

*WinDrill* series 錫鋼鑽頭系列  
Carbide Drill



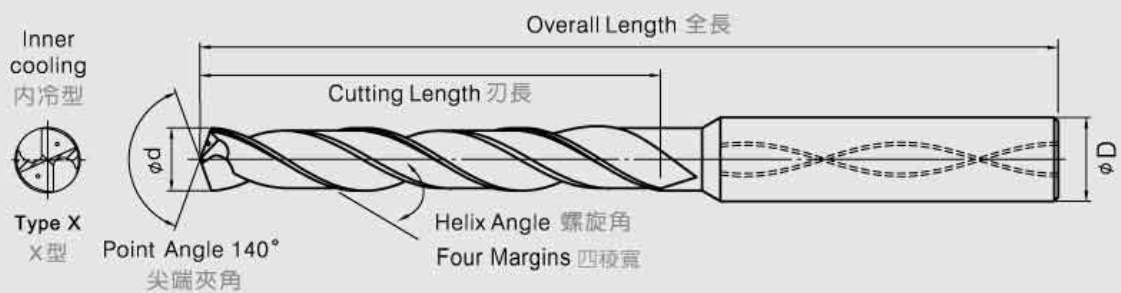
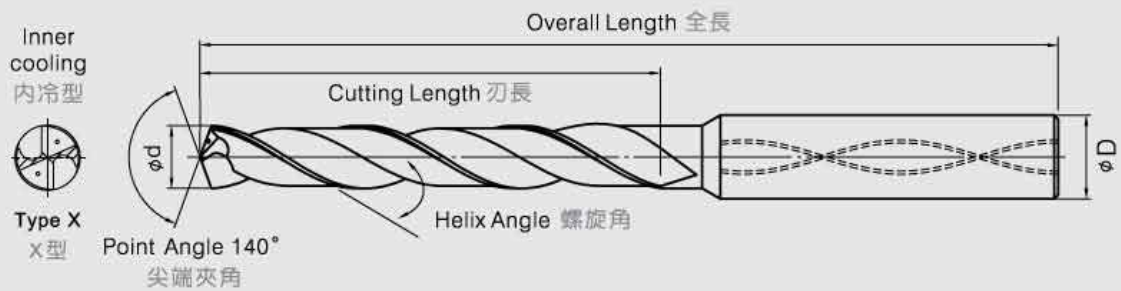
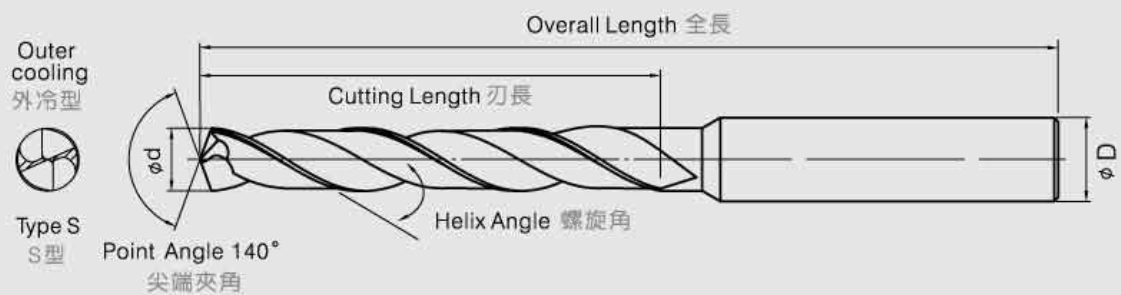
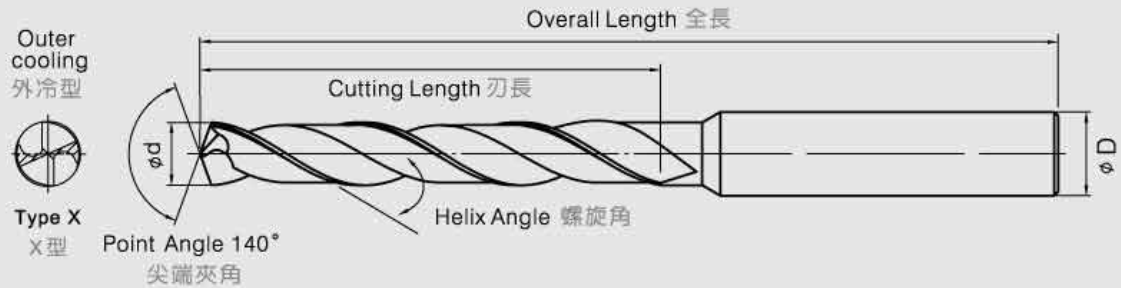


In Taiwan, WINSTAR CUTTING TECHNOLOGIES CORP is the most Professional Solid Carbide Drill manufacturer. We export high quality of cutting tools with sales network for more than 35 countries. Our strength lies on our technical innovation and provides suitable production in connecting with different domains, such as Aerospace, Medical, Automotive, Mechanical, Mold & Die, Electronic Industries' customize tool. No matter what application or industry you are serving, we are sure that Winstar can offer you the most suitable tools and outstanding quality with competitive price.

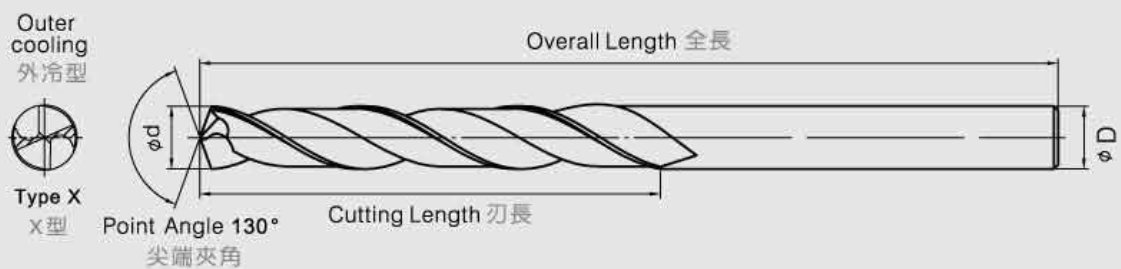
萬事達切削科技為台灣最專業鎢鋼鑽頭供應製造商。我們使用最精密加工設備、品質穩定、產品行銷全球多達35國以上。隨著科技與時代的進步，我們持續研發高品質、高效率及更穩定的新產品。並可根據客戶的特殊需求，訂做各種航天、醫療、汽車、機械、模具、電子加工業用等非標刀具。另備有優秀的專業人員回答客戶所遭遇的難題。



















因此萬事達切削科技擁有值得信賴的切削工具品質及售後服務。本著「全球服務、技術創新」的服務宗旨，歡迎客戶提出任何需要改善的地方，我們將力求百分之百客戶滿意度，努力成為客戶最滿意的合作夥伴。

### Endmill Shank 銑刀柄



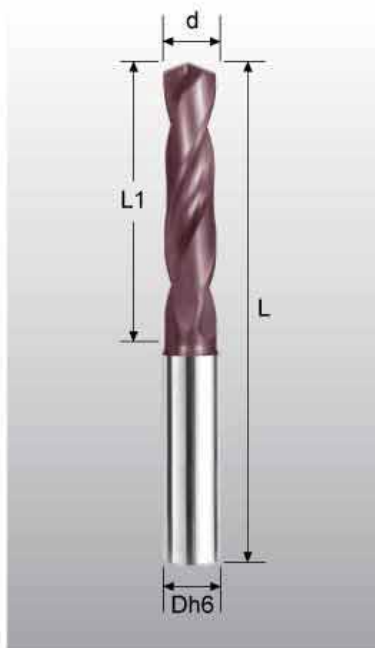
### Straight Shank 同柄



APPEARANCE	SERIES	ITEMS	CODE NO.
<b>G400 SERIES</b> <i>HIGH PERFORMANCE DRILLS (ENDMILL SHANK)</i>			
	DIN6537 - 3 x D	HIGH PERFORMANCE DRILLS	DST-MA, DST-NA
	DIN6537 - 5 x D	HIGH PERFORMANCE DRILLS	DSF-MA, DSF-NA
	DIN6537 - 3 x D	HIGH PERFORMANCE DRILLS WITH COOLANT	DST-CF, DST-HF
	DIN6537 - 5 x D	HIGH PERFORMANCE DRILLS WITH COOLANT	DSF-CF, DSF-HF
	WIN407 - 7 x D	HIGH PERFORMANCE DRILLS WITH COOLANT	DSS-CF, DSS-HF
	WIN412 -12x D	HIGH PERFORMANCE DRILLS WITH COOLANT	DSZ-HF
<b>G300 SERIES</b> <i>GENERAL PURPOSE DRILLS (STRAIGHT SHANK)</i>			
	DIN6539 - 3 x D	GENERAL PURPOSE DRILLS	DGT-NA
	DIN6539 - 5 x D	GENERAL PURPOSE DRILLS	DGF-NA
<b>H500 SERIES</b> <i>HARDENED DRILLS (ENDMILL SHANK)</i>			
	DIN6537 - 3 x D	HARDENED DRILLS FOR HARDENED STEEL	DHT-NA
<b>MICRO SERIES</b> <i>MICRO DRILLS (SHANK DIAMETER 3mm)</i>			
	WIN038A	MICRO DRILLS FOR NON-FERROUS	DGM-NA
	WIN038B	MICRO DRILLS FOR STEEL	DGM-NB
<b>DT SERIES</b> <i>SPOTTING DRILLS</i>			
	90 DEGREE	SPOTTING DRILLS	DTT-NA
	120 DEGREE	SPOTTING DRILLS	DTT-NA
	90 DEGREE	SPOTTING DRILLS - LONG SHANK	DTL-NA
	120 DEGREE	SPOTTING DRILLS - LONG SHANK	DTL-NA
<b>DC SERIES</b> <i>CENTER DRILLS</i>			
	60 DEGREE	CENTER DRILLS	DCT-NA
	90 DEGREE	CENTER DRILLS	DCT-NA
<b>DR SERIES</b> <i>STRAIGHT FLUTE DRILLS</i>			
	DIN6537 - 3 x D	FOR ALUMINUM & COPPER DRILLS	DRT-NA
	DIN6537 - 5 x D	FOR ALUMINUM & COPPER DRILLS	DRF-NA
<b>DIP SERIES</b> <i>P-TYPE INDEXABLE DRILLS</i>			
	3 x D	P-TYPE INDEXABLE DRILLS	DIP-HC
	5 x D	P-TYPE INDEXABLE DRILLS	DIP-HE
	7 x D	P-TYPE INDEXABLE DRILLS	DIP-HC
<b>DIW SERIES</b> <i>W-TYPE INDEXABLE DRILLS</i>			
	2 x D	W-TYPE INDEXABLE DRILLS	DIW-HB
	3 x D	W-TYPE INDEXABLE DRILLS	DIW-HC
	4 x D	W-TYPE INDEXABLE DRILLS	DIW-HD
<b>WIN RS SERIES</b> <i>MACHINE REAMERS</i>			
	WIN RS	MACHINE REAMERS	RST-NA

SERIES	ITEMS	DIA RANGE	PAGE
<b>G400 SERIES 高效能鑽頭</b>			
DIN6537 - 3 x D	高效能泛用鑽頭-短刃型-3xD (銑刀柄)	2.00 mm ~ 20.00 mm	1
DIN6537 - 5 x D	高效能泛用鑽頭-標準型-5xD (銑刀柄)	3.00 mm ~ 20.00 mm	4
DIN6537 - 3 x D	高效能內冷鑽頭-短刃型-3xD (銑刀柄)	2.00 mm ~ 20.00 mm	7
DIN6537 - 5 x D	高效能內冷鑽頭-標準型-5xD (銑刀柄)	3.00 mm ~ 20.00 mm	10
WIN407 - 7 x D	高效能內冷鑽頭-長刃型-7xD (銑刀柄)	3.00 mm ~ 16.00 mm	13
WIN412 - 12x D	高效能內冷鑽頭-長刃型-12xD (銑刀柄)	3.00 mm ~ 12.00 mm	15
<b>G300 SERIES 泛用鑽頭</b>			
DIN6539 - 3 x D	泛用鑽頭-短刃型-3xD (直柄)	2.00 mm ~ 16.00 mm	17
DIN6539 - 5 x D	泛用鑽頭-標準型-5xD (直柄)	5.00 mm ~ 16.00 mm	19
<b>H500 SERIES 高硬鑽頭</b>			
DIN6537 - 3 x D	高硬鑽頭-短刃型-3xD (銑刀柄)	3.00 mm ~ 16.00 mm	21
<b>MICRO SERIES 微小徑鑽頭 (3mm柄)</b>			
WIN038A	微小徑鑽頭-標準型 (3mm柄)	0.30 mm ~ 3.00 mm	22
WIN038B	微小徑鑽頭-標準型 (3mm柄)	0.50 mm ~ 3.00 mm	23
<b>DT SERIES 定點鑽</b>			
90 DEGREE	定點鑽-標準型	3.0 mm ~ 16.0 mm	24
120 DEGREE	定點鑽-標準型	3.0 mm ~ 16.0 mm	24
90 DEGREE	定點鑽-長柄型	4.0 mm ~ 16.0 mm	24
120 DEGREE	定點鑽-長柄型	4.0 mm ~ 16.0 mm	24
<b>DC SERIES 中心鑽頭</b>			
60 DEGREE	中心鑽頭 60型	1.0 mm ~ 5.0 mm	25
90 DEGREE	中心鑽頭 90型	1.0 mm ~ 5.0 mm	25
<b>DR SERIES 直刃鑽鉸刀</b>			
DIN6537 - 3 x D	直刃鑽鉸刀-標準型-3xD	3.00 mm ~ 20.00 mm	26
DIN6537 - 5 x D	直刃鑽鉸刀-長刃型-5xD	3.00 mm ~ 20.00 mm	26
<b>DIP SERIES P 型高效能鑽頭</b>			
3 x D	P 型高效能鑽頭-短刃型-3xD	10.0 mm ~ 35.0 mm	27
5 x D	P 型高效能鑽頭-標準型-5xD	10.0 mm ~ 35.0 mm	28
7 x D	P 型高效能鑽頭-長刃型-7xD	10.0 mm ~ 35.0 mm	29
<b>DIW SERIES W 型快速鑽頭</b>			
2 X D	W 型快速鑽頭-短刃型-2xD	15.0 mm ~ 42.0 mm	31
3 X D	W 型快速鑽頭-標準型-3xD	15.0 mm ~ 42.0 mm	32
4 X D	W 型快速鑽頭-長刃型-4xD	17.0 mm ~ 35.0 mm	33
<b>WIN RS SERIES 螺旋機械鉸刀</b>			
WIN RS	螺旋機械鉸刀	3.00 mm ~ 12.00 mm	35

**DST-MA2**  
**DST-NA2**



CUTTING EFFECTED LENGTH = 3xD

**Dimension**

- Sim. DIN6537
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- Without Coolant Hole
- S-Fire Coating

**Tolerance**

- d h7
- D h6

**Material**

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

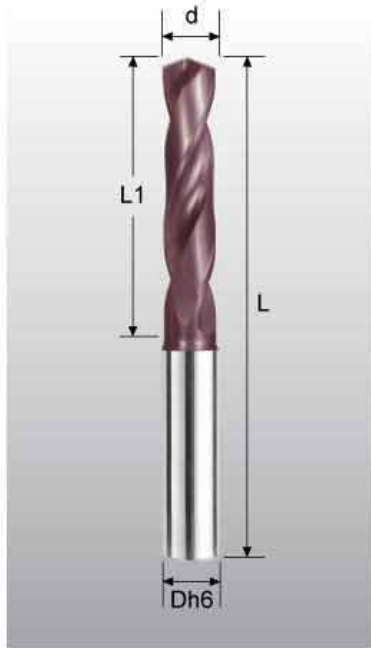
**Recommend**

**Cutting Condition**

Table 1

Order No. 訂購編號	Dia. 刀徑 (d)	CL 刃長 (L1)	OAL 全長 (L)	Shank 柄徑 (D)
DSTMA202006U	2.00	20	55	4
DSTMA202106U	2.10	20	55	4
DSTMA202206U	2.20	20	55	4
DSTMA202306U	2.30	20	55	4
DSTMA202406U	2.40	20	55	4
DSTMA202506U	2.50	20	55	4
DSTMA202606U	2.60	20	55	4
DSTMA202706U	2.70	20	55	4
DSTMA202806U	2.80	20	55	4
DSTMA202906U	2.90	20	55	4
DSTMA203006U	3.00	20	62	4
DSTMA203106U	3.10	20	62	4
DSTMA203176U	3.17	20	62	4
DSTMA203206U	3.20	20	62	4
DSTMA203256U	3.25	20	62	4
DSTMA203306U	3.30	20	62	4
DSTMA203406U	3.40	20	62	4
DSTMA203506U	3.50	20	62	4
DSTMA203606U	3.60	20	62	4
DSTMA203706U	3.70	20	62	4
DSTMA203806U	3.80	24	66	4
DSTMA203906U	3.90	24	66	4
DSTMA203976U	3.97	24	66	4
DSTNA204006U	4.00	24	66	6
DSTNA204106U	4.10	24	66	6
DSTNA204206U	4.20	24	66	6
DSTNA204306U	4.30	24	66	6
DSTNA204406U	4.40	24	66	6
DSTNA204506U	4.50	24	66	6
DSTNA204606U	4.60	24	66	6
DSTNA204656U	4.65	24	66	6
DSTNA204706U	4.70	24	66	6
DSTNA204806U	4.80	28	66	6
DSTNA204906U	4.90	28	66	6
DSTNA205006U	5.00	28	66	6
DSTNA205106U	5.10	28	66	6
DSTNA205206U	5.20	28	66	6
DSTNA205306U	5.30	28	66	6
DSTNA205406U	5.40	28	66	6
DSTNA205506U	5.50	28	66	6
DSTNA205566U	5.56	28	66	6
DSTNA205606U	5.60	28	66	6
DSTNA205706U	5.70	28	66	6
DSTNA205806U	5.80	28	66	6
DSTNA205906U	5.90	28	66	6

**DST-MA2**  
**DST-NA2**



CUTTING EFFECTED LENGTH = 3xD

**Dimension**

- Sim. DIN6537
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- Without Coolant Hole
- S-Fire Coating

**Tolerance**

- d h7
- D h6

**Material**

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

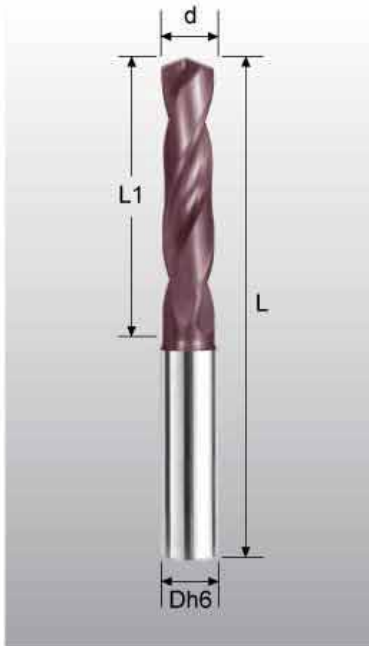
**Recommend Cutting Condition**

Table 1

Order No.	Dia.	CL	OAL	Shank
訂購編號	刃徑 (d)	刃長 (L1)	全長 (L)	柄徑 (D)
DSTNA206006U	6.00	28	66	6
DSTNA206106U	6.10	34	79	8
DSTNA206206U	6.20	34	79	8
DSTNA206306U	6.30	34	79	8
DSTNA206356U	6.35	34	79	8
DSTNA206406U	6.40	34	79	8
DSTNA206506U	6.50	34	79	8
DSTNA206606U	6.60	34	79	8
DSTNA206706U	6.70	34	79	8
DSTNA206806U	6.80	34	79	8
DSTNA206906U	6.90	34	79	8
DSTNA207006U	7.00	34	79	8
DSTNA207106U	7.10	41	79	8
DSTNA207206U	7.20	41	79	8
DSTNA207306U	7.30	41	79	8
DSTNA207406U	7.40	41	79	8
DSTNA207506U	7.50	41	79	8
DSTNA207606U	7.60	41	79	8
DSTNA207706U	7.70	41	79	8
DSTNA207806U	7.80	41	79	8
DSTNA207906U	7.90	41	79	8
DSTNA208006U	8.00	41	79	8
DSTNA208106U	8.10	47	89	10
DSTNA208206U	8.20	47	89	10
DSTNA208306U	8.30	47	89	10
DSTNA208406U	8.40	47	89	10
DSTNA208506U	8.50	47	89	10
DSTNA208606U	8.60	47	89	10
DSTNA208706U	8.70	47	89	10
DSTNA208806U	8.80	47	89	10
DSTNA208906U	8.90	47	89	10
DSTNA209006U	9.00	47	89	10
DSTNA209106U	9.10	47	89	10
DSTNA209206U	9.20	47	89	10
DSTNA209256U	9.25	47	89	10
DSTNA209306U	9.30	47	89	10
DSTNA209406U	9.40	47	89	10
DSTNA209506U	9.50	47	89	10
DSTNA209606U	9.60	47	89	10
DSTNA209706U	9.70	47	89	10
DSTNA209806U	9.80	47	89	10
DSTNA209906U	9.90	47	89	10
DSTNA210006U	10.00	47	89	10
DSTNA210106U	10.10	55	102	12
DSTNA210206U	10.20	55	102	12
DSTNA210306U	10.30	55	102	12
DSTNA210406U	10.40	55	102	12
DSTNA210506U	10.50	55	102	12
DSTNA210606U	10.60	55	102	12
DSTNA210706U	10.70	55	102	12
DSTNA210806U	10.80	55	102	12
DSTNA210906U	10.90	55	102	12

## DST-MA2

## DST-NA2



CUTTING EFFECTED LENGTH = 3xD

### Dimension

- Sim. DIN6537
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- Without Coolant Hole
- S-Fire Coating

### Tolerance

- d h7
- D h6

### Material

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

### Recommend

### Cutting Condition

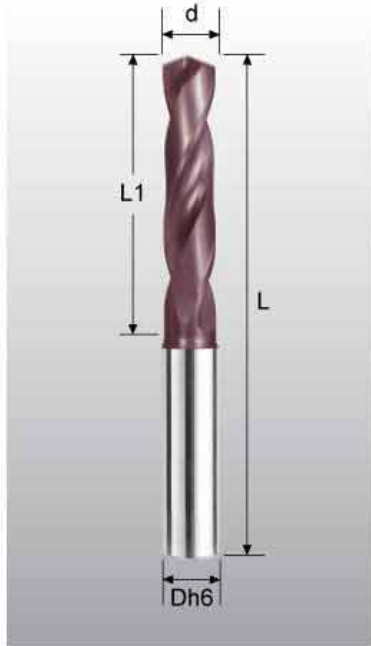
Table 1

Order No. 訂購編號	Dia. 刀徑 (d)	CL 刃長 (L1)	OAL 全長 (L)	Shank 柄徑 (D)
DSTNA211006U	11.00	55	102	12
DSTNA211106U	11.10	55	102	12
DSTNA211206U	11.20	55	102	12
DSTNA211306U	11.30	55	102	12
DSTNA211406U	11.40	55	102	12
DSTNA211506U	11.50	55	102	12
DSTNA211606U	11.60	55	102	12
DSTNA211706U	11.70	55	102	12
DSTNA211806U	11.80	55	102	12
DSTNA211906U	11.90	55	102	12
DSTNA212006U	12.00	55	102	12
DSTNA212106U	12.10	60	107	14
DSTNA212206U	12.20	60	107	14
DSTNA212306U	12.30	60	107	14
DSTNA212406U	12.40	60	107	14
DSTNA212506U	12.50	60	107	14
DSTNA212606U	12.60	60	107	14
DSTNA212706U	12.70	60	107	14
DSTNA212806U	12.80	60	107	14
DSTNA212906U	12.90	60	107	14
DSTNA213006U	13.00	60	107	14
DSTNA213206U	13.20	60	107	14
DSTNA213306U	13.30	60	107	14
DSTNA213506U	13.50	60	107	14
DSTNA213706U	13.70	60	107	14
DSTNA213806U	13.80	60	107	14
DSTNA214006U	14.00	60	107	14
DSTNA214206U	14.20	65	115	16
DSTNA214306U	14.30	65	115	16
DSTNA214406U	14.40	65	115	16
DSTNA214506U	14.50	65	115	16
DSTNA214706U	14.70	65	115	16
DSTNA215006U	15.00	65	115	16
DSTNA215206U	15.20	65	115	16
DSTNA215506U	15.50	65	115	16
DSTNA215606U	15.60	65	115	16
DSTNA215706U	15.70	65	115	16
DSTNA215806U	15.80	65	115	16
DSTNA216006U	16.00	65	115	16
DSTNA216506U	16.50	73	123	18
DSTNA217006U	17.00	73	123	18
DSTNA217506U	17.50	73	123	18
DSTNA218006U	18.00	73	123	18
DSTNA218506U	18.50	79	130	20
DSTNA219006U	19.00	79	130	20
DSTNA219506U	19.50	79	130	20
DSTNA220006U	20.00	79	130	20



**DSF-MA2**

**DSF-NA2**



CUTTING EFFECTED LENGTH = 5xD

**Dimension**

- Sim. DIN6537
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- Without Coolant Hole
- S-Fire Coating

**Tolerance**

- d h7
- D h6

**Material**

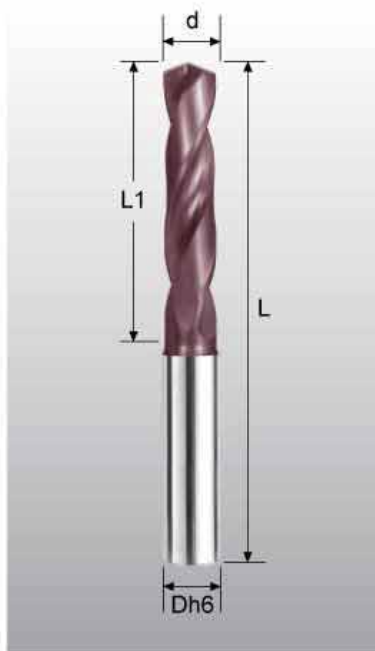
- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

**Recommend Cutting Condition**

Table 1

Order No. 訂購編號	Dia. 刃徑 (d)	CL 刃長 (L1)	OAL 全長 (L)	Shank 柄徑 (D)
DSFMA203006U	3.00	28	66	4
DSFMA203176U	3.17	28	66	4
DSFMA203256U	3.25	28	66	4
DSFMA203306U	3.30	28	66	4
DSFMA203406U	3.40	28	66	4
DSFMA203506U	3.50	28	66	4
DSFMA203576U	3.57	28	66	4
DSFMA203706U	3.70	36	74	4
DSFMA203806U	3.80	36	74	4
DSFMA203976U	3.97	36	74	4
DSFNA204006U	4.00	36	74	6
DSFNA204106U	4.10	36	74	6
DSFNA204206U	4.20	36	74	6
DSFNA204306U	4.30	36	74	6
DSFNA204406U	4.40	36	74	6
DSFNA204506U	4.50	36	74	6
DSFNA204606U	4.60	36	74	6
DSFNA204656U	4.65	36	74	6
DSFNA204706U	4.70	36	74	6
DSFNA204806U	4.80	44	82	6
DSFNA204906U	4.90	44	82	6
DSFNA205006U	5.00	44	82	6
DSFNA205106U	5.10	44	82	6
DSFNA205206U	5.20	44	82	6
DSFNA205306U	5.30	44	82	6
DSFNA205406U	5.40	44	82	6
DSFNA205506U	5.50	44	82	6
DSFNA205556U	5.55	44	82	6
DSFNA205606U	5.60	44	82	6
DSFNA205706U	5.70	44	82	6
DSFNA205806U	5.80	44	82	6
DSFNA205906U	5.90	44	82	6
DSFNA206006U	6.00	44	82	6
DSFNA206106U	6.10	53	91	8
DSFNA206206U	6.20	53	91	8
DSFNA206306U	6.30	53	91	8
DSFNA206406U	6.40	53	91	8
DSFNA206506U	6.50	53	91	8
DSFNA206606U	6.60	53	91	8
DSFNA206706U	6.70	53	91	8
DSFNA206806U	6.80	53	91	8
DSFNA206906U	6.90	53	91	8

**DSF-MA2**  
**DSF-NA2**



CUTTING EFFECTED LENGTH = 5xD

**Dimension**

- Sim. DIN6537
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- Without Coolant Hole
- S-Fire Coating

**Tolerance**

- d h7
- D h6

**Material**

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

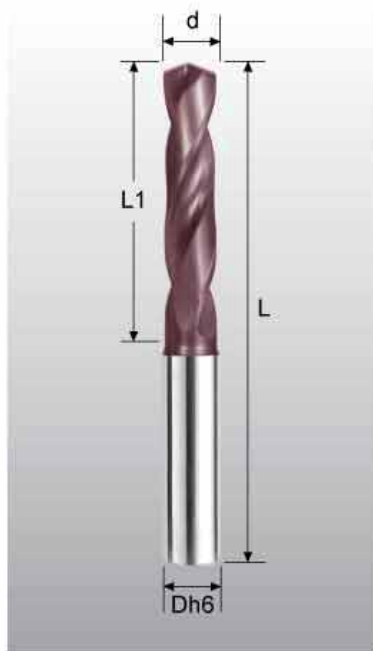
**Recommend**

**Cutting Condition**

Table 1

Order No. 訂購編號	Dia. 刃徑 (d)	CL 刃長 (L1)	OAL 全長 (L)	Shank 柄徑 (D)
DSFNA207006U	7.00	53	91	8
DSFNA207106U	7.10	53	91	8
DSFNA207206U	7.20	53	91	8
DSFNA207306U	7.30	53	91	8
DSFNA207406U	7.40	53	91	8
DSFNA207506U	7.50	53	91	8
DSFNA207606U	7.60	53	91	8
DSFNA207706U	7.70	53	91	8
DSFNA207806U	7.80	53	91	8
DSFNA207906U	7.90	53	91	8
DSFNA208006U	8.00	53	91	8
DSFNA208106U	8.10	61	102	10
DSFNA208206U	8.20	61	102	10
DSFNA208306U	8.30	61	102	10
DSFNA208406U	8.40	61	102	10
DSFNA208506U	8.50	61	102	10
DSFNA208606U	8.60	61	102	10
DSFNA208706U	8.70	61	102	10
DSFNA208806U	8.80	61	102	10
DSFNA208906U	8.90	61	102	10
DSFNA209006U	9.00	61	102	10
DSFNA209106U	9.10	61	102	10
DSFNA209206U	9.20	61	102	10
DSFNA209256U	9.25	61	102	10
DSFNA209306U	9.30	61	102	10
DSFNA209406U	9.40	61	102	10
DSFNA209506U	9.50	61	102	10
DSFNA209606U	9.60	61	102	10
DSFNA209706U	9.70	61	102	10
DSFNA209806U	9.80	61	102	10
DSFNA209906U	9.90	61	102	10
DSFNA210006U	10.00	61	102	10
DSFNA210106U	10.10	71	118	12
DSFNA210206U	10.20	71	118	12
DSFNA210306U	10.30	71	118	12
DSFNA210406U	10.40	71	118	12
DSFNA210506U	10.50	71	118	12
DSFNA210606U	10.60	71	118	12
DSFNA210706U	10.70	71	118	12
DSFNA210806U	10.80	71	118	12
DSFNA210906U	10.90	71	118	12
DSFNA211006U	11.00	71	118	12
DSFNA211106U	11.10	71	118	12
DSFNA211206U	11.20	71	118	12
DSFNA211306U	11.30	71	118	12
DSFNA211406U	11.40	71	118	12
DSFNA211506U	11.50	71	118	12
DSFNA211606U	11.60	71	118	12
DSFNA211706U	11.70	71	118	12
DSFNA211806U	11.80	71	118	12
DSFNA211906U	11.90	71	118	12

**DSF-MA2**  
**DSF-NA2**



CUTTING EFFECTED LENGTH = 5xD

**Dimension**

- Sim. DIN6537
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- Without Coolant Hole
- S-Fire Coating

**Tolerance**

- d h7
- D h6

**Material**

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

**Recommend Cutting Condition**

Table 1

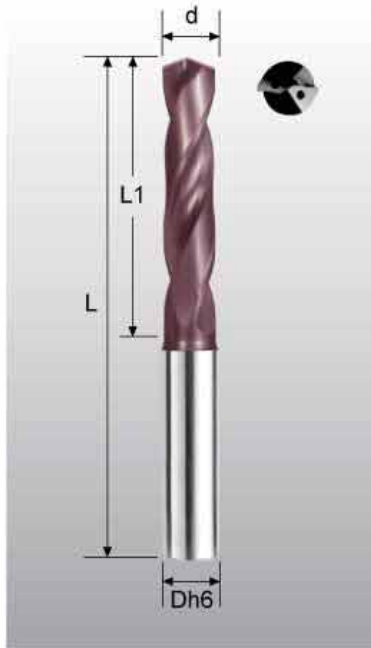
Order No. 訂購編號	Dia. 刃徑 (d)	CL 刃長 (L1)	OAL 全長 (L)	Shank 柄徑 (D)
DSFNA212006U	12.00	71	118	12
DSFNA212106U	12.10	77	124	14
DSFNA212206U	12.20	77	124	14
DSFNA212306U	12.30	77	124	14
DSFNA212406U	12.40	77	124	14
DSFNA212506U	12.50	77	124	14
DSFNA212606U	12.60	77	124	14
DSFNA212706U	12.70	77	124	14
DSFNA212806U	12.80	77	124	14
DSFNA212906U	12.90	77	124	14
DSFNA213006U	13.00	77	124	14
DSFNA213106U	13.10	77	124	14
DSFNA213306U	13.30	77	124	14
DSFNA213406U	13.40	77	124	14
DSFNA213506U	13.50	77	124	14
DSFNA213606U	13.60	77	124	14
DSFNA213706U	13.70	77	124	14
DSFNA213806U	13.80	77	124	14
DSFNA213906U	13.90	77	124	14
DSFNA214006U	14.00	77	124	14
DSFNA214106U	14.10	83	130	16
DSFNA214206U	14.20	83	130	16
DSFNA214306U	14.30	83	130	16
DSFNA214406U	14.40	83	130	16
DSFNA214506U	14.50	83	130	16
DSFNA214606U	14.60	83	130	16
DSFNA214706U	14.70	83	130	16
DSFNA214806U	14.80	83	130	16
DSFNA214906U	14.90	83	130	16
DSFNA215006U	15.00	83	130	16
DSFNA215106U	15.10	83	130	16
DSFNA215206U	15.20	83	130	16
DSFNA215306U	15.30	83	130	16
DSFNA215406U	15.40	83	130	16
DSFNA215506U	15.50	83	130	16
DSFNA215606U	15.60	83	130	16
DSFNA215706U	15.70	83	130	16
DSFNA215806U	15.80	83	130	16
DSFNA215906U	15.90	83	130	16
DSFNA216006U	16.00	83	130	16
DSFNA216506U	16.50	93	143	18
DSFNA217006U	17.00	93	143	18
DSFNA217506U	17.50	93	143	18
DSFNA218006U	18.00	93	143	18
DSFNA218506U	18.50	101	153	20
DSFNA219006U	19.00	101	153	20
DSFNA219506U	19.50	101	153	20
DSFNA220006U	20.00	101	153	20

MICRO GRAIN CARBIDE HIGH PERFORMANCE DRILLS - Endmill Shank

With Coolant Hole - 2F(3xD) 高效能內冷鑽頭-短刃型-3xD (銑刀柄)

**DST-CA2**

**DST-HA2**



CUTTING EFFECTED LENGTH = 3xD

**Dimension**

- Sim. DIN6537
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- With Coolant Hole
- S-Fire Coating

**Tolerance**

- d h7
- D h6

**Material**

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

**Recommend Cutting Condition**

Table 2

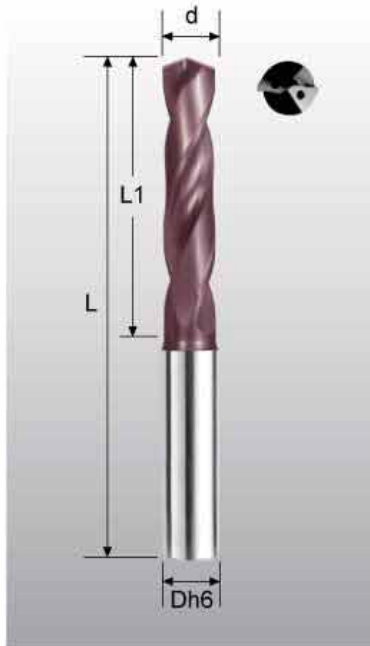
Order No.	Dia.	CL	OAL	Shank
訂購編號	刃徑 (d)	刃長 (L1)	全長 (L)	柄徑 (D)
DSTCA202006U	2.00	20	50	3
DSTCA203006U	3.00	20	50	4
DSTCA203106U	3.10	20	50	4
DSTCA203176U	3.17	20	50	4
DSTCA203206U	3.20	20	50	4
DSTCA203256U	3.25	20	50	4
DSTCA203306U	3.30	20	50	4
DSTCA203406U	3.40	20	50	4
DSTCA203506U	3.50	20	50	4
DSTCA203606U	3.60	20	50	4
DSTCA203706U	3.70	20	50	4
DSTCA203806U	3.80	24	60	4
DSTCA203906U	3.90	24	60	4
DSTCA203976U	3.97	24	60	4
DSTCA204006U	4.00	24	60	4
DSTHA204106U	4.10	24	65	6
DSTHA204206U	4.20	24	65	6
DSTHA204306U	4.30	24	65	6
DSTHA204406U	4.40	24	65	6
DSTHA204506U	4.50	24	65	6
DSTHA204606U	4.60	24	65	6
DSTHA204656U	4.65	24	65	6
DSTHA204706U	4.70	24	65	6
DSTHA204806U	4.80	28	65	6
DSTHA204906U	4.90	28	65	6
DSTHA205006U	5.00	28	65	6
DSTHA205106U	5.10	28	65	6
DSTHA205206U	5.20	28	65	6
DSTHA205306U	5.30	28	65	6
DSTHA205406U	5.40	28	65	6
DSTHA205506U	5.50	28	65	6
DSTHA205566U	5.56	28	65	6
DSTHA205606U	5.60	28	65	6
DSTHA205706U	5.70	28	65	6
DSTHA205806U	5.80	28	65	6
DSTHA205906U	5.90	28	65	6
DSTHA206006U	6.00	28	65	6
DSTHA206106U	6.10	34	79	8
DSTHA206206U	6.20	34	79	8
DSTHA206306U	6.30	34	79	8
DSTHA206356U	6.35	34	79	8
DSTHA206406U	6.40	34	79	8
DSTHA206506U	6.50	34	79	8
DSTHA206606U	6.60	34	79	8
DSTHA206706U	6.70	34	79	8

MICRO GRAIN CARBIDE HIGH PERFORMANCE DRILLS - Endmill Shank

With Coolant Hole - 2F(3xD) 高效能內冷鑽頭-短刃型-3xD (銑刀柄)

**DST-CA2**

**DST-HA2**



CUTTING EFFECTED LENGTH = 3xD

**Dimension**

- Sim. DIN6537
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- With Coolant Hole
- S-Fire Coating

**Tolerance**

- d h7
- D h6

**Material**

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

**Recommend Cutting Condition**

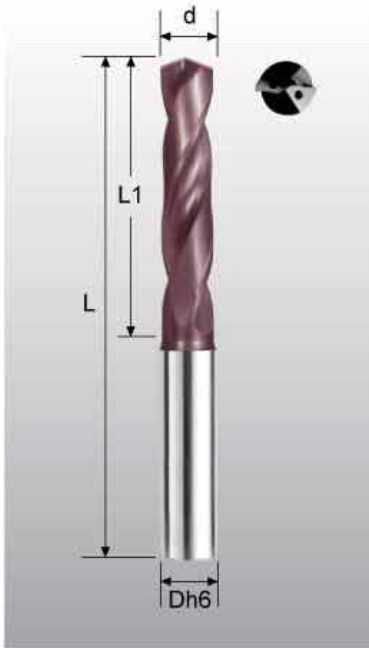
Table 2

Order No.	Dia.	CL	OAL	Shank
訂購編號	刃徑 (d)	刃長 (L1)	全長 (L)	柄徑 (D)
DSTHA206806U	6.80	34	79	8
DSTHA206906U	6.90	34	79	8
DSTHA207006U	7.00	34	79	8
DSTHA207106U	7.10	41	79	8
DSTHA207206U	7.20	41	79	8
DSTHA207306U	7.30	41	79	8
DSTHA207406U	7.40	41	79	8
DSTHA207506U	7.50	41	79	8
DSTHA207606U	7.60	41	79	8
DSTHA207706U	7.70	41	79	8
DSTHA207806U	7.80	41	79	8
DSTHA207906U	7.90	41	79	8
DSTHA208006U	8.00	41	79	8
DSTHA208106U	8.10	47	89	10
DSTHA208206U	8.20	47	89	10
DSTHA208306U	8.30	47	89	10
DSTHA208406U	8.40	47	89	10
DSTHA208506U	8.50	47	89	10
DSTHA208606U	8.60	47	89	10
DSTHA208706U	8.70	47	89	10
DSTHA208806U	8.80	47	89	10
DSTHA208906U	8.90	47	89	10
DSTHA209006U	9.00	47	89	10
DSTHA209106U	9.10	47	89	10
DSTHA209206U	9.20	47	89	10
DSTHA209256U	9.25	47	89	10
DSTHA209306U	9.30	47	89	10
DSTHA209406U	9.40	47	89	10
DSTHA209506U	9.50	47	89	10
DSTHA209606U	9.60	47	89	10
DSTHA209706U	9.70	47	89	10
DSTHA209806U	9.80	47	89	10
DSTHA209906U	9.90	47	89	10
DSTHA210006U	10.00	47	89	10
DSTHA210106U	10.10	55	102	12
DSTHA210206U	10.20	55	102	12
DSTHA210306U	10.30	55	102	12
DSTHA210406U	10.40	55	102	12
DSTHA210506U	10.50	55	102	12
DSTHA210606U	10.60	55	102	12
DSTHA210706U	10.70	55	102	12
DSTHA210806U	10.80	55	102	12
DSTHA210906U	10.90	55	102	12
DSTHA211006U	11.00	55	102	12
DSTHA211106U	11.10	55	102	12

MICRO GRAIN CARBIDE HIGH PERFORMANCE DRILLS - Endmill Shank

With Coolant Hole - 2F(3xD) 高効能内冷鑽頭-短刃型-3xD (銑刀柄)

**DST-CA2**  
**DST-HA2**



CUTTING EFFECTED LENGTH = 3xD

**Dimension**

- Sim. DIN6537
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- With Coolant Hole
- S-Fire Coating

**Tolerance**

- d h7
- D h6

**Material**

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

**Recommend Cutting Condition**

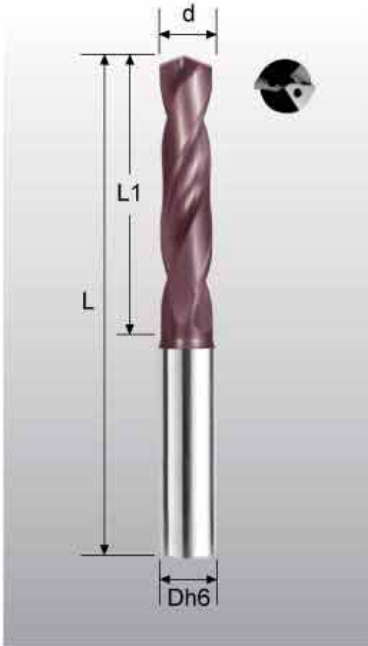
Table 2

Order No.	Dia.	CL	OAL	Shank
訂購編號	刃徑 (d)	刃長 (L1)	全長 (L)	柄徑 (D)
DSTHA211206U	11.20	55	102	12
DSTHA211306U	11.30	55	102	12
DSTHA211406U	11.40	55	102	12
DSTHA211506U	11.50	55	102	12
DSTHA211606U	11.60	55	102	12
DSTHA211706U	11.70	55	102	12
DSTHA211806U	11.80	55	102	12
DSTHA211906U	11.90	55	102	12
DSTHA212006U	12.00	55	102	12
DSTHA212106U	12.10	60	105	14
DSTHA212206U	12.20	60	105	14
DSTHA212306U	12.30	60	105	14
DSTHA212406U	12.40	60	105	14
DSTHA212506U	12.50	60	105	14
DSTHA212606U	12.60	60	105	14
DSTHA212706U	12.70	60	105	14
DSTHA212806U	12.80	60	105	14
DSTHA212906U	12.90	60	105	14
DSTHA213006U	13.00	60	105	14
DSTHA213206U	13.20	60	105	14
DSTHA213306U	13.30	60	105	14
DSTHA213506U	13.50	60	105	14
DSTHA213706U	13.70	60	105	14
DSTHA213806U	13.80	60	105	14
DSTHA214006U	14.00	60	105	14
DSTHA214206U	14.20	65	110	16
DSTHA214306U	14.30	65	110	16
DSTHA214406U	14.40	65	110	16
DSTHA214506U	14.50	65	110	16
DSTHA214706U	14.70	65	110	16
DSTHA215006U	15.00	65	110	16
DSTHA215206U	15.20	65	110	16
DSTHA215506U	15.50	65	110	16
DSTHA215606U	15.60	65	110	16
DSTHA215706U	15.70	65	110	16
DSTHA215806U	15.80	65	110	16
DSTHA216006U	16.00	65	110	16
DSTHA216506U	16.50	73	123	18
DSTHA217006U	17.00	73	123	18
DSTHA217506U	17.50	73	123	18
DSTHA218006U	18.00	73	123	18
DSTHA218506U	18.50	79	130	20
DSTHA219006U	19.00	79	130	20
DSTHA219506U	19.50	79	130	20
DSTHA220006U	20.00	79	130	20

MICRO GRAIN CARBIDE HIGH PERFORMANCE DRILLS - Endmill Shank

With Coolant Hole - 2F(5xD) 高效能內冷鑽頭-標準型-5xD (銑刀柄)

**DSF-CA2**  
**DSF-HA2**



CUTTING EFFECTED LENGTH = 5xD

**Dimension**

- Sim. DIN6537
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- With Coolant Hole
- S-Fire Coating

**Tolerance**

- d h7
- D h6

**Material**

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

**Recommend Cutting Condition**

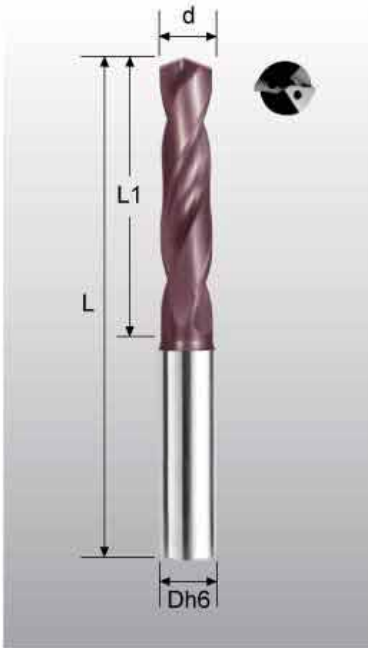
Table 2

Order No.	Dia.	CL	OAL	Shank
訂購編號	刃徑 (d)	刃長 (L1)	全長 (L)	柄徑 (D)
DSFCA203006U	3.00	28	60	4
DSFCA203176U	3.17	28	60	4
DSFCA203256U	3.25	28	60	4
DSFCA203306U	3.30	28	60	4
DSFCA203406U	3.40	28	60	4
DSFCA203506U	3.50	28	60	4
DSFCA203576U	3.57	28	60	4
DSFCA203706U	3.70	36	74	4
DSFCA203806U	3.80	36	74	4
DSFCA203976U	3.97	36	74	4
DSFCA204006U	4.00	36	74	4
DSFHA204106U	4.10	36	74	6
DSFHA204206U	4.20	36	74	6
DSFHA204306U	4.30	36	74	6
DSFHA204406U	4.40	36	74	6
DSFHA204506U	4.50	36	74	6
DSFHA204606U	4.60	36	74	6
DSFHA204656U	4.65	36	74	6
DSFHA204706U	4.70	36	74	6
DSFHA204806U	4.80	44	81	6
DSFHA204906U	4.90	44	81	6
DSFHA205006U	5.00	44	81	6
DSFHA205106U	5.10	44	81	6
DSFHA205206U	5.20	44	81	6
DSFHA205306U	5.30	44	81	6
DSFHA205406U	5.40	44	81	6
DSFHA205506U	5.50	44	81	6
DSFHA205556U	5.55	44	81	6
DSFHA205606U	5.60	44	81	6
DSFHA205706U	5.70	44	81	6
DSFHA205806U	5.80	44	81	6
DSFHA205906U	5.90	44	81	6
DSFHA206006U	6.00	44	81	6
DSFHA206106U	6.10	53	91	8
DSFHA206206U	6.20	53	91	8
DSFHA206306U	6.30	53	91	8
DSFHA206406U	6.40	53	91	8
DSFHA206506U	6.50	53	91	8
DSFHA206606U	6.60	53	91	8
DSFHA206706U	6.70	53	91	8
DSFHA206806U	6.80	53	91	8
DSFHA206906U	6.90	53	91	8
DSFHA207006U	7.00	53	91	8
DSFHA207106U	7.10	53	91	8
DSFHA207206U	7.20	53	91	8
DSFHA207306U	7.30	53	91	8
DSFHA207406U	7.40	53	91	8

MICRO GRAIN CARBIDE HIGH PERFORMANCE DRILLS - Endmill Shank

With Coolant Hole - 2F(5xD) 高效能內冷鑽頭-標準型-5xD (銑刀柄)

**DSF-CA2**  
**DSF-HA2**



CUTTING EFFECTED LENGTH = 5xD

**Dimension**

- Sim. DIN6537
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- With Coolant Hole
- S-Fire Coating

**Tolerance**

- d h7
- D h6

**Material**

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

**Recommend Cutting Condition**

Table 2

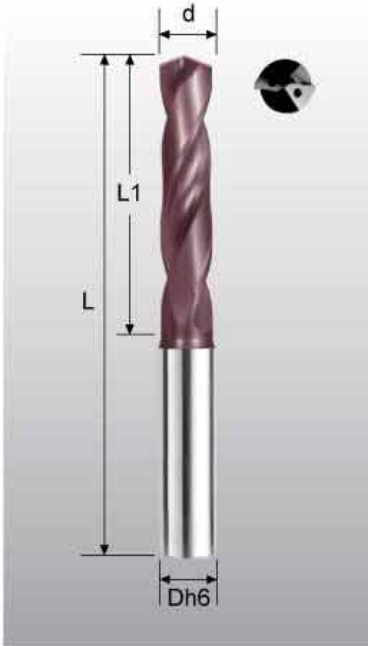
Order No.	Dia.	CL	OAL	Shank
訂購編號	刃徑 (d)	刃長 (L1)	全長 (L)	柄徑 (D)
DSFHA207506U	7.50	53	91	8
DSFHA207606U	7.60	53	91	8
DSFHA207706U	7.70	53	91	8
DSFHA207806U	7.80	53	91	8
DSFHA207906U	7.90	53	91	8
DSFHA208006U	8.00	53	91	8
DSFHA208106U	8.10	61	102	10
DSFHA208206U	8.20	61	102	10
DSFHA208306U	8.30	61	102	10
DSFHA208406U	8.40	61	102	10
DSFHA208506U	8.50	61	102	10
DSFHA208606U	8.60	61	102	10
DSFHA208706U	8.70	61	102	10
DSFHA208806U	8.80	61	102	10
DSFHA208906U	8.90	61	102	10
DSFHA209006U	9.00	61	102	10
DSFHA209106U	9.10	61	102	10
DSFHA209206U	9.20	61	102	10
DSFHA209256U	9.25	61	102	10
DSFHA209306U	9.30	61	102	10
DSFHA209406U	9.40	61	102	10
DSFHA209506U	9.50	61	102	10
DSFHA209606U	9.60	61	102	10
DSFHA209706U	9.70	61	102	10
DSFHA209806U	9.80	61	102	10
DSFHA209906U	9.90	61	102	10
DSFHA210006U	10.00	61	102	10
DSFHA210106U	10.10	71	118	12
DSFHA210206U	10.20	71	118	12
DSFHA210306U	10.30	71	118	12
DSFHA210406U	10.40	71	118	12
DSFHA210506U	10.50	71	118	12
DSFHA210606U	10.60	71	118	12
DSFHA210706U	10.70	71	118	12
DSFHA210806U	10.80	71	118	12
DSFHA210906U	10.90	71	118	12
DSFHA211006U	11.00	71	118	12
DSFHA211106U	11.10	71	118	12
DSFHA211206U	11.20	71	118	12
DSFHA211306U	11.30	71	118	12
DSFHA211406U	11.40	71	118	12
DSFHA211506U	11.50	71	118	12
DSFHA211606U	11.60	71	118	12
DSFHA211706U	11.70	71	118	12
DSFHA211806U	11.80	71	118	12
DSFHA211906U	11.90	71	118	12
DSFHA212006U	12.00	71	118	12



MICRO GRAIN CARBIDE HIGH PERFORMANCE DRILLS - Endmill Shank

With Coolant Hole - 2F(5xD) 高效能內冷鑽頭-標準型-5xD(銑刀柄)

**DSF-CA2**  
**DSF-HA2**



CUTTING EFFECTED LENGTH = 5xD

**Dimension**

- Sim. DIN6537
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- With Coolant Hole
- S-Fire Coating

**Tolerance**

- d h7
- D h6

**Material**

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

**Recommend Cutting Condition**

Table 2

Order No.	Dia.	CL	OAL	Shank
訂購編號	刃徑 (d)	刃長 (L1)	全長 (L)	柄徑 (D)
DSFHA212106U	12.10	77	120	14
DSFHA212206U	12.20	77	120	14
DSFHA212306U	12.30	77	120	14
DSFHA212406U	12.40	77	120	14
DSFHA212506U	12.50	77	120	14
DSFHA212606U	12.60	77	120	14
DSFHA212706U	12.70	77	120	14
DSFHA212806U	12.80	77	120	14
DSFHA212906U	12.90	77	120	14
DSFHA213006U	13.00	77	120	14
DSFHA213106U	13.10	77	120	14
DSFHA213306U	13.30	77	120	14
DSFHA213406U	13.40	77	120	14
DSFHA213506U	13.50	77	120	14
DSFHA213606U	13.60	77	120	14
DSFHA213706U	13.70	77	120	14
DSFHA213806U	13.80	77	120	14
DSFHA213906U	13.90	77	120	14
DSFHA214006U	14.00	77	120	14
DSFHA214106U	14.10	83	130	16
DSFHA214206U	14.20	83	130	16
DSFHA214306U	14.30	83	130	16
DSFHA214406U	14.40	83	130	16
DSFHA214506U	14.50	83	130	16
DSFHA214606U	14.60	83	130	16
DSFHA214706U	14.70	83	130	16
DSFHA214806U	14.80	83	130	16
DSFHA214906U	14.90	83	130	16
DSFHA215006U	15.00	83	130	16
DSFHA215106U	15.10	83	130	16
DSFHA215206U	15.20	83	130	16
DSFHA215306U	15.30	83	130	16
DSFHA215406U	15.40	83	130	16
DSFHA215506U	15.50	83	130	16
DSFHA215606U	15.60	83	130	16
DSFHA215706U	15.70	83	130	16
DSFHA215806U	15.80	83	130	16
DSFHA215906U	15.90	83	130	16
DSFHA216006U	16.00	83	130	16
DSFHA216506U	16.50	93	143	18
DSFHA217006U	17.00	93	143	18
DSFHA217506U	17.50	93	143	18
DSFHA218006U	18.00	93	143	18
DSFHA218506U	18.50	101	153	20
DSFHA219006U	19.00	101	153	20
DSFHA219506U	19.50	101	153	20
DSFHA220006U	20.00	101	153	20

MICRO GRAIN CARBIDE HIGH PERFORMANCE DRILLS - Endmill Shank

With Coolant Hole - 2F(7xD) 高效能內冷鑽頭-長刃型-7xD (銑刀柄)

**DSS-CF2**

**DSS-HF2**



CUTTING EFFECTED LENGTH = 7xD

**Dimension**

- Win 407
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- With Coolant Hole
- Four Margins
- S-Fire Coating

**Tolerance**

- d h7
- D h6

**Material**

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

**Recommend Cutting Condition**

Table 3

Order No. 訂購編號	Dia. 刃徑 (d)	CL 刃長 (L1)	OAL 全長 (L)	Shank 柄徑 (D)
DSSCF203006U	3.00	30	70	4
DSSCF203106U	3.10	30	70	4
DSSCF203206U	3.20	30	70	4
DSSCF203256U	3.25	30	70	4
DSSCF203306U	3.30	30	70	4
DSSCF203406U	3.40	36	75	4
DSSCF203506U	3.50	36	75	4
DSSCF203606U	3.60	36	75	4
DSSCF203706U	3.70	36	75	4
DSSCF203806U	3.80	38	75	4
DSSCF203906U	3.90	38	75	4
DSSCF204006U	4.00	38	75	4
DSSHf204106U	4.10	38	75	6
DSSHf204206U	4.20	38	75	6
DSSHf204306U	4.30	45	85	6
DSSHf204406U	4.40	45	85	6
DSSHf204506U	4.50	45	85	6
DSSHf204606U	4.60	45	85	6
DSSHf204656U	4.65	45	85	6
DSSHf204706U	4.70	45	85	6
DSSHf204806U	4.80	50	90	6
DSSHf204906U	4.90	50	90	6
DSSHf205006U	5.00	50	90	6
DSSHf205106U	5.10	50	90	6
DSSHf205206U	5.20	50	90	6
DSSHf205306U	5.30	50	90	6
DSSHf205406U	5.40	57	97	6
DSSHf205506U	5.50	57	97	6
DSSHf205706U	5.70	57	97	6
DSSHf205806U	5.80	57	97	6
DSSHf205906U	5.90	57	97	6
DSSHf206006U	6.00	57	97	6
DSSHf206206U	6.20	66	106	8
DSSHf206306U	6.30	66	106	8
DSSHf206356U	6.35	66	106	8
DSSHf206506U	6.50	66	106	8
DSSHf206606U	6.60	66	106	8
DSSHf206706U	6.70	66	106	8
DSSHf206806U	6.80	66	106	8
DSSHf206906U	6.90	76	116	8
DSSHf207006U	7.00	76	116	8
DSSHf207106U	7.10	76	116	8
DSSHf207206U	7.20	76	116	8
DSSHf207506U	7.50	76	116	8
DSSHf207606U	7.60	76	116	8
DSSHf207706U	7.70	76	116	8
DSSHf207806U	7.80	76	116	8

MICRO GRAIN CARBIDE HIGH PERFORMANCE DRILLS - Endmill Shank

With Coolant Hole - 2F(7xD) 高效能內冷鑽頭-長刃型-7xD (銑刀柄)

**DSS-CF2**  
**DSS-HF2**



CUTTING EFFECTED LENGTH = 7xD

**Dimension**

- Win 407
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- With Coolant Hole
- Four Margins
- S-Fire Coating

**Tolerance**

- d h7
- D h6

**Material**

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

**Recommend Cutting Condition**

Table 3

Order No. 訂購編號	Dia. 刃徑 (d)	CL 刃長 (L1)	OAL 全長 (L)	Shank 柄徑 (D)
DSSHF208006U	8.00	76	116	8
DSSHF208106U	8.10	87	131	10
DSSHF208206U	8.20	87	131	10
DSSHF208406U	8.40	87	131	10
DSSHF208506U	8.50	87	131	10
DSSHF208606U	8.60	87	131	10
DSSHF208706U	8.70	87	131	10
DSSHF208806U	8.80	87	131	10
DSSHF208906U	9.00	87	131	10
DSSHF209006U	9.10	95	139	10
DSSHF209106U	9.20	95	139	10
DSSHF209206U	9.30	95	139	10
DSSHF209306U	9.40	95	139	10
DSSHF209506U	9.50	95	139	10
DSSHF209526U	9.52	95	139	10
DSSHF209706U	9.70	95	139	10
DSSHF209806U	9.80	95	139	10
DSSHF210006U	10.00	95	139	10
DSSHF210206U	10.20	106	155	12
DSSHF210306U	10.30	106	155	12
DSSHF210506U	10.50	106	155	12
DSSHF210726U	10.72	106	155	12
DSSHF210806U	10.80	106	155	12
DSSHF211006U	11.00	106	155	12
DSSHF211206U	11.20	114	155	12
DSSHF211506U	11.50	114	155	12
DSSHF211806U	11.80	114	155	12
DSSHF212006U	12.00	114	155	12
DSSHF212106U	12.10	133	182	14
DSSHF212206U	12.20	133	182	14
DSSHF212306U	12.30	133	182	14
DSSHF212506U	12.50	133	182	14
DSSHF212706U	12.70	133	182	14
DSSHF213006U	13.00	133	182	14
DSSHF213506U	13.50	133	182	14
DSSHF214006U	14.00	133	182	14
DSSHF214106U	14.10	152	200	16
DSSHF214206U	14.20	152	200	16
DSSHF214506U	14.50	152	200	16
DSSHF215006U	15.00	152	200	16
DSSHF215506U	15.50	152	200	16
DSSHF215876U	15.87	152	200	16
DSSHF216006U	16.00	152	200	16

MICRO GRAIN CARBIDE HIGH PERFORMANCE DRILLS - Endmill Shank

With Coolant Hole - 2F(12xD) 高效能內冷鑽頭-長刃型-12xD (銑刀柄)

# DSZ-HF2



CUTTING EFFECTED LENGTH = 12xD

### Dimension

- Win 412
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- With Coolant Hole
- Four Margins
- S-Fire Coating

### Tolerance

- d h7
- D h6

### Material

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

### Recommend Cutting Condition

Table 3

Order No. 訂購編號	Dia. 刃徑 (d)	CL 刃長 (L1)	OAL 全長 (L)	Shank 柄徑 (D)
DSZHF203006U	3.00	50	90	6
DSZHF203106U	3.10	50	90	6
DSZHF203176U	3.17	50	90	6
DSZHF203206U	3.20	50	90	6
DSZHF203306U	3.30	50	90	6
DSZHF203406U	3.40	50	90	6
DSZHF203506U	3.50	50	90	6
DSZHF203606U	3.60	50	90	6
DSZHF203706U	3.70	50	90	6
DSZHF203806U	3.80	64	102	6
DSZHF203906U	3.90	64	102	6
DSZHF204006U	4.00	64	102	6
DSZHF204106U	4.10	64	102	6
DSZHF204206U	4.20	64	102	6
DSZHF204306U	4.30	64	102	6
DSZHF204406U	4.40	64	102	6
DSZHF204506U	4.50	64	102	6
DSZHF204606U	4.60	64	102	6
DSZHF204706U	4.70	64	102	6
DSZHF204806U	4.80	78	116	6
DSZHF204906U	4.90	78	116	6
DSZHF205006U	5.00	78	116	6
DSZHF205106U	5.10	78	116	6
DSZHF205206U	5.20	78	116	6
DSZHF205306U	5.30	78	116	6
DSZHF205406U	5.40	78	116	6
DSZHF205506U	5.50	78	116	6
DSZHF205606U	5.60	78	116	6
DSZHF205706U	5.70	78	116	6
DSZHF205806U	5.80	78	116	6
DSZHF205906U	5.90	78	116	6
DSZHF206006U	6.00	78	116	6
DSZHF206106U	6.10	108	146	8
DSZHF206206U	6.20	108	146	8
DSZHF206306U	6.30	108	146	8
DSZHF206356U	6.35	108	146	8
DSZHF206406U	6.40	108	146	8
DSZHF206506U	6.50	108	146	8
DSZHF206606U	6.60	108	146	8
DSZHF206706U	6.70	108	146	8
DSZHF206806U	6.80	108	146	8
DSZHF206906U	6.90	108	146	8
DSZHF207006U	7.00	108	146	8
DSZHF207106U	7.10	108	146	8
DSZHF207206U	7.20	108	146	8
DSZHF207306U	7.30	108	146	8
DSZHF207406U	7.40	108	146	8
DSZHF207506U	7.50	108	146	8
DSZHF207606U	7.60	108	146	8
DSZHF207706U	7.70	108	146	8
DSZHF207806U	7.80	108	146	8
DSZHF207906U	7.90	108	146	8

MICRO GRAIN CARBIDE HIGH PERFORMANCE DRILLS - Endmill Shank

With Coolant Hole - 2F(12xD) 高效能內冷鑽頭-長刃型-12xD (銑刀柄)

# DSZ-HF2



CUTTING EFFECTED LENGTH = 12xD

Order No. 訂購編號	Dia. 刃徑 (d)	CL 刃長 (L1)	OAL 全長 (L)	Shank 柄徑 (D)
DSZHF208006U	8.00	108	146	8
DSZHF208106U	8.10	120	162	10
DSZHF208206U	8.20	120	162	10
DSZHF208306U	8.30	120	162	10
DSZHF208406U	8.40	120	162	10
DSZHF208506U	8.50	120	162	10
DSZHF208606U	8.60	120	162	10
DSZHF208706U	8.70	120	162	10
DSZHF208806U	8.80	120	162	10
DSZHF208906U	8.90	120	162	10
DSZHF209006U	9.00	120	162	10
DSZHF209106U	9.10	120	162	10
DSZHF209206U	9.20	120	162	10
DSZHF209306U	9.30	120	162	10
DSZHF209406U	9.40	120	162	10
DSZHF209506U	9.50	120	162	10
DSZHF209526U	9.52	120	162	10
DSZHF209606U	9.60	120	162	10
DSZHF209706U	9.70	120	162	10
DSZHF209806U	9.80	120	162	10
DSZHF209906U	9.90	120	162	10
DSZHF210006U	10.00	120	162	10
DSZHF210206U	10.20	156	204	12
DSZHF210506U	10.50	156	204	12
DSZHF211006U	11.00	156	204	12
DSZHF211506U	11.50	156	204	12
DSZHF212006U	12.00	156	204	12

### Dimension

- Win 412
- 140 Degree Tip Angle
- 25~35 Degree Helix Angle
- With Coolant Hole
- Four Margins
- S-Fire Coating

### Tolerance

- d h7
- D h6

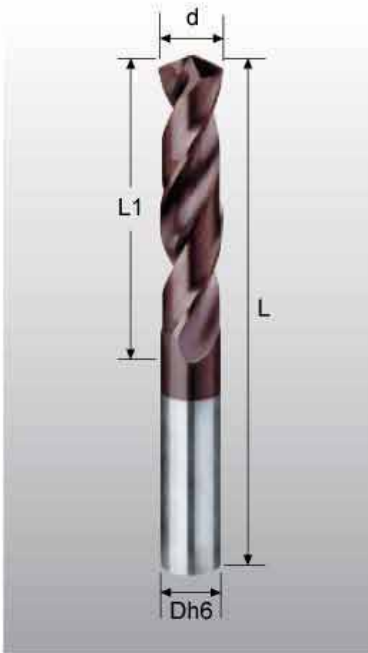
### Material

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON
- TITANIUM STEELS

### Recommend Cutting Condition

Table 3

## DGT-NA2



CUTTING EFFECTED LENGTH = 3xD

### Dimension

- Sim. DIN6539
- 130 Degree Tip Angle
- 25~35 Degree Helix Angle
- Without Coolant Hole
- S-Fire Coating

### Tolerance

- d h7
- D h6

### Material

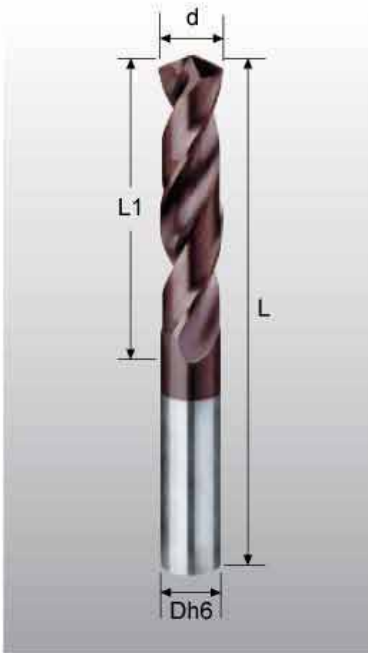
- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON

### Recommend Cutting Condition

Table 1

Order No. 訂購編號	Dia. 刃徑 (d)	CL 刃長 (L1)	OAL 全長 (L)
DGTNA202005U	2.00	12	38
DGTNA202105U	2.10	12	38
DGTNA202205U	2.20	13	40
DGTNA202305U	2.30	13	40
DGTNA202385U	2.38	14	43
DGTNA202405U	2.40	14	43
DGTNA202505U	2.50	14	43
DGTNA202605U	2.60	14	43
DGTNA202705U	2.70	16	46
DGTNA202785U	2.78	16	46
DGTNA202805U	2.80	16	46
DGTNA202905U	2.90	16	46
DGTNA203005U	3.00	16	46
DGTNA203105U	3.10	18	49
DGTNA203175U	3.17	18	49
DGTNA203205U	3.20	18	49
DGTNA203305U	3.30	18	49
DGTNA203405U	3.40	20	52
DGTNA203505U	3.50	20	52
DGTNA203575U	3.57	20	52
DGTNA203605U	3.60	20	52
DGTNA203705U	3.70	20	52
DGTNA203805U	3.80	22	55
DGTNA203905U	3.90	22	55
DGTNA203975U	3.97	22	55
DGTNA204005U	4.00	22	55
DGTNA204105U	4.10	22	55
DGTNA204205U	4.20	24	58
DGTNA204305U	4.30	24	58
DGTNA204375U	4.37	24	58
DGTNA204405U	4.40	24	58
DGTNA204505U	4.50	24	58
DGTNA204605U	4.60	24	58
DGTNA204705U	4.70	24	58
DGTNA204765U	4.76	26	62
DGTNA204805U	4.80	26	62
DGTNA204905U	4.90	26	62
DGTNA205005U	5.00	26	62
DGTNA205105U	5.10	26	62
DGTNA205205U	5.20	26	62
DGTNA205305U	5.30	26	62
DGTNA205405U	5.40	28	66
DGTNA205505U	5.50	28	66
DGTNA205605U	5.60	28	66
DGTNA205705U	5.70	28	66
DGTNA205805U	5.80	28	66
DGTNA205905U	5.90	28	66
DGTNA206005U	6.00	28	66
DGTNA206105U	6.10	31	70
DGTNA206205U	6.20	31	70
DGTNA206305U	6.30	31	70
DGTNA206355U	6.35	31	70
DGTNA206405U	6.40	31	70
DGTNA206505U	6.50	31	70
DGTNA206605U	6.60	31	70
DGTNA206705U	6.70	31	70
DGTNA206805U	6.80	34	74
DGTNA206905U	6.90	34	74

## DGT-NA2



CUTTING EFFECTED LENGTH = 3xD

### Dimension

- Sim. DIN6539
- 130 Degree Tip Angle
- 25~35 Degree Helix Angle
- Without Coolant Hole
- S-Fire Coating

### Tolerance

- d h7
- D h6

### Material

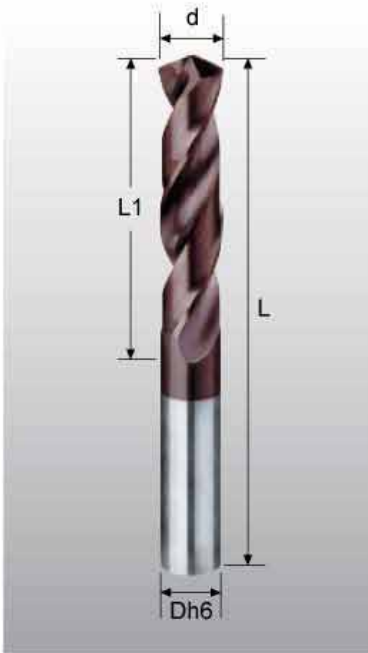
- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON

### Recommend Cutting Condition

Table 1

Order No. 訂購編號	Dia. 刃徑 (d)	CL 刃長 (L1)	OAL 全長 (L)
DGTNA207005U	7.00	34	74
DGTNA207105U	7.10	34	74
DGTNA207145U	7.14	34	74
DGTNA207205U	7.20	34	74
DGTNA207305U	7.30	34	74
DGTNA207405U	7.40	34	74
DGTNA207505U	7.50	34	74
DGTNA207605U	7.60	37	79
DGTNA207705U	7.70	37	79
DGTNA207805U	7.80	37	79
DGTNA207905U	7.90	37	79
DGTNA207945U	7.94	37	79
DGTNA208005U	8.00	37	79
DGTNA208105U	8.10	37	79
DGTNA208205U	8.20	37	79
DGTNA208305U	8.30	37	79
DGTNA208405U	8.40	37	79
DGTNA208505U	8.50	37	79
DGTNA208605U	8.60	37	79
DGTNA208705U	8.70	37	79
DGTNA208735U	8.73	40	84
DGTNA208805U	8.80	40	84
DGTNA208905U	8.90	40	84
DGTNA209005U	9.00	40	84
DGTNA209105U	9.10	40	84
DGTNA209205U	9.20	40	84
DGTNA209305U	9.30	40	84
DGTNA209405U	9.40	40	84
DGTNA209505U	9.50	40	84
DGTNA209705U	9.70	43	89
DGTNA209805U	9.80	43	89
DGTNA209905U	9.90	43	89
DGTNA210005U	10.00	43	89
DGTNA210105U	10.10	43	89
DGTNA210205U	10.20	43	89
DGTNA210305U	10.30	43	89
DGTNA210405U	10.40	43	89
DGTNA210505U	10.50	43	89
DGTNA210605U	10.60	43	89
DGTNA210805U	10.80	47	95
DGTNA210905U	10.90	47	95
DGTNA211005U	11.00	47	95
DGTNA211105U	11.10	47	95
DGTNA211205U	11.20	47	95
DGTNA211505U	11.50	47	95
DGTNA211605U	11.60	47	95
DGTNA211805U	11.80	47	95
DGTNA211905U	11.90	51	102
DGTNA212005U	12.00	51	102
DGTNA212505U	12.50	51	102
DGTNA212705U	12.70	51	102
DGTNA213005U	13.00	51	102
DGTNA213505U	13.50	54	107
DGTNA214005U	14.00	54	107
DGTNA214505U	14.50	56	111
DGTNA215005U	15.00	56	111
DGTNA215505U	15.50	58	115
DGTNA216005U	16.00	58	115

## DGF-NA2



CUTTING EFFECTED LENGTH = 5xD

### Dimension

- Sim. DIN6539
- 130 Degree Tip Angle
- 25~35 Degree Helix Angle
- With Coolant Hole
- S-Fire Coating

### Tolerance

- d h7
- D h6

### Material

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON

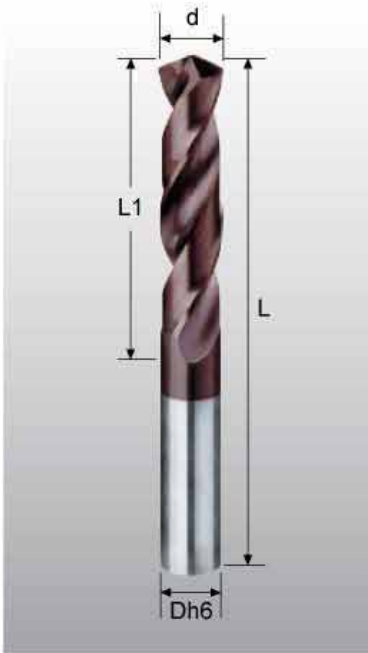
### Recommend Cutting Condition

Table 1

Order No. 訂購編號	Dia. 刃徑 (d)	CL 刃長 (L1)	OAL 全長 (L)
DGFNA205005U	5.00	34	73
DGFNA205105U	5.10	38	76
DGFNA205205U	5.20	38	76
DGFNA205305U	5.30	38	76
DGFNA205405U	5.40	38	76
DGFNA205505U	5.50	38	76
DGFNA205605U	5.60	41	81
DGFNA205705U	5.70	41	81
DGFNA205805U	5.80	41	81
DGFNA205905U	5.90	41	81
DGFNA206005U	6.00	41	81
DGFNA206105U	6.10	41	81
DGFNA206205U	6.20	41	81
DGFNA206305U	6.30	41	81
DGFNA206405U	6.40	41	81
DGFNA206505U	6.50	41	81
DGFNA206605U	6.60	43	83
DGFNA206705U	6.70	43	83
DGFNA206805U	6.80	43	83
DGFNA206905U	6.90	43	83
DGFNA207005U	7.00	43	83
DGFNA207105U	7.10	45	87
DGFNA207205U	7.20	45	87
DGFNA207305U	7.30	45	87
DGFNA207405U	7.40	45	87
DGFNA207505U	7.50	45	87
DGFNA207605U	7.60	48	90
DGFNA207705U	7.70	48	90
DGFNA207805U	7.80	48	90
DGFNA207905U	7.90	48	90
DGFNA208005U	8.00	48	90
DGFNA208105U	8.10	53	96
DGFNA208205U	8.20	53	96
DGFNA208305U	8.30	53	96
DGFNA208405U	8.40	53	96
DGFNA208505U	8.50	53	96
DGFNA208605U	8.60	55	98
DGFNA208705U	8.70	55	98



## DGF-NA2



CUTTING EFFECTED LENGTH = 5xD

### Dimension

- Sim. DIN6539
- 130 Degree Tip Angle
- 25~35 Degree Helix Angle
- With Coolant Hole
- S-Fire Coating

### Tolerance

- d h7
- D h6

### Material

- ALLOY STEELS
- STAINLESS STEELS
- CAST IRON

### Recommend Cutting Condition

Table 1

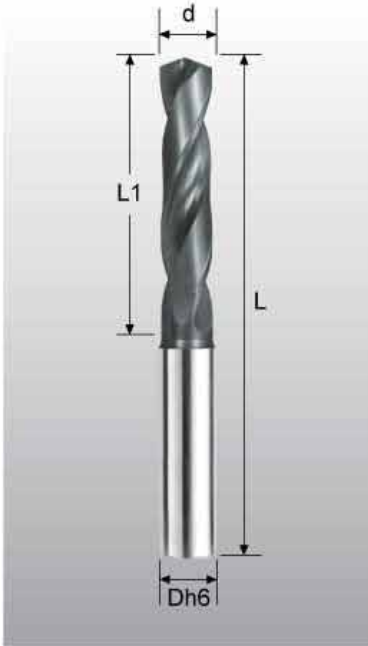
Order No. 訂購編號	Dia. 刃徑 (d)	CL 刃長 (L1)	OAL 全長 (L)
DGFNA208805U	8.80	55	98
DGFNA209005U	9.00	55	98
DGFNA209105U	9.10	58	102
DGFNA209205U	9.20	58	102
DGFNA209305U	9.30	58	102
DGFNA209505U	9.50	58	102
DGFNA209605U	9.60	60	105
DGFNA209705U	9.70	60	105
DGFNA209805U	9.80	60	105
DGFNA210005U	10.00	60	105
DGFNA210205U	10.20	66	112
DGFNA210305U	10.30	66	112
DGFNA210405U	10.40	66	112
DGFNA210505U	10.50	66	112
DGFNA210605U	10.60	68	114
DGFNA210705U	10.70	68	114
DGFNA210805U	10.80	68	114
DGFNA210905U	10.90	68	114
DGFNA211005U	11.00	68	114
DGFNA211105U	11.10	71	118
DGFNA211205U	11.20	71	118
DGFNA211405U	11.40	71	118
DGFNA211505U	11.50	71	118
DGFNA211605U	11.60	73	121
DGFNA211705U	11.70	73	121
DGFNA211805U	11.80	73	121
DGFNA211905U	11.90	73	121
DGFNA212005U	12.00	73	121
DGFNA212505U	12.50	76	135
DGFNA212705U	12.70	78	137
DGFNA213005U	13.00	78	137
DGFNA213505U	13.50	84	144
DGFNA214005U	14.00	86	147
DGFNA214505U	14.50	89	151
DGFNA215005U	15.00	91	153
DGFNA215505U	15.50	94	157
DGFNA216005U	16.00	96	160

MICRO GRAIN CARBIDE HARDENED DRILLS FOR HARDENED STEEL

- Endmill Shank - 2F(3xD)

高硬鑽頭-短刃型-3xD (銑刀柄)

**DHT-NA2**



CUTTING EFFECTED LENGTH = 3xD

Order No.	Dia.	CL	OAL	Shank
訂購編號	刃徑 (d)	刃長 (L1)	全長 (L)	柄徑 (D)
DHTNA203006T	3.00	20	62	6
DHTNA203406T	3.40	20	62	6
DHTNA204006T	4.00	24	66	6
DHTNA204306T	4.30	24	66	6
DHTNA205006T	5.00	28	66	6
DHTNA205106T	5.10	28	66	6
DHTNA206006T	6.00	28	66	6
DHTNA206906T	6.90	34	79	8
DHTNA208006T	8.00	41	79	8
DHTNA208606T	8.60	47	89	10
DHTNA210006T	10.00	47	89	10
DHTNA210406T	10.40	55	102	12
DHTNA212006T	12.00	55	102	12
DHTNA214006T	14.00	60	107	14
DHTNA216006T	16.00	65	115	16

**Dimension**

- Sim. DIN6537
- 140 Degree Tip Angle
- 15~25 Degree Helix Angle
- Without Coolant Hole
- TIALN Coating

**Tolerance**

- d h7
- D h6

**Material**

- HARDENED STEELS
- ~ HRC 50

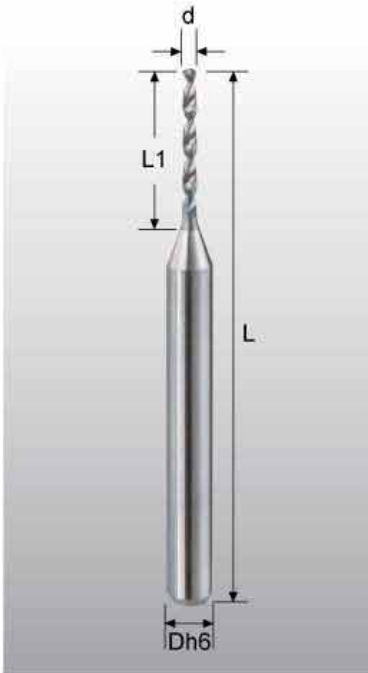
**Recommend Cutting Condition**

Table 5

- Micro Diameter - 2F

微小徑鑽頭-標準型(3mm柄)

**DGM-NA2**



Order No.	Dia.	CL	OAL	Shank
訂購編號	刃徑 (d)	刃長 (L1)	全長 (L)	柄徑 (D)
DGMNA200305	0.30	5.0	38	3
DGMNA200355	0.35	5.0	38	3
DGMNA200405	0.40	7.0	38	3
DGMNA200455	0.45	7.0	38	3
DGMNA200505	0.50	7.0	38	3
DGMNA200605	0.60	8.0	38	3
DGMNA200705	0.70	8.0	38	3
DGMNA200805	0.80	8.0	38	3
DGMNA200905	0.90	8.0	38	3
DGMNA201005U	1.00	8.0	38	3
DGMNA201105U	1.10	8.0	38	3
DGMNA201205U	1.20	8.0	38	3
DGMNA201305U	1.30	8.0	38	3
DGMNA201405U	1.40	8.0	38	3
DGMNA201505U	1.50	8.0	38	3
DGMNA201605U	1.60	8.0	38	3
DGMNA201705U	1.70	8.0	38	3
DGMNA201805U	1.80	8.0	38	3
DGMNA201905U	1.90	8.0	38	3
DGMNA202005U	2.00	8.0	38	3
DGMNA202105U	2.10	8.0	38	3
DGMNA202205U	2.20	8.0	38	3
DGMNA202305U	2.30	8.0	38	3
DGMNA202405U	2.40	8.0	38	3
DGMNA202505U	2.50	8.0	38	3
DGMNA202605U	2.60	8.0	38	3
DGMNA202705U	2.70	8.0	38	3
DGMNA202805U	2.80	8.0	38	3
DGMNA202905U	2.90	8.0	38	3
DGMNA203005U	3.00	8.0	38	3

**Dimension**

- Win 038A
- 25~35 Degree Helix Angle
- 130 Degree Tip Angle
- Uncoating
- S-Fire Coating

**Tolerance**

- d h7
- D h6

**Material**

- Non-Ferrous
- ALUMINUM
- COPPER

**Recommend Cutting Condition**

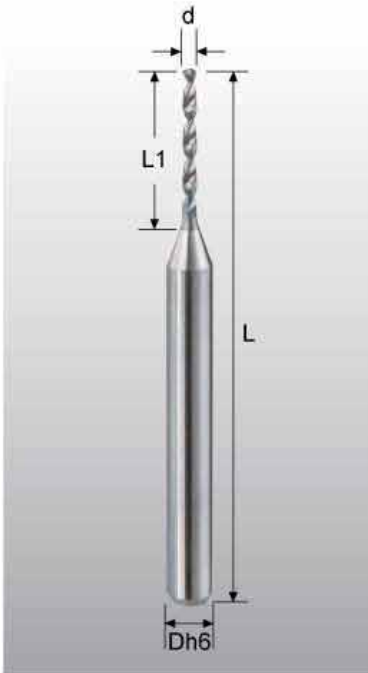
Table 4

MICRO GRAIN CARBIDE MICRO DRILLS FOR STEEL - Endmill Shank

- Micro Diameter - 2F

微小徑鑽頭-標準型 ((3mm柄)

**DGM-NB2**



Order No. 訂購編號	Dia. 刃徑 (d)	CL 刃長 (L1)	OAL 全長 (L)	Shank 柄徑 (D)
DGMNB200505U	0.50	3.0	38	3
DGMNB200605U	0.60	3.0	38	3
DGMNB200705U	0.70	3.0	38	3
DGMNB200805U	0.80	4.0	38	3
DGMNB200905U	0.90	4.0	38	3
DGMNB201005U	1.00	4.0	38	3
DGMNB201105U	1.10	6.0	38	3
DGMNB201205U	1.20	6.0	38	3
DGMNB201305U	1.30	6.0	38	3
DGMNB201405U	1.40	6.0	38	3
DGMNB201505U	1.50	6.0	38	3
DGMNB201605U	1.60	8.0	38	3
DGMNB201705U	1.70	8.0	38	3
DGMNB201805U	1.80	8.0	38	3
DGMNB201905U	1.90	8.0	38	3
DGMNB202005U	2.00	8.0	38	3
DGMNB202105U	2.10	8.0	38	3
DGMNB202205U	2.20	8.0	38	3
DGMNB202305U	2.30	8.0	38	3
DGMNB202405U	2.40	8.0	38	3
DGMNB202505U	2.50	8.0	38	3
DGMNB202605U	2.60	8.0	38	3
DGMNB202705U	2.70	8.0	38	3
DGMNB202805U	2.80	8.0	38	3
DGMNB202905U	2.90	8.0	38	3
DGMNB203005U	3.00	8.0	38	3

**Dimension**

- Win 038B
- 25~35 Degree Helix Angle
- 130 Degree Tip Angle
- S-Fire Coating

**Tolerance**

- d h7
- D h6

**Material**

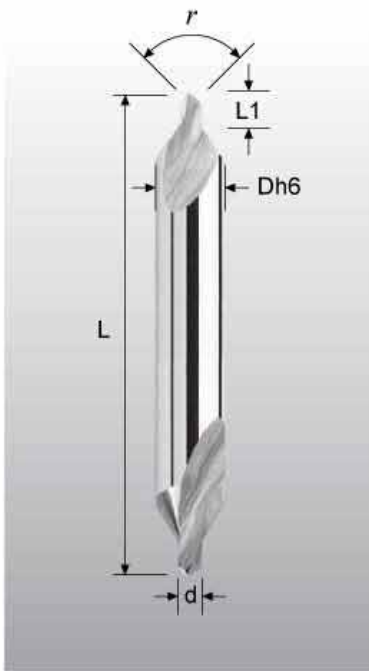
- ALLOY STEELS
- STAINLESS STEELS

**Recommend Cutting Condition**

Table 4



# DCT-NA2



(r) 60 Degree Order No. 訂購編號	(r) 90 Degree Order No. 訂購編號	Dia. 刃徑 (d)	CL 刃長 (L1)	OAL 全長 (L)	Shank 柄徑 (D)
DCTNA201001	DCTNA201002	1.00	1.6	32	3
DCTNA201251	DCTNA201252	1.25	1.9	32	3
DCTNA201601	DCTNA201602	1.60	2.4	32	4
DCTNA202001	DCTNA202002	2.00	2.9	40	5
DCTNA202501	DCTNA202502	2.50	3.6	45	6
DCTNA203001	DCTNA203002	3.00	3.9	60	8
DCTNA203151	DCTNA203152	3.15	3.9	60	8
DCTNA204001	DCTNA204002	4.00	5.0	75	10
DCTNA205001	DCTNA205002	5.00	6.3	75	12

### Dimension

- 60 & 90 Degree Tip Angle
- Without Coolant Hole
- Uncoating

### Tolerance

- d h7
- D h6

### Material

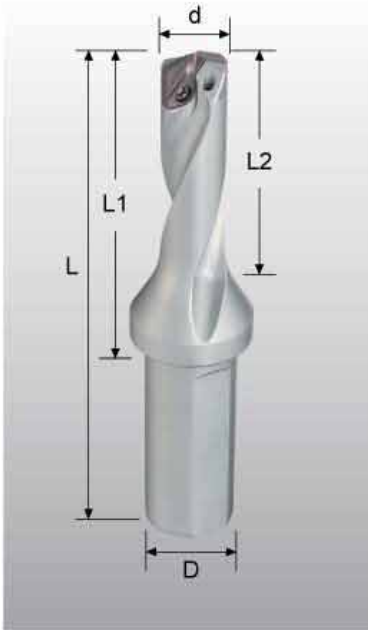
- STEEL ~ HRC30
- CAST IRON

### Recommend Cutting Condition

Table 8



### DIP-HC2



Order No.	Dia.	ND	CL	NL	OAL	Flutes	Insert Cutting Range
訂購編號	刃徑 (d)	柄徑 (D)	刃長 (L2)	頸長 (L1)	全長 (L)	刃數 (F)	刀片範圍
DIPHC210010	10	16	48	61	109	2	10.0 ~ 11.9
DIPHC212012	12	16	56	69	117	2	12.0 ~ 12.7
DIPHC212013	13	20	64	77	127	2	13.0 ~ 13.9
DIPHC214014	14	20	64	77	127	2	14.0 ~ 15.9
DIPHC216016	16	20	72	85	135	2	16.0 ~ 17.5
DIPHC218018	18	25	80	93	149	2	18.0 ~ 19.9
DIPHC220020	20	25	87	100	156	2	20.0 ~ 21.9
DIPHC222022	22	25	92	105	161	2	22.0 ~ 24.5
DIPHC225025	25	32	107	120	180	2	25.0 ~ 29.9
DIPHC230030	30	32	129	142	202	2	30.0 ~ 35.0

#### Dimension

- 3xD
- With Coolant Hole

Cutter Dia. (mm)	Max.Hole Depth (mm)
10.0 ~ 35.0	48.0 ~ 129.0

#### Recommend Cutting Condition

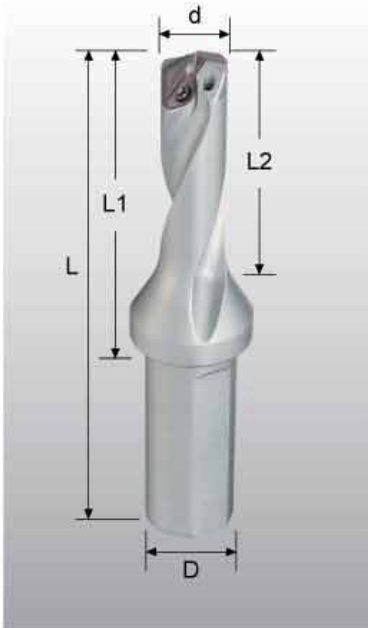
Table 10

#### INDEXABLE P DRILLS

- 【1】Cutter Order: For d=10.0mm, Order No.=DIPHC210010
- 【2】Insert Order: For d=10.0mm, Order No.=DIPA100250
- 【3】Cutter Order: For d=10.5mm, Order No.=DIPHC210010
- 【4】Insert Order: For d=10.5mm, Order No.=DIPA105250



### DIP-HE2



Order No.	Dia.	ND	CL	NL	OAL	Flutes	Insert Cutting Range
訂購編號	刃徑 (d)	柄徑 (D)	刃長 (L2)	頸長 (L1)	全長 (L)	刃數 (F)	刀片範圍
DIPHE210010	10	16	68	81	129	2	10.0 ~ 11.9
DIPHE212012	12	16	80	93	141	2	12.0 ~ 12.7
DIPHE214013	13	20	92	105	155	2	13.0 ~ 13.9
DIPHE214014	14	20	92	105	155	2	14.0 ~ 15.9
DIPHE216016	16	20	104	117	167	2	16.0 ~ 17.5
DIPHE218018	18	25	116	129	185	2	18.0 ~ 19.9
DIPHE220020	20	25	127	140	196	2	20.0 ~ 21.9
DIPHE222022	22	25	136	149	205	2	22.0 ~ 24.5
DIPHE225025	25	32	157	170	230	2	25.0 ~ 29.9
DIPHE230030	30	32	189	202	262	2	30.0 ~ 35.0

#### Dimension

- 5xD
- With Coolant Hole

Cutter Dia. (mm)	Max.Hole Depth (mm)
10.0 ~ 35.0	68.0 ~ 189.0

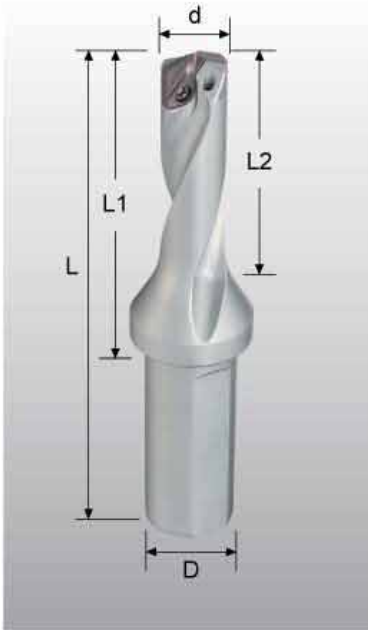
#### Recommend Cutting Condition

Table 10

#### INDEXABLE P DRILLS

- 【1】Cutter Order: For d=10.0mm, Order No.=DIPHE210010
- 【2】Insert Order: For d=10.0mm, Order No.=DIPA100250
- 【3】Cutter Order: For d=10.5mm, Order No.=DIPHE210010
- 【4】Insert Order: For d=10.5mm, Order No.=DIPA105250

### DIP-HG2



Order No.	Dia.	ND	CL	NL	OAL	Flutes	Insert Cutting Range
訂購編號	刃徑 (d)	柄徑 (D)	刃長 (L2)	頸長 (L1)	全長 (L)	刃數 (F)	刀片範圍
DIPHG210010	10	16	88	101	149	2	10.0 ~ 11.9
DIPHG212012	12	16	104	117	165	2	12.0 ~ 12.7
DIPHG212013	13	20	120	133	183	2	13.0 ~ 13.9
DIPHG214014	14	20	120	133	183	2	14.0 ~ 15.9
DIPHG216016	16	20	136	149	199	2	16.0 ~ 17.5
DIPHG218018	18	25	152	165	221	2	18.0 ~ 19.9
DIPHG220020	20	25	167	180	236	2	20.0 ~ 21.9
DIPHG222022	22	25	180	193	249	2	22.0 ~ 24.5
DIPHG225025	25	32	207	220	280	2	25.0 ~ 29.9
DIPHG230030	30	32	249	262	322	2	30.0 ~ 35.0

#### Dimension

- 7xD
- With Coolant Hole

Cutter Dia. (mm)	Max.Hole Depth (mm)
10.0 ~ 35.0	88.0 ~ 249.0

#### Recommend Cutting Condition

Table 10

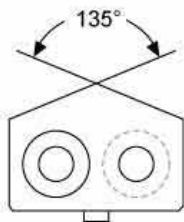
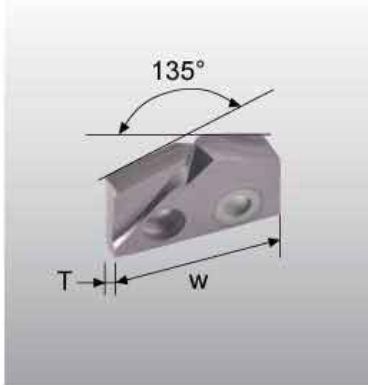
#### INDEXABLE P DRILLS

- 【1】Cutter Order: For d=10.0mm, Order No.=DIPHG210010
- 【2】Insert Order: For d=10.0mm, Order No.=DIPA100250
- 【3】Cutter Order: For d=10.5mm, Order No.=DIPHG210010
- 【4】Insert Order: For d=10.5mm, Order No.=DIPA105250

P-TYPE CARBIDE INSERTS

P 型鎢鋼刀片

**DIPA**



**Recommend Cutting Condition**

Table 10

**Tolerance**

· Width h7

Insert Order No. 刀片型號	Width 刀片寬度 (W)	Thickness 刀片厚度 (T)	Screw 螺絲	Wrench 螺絲扳手
DIPA100025U	10.00	2.5	M200427	T6
DIPA105025U	10.50	2.5	M200427	T6
DIPA110025U	11.00	2.5	M200427	T6
DIPA115025U	11.50	2.5	M200427	T6
DIPA120025U	12.00	2.5	M200427	T6
DIPA125025U	12.50	2.5	M200427	T6
DIPA127025U	12.70	2.5	M200427	T6
DIPA130034U	13.00	3.4	M256333	T8
DIPA135034U	13.50	3.4	M256333	T8
DIPA140034U	14.00	3.4	M256333	T8
DIPA145034U	14.50	3.4	M256333	T8
DIPA150034U	15.00	3.4	M256333	T8
DIPA155034U	15.50	3.4	M256333	T8
DIPA158734U	15.87	3.4	M256333	T8
DIPA160034U	16.00	3.4	M256333	T8
DIPA165034U	16.50	3.4	M256333	T8
DIPA170034U	17.00	3.4	M256333	T8
DIPA175034U	17.50	3.4	M256333	T8
DIPA180040U	18.00	4.0	M308044	T10
DIPA185040U	18.50	4.0	M308044	T10
DIPA190040U	19.00	4.0	M308044	T10
DIPA195040U	19.50	4.0	M308044	T10
DIPA200040U	20.00	4.0	M308044	T10
DIPA205040U	20.50	4.0	M308044	T10
DIPA210040U	21.00	4.0	M308044	T10
DIPA215040U	21.50	4.0	M308044	T10
DIPA220040U	22.00	4.0	M308044	T10
DIPA225040U	22.50	4.0	M308044	T10
DIPA230040U	23.00	4.0	M308044	T10
DIPA235040U	23.50	4.0	M308044	T10
DIPA239040U	23.90	4.0	M308044	T10
DIPA240048U	24.00	4.0	M308044	T10
DIPA245048U	24.50	4.0	M308044	T10
DIPA250048U	25.00	4.8	M40A055	T15
DIPA254048U	25.40	4.8	M40A055	T15
DIPA255048U	25.50	4.8	M40A055	T15
DIPA260048U	26.00	4.8	M40A055	T15
DIPA265048U	26.50	4.8	M40A055	T15
DIPA270048U	27.00	4.8	M40A055	T15
DIPA275048U	27.50	4.8	M40A055	T15
DIPA280048U	28.00	4.8	M40A055	T15
DIPA285048U	28.50	4.8	M40A055	T15
DIPA290048U	29.00	4.8	M40A055	T15
DIPA295048U	29.50	4.8	M40A055	T15
DIPA300048U	30.00	4.8	M40A055	T15
DIPA305048U	30.50	4.8	M40A055	T15
DIPA310048U	31.00	4.8	M40A055	T15
DIPA315048U	31.50	4.8	M40A055	T15
DIPA320048U	32.00	4.8	M40A055	T15
DIPA325048U	32.50	4.8	M40A055	T15
DIPA330048U	33.00	4.8	M40A055	T15
DIPA335048U	33.50	4.8	M40A055	T15
DIPA340048U	34.00	4.8	M40A055	T15
DIPA345048U	34.50	4.8	M40A055	T15
DIPA350048U	35.00	4.8	M40A055	T15

## W-TYPE INDEXABLE DRILLS - 2xD

W 型快速鑽頭-短刃型-2xD

### DIW-HB2



#### Dimension

· 2xD

Cutter Dia. (mm)	Max.Hole Depth (mm)
15.0 ~ 42.0	30.0 ~ 84.0

#### Recommend Cutting Condition

Table 11

Order No. 刀具型號	Dia. 刃徑 (d)	CL 刃長 (L2)	SD 柄徑 (D)	Parts 零件		Flutes 刃數 (F)	Insert Order No. 刀片型號
				Screw 螺絲	Wrench 棘輪扳手		
DIWHB215003	15.0	30.0	25	M256333	T8	2	WCMT0302
DIWHB216003	16.0	32.0	25	M256333	T8	2	WCMT0302
DIWHB217003	17.0	34.0	25	M256333	T8	2	WCMT0302
DIWHB218003	18.0	36.0	25	M256333	T8	2	WCMT0302
DIWHB219003	19.0	38.0	25	M256333	T8	2	WCMT0302
DIWHB220004	20.0	40.0	32	M256333	T8	2	WCMT0402
DIWHB221004	21.0	42.0	32	M256333	T8	2	WCMT0402
DIWHB222004	22.0	44.0	32	M256333	T8	2	WCMT0402
DIWHB223004	23.0	46.0	32	M256333	T8	2	WCMT0402
DIWHB224004	24.0	48.0	32	M256333	T8	2	WCMT0402
DIWHB225005	25.0	50.0	32	M308044	T10	2	WCMT0503
DIWHB226005	26.0	52.0	32	M308044	T10	2	WCMT0503
DIWHB227005	27.0	54.0	32	M308044	T10	2	WCMT0503
DIWHB228005	28.0	56.0	32	M308044	T10	2	WCMT0503
DIWHB229005	29.0	58.0	32	M308044	T10	2	WCMT0503
DIWHB230005	30.0	60.0	32	M308044	T10	2	WCMT0503
DIWHB231006	31.0	62.0	32	M358050	T15	2	WCMT06T3
DIWHB232006	32.0	64.0	32	M358050	T15	2	WCMT06T3
DIWHB233006	33.0	66.0	32	M358050	T15	2	WCMT06T3
DIWHB234006	34.0	68.0	32	M358050	T15	2	WCMT06T3
DIWHB235006	35.0	70.0	32	M358050	T15	2	WCMT06T3
DIWHB236006	36.0	72.0	32	M358050	T15	2	WCMT06T3
DIWHB237006	37.0	74.0	32	M358050	T15	2	WCMT06T3
DIWHB238006	38.0	76.0	32	M358050	T15	2	WCMT06T3
DIWHB239006	39.0	78.0	32	M358050	T15	2	WCMT06T3
DIWHB240006	40.0	80.0	32	M358050	T15	2	WCMT06T3
DIWHB241006	41.0	82.0	32	M358050	T15	2	WCMT06T3
DIWHB242006	42.0	84.0	32	M358050	T15	2	WCMT06T3
DIWHB245006	45.0	90.0	40	M40A055	T15	2	WCMT0804
DIWHB250006	50.0	100.0	40	M40A055	T15	2	WCMT0804

## INDEXABLE W-TYPE DRILLS - 3xD

W 型快速鑽頭-標準型-3xD

### DIW-HC2



#### Dimension

· 3xD

Cutter Dia. (mm)	Max.Hole Depth (mm)
15.0 ~ 42.0	45.0 ~ 126.0

#### Recommend Cutting Condition

Table 11

Order No. 刀具型號	Dia. 刃徑 (d)	CL 刃長 (L2)	SD 柄徑 (D)	Parts 零件		Flutes 刃數 (F)	Insert Order No. 刀片型號
				Screw 螺絲	Wrench 棘輪扳手		
DIWHC215003	15.0	45.0	25	M256333	T8	2	WCMT0302
DIWHC216003	16.0	48.0	25	M256333	T8	2	WCMT0302
DIWHC217003	17.0	51.0	25	M256333	T8	2	WCMT0302
DIWHC218003	18.0	54.0	25	M256333	T8	2	WCMT0302
DIWHC219003	19.0	57.0	25	M256333	T8	2	WCMT0302
DIWHC220004	20.0	60.0	32	M256333	T8	2	WCMT0402
DIWHC221004	21.0	63.0	32	M256333	T8	2	WCMT0402
DIWHC222004	22.0	66.0	32	M256333	T8	2	WCMT0402
DIWHC223004	23.0	69.0	32	M256333	T8	2	WCMT0402
DIWHC224004	24.0	72.0	32	M256333	T8	2	WCMT0402
DIWHC225005	25.0	75.0	32	M308044	T10	2	WCMT0503
DIWHC226005	26.0	78.0	32	M308044	T10	2	WCMT0503
DIWHC227005	27.0	81.0	32	M308044	T10	2	WCMT0503
DIWHC228005	28.0	84.0	32	M308044	T10	2	WCMT0503
DIWHC229005	29.0	87.0	32	M308044	T10	2	WCMT0503
DIWHC230005	30.0	90.0	32	M308044	T10	2	WCMT0503
DIWHC231006	31.0	93.0	32	M358050	T15	2	WCMT06T3
DIWHC232006	32.0	96.0	32	M358050	T15	2	WCMT06T3
DIWHC233006	33.0	99.0	32	M358050	T15	2	WCMT06T3
DIWHC234006	34.0	102.0	32	M358050	T15	2	WCMT06T3
DIWHC235006	35.0	105.0	32	M358050	T15	2	WCMT06T3
DIWHC236006	36.0	108.0	32	M358050	T15	2	WCMT06T3
DIWHC237006	37.0	111.0	32	M358050	T15	2	WCMT06T3
DIWHC238006	38.0	114.0	32	M358050	T15	2	WCMT06T3
DIWHC239006	39.0	117.0	32	M358050	T15	2	WCMT06T3
DIWHC240006	40.0	120.0	32	M358050	T15	2	WCMT06T3
DIWHC241006	41.0	123.0	32	M358050	T15	2	WCMT06T3
DIWHC242006	42.0	126.0	32	M358050	T15	2	WCMT06T3
DIWHC245006	45.0	135.0	32	M40A055	T15	2	WCMT0804
DIWHC250006	50.0	150.0	32	M40A055	T15	2	WCMT0804

# DIW-HD2



Order No. 刀具型號	Dia. 刃徑 (d)	CL 刃長 (L2)	SD 柄徑 (D)	Parts 零件		Flutes 刃數 (F)	Insert Order No. 刀片型號
				Screw 螺絲	Wrench 棘輪扳手		
DIWHD217003	17.0	68.0	25	M256333	T8	2	WCMT0302
DIWHD218003	18.0	72.0	25	M256333	T8	2	WCMT0302
DIWHD219003	19.0	76.0	25	M256333	T8	2	WCMT0302
DIWHD220004	20.0	80.0	32	M256333	T8	2	WCMT0402
DIWHD221004	21.0	84.0	32	M256333	T8	2	WCMT0402
DIWHD222004	22.0	88.0	32	M256333	T8	2	WCMT0402
DIWHD223004	23.0	92.0	32	M256333	T8	2	WCMT0402
DIWHD224004	24.0	96.0	32	M256333	T8	2	WCMT0402
DIWHD225005	25.0	100.0	32	M308044	T10	2	WCMT0503
DIWHD226005	26.0	104.0	32	M308044	T10	2	WCMT0503
DIWHD227005	27.0	108.0	32	M308044	T10	2	WCMT0503
DIWHD228005	28.0	112.0	32	M308044	T10	2	WCMT0503
DIWHD229005	29.0	116.0	32	M308044	T10	2	WCMT0503
DIWHD230005	30.0	120.0	32	M308044	T10	2	WCMT0503
DIWHD231006	31.0	124.0	32	M358050	T15	2	WCMT06T3
DIWHD232006	32.0	128.0	32	M358050	T15	2	WCMT06T3
DIWHD233006	33.0	132.0	32	M358050	T15	2	WCMT06T3
DIWHD234006	34.0	136.0	32	M358050	T15	2	WCMT06T3
DIWHD235006	35.0	140.0	32	M358050	T15	2	WCMT06T3

## Dimension

· 4xD

Cutter Dia. (mm)	Max.Hole Depth (mm)
17.0 ~ 35.0	68.0 ~ 140.0

## Recommend Cutting Condition

Table 11

W-TYPE CARBIDE INSERTS

W 型鎢鋼刀片

**WCMT**



**Recommend Cutting Condition**

Table 11

ISO / ANSI	Insert Order No.		Grade	
	ISO Code	ANSI Code	P220	P240
P	WCMT030208	WCMT1.5(1.5)2	●	●
	WCMT040208	WCMT2(1.5)2	●	●
	WCMT050308	WCMT(2.5)22	●	●
	WCMT06T308	WCMT3(2.5)2	●	●
	WCMT080412	WCMT433	●	●
K	WCMT030208	WCMT1.5(1.5)2		●
	WCMT040208	WCMT2(1.5)2		●
	WCMT050308	WCMT(2.5)22		●
	WCMT06T308	WCMT3(2.5)2		●
	WCMT080412	WCMT433		●
M	WCMT030208	WCMT1.5(1.5)2		●
	WCMT040208	WCMT2(1.5)2		●
	WCMT050308	WCMT(2.5)22		●
	WCMT06T308	WCMT3(2.5)2		●
	WCMT080412	WCMT433		●

P-220→TIALN P-240→UNICO

● : Recommended

○ : Supported

## RST-NA2



Order No.	Dia.	CL	EL	OAL	Shank	Flutes
刀具型號	刃徑 (d)	刃長 (L1)	有效長 (L2)	全長 (L)	柄徑 (D)	刃數 (F)
RSTNA203000	3.00	15	35	60	4.00	6
RSTNA203500	3.50	18	35	60	4.00	6
RSTNA204000	4.00	19	50	75	4.00	6
RSTNA204500	4.50	21	50	75	6.00	6
RSTNA205000	5.00	23	50	75	6.00	6
RSTNA205500	5.50	26	50	75	6.00	6
RSTNA206000	6.00	26	65	100	6.00	6
RSTNA206500	6.50	28	65	100	8.00	6
RSTNA207000	7.00	31	70	109	8.00	6
RSTNA207500	7.50	31	70	109	8.00	6
RSTNA208000	8.00	33	80	109	8.00	6
RSTNA208500	8.50	33	80	125	10.00	6
RSTNA209000	9.00	36	85	125	10.00	6
RSTNA209500	9.50	36	85	125	10.00	6
RSTNA210000	10.00	38	85	125	10.00	6
RSTNA210500	10.50	38	85	125	12.00	6
RSTNA211000	11.00	41	100	150	12.00	6
RSTNA211500	11.50	41	100	150	12.00	6
RSTNA212000	12.00	44	100	150	12.00	6

### Dimension

- Material : CO10%  
WC90%

### Tolerance

- d h7
- D h6

### Material

- ALLOY STEEL
- CAST IRON
- STAINLESS STEELS



**TABLE 1** DSTNA2 • DGTNA2 • DSFNA2 • DGFNA2 • DGSNA2

**DRILLING CONDITION TABLE**

WORKING MATERIAL	MILD STEEL 一般鋼材		CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼		ALLOY STEEL 合金鋼		SG CAST IRON 鑄鐵		CAST IRON 球墨鑄鐵		STAINLESS 不銹鋼	
MATERIAL CODE	SS 400		S50C , SCM		SKD 61		FC 250		FCD 400		SUS 304	
HARDNESS GRADE	—		—		HRC 30~40		> HRC 240		—		—	
Vc	90 M / min		68 M / min		45 M / min		108 M / min		85 M / min		36 M / min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
3MM	9,500	1,200	7,200	1,260	4,770	575	11,430	1,485	9,000	1,485	4,050	385
5MM	5,700	1,100	4,320	1,125	2,880	475	6,840	1,215	5,490	1,215	2,430	305
8MM	3,600	1,000	2,700	1,080	1,800	430	4,320	1,035	3,420	1,035	1,530	285
10MM	2,900	950	2,160	945	1,440	375	3,420	900	2,700	900	1,170	270
12MM	2,400	860	1,800	860	1,170	360	2,880	835	2,250	835	990	240
16MM	1,800	750	1,350	750	900	320	2,160	755	1,710	755	755	225

Remarks

※ Uncoated Drills Reduce 30% RPM & FEED From Coating One.  
未鍍膜鑽頭，請依照上表，減少30%左右轉速和進給量。

The Feed & RPM may be changed depending on the M/C Conditions, Lubricating & Cooling systems.

**TABLE 2** DSTHA2 • DSFHA2

**DRILLING CONDITION TABLE**

WORKING MATERIAL	MILD STEEL 一般鋼材		CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼		ALLOY STEEL 合金鋼		SG CAST IRON 鑄鐵		CAST IRON 球墨鑄鐵		STAINLESS 不銹鋼	
MATERIAL CODE	SS 400		S50C , SCM		SKD 61		FC 250		FCD 400		SUS 304	
HARDNESS GRADE	—		—		HRC 30~40		> HRC 240		—		—	
Vc	108 M / min		80 M / min		54 M / min		126 M / min		100 M / min		45 M / min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
3MM	11,430	1,260	8,640	1,260	5,760	575	13,410	1,485	10,530	1,485	4,770	385
5MM	6,840	1,125	5,130	1,125	3,420	475	8,010	1,215	6,300	1,215	2,880	305
8MM	4,320	1,080	3,240	1,080	2,160	430	5,040	1,035	3,960	1,035	1,800	285
10MM	3,420	945	2,610	945	1,710	375	4,050	900	3,150	900	1,440	270
12MM	2,880	864	2,160	860	1,440	360	3,330	835	2,610	835	1,170	240
16MM	2,160	756	1,620	755	1,080	320	2,520	755	1,980	755	900	225

Remarks

※ Uncoated Drills Reduce 30% RPM & FEED From Coating One.  
未鍍膜鑽頭，請依照上表，減少30%左右轉速和進給量。

The Feed & RPM may be changed depending on the M/C Conditions, Lubricating & Cooling systems.

DRILLING CONDITION TABLE

WORKING MATERIAL	MILD STEEL 一般鋼材		CARBON STEEL / ALLOY STEEL 碳素鋼/合金鋼		ALLOY STEEL 合金鋼		SG CAST IRON 鑄鐵		CAST IRON 球墨鑄鐵		STAINLESS 不銹鋼	
MATERIAL CODE	SS 400		S50C, SCM		SKD 61		FC 250		FCD 400		SUS 304	
HARDNESS GRADE	-		-		HRC 30~40		> HRC 240		-		-	
Vc	108 M / min		81 M / min		54 M / min		125 M / min		100 M / min		45 M / min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
5MM	6,840	684	5,130	645	3,420	270	8,010	1,620	6,300	990	2,880	230
8MM	4,320	684	3,240	645	2,160	270	5,040	1,620	3,960	990	1,800	230
10MM	3,420	684	2,610	645	1,710	270	4,050	1,620	3,150	990	1,440	230
12MM	2,880	576	2,160	540	1,440	230	3,330	1,350	2,610	820	1,170	180
16MM	2,160	540	1,620	510	1,080	215	2,520	1,260	1,980	810	900	180
20MM	1,710	540	1,620	500	860	215	1,980	1,260	1,620	810	720	180

Remarks

※ Uncoated Drills Reduce 30% RPM & FEED From Coating One.  
未鍍膜鑽頭，請依照上表，減少30%左右轉速和進給量。

The Feed & RPM may be changed depending on the M/C Conditions, Lubricating & Cooling systems.

DRILLING CONDITION TABLE

WORKING MATERIAL	MILD STEEL 一般鋼材		ALLOY STEEL 合金鋼		SG CAST IRON 鑄鐵		SKD CAST IRON 球墨鑄鐵		STAINLESS 不銹鋼	
MATERIAL CODE	45C, S50C, SCM		SCM, SKT, SKD		GG 25		GG 40		SUS 304	
HARDNESS GRADE	HRC < 20		HRC 20~30		> HB 240		> HB 300		-	
Vc	58 M / min		41 M / min		53 M / min		46 M / min		19 M / min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
0.50MM	31,300	625	22,100	400	28,600	720	24,900	550	10,200	70
1.00MM	15,600	630	11,000	380	14,300	750	12,400	550	5,100	70
1.50MM	10,500	640	7,400	400	9,500	720	8,200	550	3,400	70
2.00MM	7,800	640	5,500	380	7,100	720	6,200	555	2,600	70
2.50MM	6,300	630	4,400	410	5,700	720	5,000	540	2,000	70
2.95MM	5,400	700	3,700	450	4,800	810	4,200	605	1,700	75

Remarks

※ Uncoated Drills Reduce 30% RPM & FEED From Coating One.  
未鍍膜鑽頭，請依照上表，減少30%左右轉速和進給量。

The Feed & RPM may be changed depending on the M/C Conditions, Lubricating & Cooling systems.

**TABLE 5 DHTNA2**
**DRILLING CONDITION TABLE**

WORKING MATERIAL	ALLOY STEEL 合金鋼			
MATERIAL CODE	SKD , SKD			
HARDNESS GRADE	HRC 45~50		HRC 50~55	
Vc	36 M / min		27 M / min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
3MM	3,900	150	2,900	90
4MM	2,900	140	2,100	90
6MM	1,900	110	1,400	70
8MM	1,400	110	1,000	70
10MM	1,200	110	860	70
12MM	950	100	720	50
Remarks				
※ Uncoated Drills Reduce 30% RPM & FEED From Coating One. 未鍍膜鑽頭，請依照上表，減少30%左右轉速和進給量。				

The Feed & RPM may be changed depending on the M/C Conditions, Lubricating & Cooling systems.

**TABLE 8 DCTNA2**
**DRILLING CONDITION TABLE**

WORKING MATERIAL	CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼		ALLOY STEEL 合金鋼		TITANIUM 鈦		CAST IRON 鑄鐵		STAINLESS 不銹鋼	
MATERIAL CODE	45C,S50C,SCM		SCM,SKT,SKD		—		FC / FCD		SUS 304	
HARDNESS GRADE	HRC < 20		HRC 20~30		—		—		—	
Vc	60 M / min		50 M / min		50 M / min		50 M / min		50 M / min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
1MM	19,100	382	15,900	206	15,900	239	15,900	205	15,900	255
2MM	9,550	382	7,960	207	7,960	239	7,960	240	7,960	315
3MM	9,370	382	5,300	207	5,300	239	5,300	210	5,300	210
5MM	3,820	382	3,180	207	3,180	239	3,180	255	3,180	315
Remarks										
※ Uncoated Drills Reduce 30% RPM & FEED From Coating One. 未鍍膜鑽頭，請依照上表，減少30%左右轉速和進給量。										

The Feed & RPM may be changed depending on the M/C Conditions, Lubricating & Cooling systems.

**DRILLING CONDITION TABLE**

WORKING MATERIAL	MILD STEEL 一般鋼材		CARBON STEEL / ALLOY STEEL 碳素鋼 / 合金鋼		CAST IRON 鑄鐵		STAINLESS 不銹鋼		ALLUMINUM ALLOY 鋁 / 鋁合金	
MATERIAL CODE	SS 400		S50CM , SCM		FC 250		SUS 304		A 5052	
HARDNESS GRADE	—		HRC < 20		—		—		HRC < 20	
Vc	70 M / min		60 M / min		50 M / min		50 M / min		50 M / min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
5MM	4,400	350	3,800	270	4,400	350	1,300	430	7,650	1,000
8MM	2,800	290	2,400	250	2,800	370	800	340	4,800	820
10MM	2,200	280	1,900	240	2,200	350	640	320	3,800	760
12MM	1,800	260	1,600	210	1,800	300	530	300	3,200	640
16MM	1,400	230	1,200	200	1,400	280	400	270	2,400	600

Remarks

※ Uncoated Drills Reduce 30% RPM & FEED From Coating One.  
未鍍膜鑽頭，請依照上表，減少30%左右轉速和進給量。

The Feed & RPM may be changed depending on the M/C Conditions, Lubricating & Cooling systems.

**DRILLING CONDITION TABLE**

ISO/ANSI	P	M	K	N	S	H	
DIAMETER							
12	Vc (m/min)	80~110	55 ~ 70	90~120	200~ 330	40 ~ 55	15 ~ 35
	fz (mm/tooth)	0.12~0.24	0.07~0.14	0.12~0.24	0.15~0.30	0.07~0.14	0.05~0.10
14	Vc (m/min)	80~110	55 ~ 70	90~120	200~ 330	40 ~ 55	15 ~ 35
	fz (mm/tooth)	0.14~0.28	0.08~0.17	0.14~0.28	0.18~0.35	0.08~0.17	0.06~0.11
16	Vc (m/min)	80~110	55 ~ 70	90~120	200~ 330	40 ~ 55	15 ~ 35
	fz (mm/tooth)	0.16~0.32	0.1~0.19	0.16~0.32	0.20~0.40	0.1~0.19	0.06~0.13
18	Vc (m/min)	80~110	55 ~ 70	90~120	200~ 330	40 ~ 55	15 ~ 35
	fz (mm/tooth)	0.18~0.36	0.11~0.21	0.18~0.36	0.22~0.45	0.11~0.21	0.07~0.14
20	Vc (m/min)	80~110	55 ~ 70	90~120	200~ 330	40 ~ 55	15 ~ 35
	fz (mm/tooth)	0.20~0.40	0.12~0.24	0.20~0.40	0.25~0.50	0.12~0.24	0.08~0.16
25	Vc (m/min)	80~110	55 ~ 70	90~120	200~ 330	40 ~ 55	15 ~ 35
	fz (mm/tooth)	0.25~0.50	0.15~0.30	0.25~0.50	0.31~0.62	0.15~0.30	0.10~0.20
30	Vc (m/min)	80~110	55 ~ 70	90~120	200~ 330	40 ~ 55	15 ~ 35
	fz (mm/tooth)	0.30~0.60	0.18~0.36	0.30~0.60	0.38~0.75	0.18~0.36	0.12~0.24
Remarks							

The Feed & RPM may be changed depending on the M/C Conditions, Lubricating & Cooling systems.

**TABLE 11** DIWHB2 · DIWHC2 · DIWHC2

**DRILLING CONDITION TABLE**

WORKING MATERIAL		MILD STEEL 一般鋼材	CARBON STEEL 碳素鋼	ALLOY STEEL 合金鋼	STAINLESS 不鏽鋼	CAST IRON 鑄鐵
MATERIAL CODE		SS 400	S45C	SCM	SUS 304	FC 250
HARDNESS GRADE		—	HRC < 20	HRC 20~30	—	—
DIAMETER						
12~14.5	V(2D/3D)	100-150-200	60-100-160	80-120-160	80-100-120	80-120-160
	V(4D)	100-140-200	60-80-120	80-100-120	80-110-140	110-140-160
	f	0.04-0.06-0.10	0.04-0.06-0.10	0.04-0.06-0.10	0.04-0.07-0.10	0.04-0.07-0.10
15~22.5	V(2D/3D)	100-150-200	60-100-160	80-120-160	80-100-120	80-120-160
	V(4D)	100-140-200	60-80-120	80-100-120	80-110-140	110-140-160
	f	0.04-0.07-0.10	0.06-0.09-0.12	0.06-0.08-0.10	0.04-0.07-0.10	0.06-0.07-0.10
23~34	V(2D/3D)	100-150-200	60-100-160	80-120-160	80-100-120	80-120-160
	V(4D)	100-140-200	60-80-120	80-100-120	80-110-140	110-140-160
	f	0.04-0.10-0.12	0.08-0.15-0.18	0.06-0.10-0.14	0.04-0.10-0.12	0.06-0.10-0.14
35~48	V(2D/3D)	100-150-200	60-100-160	80-120-160	80-100-120	80-120-160
	V(4D)	100-140-200	60-80-120	80-100-120	80-110-140	110-140-160
	f	0.04-0.08-0.10	0.08-0.12-0.14	0.06-0.09-0.12	0.04-0.08-0.10	0.06-0.10-0.14
Remarks						

The Feed & RPM may be changed depending on the M/C Conditions, Lubricating & Cooling systems.

**TABLE 12** DRT-NA2 · DRF-NA2

**DRILLING CONDITION TABLE**

WORKING MATERIAL	BRONZE 青銅		SILICON-ALUMINUM ALLOY 鋁合金(含矽)		CAST IRON 鑄鐵	
MATERIAL CODE	—		SI > 10%		—	
HARDNESS GRADE	HRC ≤ 25		—		HRC ≤ 22	
Vc	80 M / min		140 M / min		120 M / min	
DIAMETER	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)	R.P.M	FEED (mm/min)
5MM	5,100	410	8,920	1,430	7,640	960
6MM	4,250	340	7,430	1,190	6,370	800
8MM	3,190	260	5,570	890	4,780	600
10MM	2,550	200	4,460	710	3,820	480
12MM	2,120	170	3,720	600	3,190	400
16MM	1,590	130	2,790	450	2,390	300
Remarks		※ Uncoated Drills Reduce 30% RPM & FEED From Coating One. 未鍍膜鑽頭，請依照上表，減少30%左右轉速和進給量。				

The Feed & RPM may be changed depending on the M/C Conditions, Lubricating & Cooling systems.

## ■ Troubleshooting in Drilling

Trouble / 情況	Occurrences / 原因	Countermeasures / 對策
Deformation of hole 鑽孔成橢圓	Becoming thread scratch in the hole 形成螺紋刮痕	<ol style="list-style-type: none"> <li>1. Check for Suitable Guide-Bush 使用適合之鑽套</li> <li>2. Reduce relief angle 減少間隙角度</li> <li>3. Check for proper point angle &amp; length of lips 檢查鑽頭尖端角度及兩邊長度是否對稱</li> </ol>
	Generation of chattering & vibration 產生顫動、振動	<ol style="list-style-type: none"> <li>1. Reduce relief angle 減少間隙角度</li> <li>2. Grind web thinning 腹板削薄</li> <li>3. Shortening length of drill 縮短鑽頭長度，增加剛性</li> <li>4. Check for proper drill 檢查鑽頭角度研磨是否正確</li> <li>5. Check for chuck &amp; collet &amp; socket 檢查夾具與鑽頭接觸情形</li> <li>6. Pre-centering 預先鑽好中心孔</li> <li>7. Inspect rigidity of the Drill Machine 提高工作機械的剛性</li> </ol>
	Poor chip evacuation 切屑排出不易	<ol style="list-style-type: none"> <li>1. Increase Feed 加大每週進給量</li> <li>2. Check for proper helix angle 選擇正確螺旋角</li> <li>3. Check for proper chip space 加大槽寬比</li> <li>4. Using Step feed 採用間歇式進給</li> </ol>
Deflection of hole 鑽孔傾斜	Drill won't enter work 剛切入時不良	<ol style="list-style-type: none"> <li>1. Check for Suitable Guide-Bush 使用適合之鑽套</li> <li>2. Reduce Feed 減少切入時之每週進給量</li> <li>3. Pre-centering 預先鑽好中心孔</li> </ol>
	Insufficient rigidity of drill 鑽頭剛性不良	Shortening length of drill 縮短鑽頭長度，增加剛性
	Unsuitable angle 鑽頭角度不對	Regrinding 再研磨
Excessive wear of cutting edge 外角磨損	Cutting speed too high 切削速度太快	<ol style="list-style-type: none"> <li>1. Reduce cutting speed 降低切削速度</li> <li>2. Check Lip Relief 加大間隙角</li> <li>3. Increase Coolant Flow 充分供給切削液</li> <li>4. Check for proper material 提高鑽頭之材質</li> </ol>

Trouble / 情況	Occurrences / 原因	Countermeasures / 對策
Poor surface conditions of work piece 孔壁粗糙	Excessive wear of cutting edge 刀刃磨損太大	Regrinding 再研磨
	Too much Feed 進刀速度太大	Decrease feed 降低進刀速度
	Chips clog in hole 切削阻塞	Add number of exit 增加退刀次數
	the others 其他	1.Thin Web 腹板削薄 2.Check for Proper Guide-bush 使用適合導套 3.Use the highly rigid spindle 採用高剛性主軸
Breakage 切削中鑽頭折斷	Feed too heavy 進給量太大	Decrease feed rate 減少每週進給量
	Chips clog in hole 切削阻塞	1.Check for proper chip space 加大槽寬比 2.Check for proper helix angle 選擇適當之螺旋角度
	Insufficient rigidity of drill 鑽頭剛性不足	1.Reduce feed 減少每週進給量 2.Shortening length of drill 縮短鑽頭長度，增加剛性 3.Increasing Web thickness 腹板厚度加大
	Unstable in throughout hole drilling 貫穿時安定性不夠(工件不完全被夾住)	1.Reduce feed while throughout drilling 降低貫穿時的每週進給量 2.Check Set Up Rigidity 工作保持固定 3.Use the highly rigid spindle 採用高剛性主軸
Chipping 切唇崩刃	Feed speed too high 進給速度太快	Decrease feed rate 減少每週進給量
	Too High Lip relief Angle 切刃強度不足(過度的間隙角度)	1.Reduce Lip Relief Angle 減少間隙角度 2.Reduce feed in drilling 降低貫空時的每週進給量 3.Check Set up Rigidity 工作保持固定
	During oversize operation 使用在擴孔作業時	1.Properly grind point angle 加大尖端角度 2.Reduce cutting speed 降低切削速度
Hole oversize 孔徑擴大	Point angle is not properly, large chip of one flute; small chip of other flute 尖端角度未對稱或刃大小不一	1.Regrinding 再研磨 2.Thin Web 腹板削薄 3.Properly grind point angle 減少尖端角度 4.Guide-bush 使用鑽套



**WINSTAR CUTTING TECHNOLOGIES CORP.**

萬事達切削科技股份有限公司

709 台灣台南市安南區工業六路10號(台南科技工業區)  
No.10,Gongye 6th Road,Tainan Technology Industrial Park,  
Tainan City 709, Taiwan

TEL:+886-6-3840386 FAX:+886-6-3840387

E-mail : info@winstarcutting.com

