE C5 (P40)

- ▶ Improved stability and hole straightness by newly developed chip thinning design.
- ▶ Less thrust force and excellent self-centering.
- ▶ Any non-standard size available.
- ▶ Increased speeds & feeds



POINT ANGLE : 132 degree

cutting conditions : p.309

Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. TiAIN	Series Min. to Max. (inch/mm)	Diameter			Thick Fractional [Metric]	EDP No. TiAIN	
	Fractional (inch)	Metric (mm)	Decimal (inch)				Fractional (inch)	Metric (mm)	Decimal (inch)			
2 .961 (24.41) to 1.380 (35.05)	31/32	24.61	.9688	3/16 (4.8)	*	3 1.353 (34.37) to 1.882 (47.80)	1-13/32	35.72	1.4062	1/4 (6.4)	*	
	63/64	25.00	.9843					36.00	1.4173			SM28301
	1	25.40	1.0000					36.51	1.4375			SM28302
	1-1/64	25.80	1.0156					37.00	1.4567			SM28303
		26.00	1.0236					37.31	1.4688			SM28304
	1-1/32	26.19	1.0312					38.00	1.4961			SM28305
	1-3/64	26.59	1.0469					38.10	1.5000			SM28306
	1-1/16	26.99	1.0625					38.89	1.5312			SM28307
		27.00	1.0630					39.00	1.5354			SM28308
	1-3/32	27.78	1.0938					39.69	1.5625			SM28309
		28.00	1.1024					40.00	1.5748			SM28310
	1-7/64	28.18	1.1094					40.48	1.5938			SM28311
	1-1/8	28.58	1.1250					41.00	1.6142			SM28312
		29.00	1.1417					41.28	1.6250			SM28313
	1-5/32	29.37	1.1562					42.00	1.6535			SM28314
		30.00	1.1811					42.07	1.6562			SM28315
	1-3/16	30.16	1.1875					42.86	1.6875			SM28316
	1-7/32	30.96	1.2188					43.00	1.6929			SM28317
		31.00	1.2205					43.66	1.7188			SM28318
	1-1/4	31.75	1.2500					44.00	1.7323			SM28319
		32.00	1.2598					44.45	1.7500			SM28320
	1-9/32	32.54	1.2812					45.00	1.7717			SM28321
	33.00	1.2992		45.24	1.7812	SM28322						
1-5/16	33.34	1.3125		46.00	1.8110	SM28323						
	34.00	1.3386		46.04	1.8125	SM28324						
1-11/32	34.13	1.3438		46.83	1.8438	SM28325						
1-3/8	34.93	1.3750		47.00	1.8504	SM28326						
	35.00	1.3780		47.63	1.8750	SM28327						
						SM28328						

◎ : Excellent ○ : Good

P										M	K	N	
Non-alloyed Steels, Free Machining Steels	Carbon Steels		Alloy Steels		High Alloyed steels		Structural Steels		Tool Steels	Stainless Steels	Cast Iron	Aluminum	Copper Alloys
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc28 (~HB275)	HRc28~ (~HB275~)	~HRc37 (~HB350)	HRc37~ (~HB350~)	~HRc24 (~HB250)	HRc24~ (~HB250~)	~HRc13 (~HB200)	HRc13~ (~HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (~HB220~)
◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

YG SPADE DRILLS

SERIES Y,Z,0,1,2

SPADE DRILL FLAT BOTTOM INSERTS - SUPER COBALT (T15)

POINT ANGLE : 180 degree



cutting conditions : p.309

Series	Diameter		Thick	EDP No.		Series	Diameter		Thick	EDP No.	
	Fractional (inch)	Decimal (inch)		Fractional [Metric]	TiN		TiAlN	Fractional (inch)		Decimal (inch)	Fractional [Metric]
Y	3/8	.3750	3/32 (2.4)	SF05024	SF15024	2	31/32	.9688	3/16 (4.8)	SF05062	SF15062
	13/32	.4063		SF05026	SF15026		1	1.0000		SF05100	SF15100
Z	7/16	.4375	3/32 (2.4)	SF05028	SF15028		1-1/32	1.0313		SF05102	SF15102
	15/32	.4688		SF05030	SF15030		1-1/16	1.0625		SF05104	SF15104
	1/2	.5000		SF05032	SF15032		1-3/32	1.0938		SF05106	SF15106
0	17/32	.5313	1/8 (3.2)	SF05034	SF15034		1-1/8	1.1250		SF05108	SF15108
	9/16	.5625		SF05036	SF15036		1-5/32	1.1563		SF05110	SF15110
	19/32	.5938		SF05038	SF15038		1-3/16	1.1875		SF05112	SF15112
	5/8	.6250		SF05040	SF15040		1-7/32	1.2188		SF05114	SF15114
	21/32	.6563		SF05042	SF15042		1-1/4	1.2500		SF05116	SF15116
1	11/16	.6875	5/32 (4.0)	SF05044	SF15044		1-9/32	1.2813		SF05118	SF15118
	23/32	.7188		SF05046	SF15046		1-5/16	1.3125		SF05120	SF15120
	3/4	.7500		SF05048	SF15048	1-11/32	1.3438	SF05122	SF15122		
	25/32	.7813		SF05050	SF15050	1-3/8	1.3750	SF05124	SF15124		
	13/16	.8125		SF05052	SF15052						
	27/32	.8438		SF05054	SF15054						
	7/8	.8750		SF05056	SF15056						
	29/32	.9063	SF05058	SF15058							
	15/16	.9375	SF05060	SF15060							

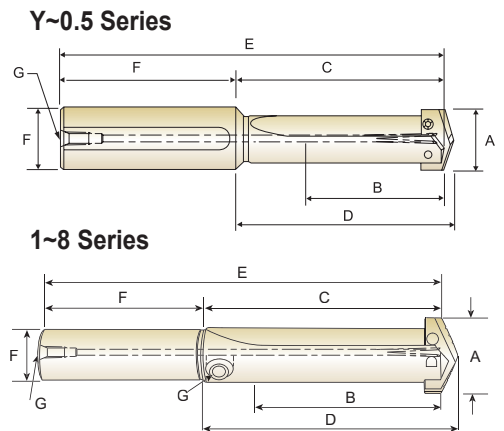
◎ : Excellent ○ : Good

P										M	K	N			
Non-alloyed Steels, Free Machining Steels										Stainless Steels	Cast Iron	Aluminum	Copper Alloys		
~HRc24 (~HB250)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc28 (~HB275)	HRc28~ (HB275~)	~HRc37 (~HB350)	HRc37~ (HB350~)	~HRc24 (~HB250)	HRc24~ (HB250~)	~HRc13 (~HB200)	HRc13~ (HB200~)	~HRc28 (~HB275)	~HRc19 (~HB220)	HRc19~ (HB220~)	~HRc8 (~HB180)	~HB110
◎	◎	◎	◎	○	○	○	◎	◎	○	○	○	○	◎	○	○

YG SPADE DRILLS

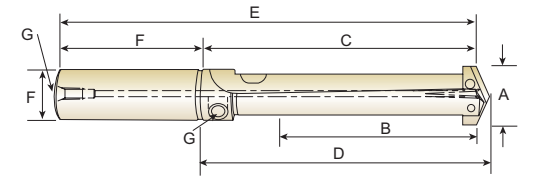
P13 SERIES
P14 SERIES

STRAIGHT SHANK HOLDER, STRAIGHT FLUTE



SHORT LENGTH

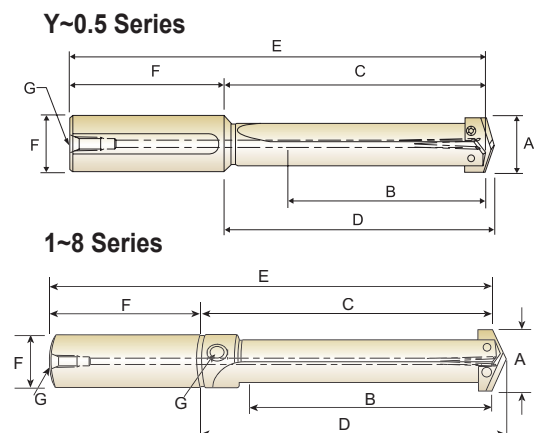
Series	EDP No.	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F	G	
Y	P13Y01	3/8 - 27/64	1-1/4	2-1/32	2-1/8	4-13/32	3/4	2-3/8	1/8
Z	P13Z01	7/16 - 1/2	1-1/4	2-1/32	2-1/8	4-13/32	3/4	2-3/8	1/8
0	P13001	33/64 - 11/16	1-3/8	2-3/16	2-19/64	4-9/16	3/4	2-3/8	1/8
0.5	P13051	39/64 - 11/16	1-3/8	2-3/16	2-19/64	4-9/16	3/4	2-3/8	1/8
1	P13101	45/64 - 15/16	2-5/8	3-7/8	4-1/64	6-7/8	3/4	3	1/8
	P13102	45/64 - 15/16	2-5/8	3-7/8	4-1/64	6-7/8	1	3	1/8
1.5	P13151	55/64 - 15/16	2-5/8	3-7/8	4-1/64	6-7/8	3/4	3	1/8
	P13152	55/64 - 15/16	2-5/8	3-7/8	4-1/64	6-7/8	1	3	1/8
2	P13202	31/32 - 1-3/8	3-3/8	4-1/2	4-41/64	8	1	3-1/2	1/8
	P13203	31/32 - 1-3/8	3-3/8	4-1/2	4-41/64	8	1-1/4	3-1/2	1/8
2.5	P13252	1-3/16 - 1-3/8	3-3/8	4-1/2	4-41/64	8	1	3-1/2	1/8
	P13253	1-3/16 - 1-3/8	3-3/8	4-1/2	4-41/64	8	1-1/4	3-1/2	1/8
3	P13303	1-13/32 - 1-7/8	4-3/4	6	6-3/16	10	1-1/4	4	1/4
	P13304	1-13/32 - 1-7/8	4-3/4	6	6-3/16	10	1-1/2	4	1/4
4	P13404	1-29/32 - 2-9/16	5-1/8	6-1/2	6-11/16	10-1/2	1-1/2	4	1/4
	P13405	1-29/32 - 2-9/16	5-1/8	6-1/2	6-11/16	10-1/2	1-3/4	4	1/4
5-6	P13506	2-1/2 - 3-1/2	6-3/4	8-1/2	8-3/4	12-1/2	2	4	1/2
7-8	P13708	3-17/32 - 4-1/2	6-3/4	8-7/8	9-1/8	13-7/8	3	5	1/2



INTERMEDIATE LENGTH

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F	G	
1	P14102	45/64 - 15/16	4-5/8	5-7/8	6-1/64	8-7/8	1	3	1/8
1.5	P14152	55/64 - 15/16	4-5/8	5-7/8	6-1/64	8-7/8	1	3	1/8
2	P14203	31/32 - 1-3/8	5-3/8	6-1/2	6-41/64	10	1-1/4	3-1/2	1/8
2.5	P14253	1-3/16 - 1-3/8	5-3/8	6-1/2	6-41/64	10	1-1/4	3-1/2	1/8
3	P14304	1-13/32 - 1-7/8	6-1/2	7-3/4	7-15/16	11-3/4	1-1/2	4	1/4

STRAIGHT SHANK HOLDER, STRAIGHT FLUTE

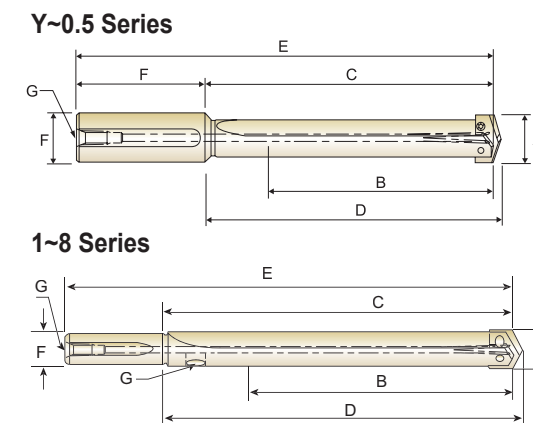


STANDARD LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Flute Length C	Ref. Length D	Overall Length E	Shank		Pipe Tap G
							Dia.	Length F	
Y	P15Y01	3/8 - 27/64	2-3/8	3-5/32	3-1/4	5-17/32	3/4	2-3/8	1/8
Z	P15Z01	7/16 - 1/2	2-3/8	3-5/32	3-1/4	5-17/32	3/4	2-3/8	1/8
O	P15O01	33/64 - 11/16	2-1/2	3-5/16	3-27/64	5-11/16	3/4	2-3/8	1/8
0.5	P15O51	39/64 - 11/16	2-1/2	3-5/16	3-27/64	5-11/16	3/4	2-3/8	1/8
1	P15101	45/64 - 15/16	6-5/8	7-7/8	8-1/64	10-7/8	3/4	3	1/8
	P15102	45/64 - 15/16	6-5/8	7-7/8	8-1/64	10-7/8	1	3	1/8
1.5	P15151	55/64 - 15/16	6-5/8	7-7/8	8-1/64	10-7/8	3/4	3	1/8
	P15152	55/64 - 15/16	6-5/8	7-7/8	8-1/64	10-7/8	1	3	1/8
2	P15202	31/32 - 1-3/8	7-3/8	8-1/2	8-41/64	12	1	3-1/2	1/8
	P15203	31/32 - 1-3/8	7-3/8	8-1/2	8-41/64	12	1-1/4	3-1/2	1/8
2.5	P15252	1-3/16 - 1-3/8	7-3/8	8-1/2	8-41/64	12	1	3-1/2	1/8
	P15253	1-3/16 - 1-3/8	7-3/8	8-1/2	8-41/64	12	1-1/4	3-1/2	1/8
3	P15303	1-13/32 - 1-7/8	8-1/4	9-1/2	9-11/16	13-1/2	1-1/4	4	1/4
	P15304	1-13/32 - 1-7/8	8-1/4	9-1/2	9-11/16	13-1/2	1-1/2	4	1/4
4	P15404	1-29/32 - 2-9/16	9-1/8	10-1/2	10-11/16	14-1/2	1-1/2	4	1/4
	P15405	1-29/32 - 2-9/16	9-1/8	10-1/2	10-11/16	14-1/2	1-3/4	4	1/4
5-6	P15506	2-1/2 - 3-1/2	10-3/4	12-1/2	12-3/4	16-1/2	2	4	1/2
7-8	P15708	3-17/32 - 4-1/2	10-3/4	12-7/8	13-1/8	17-7/8	3	5	1/2

STRAIGHT SHANK HOLDER, STRAIGHT FLUTE



EXTENDED LENGTH

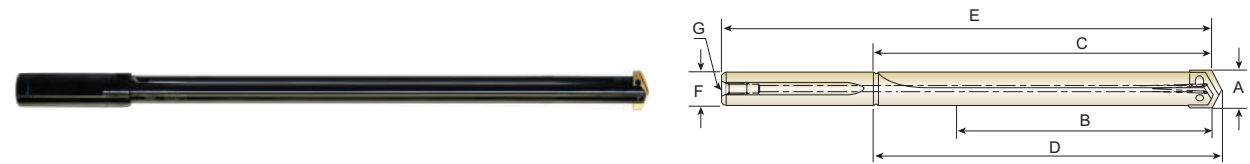
Unit : Inch

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Flute Length C	Ref. Length D	Overall Length E	Shank		Pipe Tap G
							Dia.	Length F	
Y	P16Y01	3/8 - 27/64	4-3/8	5-5/32	5-1/4	7-17/32	3/4	2-3/8	1/8
Z	P16Z01	7/16 - 1/2	4-3/8	5-5/32	5-1/4	7-17/32	3/4	2-3/8	1/8
O	P16O01	33/64 - 11/16	4-1/2	5-5/16	5-27/64	7-11/16	3/4	2-3/8	1/8
0.5	P16O51	39/64 - 11/16	4-1/2	5-5/16	5-27/64	7-11/16	3/4	2-3/8	1/8
1	P16102	45/64 - 15/16	10-5/8	11-7/8	12-1/64	14-7/8	1	3	1/8
1.5	P16152	55/64 - 15/16	10-5/8	11-7/8	12-1/64	14-7/8	1	3	1/8
2	P16203	31/32 - 1-3/8	11-3/8	12-1/2	12-41/64	16	1-1/4	3-1/2	1/8
2.5	P16253	1-3/16 - 1-3/8	11-3/8	12-1/2	12-41/64	16	1-1/4	3-1/2	1/8
3	P16303	1-13/32 - 1-7/8	13-3/4	15	15-3/16	19	1-1/4	4	1/4
4	P16404	1-29/32 - 2-9/16	16-5/8	18	18-3/16	22	1-1/2	4	1/4
5-6	P16506	2-1/2 - 3-1/2	18-1/4	20	20-1/4	24	2	4	1/2
7-8	P16708	3-17/32 - 4-1/2	21-7/8	24	24-1/4	29	3	5	1/2

Y/G SPADE DRILLS

P17 SERIES

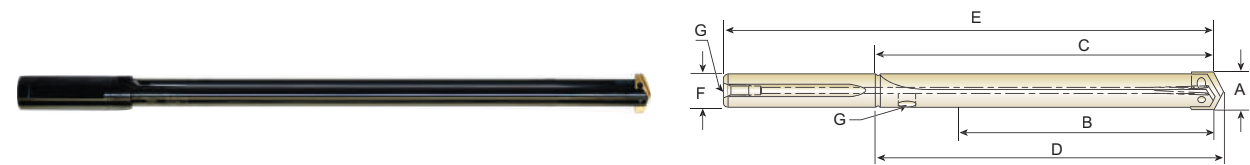
STRAIGHT SHANK HOLDER, STRAIGHT FLUTE



LONG LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Flute Length C	Ref. Length D	Overall Length E	Shank		Pipe Tap G
							Dia. F	Length	
O	P17001	33/64 - 11/16	7	7-13/16	7-59/64	10-3/16	3/4	2-3/8	1/8
O.5	P17051	39/64 - 11/16	7	7-13/16	7-59/64	10-3/16	3/4	2-3/8	1/8



EXTRA LONG LENGTH

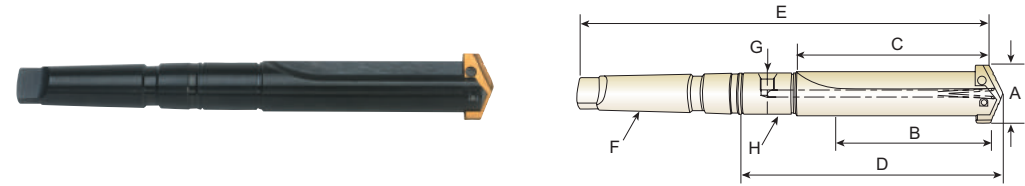
Unit : Inch

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Flute Length C	Ref. Length D	Overall Length E	Shank		Pipe Tap G
							Dia. F	Length	
1	P17101	45/64 - 15/16	18	19-1/4	19-25/64	22-1/4	1	3	1/8
2	P17202	31/32 - 1-3/8	20-1/8	21-1/4	21-25/64	24-3/4	1-1/4	3-1/2	1/8
3	P17303	1-13/32 - 1-7/8	22	23-1/4	23-7/16	27-1/4	1-1/2	4	1/4
4	P17404	1-29/32 - 2-9/16	24-5/8	26	26-3/16	30	1-1/2	4	1/4
5	P17506	2-1/2 - 3-1/2	26	27-3/4	28	31-3/4	2	4	1/2
7	P17708	3-17/32 - 4-1/2	27	29-1/8	29-3/8	34-1/8	3	5	1/2

Y/G SPADE DRILLS

P01 SERIES
P08 SERIES

TAPER SHANK HOLDER, STRAIGHT FLUTE / HELICAL FLUTE

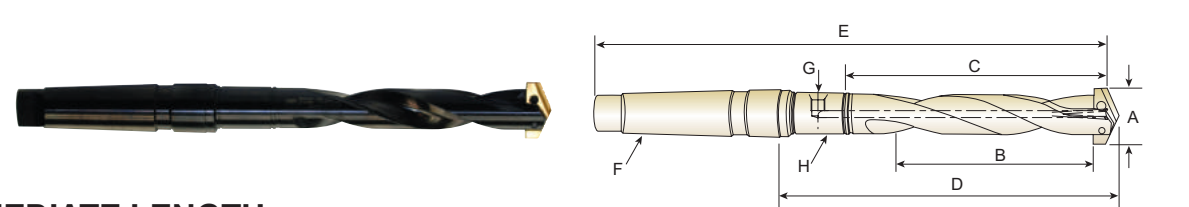


SHORT LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Flute Length C	Ref. Length D	Overall Length E	MT F	Pipe Tap G	RCI H
Z	P01Z02	7/16 - 1/2	1-1/4	2-1/32	3-15/32	6-5/16	#2	1/16	PR1030
O	P01002	33/64 - 11/16	1-3/8	2-3/16	3-41/64	6-15/32	#2	1/16	PR1030
O.5	P01052	39/64 - 11/16	1-3/8	2-3/16	3-41/64	6-15/32	#2	1/16	PR1030
1	P01103	45/64 - 15/16	2-3/4	3-7/8	5-39/64	9-5/32	#3	1/8	PR1031
	P01104	45/64 - 15/16	2-3/4	3-7/8	5-43/64	10-5/32	#4	1/8	PR1031
1.5	P01153	55/64 - 15/16	2-3/4	3-7/8	5-39/64	9-5/32	#3	1/8	PR1031
	P01154	55/64 - 15/16	2-3/4	3-7/8	5-43/64	10-5/32	#4	1/8	PR1031
2	P01203	31/32 - 1-3/8	3-3/8	4-1/2	6-15/64	9-25/32	#3	1/8	PR1031
	P01204	31/32 - 1-3/8	3-3/8	4-1/2	6-19/64	10-25/32	#4	1/8	PR1031
2.5	P01253	1-3/16 - 1-3/8	3-3/8	4-1/2	6-15/64	9-25/32	#3	1/8	PR1031
	P01254	1-3/16 - 1-3/8	3-3/8	4-1/2	6-37/64	11-1/16	#4	1/4	PR1042
3	P01304	1-13/32 - 1-7/8	4-3/4	6	8-1/8	12-9/16	#4	1/4	PR1042
	P01305	1-13/32 - 1-7/8	4-3/4	6	8-1/8	13-13/16	#5	1/4	PR1043
4	P01404	1-29/32 - 2-9/16	5-1/8	6-1/2	8-5/8	13-1/16	#4	1/4	PR1042
	P01405	1-29/32 - 2-9/16	5-1/8	6-1/2	8-5/8	14-5/16	#5	1/4	PR1043
5-6	P01505	2-1/2 - 3-1/2	6-3/4	8-1/2	11-5/16	16-15/16	#5	1/2	PR1054
7-8	P01705	3-17/32 - 4-1/2	6-3/4	8-7/8	11-11/16	17-5/16	#5	1/2	PR1054

► You can also apply RCI(Rotary Coolant Inducer) for internal cooling. (See page 307)



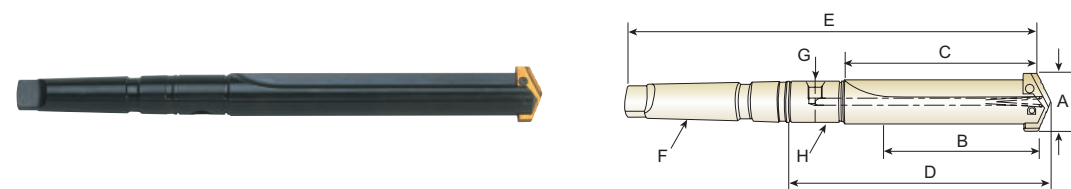
INTERMEDIATE LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Flute Length C	Ref. Length D	Overall Length E	MT F	Pipe Tap G	RCI H
1.5	P08153	55/64 - 15/16	4-3/4	5-7/8	7-39/64	11-5/32	#3	1/8	PR1031
2	P08204	31/32 - 1-3/8	5-3/8	6-1/2	8-19/64	12-25/32	#4	1/8	PR1031
2.5	P08254	1-3/16 - 1-3/8	5-3/8	6-1/2	8-37/64	13-1/16	#4	1/4	PR1042

► You can also apply RCI(Rotary Coolant Inducer) for internal cooling. (See page 307)

TAPER SHANK HOLDER, TAPER FLUTE



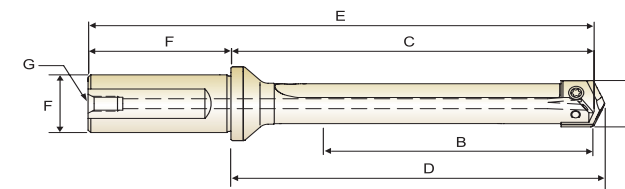
STANDARD LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Flute Length C	Ref. Length D	Overall Length E	MT F	Pipe Tap G	RCI H
Z	P03Z02	7/16 - 1/2	2-3/8	3-5/32	4-19/32	7-7/16	#2	1/16	PR1030
0	P03002	33/64 - 11/16	2-1/2	3-5/16	4-49/64	7-19/32	#2	1/16	PR1030
0.5	P03052	39/64 - 11/16	2-1/2	3-5/16	4-49/64	7-19/32	#2	1/16	PR1030
1	P03103	45/64 - 15/16	6-3/4	7-7/8	9-39/64	13-5/32	#3	1/8	PR1031
	P03104	45/64 - 15/16	6-3/4	7-7/8	9-43/64	14-5/32	#4	1/8	PR1031
1.5	P03153	55/64 - 15/16	6-3/4	7-7/8	9-39/64	13-5/32	#3	1/8	PR1031
	P03154	55/64 - 15/16	6-3/4	7-7/8	9-43/64	14-5/32	#4	1/8	PR1031
2	P03203	31/32 - 1-3/8	7-3/8	8-1/2	10-15/64	13-25/32	#3	1/8	PR1031
	P03204	31/32 - 1-3/8	7-3/8	8-1/2	10-19/64	14-25/32	#4	1/8	PR1031
2.5	P03253	1-3/16 - 1-3/8	7-3/8	8-1/2	10-15/64	13-25/32	#3	1/8	PR1031
	P03254	1-3/16 - 1-3/8	7-3/8	8-1/2	10-37/64	15-1/16	#4	1/4	PR1042
3	P03304	1-13/32 - 1-7/8	8-1/4	9-1/2	11-5/8	16-1/16	#4	1/4	PR1042
	P03305	1-13/32 - 1-7/8	8-1/4	9-1/2	11-5/8	17-5/16	#5	1/4	PR1043
4	P03404	1-29/32 - 2-9/16	9-1/8	10-1/2	12-5/8	17-1/16	#4	1/4	PR1042
	P03405	1-29/32 - 2-9/16	9-1/8	10-1/2	12-5/8	18-5/16	#5	1/4	PR1043
5-6	P03505	2-1/2 - 3-1/2	10-3/4	12-1/2	15-5/16	20-15/16	#5	1/2	PR1054
7-8	P03705	3-17/32 - 4-1/2	10-3/4	12-7/8	15-11/16	21-5/16	#5	1/2	PR1054

► You can also apply RCI(Rotary Coolant Inducer) for internal cooling. (See page 307)

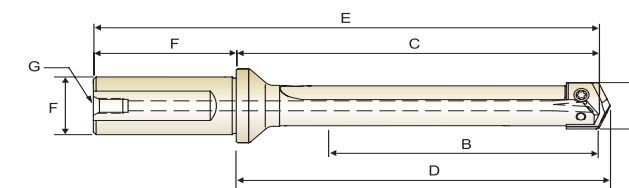
FLANGED STRAIGHT SHANK HOLDER, STRAIGHT FLUTE



SHORT LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Flute Length C	Ref. Length D	Overall Length E	Shank		Pipe Tap G
							Dia. F	Length	
Y	P25Y01	3/8 - 27/64	1-1/4	2-13/32	2-1/2	4-7/16	3/4	2-1/32	1/8
Z	P25Y01	7/16 - 1/2	1-1/4	2-13/32	2-1/2	4-7/16	3/4	2-1/32	1/8
0	P25001	33/64 - 11/16	1-3/8	2-1/2	2-39/64	4-17/32	3/4	2-1/32	1/8
0.5	P25051	39/64 - 11/16	1-3/8	2-1/2	2-39/64	4-17/32	3/4	2-1/32	1/8
1	P25102	45/64 - 15/16	2-5/8	4-7/32	4-23/64	6-1/2	1	2-9/32	1/8
1.5	P25152	55/64 - 15/16	2-5/8	4-7/32	4-23/64	6-1/2	1	2-9/32	1/8
2	P25203	31/32 - 1-3/8	3-3/8	5-1/16	5-13/64	7-11/32	1-1/4	2-9/32	1/4
2.5	P25253	1-3/16 - 1-3/8	3-3/8	5-1/16	5-13/64	7-11/32	1-1/4	2-9/32	1/4
3	P25303	1-13/32 - 1-7/8	4-3/4	6-13/16	7	9-1/2	1-1/2	2-11/16	1/4
4	P25404	1-29/32 - 2-9/16	5-1/8	7-1/16	7-1/4	9-3/4	1-1/2	2-11/16	1/4



INTERMEDIATED LENGTH

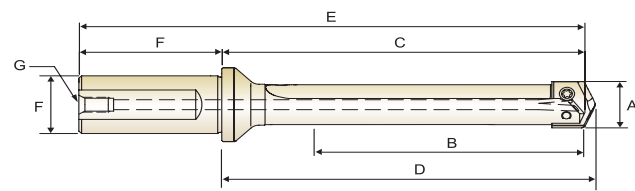
Unit : Inch

Series	EDP No.	Drill Insert Range A	Max. Drill Depth B	Flute Length C	Ref. Length D	Overall Length E	Shank		Pipe Tap G
							Dia. F	Length	
1	P26102	45/64 ~ 15/16	4-5/8	6-3/32	6-15/64	8-3/8	1	2-9/32	1/8
1.5	P26152	55/64 ~ 15/16	4-5/8	6-3/32	6-15/64	8-3/8	1	2-9/32	1/8
2	P26203	31/32 ~ 1-3/8	5-3/8	7-1/16	7-13/64	9-11/32	1-1/4	2-9/32	1/4
2.5	P26253	1-3/16 ~ 1-3/8	5-3/8	7-1/16	7-13/64	9-11/32	1-1/4	2-9/32	1/4
3	P26304	1-13/32 ~ 1-7/8	6-1/2	8-9/16	8-3/4	11-1/4	1-1/2	2-11/32	1/4



P27 SERIES
P28 SERIES

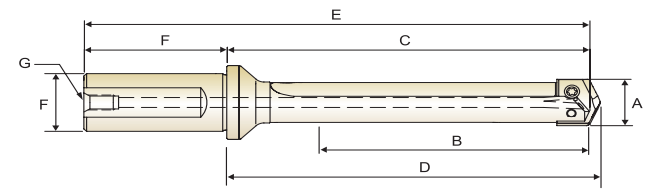
FLANGED STRAIGHT SHANK HOLDER, STRAIGHT FLUTE



STANDARD LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
Y	P27Y01	3/8 ~ 27/64	2-3/8	3-17/32	3-5/8	5-9/16	3/4	2-1/32	1/8
Z	P27Z01	7/16 ~ 1/2	2-3/8	3-17/32	3-5/8	5-9/16	3/4	2-1/32	1/8
O	P27O01	33/64 ~ 11/16	2-1/2	3-5/8	3-47/64	5-21/32	3/4	2-1/32	1/8
0.5	P27O51	39/64 ~ 11/16	2-1/2	3-5/8	3-47/64	5-21/32	3/4	2-1/32	1/8
1	P27102	45/64 ~ 15/16	6-5/8	8-3/32	8-15/64	10-3/8	1	2-9/32	1/8
1.5	P27152	55/64 ~ 15/16	6-5/8	8-3/32	8-15/64	10-3/8	1	2-9/32	1/8
2	P27203	31/32 ~ 1-3/8	7-3/8	9-1/16	9-13/64	11-11/32	1-1/4	2-9/32	1/4
2.5	P27253	1-3/16 ~ 1-3/8	7-3/8	9-1/16	9-13/64	11-11/32	1-1/4	2-9/32	1/4
3	P27303	1-13/32 ~ 1-7/8	8-1/4	10-5/16	10-1/2	13	1-1/2	2-11/16	1/4
4	P27404	1-29/32 ~ 2-9/16	9-1/8	11-1/16	11-1/4	13-3/4	1-1/2	2-11/16	1/4



EXTENDED LENGTH

Unit : Inch

Series	EDP No.	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	Shank		Pipe Tap
							Dia.	Length	
		A	B	C	D	E	F		G
Y	P28Y01	3/8 ~ 27/64	4-3/8	5-17/32	5-5/8	7-9/16	3/4	2-1/32	1/8
Z	P28Y01	7/16 ~ 1/2	4-3/8	5-17/32	5-5/8	7-9/16	3/4	2-1/32	1/8
O	P28O01	33/64 ~ 11/16	4-1/2	5-5/8	5-47/64	7-21/32	3/4	2-1/32	1/8
0.5	P28O51	39/64 ~ 11/16	4-1/2	5-5/8	5-47/64	7-21/32	3/4	2-1/32	1/8
1	P28102	45/64 ~ 15/16	10-5/8	12-3/32	12-15/64	14-3/8	1	2-9/32	1/8
1.5	P28152	55/64 ~ 15/16	10-5/8	12-3/32	12-15/64	14-3/8	1	2-9/32	1/8
2	P28203	31/32 ~ 1-3/8	11-3/8	13-1/16	13-13/64	15-11/32	1-1/4	2-9/32	1/4
2.5	P28253	1-3/16 ~ 1-3/8	11-3/8	13-1/16	13-13/64	15-11/32	1-1/4	2-9/32	1/4



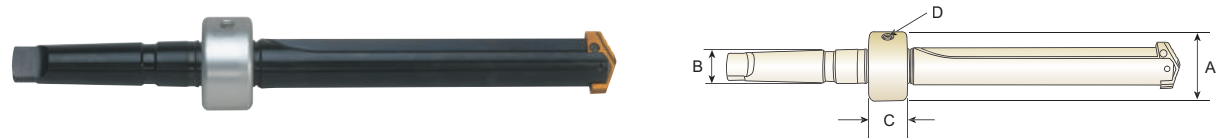
RECOMMENDED CUTTING CONDITIONS

HOLDER ACCESSORIES

TORX SCREWS AND PREMIUM TORX HAND DRIVERS

Series	Torx Screws		Torx Screws (Nylon Locking)		Premium Torx Drivers	Drill Range		Torque in Lbs. 5.5
	Item	PKG EDP No. (10 Screws)	Item	PKG EDP No. (10 Screws)		Inch	Metric	
					EDP No.	inch	mm	
Y	2XT7	J7Y001	2XT7N	J7Y006	J5Y007	3/8 - 27/64	9.5 - 11.0	5.5
Z	2LXT7	J7Z011	2LXT7N	J7Z016	J5Y007	7/16 - 1/2	11.5 - 12.5	5.5
O	2.5XT8	J8O021	2.5XT8N	J8O026	J5O008	33/64 - 11/16	13.0 - 17.5	11.0
0.5	2.5LXT8	J8O531	2.5LXT8N	J8O536	J5O008	39/64 - 11/16	15.5 - 17.5	11.0
1	3XT9	J91O41	3XT9N	J91O46	J51O09	45/64 - 15/16	18.0 - 24.0	20.0
1.5	3LXT9	J91551	3LXT9N	J91556	J51O09	55/64 - 15/16	22.0 - 24.0	20.0
2	4XT15	JB2O61	4XT15N	JB2O66	J52O15	31/32 - 1-3/8	25.0 - 35.0	45.0
2.5	4XT15	JB2O61	4XT15N	JB2O66	J52O15	31/32 - 1-3/8	30.0 - 35.0	45.0
3-4	5XT20	JC3O81	5XT20N	JC3O86	J53O20	1-13/32 - 2-9/16	36.0 - 65.0	90.0
5-8	6XT25	JD5O91	6XT25N	JD5O96	J55O25	2-1/2 - 4-1/2	64.0 - 114.0	155.0

NOTE : Replacement screws sold in packages (10 screws per package)



ROTARY COOLANT INDUCER (RCI) AND ACCESSORIES



Complete with O'Rings, Flat Washers and Locking Clips.

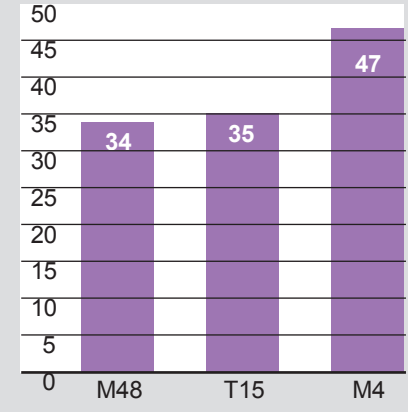
EDP No.	I.D.	Pipe O.D.	Length	Tap	Thread for Driving Rod
	A	B	C	D	
PR1030	1-3/4	3/4	7/8	1/8	5/16 - NC
PR1031	2-1/8	1	1-1/8	1/8	5/16 - NC
PR1042	2-1/2	1-1/4	1-3/8	1/4	3/8 - NC
PR1043	3	1-3/4	1-3/8	1/4	3/8 - NC
PR1054	3-3/4	2-1/4	1-3/4	1/2	1/2 - NC



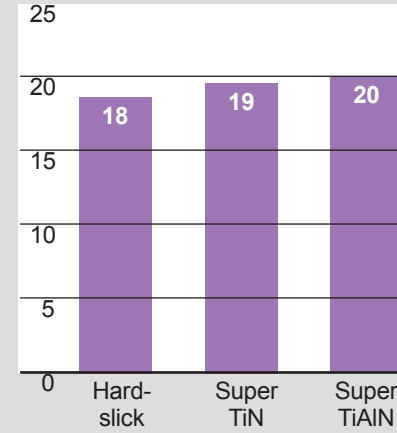
RECOMMENDED CUTTING CONDITIONS

SPADE BLADE INSERTS SELECTION & APPLICATIONS HSS

Toughness Values



Wear Values



- WHEN TO USE M4
WHEN TO USE T15
WHEN TO USE M48
WHEN TO USE SM POINT

SPEEDS - FEED RECOMMENDATIONS (STD POINT-SM POINT)

STANDARD GEOMETRY SM POINT

Table with columns for Material, Material Hardness (BHN), SFM Surface Footage, and Feed (IPR) for various materials like Free Machining Steel, Low & Medium Carbon Steel, Alloy Steel, etc.

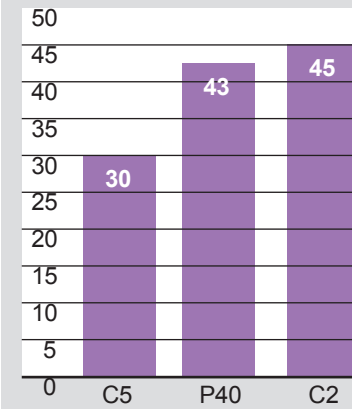
The recommendations for speed, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.



RECOMMENDED CUTTING CONDITIONS

SPADE BLADE INSERTS SELECTION & APPLICATIONS CARBIDE

Toughness Values



Wear Values

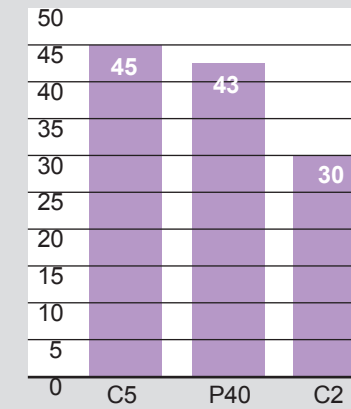


Table with columns for Grade, Geometry and Application, and Stocked Coatings.

Note: Carbide has a lower transverse rupture strength than HSS and is prone to chipping and breakage.

If C5 chips try C2 at 10% - 20% lower S.F.M. than C5 rating

SPEEDS - FEED RECOMMENDATIONS (STD POINT-SM POINT)

STANDARD GEOMETRY SM POINT

Table with columns for Material, Material Hardness (BHN), SFM Surface Footage, and Feed (IPR) for various materials like Free Machining Steel, Low & Medium Carbon Steel, Alloy Steel, etc.

The recommendations for speed, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.

SUPER COBALT (T15) FLAT BOTTOM

Material	Material Hardness (BHN)	Speed (SFM)		Feed			
		TiN	TiAlN	3/8 ~ 1/2	33/64 ~ 11/16	45/64 ~ 15/16	31/32 ~ 1-3/8
Free machining Steel 1213, 12L13, 1215 12L14, 1118	100 - 150	165	220	0.005	0.007	0.010	0.013
	150 - 200	150	215	0.005	0.007	0.010	0.013
	200 - 250	135	190	0.004	0.007	0.010	0.012
Low Carbon Steel 1015, 1020, 1140, 1025	85 - 125	140	195	0.005	0.007	0.009	0.012
	125 - 175	135	190	0.005	0.007	0.009	0.012
	175 - 225	125	180	0.004	0.006	0.008	0.011
	225 - 275	115	175	0.004	0.006	0.008	0.011
Medium Carbon Steel 1035, 1050, 1045 1055, 1140	125 - 175	135	195	0.004	0.007	0.009	0.011
	175 - 225	125	180	0.004	0.006	0.007	0.011
	225 - 275	115	165	0.004	0.006	0.007	0.011
	275 - 325	105	150	0.003	0.005	0.007	0.009
Structural Steel A36, A516, A182	100 - 150	115	165	0.004	0.007	0.009	0.011
	150 - 250	100	140	0.004	0.007	0.008	0.009
	250 - 350	80	115	0.003	0.006	0.007	0.008
Cast Iron / S,G Iron A48-76 GR30/GR45 A536-72 60-40-18 A220-76 GR40010	120 - 150	145	215	0.005	0.010	0.014	0.016
	150 - 200	130	190	0.005	0.008	0.011	0.016
	200 - 220	110	165	0.005	0.008	0.010	0.014
	220 - 260	95	150	0.004	0.006	0.008	0.010
	260 - 320	80	120	0.004	0.005	0.006	0.008
Alloy Steel 8620, 4130, 4137 4140, 6150	125 - 175	125	165	0.005	0.006	0.008	0.011
	175 - 225	115	150	0.004	0.006	0.008	0.011
	225 - 275	105	145	0.004	0.005	0.007	0.011
	275 - 325	100	140	0.003	0.005	0.007	0.009
Tool Steel H13, H21, A2, S1	150 - 200	65	90	0.003	0.005	0.006	0.008
	200 - 250	45	75	0.003	0.005	0.006	0.008
High Temp. Alloy Hastelloy B, Inconel	140 - 220	20	30	0.003	0.005	0.006	0.008
	220 - 310	15	25	0.003	0.004	0.006	0.006
	225 - 300	65	90	0.004	0.006	0.007	0.008
High Strength Alloy 9840, 4340, 4330V	300 - 350	45	70	0.003	0.006	0.007	0.008
	350 - 400	40	60	0.003	0.005	0.006	0.007
Aluminium 2014, 6061, 7075	30	520	700	0.007	0.011	0.014	0.017
	180	255	390	0.007	0.011	0.014	0.016
Stainless Steel 310, 316, 410, 330	135 - 185	60	90	0.005	0.007	0.008	0.009
	185 - 275	50	80	0.004	0.006	0.007	0.009

RPM = revolution per minute (rev/min)
 SFM = surface feet per minute (ft/min)
 DIA = diameter of drill (inch)
 IPR = feed rate (in/rev)
 IPM = inch per minute penetration rate

*** Formulas :**

SFM = (RPM) · (.262) · (DIA.)
 IPM = (RPM) · (IPR)

$$RPM = \frac{(SFM) \cdot (3.82)}{(DIA.)}$$

The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points. Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.

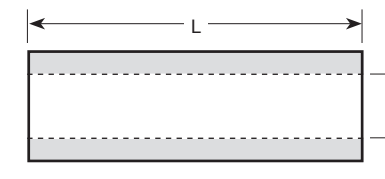
SPADE BLADE INSERTS HORSEPOWER CONSUMPTION RATE

Metal Removal Rates (MRR)

Example : 1.50 Dia. Drill @ 6.412 I.P.M.

Volume of Cylinder Method : D²x.785xL

D = Hole Diameter
 L = Length in I.P.M.
 .785 is Constant



Material Drilled 4140 250 BHN :

Cutting Data : 180 S.F.M. (458 R.P.M.) x .014 Feed per Rev.

458 R.P.M. x .014 = 6.412 I.P.M. (L)

D² (1.5)² x .785 x L (6.412) = 11.3 C.U.In./ Min (MRR)

MRR of 11.3 x 1.4 Energy Value = 15.8HP.

metal removal rates (mrR)

- Cubic inches of metal removal per unit of horsepower.
- Unit horsepower (HP_u) is the amount of power to remove a volume of metal in a period of time.
 - HP_u = power to cut 1 cubic inch per minute – found in tables

Average Unit Horsepower Values of Energy Per Unit Volume		
Material	BHN	HP _u (HP/(in ³ /min.))
Carbon Steels	150-200	1.0
	200-250	1.4
	250-350	1.6
Leaded Steels	150-175	0.7
Cast Irons	125-190	0.5
	190-250	1.6
Stainless Steels	135-275	1.5
Aluminum Alloys	50-100	0.3
Magnesium Alloys	40-90	0.2
Copper	125-140	0.7
Copper Alloys	100-150	0.7

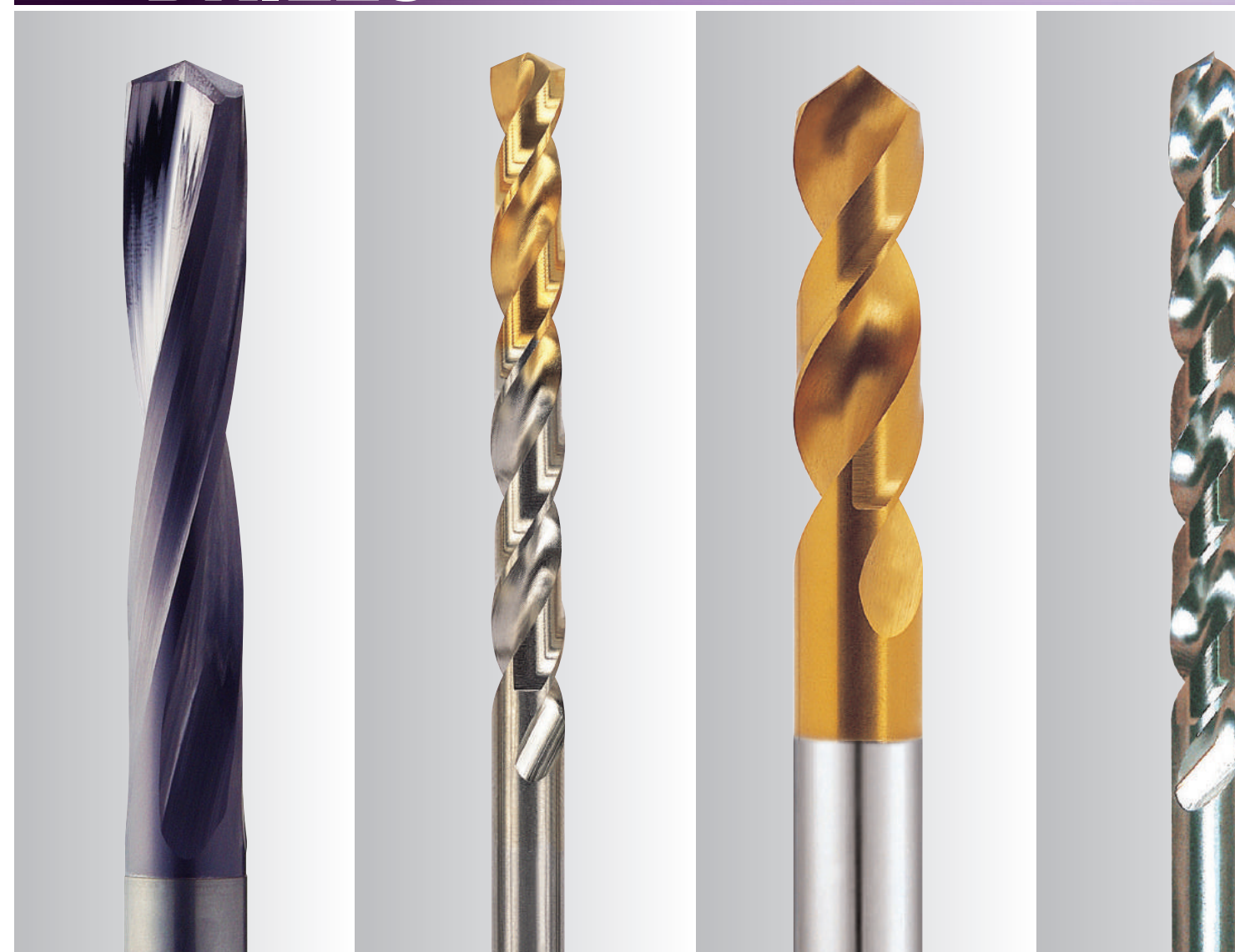
COOLANT RECOMMENDATIONS (SPADE BLADE)

Material	Material Hardness (BHN)	Coolant Pressure (PSi)						
		Coolant Volumetric Flowrate (GPM)						
		3/8 ~ 1/2	33/64 ~ 11/16	23/32 ~ 1	1 ~ 1-1/4	1-1/4 ~ 2	2 ~ 3	3 ~ 4
Free Machining Steel 1118, 1215, 12L14, etc.	100 - 250	175-185 2.5-2.6	100-120 2.8-3.0	105-140 4.4-5.2	80-115 7-8	75-100 12-14	40-50 30-33	65-90 38-44
Low Carbon Steel 1010, 1020, 1025, 1522, etc.	85 - 275	165-170 2.4-2.5	75-90 2.4-2.6	75-95 3.7-4.2	60-80 6-7	55-75 11-12	30-40 26-30	50-65 33-38
Medium Carbon Steel 1030,1040,1050,1527,1140,1151,etc.	125 - 325	160-165 2.3-2.4	70-85 2.3-2.6	70-90 3.6-4.1	55-75 5-6	50-70 10-12	30-40 26-30	50-65 33-38
Alloy Steel 4140, 5140, 8640, etc.	125 - 375	160-165 2.3-2.4	66-75 2.2-2.4	65-80 3.5-3.9	50-70 5-6	45-60 10-11	30-35 26-28	40-50 30-33
High Strength Alloy 4340, 4330V, 300M, etc.	225 - 400	150-155 2.3-2.4	55-60 2.1-2.2	45-50 2.9-3.1	25-30 4-5	25-30 7-8	20-25 21-23	25-30 23-26
Structural Steel A36, A285, A516, etc.	100 - 350	160-165 2.3-2.4	75-85 2.4-2.6	65-80 3.5-3.9	40-55 5-6	40-50 9-10	25-30 23-26	40-50 30-33
High Temp. Alloy Hastelloy B, Inconel 600, etc.	140 - 310	150-155 2.3-2.4	60-65 2.2-2.3	50-55 3.1-3.2	30-35 4-5	25-30 7-8	25-30 23-26	- -
Stainless Steel 301, 316, 330, 17-4PH, etc.	135 - 275	165-170 2.4-2.5	70-85 2.3-2.6	65-75 3.5-3.7	40-55 5-6	40-50 9-10	25-30 23-26	35-45 28-31
Tool Steel H-13, H-21, A-4, O-2, S-3, etc.	150 - 250	150-155 2.3-2.4	55-60 2.1-2.2	45-50 2.9-3.1	25-30 4-5	25-30 7-8	20-25 21-23	25-30 23-26
Aluminum	30 - 180	190-210 2.6-2.7	140-180 3.3-3.7	150-200 5.3-6.1	115-160 8-9	90-125 14-16	40-50 30-33	60-80 36-42
Cast Iron	120 - 320	155-160 2.3-2.4	60-65 2.2-2.3	50-60 3.1-3.3	30-40 4-5	30-35 8-9	25-30 23-26	30-35 26-28



Being the best through innovation

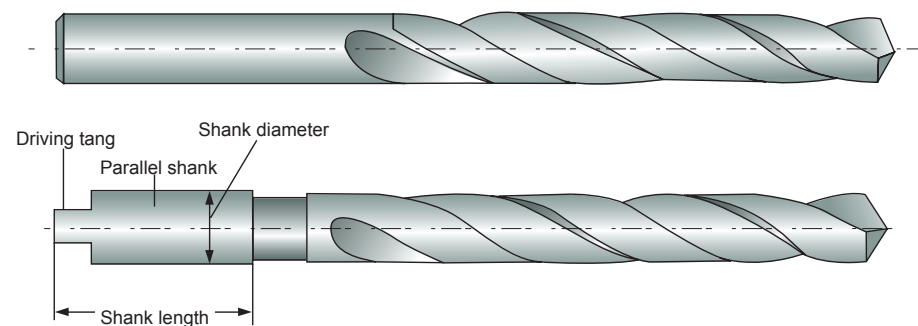
DRILLS



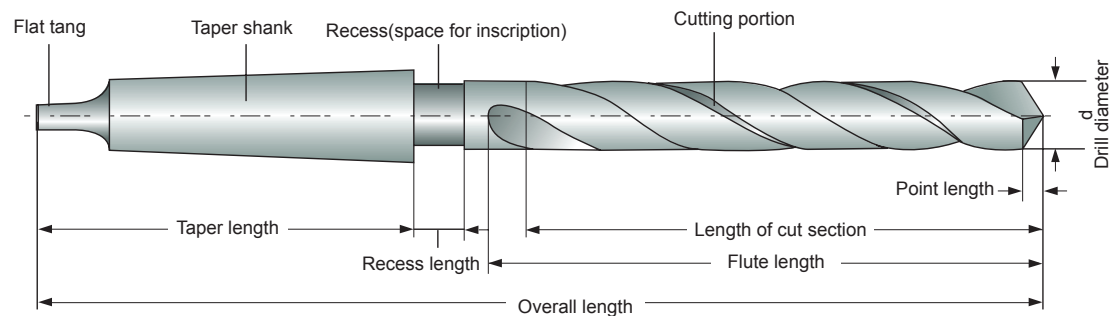
TECHNICAL DATA

- i-DREAM DRILLS
- DREAM DRILLS -GENERAL
- DREAM DRILLS -HIGH FEED
- DREAM DRILLS -FLAT BOTTOM
- DREAM DRILLS -INOX
- DREAM DRILLS -ALU
- DREAM DRILLS -MQL TYPE
- DREAM DRILLS for HIGH HARDENED STEELS
- STANDARD CARBIDE DRILLS
- MULTI-1 DRILLS
- HPD DRILLS
- GOLD-P DRILLS
- STRAIGHT SHANK DRILLS
- AIRCRAFT DRILLS
- SILVER & DEMING DRILLS
- TAPER SHANK DRILLS
- NC SPOTTING DRILLS
- COMBINATION DRILLS & COUNTERSIN
- SPADE DRILLS
- TECHNICAL DATA

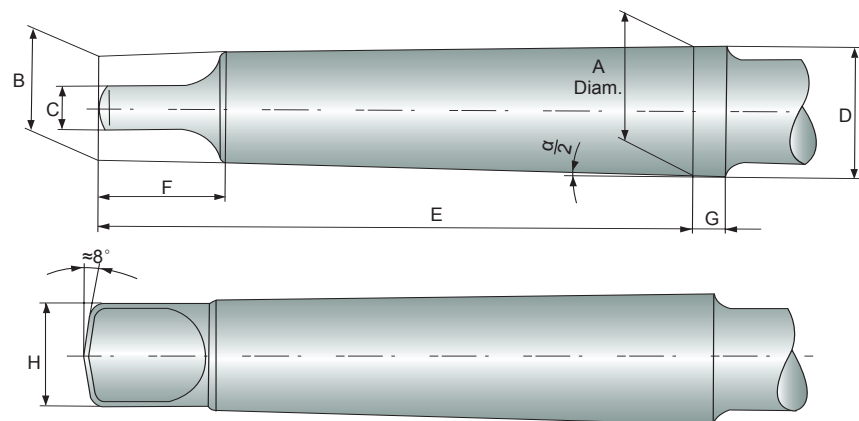
1 Twist Drill with parallel shank



2 Twist Drill with taper shank

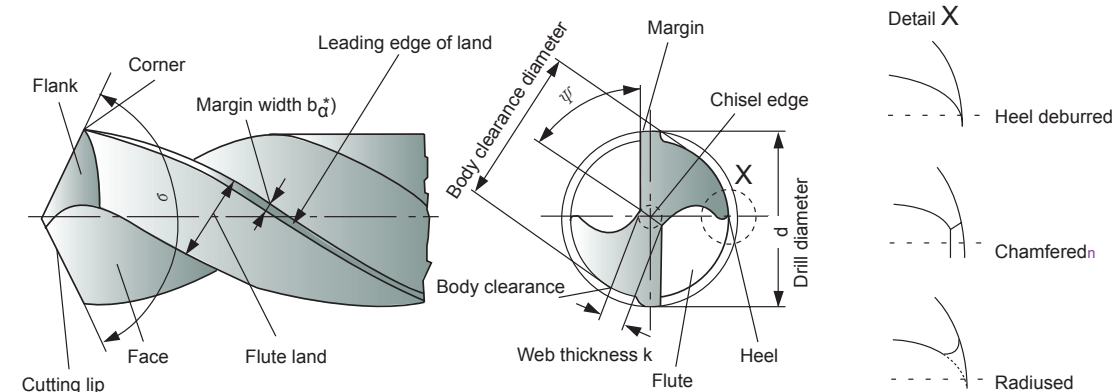


3 General dimensions of morse taper shanks



Morse Taper Shank	A mm	B mm	C(h13) mm	D mm	E mm	F(max.) mm	G mm	H(max.) mm	$\alpha/2$
No.1	12.065	9	5.2	12.2	62	13.5	3.5	8.7	1° 25' 43"
No.2	17.780	14	6.3	18.0	75	16	5	13.5	1° 25' 50"
No.3	23.825	19.1	7.9	24.1	94	20	5	18.5	1° 26' 16"
No.4	31.267	25.2	11.9	31.6	117.5	24	6.5	24.5	1° 29' 15"
No.5	44.399	36.5	15.9	44.7	149.5	29	6.5	35.7	1° 30' 26"
No.6	63.348	52.4	19	63.8	210	40	8	51	1° 29' 36"

4 Cutting portion



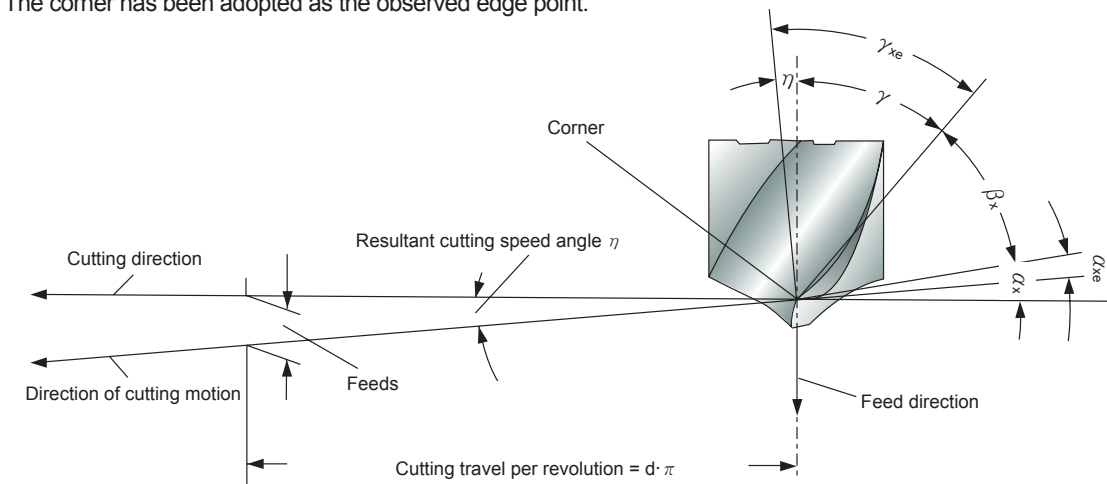
σ = Point angle (sigma)

Ψ = Chisel edge angle (psi)

* In the context of cutting technology, land width b_{α} is the body clearance land width which is to be by b_{fan} , see DIN 6581.

5 Angle at the cutting edges

The corner has been adopted as the observed edge point.



α_x = Side clearance angle (alpha)

α_{xe} = Effective side clearance angle

β_x = Side wedge angle (beta)

γ_x = Front rake angle (gamma)

γ_{xe} = Working front rake angle

η = Resultant cutting speed angle (eta)

Clearance angle α , wedge angle β and rake angle γ are measured in the tool orthogonal plane. For details, see DIN 6581, definitions of metal-cutting technology; geometry at the tool edge.

6

Web thickness k

Test values : The web thickness according to Fig. 1 shall not be less than the minimum value k_{min} indicated in Fig. 2.

Test point : At the point of the drill.

Testing equipment : Slide gauge with measuring points.

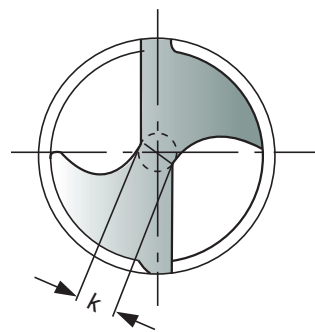


Figure 1. Web thickness k

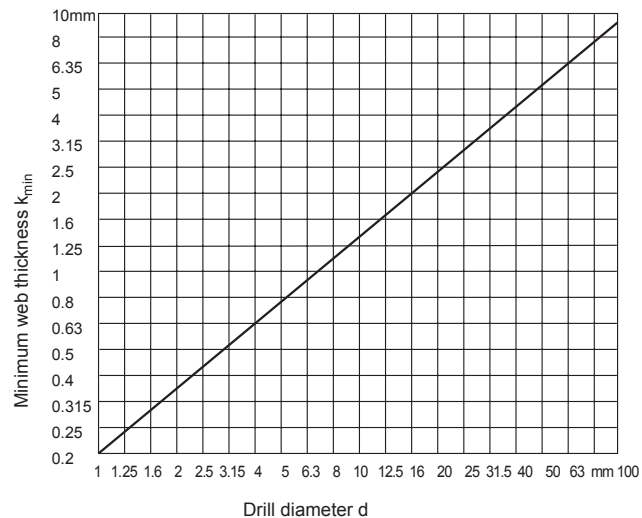


Figure 2. Web thickness k_{min}

7

Margin width b_α

Test values : The land width as in Fig. 3 shall lie within the limited values indicated in Fig. 4.

Test point : 5mm behind the corner

Testing equipment : Slide gauge

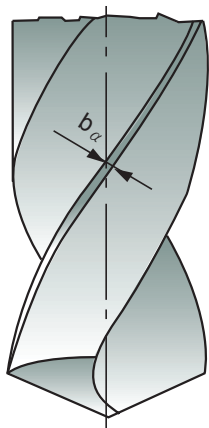


Figure 3. Margin width b_α

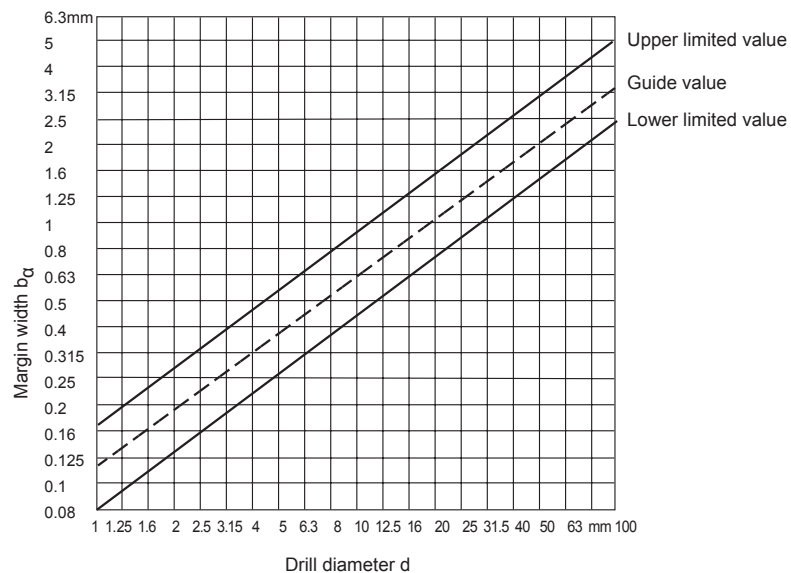


Figure 4. Margin width b_α

8

Angle on Twist Drills

(1) Side rake angle γ_f (Helix angle)

Recommended test value : Recommended ranges depending on the tool types N,H and W according to DIN 1836 and the diameter of the drill included in Fig. 5.

Test point : At the corner, see Fig. 6.

Testing equipment : According to VDI Guideline 3331 Part 1, Section Margin width b_α

Note : The side rake angle γ_f is measured in place of the orthogonal rake angle γ_o found in the wedge measuring plane (see DIN 6581), as this changes along the cutting edge (becoming smaller towards the point of the drill).

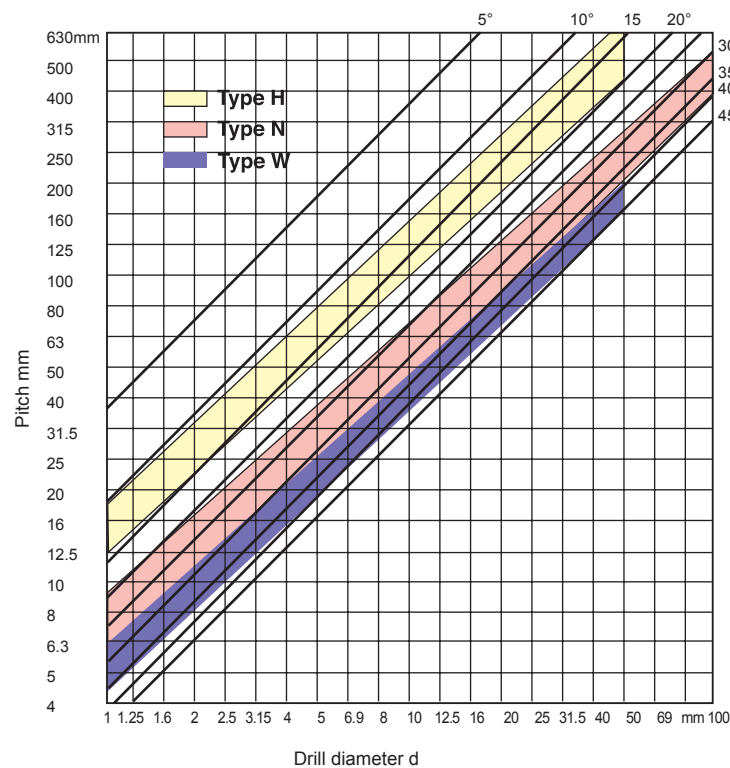


Figure 6. Side rake angle γ_f

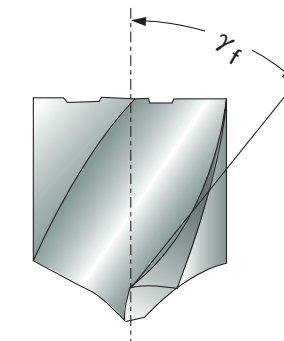


Figure 5. Side rake angle γ_f

(2) Point angle σ

Test value : Usual executin for tool types N and H : $\sigma = 118^\circ$,
for tool type W : $\sigma = 130^\circ$

Test point : At the cutting, see Fig. 7.

Testing equipment : According to VDI Guideline 3331 Part 1, Section Margin width b_α

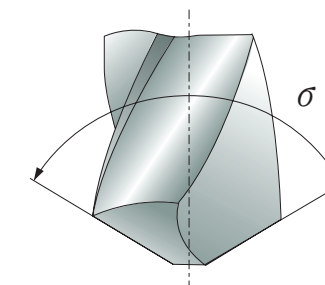


Figure 7. Point angle σ



Resharpener Twist Drills

(1) Drills are worn off irregularly. It should be sharpened prior to developing into excessive wear.

(2) Resharpener

- ① Grind the correct point angle to suit your application. (figure 8)
- ② Check that both cutting lips have the same angle. On a 130° point, each lip should be 65° toward the axis. The point must be on center, i.e., the chisel edge must produce cutting lips of equal length. (figure 8)
- ③ Grind Primary relief and Secondary clearance. (figure 9)
- ④ Grind web thinning. (figure 10)

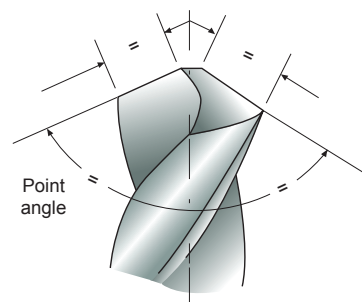


Figure 8

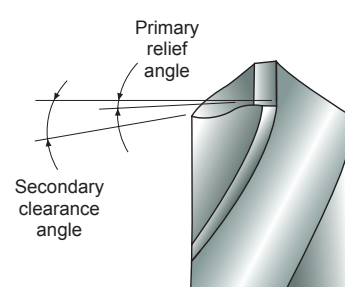


Figure 9

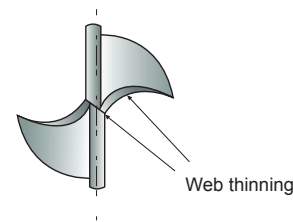


Figure 10



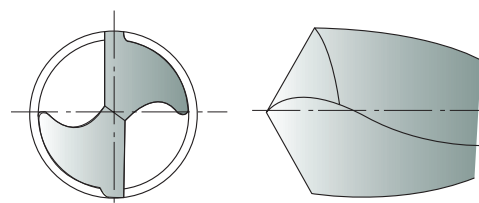
Web thinning

(1) Without thinning

Suitable for drill of general purpose.

Thanks to thin web thickness, web thinning is not needed.

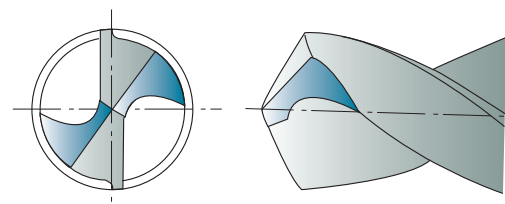
This without web thinning type is applied to design of drills for mild steels, alloy steels, cast iron, stainless steels, titanium, inconel, etc. and conventional cutting conditons.



(2) Type C thinning (DIN1412 FORM C, SPLIT POINT)

Because Split point enables good centering when drilling and breaks the chips, chip removals are easy.

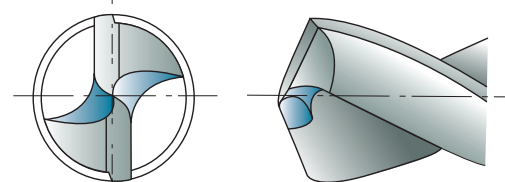
Suitable for drill design in high hardened tough materials, i.e., heat treated steels, titanium alloys, stainless steels, inconel, nimonon, etc.



(3) Type R thinning (HELICAL THINNING)

Helical thinning ensures to frequent chip breaking and removal.

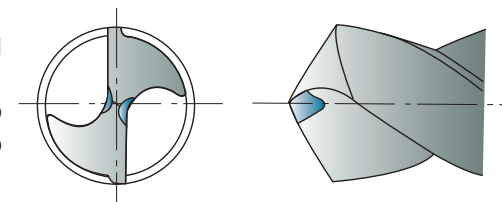
The different direction force of cutting edges and helical thinning parts enable that chips curl, break and remove through the flutes. In addition, helical thinning makes the chip room up to center, remove the chisel and enables good centering



(4) Type A thinning (DIN1412 FORM A)

A type thinnings makes thin chisel, good chip removal and favorable centering.

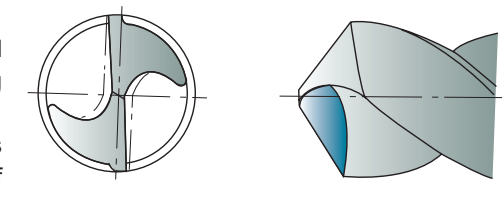
This type is the easiest type to grind the thinning. In narrow web and wide fluted drills, keeping of the rigidity and smooth chip removal are possible.



(5) Type B thinning (DIN1412 FORM B)

In case of work materials with low cutting resistance and good chip removal, i.e., cast iron, aluminum, plastic etc., B type thinning is suitable.

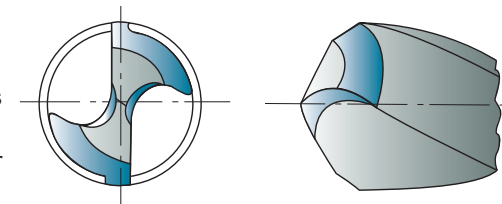
Especially when drills for high hardened steels are designed, this type is applied to decrease rake angle and avoid chipping of cutting lips.



(6) Type D thinning (DIN1412 FORM D)

Grey cast iron thinning; bevelling of external edges strengthens the cutting edge.

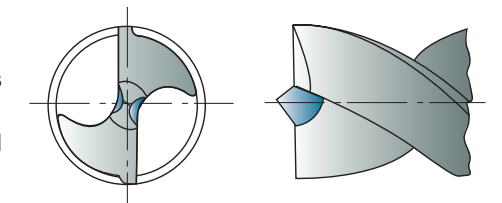
Used for medium to high grey cast iron hardness and for abrasives.



(7) Type E thinning (DIN1412 FORM E)

Center drill bit thinning; ensures optimal center drilling and does not leave burs in through holes.

As the bit and cutting edges are delicate, this bit should be used for drilling thin sheet metal.



Surface Finishes for high speed steels Twist Drills

(1) Bright Finish

Drills with a bright finish are without surface treatment and ground condition.

Especially bright finished drills are used in machining of non ferrous materials.

(2) Coloring (Gold color)

The coloring is a thin oxide layer formed on the tool surfaces.

This is often applied to cobalt high speed steels twist drills.

(3) Steam Tempered (black oxide finish)

This is a black oxide layer 1-2 μ m formed on the tool surfaces.

Steam Tempered treated drill is the result of a steam tempering operation. Because the oxide layer retains some coolant on the tool surface, and aids chip flow, helps to dissipate heat, steam homo treated drills are recommended for ferrous applications.



Coating

The use of coated cutting tools reduce production costs.

For example

- Avoidance of machine downtime due to premature tool wear.
- Higher cutting capabilities to reduce actual machining times.
- Reproducible tool life.
- Improvement of component surface quality.

(1) TiN (Titanium Nitride) coating

Titanium Nitride gives the tool a higher performance in comparison to traditional non-coated drills.

TiN coating, with good all-around properties, is recommended for the general application, i.e., attack by abrasive, adhesive and chemical wear in equal proportions.

(2) TiCN (Titanium Carbon Nitride) coating

TiCN coating should be employed when severe thermodynamic stress is expected, for example when drilling in high hardened steels or in mild steels with high speed and feed.

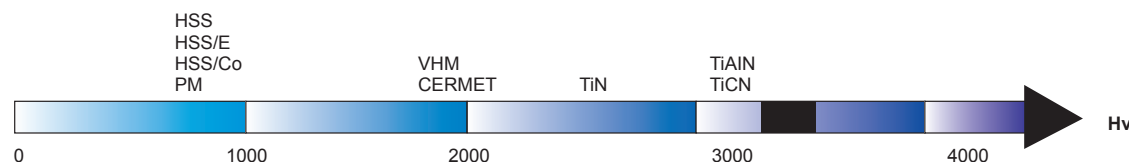
(3) TiAlN (Titanium Aluminum Nitride) coating

The addition of Aluminum to the Titanium Nitride produces an increase in hardness and an exceptional increase in resistance to oxidation at high temperature.

TiAlN coating is applied to drilling with severe thermal stress on cutting edges when continuous non-step feed, dry cutting or high speed cutting.

(4) Properties of coating

Properties	TiN	TiCN	TiAlN
Coating color	gold - yellow	blue - grey	violet - grey
Hardness (Hv 0.05)	2300	3000	3000
Coating thickness(μm)	1~4	1~4	1~5
Max. working temperature (°C)	600	400	800
Coefficient of friction against steels(dry)	0.4	0.4	0.4



(5) Selection of coating

Work-material	HSS TWIST DRILLS	CARBIDE DRILLS
Unalloyed steels	TiCN, TiAlN	TiCN, TiAlN
Steels < 1000 N/mm ²	TiCN, TiAlN	TiCN, TiAlN
Steels > 1000 N/mm ²	TiCN, TiAlN	TiCN, TiAlN
Stainless steels	TiCN, TiAlN	TiCN, TiAlN
Cast iron	TiCN, TiAlN	TiAlN
Al-wrought alloys	TiN	TiN
Al-cast alloys	TiCN	TiCN
Copper (pure)	CrN	CrN
Brass	TiCN	TiCN
Bronze	TiCN	TiCN



Drill sizes before Tapping

(1) Metric - ISO threads coarse pitch

Nominal diameter	Drill diameter	Nominal diameter	Drill diameter	Nominal diameter	Drill diameter	Nominal diameter	Drill diameter
		M3	2.5	M11	9.5	M30	26.5
M1	0.75	M3.5	2.9	M12	10.2	M33	29.5
M1.2	0.95	M4	3.3	M14	12.0	M36	32.0
M1.4	1.1	M5	4.2	M16	14.0	M39	35.0
M1.6	1.25	M6	5.0	M18	15.5	M42	37.5
M1.8	1.45	M7	6.0	M20	17.5	M45	40.5
M2	1.6	M8	6.8	M22	19.5	M48	43.0
M2.2	1.75	M9	7.8	M24	21.0	M52	47.0
M2.5	2.05	M10	8.5	M27	24.0	M56	50.5

(2) Metric ISO threads fine pitch

Nominal diameter	Tap Pitch	Drill diameter	Nominal diameter	Tap Pitch	Drill diameter	Nominal diameter	Tap Pitch	Drill diameter
2.5	0.35	2.15	17	1.5	15.5	33	1.5	31.5
3	0.35	2.65	18	1	17	33	2	31
3.5	0.35	3.15	18	1.5	16.5	33	3	30
4	0.5	3.5	18	2	16	35	1.5	33.5
4.5	0.5	4	20	1	19	36	1.5	34.5
5	0.5	4.5	20	1.5	18.5	36	2	34
5.5	0.5	5	20	2	18	36	3	33
6	0.75	5.2	22	1	21	38	1.5	36.5
7	0.75	6.2	22	1.5	20.5	39	1.5	37.5
8	0.75	7.2	22	2	20	39	2	37
8	1	7	24	1	23	39	3	36
9	0.75	8.2	24	1.5	22.5	40	1.5	38.5
9	1	8	24	2	22	40	2	38
10	0.75	9.2	25	1	24	40	3	37
10	1	9	25	1.5	23.5	42	1.5	40.5
10	1.25	8.8	25	2	23	42	2	40
11	0.75	10.2	26	1.5	24.5	42	3	39
11	1	10	27	1	26	45	1.5	43.5
12	1	11	27	1.5	25.5	45	2	43
12	1.25	10.8	27	2	25	45	3	42
12	1.5	10.5	28	1	27	48	1.5	46.5
14	1	13	28	1.5	26.5	48	2	46
14	1.25	12.8	28	2	26	48	3	45
14	1.5	12.5	30	1	29	50	1.5	48.5
15	1	14	30	1.5	28.5	50	2	48
15	1.5	13.5	30	2	28	50	3	47
16	1	15	30	3	27	52	1.5	50.5
16	1.5	14.5	32	1.5	30.5	52	2	50
17	1	16	32	2	30	52	3	49

(3) WITHWORTH pipe threads (BSP)

Nominal size inches	Drill diameter mm	Nominal size inches	Drill diameter mm
G1/8	8.8	G1 * 1/4	39.5
G1/4	11.8	G1 * 3/8	42.0
G3/8	15.25	G1 * 1/2	45.0
G1/2	19.0	G1 * 3/4	51.0
G5/8	21.0	G2	57.0
G3/4	24.5	G2 * 1/4	63.0
G7/8	28.25	G2 * 1/2	73.0
G1	30.75	G2 * 3/4	79.0
G1 1/8	35.5	G3	85.0

(4) American unified coarse threads

UNC	Drill diameter		UNC	Drill diameter	
	inches	mm		inches	mm
No. 1	53	1.51	7/16	U	9.35
No. 2	50	1.78	1/2	27/64	10.71
No. 3	47	1.99	9/16	31/64	12.30
No. 4	43	2.26	5/8	17/32	13.49
No. 5	38	2.58	3/4	21/32	16.67
No. 6	36	2.71	7/8	49/64	19.44
No. 8	29	3.45	1	7/8	22.22
No. 10	25	3.8	1 * 1/8	63/64	25.00
No. 12	16	4.5	1 * 1/4	1 * 7/64	28.18
1/4	7	5.11	1 * 3/8	1 * 7/32	30.95
5/16	F	6.53	1 * 1/2	1 * 11/32	34.13
3/8	5/16	7.94			

(5) American unified fine threads

NF	Drill diameter		NF	Drill diameter	
	inches	mm		inches	mm
No. 0	3/64	1.19	3/8	Q	8.43
No. 1	53	1.51	7/16	25/64	9.92
No. 2	50	1.78	1/2	29/64	11.51
No. 3	45	2.08	9/16	33/64	13.10
No. 4	42	2.37	5/8	37/64	14.86
No. 5	37	2.64	3/4	11/16	17.46
No. 6	33	2.87	7/8	13/16	20.64
No. 8	29	3.45	1	59/64	23.42
No. 10	21	4.04	1 * 1/8	1 * 3/64	26.59
No. 12	14	4.62	1 * 1/4	1 * 11/32	29.76
1/4	3	5.41	1 * 3/8	1 * 19/32	32.94
5/16	1	6.91	1 * 1/2	1 * 27/64	36.11

14 ISO Tolerance

Drill Diameter Tolerance Inch

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

Drill Diameter Tolerance Metric

Diameter (mm)	1 - 3 from to	3 - 6 over to	6 - 10 over to	10 - 18 over to	18 - 30 over to
h6	0 -.00024	0 -.00032	0 -.00036	0 -.00044	0 -.00052
h7	0 -.0004	0 -.00048	0 -.00059	0 -.00071	0 -.00083
h8	0 -.00056	0 -.00071	0 -.00087	0 -.00107	0 -.00130
m7	+0.00048 +.00007	+0.00063 +.00015	+0.00083 +.00023	+0.00099 +.00027	+0.00114 +.00031

15 Trouble Shooting in Drilling

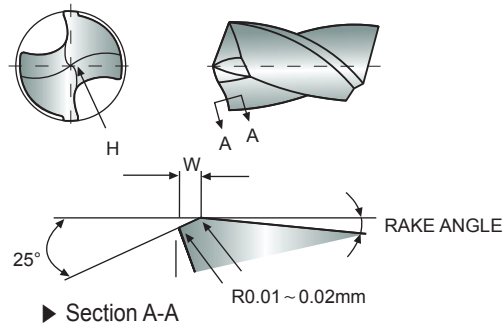
Occurrence of trouble	Cause of trouble	Countermeasures
Drill will not enter work	1. Drill is dull. 2. Lip relief too small. 3. Too thick a web.	1. Grind lip relief sufficiently. 2. Grind web thinning. 3. Choose a drill with narrow web.
Margin chipping	1. Oversized jig bushing.	1. Choose the suitable jig bushing for drill diameter
Cutting lip breaks	1. Lip relief too much. 2. Feed too heavy.	1. Grind lip relief sufficiently. 2. Decrease feed rate.
Tang breaks Bruch der	1. Imperfect fit between taper shank and socket. 2. Burred or Badly worn sockets.	1. Clean the dirt or chips in sockets. 2. Change the worn sockets to new ones.
Drill breaks in brass	1. Unsuitable drill 2. Flutes clogged with chips	1. Choose the suitable drill for work material.
Chipping of drill center	1. Lip relief too much. 2. Feed too heavy.	1. Grind lip relief sufficiently. 2. Decrease feed rate.
Hole oversize	1. Unequal angle or length of cutting edges. 2. Loosen spindle.	1. Resharpener point, choose correct drills. 2. Tighten spindle sufficiently.
Outer corners broken down	1. Cutting speed too high. 2. Hard spots in work material. 3. Flutes clogged with chips. 4. Too wear of drills.	1. Grind point to suit work material. 2. Decrease the feed rates. 3. Resharpener early before too wear.
Large chip of one flute and small chip of other flute	1. Improperly ground point. 2. Only one lip doing all the cutting	1. Properly grind point. 2. Grind point with same point angle and length of lip 3. Grind with small lip height.
Hole rough	1. Improperly ground point. 2. Unenough coolant supply 3. Too much feed. 4. Fixture not rigid.	1. Properly grind point. 2. Supply coolant enough. 3. Decrease the feed rate. 4. Tighten the fixture or replace.

16 Characteristic of DREAM DRILLS

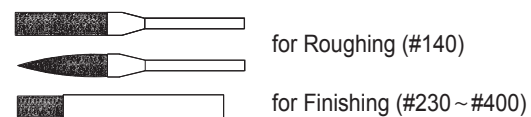
- YG-1's Dream Drill Series are suitable for high speed and accurate drilling operations by special design and high quality.
- Good performance for Steels, Cast Irons, Tool steels, Alloy steels and Stainless steels.
- Rapid chip evacuation and excellent chip breaking can be achieved by special designed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

17 Honing Guide of DREAM DRILLS

■ Dimension of Honing



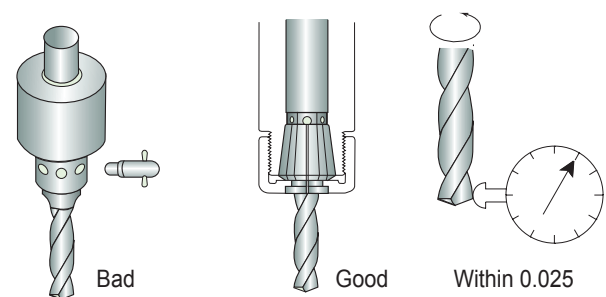
■ Scraper



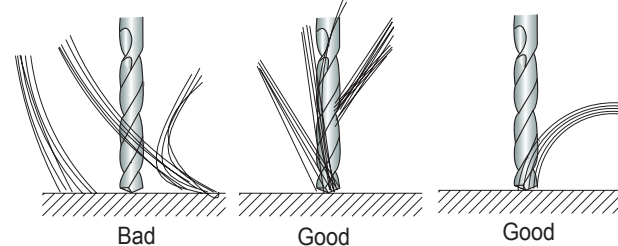
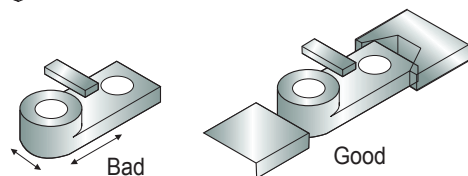
Work Material	Alloy Steels	Mild Steels	Cast Iron
W(mm)	0.15 ~ 0.2	0.1 ~ 0.15	0.03

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

18 Use of DREAM DRILLS

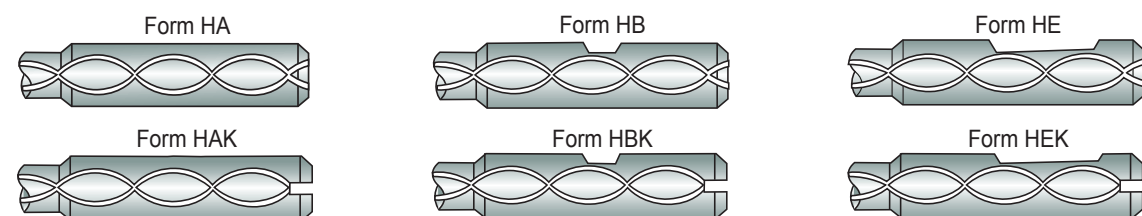


- ▶ Chucking with spring collet correctly.
- ▶ Radial run out at cutting lip must not exceed 0.025 mm.
- ▶ Tighten clamp of work piece.



- ▶ Supply coolant enough to the entrance of hole.
- ▶ When using Dream Drills with Coolant holes, Supply high pressure coolant.

19 Shank Type DREAM DRILLS with Coolant Holes



- ▶ Shank Type of stocked products is Form HA.
- ▶ If you need other Shank Type, we can supply them.

THREADING TOOLS

SOLID CARBIDE THREAD MILLS

COMBO TAPS(Spiral Point & Spiral Flute)

SPIRAL FLUTE TAPS

SPIRAL POINT TAPS

STRAIGHT FLUTE TAPS

FORMING TAPS

SCREW THREAD INSERT TAPS (STI)

PIPE TAPS

TECHNICAL DATA