

2025



# *Holemaking*

孔加工刀具



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**DP Series** High Performance Drills for Universal 高效能內冷及外冷全鎢鋼鑽頭 (泛用)

	Universal · Internal Coolant · 3D 高效能內冷鑽頭 · 3D	DPC3	Ø0.65~Ø20	140°	UNIX	●	●	●	●	○		C010
	High Feed · 3F · Internal Coolant · 3D 高進給 3 刃內冷鑽頭 · 3D	DPTC3	Ø6~Ø16	140°	UNIX	●	○	●	○	○		C012
	Universal · External Coolant · 3D 高效能外冷鑽頭 · 3D	DPN3	Ø0.1~Ø20	130° / 140°	UNIX	●	●	●	●	○		C013
	High Feed · 3F · External Coolant · 3D 高進給 3 刃外冷鑽頭 · 3D	DPTN3	Ø4~Ø16	140°	UNIX	●		●	○			C016
	Universal · Internal Coolant · 5D 高效能內冷鑽頭 · 5D	DPC5	Ø0.65~Ø20	140°	UNIX	●	●	●	●	○		C017
	Universal · External Coolant · 5D 高效能外冷鑽頭 · 5D	DPN5	Ø3~Ø20	140°	UNIX	●	●	●	●	○		C019
	High Feed · 3F · Internal Coolant · 5D 高進給 3 刃內冷鑽頭 · 5D	DPTC5	Ø6~Ø16	140°	UNIX	●	○	●	○	○		C012
	Universal · Internal Coolant · 7D 高效能內冷鑽頭 · 7D	DPC7	Ø4~Ø16	140°	UNIX	●	●	●	●	○		C021
	Universal · Internal Coolant · 10D 高效能內冷鑽頭 · 10D	DPC9	Ø1~Ø16	135°	UNIX	●	●	●	●	○		C022
	Universal · Internal Coolant · 15D 高效能內冷鑽頭 · 15D	DPC9	Ø1~Ø12	135°	UNIX	●	●	●	●	○		C022
	Universal · Internal Coolant · 20D 高效能內冷鑽頭 · 20D	DPC9	Ø1~Ø10	135°	UNIX	●	●	●	●	○		C023
	Universal · Internal Coolant · 30D 高效能內冷鑽頭 · 30D	DPC9	Ø3~Ø6	135°	UNIX	●	●	●	●	○		C023
	Universal · Micro · External Coolant · 10D/30D/50D 外冷微小徑深孔鑽 · 10/30/50 倍深 (啄鑽專用)	DPN9	Ø0.1~Ø1.5	130°	UNIX	●	●	●	●	○		C025

**DM Series** High Performance Drills for Stainless Steel 高效能內冷及外冷全鎢鋼鑽頭 (不鏽鋼用)

	Exotic Material · Internal Coolant · 3D 高效能內冷鑽頭 (鈦及不鏽鋼用) · 3D	DMC3	Ø3.9~Ø20	140°	SINIX	●	●	●	●	○		C026
	Exotic Material · External Coolant · 3D 高效能外冷鑽頭 (鈦及不鏽鋼用) · 3D	DMN3	Ø4~Ø18	140°	SINIX	●	●	●	●			C027
	Exotic Material · Internal Coolant · 5D 高效能內冷鑽頭 (鈦及不鏽鋼用) · 5D	DMC5	Ø3.4~Ø20	140°	SINIX	●	●	●	●	○		C028

**DH Series** High Performance Drills for Hardened Steel 高效能外冷全鎢鋼鑽頭 (高硬用)

	Hardened Steel · External Coolant · 3D 高效能外冷鑽頭 (高硬用) · 3D	DHN3	Ø0.9~Ø12	140°	SINIX	●				●	●	C029
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**DG Series** General Purpose Drills 泛用外冷全鎢鋼鑽頭

	General Purpose · External Coolant · 3D 泛用外冷鑽頭 · 3D	DGN3	Ø3.1~Ø13	130°	UNICO	●	●	●	○	○		C030
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**DA Series** Straight Flute Drills 直刃外冷全鎢鋼鑽鉸刀

	Straight flute · External Coolant · 3D 直刃外冷鑽鉸刀 · 3D	DAN	Ø4~Ø16	130°	UNIX	○		●	●			C031
	Straight flute · External Coolant · 5D 直刃外冷鑽鉸刀 · 5D	DAN	Ø4~Ø16	130°	UNIX	○		●	●			C032

Appearance 外觀	Name 名稱	Code No. 編碼	Diameter 外徑	Tip Angle 鑽尖	Coating 塗層	P	M	K	N	S	H	Page 頁碼
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**DF Series** Flat Drills 平底外冷鑽頭

	Flat Point · External Coolant · 3D 平底外冷鑽頭 · 3D	DFN3	Ø2.2~Ø20	180°	UNIX	●	○	●	○			C033
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**DT Series** Spotting Drills 定位外冷全鎢鋼鑽頭

	Spotting · External Coolant · Tip angle 90°&120° 定位外冷鑽頭 · 鑽尖 90° & 120°	DTN	Ø0.3~Ø16	90° & 120°	UNICO	●	●	●	●	●		C035
	Spotting · External Coolant · Tip angle 90° 定位外冷鑽頭 · 鑽尖 90°	DTN	Ø1.3~Ø16	90°	UNICO	●	●	●	○	○		C035
	Spotting · External Coolant · Tip angle 120° 定位外冷鑽頭 · 鑽尖 120°	DTN	Ø3~Ø16	120°	UNICO	●	●	●	○	●		C036
	Spotting · External Coolant · Tip angle 142° 定位外冷鑽頭 · 鑽尖 142°	DTN	Ø3~Ø16	142°	UNICO	●	●	●	○	●		C036

**DC Series** Center Drills 中心外冷全鎢鋼鑽頭

	Centering · External Coolant · Countersink angle 60° 中心外冷鑽頭 · 錐孔 60°	DCN	Ø1~Ø6.3	120°	UNICO	●	○	●				C037
	Centering · External Coolant · Countersink angle 90° 中心外冷鑽頭 · 錐孔 90°	DCN	Ø1~Ø5	120°	UNICO	●	○	●				C037

**DZ Series** Step Drills 階梯外冷全鎢鋼鑽頭

	Step · External Coolant 階梯外冷鑽頭	DZN	Ø3.3~Ø8.5	140°	UNIX	●	○	●				C038
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Appearance 外觀	Name 名稱	Diameter 外徑	Inserts 刀片	Page 頁碼
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**DMU Series** Modular Drills 模組化鑽頭

	Modular Drills · 3D 模組化鑽頭 · 3D	Ø12~Ø25.4	DMUA..	C043
	Modular Drills · 5D 模組化鑽頭 · 5D	Ø12~Ø25.4	DMUA..	C043
	Modular Drills · 7D 模組化鑽頭 · 7D	Ø12~Ø25.4	DMUA..	C044
	Modular Drills · 10D 模組化鑽頭 · 10D	Ø12~Ø25.4	DMUA..	C044
	Modular Drills · 12D 模組化鑽頭 · 12D	Ø12~Ø25.4	DMUA..	C045

**DSP Series** Indexable Drilling Tools 捨棄式鑽頭

	Indexable Drills · 2D 捨棄式鑽頭 · 2D	Ø12.5~Ø41	SPGG.. / SPMG..	C049
	Indexable Drills · 3D 捨棄式鑽頭 · 3D	Ø12.5~Ø41	SPGG.. / SPMG..	C051
	Indexable Drills · 4D 捨棄式鑽頭 · 4D	Ø12.5~Ø41	SPGG.. / SPMG..	C053
	Indexable Drills · 5D 捨棄式鑽頭 · 5D	Ø13~Ø36	SPGG.. / SPMG..	C055

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Appearance 外觀	Name 名稱	Diameter 外徑	Inserts 刀片	Page 頁碼
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**DWC Series** Indexable Drilling Tools 捨棄式鑽頭

	Indexable Drills · 2D 捨棄式鑽頭 · 2D	Ø14~Ø60	WCMT..	C058
	Indexable Drills · 3D 捨棄式鑽頭 · 3D	Ø14~Ø60	WCMT..	C060
	Indexable Drills · 4D 捨棄式鑽頭 · 4D	Ø14~Ø60	WCMT..	C062
	Indexable Drills · 5D 捨棄式鑽頭 · 5D	Ø16~Ø44	WCMT..	C064

**DWD Series** Indexable Drilling Tools 捨棄式鑽頭

	Indexable Drills · 3D (Single Flute) 捨棄式鑽頭 · 3D (單刃)	Ø10~Ø12	WDXT..	C067
	Indexable Drills · 3D 捨棄式鑽頭 · 3D	Ø13~Ø25	WDXT..	C067
	Indexable Drills · 4D 捨棄式鑽頭 · 4D	Ø13~Ø25	WDXT..	C068
	Indexable Drills · 5D 捨棄式鑽頭 · 5D	Ø13~Ø25	WDXT..	C069

Appearance 外觀	Name 名稱	Spotting Range 定位外徑範圍	Inserts 刀片	Page 頁碼
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**DTS Series** Indexable Spotting Drills 捨棄式定位鑽頭

	DTS60 Indexable Spotting Drills 60° 定位鑽	Ø0.2~Ø3	DCEX11T3	C072
	DTS90 Indexable Spotting Drills 90° 定位鑽	Ø1~Ø5	SDMX05T1	C073
	DTS90 Indexable Spotting Drills 90° 定位鑽	Ø2~Ø11	SCGX09T3 / SCMX09T3	C073
	DTS90 Indexable Spotting Drills 90° 定位鑽	Ø3~Ø14	SDMX11T3	C073
	DTS90 Modular Spotting Drill Heads 90° 定位鑽刀頭	Ø2~Ø11	SCGX09T3 / SCMX09T3	C073
	DTS90 Indexable Spotting Drills 90° 定位鑽	Ø3~Ø20	TCMX16T3	C074

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Appearance 外觀	Name 名稱	Code No. 編碼	Diameter 外徑	Tip Angle 鑽尖	Coating 塗層	P	M	K	N	S	H	Page 頁碼
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**DR Series** Solid Carbide Reamers 全鎢鋼鉸刀

	Left spiral flute · External Coolant 螺旋機械外冷鉸刀	DRMN	Ø2.99-Ø12.02	-	UNIX	●		●	●			C077
	Straight flute · Internal Coolant 直刃內冷鉸刀	DRSC	Ø3~Ø12	-	UNIX	●	○	●	●	○		C078
	Straight flute · External Coolant 直刃外冷鉸刀	DRSN	Ø2.99~Ø20	-	UNIX	●	○	●	●	○		C079

Appearance 外觀	Name 名稱	Code No. 編碼	Diameter 外徑	Coating 塗層	P	M	K	N	S	H	Page 頁碼
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**DR<sup>3</sup>M Series** Modular Reamers 模組化鉸刀

	Left spiral flute · Internal Coolant 內冷模組化螺旋機械鉸刀	DRMMC	Ø12.99~Ø20.01	UNIX	●	●	●	○	●			C081
	Left spiral flute · External Coolant 外冷模組化螺旋機械鉸刀	DRMMN	Ø12.99~Ø20.01	UNIX	●		●					C084
	Straight flute · Internal Coolant 內冷模組化直刃鉸刀	DRSMC	Ø12.99~Ø20.01	UNIX	●	●	●	○	●			C087
	Straight flute · External Coolant 外冷模組化直刃鉸刀	DRSMN	Ø12.99~Ø20.01	UNIX	●		●					C090

Appearance 外觀	Name 名稱	Boring Range 搪孔範圍	Inserts 刀片	Page 頁碼
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**DB Series** Indexable Boring Tools 捨棄式搪孔刀

	DBP - Finish Boring Head · Internal Coolant 捨棄式內冷單刃精搪刀	Ø20~Ø202	TC..09 / TC..11	C093
	DBR - Rough Boring Head · Internal Coolant 捨棄式內冷雙刃粗搪刀	Ø25~Ø204	CC..06 / CC..09 / SC..09 TC..11 / TC..16	C094
	DBEXC - Constant Diameter Extension 等徑搪刀延長桿	-	-	C095
	DBBT - Boring Taper Shank 捨棄式搪刀刀柄	-	-	C096

Holemaking

Coating 塗層

	UNICO	UNIX	SINIX
Coating Type 塗層類型			
Hardness(HV 0.05) 硬度	HV2800 ~ 3100	HV2800 ~ 3100	HV3500 ~ 3800
Friction Coefficient 摩擦係數	0.4 ~ 0.5	0.3 ~ 0.4	0.3 ~ 0.4
Working Temperature 加工溫度	800 ~ 900°C	800 ~ 900°C	1100 ~ 1200°C
Coating Structure 塗層結構	Multi-layer	Multi-layer	Nano Multi-layer
Coating Elements 塗層元素	TiAlN	TiAlN	AlTiSiN

Grade 材質

Grade Type 刀片材質	Color 刀片顏色	Properties 屬性	Application 加工特性	Working Material 加工材質						Industry Area 產業應用範圍	Previous Grade 以前的材質
				P	M	K	N	S	H		
CX32HS		<ul style="list-style-type: none"> <li>PVD (AlTiSiN)</li> <li>Wear resistance</li> <li>Anti-corrosion</li> </ul>	<ul style="list-style-type: none"> <li>Medium to roughing</li> <li>General machining</li> <li>For carbon steel &amp; alloy steel is 1st recommended</li> </ul>	●	○	●				<ul style="list-style-type: none"> <li>Mold &amp; Die</li> <li>Automotive</li> <li>Machinery</li> <li>Aerospace</li> </ul>	-
CX33TX		<ul style="list-style-type: none"> <li>耐磨性</li> <li>抗腐蝕</li> </ul>	<ul style="list-style-type: none"> <li>適合中至粗加工</li> <li>適合泛用加工</li> <li>加工碳鋼 &amp; 合金鋼為第一建議</li> </ul>	●	○	●		○	●	<ul style="list-style-type: none"> <li>模具產業</li> <li>汽車零件</li> <li>機械零件</li> <li>航太零件</li> </ul>	
CX43TX		<ul style="list-style-type: none"> <li>PVD (AlTiSiN)</li> <li>High impact resistance</li> <li>Anti-corrosion</li> </ul>	<ul style="list-style-type: none"> <li>Medium to roughing</li> <li>Interrupted machining</li> <li>For exotic materials is 1st recommended</li> </ul>	●	●				●	<ul style="list-style-type: none"> <li>Electronics</li> <li>Medical</li> <li>Aerospace</li> </ul>	-
		<ul style="list-style-type: none"> <li>高抗衝擊性</li> <li>抗腐蝕</li> </ul>	<ul style="list-style-type: none"> <li>適合中至粗加工</li> <li>適合斷續加工</li> <li>加工高溫合金為第一建議</li> </ul>							<ul style="list-style-type: none"> <li>電子零件</li> <li>醫療產業</li> <li>航太零件</li> </ul>	



**Selection Guide** 選擇指南

**P Steel 鋼**

Application 應用	1st Recommendation 第一推薦	2nd Recommendation 第二推薦
Large Hole Drilling (Indexable) (Hole Tolerance : -0.1~+0.4) 大孔 (中至大孔, 捨棄式鑽頭)	DSP · SPMG-MG · CX33TX 	DWC · WCMT-MG · CX33TX 
Medium Hole Drilling (Modular) (Hole Tolerance : 0~+0.2) 中孔 (中至中大孔, 模組化鑽頭)	DMU · DMUA-SX · CX33TX 	—
Small Hole Drilling (Solid) (Hole Tolerance : 0~+0.1) 小孔 (小至中孔, 全鎢鋼鑽頭)	DPC / DPN · UNIX 	DMC / DMN · SINIX 

**M Stainless Steel 不鏽鋼**

Application 應用	1st Recommendation 第一推薦	2nd Recommendation 第二推薦
Large Hole Drilling (Indexable) (Hole Tolerance : -0.1~+0.4) 大孔 (中至大孔, 捨棄式鑽頭)	DWC · WCMT-SG · CX43TX 	DSP · SPMG-SG · CX33TX 
Medium Hole Drilling (Modular) (Hole Tolerance : 0~+0.2) 中孔 (中至中大孔, 模組化鑽頭)	DMU · DMUA-SX · CX33TX 	—
Small Hole Drilling (Solid) (Hole Tolerance : 0~+0.1) 小孔 (小至中孔, 全鎢鋼鑽頭)	DMC / DMN · SINIX 	DPC / DPN · UNIX 

Holemaking








**K Cast Iron 鑄鐵**

Application 應用	1st Recommendation 第一推薦	2nd Recommendation 第二推薦
Large Hole Drilling (Indexable) (Hole Tolerance : -0.1~+0.4) 大孔 (中至大孔, 捨棄式鑽頭)	DSP · SPMG-MG · CX33TX 	DWC · WCMT-MG · CX33TX 
Medium Hole Drilling (Modular) (Hole Tolerance : 0~+0.2) 中孔 (中至中大孔, 模組化鑽頭)	DMU · DMUA-SX · CX33TX 	—
Small Hole Drilling (Solid) (Hole Tolerance : 0~+0.1) 小孔 (小至中孔, 全鎢鋼鑽頭)	DPC / DPN · UNIX 	DMC / DMN · SINIX 

**N Aluminum alloy & Brass 鋁合金與銅**

Application 應用	1st Recommendation 第一推薦	2nd Recommendation 第二推薦
Large Hole Drilling (Indexable) (Hole Tolerance : -0.1~+0.4) 大孔 (中至大孔, 捨棄式鑽頭)	DSP · SPGG-SG · CX33TX 	—
Medium Hole Drilling (Modular) (Hole Tolerance : 0~+0.2) 中孔 (中至中大孔, 模組化鑽頭)	—	—
Small Hole Drilling (Solid) (Hole Tolerance : 0~+0.1) 小孔 (小至中孔, 全鎢鋼鑽頭)	DGN · UNICO 	—

**S Super Alloy** 高溫合金

Application 應用	1st Recommendation 第一推薦	2nd Recommendation 第二推薦
Large Hole Drilling (Indexable) (Hole Tolerance : -0.1~+0.4) 大孔 (中至大孔, 捨棄式鑽頭)	DWC · WCMT-SG · CX43TX 	DSP · SPMG-MG · CX43TX 
Medium Hole Drilling (Modular) (Hole Tolerance : 0~+0.2) 中孔 (中至中大孔, 模組化鑽頭)	DMU · DMUA-SX · CX33TX 	—
Small Hole Drilling (Solid) (Hole Tolerance : 0~+0.1) 小孔 (小至中孔, 全鎢鋼鑽頭)	DMC / DMN · SINIX 	DHN · SINIX 

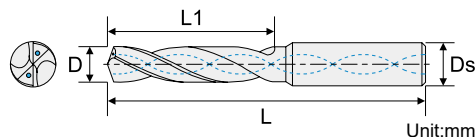
**H Hardened Steel** 高硬度鋼

Application 應用	1st Recommendation 第一推薦	2nd Recommendation 第二推薦
Large Hole Drilling (Indexable) (Hole Tolerance : -0.1~+0.4) 大孔 (中至大孔, 捨棄式鑽頭)	DSP · SPMG-MG · CX33TX 	DWC · WCMT-MG · CX33TX 
Medium Hole Drilling (Modular) (Hole Tolerance : 0~+0.2) 中孔 (中至中大孔, 模組化鑽頭)	DMU · DMUA-SX · CX33TX 	—
Small Hole Drilling (Solid) (Hole Tolerance : 0~+0.1) 小孔 (小至中孔, 全鎢鋼鑽頭)	DHN · SINIX 	—

**DPC - for Universal · Internal Coolant · 3D** 高性能內冷鑽頭 · 3倍深

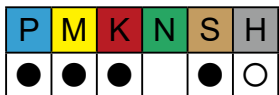


- 3×D Cutting Depth
- 140° SX Tip
- Double Margin
- UNIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6
- Similar DIN6537

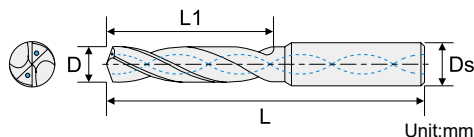


Order No.	D	L1	L	Ds	Order No.	D	L1	L	Ds
DPC30065033UX	0.65	3.5	50	3	DPC30476030UX	4.76(3/16")	28	66	6
DPC30070033UX	0.70	4	50	3	DPC30480030UX	4.80	28	66	6
DPC30075033UX	0.75	4	50	3	DPC30490030UX	4.90	28	66	6
DPC30080033UX	0.80	4.5	50	3	DPC30500030UX	5.00	28	66	6
DPC30085033UX	0.85	4.5	50	3	DPC30510030UX	5.10	28	66	6
DPC30090033UX	0.90	5	50	3	DPC30520030UX	5.20	28	66	6
DPC30095033UX	0.95	5	50	3	DPC30530030UX	5.30	28	66	6
DPC30100033UX	1.00	6	50	3	DPC30540030UX	5.40	28	66	6
DPC30110033UX	1.10	6	50	3	DPC30550030UX	5.50	28	66	6
DPC30120033UX	1.20	7	50	3	DPC30556030UX	5.56	28	66	6
DPC30130033UX	1.30	7	50	3	DPC30560030UX	5.60	28	66	6
DPC30140033UX	1.40	8	50	3	DPC30570030UX	5.70	28	66	6
DPC30150033UX	1.50	10	50	3	DPC30580030UX	5.80	28	66	6
DPC30160033UX	1.60	10	50	3	DPC30590030UX	5.90	28	66	6
DPC30170033UX	1.70	10	50	3	DPC30600030UX	6.00	28	66	6
DPC30180033UX	1.80	12	50	3	DPC30610030UX	6.10	34	79	8
DPC30190033UX	1.90	12	50	3	DPC30620030UX	6.20	34	79	8
DPC30200033UX	2.00	12	50	3	DPC30630030UX	6.30	34	79	8
DPC30210033UX	2.10	12	50	3	DPC30635030UX	6.35(1/4")	34	79	8
DPC30220033UX	2.20	12	50	3	DPC30640030UX	6.40	34	79	8
DPC30230033UX	2.30	14	50	3	DPC30650030UX	6.50	34	79	8
DPC30240033UX	2.40	14	50	3	DPC30660030UX	6.60	34	79	8
DPC30250033UX	2.50	16	50	3	DPC30670030UX	6.70	34	79	8
DPC30260033UX	2.60	16	50	3	DPC30680030UX	6.80	34	79	8
DPC30270033UX	2.70	16	50	3	DPC30690030UX	6.90	34	79	8
DPC30280033UX	2.80	16	50	3	DPC30700030UX	7.00	34	79	8
DPC30290033UX	2.90	16	50	3	DPC30710030UX	7.10	41	79	8
DPC30300033UX	3.00	16	50	3	DPC30720030UX	7.20	41	79	8
DPC30300034UX	3.00	20	60	4	DPC30730030UX	7.30	41	79	8
DPC30310034UX	3.10	20	60	4	DPC30740030UX	7.40	41	79	8
DPC30317034UX	3.17(1/8")	20	60	4	DPC30750030UX	7.50	41	79	8
DPC30320034UX	3.20	20	60	4	DPC30760030UX	7.60	41	79	8
DPC30330034UX	3.30	20	60	4	DPC30770030UX	7.70	41	79	8
DPC30340034UX	3.40	20	60	4	DPC30780030UX	7.80	41	79	8
DPC30350034UX	3.50	20	60	4	DPC30790030UX	7.90	41	79	8
DPC30360034UX	3.60	20	60	4	DPC30794030UX	7.94(5/16)	41	79	8
DPC30370034UX	3.70	20	60	4	DPC30800030UX	8.00	41	79	8
DPC30380034UX	3.80	24	60	4	DPC30810030UX	8.10	47	89	10
DPC30390034UX	3.90	24	60	4	DPC30820030UX	8.20	47	89	10
DPC30400030UX	4.00	24	66	6	DPC30830030UX	8.30	47	89	10
DPC30410030UX	4.10	24	66	6	DPC30840030UX	8.40	47	89	10
DPC30420030UX	4.20	24	66	6	DPC30850030UX	8.50	47	89	10
DPC30430030UX	4.30	24	66	6	DPC30860030UX	8.60	47	89	10
DPC30440030UX	4.40	24	66	6	DPC30870030UX	8.70	47	89	10
DPC30450030UX	4.50	24	66	6	DPC30880030UX	8.80	47	89	10
DPC30460030UX	4.60	24	66	6	DPC30890030UX	8.90	47	89	10
DPC30465030UX	4.65(13/71")	24	66	6	DPC30900030UX	9.00	47	89	10
DPC30470030UX	4.70	24	66	6	DPC30910030UX	9.10	47	89	10

**DPC - for Universal · Internal Coolant · 3D** 高效能內冷鑽頭 · 3倍深



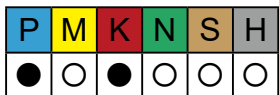
- 3×D Cutting Depth
- 140° SX Tip
- Double Margin
- UNIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6
- Similar DIN6537



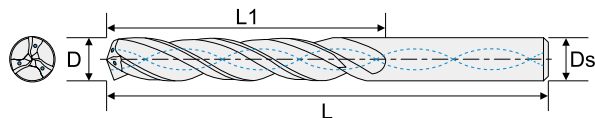
Order No.	D	L1	L	Ds	Order No.	D	L1	L	Ds
DPC30920030UX	9.20	47	89	10	DPC31420030UX	14.20	65	115	16
DPC30925030UX	9.25(23/64")	47	89	10	DPC31429030UX	14.29(9/16")	65	115	16
DPC30930030UX	9.30	47	89	10	DPC31430030UX	14.30	65	115	16
DPC30940030UX	9.40	47	89	10	DPC31440030UX	14.40	65	115	16
DPC30950030UX	9.50	47	89	10	DPC31450030UX	14.50	65	115	16
DPC30952030UX	9.52(3/8")	47	89	10	DPC31470030UX	14.70	65	115	16
DPC30960030UX	9.60	47	89	10	DPC31500030UX	15.00	65	115	16
DPC30970030UX	9.70	47	89	10	DPC31520030UX	15.20	65	115	16
DPC30980030UX	9.80	47	89	10	DPC31550030UX	15.50	65	115	16
DPC30990030UX	9.90	47	89	10	DPC31560030UX	15.60	65	115	16
DPC31000030UX	10.00	47	89	10	DPC31570030UX	15.70	65	115	16
DPC31010030UX	10.10	55	102	12	DPC31580030UX	15.80	65	115	16
DPC31020030UX	10.20	55	102	12	DPC31587030UX	15.87(5/8")	65	115	16
DPC31030030UX	10.30	55	102	12	DPC31600030UX	16.00	65	115	16
DPC31040030UX	10.40	55	102	12	DPC31650030UX	16.50	73	123	18
DPC31050030UX	10.50	55	102	12	DPC31700030UX	17.00	73	123	18
DPC31060030UX	10.60	55	102	12	DPC31750030UX	17.50	73	123	18
DPC31070030UX	10.70	55	102	12	DPC31800030UX	18.00	73	123	18
DPC31080030UX	10.80	55	102	12	DPC31850030UX	18.50	79	131	20
DPC31090030UX	10.90	55	102	12	DPC31900030UX	19.00	79	131	20
DPC31100030UX	11.00	55	102	12	DPC31905030UX	19.05(3/4")	79	131	20
DPC31110030UX	11.10	55	102	12	DPC31950030UX	19.50	79	131	20
DPC31111030UX	11.11(7/16")	55	102	12	DPC32000030UX	20.00	79	131	20
DPC31120030UX	11.20	55	102	12					
DPC31130030UX	11.30	55	102	12					
DPC31140030UX	11.40	55	102	12					
DPC31150030UX	11.50	55	102	12					
DPC31160030UX	11.60	55	102	12					
DPC31170030UX	11.70	55	102	12					
DPC31180030UX	11.80	55	102	12					
DPC31190030UX	11.90	55	102	12					
DPC31200030UX	12.00	55	102	12					
DPC31210030UX	12.10	60	107	14					
DPC31220030UX	12.20	60	107	14					
DPC31230030UX	12.30	60	107	14					
DPC31240030UX	12.40	60	107	14					
DPC31250030UX	12.50	60	107	14					
DPC31260030UX	12.60	60	107	14					
DPC31270030UX	12.70(1/2")	60	107	14					
DPC31280030UX	12.80	60	107	14					
DPC31290030UX	12.90	60	107	14					
DPC31300030UX	13.00	60	107	14					
DPC31320030UX	13.20	60	107	14					
DPC31330030UX	13.30	60	107	14					
DPC31350030UX	13.50	60	107	14					
DPC31370030UX	13.70	60	107	14					
DPC31380030UX	13.80	60	107	14					
DPC31400030UX	14.00	60	107	14					

Holemaking

**DPTC - High Feed · 3F · Internal Coolant · 3D / 5D** 高進給 3 刃內冷鑽頭 · 3 倍 / 5 倍深



- 3 Flute Design
- 140° SU Tip
- Single Margin
- UNIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6



**3D** Unit:mm

Order No.	D	L1	L	Ds
DPTC30600030UX	6.00	28	66	6
DPTC30635030UX	6.35(1/4")	34	79	8
DPTC30650030UX	6.50	34	79	8
DPTC30680030UX	6.80	34	79	8
DPTC30700030UX	7.00	34	79	8
DPTC30794030UX	7.94(5/16)	41	79	8
DPTC30800030UX	8.00	41	79	8
DPTC30850030UX	8.50	47	89	10
DPTC30860030UX	8.60	47	89	10
DPTC30880030UX	8.80	47	89	10
DPTC30900030UX	9.00	47	89	10
DPTC30950030UX	9.50	47	89	10
DPTC30952030UX	9.52(3/8")	47	89	10
DPTC31000030UX	10.00	47	89	10
DPTC31020030UX	10.20	55	102	12
DPTC31030030UX	10.30	55	102	12
DPTC31100030UX	11.00	55	102	12
DPTC31140030UX	11.40	55	102	12
DPTC31150030UX	11.50	55	102	12
DPTC31200030UX	12.00	55	102	12
DPTC31250030UX	12.50	60	107	14
DPTC31270030UX	12.70(1/2")	60	107	14
DPTC31300030UX	13.00	60	107	14
DPTC31400030UX	14.00	60	107	14
DPTC31587030UX	15.87(5/8")	65	115	16
DPTC31600030UX	16.00	65	115	16

**5D** Unit:mm

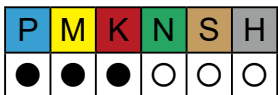
Order No.	D	L1	L	Ds
DPTC50600050UX	6.00	44	82	6
DPTC50635050UX	6.35(1/4")	53	91	8
DPTC50650050UX	6.50	53	91	8
DPTC50680050UX	6.80	53	91	8
DPTC50700050UX	7.00	53	91	8
DPTC50794050UX	7.94(5/16")	53	91	8
DPTC50800050UX	8.00	53	91	8
DPTC50850050UX	8.50	61	103	10
DPTC50860050UX	8.60	61	103	10
DPTC50880050UX	8.80	61	103	10
DPTC50900050UX	9.00	61	103	10
DPTC50950050UX	9.50	61	103	10
DPTC50952050UX	9.52(3/8")	61	103	10
DPTC51000050UX	10.00	61	103	10
DPTC51020050UX	10.20	71	118	12
DPTC51030050UX	10.30	71	118	12
DPTC51100050UX	11.00	71	118	12
DPTC51140050UX	11.40	71	118	12
DPTC51150050UX	11.50	71	118	12
DPTC51200050UX	12.00	71	118	12
DPTC51270050UX	12.70(1/2")	77	124	14
DPTC51250050UX	12.50	77	124	14
DPTC51300050UX	13.00	77	124	14
DPTC51400050UX	14.00	77	124	14
DPTC51587050UX	15.87(5/8")	83	133	16
DPTC51600050UX	16.00	83	133	16

**Recommended Cutting Conditions**

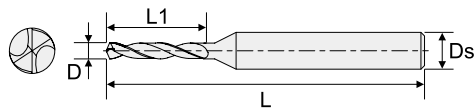
Min. - Suggestion - Max.

Work Material	Vc (m/min)	fr (mm/rev)		Vc (m/min)	fr (mm/rev)		Vc (m/min)	fr (mm/rev)	
		Ø6mm	Ø8mm		Ø10mm	Ø12mm		Ø14mm	Ø16mm
<b>P</b> Carbon Steel (180 ~ 280HB)	70-90-110	0.18-0.24-0.30	0.24-0.32-0.40	80-100-120	0.30-0.40-0.50	0.36-0.48-0.60	90-110-130	0.42-0.56-0.70	0.48-0.64-0.80
	60-80-100	0.16-0.22-0.27	0.22-0.29-0.36	70-90-110	0.27-0.36-0.45	0.32-0.43-0.54	80-100-120	0.38-0.50-0.63	0.43-0.58-0.72
<b>M</b> Alloy Steel (280 ~ 350HB)	35-45-55	0.06-0.12-0.18	0.08-0.16-0.24	40-50-60	0.10-0.20-0.30	0.12-0.24-0.36	45-55-65	0.14-0.28-0.42	0.16-0.32-0.48
<b>K</b> Stainless Steel	70-90-110	0.18-0.24-0.30	0.24-0.32-0.40	80-100-120	0.30-0.40-0.50	0.36-0.48-0.60	90-110-130	0.42-0.56-0.70	0.48-0.64-0.80
	60-80-100	0.16-0.22-0.27	0.22-0.29-0.36	70-90-110	0.27-0.36-0.45	0.32-0.43-0.54	80-100-120	0.38-0.50-0.63	0.43-0.58-0.72
Cast Iron (< 350Mpa)	70-90-110	0.18-0.24-0.30	0.24-0.32-0.40	80-100-120	0.30-0.40-0.50	0.36-0.48-0.60	90-110-130	0.42-0.56-0.70	0.48-0.64-0.80
	60-80-100	0.16-0.22-0.27	0.22-0.29-0.36	70-90-110	0.27-0.36-0.45	0.32-0.43-0.54	80-100-120	0.38-0.50-0.63	0.43-0.58-0.72
Ductile Cast Iron (< 450Mpa)	70-90-110	0.18-0.24-0.30	0.24-0.32-0.40	80-100-120	0.30-0.40-0.50	0.36-0.48-0.60	90-110-130	0.42-0.56-0.70	0.48-0.64-0.80
	60-80-100	0.16-0.22-0.27	0.22-0.29-0.36	70-90-110	0.27-0.36-0.45	0.32-0.43-0.54	80-100-120	0.38-0.50-0.63	0.43-0.58-0.72

**DPN - for Universal · External Coolant · Micro · 3D** 高效能微小徑外冷鑽頭 · 3倍深



- 3×D Cutting Depth
- 130° NX Tip
- UNIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6



Unit:mm

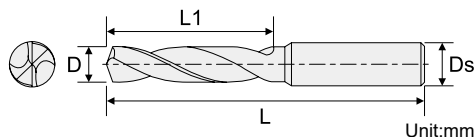
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DPN300100330	0.10	0.6	38	3	DPN30250033UX	2.50	14	50	3
DPN300150330	0.15	1	38	3	DPN30255033UX	2.55	14	50	3
DPN300200330	0.20	1.5	38	3	DPN30260033UX	2.60	14	50	3
DPN300250330	0.25	1.5	38	3	DPN30265033UX	2.65	16	50	3
DPN300300330	0.30	2	38	3	DPN30270033UX	2.70	16	50	3
DPN30035033UX	0.35	2	38	3	DPN30275033UX	2.75	16	50	3
DPN30040033UX	0.40	2.5	38	3	DPN30280033UX	2.80	16	50	3
DPN30045033UX	0.45	2.8	38	3	DPN30285033UX	2.85	16	50	3
DPN30050033UX	0.50	3	38	3	DPN30290033UX	2.90	16	50	3
DPN30055033UX	0.55	3.5	38	3	DPN30295033UX	2.95	16	50	3
DPN30060033UX	0.60	3	38	3	DPN30300033UX	3.00	16	50	3
DPN30065033UX	0.65	3	38	3					
DPN30070033UX	0.70	3	38	3					
DPN30075033UX	0.75	4	38	3					
DPN30080033UX	0.80	4	38	3					
DPN30085033UX	0.85	4	38	3					
DPN30090033UX	0.90	4	38	3					
DPN30095033UX	0.95	4	38	3					
DPN30100033UX	1.00	4	38	3					
DPN30105033UX	1.05	6	38	3					
DPN30110033UX	1.10	6	38	3					
DPN30115033UX	1.15	6	38	3					
DPN30120033UX	1.20	6	38	3					
DPN30125033UX	1.25	6	38	3					
DPN30130033UX	1.30	6	38	3					
DPN30135033UX	1.35	6	38	3					
DPN30140033UX	1.40	6	38	3					
DPN30145033UX	1.45	6	38	3					
DPN30150033UX	1.50	6	38	3					
DPN30155033UX	1.55	8	38	3					
DPN30160033UX	1.60	8	38	3					
DPN30165033UX	1.65	8	38	3					
DPN30170033UX	1.70	8	38	3					
DPN30175033UX	1.75	10	50	3					
DPN30180033UX	1.80	10	50	3					
DPN30185033UX	1.85	10	50	3					
DPN30190033UX	1.90	10	50	3					
DPN30195033UX	1.95	12	50	3					
DPN30200033UX	2.00	12	50	3					
DPN30205033UX	2.05	12	50	3					
DPN30210033UX	2.10	12	50	3					
DPN30215033UX	2.15	13	50	3					
DPN30220033UX	2.20	13	50	3					
DPN30225033UX	2.25	13	50	3					
DPN30230033UX	2.30	13	50	3					
DPN30235033UX	2.35	14	50	3					
DPN30240033UX	2.40	14	50	3					
DPN30245033UX	2.45	14	50	3					

Holemaking

DPN - for Universal · External Coolant · 3D 高效能外冷鑽頭 · 3倍深



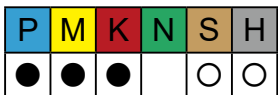
- 3×D Cutting Depth
- 140° SX Tip
- UNIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6
- Similar DIN6537



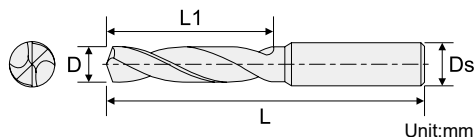
Order No.	D	L1	L	Ds	Order No.	D	L1	L	Ds
DPN30300034UX	3.00	20	60	4	DPN30570030UX	5.70	28	66	6
DPN30310034UX	3.10	20	60	4	DPN30580030UX	5.80	28	66	6
DPN30317034UX	3.17(1/8")	20	60	4	DPN30590030UX	5.90	28	66	6
DPN30320034UX	3.20	20	60	4	DPN30600030UX	6.00	28	66	6
DPN30325034UX	3.25(5/39")	20	60	4	DPN30610030UX	6.10	34	79	8
DPN30330034UX	3.30	20	60	4	DPN30620030UX	6.20	34	79	8
DPN30340034UX	3.40	20	60	4	DPN30630030UX	6.30	34	79	8
DPN30350034UX	3.50	20	60	4	DPN30635030UX	6.35(1/4")	34	79	8
DPN30360034UX	3.60	20	60	4	DPN30640030UX	6.40	34	79	8
DPN30370034UX	3.70	20	60	4	DPN30650030UX	6.50	34	79	8
DPN30380034UX	3.80	24	60	4	DPN30660030UX	6.60	34	79	8
DPN30390034UX	3.90	24	60	4	DPN30670030UX	6.70	34	79	8
DPN30397034UX	3.97(5/32")	24	60	4	DPN30680030UX	6.80	34	79	8
DPN30400034UX	4.00	24	60	4	DPN30690030UX	6.90	34	79	8
DPN30300030UX	3.00	20	62	6	DPN30700030UX	7.00	34	79	8
DPN30310030UX	3.10	20	62	6	DPN30710030UX	7.10	41	79	8
DPN30317030UX	3.17(1/8")	20	62	6	DPN30720030UX	7.20	41	79	8
DPN30320030UX	3.20	20	62	6	DPN30730030UX	7.30	41	79	8
DPN30323030UX	3.23	20	62	6	DPN30740030UX	7.40	41	79	8
DPN30325030UX	3.25(5/39")	20	62	6	DPN30750030UX	7.50	41	79	8
DPN30330030UX	3.30	20	62	6	DPN30760030UX	7.60	41	79	8
DPN30340030UX	3.40	20	62	6	DPN30770030UX	7.70	41	79	8
DPN30350030UX	3.50	20	62	6	DPN30780030UX	7.80	41	79	8
DPN30360030UX	3.60	20	62	6	DPN30790030UX	7.90	41	79	8
DPN30370030UX	3.70	20	62	6	DPN30794030UX	7.94(5/16")	41	79	8
DPN30380030UX	3.80	24	66	6	DPN30800030UX	8.00	41	79	8
DPN30390030UX	3.90	24	66	6	DPN30810030UX	8.10	47	89	10
DPN30397030UX	3.97(5/32")	24	66	6	DPN30820030UX	8.20	47	89	10
DPN30400030UX	4.00	24	66	6	DPN30830030UX	8.30	47	89	10
DPN30410030UX	4.10	24	66	6	DPN30840030UX	8.40	47	89	10
DPN30420030UX	4.20	24	66	6	DPN30850030UX	8.50	47	89	10
DPN30430030UX	4.30	24	66	6	DPN30860030UX	8.60	47	89	10
DPN30440030UX	4.40	24	66	6	DPN30870030UX	8.70	47	89	10
DPN30450030UX	4.50	24	66	6	DPN30880030UX	8.80	47	89	10
DPN30460030UX	4.60	24	66	6	DPN30890030UX	8.90	47	89	10
DPN30465030UX	4.65(13/71")	24	66	6	DPN30900030UX	9.00	47	89	10
DPN30470030UX	4.70	24	66	6	DPN30910030UX	9.10	47	89	10
DPN30476030UX	4.76(3/16")	28	66	6	DPN30920030UX	9.20	47	89	10
DPN30480030UX	4.80	28	66	6	DPN30925030UX	9.25(23/64")	47	89	10
DPN30490030UX	4.90	28	66	6	DPN30930030UX	9.30	47	89	10
DPN30500030UX	5.00	28	66	6	DPN30940030UX	9.40	47	89	10
DPN30510030UX	5.10	28	66	6	DPN30950030UX	9.50	47	89	10
DPN30520030UX	5.20	28	66	6	DPN30952030UX	9.52(3/8")	47	89	10
DPN30530030UX	5.30	28	66	6	DPN30960030UX	9.60	47	89	10
DPN30540030UX	5.40	28	66	6	DPN30970030UX	9.70	47	89	10
DPN30550030UX	5.50	28	66	6	DPN30980030UX	9.80	47	89	10
DPN30556030UX	5.56(7/32")	28	66	6	DPN30990030UX	9.90	47	89	10
DPN30560030UX	5.60	28	66	6	DPN31000030UX	10.00	47	89	10



DPN - for Universal · External Coolant · 3D 高效能外冷鑽頭 · 3 倍深



- 3×D Cutting Depth
- 140° SX Tip
- UNIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6
- Similar DIN6537



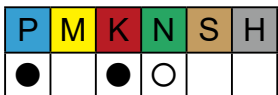
Unit:mm

Order No.	D	L1	L	Ds
DPN31010030UX	10.10	55	102	12
DPN31020030UX	10.20	55	102	12
DPN31030030UX	10.30	55	102	12
DPN31040030UX	10.40	55	102	12
DPN31050030UX	10.50	55	102	12
DPN31060030UX	10.60	55	102	12
DPN31070030UX	10.70	55	102	12
DPN31080030UX	10.80	55	102	12
DPN31090030UX	10.90	55	102	12
DPN31100030UX	11.00	55	102	12
DPN31110030UX	11.10	55	102	12
DPN31111030UX	11.11(7/16")	55	102	12
DPN31120030UX	11.20	55	102	12
DPN31130030UX	11.30	55	102	12
DPN31140030UX	11.40	55	102	12
DPN31150030UX	11.50	55	102	12
DPN31160030UX	11.60	55	102	12
DPN31170030UX	11.70	55	102	12
DPN31180030UX	11.80	55	102	12
DPN31190030UX	11.90	55	102	12
DPN31200030UX	12.00	55	102	12
DPN31210030UX	12.10	60	107	14
DPN31220030UX	12.20	60	107	14
DPN31230030UX	12.30	60	107	14
DPN31240030UX	12.40	60	107	14
DPN31250030UX	12.50	60	107	14
DPN31260030UX	12.60	60	107	14
DPN31270030UX	12.70(1/2")	60	107	14
DPN31280030UX	12.80	60	107	14
DPN31290030UX	12.90	60	107	14
DPN31300030UX	13.00	60	107	14
DPN31320030UX	13.20	60	107	14
DPN31330030UX	13.30	60	107	14
DPN31350030UX	13.50	60	107	14
DPN31370030UX	13.70	60	107	14
DPN31380030UX	13.80	60	107	14
DPN31400030UX	14.00	60	107	14
DPN31420030UX	14.20	65	115	16
DPN31429030UX	14.29(9/16")	65	115	16
DPN31430030UX	14.30	65	115	16
DPN31440030UX	14.40	65	115	16
DPN31450030UX	14.50	65	115	16
DPN31470030UX	14.70	65	115	16
DPN31500030UX	15.00	65	115	16
DPN31520030UX	15.20	65	115	16
DPN31550030UX	15.50	65	115	16
DPN31560030UX	15.60	65	115	16
DPN31570030UX	15.70	65	115	16

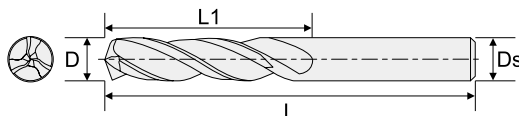
Order No.	D	L1	L	Ds
DPN31580030UX	15.80	65	115	16
DPN31587030UX	15.87(5/8")	65	115	16
DPN31600030UX	16.00	65	115	16
DPN31650030UX	16.50	73	123	18
DPN31700030UX	17.00	73	123	18
DPN31750030UX	17.50	73	123	18
DPN31800030UX	18.00	73	123	18
DPN31850030UX	18.50	79	131	20
DPN31900030UX	19.00	79	131	20
DPN31905030UX	19.05(3/4")	79	131	20
DPN31950030UX	19.50	79	131	20
DPN32000030UX	20.00	79	131	20

Holemaking

**DPTN - High Feed · 3F · External Coolant · 3D** 高進給 3 刃外冷鑽頭 · 3 倍



- 3 Flute Design
- 140° SU Tip
- Single Margin
- UNIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6



Unit:mm

Order No.	D	L1	L	Ds	Order No.	D	L1	L	Ds
DPTN30400030UX	4.00	24	66	6	DPTN31600030UX	16.00	65	115	16
DPTN30600030UX	6.00	28	66	6					
DPTN30635030UX	6.35(1/4")	34	79	8					
DPTN30650030UX	6.50	34	79	8					
DPTN30680030UX	6.80	34	79	8					
DPTN30700030UX	7.00	34	79	8					
DPTN30794030UX	7.94(5/16)	41	79	8					
DPTN30800030UX	8.00	41	79	8					
DPTN30850030UX	8.50	47	89	10					
DPTN30860030UX	8.60	47	89	10					
DPTN30880030UX	8.80	47	89	10					
DPTN30900030UX	9.00	47	89	10					
DPTN30950030UX	9.50	47	89	10					
DPTN30952030UX	9.52(3/8")	47	89	10					
DPTN31000030UX	10.00	47	89	10					
DPTN31020030UX	10.20	55	102	12					
DPTN31030030UX	10.30	55	102	12					
DPTN31100030UX	11.00	55	102	12					
DPTN31140030UX	11.40	55	102	12					
DPTN31150030UX	11.50	55	102	12					
DPTN31200030UX	12.00	55	102	12					
DPTN31250030UX	12.50	60	107	14					
DPTN31270030UX	12.70(1/2")	60	107	14					
DPTN31300030UX	13.00	60	107	14					
DPTN31400030UX	14.00	60	107	14					
DPTN31587030UX	15.87(5/8")	65	115	16					

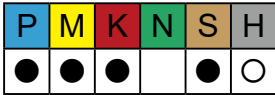
Recommended Cutting Conditions

Min. - Suggestion - Max.

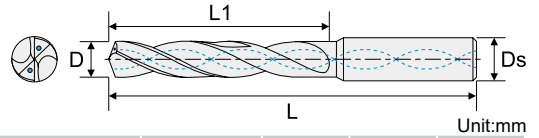
Work Material	Vc (m/min)	fr (mm/rev)		Vc (m/min)	fr (mm/rev)		Vc (m/min)	fr (mm/rev)		
		Ø6mm	Ø8mm		Ø10mm	Ø12mm		Ø14mm	Ø16mm	
P	Carbon Steel (180 ~ 280HB)	45-58-70	0.12-0.18-0.24	0.16-0.24-0.32	50-65-80	0.20-0.30-0.40	0.24-0.36-0.48	60-73-85	0.28-0.42-0.56	0.32-0.48-0.64
	Alloy Steel (280 ~ 350HB)	40-52-65	0.11-0.16-0.22	0.14-0.22-0.29	45-52-65	0.18-0.27-0.36	0.22-0.32-0.43	50-65-80	0.25-0.38-0.50	0.29-0.43-0.58
K	Cast Iron (< 350Mpa)	45-60-70	0.12-0.18-0.24	0.16-0.24-0.32	50-65-80	0.20-0.30-0.40	0.24-0.36-0.48	60-73-85	0.28-0.42-0.56	0.32-0.48-0.64
	Ductile Cast Iron (< 450Mpa)	40-52-65	0.11-0.16-0.22	0.14-0.22-0.29	45-52-65	0.18-0.27-0.36	0.22-0.32-0.43	50-65-80	0.25-0.38-0.50	0.29-0.43-0.58

DPC - for Universal · Internal Coolant · 5D

高效能內冷鑽頭 · 5倍深



- 5×D Cutting Depth
- 140° SX Tip
- Double Margin
- UNIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6
- Similar DIN6537



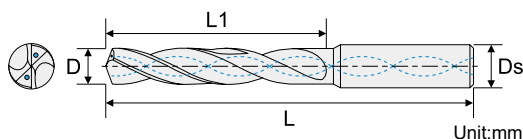
Order No.	D	L1	L	Ds	Order No.	D	L1	L	Ds
DPC50065053UX	0.65	5	50	3	DPC50476050UX	4.76(3/16")	44	82	6
DPC50070053UX	0.70	5	50	3	DPC50480050UX	4.80	44	82	6
DPC50075053UX	0.75	5.5	50	3	DPC50490050UX	4.90	44	82	6
DPC50080053UX	0.80	6	50	3	DPC50500050UX	5.00	44	82	6
DPC50085053UX	0.85	6	50	3	DPC50510050UX	5.10	44	82	6
DPC50090053UX	0.90	7	50	3	DPC50520050UX	5.20	44	82	6
DPC50095053UX	0.95	7	50	3	DPC50530050UX	5.30	44	82	6
DPC50100053UX	1.00	8	50	3	DPC50540050UX	5.40	44	82	6
DPC50110053UX	1.10	9	50	3	DPC50550050UX	5.50	44	82	6
DPC50120053UX	1.20	9	50	3	DPC50555050UX	5.55(7/32")	44	82	6
DPC50130053UX	1.30	10	50	3	DPC50560050UX	5.60	44	82	6
DPC50140053UX	1.40	10	50	3	DPC50570050UX	5.70	44	82	6
DPC50150053UX	1.50	12	50	3	DPC50580050UX	5.80	44	82	6
DPC50160053UX	1.60	12	50	3	DPC50590050UX	5.90	44	82	6
DPC50170053UX	1.70	12	50	3	DPC50600050UX	6.00	44	82	6
DPC50180053UX	1.80	14	50	3	DPC50610050UX	6.10	53	91	8
DPC50190053UX	1.90	14	50	3	DPC50620050UX	6.20	53	91	8
DPC50200053UX	2.00	14	50	3	DPC50630050UX	6.30	53	91	8
DPC50210053UX	2.10	16	50	3	DPC50635050UX	6.35(1/4")	53	91	8
DPC50220053UX	2.20	16	50	3	DPC50640050UX	6.40	53	91	8
DPC50230053UX	2.30	18	50	3	DPC50650050UX	6.50	53	91	8
DPC50240053UX	2.40	18	50	3	DPC50660050UX	6.60	53	91	8
DPC50250053UX	2.50	20	60	3	DPC50670050UX	6.70	53	91	8
DPC50260053UX	2.60	20	60	3	DPC50680050UX	6.80	53	91	8
DPC50270053UX	2.70	20	60	3	DPC50690050UX	6.90	53	91	8
DPC50280053UX	2.80	20	60	3	DPC50700050UX	7.00	53	91	8
DPC50290053UX	2.90	22	60	3	DPC50710050UX	7.10	53	91	8
DPC50300053UX	3.00	22	60	3	DPC50720050UX	7.20	53	91	8
DPC50300054UX	3.00	28	60	4	DPC50730050UX	7.30	53	91	8
DPC50310054UX	3.10	28	60	4	DPC50740050UX	7.40	53	91	8
DPC50317054UX	3.17(1/8")	28	60	4	DPC50750050UX	7.50	53	91	8
DPC50325054UX	3.25	28	60	4	DPC50760050UX	7.60	53	91	8
DPC50330054UX	3.30	28	60	4	DPC50770050UX	7.70	53	91	8
DPC50340054UX	3.40	28	60	4	DPC50780050UX	7.80	53	91	8
DPC50350054UX	3.50	28	60	4	DPC50790050UX	7.90	53	91	8
DPC50360054UX	3.60	28	60	4	DPC50794050UX	7.94(5/16")	53	91	8
DPC50370054UX	3.70	28	60	4	DPC50800050UX	8.00	53	91	8
DPC50380054UX	3.80	36	74	4	DPC50810050UX	8.10	61	103	10
DPC50397054UX	3.97(5/32")	36	74	4	DPC50820050UX	8.20	61	103	10
DPC50400050UX	4.00	36	74	6	DPC50830050UX	8.30	61	103	10
DPC50410050UX	4.10	36	74	6	DPC50840050UX	8.40	61	103	10
DPC50420050UX	4.20	36	74	6	DPC50850050UX	8.50	61	103	10
DPC50430050UX	4.30	36	74	6	DPC50860050UX	8.60	61	103	10
DPC50440050UX	4.40	36	74	6	DPC50870050UX	8.70	61	103	10
DPC50450050UX	4.50	36	74	6	DPC50880050UX	8.80	61	103	10
DPC50460050UX	4.60	36	74	6	DPC50890050UX	8.90	61	103	10
DPC50465050UX	4.65(13/71")	36	74	6	DPC50900050UX	9.00	61	103	10
DPC50470050UX	4.70	36	74	6	DPC50910050UX	9.10	61	103	10

Holemaking

**DPC - for Universal · Internal Coolant · 5D** 高效能內冷鑽頭 · 5倍深



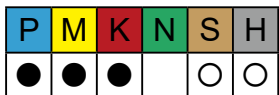
- 5×D Cutting Depth
- 140° SX Tip
- Double Margin
- UNIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6
- Similar DIN6537



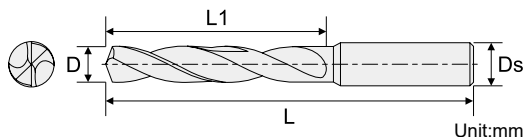
Order No.	D	L1	L	Ds
DPC50920050UX	9.20	61	103	10
DPC50925050UX	9.25(23/64")	61	103	10
DPC50930050UX	9.30	61	103	10
DPC50940050UX	9.40	61	103	10
DPC50950050UX	9.50	61	103	10
DPC50952050UX	9.52(3/8")	61	103	10
DPC50960050UX	9.60	61	103	10
DPC50970050UX	9.70	61	103	10
DPC50980050UX	9.80	61	103	10
DPC50990050UX	9.90	61	103	10
DPC51000050UX	10.00	61	103	10
DPC51010050UX	10.10	71	118	12
DPC51020050UX	10.20	71	118	12
DPC51030050UX	10.30	71	118	12
DPC51040050UX	10.40	71	118	12
DPC51050050UX	10.50	71	118	12
DPC51060050UX	10.60	71	118	12
DPC51070050UX	10.70	71	118	12
DPC51080050UX	10.80	71	118	12
DPC51090050UX	10.90	71	118	12
DPC51100050UX	11.00	71	118	12
DPC51100050UX	11.00	71	118	12
DPC51110050UX	11.10	71	118	12
DPC51111050UX	11.11(7/16")	71	118	12
DPC51120050UX	11.20	71	118	12
DPC51130050UX	11.30	71	118	12
DPC51140050UX	11.40	71	118	12
DPC51150050UX	11.50	71	118	12
DPC51160050UX	11.60	71	118	12
DPC51170050UX	11.70	71	118	12
DPC51180050UX	11.80	71	118	12
DPC51190050UX	11.90	71	118	12
DPC51200050UX	12.00	71	118	12
DPC51210050UX	12.10	77	124	14
DPC51220050UX	12.20	77	124	14
DPC51230050UX	12.30	77	124	14
DPC51240050UX	12.40	77	124	14
DPC51250050UX	12.50	77	124	14
DPC51260050UX	12.60	77	124	14
DPC51270050UX	12.70(1/2")	77	124	14
DPC51280050UX	12.80	77	124	14
DPC51290050UX	12.90	77	124	14
DPC51300050UX	13.00	77	124	14
DPC51310050UX	13.10	77	124	14
DPC51330050UX	13.30	77	124	14
DPC51340050UX	13.40	77	124	14
DPC51350050UX	13.50	77	124	14
DPC51360050UX	13.60	77	124	14
DPC51370050UX	13.70	77	124	14

Order No.	D	L1	L	Ds
DPC51380050UX	13.80	77	124	14
DPC51390050UX	13.90	77	124	14
DPC51400050UX	14.00	77	124	14
DPC51410050UX	14.10	83	133	16
DPC51420050UX	14.20	83	133	16
DPC51429050UX	14.29(9/16")	83	133	16
DPC51430050UX	14.30	83	133	16
DPC51440050UX	14.40	83	133	16
DPC51450050UX	14.50	83	133	16
DPC51460050UX	14.60	83	133	16
DPC51470050UX	14.70	83	133	16
DPC51480050UX	14.80	83	133	16
DPC51490050UX	14.90	83	133	16
DPC51500050UX	15.00	83	133	16
DPC51510050UX	15.10	83	133	16
DPC51520050UX	15.20	83	133	16
DPC51530050UX	15.30	83	133	16
DPC51540050UX	15.40	83	133	16
DPC51550050UX	15.50	83	133	16
DPC51560050UX	15.60	83	133	16
DPC51570050UX	15.70	83	133	16
DPC51580050UX	15.80	83	133	16
DPC51587050UX	15.87(5/8")	83	133	16
DPC51590050UX	15.90	83	133	16
DPC51600050UX	16.00	83	133	16
DPC51650050UX	16.50	93	143	18
DPC51700050UX	17.00	93	143	18
DPC51750050UX	17.50	93	143	18
DPC51800050UX	18.00	93	143	18
DPC52000050UX	20.00	101	153	20

DPN - for Universal · External Coolant · 5D 高效能外冷鑽頭 · 5倍深



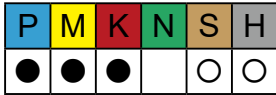
- 5×D Cutting Depth
- 140° SX Tip
- UNIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6
- Similar DIN6537



Order No.	D	L1	L	Ds	Order No.	D	L1	L	Ds
DPN50300050UX	3.00	28	66	6	DPN50710050UX	7.10	53	91	8
DPN50317050UX	3.17(1/8")	28	66	6	DPN50720050UX	7.20	53	91	8
DPN50325050UX	3.25	28	66	6	DPN50730050UX	7.30	53	91	8
DPN50330050UX	3.30	28	66	6	DPN50740050UX	7.40	53	91	8
DPN50340050UX	3.40	28	66	6	DPN50750050UX	7.50	53	91	8
DPN50350050UX	3.50	28	66	6	DPN50760050UX	7.60	53	91	8
DPN50357050UX	3.57	28	66	6	DPN50770050UX	7.70	53	91	8
DPN50360050UX	3.60	28	66	6	DPN50780050UX	7.80	53	91	8
DPN50370050UX	3.70	28	66	6	DPN50790050UX	7.90	53	91	8
DPN50380050UX	3.80	36	74	6	DPN50794050UX	7.94(5/16")	53	91	8
DPN50390050UX	3.90	36	74	6	DPN50800050UX	8.00	53	91	8
DPN50397050UX	3.97(5/32")	36	74	6	DPN50810050UX	8.10	61	103	10
DPN50400050UX	4.00	36	74	6	DPN50820050UX	8.20	61	103	10
DPN50410050UX	4.10	36	74	6	DPN50830050UX	8.30	61	103	10
DPN50420050UX	4.20	36	74	6	DPN50840050UX	8.40	61	103	10
DPN50430050UX	4.30	36	74	6	DPN50850050UX	8.50	61	103	10
DPN50440050UX	4.40	36	74	6	DPN50860050UX	8.60	61	103	10
DPN50450050UX	4.50	36	74	6	DPN50870050UX	8.70	61	103	10
DPN50460050UX	4.60	36	74	6	DPN50880050UX	8.80	61	103	10
DPN50465050UX	4.65(13/71")	36	74	6	DPN50890050UX	8.90	61	103	10
DPN50470050UX	4.70	36	74	6	DPN50900050UX	9.00	61	103	10
DPN50476050UX	4.76(3/16")	44	82	6	DPN50910050UX	9.10	61	103	10
DPN50480050UX	4.80	44	82	6	DPN50920050UX	9.20	61	103	10
DPN50490050UX	4.90	44	82	6	DPN50925050UX	9.25(23/64")	61	103	10
DPN50500050UX	5.00	44	82	6	DPN50930050UX	9.30	61	103	10
DPN50510050UX	5.10	44	82	6	DPN50940050UX	9.40	61	103	10
DPN50520050UX	5.20	44	82	6	DPN50950050UX	9.50	61	103	10
DPN50530050UX	5.30	44	82	6	DPN50952050UX	9.52(3/8")	61	103	10
DPN50540050UX	5.40	44	82	6	DPN50960050UX	9.60	61	103	10
DPN50550050UX	5.50	44	82	6	DPN50970050UX	9.70	61	103	10
DPN50555050UX	5.55	44	82	6	DPN50980050UX	9.80	61	103	10
DPN50556050UX	5.56(7/32")	44	82	6	DPN50990050UX	9.90	61	103	10
DPN50560050UX	5.60	44	82	6	DPN51000050UX	10.00	61	103	10
DPN50570050UX	5.70	44	82	6	DPN51010050UX	10.10	71	118	12
DPN50580050UX	5.80	44	82	6	DPN51020050UX	10.20	71	118	12
DPN50590050UX	5.90	44	82	6	DPN51030050UX	10.30	71	118	12
DPN50600050UX	6.00	44	82	6	DPN51040050UX	10.40	71	118	12
DPN50610050UX	6.10	53	91	8	DPN51050050UX	10.50	71	118	12
DPN50620050UX	6.20	53	91	8	DPN51060050UX	10.60	71	118	12
DPN50630050UX	6.30	53	91	8	DPN51070050UX	10.70	71	118	12
DPN50635050UX	6.35(1/4")	53	91	8	DPN51080050UX	10.80	71	118	12
DPN50640050UX	6.40	53	91	8	DPN51090050UX	10.90	71	118	12
DPN50650050UX	6.50	53	91	8	DPN51100050UX	11.00	71	118	12
DPN50660050UX	6.60	53	91	8	DPN51110050UX	11.10	71	118	12
DPN50670050UX	6.70	53	91	8	DPN5111050UX	11.11(7/16")	71	118	12
DPN50680050UX	6.80	53	91	8	DPN51120050UX	11.20	71	118	12
DPN50690050UX	6.90	53	91	8	DPN51130050UX	11.30	71	118	12
DPN50700050UX	7.00	53	91	8	DPN51140050UX	11.40	71	118	12

Holemaking

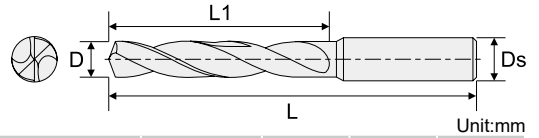
**DPN - for Universal · External Coolant · 5D** 高效能外冷鑽頭 · 5 倍深



- 5×D Cutting Depth
- D tolerance : h8

- 140° SX Tip
- Ds tolerance : h6

- UNIX Smooth Coating
- Similar DIN6537

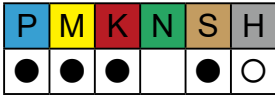


Order No.	D	L1	L	Ds
DPN51150050UX	11.50	71	118	12
DPN51160050UX	11.60	71	118	12
DPN51170050UX	11.70	71	118	12
DPN51180050UX	11.80	71	118	12
DPN51190050UX	11.90	71	118	12
DPN51200050UX	12.00	71	118	12
DPN51210050UX	12.10	77	124	14
DPN51220050UX	12.20	77	124	14
DPN51230050UX	12.30	77	124	14
DPN51240050UX	12.40	77	124	14
DPN51250050UX	12.50	77	124	14
DPN51260050UX	12.60	77	124	14
DPN51270050UX	12.70(1/2")	77	124	14
DPN51280050UX	12.80	77	124	14
DPN51290050UX	12.90	77	124	14
DPN51300050UX	13.00	77	124	14
DPN51310050UX	13.10	77	124	14
DPN51330050UX	13.30	77	124	14
DPN51340050UX	13.40	77	124	14
DPN51350050UX	13.50	77	124	14
DPN51360050UX	13.60	77	124	14
DPN51370050UX	13.70	77	124	14
DPN51380050UX	13.80	77	124	14
DPN51390050UX	13.90	77	124	14
DPN51400050UX	14.00	77	124	14
DPN51410050UX	14.10	83	133	16
DPN51420050UX	14.20	83	133	16
DPN51429050UX	14.29(9/16")	83	133	16
DPN51430050UX	14.30	83	133	16
DPN51440050UX	14.40	83	133	16
DPN51450050UX	14.50	83	133	16
DPN51460050UX	14.60	83	133	16
DPN51470050UX	14.70	83	133	16
DPN51480050UX	14.80	83	133	16
DPN51490050UX	14.90	83	133	16
DPN51500050UX	15.00	83	133	16
DPN51510050UX	15.10	83	133	16
DPN51520050UX	15.20	83	133	16
DPN51530050UX	15.30	83	133	16
DPN51540050UX	15.40	83	133	16
DPN51550050UX	15.50	83	133	16
DPN51560050UX	15.60	83	133	16
DPN51570050UX	15.70	83	133	16
DPN51580050UX	15.80	83	133	16
DPN51587050UX	15.87(5/8")	83	133	16
DPN51590050UX	15.90	83	133	16
DPN51600050UX	16.00	83	133	16
DPN51650050UX	16.50	93	143	18

Order No.	D	L1	L	Ds
DPN51700050UX	17.00	93	143	18
DPN51750050UX	17.50	93	143	18
DPN51800050UX	18.00	93	143	18
DPN52000050UX	20.00	101	153	20

DPC - for Universal · Internal Coolant · 7D

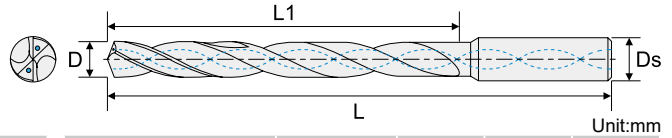
高效能內冷鑽頭 · 7 倍深



- 7×D Cutting Depth
- 140° SX Tip
- Double Margin
- UNIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6
- Similar DIN6537



\* Made to order



Order No.	D	L1	L	Ds
DPC70400070UX	4.00	40	80	6
DPC70410070UX	4.10	40	80	6
DPC70420070UX	4.20	40	80	6
DPC70430070UX	4.30	45	80	6
DPC70440070UX	4.40	45	80	6
DPC70450070UX	4.50	45	80	6
DPC70460070UX	4.60	45	80	6
DPC70465070UX	4.65(13/71")	45	80	6
DPC70470070UX	4.70	45	80	6
DPC70480070UX	4.80	50	97	6
DPC70490070UX	4.90	50	97	6
DPC70500070UX	5.00	50	97	6
DPC70510070UX	5.10	50	97	6
DPC70520070UX	5.20	50	97	6
DPC70530070UX	5.30	50	97	6
DPC70540070UX	5.40	57	97	6
DPC70550070UX	5.50	57	97	6
DPC70570070UX	5.70	57	97	6
DPC70580070UX	5.80	57	97	6
DPC70590070UX	5.90	57	97	6
DPC70600070UX	6.00	57	97	6
DPC70620070UX	6.20	66	106	8
DPC70630070UX	6.30	66	106	8
DPC70635070UX	6.35(1/4")	66	106	8
DPC70650070UX	6.50	66	106	8
DPC70660070UX	6.60	66	106	8
DPC70670070UX	6.70	66	106	8
DPC70680070UX	6.80	66	106	8
DPC70690070UX	6.90	76	116	8
DPC70700070UX	7.00	76	116	8
DPC70710070UX	7.10	76	116	8
DPC70720070UX	7.20	76	116	8
DPC70750070UX	7.50	76	116	8
DPC70760070UX	7.60	76	116	8
DPC70770070UX	7.70	76	116	8
DPC70780070UX	7.80	76	116	8
DPC70800070UX	8.00	76	116	8
DPC70810070UX	8.10	87	131	10
DPC70820070UX	8.20	87	131	10
DPC70840070UX	8.40	87	131	10
* DPC70850070UX	8.50	87	131	10
* DPC70860070UX	8.60	87	131	10
DPC70870070UX	8.70	87	131	10
DPC70880070UX	8.80	87	131	10
DPC70890070UX	8.90	87	131	10
DPC70900070UX	9.00	95	139	10
DPC70910070UX	9.10	95	139	10
DPC70920070UX	9.20	95	139	10

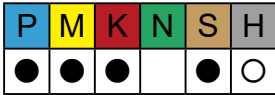
Order No.	D	L1	L	Ds
DPC70930070UX	9.30	95	139	10
DPC70940070UX	9.40	95	139	10
DPC70950070UX	9.50	95	139	10
DPC70952070UX	9.52	95	139	10
DPC70970070UX	9.70	95	139	10
* DPC70980070UX	9.80	95	139	10
DPC71000070UX	10.00	95	139	10
DPC71020070UX	10.20	106	155	12
* DPC71030070UX	10.30	106	155	12
* DPC71050070UX	10.50	106	155	12
DPC71072070UX	10.72(27/64")	106	155	12
DPC71080070UX	10.80	106	155	12
DPC71100070UX	11.00	106	155	12
DPC71120070UX	11.20	114	155	12
* DPC71150070UX	11.50	114	155	12
DPC71180070UX	11.80	114	155	12
* DPC71200070UX	12.00	114	155	12
DPC71210070UX	12.10	133	182	14
* DPC71220070UX	12.20	133	182	14
DPC71230070UX	12.30	133	182	14
DPC71250070UX	12.50	133	182	14
DPC71270070UX	12.70	133	182	14
DPC71300070UX	13.00	133	182	14
DPC71350070UX	13.50	133	182	14
* DPC71400070UX	14.00	133	182	14
DPC71410070UX	14.10	152	200	16
* DPC71420070UX	14.20	152	200	16
* DPC71450070UX	14.50	152	200	16
DPC71500070UX	15.00	152	200	16
* DPC71550070UX	15.50	152	200	16
DPC71587070UX	15.87	152	200	16
* DPC71600070UX	16.00	152	200	16

Holemaking

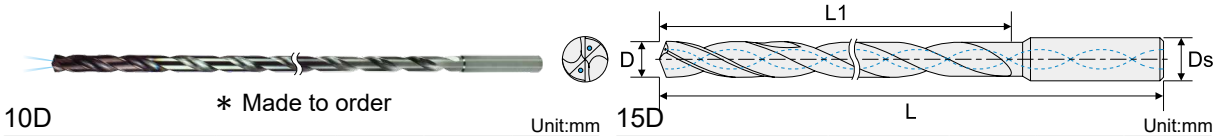


DPC - for Universal · Internal Coolant · 10D / 15D

高效能內冷鑽頭 · 10 倍 / 15 倍深



- 10D / 15D Cutting Depth
- 135° SX Tip
- UNIX Smooth Coating
- D tolerance : h8
- D < 1.5mm is Single Margin, D ≥ 1.5mm is Double Margin
- Ds tolerance : h6
- Require an initial pilot hole to guide the drill.



10D \* Made to order Unit:mm

Order No.	D	L1	L	Ds
DPC90100101UX	1.00	13	50	3
* DPC90110101UX	1.10	14	50	3
DPC90120101UX	1.20	15.5	50	3
* DPC90130101UX	1.30	16	50	3
* DPC90140101UX	1.40	18	50	3
DPC90150101UX	1.50	18	50	3
* DPC90158101UX	1.587 (1/16")	20.5	60	3
* DPC90160101UX	1.60	20.5	60	3
* DPC90170101UX	1.70	22	60	3
* DPC90180101UX	1.80	23	60	3
* DPC90190101UX	1.90	24.5	60	3
* DPC90200101UX	2.00	26	60	3
* DPC90210101UX	2.10	27	75	3
* DPC90220101UX	2.20	28.5	75	3
* DPC90230101UX	2.30	30	75	3
* DPC90238101UX	2.381 (3/32")	30.5	75	3
* DPC90240101UX	2.40	31	75	3
* DPC90250101UX	2.50	34	75	3
* DPC90260101UX	2.60	34	75	3
* DPC90270101UX	2.70	35	75	3
* DPC90280101UX	2.80	36	75	3
* DPC90290101UX	2.90	37.5	75	3
DPC90300100UX	3.00	48	100	4
* DPC90317100UX	3.17(1/8")	48	100	4
DPC90350100UX	3.50	48	100	4
* DPC90397100UX	3.97(5/32")	48	100	4
DPC90400100UX	4.00	48	100	4
DPC90450100UX	4.50	72	125	6
* DPC90476100UX	4.76(3/16")	72	125	6
DPC90500100UX	5.00	72	125	6
DPC90550100UX	5.50	72	125	6
* DPC90556100UX	5.56(7/32")	72	125	6
DPC90600100UX	6.00	72	125	6
* DPC90635100UX	6.35(1/4")	96	150	8
* DPC90650100UX	6.50	96	150	8
* DPC90700100UX	7.00	96	150	8
* DPC90750100UX	7.50	96	150	8
* DPC90794100UX	7.94(5/16")	96	150	8
DPC90800100UX	8.00	96	150	8
DPC90850100UX	8.50	120	175	10
DPC90900100UX	9.00	120	175	10
DPC90950100UX	9.50	120	175	10
* DPC90952100UX	9.52(3/8")	120	175	10
DPC91000100UX	10.00	120	175	10
DPC91100100UX	11.00	132	200	12
* DPC91111100UX	11.11(7/16")	144	200	12
DPC91200100UX	12.00	144	200	12
* DPC91270100UX	12.70(1/2")	152	200	14
* DPC91400100UX	14.00	168	230	14
* DPC91587100UX	15.87(5/8")	192	260	16
* DPC91600100UX	16.00	192	260	16

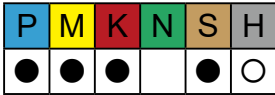
15D Unit:mm

Order No.	D	L1	L	Ds
DPC90100151UX	1.00	18	60	3
* DPC90110151UX	1.10	19.5	60	3
DPC90120151UX	1.20	21.5	60	3
* DPC90130151UX	1.30	23	60	3
* DPC90140151UX	1.40	25	60	3
DPC90150151UX	1.50	27	75	3
* DPC90158151UX	1.587 (1/16")	28.5	75	3
* DPC90160151UX	1.60	28.5	75	3
* DPC90170151UX	1.70	30.5	75	3
* DPC90180151UX	1.80	32	75	3
* DPC90190151UX	1.90	34	75	3
* DPC90200151UX	2.00	36	75	3
* DPC90210151UX	2.10	37.5	75	3
* DPC90220151UX	2.20	39.5	75	3
* DPC90230151UX	2.30	41	100	3
* DPC90238151UX	2.381 (3/32")	42.5	100	3
* DPC90240151UX	2.40	43	100	3
* DPC90250151UX	2.50	45	100	3
* DPC90260151UX	2.60	46.5	100	3
* DPC90270151UX	2.70	48.5	100	3
* DPC90280151UX	2.80	50	100	3
* DPC90290151UX	2.90	52	100	3
DPC90300150UX	3.00	55	100	4
* DPC90317150UX	3.17(1/8")	67	106	4
DPC90350150UX	3.50	76	116	4
* DPC90397150UX	3.97(5/32")	76	116	4
DPC90400150UX	4.00	76	116	4
DPC90450150UX	4.50	93	133	6
* DPC90476150UX	4.76(3/16")	93	133	6
DPC90500150UX	5.00	93	133	6
DPC90550150UX	5.50	110	150	6
* DPC90556150UX	5.56(7/32")	110	150	6
DPC90600150UX	6.00	110	150	6
* DPC90635150UX	6.35(1/4")	127	167	8
DPC90650150UX	6.50	127	167	8
DPC90700150UX	7.00	127	167	8
* DPC90750150UX	7.50	143	183	8
* DPC90794150UX	7.94(5/16")	143	183	8
DPC90800150UX	8.00	143	183	8
DPC90850150UX	8.50	160	204	10
DPC90900150UX	9.00	160	204	10
DPC90950150UX	9.50	177	221	10
* DPC90952150UX	9.52(3/8")	177	221	10
DPC91000150UX	10.00	177	221	10
DPC91100150UX	11.00	198	247	12
* DPC91111150UX	11.11(7/16")	214	263	12
DPC91200150UX	12.00	214	263	12

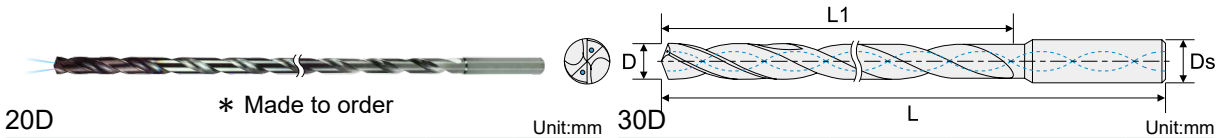
Cutting conditions : Page C039

DPC - for Universal · Internal Coolant · 20D / 30D

高效能內冷鑽頭 · 20 倍 / 30 倍深



- 20D / 30D Cutting Depth
- 135° SX Tip
- UNIX Smooth Coating
- D tolerance : h8
- D < 1.5mm is Single Margin, D ≥ 1.5mm is Double Margin
- Ds tolerance : h6
- Require an initial pilot hole to guide the drill.



20D \* Made to order Unit:mm

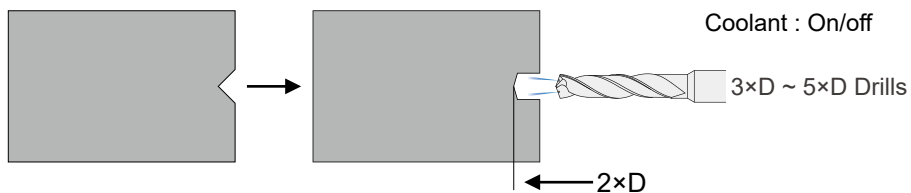
30D Unit:mm

Order No.	D	L1	L	Ds
DPC90100201UX	1.00	23	60	3
* DPC90110201UX	1.10	25	60	3
DPC90120201UX	1.20	27.5	75	3
* DPC90130201UX	1.30	29.5	75	3
* DPC90140201UX	1.40	32	75	3
DPC90150201UX	1.50	34.5	75	3
* DPC90158201UX	1.587 (1/16")	36.5	75	3
* DPC90160201UX	1.60	36.5	75	3
* DPC90170201UX	1.70	39	75	3
* DPC90180201UX	1.80	41	100	3
* DPC90190201UX	1.90	43.5	100	3
* DPC90200201UX	2.00	46	100	3
* DPC90210201UX	2.10	48	100	3
* DPC90220201UX	2.20	50.5	100	3
* DPC90230201UX	2.30	52.5	100	3
* DPC90238201UX	2.381 (3/32")	54.5	100	3
* DPC90240201UX	2.40	55	100	3
* DPC90250201UX	2.50	57.5	100	3
* DPC90260201UX	2.60	59.5	100	3
* DPC90270201UX	2.70	62	100	3
* DPC90280201UX	2.80	64	100	3
* DPC90290201UX	2.90	66.5	100	3
DPC90300200UX	3.00	70	110	4
* DPC90317200UX	3.17(1/8")	83	123	4
DPC90350200UX	3.50	83	123	4
* DPC90397200UX	3.97(5/32")	96	136	4
DPC90400200UX	4.00	96	136	4
DPC90450200UX	4.50	118	158	6
* DPC90476200UX	4.76(3/16")	118	158	6
DPC90500200UX	5.00	118	158	6
DPC90550200UX	5.50	140	180	6
* DPC90556200UX	5.56(7/32")	140	180	6
DPC90600200UX	6.00	140	180	6
* DPC90635200UX	6.35(1/4")	162	202	8
DPC90650200UX	6.50	162	202	8
DPC90700200UX	7.00	162	202	8
DPC90750200UX	7.50	183	223	8
* DPC90794200UX	7.94(5/16")	183	223	8
DPC90800200UX	8.00	183	223	8
DPC90850200UX	8.50	205	249	10
DPC90900200UX	9.00	205	249	10
DPC90950200UX	9.50	227	271	10
* DPC90952200UX	9.52(3/8")	227	271	10
DPC91000200UX	10.00	227	271	10

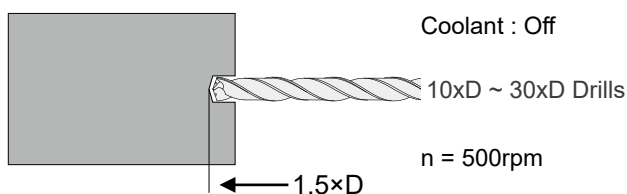
Order No.	D	L1	L	Ds
* DPC90300300UX	3.00	100	140	4
* DPC90317300UX	3.17(1/8")	118	158	4
* DPC90350300UX	3.50	136	176	4
* DPC90397300UX	3.97(5/32")	136	176	4
* DPC90400300UX	4.00	136	176	4
* DPC90450300UX	4.50	168	208	6
* DPC90476300UX	4.76(3/16")	168	208	6
* DPC90500300UX	5.00	168	208	6
* DPC90550300UX	5.50	200	240	6
* DPC90556300UX	5.56(7/32")	200	240	6
* DPC90600300UX	6.00	200	240	6

Holemaking

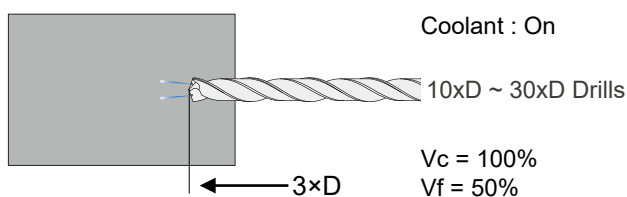
**1 Spotting & piloting 定位及導引孔加工**



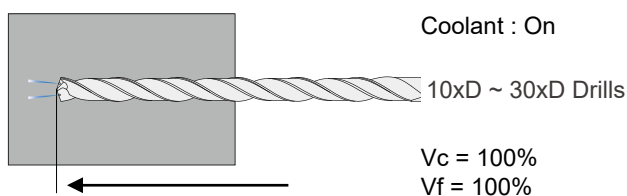
**2 Long drill into pilot hole 深孔鑽頭進入導引孔**



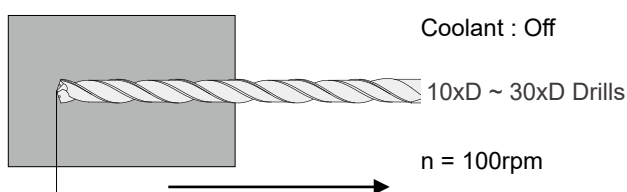
**3 Spotting 深孔定位加工**



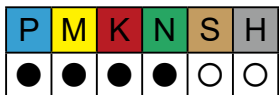
**4 Deep Hole drilling 深孔加工**



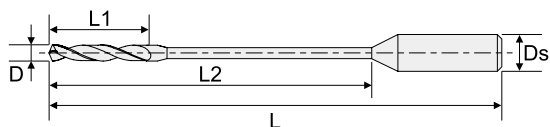
**5 Retracting 鑽頭退出**



**DPN9 - Micro · External Coolant · 10D/30D/50D** 外冷微小徑深孔鑽 · 10/30/50 倍深 ( 啄鑽專用 )



- 10D/30D/50D for Peck drilling
- 130° Tip Angle
- UNICO Coating
- D tolerance : h8
- Ds tolerance : h6



\* Made to order

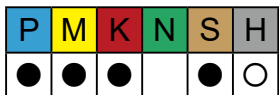
$LD = L2 / D$

Unit:mm

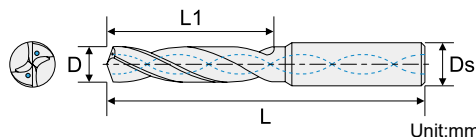
Order No.	D	L1	L2	LD	L	Ds
* DPN90010104U	0.10	0.5	1	10	50	4
* DPN90010304U	0.10	0.5	3	30	50	4
* DPN90010504U	0.10	0.5	5	50	50	4
* DPN90015104U	0.15	0.75	1.5	10	50	4
* DPN90015304U	0.15	0.75	4.5	30	50	4
* DPN90015504U	0.15	0.75	7.5	50	50	4
* DPN90020104U	0.20	1	2	10	50	4
* DPN90020304U	0.20	1	6	30	50	4
* DPN90020504U	0.20	1	10	50	50	4
* DPN90030104U	0.30	1.5	3	10	50	4
* DPN90030304U	0.30	1.5	9	30	50	4
* DPN90030504U	0.30	1.5	15	50	50	4
* DPN90040104U	0.40	2	4	10	50	4
* DPN90040304U	0.40	2	12	30	50	4
* DPN90040504U	0.40	2	20	50	50	4
* DPN90050104U	0.50	2.5	5	10	50	4
* DPN90050304U	0.50	2.5	15	30	50	4
* DPN90050504U	0.50	2.5	25	50	60	4
* DPN90060104U	0.60	3	6	10	60	4
* DPN90060304U	0.60	3	18	30	60	4
* DPN90060504U	0.60	3	30	50	75	4
* DPN90070104U	0.70	3.5	7	10	60	4
* DPN90070304U	0.70	3.5	21	30	60	4
* DPN90070504U	0.70	3.5	35	50	75	4
* DPN90080104U	0.80	4	8	10	60	4
* DPN90080304U	0.80	4	24	30	75	4
* DPN90080504U	0.80	4	40	50	75	4
* DPN90090104U	0.90	4.5	9	10	60	4
* DPN90090304U	0.90	4.5	27	30	60	4
* DPN90090504U	0.90	4.5	45	50	75	4
* DPN90100104U	1.00	5	10	10	75	4
* DPN90100304U	1.00	5	30	30	75	4
* DPN90100504U	1.00	5	50	50	100	4
* DPN90110104U	1.10	5.5	11	10	75	4
* DPN90110304U	1.10	5.5	33	30	75	4
* DPN90110504U	1.10	5.5	55	50	100	4
* DPN90120104U	1.20	6	12	10	75	4
* DPN90120304U	1.20	6	36	30	75	4
* DPN90120504U	1.20	6	60	50	100	4
* DPN90130104U	1.30	6.5	13	10	75	4
* DPN90130304U	1.30	6.5	39	30	75	4
* DPN90130504U	1.30	6.5	65	50	100	4
* DPN90150104U	1.50	7.5	15	10	75	4
* DPN90150304U	1.50	7.5	45	30	100	4

Holemaking

**DMC - for Exotic Material · Internal Coolant · 3D** 高效能內冷鑽頭 ( 鈦及不鏽鋼用 ) · 3 倍深

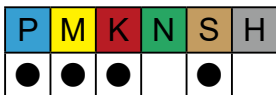


- 3×D Cutting Depth
- 140° NR Tip
- Double Margin
- SINIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6
- Similar DIN6537

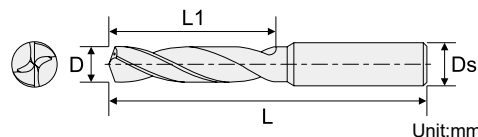


Order No.	D	L1	L	Ds	Order No.	D	L1	L	Ds
DMC30390034SX	3.90	24	66	4	DMC30810030SX	8.10	47	89	10
DMC30400030SX	4.00	24	66	6	DMC30820030SX	8.20	47	89	10
DMC30410030SX	4.10	24	66	6	DMC30830030SX	8.30	47	89	10
DMC30420030SX	4.20	24	66	6	DMC30840030SX	8.40	47	89	10
DMC30430030SX	4.30	24	66	6	DMC30850030SX	8.50	47	89	10
DMC30440030SX	4.40	24	66	6	DMC30860030SX	8.60	47	89	10
DMC30450030SX	4.50	24	66	6	DMC30870030SX	8.70	47	89	10
DMC30460030SX	4.60	24	66	6	DMC30880030SX	8.80	47	89	10
DMC30465030SX	4.65	24	66	6	DMC30890030SX	8.90	47	89	10
DMC30470030SX	4.70	24	66	6	DMC30900030SX	9.00	47	89	10
DMC30476030SX	4.76(3/16")	24	66	6	DMC30910030SX	9.10	47	89	10
DMC30480030SX	4.80	28	66	6	DMC30920030SX	9.20	47	89	10
DMC30490030SX	4.90	28	66	6	DMC30925030SX	9.25	47	89	10
DMC30500030SX	5.00	28	66	6	DMC30930030SX	9.30	47	89	10
DMC30510030SX	5.10	28	66	6	DMC30940030SX	9.40	47	89	10
DMC30520030SX	5.20	28	66	6	DMC30950030SX	9.50	47	89	10
DMC30530030SX	5.30	28	66	6	DMC30952030SX	9.52(3/8")	47	89	10
DMC30540030SX	5.40	28	66	6	DMC30960030SX	9.60	47	89	10
DMC30550030SX	5.50	28	66	6	DMC30970030SX	9.70	47	89	10
DMC30556030SX	5.56(7/32")	28	66	6	DMC30980030SX	9.80	47	89	10
DMC30560030SX	5.60	28	66	6	DMC30990030SX	9.90	47	89	10
DMC30570030SX	5.70	28	66	6	DMC31000030SX	10.00	47	89	10
DMC30580030SX	5.80	28	66	6	DMC31020030SX	10.20	55	102	12
DMC30590030SX	5.90	28	66	6	DMC31050030SX	10.50	55	102	12
DMC30600030SX	6.00	28	66	6	DMC31070030SX	10.70	55	102	12
DMC30610030SX	6.10	34	79	8	DMC31100030SX	11.00	55	102	12
DMC30620030SX	6.20	34	79	8	DMC31120030SX	11.20	55	102	12
DMC30630030SX	6.30	34	79	8	DMC31150030SX	11.50	55	102	12
DMC30635030SX	6.35(1/4")	34	79	8	DMC31170030SX	11.70	55	102	12
DMC30640030SX	6.40	34	79	8	DMC31200030SX	12.00	55	102	12
DMC30650030SX	6.50	34	79	8	DMC31250030SX	12.50	60	107	14
DMC30660030SX	6.60	34	79	8	DMC31270030SX	12.70(1/2")	60	107	14
DMC30670030SX	6.70	34	79	8	DMC31300030SX	13.00	60	107	14
DMC30680030SX	6.80	34	79	8	DMC31350030SX	13.50	60	107	14
DMC30690030SX	6.90	34	79	8	DMC31370030SX	13.70	60	107	14
DMC30700030SX	7.00	34	79	8	DMC31400030SX	14.00	60	107	14
DMC30710030SX	7.10	41	79	8	DMC31450030SX	14.50	65	115	16
DMC30714030SX	7.14(9/32")	41	79	8	DMC31470030SX	14.70	65	115	16
DMC30720030SX	7.20	41	79	8	DMC31500030SX	15.00	65	115	16
DMC30730030SX	7.30	41	79	8	DMC31550030SX	15.50	65	115	16
DMC30740030SX	7.40	41	79	8	DMC31570030SX	15.70	65	115	16
DMC30750030SX	7.50	41	79	8	DMC31600030SX	16.00	65	115	16
DMC30760030SX	7.60	41	79	8	DMC31800030SX	18.00	73	123	18
DMC30770030SX	7.70	41	79	8	DMC31900030SX	19.00	79	131	20
DMC30780030SX	7.80	41	79	8	DMC32000030SX	20.00	79	131	20
DMC30790030SX	7.90	41	79	8					
DMC30794030SX	7.94(5/16")	41	79	8					
DMC30800030SX	8.00	41	79	8					

**DMN - for Exotic Material · External Coolant · 3D** 高效能外冷鑽頭 ( 鈦及不鏽鋼用 ) · 3 倍深



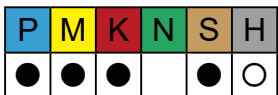
- 3×D Cutting Depth
- 140° NR Tip
- Double Margin
- SINIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6
- Similar DIN6537



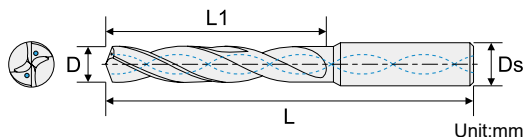
Order No.	D	L1	L	Ds	Order No.	D	L1	L	Ds
DMN30400030SX	4.00	24	66	6	DMN30820030SX	8.20	47	89	10
DMN30410030SX	4.10	24	66	6	DMN30830030SX	8.30	47	89	10
DMN30420030SX	4.20	24	66	6	DMN30840030SX	8.40	47	89	10
DMN30430030SX	4.30	24	66	6	DMN30850030SX	8.50	47	89	10
DMN30440030SX	4.40	24	66	6	DMN30860030SX	8.60	47	89	10
DMN30450030SX	4.50	24	66	6	DMN30870030SX	8.70	47	89	10
DMN30460030SX	4.60	24	66	6	DMN30880030SX	8.80	47	89	10
DMN30465030SX	4.65	24	66	6	DMN30890030SX	8.90	47	89	10
DMN30470030SX	4.70	24	66	6	DMN30900030SX	9.00	47	89	10
DMN30476030SX	4.76(3/16")	24	66	6	DMN30910030SX	9.10	47	89	10
DMN30480030SX	4.80	28	66	6	DMN30920030SX	9.20	47	89	10
DMN30490030SX	4.90	28	66	6	DMN30925030SX	9.25	47	89	10
DMN30500030SX	5.00	28	66	6	DMN30930030SX	9.30	47	89	10
DMN30510030SX	5.10	28	66	6	DMN30940030SX	9.40	47	89	10
DMN30520030SX	5.20	28	66	6	DMN30950030SX	9.50	47	89	10
DMN30530030SX	5.30	28	66	6	DMN30952030SX	9.52(3/8")	47	89	10
DMN30540030SX	5.40	28	66	6	DMN30960030SX	9.60	47	89	10
DMN30550030SX	5.50	28	66	6	DMN30970030SX	9.70	47	89	10
DMN30556030SX	5.56(7/32")	28	66	6	DMN30980030SX	9.80	47	89	10
DMN30560030SX	5.60	28	66	6	DMN30990030SX	9.90	47	89	10
DMN30570030SX	5.70	28	66	6	DMN31000030SX	10.00	47	89	10
DMN30580030SX	5.80	28	66	6	DMN31020030SX	10.20	55	102	12
DMN30590030SX	5.90	28	66	6	DMN31050030SX	10.50	55	102	12
DMN30600030SX	6.00	28	66	6	DMN31070030SX	10.70	55	102	12
DMN30610030SX	6.10	34	79	8	DMN31100030SX	11.00	55	102	12
DMN30620030SX	6.20	34	79	8	DMN31110030SX	11.10	55	102	12
DMN30630030SX	6.30	34	79	8	DMN31120030SX	11.20	55	102	12
DMN30635030SX	6.35(1/4")	34	79	8	DMN31150030SX	11.50	55	102	12
DMN30640030SX	6.40	34	79	8	DMN31170030SX	11.70	55	102	12
DMN30650030SX	6.50	34	79	8	DMN31190030SX	11.90	55	102	12
DMN30660030SX	6.60	34	79	8	DMN31200030SX	12.00	55	102	12
DMN30670030SX	6.70	34	79	8	DMN31250030SX	12.50	60	107	14
DMN30680030SX	6.80	34	79	8	DMN31270030SX	12.70(1/2)	60	107	14
DMN30690030SX	6.90	34	79	8	DMN31300030SX	13.00	60	107	14
DMN30700030SX	7.00	34	79	8	DMN31400030SX	14.00	60	107	14
DMN30710030SX	7.10	41	79	8	DMN31600030SX	16.00	65	115	16
DMN30714030SX	7.14(9/32")	41	79	8	DMN31800030SX	18.00	73	123	18
DMN30720030SX	7.20	41	79	8					
DMN30730030SX	7.30	41	79	8					
DMN30740030SX	7.40	41	79	8					
DMN30750030SX	7.50	41	79	8					
DMN30760030SX	7.60	41	79	8					
DMN30770030SX	7.70	41	79	8					
DMN30780030SX	7.80	41	79	8					
DMN30790030SX	7.90	41	79	8					
DMN30794030SX	7.94(5/16")	41	79	8					
DMN30800030SX	8.00	41	79	8					
DMN30810030SX	8.10	47	89	10					

Holemaking

**DMC - for Exotic Material · Internal Coolant · 5D** 高效能內冷鑽頭 ( 鈦及不鏽鋼用 ) · 5 倍深



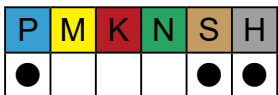
- 5×D Cutting Depth
- 140° NR Tip
- Double Margin
- SINIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6
- Similar DIN6537



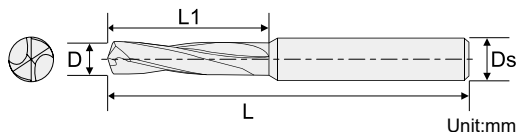
Order No.	D	L1	L	Ds	Order No.	D	L1	L	Ds
DMC50340054SX	3.40	28	60	4	DMC50790050SX	7.90	53	91	8
DMC50350054SX	3.50	28	60	4	DMC50794050SX	7.94(5/16")	53	91	8
DMC50370054SX	3.70	28	60	4	DMC50800050SX	8.00	53	91	8
DMC50380054SX	3.80	36	74	4	DMC50810050SX	8.10	61	103	10
DMC50400050SX	4.00	36	74	6	DMC50820050SX	8.20	61	103	10
DMC50410050SX	4.10	36	74	6	DMC50830050SX	8.30	61	103	10
DMC50420050SX	4.20	36	74	6	DMC50840050SX	8.40	61	103	10
DMC50430050SX	4.30	36	74	6	DMC50850050SX	8.50	61	103	10
DMC50440050SX	4.40	36	74	6	DMC50860050SX	8.60	61	103	10
DMC50450050SX	4.50	36	74	6	DMC50870050SX	8.70	61	103	10
DMC50460050SX	4.60	36	74	6	DMC50880050SX	8.80	61	103	10
DMC50465050SX	4.65	36	74	6	DMC50890050SX	8.90	61	103	10
DMC50470050SX	4.70	36	74	6	DMC50900050SX	9.00	61	103	10
DMC50476050SX	4.76(3/16")	36	74	6	DMC50910050SX	9.10	61	103	10
DMC50480050SX	4.80	44	82	6	DMC50920050SX	9.20	61	103	10
DMC50490050SX	4.90	44	82	6	DMC50925050SX	9.25	61	103	10
DMC50500050SX	5.00	44	82	6	DMC50930050SX	9.30	61	103	10
DMC50510050SX	5.10	44	82	6	DMC50940050SX	9.40	61	103	10
DMC50520050SX	5.20	44	82	6	DMC50950050SX	9.50	61	103	10
DMC50530050SX	5.30	44	82	6	DMC50952050SX	9.52(3/8")	61	103	10
DMC50540050SX	5.40	44	82	6	DMC50960050SX	9.60	61	103	10
DMC50550050SX	5.50	44	82	6	DMC50970050SX	9.70	61	103	10
DMC50555050SX	5.55(7/32")	44	82	6	DMC50980050SX	9.80	61	103	10
DMC50560050SX	5.60	44	82	6	DMC50990050SX	9.90	61	103	10
DMC50570050SX	5.70	44	82	6	DMC51000050SX	10.00	61	103	10
DMC50580050SX	5.80	44	82	6	DMC51020050SX	10.20	71	118	12
DMC50590050SX	5.90	44	82	6	DMC51050050SX	10.50	71	118	12
DMC50600050SX	6.00	44	82	6	DMC51070050SX	10.70	71	118	12
DMC50610050SX	6.10	53	91	8	DMC51100050SX	11.00	71	118	12
DMC50620050SX	6.20	53	91	8	DMC51120050SX	11.20	71	118	12
DMC50630050SX	6.30	53	91	8	DMC51150050SX	11.50	71	118	12
DMC50635050SX	6.35(1/4")	53	91	8	DMC51170050SX	11.70	71	118	12
DMC50640050SX	6.40	53	91	8	DMC51200050SX	12.00	71	118	12
DMC50650050SX	6.50	53	91	8	DMC51250050SX	12.50	77	124	14
DMC50660050SX	6.60	53	91	8	DMC51270050SX	12.70(1/2")	77	124	14
DMC50670050SX	6.70	53	91	8	DMC51300050SX	13.00	77	124	14
DMC50680050SX	6.80	53	91	8	DMC51350050SX	13.50	77	124	14
DMC50690050SX	6.90	53	91	8	DMC51370050SX	13.70	77	124	14
DMC50700050SX	7.00	53	91	8	DMC51400050SX	14.00	77	124	14
DMC50710050SX	7.10	53	91	8	DMC51450050SX	14.50	83	133	16
DMC50714050SX	7.14(9/32")	53	91	8	DMC51470050SX	14.70	83	133	16
DMC50720050SX	7.20	53	91	8	DMC51500050SX	15.00	83	133	16
DMC50730050SX	7.30	53	91	8	DMC51550050SX	15.50	83	133	16
DMC50740050SX	7.40	53	91	8	DMC51570050SX	15.70	83	133	16
DMC50750050SX	7.50	53	91	8	DMC51600050SX	16.00	83	133	16
DMC50760050SX	7.60	53	91	8	DMC51800050SX	18.00	93	143	18
DMC50770050SX	7.70	53	91	8	DMC51900050SX	19.00	101	153	20
DMC50780050SX	7.80	53	91	8	DMC52000050SX	20.00	101	153	20



**DHN - for Hardened Steel · External Coolant · 3D** 高效能外冷鑽頭 (高硬用) · 3倍深



- 3×D Cutting Depth
- 140° NX Tip
- Helix : 12° ~ 20°
- SINIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6
- Similar DIN6537



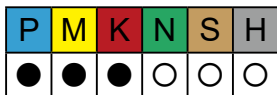
Unit:mm

Order No.	D	L1	L	Ds
DHN30090030SX	0.90	8	50	3
DHN30095030SX	0.95	8	50	3
DHN30100030SX	1.00	8	50	3
DHN30110030SX	1.10	8	50	3
DHN30120030SX	1.20	8	50	3
DHN30125030SX	1.25	8	50	3
DHN30130030SX	1.30	10	50	3
DHN30132030SX	1.32	10	50	3
DHN30140030SX	1.40	10	50	3
DHN30145030SX	1.45	10	50	3
DHN30150030SX	1.50	10	50	3
DHN30160030SX	1.60	10	50	3
DHN30165030SX	1.65	10	50	3
DHN30170030SX	1.70	10	50	3
DHN30175030SX	1.75	10	50	3
DHN30185030SX	1.85	10	50	3
DHN30190030SX	1.90	10	50	3
DHN30200030SX	2.00	12	50	3
DHN30205030SX	2.05	12	50	3
DHN30210030SX	2.10	12	50	3
DHN30220030SX	2.20	12	50	3
DHN30230030SX	2.30	12	50	3
DHN30240030SX	2.40	12	50	3
DHN30250030SX	2.50	12	50	3
DHN30260030SX	2.60	16	60	3
DHN30270030SX	2.70	16	60	3
DHN30280030SX	2.80	16	60	3
DHN30290030SX	2.90	16	60	3
DHN30300030SX	3.00	16	60	3
DHN30310030SX	3.10	20	62	6
DHN30320030SX	3.20	20	62	6
DHN30330030SX	3.30	20	62	6
DHN30340030SX	3.40	20	62	6
DHN30350030SX	3.50	20	62	6
DHN30360030SX	3.60	20	62	6
DHN30370030SX	3.70	20	62	6
DHN30380030SX	3.80	20	62	6
DHN30390030SX	3.90	20	62	6
DHN30400030SX	4.00	24	66	6
DHN30420030SX	4.20	24	66	6
DHN30450030SX	4.50	24	66	6
DHN30460030SX	4.60	24	66	6
DHN30465030SX	4.65	24	66	6
DHN30480030SX	4.80	28	66	6
DHN30500030SX	5.00	28	66	6
DHN30550030SX	5.50	28	66	6
DHN30556030SX	5.56(7/32")	28	66	6
DHN30570030SX	5.70	28	66	6

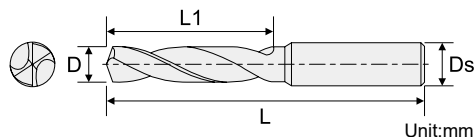
Order No.	D	L1	L	Ds
DHN30580030SX	5.80	28	66	6
DHN30600030SX	6.00	28	66	6
DHN30635030SX	6.35(1/4")	34	79	8
DHN30640030SX	6.40	34	79	8
DHN30650030SX	6.50	34	79	8
DHN30680030SX	6.80	34	79	8
DHN30700030SX	7.00	34	79	8
DHN30740030SX	7.40	41	79	8
DHN30750030SX	7.50	41	79	8
DHN30780030SX	7.80	41	79	8
DHN30800030SX	8.00	41	79	8
DHN30850030SX	8.50	47	89	10
DHN30880030SX	8.80	47	89	10
DHN30900030SX	9.00	47	89	10
DHN30925030SX	9.25	47	89	10
DHN30930030SX	9.30	47	89	10
DHN30950030SX	9.50	47	89	10
DHN30980030SX	9.80	47	89	10
DHN31000030SX	10.00	47	89	10
DHN31020030SX	10.20	55	102	12
DHN31050030SX	10.50	55	102	12
DHN31070030SX	10.70	55	102	12
DHN31100030SX	11.00	55	102	12
DHN31120030SX	11.20	55	102	12
DHN31150030SX	11.50	55	102	12
DHN31170030SX	11.70	55	102	12
DHN31200030SX	12.00	55	102	12

Holemaking

DGN3 - General Purpose · External Coolant · 3D 泛用外冷鑽頭 · 3倍深



- 3×D Cutting Depth
- 130° NX Tip
- UNICO Coating
- D tolerance : h8
- Ds tolerance : h6

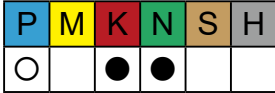


Unit:mm

Order No.	D	L1	L	Ds	Order No.	D	L1	L	Ds
DGN30200031U	2.00	12	38	3	DGN30610031U	6.10	31	70	7
DGN30210031U	2.10	12	38	3	DGN30620031U	6.20	31	70	7
DGN30220031U	2.20	13	40	3	DGN30630031U	6.30	31	70	7
DGN30230031U	2.30	13	40	3	DGN30635031U	6.35(1/4")	31	70	7
DGN30238031U	2.38(3/32")	14	43	3	DGN30640031U	6.40	31	70	7
DGN30240031U	2.40	14	43	3	DGN30650031U	6.50	31	70	7
DGN30250031U	2.50	14	43	3	DGN30660031U	6.60	31	70	7
DGN30260031U	2.60	14	43	3	DGN30670031U	6.70	31	70	7
DGN30270031U	2.70	16	46	3	DGN30680031U	6.80	34	74	7
DGN30278031U	2.78(7/64")	16	46	3	DGN30690031U	6.90	34	74	7
DGN30280031U	2.80	16	46	3	DGN30700031U	7.00	34	74	7
DGN30290031U	2.90	16	46	3	DGN30710031U	7.10	34	74	8
DGN30300031U	3.00	16	46	3	DGN30714031U	7.14(9/32")	34	74	8
DGN30310031U	3.10	18	49	4	DGN30720031U	7.20	34	74	8
DGN30317031U	3.17(1/8")	18	49	4	DGN30730031U	7.30	34	74	8
DGN30320031U	3.20	18	49	4	DGN30740031U	7.40	34	74	8
DGN30330031U	3.30	18	49	4	DGN30750031U	7.50	34	74	8
DGN30340031U	3.40	20	52	4	DGN30760031U	7.60	37	79	8
DGN30350031U	3.50	20	52	4	DGN30770031U	7.70	37	79	8
DGN30357031U	3.57(9/64")	20	52	4	DGN30780031U	7.80	37	79	8
DGN30360031U	3.60	20	52	4	DGN30790031U	7.90	37	79	8
DGN30370031U	3.70	20	52	4	DGN30794031U	7.94(5/16")	37	79	8
DGN30380031U	3.80	22	55	4	DGN30800031U	8.00	37	79	8
DGN30390031U	3.90	22	55	4	DGN30810031U	8.10	37	79	9
DGN30397031U	3.97(5/32")	22	55	4	DGN30820031U	8.20	37	79	9
DGN30400031U	4.00	22	55	4	DGN30830031U	8.30	37	79	9
DGN30410031U	4.10	22	55	5	DGN30840031U	8.40	37	79	9
DGN30420031U	4.20	24	58	5	DGN30850031U	8.50	37	79	9
DGN30430031U	4.30	24	58	5	DGN30860031U	8.60	37	79	9
DGN30437031U	4.37(11/64")	24	58	5	DGN30870031U	8.70	37	79	9
DGN30440031U	4.40	24	58	5	DGN30873031U	8.73(11/32")	40	84	9
DGN30450031U	4.50	24	58	5	DGN30880031U	8.80	40	84	9
DGN30460031U	4.60	24	58	5	DGN30890031U	8.90	40	84	9
DGN30470031U	4.70	24	58	5	DGN30900031U	9.00	40	84	9
DGN30476031U	4.76(3/16")	26	62	5	DGN30910031U	9.10	40	84	10
DGN30480031U	4.80	26	62	5	DGN30920031U	9.20	40	84	10
DGN30490031U	4.90	26	62	5	DGN30930031U	9.30	40	84	10
DGN30500031U	5.00	26	62	5	DGN30940031U	9.40	40	84	10
DGN30510031U	5.10	26	62	6	DGN30960031U	9.60	43	89	10
DGN30520031U	5.20	26	62	6	DGN30950031U	9.50	40	84	10
DGN30530031U	5.30	26	62	6	DGN30970031U	9.70	43	89	10
DGN30540031U	5.40	28	66	6	DGN30980031U	9.80	43	89	10
DGN30550031U	5.50	28	66	6	DGN30990031U	9.90	43	89	10
DGN30560031U	5.60	28	66	6	DGN31000031U	10.00	43	89	10
DGN30570031U	5.70	28	66	6	DGN31100031U	11.00	47	95	11
DGN30580031U	5.80	28	66	6	DGN31200031U	12.00	51	102	12
DGN30590031U	5.90	28	66	6	DGN31250031U	12.50	51	102	13
DGN30600031U	6.00	28	66	6	DGN31300031U	13.00	51	102	13



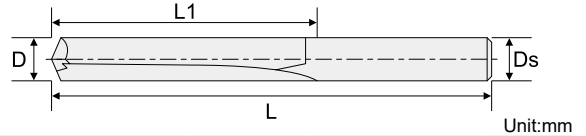
DAN - Straight Flute · External Coolant · 5D 直刃外冷鑽鉸刀 · 5倍深



- 5×D Cutting Depth
- D tolerance : h8

- 130° Tip
- Ds tolerance : h6

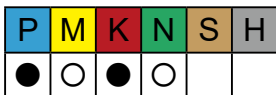
- UNIX Smooth Coating



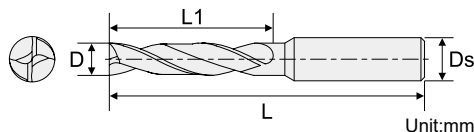
Order No.	D	L1	L	Ds
DAN50400054UX	4.00	36	100	4
DAN50450050UX	4.50	36	100	6
DAN50500050UX	5.00	44	100	6
DAN50550050UX	5.50	44	100	6
DAN50600050UX	6.00	44	100	6
DAN50650050UX	6.50	53	100	8
DAN50700050UX	7.00	53	100	8
DAN50750050UX	7.50	53	100	8
DAN50800050UX	8.00	53	100	8
DAN50850050UX	8.50	61	107	10
DAN50900050UX	9.00	61	107	10
DAN50950050UX	9.50	61	107	10
DAN51000050UX	10.00	61	107	10
DAN51200050UX	12.00	71	125	12
DAN51400050UX	14.00	77	150	14
DAN51600050UX	16.00	83	150	16

Order No.	D	L1	L	Ds

**DFN - Flat Point · External Coolant · 3D** 平底外冷鑽頭 · 3倍深



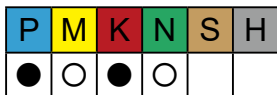
- 3×D Cutting Depth
- FX Flat Tip
- UNIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6
- Similar DIN6537



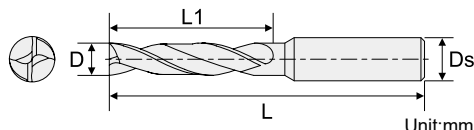
Order No.	D	L1	L	Ds	Order No.	D	L1	L	Ds
DFN30220034UX	2.20	13	60	4	DFN30570030UX	5.70	28	66	6
DFN30250034UX	2.50	15	60	4	DFN30580030UX	5.80	28	66	6
DFN30260034UX	2.60	15	60	4	DFN30590030UX	5.90	28	66	6
DFN30270034UX	2.70	15	60	4	DFN30600030UX	6.00	28	66	6
DFN30300034UX	3.00	20	60	4	DFN30610030UX	6.10	34	79	8
DFN30310034UX	3.10	20	60	4	DFN30620030UX	6.20	34	79	8
DFN30317034UX	3.17(1/8")	20	60	4	DFN30630030UX	6.30	34	79	8
DFN30320034UX	3.20	20	60	4	DFN30635030UX	6.35	34	79	8
DFN30325034UX	3.25(5/32")	20	60	4	DFN30640030UX	6.40	34	79	8
DFN30330034UX	3.30	20	60	4	DFN30650030UX	6.50	34	79	8
DFN30340034UX	3.40	20	60	4	DFN30660030UX	6.60	34	79	8
DFN30350034UX	3.50	20	60	4	DFN30670030UX	6.70	34	79	8
DFN30360034UX	3.60	20	60	4	DFN30680030UX	6.80	34	79	8
DFN30370034UX	3.70	20	60	4	DFN30690030UX	6.90	34	79	8
DFN30380034UX	3.80	24	60	4	DFN30700030UX	7.00	34	79	8
DFN30390034UX	3.90	24	60	4	DFN30710030UX	7.10	41	79	8
DFN30397034UX	3.97(5/32")	24	60	4	DFN30720030UX	7.20	41	79	8
DFN30300030UX	3.00	20	62	6	DFN30730030UX	7.30	41	79	8
DFN30310030UX	3.10	20	62	6	DFN30740030UX	7.40	41	79	8
DFN30320030UX	3.20	20	62	6	DFN30750030UX	7.50	41	79	8
DFN30325030UX	3.25(5/32")	20	62	6	DFN30760030UX	7.60	41	79	8
DFN30330030UX	3.30	20	62	6	DFN30770030UX	7.70	41	79	8
DFN30340030UX	3.40	20	62	6	DFN30780030UX	7.80	41	79	8
DFN30350030UX	3.50	20	62	6	DFN30790030UX	7.90	41	79	8
DFN30360030UX	3.60	20	62	6	DFN30800030UX	8.00	41	79	8
DFN30370030UX	3.70	20	62	6	DFN30810030UX	8.10	47	89	10
DFN30380030UX	3.80	24	66	6	DFN30820030UX	8.20	47	89	10
DFN30390030UX	3.90	24	66	6	DFN30830030UX	8.30	47	89	10
DFN30397030UX	3.97(5/32")	24	66	6	DFN30840030UX	8.40	47	89	10
DFN30400030UX	4.00	24	66	6	DFN30850030UX	8.50	47	89	10
DFN30410030UX	4.10	24	66	6	DFN30860030UX	8.60	47	89	10
DFN30420030UX	4.20	24	66	6	DFN30870030UX	8.70	47	89	10
DFN30430030UX	4.30	24	66	6	DFN30880030UX	8.80	47	89	10
DFN30440030UX	4.40	24	66	6	DFN30890030UX	8.90	47	89	10
DFN30450030UX	4.50	24	66	6	DFN30900030UX	9.00	47	89	10
DFN30460030UX	4.60	24	66	6	DFN30910030UX	9.10	47	89	10
DFN30465030UX	4.65(13/71")	24	66	6	DFN30920030UX	9.20	47	89	10
DFN30470030UX	4.70	24	66	6	DFN30925030UX	9.25(23/64")	47	89	10
DFN30480030UX	4.80	28	66	6	DFN30930030UX	9.30	47	89	10
DFN30490030UX	4.90	28	66	6	DFN30940030UX	9.40	47	89	10
DFN30500030UX	5.00	28	66	6	DFN30950030UX	9.50	47	89	10
DFN30510030UX	5.10	28	66	6	DFN30960030UX	9.60	47	89	10
DFN30520030UX	5.20	28	66	6	DFN30970030UX	9.70	47	89	10
DFN30530030UX	5.30	28	66	6	DFN30980030UX	9.80	47	89	10
DFN30540030UX	5.40	28	66	6	DFN30990030UX	9.90	47	89	10
DFN30550030UX	5.50	28	66	6	DFN31000030UX	10.00	47	89	10
DFN30556030UX	5.56(7/32")	28	66	6	DFN31010030UX	10.10	55	102	12
DFN30560030UX	5.60	28	66	6	DFN31020030UX	10.20	55	102	12

Holemaking

**DFN - Flat Point · External Coolant · 3D** 平底外冷鑽頭 · 3倍深



- 3×D Cutting Depth
- FX Flat Tip
- UNIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6
- Similar DIN6537

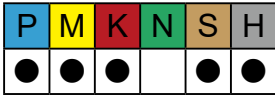


Unit:mm

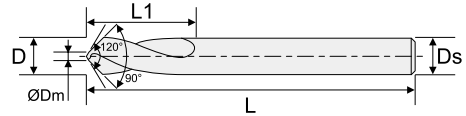
Order No.	D	L1	L	Ds	Order No.	D	L1	L	Ds
DFN31030030UX	10.30	55	102	12	DFN31750030UX	17.50	73	123	18
DFN31040030UX	10.40	55	102	12	DFN31800030UX	18.00	73	123	18
DFN31050030UX	10.50	55	102	12	DFN31850030UX	18.50	79	131	20
DFN31060030UX	10.60	55	102	12	DFN31900030UX	19.00	79	131	20
DFN31070030UX	10.70	55	102	12	DFN31950030UX	19.50	79	131	20
DFN31080030UX	10.80	55	102	12	DFN32000030UX	20.00	79	131	20
DFN31090030UX	10.90	55	102	12					
DFN31100030UX	11.00	55	102	12					
DFN31110030UX	11.10	55	102	12					
DFN31120030UX	11.20	55	102	12					
DFN31130030UX	11.30	55	102	12					
DFN31140030UX	11.40	55	102	12					
DFN31150030UX	11.50	55	102	12					
DFN31160030UX	11.60	55	102	12					
DFN31170030UX	11.70	55	102	12					
DFN31180030UX	11.80	55	102	12					
DFN31190030UX	11.90	55	102	12					
DFN31200030UX	12.00	55	102	12					
DFN31210030UX	12.10	60	107	14					
DFN31220030UX	12.20	60	107	14					
DFN31230030UX	12.30	60	107	14					
DFN31240030UX	12.40	60	107	14					
DFN31250030UX	12.50	60	107	14					
DFN31260030UX	12.60	60	107	14					
DFN31270030UX	12.70(1/2")	60	107	14					
DFN31280030UX	12.80	60	107	14					
DFN31290030UX	12.90	60	107	14					
DFN31300030UX	13.00	60	107	14					
DFN31320030UX	13.20	60	107	14					
DFN31330030UX	13.30	60	107	14					
DFN31350030UX	13.50	60	107	14					
DFN31370030UX	13.70	60	107	14					
DFN31380030UX	13.80	60	107	14					
DFN31400030UX	14.00	60	107	14					
DFN31420030UX	14.20	65	115	16					
DFN31430030UX	14.30	65	115	16					
DFN31440030UX	14.40	65	115	16					
DFN31450030UX	14.50	65	115	16					
DFN31470030UX	14.70	65	115	16					
DFN31500030UX	15.00	65	115	16					
DFN31520030UX	15.20	65	115	16					
DFN31550030UX	15.50	65	115	16					
DFN31560030UX	15.60	65	115	16					
DFN31570030UX	15.70	65	115	16					
DFN31580030UX	15.80	65	115	16					
DFN31600030UX	16.00	65	115	16					
DFN31650030UX	16.50	73	123	18					
DFN31700030UX	17.00	73	123	18					

DTN - Spotting · External Coolant · Tip angle 90°

定位外冷鑽頭 · 鑽尖 90°



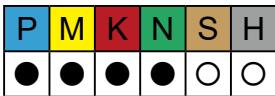
- 90° & 120° Tip Angle
- 45° Chamfer Angle
- UNICO Coating
- Ds tolerance : h6
- Double angle tip design reduces drill tip cracking.



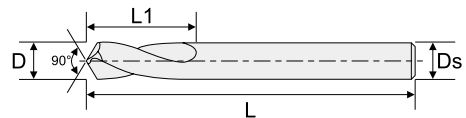
Unit:mm

Order No.	ØDm	D	L1	L	Ds
DTN0130090U	0.3	1.30	4	50	3
DTN0170090U	0.4	1.70	5	50	3
DTN0300090U	0.8	3.00	8	50	3
DTN0400090U	1.0	4.00	10	50	4
DTN0500090U	1.3	5.00	13	50	5
DTN0600090U	1.5	6.00	15	50	6
DTN0800090U	2.0	8.00	20	60	8
DTN1000090U	2.5	10.00	25	75	10
DTN1200090U	3.0	12.00	30	75	12
DTN1600090U	4.0	16.00	35	100	16

Order No.	ØDm	D	L1	L	Ds
* Long Shank Type					
DTN0400091U	1.0	4.00	10	75	4
DTN0500091U	1.3	5.00	13	75	5
DTN0600091U	1.5	6.00	15	100	6
DTN0800091U	2.0	8.00	20	100	8
DTN1000091U	2.5	10.00	25	150	10
DTN1200091U	3.0	12.00	30	150	12
DTN1600091U	4.0	16.00	35	150	16



- 90° Tip Angle
- 45° Chamfer Angle
- UNICO Coating
- Ds tolerance : h6
- Single angle tip design.



Unit:mm

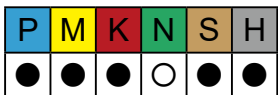
Order No.	D	L1	L	Ds
DTN0130095U	1.30	4	50	3
DTN0170095U	1.70	5	50	3
DTN0300095U	3.00	8	50	3
DTN0400095U	4.00	10	50	4
DTN0500095U	5.00	13	50	5
DTN0600095U	6.00	15	50	6
DTN0800095U	8.00	20	60	8
DTN1000095U	10.00	25	75	10
DTN1200095U	12.00	30	75	12
DTN1600095U	16.00	35	100	16

Order No.	D	L1	L	Ds
* Long Shank Type				
DTN0400096U	4.00	10	75	4
DTN0500096U	5.00	13	75	5
DTN0600096U	6.00	15	100	6
DTN0800096U	8.00	20	100	8
DTN1000096U	10.00	25	150	10
DTN1200096U	12.00	30	150	12
DTN1600096U	16.00	35	150	16

Holemaking



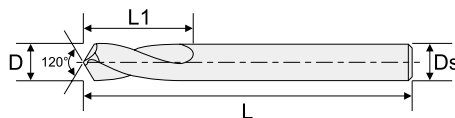
**DTN - Spotting · External Coolant · Tip angle 120° / 142°** 定位外冷鑽頭 · 鑽尖 120° / 142°



- 120° Tip Angle
- Ds tolerance : h6

- 60° Chamfer Angle

- UNICO Coating



Unit:mm

Order No.	D	L1	L	Ds
DTN0300120U	3.00	8	50	3
DTN0400120U	4.00	10	50	4
DTN0500120U	5.00	13	50	5
DTN0600120U	6.00	15	50	6
DTN0800120U	8.00	20	60	8
DTN1000120U	10.00	25	75	10
DTN1200120U	12.00	30	75	12
DTN1600120U	16.00	35	100	16

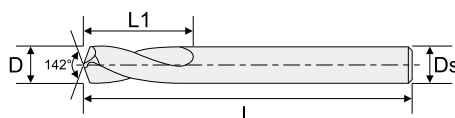
Order No.	D	L1	L	Ds
* Long Shank Type				
DTN0400121U	4.00	10	75	4
DTN0500121U	5.00	13	75	5
DTN0600121U	6.00	15	100	6
DTN0800121U	8.00	20	100	8
DTN1000121U	10.00	25	150	10
DTN1200121U	12.00	30	150	12
DTN1600121U	16.00	35	150	16



- 142° Tip Angle
- Ds tolerance : h6

- UNICO Coating

- Ds tolerance : h6



Unit:mm

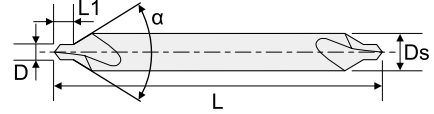
Order No.	D	L1	L	Ds
DTN0300140U	3.00	8	50	3
DTN0400140U	4.00	10	50	4
DTN0500140U	5.00	13	50	5
DTN0600140U	6.00	15	50	6
DTN0800140U	8.00	20	60	8
DTN1000140U	10.00	25	75	10
DTN1200140U	12.00	30	75	12
DTN1600140U	16.00	35	100	16

Order No.	D	L1	L	Ds
* Long Shank Type				
DTN0400141U	4.00	10	75	4
DTN0500141U	5.00	13	75	5
DTN0600141U	6.00	15	100	6
DTN0800141U	8.00	20	100	8
DTN1000141U	10.00	25	150	10
DTN1200141U	12.00	30	150	12
DTN1600141U	16.00	35	150	16

## DCN - Centering · External Coolant 中心外冷鑽頭



- 120° Tip Angle
- UNICO Coating
- D tolerance : h8
- Ds tolerance : h6



Unit:mm

Order No.	D	L1	L	Ds
60° Countersink Angle (α)				
DCN0100060U	1.00	1.6	38	3
DCN0125060U	1.25	1.9	38	3
DCN0160060U	1.60	2.4	42	4
DCN0200060U	2.00	2.9	50	5
DCN0250060U	2.50	3.6	50	6
DCN0250061U	2.50	3.6	50	6.3
DCN0300060U	3.00	3.9	60	8
DCN0315060U	3.15	3.9	60	8
DCN0400060U	4.00	5.0	75	10
DCN0500060U	5.00	6.3	75	12
DCN0500061U	5.00	6.3	75	12.5
DCN0630060U	6.30	8.0	75	16.0

Order No.	D	L1	L	Ds
90° Countersink Angle (α)				
DCN0100090U	1.00	1.6	38	3
DCN0125090U	1.25	1.9	38	3
DCN0160090U	1.60	2.4	42	4
DCN0200090U	2.00	2.9	50	5
DCN0250090U	2.50	3.6	50	6
DCN0300090U	3.00	3.9	60	8
DCN0315090U	3.15	3.9	60	8
DCN0400090U	4.00	5.0	75	10
DCN0500090U	5.00	6.3	75	12

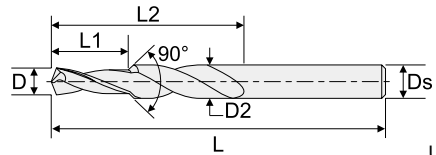
Holemaking

DZN - Step · External Coolant

階梯外冷鑽頭

P	M	K	N	S	H
●	○	●	□	□	□

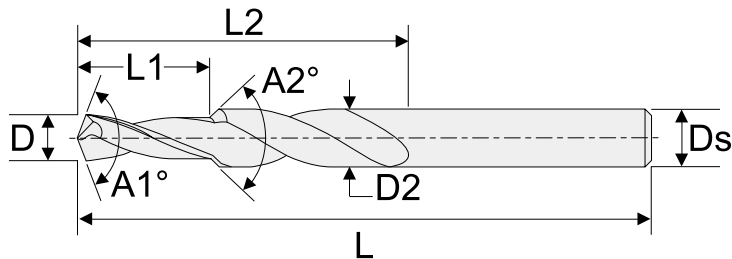
- For drill with a counterbore, countersink, or chamfer.
- UNIX Smooth Coating
- D tolerance : h8
- Ds tolerance : h6
- Customizable



Unit:mm

Order No.	D	L1	D2	L2	L	Ds	Order No.	D	L1	D2	L2	L	Ds
DZN03300301	3.30	12	6	26	62	6							
DZN04200301	4.20	15	6	28	66	6							
DZN05000301	5.00	18	8	36	79	8							
DZN06800301	6.80	24	10	48	90	10							
DZN08500301	8.50	30	12	55	102	12							

Custom Form



Drill Specifications				
D : _____ (Tolerance : _____)		L1 : _____ (Tolerance : _____)		D2 : _____
L2 : _____	L : _____	Ds : _____	A1 : _____	A2 : _____
Helix Type : <input type="checkbox"/> Left <input type="checkbox"/> Right		Coolant Supply : <input type="checkbox"/> Internal <input type="checkbox"/> External		
Coating : <input type="checkbox"/> UNICO <input type="checkbox"/> UNIX <input type="checkbox"/> SINIX <input type="checkbox"/> Uncoated <input type="checkbox"/> Other _____				

Working Application	
Working Piece Material : _____	Hardness : _____
Drilling Depth : _____	Hole Type : <input type="checkbox"/> Blind Hole <input type="checkbox"/> Through Hole

Comment

**Recommended Cutting Conditions** 建議切削數據

**DPC Series (Internal Coolant 內冷)**

Work Material		Drill Diameter	Ø3-6mm		Ø6.1~10mm		Ø10.1-16mm	
			Hardness	Vc (m/min)	Feed (mm/rev)	Vc (m/min)	Feed (mm/rev)	Vc (m/min)
P	Mild Steel	(<180HB)	70~120	0.06~0.2	90~130	0.12~0.3	110~150	0.2~0.4
	Carbon Steel	(180~280HB)	70~110	0.06~0.2	90~120	0.12~0.3	110~140	0.2~0.4
	Alloy Steel	(280~350HB)	60~100	0.06~0.18	65~110	0.12~0.27	80~120	0.2~0.35
M	Stainless Steel	(<200HB)	35~60	0.05~0.15	45~80	0.1~0.25	55~100	0.15~0.3
K	Cast Iron	(<350Mpa)	70~100	0.06~0.2	80~120	0.12~0.3	90~140	0.2~0.4
	Ductile Cast Iron	(<450Mpa)	50~80	0.06~0.2	60~90	0.12~0.3	70~110	0.2~0.4
N	Aluminum <12% Si	-	80~140	0.1~0.25	100~160	0.15~0.35	110~180	0.3~0.45
	Aluminum >12% Si	-	70~120	0.1~0.25	90~130	0.15~0.35	100~150	0.3~0.45
S	Heat Resistant Alloy	-	15~30	0.02~0.08	20~40	0.04~0.1	25~45	0.06~0.12
H	Hardened Material	40~60HRC	10~25	0.02~0.08	15~35	0.04~0.1	20~40	0.06~0.12

Warning :

For deep hole drills(10xD~30xD), need reduce the Vc to 90% and require an initial pilot hole to help guide the drill.

**DPN, DGN, DFN Series (External Coolant 外冷)**

Work Material		Drill Diameter	Ø3-6mm		Ø6.1~10mm		Ø10.1-16mm	
			Hardness	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)	Feed (mm/rev)	Cutting Speed (m/min)
P	Mild Steel	(<180HB)	45~75	0.06~0.2	55~85	0.12~0.3	60~100	0.2~0.4
	Carbon Steel	(180~280HB)	40~70	0.06~0.2	50~80	0.12~0.3	55~90	0.2~0.4
	Alloy Steel	(280~350HB)	35~65	0.06~0.18	40~75	0.12~0.27	50~85	0.2~0.35
M	Stainless Steel	(<200HB)	25~45	0.05~0.15	25~50	0.1~0.25	30~60	0.15~0.3
K	Cast Iron	(<350Mpa)	45~65	0.06~0.2	50~75	0.12~0.3	55~85	0.2~0.4
	Ductile Cast Iron	(<450Mpa)	40~60	0.06~0.2	45~70	0.12~0.3	50~80	0.2~0.4
N	Aluminum <12% Si	-	65~105	0.1~0.25	65~115	0.15~0.35	70~130	0.3~0.45
	Aluminum >12% Si	-	55~95	0.1~0.25	60~110	0.15~0.35	65~120	0.3~0.45
S	Heat Resistant Alloy	-	15~30	0.02~0.08	20~40	0.04~0.1	25~45	0.06~0.12
H	Hardened Material	40~60HRC	10~25	0.02~0.08	15~35	0.04~0.1	20~40	0.06~0.12

Warning :For slope drilling, please adjust cutting data according to inclined angle

1. For inclined angle under 20 degree, reduce the feed to 50%
2. For inclined angle between 20 to 50 degree, reduce the feed to 40%, and reduce rotation to 70%
3. For inclined angle between 50 to 65 degree, reduce the feed to 30%, and reduce rotation to 70%
4. Not recommend to side milling

Holemaking

## DPN Series for 10D~50D (External Coolant 外冷)

Dia. (D)	EFF-L (L2)	LD	Carbon steels (180~250HB)			Pre-hardened steels (35~45HRC)			Stainless steels (25~35HRC)			Aluminum			Hardened steels (45~55HRC)		
			RPM	Feed (mm/rev)	Step Feed (mm)	RPM	Feed (mm/rev)	Step Feed (mm)	RPM	Feed (mm/rev)	Step Feed (mm)	RPM	Feed (mm/rev)	Step Feed (mm)	RPM	Feed (mm/rev)	Step Feed (mm)
0.1	1	10	25,465	76	0.01	22,282	67	0.007	23,873	72	0.01	35,014	105	0.01	20,690	41	0.005
0.1	3	30	25,465	76	0.01	22,282	67	0.007	23,873	72	0.01	35,014	105	0.01	20,690	41	0.005
0.1	5	50	20,372	61	0.01	17,825	53	0.007	19,099	57	0.01	28,011	84	0.01	16,552	33	0.005
0.15	1.5	10	23,343	70	0.015	20,160	60	0.0105	21,221	64	0.015	25,465	76	0.015	19,099	38	0.0075
0.15	4.5	30	23,343	70	0.015	20,160	60	0.0105	21,221	64	0.015	25,465	76	0.015	19,099	38	0.0075
0.15	7.5	50	18,674	56	0.015	16,128	48	0.0105	16,977	51	0.015	20,372	61	0.015	15,279	31	0.0075
0.2	2	10	20,690	83	0.02	17,507	70	0.014	19,099	76	0.02	23,873	95	0.02	16,711	50	0.01
0.2	6	30	20,690	83	0.02	17,507	70	0.014	19,099	76	0.02	23,873	95	0.02	16,711	50	0.01
0.2	10	50	16,552	66	0.02	14,006	56	0.014	15,279	61	0.02	19,099	76	0.02	13,369	40	0.01
0.3	3	10	14,854	59	0.03	12,732	51	0.021	13,793	55	0.03	15,915	64	0.03	12,202	37	0.015
0.3	9	30	14,854	59	0.03	12,732	51	0.021	13,793	55	0.03	15,915	64	0.03	12,202	37	0.015
0.3	15	50	11,884	48	0.03	10,186	41	0.021	11,035	44	0.03	12,732	51	0.03	9,762	29	0.015
0.4	4	10	12,335	49	0.04	11,539	46	0.028	11,937	48	0.04	13,528	54	0.04	10,743	43	0.02
0.4	12	30	12,335	49	0.04	11,539	46	0.028	11,937	48	0.04	13,528	54	0.04	10,743	43	0.02
0.4	20	50	9,868	39	0.04	9,231	37	0.028	9,549	38	0.04	10,823	43	0.04	8,594	34	0.02
0.5	5	10	9,868	49	0.05	9,231	46	0.035	9,549	48	0.05	10,823	54	0.05	8,594	43	0.025
0.5	15	30	9,868	49	0.05	9,231	46	0.035	9,549	48	0.05	10,823	54	0.05	8,594	43	0.025
0.5	25	50	7,894	39	0.05	7,385	37	0.035	7,639	38	0.05	8,658	43	0.05	6,875	34	0.025
0.6	6	10	8,223	49	0.06	7,692	46	0.042	7,958	48	0.06	9,019	54	0.06	7,162	43	0.03
0.6	18	30	8,223	49	0.06	7,692	46	0.042	7,958	48	0.06	9,019	54	0.06	7,162	43	0.03
0.6	30	50	6,578	39	0.06	6,154	37	0.042	6,366	38	0.06	7,215	43	0.06	5,730	34	0.03
0.7	7	10	7,048	49	0.07	6,594	46	0.049	6,821	48	0.07	7,730	54	0.07	6,139	43	0.035
0.7	21	30	7,048	49	0.07	6,594	46	0.049	6,821	48	0.07	7,730	54	0.07	6,139	43	0.035
0.7	35	50	5,639	39	0.07	5,275	37	0.049	5,457	38	0.07	6,184	43	0.07	4,911	34	0.035
0.8	8	10	6,167	49	0.08	5,769	46	0.056	5,968	48	0.08	6,764	54	0.08	5,371	43	0.04
0.8	24	30	6,167	49	0.08	5,769	46	0.056	5,968	48	0.08	6,764	54	0.08	5,371	43	0.04
0.8	40	50	4,934	39	0.08	4,615	37	0.056	4,775	38	0.08	5,411	43	0.08	4,297	34	0.04
0.9	9	10	5,482	49	0.09	5,128	46	0.063	5,305	48	0.09	6,013	54	0.09	4,775	43	0.045
0.9	27	30	5,482	49	0.09	5,128	46	0.063	5,305	48	0.09	6,013	54	0.09	4,775	43	0.045
0.9	45	50	4,386	39	0.09	4,103	37	0.063	4,244	38	0.09	4,810	43	0.09	3,820	34	0.045
1	10	10	4,934	49	0.1	4,615	46	0.07	4,775	48	0.1	5,411	54	0.1	4,297	43	0.05
1	30	30	4,934	49	0.1	4,615	46	0.07	4,775	48	0.1	5,411	54	0.1	4,297	43	0.05
1	50	50	3,947	39	0.1	3,692	37	0.07	3,820	38	0.1	4,329	43	0.1	3,438	34	0.05

## Warning :

1. Always use Peck drilling (G83 program).
2. Use water-soluble or oil-based coolant should be to ensure chip removal.

## 注意：

1. 使用啄鑽方式鑽孔 (G83 程序)
2. 請使用水溶性或油性冷卻液以確保排屑

**Recommended Cutting Conditions** 建議切削數據

**DMC Series (Internal Coolant 內冷)**

Material	Stainless Steel				Titanium Alloy		Nickel Alloy		Carbon Steel / Alloy Steel	
Hardness	< HRC 20		≥ HRC 20		HRC 33 ~ 45		HRC 33 ~ 45		< HRC 35	
Vc	50 ~ 90 m/min		40 ~ 80 m/min		20 ~ 40 m/min		18 ~ 30 m/min		60 ~ 100 m/min	
Dia (mm)	RPM	fr (mm/rev)	RPM	fr (mm/rev)	RPM	fr (mm/rev)	RPM	fr (mm/rev)	RPM	fr (mm/rev)
4	4000 ~ 7200	0.04 ~ 0.11	3200 ~ 6400	0.04 ~ 0.11	1600 ~ 3200	0.04 ~ 0.08	1400 ~ 2400	0.04 ~ 0.08	4800 ~ 8000	0.04 ~ 0.12
6	2700 ~ 4800	0.06 ~ 0.17	2100 ~ 4200	0.06 ~ 0.17	1000 ~ 2100	0.06 ~ 0.12	1000 ~ 1600	0.06 ~ 0.12	3200 ~ 5300	0.06 ~ 0.18
8	2000 ~ 3600	0.08 ~ 0.22	1600 ~ 3200	0.08 ~ 0.22	800 ~ 1600	0.08 ~ 0.16	700 ~ 1200	0.08 ~ 0.16	2400 ~ 4000	0.08 ~ 0.24
10	1600 ~ 2900	0.10 ~ 0.28	1300 ~ 2500	0.10 ~ 0.28	600 ~ 1300	0.10 ~ 0.20	600 ~ 1000	0.10 ~ 0.20	1900 ~ 3200	0.10 ~ 0.30
12	1300 ~ 2400	0.12 ~ 0.33	1000 ~ 2100	0.12 ~ 0.33	500 ~ 1100	0.12 ~ 0.24	500 ~ 800	0.12 ~ 0.24	1600 ~ 2700	0.12 ~ 0.36
16	1000 ~ 1800	0.16 ~ 0.32	800 ~ 1600	0.16 ~ 0.32	400 ~ 800	0.16 ~ 0.32	400 ~ 600	0.16 ~ 0.32	1200 ~ 2000	0.16 ~ 0.40
20	800 ~ 1400	0.20 ~ 0.40	600 ~ 1300	0.20 ~ 0.40	300 ~ 600	0.20 ~ 0.40	300 ~ 500	0.20 ~ 0.40	1000 ~ 1600	0.20 ~ 0.50

**DMN Series (External Coolant 外冷)**

Material	Stainless Steel				Titanium Alloy		Nickel Alloy		Carbon Steel / Alloy Steel	
Hardness	< HRC 20		≥ HRC 20		HRC 33 ~ 45		HRC 33 ~ 45		< HRC 35	
Vc	50 ~ 90 m/min		40 ~ 80 m/min		20 ~ 40 m/min		18 ~ 30 m/min		60 ~ 100 m/min	
Dia (mm)	RPM	fr (mm/rev)	RPM	fr (mm/rev)	RPM	fr (mm/rev)	RPM	fr (mm/rev)	RPM	fr (mm/rev)
4	4000 ~ 7200	0.04 ~ 0.08	3200 ~ 6400	0.04 ~ 0.08	1600 ~ 3200	0.04 ~ 0.07	1400 ~ 2400	0.04 ~ 0.07	4800 ~ 8000	0.04 ~ 0.10
6	2700 ~ 4800	0.06 ~ 0.12	2100 ~ 4200	0.06 ~ 0.12	1000 ~ 2100	0.06 ~ 0.11	1000 ~ 1600	0.06 ~ 0.11	3200 ~ 5300	0.06 ~ 0.15
8	2000 ~ 3600	0.08 ~ 0.16	1600 ~ 3200	0.08 ~ 0.16	800 ~ 1600	0.08 ~ 0.14	700 ~ 1200	0.08 ~ 0.14	2400 ~ 4000	0.08 ~ 0.20
10	1600 ~ 2900	0.10 ~ 0.20	1300 ~ 2500	0.10 ~ 0.20	600 ~ 1300	0.10 ~ 0.18	600 ~ 1000	0.10 ~ 0.18	1900 ~ 3200	0.10 ~ 0.25
12	1300 ~ 2400	0.12 ~ 0.24	1000 ~ 2100	0.12 ~ 0.24	500 ~ 1100	0.12 ~ 0.22	500 ~ 800	0.12 ~ 0.22	1600 ~ 2700	0.12 ~ 0.30
16	1000 ~ 1800	0.16 ~ 0.32	800 ~ 1600	0.16 ~ 0.32	400 ~ 800	0.16 ~ 0.29	400 ~ 600	0.16 ~ 0.29	1200 ~ 2000	0.16 ~ 0.40
20	800 ~ 1400	0.20 ~ 0.40	600 ~ 1300	0.20 ~ 0.40	300 ~ 600	0.20 ~ 0.36	300 ~ 500	0.20 ~ 0.36	1000 ~ 1600	0.20 ~ 0.50

Holemaking

**Recommended Cutting Conditions** 建議切削數據

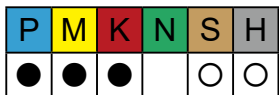
**DHN Series (External Coolant 外冷)**

Material	Hardened Steel / Pre-Hardened Steel						Nickel Alloy	
Hardness	HRC 40 ~ 45		HRC 45 ~ 50		HRC 50 ~ 60		HRC 33 ~ 45	
Vc	30 ~ 50 m/min		20 ~ 30 m/min		20 ~ 30 m/min		15 ~ 30 m/min	
Dia (mm)	RPM	Feed(mm/rev)	RPM	Feed(mm/rev)	RPM	Feed(mm/rev)	RPM	Feed(mm/rev)
4	3200	0.04 ~ 0.08	2000	0.04 ~ 0.08	2000	0.03 ~ 0.06	1600	0.04 ~ 0.08
5	2500	0.05 ~ 0.10	1600	0.05 ~ 0.10	1600	0.04 ~ 0.08	1300	0.05 ~ 0.10
6	2100	0.06 ~ 0.12	1300	0.06 ~ 0.12	1300	0.05 ~ 0.09	1100	0.06 ~ 0.12
7	1800	0.07 ~ 0.14	1100	0.07 ~ 0.14	1100	0.06 ~ 0.11	900	0.07 ~ 0.14
8	1600	0.08 ~ 0.16	1000	0.08 ~ 0.16	1000	0.06 ~ 0.12	800	0.08 ~ 0.16
9	1400	0.09 ~ 0.18	900	0.09 ~ 0.18	900	0.07 ~ 0.14	700	0.09 ~ 0.18
10	1300	0.10 ~ 0.20	800	0.10 ~ 0.20	800	0.08 ~ 0.15	600	0.10 ~ 0.20
11	1150	0.11 ~ 0.22	720	0.11 ~ 0.22	720	0.09 ~ 0.17	600	0.11 ~ 0.22
12	1100	0.12 ~ 0.24	700	0.12 ~ 0.24	700	0.10 ~ 0.18	500	0.12 ~ 0.24

**DTN Series (External Coolant 外冷)**

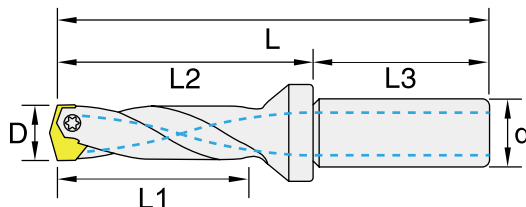
Work Material		VC (m/min)		Fr (mm/rev)
		DTN 90° & DTN 120°	DTN 140°	
P	Carbon steel	55 ~ 75	60 ~ 90	0.04 ~ 0.14
	Alloy steel	50 ~ 70	55 ~ 85	0.03 ~ 0.10
M	Stainless steel	20 ~ 40	22 ~ 50	0.02 ~ 0.10
K	Cast iron	50 ~ 80	55 ~ 95	0.04 ~ 0.13
H	Hardened steel	20 ~ 40	22 ~ 50	0.02 ~ 0.06

**DMU - Internal Coolant · 3D / 5D** 模組化內冷鑽頭 · 3 倍深 / 5 倍深



- 3×D / 5×D Cutting Depth
- Internal Coolant

- High durable SKD holder body
- Use DMUA series inserts



**3D**

Insert Brand : Winstar

Order No.	Dimensions, mm						Insert	Screw	Wrench	Stock
	D (Applicable Insert Dia.)	L1	L2	L3	L	d				
IDMU3120016	12.0 ~ 12.99	43	60	48	108	16	DMUA12	IWCS2510	IPL20	○
IDMU3130016	13.0 ~ 13.99	46	63	48	111	16	DMUA13			○
IDMU3140020	14.0 ~ 14.99	49	70	50	120	20	DMUA14	IWCS3013	IPL25	○
IDMU3150020	15.0 ~ 15.99	52	73	50	123	20	DMUA15			○
IDMU3160020	16.0 ~ 16.99	56	77	50	127	20	DMUA16	IWCS3014	IPL25	○
IDMU3170020	17.0 ~ 17.99	60	81	50	131	20	DMUA17			○
IDMU3180020	18.0 ~ 18.99	63	86	50	136	20	DMUA18	IWCS4016	IPL30	○
IDMU3190020	19.0 ~ 19.99	67	90	50	140	20	DMUA19			○
IDMU3200025	20.0 ~ 20.99	72	98	56	154	25	DMUA20	IWCS4018	IPL30	○
IDMU3210025	21.0 ~ 21.99	75	101	56	157	25	DMUA21			○
IDMU3220025	22.0 ~ 22.99	79	105	56	161	25	DMUA22	IWCS5020	IPL35	○
IDMU3240025	24.0 ~ 25.40	86	116	56	172	25	DMUA2			○

**5D**

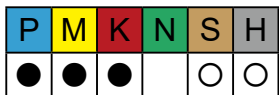
Order No.	Dimensions, mm						Insert	Screw	Wrench	Stock
	D (Applicable Insert Dia.)	L1	L2	L3	L	d				
IDMU5120016	12.0 ~ 12.99	67	65	48	132	16	DMUA12	IWCS2510	IPL20	○
IDMU5130016	13.0 ~ 13.99	72	65	48	137	16	DMUA13			○
IDMU5140020	14.0 ~ 14.99	77	71	50	148	20	DMUA14	IWCS3013	IPL25	○
IDMU5150020	15.0 ~ 15.99	82	71	50	153	20	DMUA15			○
IDMU5160020	16.0 ~ 16.99	88	71	50	159	20	DMUA16	IWCS3014	IPL25	○
IDMU5170020	17.0 ~ 17.99	94	71	50	165	20	DMUA17			○
IDMU5180020	18.0 ~ 18.99	99	73	50	172	20	DMUA18	IWCS4016	IPL30	○
IDMU5190020	19.0 ~ 19.99	105	73	50	178	20	DMUA19			○
IDMU5200025	20.0 ~ 20.99	112	82	56	194	25	DMUA20	IWCS4018	IPL30	○
IDMU5210025	21.0 ~ 21.99	117	82	56	199	25	DMUA21			○
IDMU5220025	22.0 ~ 22.99	123	82	56	205	25	DMUA22	IWCS5020	IPL35	○
IDMU5240025	24.0 ~ 25.40	134	86	56	220	25	DMUA2			○

● stock ○ by inquiry

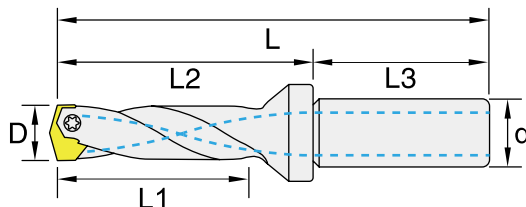
Customize available.



**DMU - Internal Coolant · 7D / 10D** 模組化內冷鑽頭 · 7 倍深 / 10 倍深



- 7×D / 10×D Cutting Depth
  - Internal Coolant
  - High durable SKD holder body
  - Use DMUA series inserts
- ※10D drilling requires an initial pilot hole to guide the drill.



**7D**

Insert Brand : Winstar

Order No.	Dimensions, mm						Insert	Screw	Wrench	Stock
	D (Applicable Insert Dia.)	L1	L2	L3	L	d				
IDMU7120016	12.0 ~ 12.99	91	65	48	156	16	DMUA12	IWCS2510	IPL20	○
IDMU7130016	13.0 ~ 13.99	98	65	48	163	16	DMUA13			○
IDMU7140020	14.0 ~ 14.99	105	71	50	176	20	DMUA14	IWCS3013	IPL25	○
IDMU7150020	15.0 ~ 15.99	112	71	50	183	20	DMUA15			○
IDMU7160020	16.0 ~ 16.99	120	71	50	191	20	DMUA16	IWCS3014	IPL25	○
IDMU7170020	17.0 ~ 17.99	128	71	50	199	20	DMUA17			○
IDMU7180020	18.0 ~ 18.99	135	73	50	208	20	DMUA18	IWCS4016	IPL30	○
IDMU7190020	19.0 ~ 19.99	143	73	50	216	20	DMUA19			○
IDMU7200025	20.0 ~ 20.99	152	82	56	234	25	DMUA20	IWCS4018	IPL30	○
IDMU7210025	21.0 ~ 21.99	159	82	56	241	25	DMUA21			○
IDMU7220025	22.0 ~ 22.99	167	82	56	249	25	DMUA22			○
IDMU7240025	24.0 ~ 25.40	182	86	56	268	25	DMUA2	IWCS5020	IPL35	○

**10D**

Order No.	Dimensions, mm						Insert	Screw	Wrench	Stock
	D (Applicable Insert Dia.)	L1	L2	L3	L	d				
IDMU9120016	12.0 ~ 12.99	127	144	48	192	16	DMUA12	IWCS2510	IPL20	○
IDMU9130016	13.0 ~ 13.99	137	154	48	202	16	DMUA13			○
IDMU9140020	14.0 ~ 14.99	147	168	50	218	20	DMUA14	IWCS3013	IPL25	○
IDMU9150020	15.0 ~ 15.99	157	178	50	228	20	DMUA15			○
IDMU9160020	16.0 ~ 16.99	168	189	50	239	20	DMUA16	IWCS3014	IPL25	○
IDMU9170020	17.0 ~ 17.99	179	200	50	250	20	DMUA17			○
IDMU9180020	18.0 ~ 18.99	189	212	50	262	20	DMUA18	IWCS4016	IPL30	○
IDMU9190020	19.0 ~ 19.99	200	223	50	273	20	DMUA19			○
IDMU9200025	20.0 ~ 20.99	212	238	56	294	25	DMUA20	IWCS4018	IPL30	○
IDMU9210025	21.0 ~ 21.99	222	248	56	304	25	DMUA21			○
IDMU9220025	22.0 ~ 22.99	233	259	56	315	25	DMUA22			○
IDMU9240025	24.0 ~ 25.40	254	284	56	340	25	DMUA2	IWCS5020	IPL35	○

● stock ○ by inquiry

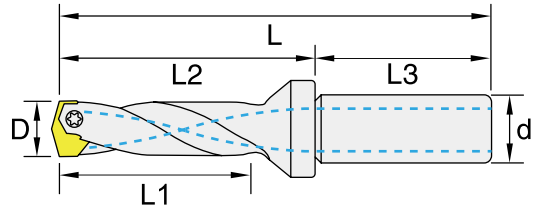
Customize available.

DMU - Internal Coolant · 12D

模組化內冷鑽頭 · 12倍深

P	M	K	N	S	H
●	●	●	○	○	○

- 12×D Cutting Depth
  - Internal Coolant
  - High durable SKD holder body
  - Use DMUA series inserts
- ※Require an initial pilot hole to guide the drill.



Insert Brand : Winstar

Order No.	Dimensions, mm						Insert	Screw	Wrench	Stock
	D (Applicable Insert Dia.)	L1	L2	L3	L	d				
IDMU12120016	12.0 ~ 12.99	151	168	48	216	16	DMUA12	IWCS2510	IPL20	○
IDMU12130016	13.0 ~ 13.99	163	180	48	228	16	DMUA13			○
IDMU12140020	14.0 ~ 14.99	175	196	50	246	20	DMUA14	IWCS3013	IPL25	○
IDMU12150020	15.0 ~ 15.99	187	208	50	258	20	DMUA15			○
IDMU12160020	16.0 ~ 16.99	200	221	50	271	20	DMUA16	IWCS3014	IPL25	○
IDMU12170020	17.0 ~ 17.99	213	234	50	284	20	DMUA17			○
IDMU12180020	18.0 ~ 18.99	225	248	50	298	20	DMUA18	IWCS4016	IPL30	○
IDMU12190020	19.0 ~ 19.99	238	261	50	311	20	DMUA19			○
IDMU12200025	20.0 ~ 20.99	252	278	56	334	25	DMUA20	IWCS4018	IPL30	○
IDMU12210025	21.0 ~ 21.99	264	290	56	346	25	DMUA21			○
IDMU12220025	22.0 ~ 22.99	277	303	56	359	25	DMUA22			○
IDMU12240025	24.0 ~ 25.40	302	332	56	388	25	DMUA2	IWCS5020	IPL35	○

● stock ○ by inquiry

Customize available.

Holemaking

**DMU - Modular Drill Inserts** 模組化鑽頭刀片

**Recommended Cutting Conditions** 建議切削數據

Work Material	Vc (m/min)	fr (mm/rev)		
		12.0 ≤ ØD ≤ 15.9	16.0 ≤ ØD ≤ 19.9	20.0 ≤ ØD ≤ 25.4
<b>P</b> Carbon Steel	70 - 95 - 120	0.15 - 0.24 - 0.32	0.18 - 0.27 - 0.35	0.20 - 0.29 - 0.38
	60 - 85 - 110	0.15 - 0.23 - 0.30	0.17 - 0.25 - 0.32	0.20 - 0.28 - 0.35
<b>M</b> Stainless Steel	55 - 68 - 80	0.11 - 0.17 - 0.23	0.13 - 0.19 - 0.25	0.15 - 0.23 - 0.30
<b>K</b> Cast Iron	70 - 95 - 120	0.15 - 0.24 - 0.32	0.18 - 0.27 - 0.35	0.20 - 0.29 - 0.38
<b>S</b> High Temperature Alloy	35 - 50 - 65	0.08 - 0.13 - 0.18	0.10 - 0.15 - 0.20	0.12 - 0.17 - 0.22

※For deep drilling(10D, 12D), 50% feed rate for touching workpiece

**Insert Chipbreaker** 刀片斷屑槽

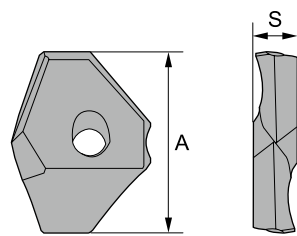
Shape 形狀	Tip Design 鑽尖設計	Application 加工特性
	<b>SX</b>	<ul style="list-style-type: none"> <li>• Tip Angle : 140°, Universal</li> <li>• Low cutting force for steel, stainless steel, cast iron and high temperature alloy.</li> <li>• 鑽尖：140°，泛用</li> <li>• 低切削阻力的刀口設計，適用於鋼件、不鏽鋼、鑄鐵和高溫合金加工</li> </ul>

**Insert Grade** 刀片材質

Grade Type 刀片材質	Color 刀片顏色	Properties 屬性	Application 加工特性	Working Material 加工材質						Industry Area 產業應用範圍
				P	M	K	N	S	H	
<b>CX33TX</b>		<ul style="list-style-type: none"> <li>• PVD (TiSiN)</li> <li>• Wear resistance</li> <li>• Anti-corrosion</li> <li>• 耐磨性</li> <li>• 抗腐蝕</li> </ul>	<ul style="list-style-type: none"> <li>• General machining</li> <li>• For carbon steel &amp; alloy steel is 1st recommended</li> <li>• 適合泛用加工</li> <li>• 加工碳鋼 &amp; 合金鋼為第一建議</li> </ul>	●	○	●	○	○	●	<ul style="list-style-type: none"> <li>• Mold &amp; Die</li> <li>• Automotive</li> <li>• Machinery</li> <li>• Aerospace</li> <li>• 模具產業</li> <li>• 汽車零件</li> <li>• 機械零件</li> <li>• 航太零件</li> </ul>

**Insert Specifications** 刀片規格

Insert	Dimensions (mm)	
	A	S
DMUA1200	12.00	3.6
DMUA1270	12.70	3.6
DMUA1300	13.00	3.6
DMUA1350	13.50	3.6
DMUA1400	14.00	4.0
DMUA1450	14.50	4.0
DMUA1500	15.00	4.0
DMUA1550	15.50	4.0
DMUA1587	15.875 (5/8")	4.0
DMUA1600	16.00	4.0
DMUA1630	16.30	4.0
DMUA1650	16.50	4.0
DMUA1700	17.00	4.0
DMUA1750	17.50	4.0
DMUA1800	18.00	5.0
DMUA1900	19.00	5.0
DMUA1905	19.05 (3/4")	5.0
DMUA2000	20.00	5.0
DUMA2100	21.00	6.0
DMUA2200	22.00	6.0
DMUA2222	22.225 (7/8")	6.0
DMUA2400	24.00	7.0
DMUA2500	25.00	7.0
DMUA2540	25.40 (1")	7.0




Holemaking

※ Customized sizes (two decimal places) are acceptable. 客製化尺寸可至小數點後 2 位

**DMU - Modular Drill Inserts** 模組化鑽頭刀片

**Insert Designation** 刀片型號

Insert	Order No.	Series-Size-Tip Design-Grade	Working Material					
			P	M	K	N	S	H
	IDMUA1200SX33TX	DMUA-1200-SX-CX33TX	●	●	●		○	○
	IDMUA1270SX33TX	DMUA-1270-SX-CX33TX	●	●	●		○	○
	IDMUA1300SX33TX	DMUA-1300-SX-CX33TX	●	●	●		○	○
	IDMUA1350SX33TX	DMUA-1350-SX-CX33TX	●	●	●		○	○
	IDMUA1400SX33TX	DMUA-1400-SX-CX33TX	●	●	●		○	○
	IDMUA1450SX33TX	DMUA-1450-SX-CX33TX	●	●	●		○	○
	IDMUA1500SX33TX	DMUA-1500-SX-CX33TX	●	●	●		○	○
	IDMUA1550SX33TX	DMUA-1550-SX-CX33TX	●	●	●		○	○
	IDMUA1587SX33TX	DMUA-1587-SX-CX33TX	●	●	●		○	○
	IDMUA1600SX33TX	DMUA-1600-SX-CX33TX	●	●	●		○	○
	IDMUA1630SX33TX	DMUA-1630-SX-CX33TX	●	●	●		○	○
	IDMUA1650SX33TX	DMUA-1650-SX-CX33TX	●	●	●		○	○
	IDMUA1700SX33TX	DMUA-1700-SX-CX33TX	●	●	●		○	○
	IDMUA1750SX33TX	DMUA-1750-SX-CX33TX	●	●	●		○	○
	IDMUA1800SX33TX	DMUA-1800-SX-CX33TX	●	●	●		○	○
	IDMUA1900SX33TX	DMUA-1900-SX-CX33TX	●	●	●		○	○
	IDMUA1905SX33TX	DMUA-1905-SX-CX33TX	●	●	●		○	○
	IDMUA2000SX33TX	DMUA-2000-SX-CX33TX	●	●	●		○	○
	IDUMA2100SX33TX	DUMA-2100-SX-CX33TX	●	●	●		○	○
	IDMUA2200SX33TX	DMUA-2200-SX-CX33TX	●	●	●		○	○
	IDMUA2222SX33TX	DMUA-2222-SX-CX33TX	●	●	●		○	○
	IDMUA2400SX33TX	DMUA-2400-SX-CX33TX	●	●	●		○	○
IDMUA2500SX33TX	DMUA-2500-SX-CX33TX	●	●	●		○	○	
IDMUA2540SX33TX	DMUA-2540-SX-CX33TX	●	●	●		○	○	

**Special Insert Order No.** 刀片特殊規格訂購碼

Order No. 訂購編碼

IDMUA 0000 SX33TX → IDMUA1510SX33TX

EX: Insert Dia. = 15.1mm  
刀片直徑 = 15.1mm

DSP - Indexable Drills · 2D

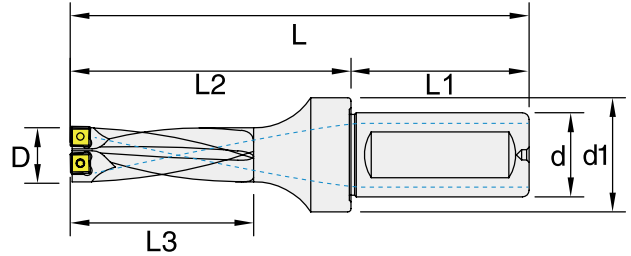
捨棄式鑽頭 · 2 倍深

Specification

- 2×D Cutting depth
- High durable SKD holder body
- Internal Coolant
- Use SPMG series inserts
- Indexable Insert with 4 sides cutting edge

規格

- 2 倍深
- 內冷卻孔
- 刀片含有 4 個切削角
- SKD 高耐久性刀體
- 使用 SPMG 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock
	D	d	d1	L	L3	L2	L1					
IDSP125220T205	12.5	20	27	94	26	44	50	2	SPGG0502 SPMG0502	ITS2003	ITK06	○
IDSP130220T205	13			96	28	46		2				○
IDSP135220T205	13.5			96	28	46		2				○
IDSP140220T205	14			96	28	46		2				○
IDSP145220T205	14.5			96	28	46		2				○
IDSP150220T205	15			96	28	46		2				○
IDSP155225T206	15.5	25	33	108	32	52	56	2	SPGG0602 SPMG0602	ITS2205	ITK06	○
IDSP160225T206	16			110	34	54		2				○
IDSP165225T206	16.5			110	34	54		2				○
IDSP170225T206	17			110	34	54		2				○
IDSP175225T206	17.5			110	34	54		2				○
IDSP180225T206	18			110	34	54		2				○
IDSP185225T206	18.5			110	34	54		2				○
IDSP190225T206	19			110	34	54		2				○
IDSP195225T206	19.5			110	34	54		2				○
IDSP200225T206	20			110	34	54		2				○
IDSP205225T206	20.5			110	34	54		2				○
IDSP210225T206	21			110	34	54		2				○
IDSP215225T206	21.5			110	34	54		2				○
IDSP220225T207	22			110	34	54		2				○
IDSP225232T207	22.5	32	43	131	46	71	60	2	SPGG07T308 SPMG07T308	ITS2511	ITK08	○
IDSP230232T207	23			131	46	71		2				○
IDSP235232T207	23.5			131	46	71		2				○
IDSP240232T207	24			131	46	71		2				○
IDSP245232T207	24.5			131	46	71		2				○
IDSP250232T207	25			131	46	71		2				○
IDSP255232T207	25.5			131	46	71		2				○
IDSP260232T207	26			131	46	71		2				○
IDSP265232T207	26.5			131	46	71		2				○
IDSP270232T207	27			131	46	71		2				○
IDSP275232T207	27.5	131	46	71	2	○						

Holemaking

● stock ○ by inquiry

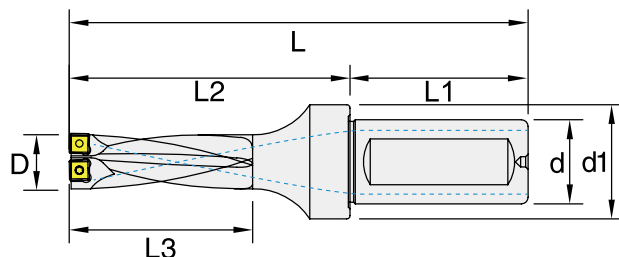
**DSP - Indexable Drills · 2D** 捨棄式鑽頭 · 2 倍深

**Specification**

- 2×D Cutting depth
- Internal Coolant
- Indexable Insert with 4 sides cutting edge
- High durable SKD holder body
- Use SPMG series inserts

**規格**

- 2 倍深
- 內冷卻孔
- 刀片含有 4 個切削角
- SKD 高耐久性刀體
- 使用 SPMG 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock
	D	d	d1	L	L3	L2	L1					
IDSP280232T209	28	32	43	144	56	84	60	2	SPGG090408 SPMG090408	ITS3504	ITK15	●
IDSP285232T209	28.5			2	○							
IDSP290232T209	29			2	●							
IDSP295232T209	29.5			2	○							
IDSP300232T209	30			2	●							
IDSP305232T209	30.5			2	○							
IDSP310232T209	31			2	●							
IDSP315232T209	31.5			2	○							
IDSP320232T209	32			2	●							
IDSP325232T209	32.5			2	○							
IDSP330232T209	33			2	●							
IDSP340232T211	34			2	●							
IDSP350232T211	35			2	●							
IDSP360232T211	36			2	●							
IDSP370232T211	37	2	●									
IDSP380232T211	38	2	●									
IDSP390232T211	39	2	●									
IDSP400240T211	40	40	53	185	80	115	2	SPGG110408 SPMG110408	ITS4006	ITK15	●	
IDSP410240T211	41			187	82	117	2				○	

● stock ○ by inquiry

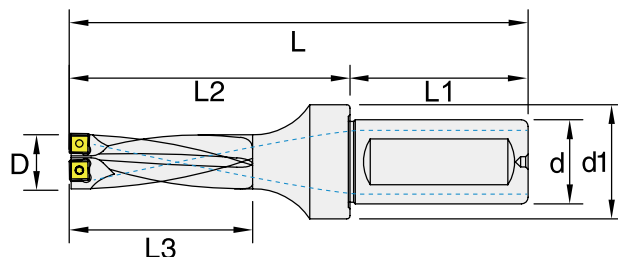
DSP - Indexable Drills · 3D 捨棄式鑽頭 · 3 倍深

Specification

- 3×D Cutting depth
- High durable SKD holder body
- Internal Coolant
- Use SPMG series inserts
- Indexable Insert with 4 sides cutting edge

規格

- 3 倍深
- 內冷卻孔
- 刀片含有 4 個切削角
- SKD 高耐久性刀體
- 使用 SPMG 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock
	D	d	d1	L	L3	L2	L1					
IDSP125320T205	12.5	20	25	107	39	57	50	2	SPGG0502 SPMG0502	ITS2003	ITK06	○
IDSP130320T205	13			110	42	60		2				●
IDSP135320T205	13.5			110	42	60		2				○
IDSP140320T205	14			110	42	60		2				○
IDSP145320T205	14.5			110	42	60		2				○
IDSP150320T205	15			110	42	60		2				●
IDSP155325T206	15.5	25	33	124	48	68	56	2	SPGG0602 SPMG0602	ITS2205	ITK06	○
IDSP160325T206	16			124	48	68		2				●
IDSP165325T206	16.5			127	51	71		2				○
IDSP170325T206	17			127	51	71		2				○
IDSP175325T206	17.5			131	54	75		2				○
IDSP180325T206	18			131	54	75		2				●
IDSP185325T206	18.5			134	57	78		2				○
IDSP190325T206	19			134	57	78		2				●
IDSP195325T206	19.5			139	60	83		2				○
IDSP200325T206	20			139	60	83		2				●
IDSP205325T206	20.5			142	63	86		2				○
IDSP210325T206	21			142	63	86		2				●
IDSP215325T206	21.5			145	66	89		2				○
IDSP220325T207	22			145	66	89		2				●
IDSP225332T207	22.5	32	43	154	69	94	60	2	SPGG07T3 SPMG07T3	ITS2511	ITK08	○
IDSP230332T207	23			154	69	94		2				●
IDSP235332T207	23.5			158	72	98		2				○
IDSP240332T207	24			158	72	98		2				○
IDSP245332T207	24.5			162	75	102		2				○
IDSP250332T207	25			162	75	102		2				●
IDSP255332T207	25.5			165	78	105		2				○
IDSP260332T207	26			165	78	105		2				●
IDSP265332T207	26.5			169	81	108		2				○
IDSP270332T207	27			169	81	108		2				●
IDSP275332T207	27.5	172	84	112	2	○						

● stock ○ by inquiry

Holemaking



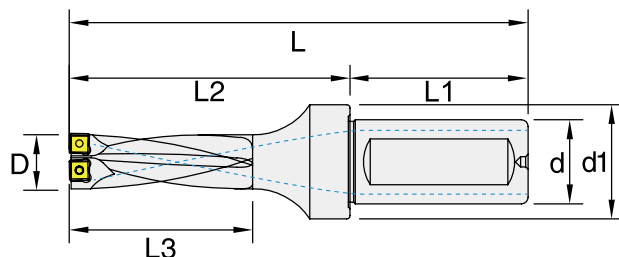
**DSP - Indexable Drills · 3D** 捨棄式鑽頭 · 3 倍深

**Specification**

- 3×D Cutting depth
- Internal Coolant
- Indexable Insert with 4 sides cutting edge
- High durable SKD holder body
- Use SPMG series inserts

**規格**

- 3 倍深
- 內冷卻孔
- 刀片含有 4 個切削角
- SKD 高耐久性刀體
- 使用 SPMG 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock
	D	d	d1	L	L3	L2	L1					
IDSP280332T209	28	32	43	172	84	112	60	2	SPGG0904 SPMG0904	ITS3504	ITK15	●
IDSP285332T209	28.5			175	87	115		2				
IDSP290332T209	29			178	90	118		2				
IDSP295332T209	29.5			181	93	121		2				
IDSP300332T209	30			184	96	124		2				
IDSP305332T209	30.5			187	99	127		2				
IDSP310332T209	31			190	102	130		2				
IDSP315332T209	31.5			193	105	133		2				
IDSP320332T209	32			196	108	136		2				
IDSP325332T209	32.5			199	111	139		2				
IDSP330332T209	33			202	114	142		2				
IDSP340332T211	34			205	117	145		2				
IDSP350332T211	35			225	120	155		2				
IDSP360332T211	36			228	123	158		2				
IDSP370332T211	37											●
IDSP380332T211	38											●
IDSP390332T211	39											●
IDSP400340T211	40	40	53									●
IDSP410340T211	41											○

● stock ○ by inquiry

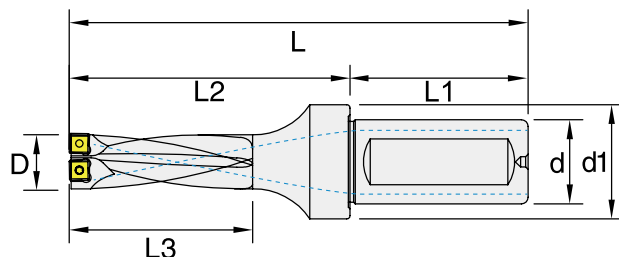
DSP - Indexable Drills · 4D 捨棄式鑽頭 · 4 倍深

**Specification**

- 4×D Cutting depth
- Internal Coolant
- Indexable Insert with 4 sides cutting edge
- High durable SKD holder body
- Use SPMG series inserts

**規格**

- 4 倍深
- 內冷卻孔
- 刀片含有 4 個切削角
- SKD 高耐久性刀體
- 使用 SPMG 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock
	D	d	d1	L	L3	L2	L1					
IDSP125420T205	12.5	20	27	120	52	70	50	2	SPGG0502 SPMG0502	ITS2003	ITK06	○
IDSP130420T205	13			124	56	74		2				●
IDSP135420T205	13.5			124	56	74		2				○
IDSP140420T205	14			124	56	74		2				○
IDSP145420T205	14.5			129	60	79		2				○
IDSP150420T205	15			129	60	79		2				●
IDSP155425T206	15.5	25	33	140	64	84	56	2	SPGG0602 SPMG0602	ITS2205	ITK06	○
IDSP160425T206	16			144	68	88		2				○
IDSP165425T206	16.5			144	68	88		2				○
IDSP170425T206	17			144	68	88		2				○
IDSP175425T206	17.5			148	72	92		2				○
IDSP180425T206	18			148	72	92		2				●
IDSP185425T206	18.5			152	76	96		2				○
IDSP190425T206	19			152	76	96		2				○
IDSP195425T206	19.5			152	76	96		2				○
IDSP200425T206	20			156	80	100		2				○
IDSP205425T206	20.5			156	80	100		2				○
IDSP210425T206	21			160	84	104		2				○
IDSP215425T206	21.5			160	84	104		2				○
IDSP220425T207	22			164	88	108		2				○
IDSP225432T207	22.5	32	43	177	92	117	60	2	SPGG07T3 SPMG07T3	ITS2511	ITK08	○
IDSP230432T207	23			181	96	121		2				○
IDSP235432T207	23.5			181	96	121		2				○
IDSP240432T207	24			181	96	121		2				○
IDSP245432T207	24.5			185	100	125		2				○
IDSP250432T207	25			185	100	125		2				○
IDSP255432T207	25.5			189	104	129		2				○
IDSP260432T207	26			189	104	129		2				○
IDSP265432T207	26.5			196	108	136		2				○
IDSP270432T207	27			196	108	136		2				○
IDSP275432T207	27.5	200	112	140	2	○						

● stock ○ by inquiry

Holemaking

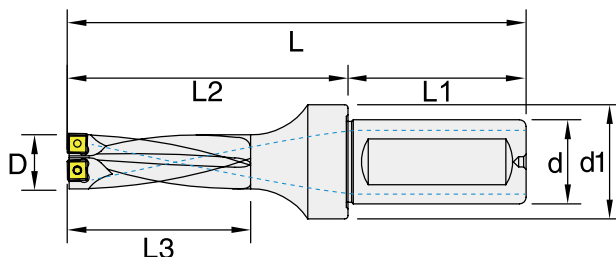
DSP - Indexable Drills · 4D 捨棄式鑽頭 · 4 倍深

Specification

- 4×D Cutting depth
- High durable SKD holder body
- Internal Coolant
- Use SPMG series inserts
- Indexable Insert with 4 sides cutting edge

規格

- 4 倍深
- 內冷卻孔
- 刀片含有 4 個切削角
- SKD 高耐久性刀體
- 使用 SPMG 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock
	D	d	d1	L	L3	L2	L1					
IDSP280432T209	28	32	43	200	112	140	60	2	SPGG0904 SPMG0904	TS3504	TK15	●
IDSP285432T209	28.5			204	116	144		2				○
IDSP290432T209	29			208	120	148		2				●
IDSP295432T209	29.5			212	124	152		2				○
IDSP300432T209	30			216	128	156		2				●
IDSP305432T209	30.5			220	132	160		2				○
IDSP310432T209	31			224	136	164		2				●
IDSP315432T209	31.5			228	140	168		2				○
IDSP320432T209	32			232	144	172		2				●
IDSP325432T209	32.5			236	148	176		2				○
IDSP330432T209	33			240	152	180		2				●
IDSP340432T211	34			244	156	184		2				○
IDSP350432T211	35			248	160	188		2				●
IDSP360432T211	36			252	164	192		2				○
IDSP370432T211	37			256	168	196		2				●
IDSP380432T211	38	260	172	200	2	○						
IDSP390432T211	39	264	176	204	2	●						
IDSP400440T211	40	40	53	265	160	195	2	○	SPGG1104 SPMG1104	TS4006	TK15	●
IDSP410440T211	41			269	164	199	2	○				

● stock ○ by inquiry

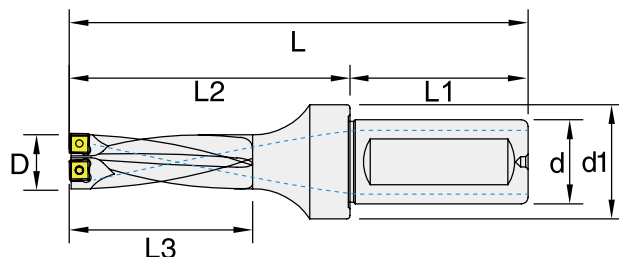
DSP - Indexable Drills · 5D 捨棄式鑽頭 · 5 倍深

Specification

- 5×D Cutting depth
- High durable SKD holder body
- Internal Coolant
- Use SPMG series inserts
- Indexable Insert with 4 sides cutting edge

規格

- 5 倍深
- 內冷卻孔
- 刀片含有 4 個切削角
- SKD 高耐久性刀體
- 使用 SPMG 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock			
	D	d	d1	L	L3	L2	L1								
IDSP130520T205	13	20	27	133	65	83	50	2	SPGG0502 SPMG0502	ITS2003	ITK06	<input type="radio"/>			
IDSP140520T205	14			138	70	88		2				<input type="radio"/>			
IDSP150520T205	15			144	75	94		2				<input type="radio"/>			
IDSP160525T206	16	25	33	156	80	100	56	2	SPGG0602 SPMG0602	ITS2205	ITK06	<input type="radio"/>			
IDSP170525T206	17			161	85	105		2				<input type="radio"/>			
IDSP180525T206	18			166	90	110		2				<input type="radio"/>			
IDSP190525T206	19			171	95	115		2				<input type="radio"/>			
IDSP200525T206	20			176	100	120		2				<input type="radio"/>			
IDSP210525T206	21			181	105	125		2				<input type="radio"/>			
IDSP220525T207	22			186	110	130		2				<input type="radio"/>			
IDSP230532T207	23			200	115	140		2				<input type="radio"/>			
IDSP240532T207	24	205	120	145	2	SPGG07T3 SPMG07T3	ITS2511	ITK08	<input type="radio"/>						
IDSP250532T207	25	210	125	150	2				<input type="radio"/>						
IDSP260532T207	26	215	130	155	2				<input type="radio"/>						
IDSP270532T207	27	223	135	163	2	<input type="radio"/>									
IDSP280532T209	28	32	43	228	140	168	60	2	SPGG0904 SPMG0904	ITS3504	ITK15	<input type="radio"/>			
IDSP290532T209	29			233	145	173		2				<input type="radio"/>			
IDSP300532T209	30			238	150	178		2				<input type="radio"/>			
IDSP310532T209	31			243	155	183		2				<input type="radio"/>			
IDSP320532T209	32			248	160	188		2				<input type="radio"/>			
IDSP330532T209	33			253	165	193		2				<input type="radio"/>			
IDSP340532T211	34			258	170	198		2				SPGG1104 SPMG1104	ITS4006	ITK15	<input type="radio"/>
IDSP350532T211	35			263	175	203		2							<input type="radio"/>
IDSP360532T211	36			268	180	208		2							<input type="radio"/>

● stock ○ by inquiry

Holemaking

**DSP - Indexable Drill Inserts** 捨棄式鑽頭刀片

**Insert Specifications** 刀片規格

Insert	Dimensions (mm)				Chipbreaker
	A	S	r	d1	
SP□G050204	5.00	2.38	0.4	2.30	SG, MG
SP□G060204	6.00	2.38	0.4	2.65	SG, MG
SP□G07T308	7.94	3.97	0.8	2.85	SG, MG
SP□G090408	9.80	4.3	0.8	4.05	SG, MG
SP□G110408	11.50	4.8	0.8	4.45	SG, MG

**Insert Geometry** 刀片幾何

Shape 形狀	Chipbreaker 斷屑槽	Application 應用
	<b>SG</b>	Sharp geometry design for semi-finishing cutting in stainless steel and non-ferrous materials. 鋒利的刀口設計，適用於不鏽鋼及非鐵金屬的半精加工應用
	<b>MG</b>	Low cutting force for medium cutting in steel, stainless steel and cast iron. 低切削阻力的刀口設計，適用於鋼件、不鏽鋼和鑄鐵的中加工應用

**Recommended Cutting Conditions** 建議切削數據

DSP Series (2×D, 3×D)

Work Material	Hardness	Vc (m/min)	Feed Rate (mm/rev)				
			SPMG05 Ø13-Ø15	SPMG06 Ø16-Ø21	SPMG07 Ø22-Ø27	SPMG09 Ø28-Ø33	SPMG11 Ø34-Ø41
<b>P</b>	Mild Steel (<180HB)	120~250	0.04~0.08	0.05~0.10	0.06~0.13	0.07~0.15	0.08~0.18
	Carbon Steel (180~280HB)	100~150	0.04~0.08	0.05~0.09	0.06~0.12	0.07~0.13	0.08~0.15
	Alloy Steel (280~350HB)	80~140	0.04~0.07	0.05~0.08	0.05~0.09	0.06~0.12	0.07~0.14
<b>M</b>	Stainless Steel (<200HB)	80~180	0.04~0.08	0.05~0.09	0.05~0.10	0.06~0.12	0.07~0.14
<b>K</b>	Cast Iron (<350Mpa)	110~190	0.05~0.09	0.07~0.12	0.08~0.15	0.09~0.17	0.12~0.20
	Ductile Cast Iron (<450Mpa)	100~160	0.05~0.08	0.06~0.11	0.07~0.13	0.08~0.15	0.10~0.18
<b>N</b>	Aluminum <12% Si	300~400	0.05~0.11	0.07~0.13	0.08~0.15	0.09~0.20	0.12~0.25
	Aluminum >12% Si	200~330	0.04~0.08	0.05~0.10	0.06~0.13	0.07~0.15	0.08~0.18
<b>S</b>	Super Alloy	30~60	0.02~0.04	0.03~0.05	0.03~0.05	0.04~0.06	0.05~0.08
<b>H</b>	Hardened Material 40~60HRC	30~60	0.02~0.04	0.03~0.05	0.03~0.05	0.04~0.06	0.05~0.08

Apply for 4×D reduce 10%, 5×D reduce 15%.

DSP - Indexable Drill Inserts 捨棄式鑽頭刀片

Insert Designation 刀片型號

Insert	Order No.	Series-Size-Chipbreaker-Grade	Working Material					
			P	M	K	N	S	H
	ISPGG050204SG33TX	SPGG-050204-SG-CX33TX	○	●	○	●	○	
	ISPGG060204SG33TX	SPGG-060204-SG-CX33TX	○	●	○	●	○	
	ISPGG07T304SG33TX	SPGG-070304-SG-CX33TX	○	●	○	●	○	
	ISPGG090408SG33TX	SPGG-090408-SG-CX33TX	○	●	○	●	○	
	ISPGG110408SG33TX	SPGG-110408-SG-CX33TX	○	●	○	●	○	
	ISPMG050204MG32HS	SPMG-050204-MG-CX32HS	●	○	●			
	ISPMG050204MG33TX	SPMG-050204-MG-CX33TX	●	○	●		○	●
	ISPMG050204MG43TX	SPMG-050204-MG-CX43TX	●	●	○		●	
	ISPMG060204MG32HS	SPMG-060204-MG-CX32HS	●	○	●			
	ISPMG060204MG33TX	SPMG-060204-MG-CX33TX	●	○	●		○	●
	ISPMG060204MG43TX	SPMG-060204-MG-CX43TX	●	●	○		●	
	ISPMG07T308MG32HS	SPMG-07T308-MG-CX32HS	●	○	●			
	ISPMG07T308MG33TX	SPMG-07T308-MG-CX33TX	●	○	●		○	●
	ISPMG07T308MG43TX	SPMG-07T308-MG-CX43TX	●	●	○		●	
	ISPMG090408MG32HS	SPMG-090408-MG-CX32HS	●	○	●			
	ISPMG090408MG33TX	SPMG-090408-MG-CX33TX	●	○	●		○	●
	ISPMG090408MG43TX	SPMG-090408-MG-CX43TX	●	●	○		●	
	ISPMG110408MG32HS	SPMG-110408-MG-CX32HS	●	○	●			
	ISPMG110408MG33TX	SPMG-110408-MG-CX33TX	●	○	●		○	●
	ISPMG110408MG43TX	SPMG-110408-MG-CX43TX	●	●	○		●	

Holemaking

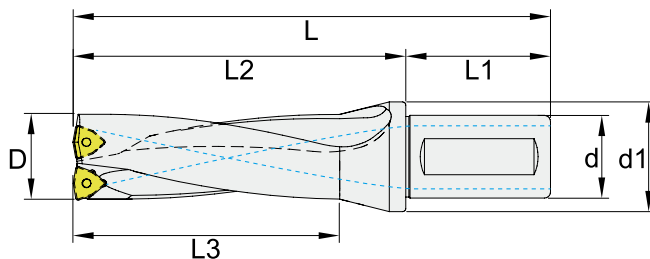
**DWC - Indexable Drills · 2D** 捨棄式鑽頭 · 2 倍深

**Specification**

- 2×D Cutting depth
- Internal Coolant
- Indexable Insert with 3 sides cutting edge
- High durable SKD holder body
- Use WCMT series inserts

**規格**

- 2 倍深
- 內冷卻孔
- 刀片含有 3 個切削角
- SKD 高耐久性刀體
- 使用 WCMT 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock
	D	d	d1	L	L3	L2	L1					
IDWC140225T203	14	25	38	114	28	58	56	2	WCMT0302	ITS2502	ITK08	●
IDWC145225T203	14.5			2	●							
IDWC150225T203	15			2	●							
IDWC155225T203	15.5			2	○							
IDWC160225T203	16			2	●							
IDWC165225T203	16.5			2	○							
IDWC170225T203	17			2	●							
IDWC175225T203	17.5			2	○							
IDWC180225T203	18			2	●							
IDWC185225T203	18.5			2	○							
IDWC190225T203	19			2	●							
IDWC195225T203	19.5			2	○							
IDWC200225T203	20			2	●							
IDWC205225T203	20.5	2	○									
IDWC210225T204	21	32	43	126	40	70	60	2	WCMT0402	ITS2507	ITK08	●
IDWC215225T204	21.5			2	○							
IDWC220232T204	22			2	●							
IDWC225232T204	22.5			2	○							
IDWC230232T204	23			2	●							
IDWC235232T204	23.5			2	○							
IDWC240232T204	24			2	●							
IDWC245232T204	24.5			2	○							
IDWC250232T204	25			2	●							
IDWC255232T204	25.5			2	○							
IDWC260232T205	26			2	●							
IDWC270232T205	27			2	○							
IDWC280232T205	28			2	●							
IDWC290232T205	29	2	○									
IDWC300232T205	30	2	●									

● stock ○ by inquiry

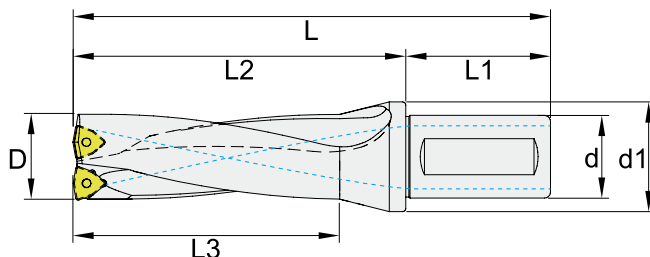
**DWC - Indexable Drills · 2D** 捨棄式鑽頭 · 2 倍深

**Specification**

- 2×D Cutting depth
- Internal Coolant
- Indexable Insert with 3 sides cutting edge
- High durable SKD holder body
- Use WCMT series inserts

**規格**

- 2 倍深
- 內冷卻孔
- 刀片含有 3 個切削角
- SKD 高耐久性刀體
- 使用 WCMT 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock
	D	d	d1	L	L3	L2	L1					
IDWC310232T206	31	32	43	154	62	94	60	2	WCMT06T3	ITS3504		●
IDWC320232T206	32			156	64	96		2				
IDWC330232T206	33			159	66	99		2				
IDWC340232T206	34			160	68	100		2				
IDWC350232T206	35			162	70	102		2				
IDWC360232T206	36			164	72	104		2				
IDWC370232T206	37			166	74	106		2				
IDWC380232T206	38			168	76	106		2				
IDWC390232T206	39			170	78	110		2				
IDWC400240T206	40			40	54	185		80				115
IDWC410240T206	41	187	82			117	2					
IDWC420240T208	42	189	84			119	2					
IDWC430240T208	43	191	86			121	2					
IDWC440240T208	44	194	88			124	2					
IDWC450240T208	45	195	90			125	2					
IDWC460240T208	46	197	92			127	2					
IDWC470240T208	47	199	94			129	2					
IDWC480240T208	48	201	96			131	2					
IDWC490240T208	49	202	98			132	2					
IDWC500240T208	50	204	100			134	2					
IDWC510240T208	51	206	102			136	2					
IDWC520240T208	52	208	104			138	2					
IDWC530240T208	53	210	106			140	2					
IDWC540240T208	54	212	108			142	2					
IDWC550240T208	55	215	110			145	2					
IDWC560240T208	56	217	112			147	2					
IDWC570240T208	57	219	114			149	2					
IDWC580240T208	58	221	116			151	2					
IDWC590240T208	59	223	118			153	2					
IDWC600240T208	60	225	120	155	2	2	○					

● stock ○ by inquiry

Holemaking



DWC - Indexable Drills · 3D

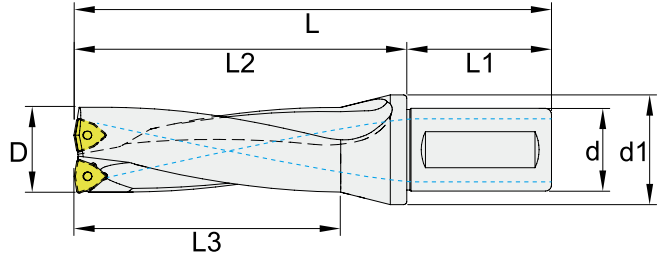
捨棄式鑽頭 · 3 倍深

Specification

- 3×D Cutting depth
- High durable SKD holder body
- Internal Coolant
- Use WCMT series inserts
- Indexable Insert with 3 sides cutting edge

規格

- 3 倍深
- 內冷卻孔
- 刀片含有 3 個切削角
- SKD 高耐久性刀體
- 使用 WCMT 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock						
	D	d	d1	L	L3	L2	L1											
IDWC140325T203	14	25	38	128	42	72	56	2	WCMT0302	ITS2502	ITK08	●						
IDWC145325T203	14.5											○						
IDWC150325T203	15											●						
IDWC155325T203	15.5											○						
IDWC160325T203	16											●						
IDWC165325T203	16.5											○						
IDWC170325T203	17											●						
IDWC175325T203	17.5			○														
IDWC180325T203	18			●														
IDWC185325T203	18.5			○														
IDWC190325T203	19			●														
IDWC195325T203	19.5			○														
IDWC200325T203	20			●														
IDWC205325T203	20.5			○														
IDWC210325T204	21	32	43	149	63	93	60	2	WCMT0402	ITS2507	ITK08	●						
IDWC215325T204	21.5											○						
IDWC220332T204	22											●						
IDWC225332T204	22.5											○						
IDWC230332T204	23											●						
IDWC235332T204	23.5											○						
IDWC240332T204	24											●						
IDWC245332T204	24.5			○														
IDWC250332T204	25			●														
IDWC255332T204	25.5			○														
IDWC260332T205	26			170	78	110	81					107	60	2	WCMT0503	ITS3007	ITK10	●
IDWC270332T205	27																	○
IDWC280332T205	28																	●
IDWC290332T205	29																	○
IDWC300332T205	30	●																
IDWC305332T206	30.5	○																
IDWC310332T206	31	●																
IDWC310332T206	31	182	93	125	93	125	60	2	WCMT06T3	ITS3504	ITK15	○						
IDWC310332T206	31											●						

● stock ○ by inquiry

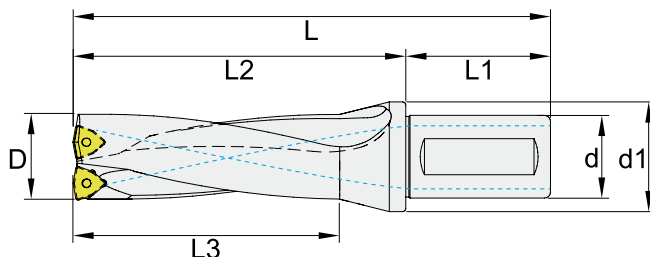
**DWC - Indexable Drills · 3D** 捨棄式鑽頭 · 3 倍深

**Specification**

- 3×D Cutting depth
- Internal Coolant
- Indexable Insert with 3 sides cutting edge
- High durable SKD holder body
- Use WCMT series inserts

**規格**

- 3 倍深
- 內冷卻孔
- 刀片含有 3 個切削角
- SKD 高耐久性刀體
- 使用 WCMT 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock
	D	d	d1	L	L3	L2	L1					
IDWC315332T206	31.5	32	43	185	93	125	60	2	WCMT06T3	ITS3504		○
IDWC320332T206	32			188	96	128		2				●
IDWC325332T206	32.5			188	96	128		2				○
IDWC330332T206	33			191	99	131		2				●
IDWC340332T206	34			194	102	134		2				●
IDWC350332T206	35			197	105	137		2				●
IDWC360332T206	36			200	108	140		2				●
IDWC370332T206	37			203	111	143		2				●
IDWC380332T206	38			206	114	146		2				●
IDWC390332T206	39			209	117	149		2				●
IDWC400340T206	40	40	54	225	120	155	70	2	WCMT0804	ITS4004	ITK15	●
IDWC410340T206	41			228	123	158		2				○
IDWC420340T208	42			231	126	161		2				○
IDWC430340T208	43			234	129	164		2				○
IDWC440340T208	44			238	132	168		2				○
IDWC450340T208	45			240	135	170		2				○
IDWC460340T208	46			243	138	173		2				○
IDWC470340T208	47			246	141	176		2				○
IDWC480340T208	48			249	144	179		2				○
IDWC490340T208	49			253	147	182		2				○
IDWC500340T208	50	254	150	184	2	○						
IDWC510340T208	51	257	153	187	2	○						
IDWC520340T208	52	260	156	190	2	○						
IDWC530340T208	53	263	159	193	2	○						
IDWC540340T208	54	266	162	196	2	○						
IDWC550340T208	55	270	165	200	2	○						
IDWC560340T208	56	58	58	273	168	203	2	○				
IDWC570340T208	57			276	171	205	2	○				
IDWC580340T208	58	59	59	279	174	209	2	○				
IDWC590340T208	59			282	177	212	2	○				
IDWC600340T208	60			63	285	180	215	2	○			

● stock ○ by inquiry

Holemaking

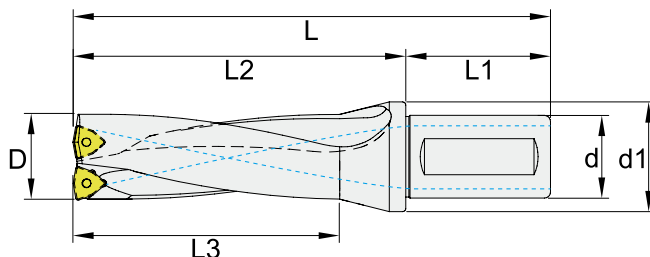
**DWC - Indexable Drills · 4D** 捨棄式鑽頭 · 4 倍深

**Specification**

- 4×D Cutting depth
- Internal Coolant
- Indexable Insert with 3 sides cutting edge
- High durable SKD holder body
- Use WCMT series inserts

**規格**

- 4 倍深
- 內冷卻孔
- 刀片含有 3 個切削角
- SKD 高耐久性刀體
- 使用 WCMT 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock			
	D	d	d1	L	L3	L2	L1								
IDWC140425T203	14	25	38	142	56	86	56	2	WCMT0302	ITS2502	ITK08	●			
IDWC150425T203	15			146	60	90		2							
IDWC160425T203	16			150	64	94		2							
IDWC170425T203	17			154	68	98		2							
IDWC180425T203	18			158	72	102		2							
IDWC190425T203	19			162	76	106		2							
IDWC200425T203	20			166	80	110		2							
IDWC210425T204	21			170	84	114		2							
IDWC220432T204	22			32	43	180		88				120	60	2	WCMT0402
IDWC230432T204	23	184	92			124	2								
IDWC240432T204	24	188	96			128	2								
IDWC250432T204	25	192	100			132	2								
IDWC260432T205	26	196	104			136	2	WCMT0503	ITS3007	ITK10	●				
IDWC270432T205	27	200	108			140	2								
IDWC280432T205	28	204	112			144	2								
IDWC290432T205	29	208	116			148	2								
IDWC300432T205	30	212	120			152	2								
IDWC310432T206	31	216	124			156	2				WCMT06T3	ITS3504		ITK15	●
IDWC320432T206	32	220	128			160	2								
IDWC330432T206	33	224	132			164	2								
IDWC340432T206	34	228	136			168	2								
IDWC350432T206	35	232	140			172	2								
IDWC360432T206	36	236	144			176	2								
IDWC370432T206	37	240	148			180	2	70	2	●					
IDWC380432T206	38	244	152			184	2								
IDWC390432T206	39	248	156			188	2								
IDWC400440T206	40	40	54	265	160	195	2								
IDWC410440T206	41			269	164	199	2			○					

● stock ○ by inquiry

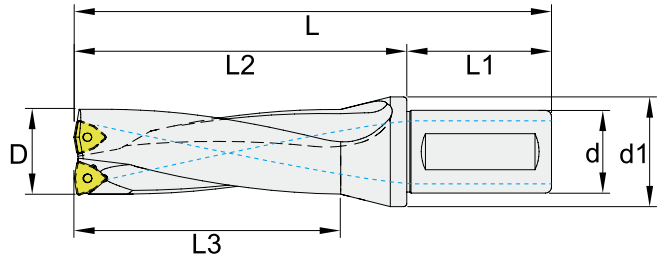
**DWC - Indexable Drills · 4D** 捨棄式鑽頭 · 4 倍深

**Specification**

- 4×D Cutting depth
- Internal Coolant
- Indexable Insert with 3 sides cutting edge
- High durable SKD holder body
- Use WCMT series inserts

**規格**

- 4 倍深
- 內冷卻孔
- 刀片含有 3 個切削角
- SKD 高耐久性刀體
- 使用 WCMT 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock
	D	d	d1	L	L3	L2	L1					
IDWC420440T208	42	40	54	273	168	203	70	2	WCMT0804	ITS4004	ITK15	<input type="radio"/>
IDWC430440T208	43			277	172	207		2				<input type="radio"/>
IDWC440440T208	44			282	176	212		2				<input type="radio"/>
IDWC450440T208	45			285	180	215		2				<input type="radio"/>
IDWC460440T208	46			289	184	219		2				<input type="radio"/>
IDWC470440T208	47			293	188	223		2				<input type="radio"/>
IDWC480440T208	48			297	192	227		2				<input type="radio"/>
IDWC490440T208	49			301	196	231		2				<input type="radio"/>
IDWC500440T208	50			305	200	235		2				<input type="radio"/>
IDWC510440T208	51			309	204	239		2				<input type="radio"/>
IDWC520440T208	52			313	208	243		2				<input type="radio"/>
IDWC530440T208	53			317	212	247		2				<input type="radio"/>
IDWC540440T208	54			320	216	250		2				<input type="radio"/>
IDWC550440T208	55			325	220	255		2				<input type="radio"/>
IDWC560440T208	56			329	224	259		2				<input type="radio"/>
IDWC570440T208	57			333	228	263		2				<input type="radio"/>
IDWC580440T208	58			337	232	267		2				<input type="radio"/>
IDWC590440T208	59			341	236	271		2				<input type="radio"/>
IDWC600440T208	60	345	240	275	2	<input type="radio"/>						

● stock    ○ by inquiry

Holemaking

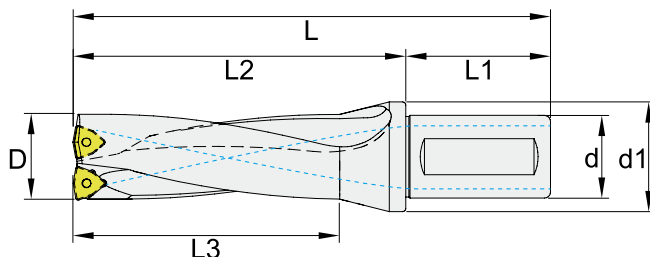
**DWC - Indexable Drills · 5D** 捨棄式鑽頭 · 5 倍深

**Specification**

- 5×D Cutting depth
- Internal Coolant
- Indexable Insert with 3 sides cutting edge
- High durable SKD holder body
- Use WCMT series inserts

**規格**

- 5 倍深
- 內冷卻孔
- 刀片含有 3 個切削角
- SKD 高耐久性刀體
- 使用 WCMT 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock
	D	d	d1	L	L3	L2	L1					
IDWC160525T203	16	25	38	166	80	110	56	2	WCMT0302	ITS2507	ITK08	<input type="radio"/>
IDWC170525T203	17	25	38	171	85	115	56	2				<input type="radio"/>
IDWC180525T203	18	25	38	176	90	120	56	2				<input type="radio"/>
IDWC190525T203	19	25	38	181	95	125	56	2				<input type="radio"/>
IDWC200525T203	20	25	38	186	100	130	56	2				<input type="radio"/>
IDWC210525T203	21	25	38	191	105	135	56	2				<input type="radio"/>
IDWC220525T203	22	25	38	196	110	140	56	2				<input type="radio"/>
IDWC230532T204	23	32	43	207	115	147	60	2	WCMT0402	ITS2507	ITK08	<input type="radio"/>
IDWC240532T204	24	32	43	212	120	152	60	2				<input type="radio"/>
IDWC250532T204	25	32	43	217	125	157	60	2				<input type="radio"/>
IDWC260532T205	26	32	43	222	130	162	60	2	WCMT0503	ITS3007	ITK10	<input type="radio"/>
IDWC270532T205	27	32	43	227	135	167	60	2				<input type="radio"/>
IDWC280532T205	28	32	43	232	140	172	60	2				<input type="radio"/>
IDWC290532T205	29	32	43	237	145	177	60	2				<input type="radio"/>
IDWC300532T205	30	32	43	242	150	182	60	2				<input type="radio"/>
IDWC310532T206	31	32	43	247	155	187	60	2				WCMT06T3
IDWC320532T206	32	32	43	252	160	192	60	2	<input type="radio"/>			
IDWC330532T206	33	32	43	257	165	197	60	2	<input type="radio"/>			
IDWC340532T206	34	32	43	262	170	202	60	2	<input type="radio"/>			
IDWC350532T206	35	32	43	267	175	207	60	2	<input type="radio"/>			
IDWC360532T206	36	32	43	272	180	212	60	2	<input type="radio"/>			
IDWC440540T208	44	40	54	326	220	256	70	2	WCMT0804	ITS4004	ITK15	

● stock   ○ by inquiry

**Insert Specifications** 刀片規格

Insert	Dimensions (mm)					Chipbreaker
	A	B	S	r	d1	
WCMT030208	3.8	5.56	2.38	0.8	2.8	SG, MG
WCMT040208	4.3	6.35	2.38	0.8	3.0	SG, MG
WCMT050308	5.4	7.94	3.18	0.8	3.4	SG, MG
WCMT06T308	6.5	9.53	3.97	0.8	4.0	SG, MG
WCMT080412	8.7	12.7	4.76	1.2	4.3	SG, MG

**Insert Geometry** 刀片幾何

Shape 形狀	Chipbreaker 斷屑槽	Application 應用
	<b>SG</b>	Sharp geometric design, easy to chip breaking, for steel, stainless steel and cast iron. 鋒利的刀口設計，易於斷屑，適用於鋼件、不鏽鋼和鑄鐵加工
	<b>MG</b>	Low cutting force for medium cutting in steel, stainless steel and cast iron. 低切削阻力的刀口設計，適用於鋼件、不鏽鋼和鑄鐵的中加工應用

**Recommended Cutting Conditions** 建議切削數據

DWC Series (2×D, 3×D)

Work Material	Hardness	Vc (m/min)	Feed Rate (mm/rev)				
			WCMT03 Ø14-Ø20.5	WCMT04 Ø22-Ø25.5	WCMT05 Ø26-Ø30	WCMT06 Ø31-Ø39	WCMT08 Ø40-Ø60
<b>P</b>	Mild Steel (<180HB)	110~220	0.06~0.09	0.06~0.11	0.07~0.13	0.08~0.18	0.10~0.25
	Carbon Steel (180~280HB)	90~140	0.06~0.09	0.06~0.11	0.07~0.13	0.08~0.18	0.10~0.25
	Alloy Steel (280~350HB)	70~120	0.05~0.07	0.05~0.09	0.06~0.11	0.07~0.14	0.08~0.17
<b>M</b>	Stainless Steel (<200HB)	60~140	0.05~0.09	0.05~0.10	0.06~0.13	0.07~0.15	0.08~0.18
<b>K</b>	Cast Iron (<350Mpa)	100~160	0.07~0.11	0.07~0.13	0.08~0.15	0.09~0.18	0.11~0.22
	Ductile Cast Iron (<450Mpa)	90~120	0.06~0.10	0.06~0.12	0.07~0.14	0.08~0.16	0.10~0.20
<b>N</b>	Aluminum <12% Si	200~360	0.06~0.11	0.08~0.13	0.09~0.15	0.11~0.18	0.12~0.25
	Aluminum >12% Si	150~250	0.06~0.11	0.08~0.13	0.09~0.15	0.11~0.18	0.12~0.25
<b>S</b>	Super Alloy	25~50	0.03~0.05	0.03~0.06	0.04~0.08	0.05~0.10	0.06~0.12
<b>H</b>	Hardened Material	-	-	-	-	-	-

Apply for 4×D reduce 10%, 5×D reduce 15%.

**DWC - Indexable Drill Inserts** 捨棄式鑽頭刀片

**Insert Designation** 刀片型號

Insert	Order No.	Series-Size-Chipbreaker-Grade	Working Material					
			P	M	K	N	S	H
	IWCMT030208SG32HS	WCMT-030208-SG-CX32HS	●	●	●		○	○
	IWCMT030208SG33TX	WCMT-030208-SG-CX33TX	●	●	●		●	●
	IWCMT030208SG43TX	WCMT-030208-SG-CX43TX	●	●	●		●	
	IWCMT030208MG32HS	WCMT-030208-MG-CX32HS	●	●	●		○	○
	IWCMT030208MG33TX	WCMT-030208-MG-CX33TX	●	●	●		●	●
	IWCMT030208MG43TX	WCMT-030208-MG-CX43TX	●	●	●		●	
	IWCMT040208SG32HS	WCMT-040208-SG-CX32HS	●	●	●		○	○
	IWCMT040208SG33TX	WCMT-040208-SG-CX33TX	●	●	●		●	●
	IWCMT040208SG43TX	WCMT-040208-SG-CX43TX	●	●	●		●	
	IWCMT040208MG32HS	WCMT-040208-MG-CX32HS	●	●	●		○	○
	IWCMT040208MG33TX	WCMT-040208-MG-CX33TX	●	●	●		●	●
	IWCMT040208MG43TX	WCMT-040208-MG-CX43TX	●	●	●		●	
	IWCMT050308SG32HS	WCMT-050308-SG-CX32HS	●	●	●		○	○
	IWCMT050308SG33TX	WCMT-050308-SG-CX33TX	●	●	●		●	●
	IWCMT050308SG43TX	WCMT-050308-SG-CX43TX	●	●	●		●	
	IWCMT050308MG32HS	WCMT-050308-MG-CX32HS	●	●	●		○	○
	IWCMT050308MG33TX	WCMT-050308-MG-CX33TX	●	●	●		●	●
	IWCMT050308MG43TX	WCMT-050308-MG-CX43TX	●	●	●		●	
	IWCMT06T308SG32HS	WCMT-06T308-SG-CX32HS	●	●	●		○	○
	IWCMT06T308SG33TX	WCMT-06T308-SG-CX33TX	●	●	●		●	●
	IWCMT06T308SG43TX	WCMT-06T308-SG-CX43TX	●	●	●		●	
	IWCMT06T308MG32HS	WCMT-06T308-MG-CX32HS	●	●	●		○	○
	IWCMT06T308MG33TX	WCMT-06T308-MG-CX33TX	●	●	●		●	●
	IWCMT06T308MG43TX	WCMT-06T308-MG-CX43TX	●	●	●		●	
	IWCMT080412SG32HS	WCMT-080412-SG-CX32HS	●	●	●		○	○
	IWCMT080412SG33TX	WCMT-080412-SG-CX33TX	●	●	●		●	●
	IWCMT080412SG43TX	WCMT-080412-SG-CX43TX	●	●	●		●	
	IWCMT080412MG32HS	WCMT-080412-MG-CX32HS	●	●	●		○	○
	IWCMT080412MG33TX	WCMT-080412-MG-CX33TX	●	●	●		●	●
	IWCMT080412MG43TX	WCMT-080412-MG-CX43TX	●	●	●		●	

DWD - Indexable Drills · 3D

捨棄式鑽頭 · 3 倍深

Specification

- 3×D Cutting depth
- Internal Coolant
- Indexable Insert with 4 sides cutting edge
- High durable SKD holder body
- Use WDXT series inserts

規格

- 3 倍深
- 內冷卻孔
- 刀片含有 4 個切削角
- SKD 高耐久性刀體
- 使用 WDXT 刀片



Fig. 1

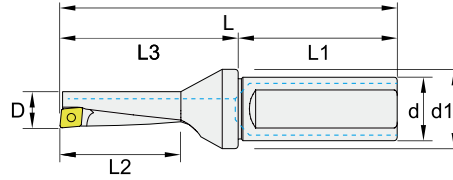
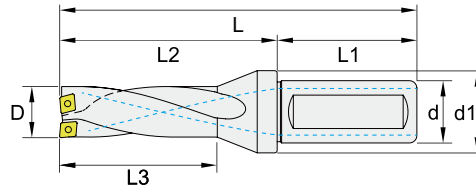


Fig. 2



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Fig	Insert	Screw	Wrench	Stock								
	D	d	d1	L	L3	L2	L1														
IDWD100320T105	10	20	27	101	51	30	50	1	1	WDXT0525	ITS2003	ITK06	●								
IDWD120320T106	12			107	57	36				●											
IDWD130320T204	13	20	27	107	39	57	50	2	2	WDXT0420	ITS1801	ITK06	●								
IDWD135320T204	13.5			110	42	60							○								
IDWD140320T204	14			114	45	64							○								
IDWD145320T204	14.5			117	48	67							○								
IDWD150320T204	15			120	51	70							○								
IDWD155320T205	15.5			123	54	73							○								
IDWD160320T205	16			126	57	76				○											
IDWD165320T205	16.5			129	60	79				○											
IDWD170320T205	17			25	33	143				63	87	56	2	2	WDXT0630	ITS2203	ITK07	○			
IDWD175320T205	17.5					146				66	90							○			
IDWD180320T205	18					149				69	93							○			
IDWD185320T206	18.5					152				72	96							○			
IDWD190320T206	19					155				75	99							○			
IDWD195320T206	19.5					32				43	149							69	93	56	2
IDWD200320T206	20	152	72	96	○																
IDWD205325T206	20.5	155	75	99	○																
IDWD210325T206	21	32	43	152	72		96	56	2		2	WDXT0735	ITS2511	ITK08	○						
IDWD215325T206	21.5			155	75		99								○						
IDWD220325T206	22			152	72		96								○						
IDWD225332T206	22.5			155	75	99	○														
IDWD230332T207	23			152	72	96	○														
IDWD235332T207	23.5			155	75	99	○														
IDWD240332T207	24	32	43	152	72	96	56	2	2	WDXT0735	ITS2511	ITK08	○								
IDWD245332T207	24.5			155	75	99							○								
IDWD250332T207	25			152	72	96							○								

● stock ○ by inquiry

Holemaking



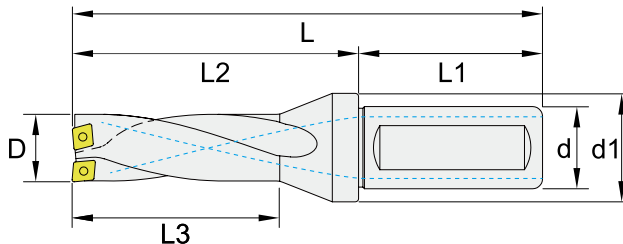
**DWD - Indexable Drills · 4D** 捨棄式鑽頭 · 4 倍深

**Specification**

- 4×D Cutting depth
- Internal Coolant
- Indexable Insert with 4 sides cutting edge
- High durable SKD holder body
- Use WDXT series inserts

**規格**

- 4 倍深
- 內冷卻孔
- 刀片含有 4 個切削角
- SKD 高耐久性刀體
- 使用 WDXT 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock			
	D	d	d1	L	L3	L2	L1								
IDWD130420T204	13	20	27	120	52	70	50	2	WDXT0420	ITS1801	ITK06	●			
IDWD135420T204	13.5			124	56	74						○			
IDWD140420T204	14			129	60	79						●			
IDWD145420T204	14.5			133	64	83						○			
IDWD150420T204	15			137	68	87						●			
IDWD155420T205	15.5			141	72	91						○			
IDWD160420T205	16			145	76	95			●						
IDWD165420T205	16.5			149	80	99			○						
IDWD170420T205	17			164	84	108			●						
IDWD175420T205	17.5			168	88	112			○						
IDWD180420T205	18			172	92	116			●						
IDWD185420T206	18.5			176	96	120			○						
IDWD190420T206	19			180	100	124			●						
IDWD195420T206	19.5			25	33	172			92	116	56	2	WDXT0630	ITS2203	ITK07
IDWD200420T206	20	176	96				120	●							
IDWD205425T206	20.5	180	100				124	○							
IDWD210425T206	21	WDXT0735	ITS2511				ITK08	○							
IDWD215425T206	21.5							176							
IDWD220425T206	22							180					100	124	○
IDWD225425T206	22.5							172					92	116	●
IDWD230425T207	23							176					96	120	○
IDWD235425T207	23.5	180	100				124	●							
IDWD240425T207	24	25	33				172	92					116	56	2
IDWD245425T207	24.5			176	96	120			●						
IDWD250425T207	25			180	100	124			○						
IDWD250425T207	25			172	92	116			●						

● stock ○ by inquiry

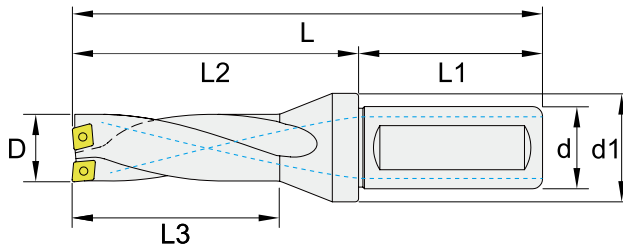
**DWD - Indexable Drills · 5D** 捨棄式鑽頭 · 5 倍深

**Specification**

- 5×D Cutting depth
- Internal Coolant
- Indexable Insert with 4 sides cutting edge
- High durable SKD holder body
- Use WDXT series inserts

**規 格**

- 5 倍深
- 內冷卻孔
- 刀片含有 4 個切削角
- SKD 高耐久性刀體
- 使用 WDXT 刀片



Insert Brand : Winstar

Order No.	Dimensions, mm							T	Insert	Screw	Wrench	Stock
	D	d	d1	L	L3	L2	L1					
IDWD130520T204	13	20	25	133	65	83	50	2	WDXT0420	ITS1801	ITK06	●
IDWD140520T204	14			138	70	88						●
IDWD150520T204	15			144	75	94						●
IDWD160520T205	16			149	80	100						●
IDWD170520T205	17			154	85	105						●
IDWD180520T205	18			159	90	110						●
IDWD190520T206	19			164	95	115						●
IDWD200520T206	20			169	100	120						●
IDWD210525T206	21	25	33	185	105	125	56		WDXT0630	ITS2203	ITK07	●
IDWD220525T206	22			190	110	130						●
IDWD230525T207	23			195	115	140						●
IDWD240525T207	24			200	120	145						●
IDWD250525T207	25			205	125	150						●

● stock ○ by inquiry

Holemaking

**DWD - Indexable Drill Inserts** 捨棄式鑽頭刀片

**Insert Specifications** 刀片規格

Insert	Dimensions (mm)				Chipbreaker
	A	r1	r2	S	
WDXT042004	4.2	0.4	0.4	2.0	MG
WDXT052504	5.0	0.4	0.4	2.5	MG
WDXT063006	6.0	0.6	0.6	3.0	MG
WDXT073506	7.5	0.6	0.6	3.5	MG

**Insert Geometry** 刀片幾何

Shape 形狀	Chipbreaker 斷屑槽	Application 應用
	<b>MG</b>	Low cutting force for medium cutting in steel, stainless steel and cast iron. 低切削阻力的刀口設計，適用於鋼件、不鏽鋼和鑄鐵的中加工應用

**Recommended Cutting Conditions** 建議切削數據

DWD Series (3×D)

Work Material	Hardness	Vc (m/min)	Feed Rate (mm/rev)	
			Ø13-Ø18	Ø18.5-Ø25
<b>P</b>	Mild Steel (<180HB)	100~200	0.08~0.20	0.08~0.20
	Carbon Steel (180~280HB)	120~240	0.06~0.14	0.06~0.14
	Alloy Steel (280~350HB)	85~210	0.05~0.11	0.05~0.11
<b>M</b>	Stainless Steel (<200HB)	120~180	0.06~0.15	0.06~0.15
<b>K</b>	Cast Iron (<350Mpa)	120~200	0.09~0.27	0.10~0.30
	Ductile Cast Iron (<450Mpa)	90~150	0.09~0.27	0.10~0.30
<b>N</b>	Aluminum <12% Si	-	0.06~0.17	0.06~0.17
	Aluminum >12% Si	-	0.06~0.17	0.06~0.17
<b>S</b>	Super Alloy	-	0.06~0.15	0.06~0.15

Apply for 4×D reduce 10%, 5×D reduce 15%.

**DWD - Indexable Drill Inserts** 捨棄式鑽頭刀片

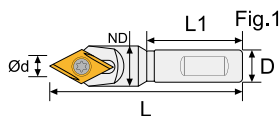
**Insert Designation** 刀片型號

Insert	Order No.	Series-Size-Chipbreaker-Grade	Working Material					
			P	M	K	N	S	H
	IWDXT042004MG33TX	WDXT-042004-MG-CX33TX	●	●	●		●	●
	IWDXT042004MG43TX	WDXT-042004-MG-CX43TX	●	●	●		●	
	IWDXT052504MG33TX	WDXT-052504-MG-CX33TX	●	●	●		●	●
	IWDXT052504MG43TX	WDXT-052504-MG-CX43TX	●	●	●		●	
	IWDXT063006MG33TX	WDXT-063006-MG-CX33TX	●	●	●		●	●
	IWDXT073506MG33TX	WDXT-073506-MG-CX33TX	●	●	●		●	●

Holemaking

**DTS60 - Indexable Spotting Drills** 60° 捨棄式定位鑽頭

**DTS60 - Spotting Drills** 定位鑽頭



DTS 60 - DCEX11T3

Insert Brand : Winstar

Order No.	D	ND	L	L1	Fig	Insert	Screw	Wrench	Stock
IDTS1006006011	10	12	60	30	1	DCEX11T3	ITS3520	ITK15	●
IDTS1210006011	12	12	100	-	2				●

● stock ○ by inquiry

**Recommended Cutting Conditions** 建議切削數據

DTS 60 Chamfering / Countersinking

Material	Vc (m/min)	fr (mm/rev)
Carbon steel	12 ~ 180	0.05 ~ 0.15
Alloy steel	12 ~ 180	0.05 ~ 0.15
Stainless steel	12 ~ 180	0.05 ~ 0.15
Cast iron	12 ~ 180	0.05 ~ 0.15
Aluminum	12 ~ 180	0.10 ~ 0.20
Hardened steel	12 ~ 180	0.03 ~ 0.10

DTS 60 Grooving / Engraving

Material	Vc (m/min)	fr (mm/rev)
Carbon steel	10 ~ 170	0.005 ~ 0.05
Alloy steel	10 ~ 170	0.005 ~ 0.03
Stainless steel	10 ~ 170	0.005 ~ 0.05
Cast iron	10 ~ 170	0.005 ~ 0.03
Aluminum	10 ~ 170	0.005 ~ 0.08
Hardened steel	10 ~ 170	0.005 ~ 0.02

DTS 60 Cutting Depth of Passes

No. of Passes	ap of one pass (mm)					
	Aluminum	Cast iron	Carbon steel	Alloy steel	Stainless steel	Hardened steel
1	1.0	0.8	0.8	0.6	0.5	0.2
2	0.8	0.7	0.6	0.5	0.4	0.2
3	0.2	0.3	0.3	0.3	0.3	0.15
4		0.2	0.2	0.3	0.3	0.15
5			0.1	0.2	0.2	0.1
6				0.1	0.2	0.1
7					0.1	0.1

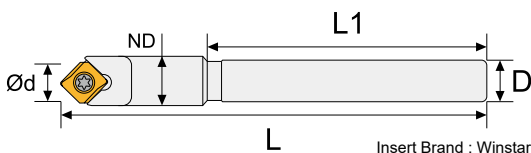
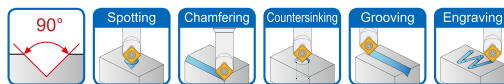
※ Max ap is 2mm

**Insert Designation** 刀片型號

Insert	Order No.	Series-Size-Chipbreaker-Grade	r	Engraving $\phi d$	P	M	K	N	S	H
	IDCEX11T301SG32HS	DCEX-11T301-SG-CX32HS	0.1	0.2 ~ 1	●	●	●	●	●	
	IDCEX11T302SG32HS	DCEX-11T302-SG-CX32HS	0.2	0.4 ~ 2	●	●	●	●	●	
	IDCEX11T304SG32HS	DCEX-11T304-SG-CX32HS	0.4	0.8 ~ 3	●	●	●	●	●	
	IDCEX11T30132HS	DCEX-11T301-CX32HS	0.1	0.8 ~ 3	●	●	●		●	●
	IDCEX11T30232HS	DCEX-11T302-CX32HS	0.2	0.8 ~ 3	●	●	●		●	●
	IDCEX11T30432HS	DCEX-11T304-CX32HS	0.4	0.8 ~ 3	●	●	●		●	●
	IDCEX11T30832HS	DCEX-11T308-CX32HS	0.8	0.8 ~ 3	●	●	●		●	●

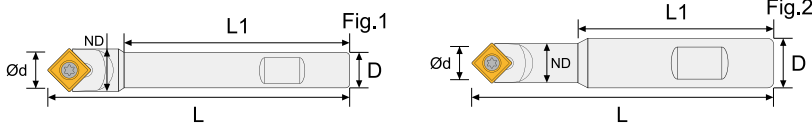
**DTS90 - Indexable Spotting Drills** 90° 捨棄式定位鑽頭

**DTS90 - Spotting Drills** 定位鑽頭



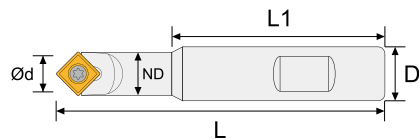
DTS90 - SDMX05T1 (for small lathe 適用於小型車床)

Order No.	D	L	ND	L1	Spotting Ød	Engraving Ød	Insert	Screw	Wrench	Stock
IDTS0604009005	6	40	7	20	1 ~ 5	0.8 ~ 1.5	SDMX05T1	ITS1801	ITK06	●
IDTS0606009005	6	60	7	40						●



DTS90 - SCGX09T3, SCMX09T3

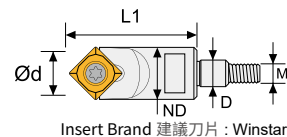
Order No.	D	L	ND	L1	Fig	Spotting Ød	Engraving Ød	Insert	Screw	Wrench	Stock
IDTS1010009009	10	100	12.2	71	1	2 ~ 11	0.8 ~ 2.5	SCGX09T3 SCMX09T3	ITS3520	ITK15	●
IDTS1210009009	12	100	12.2	71							●
IDTS1610009009	16	100	12.2	71	2						●
IDTS1613009009	16	130	12.2	101							●



DTS90 - SDMX11T3

Order No.	D	L	ND	L1	Spotting Ød	Engraving Ød	Insert	Screw	Wrench	Stock
IDTS1610009011	16	100	14.1	71	3 ~ 14	1.6 ~ 4.0	SDMX11T3	ITS3521	ITK15	●

**DTS90 - Modular Spotting Drill Heads** 定位鑽刀頭

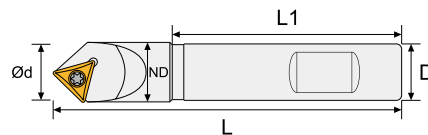
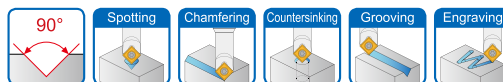


Order No.	L1	ND	D	M	Spotting Ød	Engraving Ød	Insert	Screw	Wrench	Stock
IDTSM603009009	30	12.4	6.5	M6	2 ~ 11	0.8 ~ 2.5	SCMX09T3	ITS3520	ITK15	○

● stock ○ by inquiry

**DTS90 - Indexable Spotting Drills** 90° 捨棄式定位鑽頭

**DTS90 - Spotting Drills** 定位鑽頭



DTS90 - TCMX16T3

Insert Brand : Winstar

Order No.	D	L	ND	L1	Spotting Ød	Engraving Ød	Insert	Screw	Wrench	Stock
IDTS2012009016	20	120	21.2	78	3 ~ 20	1.6 ~ 4.0	TCMX16T3	ITS3521	ITK15	●

● stock ○ by inquiry

**Recommended Cutting Conditions** 建議切削數據

DTS 90 Spotting

Material	Vc (m/min)		Fr (mm/rev)	
	Ød = 2 ~ 4.9 mm	Ød ≥ 5 mm	Ød = 2 ~ 4.9 mm	Ød ≥ 5 mm
Carbon steel	60 ~ 120	90 ~ 220	0.04 ~ 0.08	0.06 ~ 0.10
Alloy steel	50 ~ 100	75 ~ 180	0.03 ~ 0.06	0.05 ~ 0.08
Stainless steel	30 ~ 60	45 ~ 120	0.02 ~ 0.04	0.04 ~ 0.06
Cast iron	40 ~ 80	60 ~ 130	0.04 ~ 0.08	0.06 ~ 0.10
Hardened steel	20 ~ 40	30 ~ 60	0.02 ~ 0.04	0.04 ~ 0.08

DTS 90 Chamfering / Countersinking








Material	Vc (m/min)	Fr (mm/rev)
Carbon steel	60 ~ 270	0.15 ~ 0.24
Alloy steel	50 ~ 220	0.12 ~ 0.20
Stainless steel	35 ~ 120	0.10 ~ 0.20
Cast iron	60 ~ 220	0.15 ~ 0.25
Hardened steel	20 ~ 60	0.03 ~ 0.08

DTS 90 Grooving / Engraving

Material	Vc (m/min)	Fr (mm/rev)
Carbon steel	40 ~ 140	0.12 ~ 0.18
Alloy steel	35 ~ 120	0.10 ~ 0.14
Stainless steel	25 ~ 70	0.08 ~ 0.12
Cast iron	30 ~ 100	0.12 ~ 0.18
Hardened steel	20 ~ 50	0.02 ~ 0.04

**DTS90 - Indexable Spotting Drills** 90° 捨棄式定位鑽頭

**Insert Designation** 刀片型號

Insert	Order No.	Series-Size-Chipbreaker-Grade	r	Spotting Ød	Engraving Ød	P	M	K	N	S	H
	ISCYG09T304AG10	SCGX-09T304-AG-CX10	0.4	2 ~ 11	0.8 ~ 2.5				●		
	ISCGX09T304FG13TX	SCGX-09T304-FG-CX13TX	0.4	2 ~ 11	0.8 ~ 2.5	●	●	●	○	●	●
	ISCMX09T304SM32HS	SCMX-09T304-SM-CX32HS	0.4	2 ~ 11	0.8 ~ 2.5	●	●	●	○	●	○
	ISDMX05T104FG13TX	SDMX-05T104-FG-CX13TX	0.4	1 ~ 5	0.8 ~ 1.5	●	●	●	○	●	●
	ISDMX05T104FG33TX	SDMX-05T104-FG-CX33TX	0.4	1 ~ 5	0.8 ~ 1.5	●	●	●	○	●	●
	ISDMX11T308SG33TX	SDMX-11T308-SG-CX33TX	0.8	3 ~ 14	1.6 ~ 4.0	●	●	●		●	●
	ITCMX16T308SM32HS	TCMX-16T308-SM-CX32HS	0.8	3 ~ 20	1.6 ~ 4.0	●	●	●	○	●	●

Holemaking



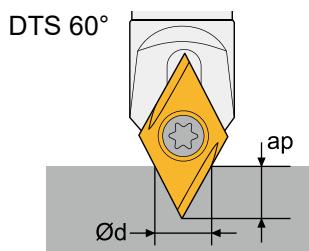
**DTS - Indexable Spotting Drills** 捨棄式定位鑽頭

**How to calculate Ød ,RPM and Feed** 如何計算 Ød ,RPM 和 Feed

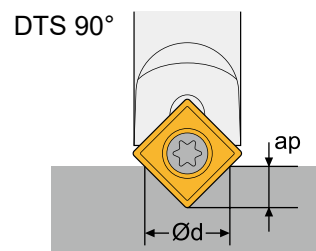
Formula :

$$RPM = \frac{V_c \times 1000}{\varnothing d \times \pi}$$

$$Feed = RPM \times fr$$



$$\varnothing d \approx (0.577 \times (ap + r) + 0.05) \times 2$$



$$\varnothing d \approx (0.4r + ap + 0.05) \times 2$$

EX :

Working Material : Cast iron

Insert : SCGX09T304

Application : 90° Spotting

ap : 2.5mm

$$\varnothing d = (0.4r + ap + 0.05) \times 2 = (0.4 \times 0.4 + 2.5 + 0.05) \times 2 = 5.42 \text{ mm}$$

Reference conditions table get  $V_c \approx 85 \text{ m/min}$  and  $fr \approx 0.075 \text{ mm/rev}$

$$RPM = (V_c \times 1000) / (\varnothing d \times \pi) = (85 \times 1000) / (5.42 \times \pi) \approx 5000$$

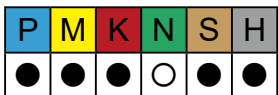
$$Feed = RPM \times fr = 5000 \times 0.075 = 375 \text{ mm/min}$$

**Working Demonstration** 加工實例

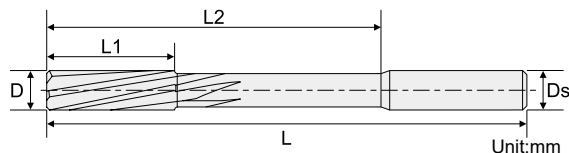


Cutting parameter	
Tools	DTS 90° with SCMX09T304-SP CX32HS
Material	Cast Iron
Coolant	Dry
Application	Spotting
Vc	85 m/min
S	4800 rpm
Feed	360 mm/min
ap	2.5 mm

**DRMN - Left spiral flute · External Coolant** 螺旋機械外冷鉸刀



- External coolant
- Left spiral flute
- Right hand cutting
- UNIX smooth coating
- D tolerance : H7
- Ds tolerance : h6
- For through hole
- Hole tolerance : H7



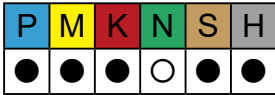
Order No.	D	L1	L2	L	Ds	F
DRMN0299090UX	2.99	15	35	60	4	4
DRMN0300090UX	3.00	15	35	60	4	4
DRMN0301090UX	3.01	15	35	60	4	4
DRMN0302090UX	3.02	15	35	60	4	4
DRMN0310090UX	3.10	15	35	60	4	4
DRMN0320090UX	3.20	15	35	60	4	4
DRMN0330090UX	3.30	15	35	60	4	4
DRMN0340090UX	3.40	15	35	60	4	4
DRMN0350090UX	3.50	18	35	60	4	4
DRMN0360090UX	3.60	18	35	60	4	4
DRMN0370090UX	3.70	18	35	60	4	4
DRMN0380090UX	3.80	18	35	60	4	4
DRMN0390090UX	3.90	18	35	60	4	4
DRMN0399090UX	3.99	19	50	75	4	4
DRMN0400090UX	4.00	19	50	75	4	4
DRMN0401090UX	4.01	19	50	75	4	4
DRMN0402090UX	4.02	19	50	75	4	4
DRMN0410090UX	4.10	19	50	75	6	4
DRMN0420090UX	4.20	19	50	75	6	4
DRMN0430090UX	4.30	19	50	75	6	4
DRMN0440090UX	4.40	19	50	75	6	4
DRMN0450090UX	4.50	21	50	75	6	4
DRMN0460090UX	4.60	21	50	75	6	4
DRMN0470090UX	4.70	21	50	75	6	4
DRMN0480090UX	4.80	21	50	75	6	4
DRMN0490090UX	4.90	21	50	75	6	4
DRMN0499090UX	4.99	23	50	75	6	6
DRMN0500090UX	5.00	23	50	75	6	6
DRMN0501090UX	5.01	23	50	75	6	6
DRMN0502090UX	5.02	23	50	75	6	6
DRMN0510090UX	5.10	23	50	75	6	6
DRMN0520090UX	5.20	23	50	75	6	6
DRMN0530090UX	5.30	23	50	75	6	6
DRMN0540090UX	5.40	23	50	75	6	6
DRMN0550090UX	5.50	26	50	75	6	6
DRMN0560090UX	5.60	26	50	75	6	6
DRMN0570090UX	5.70	26	50	75	6	6
DRMN0580090UX	5.80	26	50	75	6	6
DRMN0590090UX	5.90	26	50	75	6	6
DRMN0599090UX	5.99	26	65	100	6	6
DRMN0600090UX	6.00	26	65	100	6	6
DRMN0601090UX	6.01	26	65	100	6	6
DRMN0602090UX	6.02	26	65	100	6	6
DRMN0650090UX	6.50	28	65	100	8	6
DRMN0699090UX	6.99	31	70	109	8	6
DRMN0700090UX	7.00	31	70	109	8	6
DRMN0701090UX	7.01	31	70	109	8	6
DRMN0702090UX	7.02	31	70	109	8	6

Order No.	D	L1	L2	L	Ds	F
DRMN0750090UX	7.50	31	70	109	8	6
DRMN0799090UX	7.99	33	80	109	8	6
DRMN0800090UX	8.00	33	80	109	8	6
DRMN0801090UX	8.01	33	80	109	8	6
DRMN0802090UX	8.02	33	80	109	8	6
DRMN0850090UX	8.50	33	80	125	10	6
DRMN0899090UX	8.99	36	85	125	10	6
DRMN0900090UX	9.00	36	85	125	10	6
DRMN0901090UX	9.01	36	85	125	10	6
DRMN0902090UX	9.02	36	85	125	10	6
DRMN0950090UX	9.50	36	85	125	10	6
DRMN0999090UX	9.99	38	85	125	10	6
DRMN1000090UX	10.00	38	85	125	10	6
DRMN1001090UX	10.01	38	85	125	10	6
DRMN1002090UX	10.02	38	85	125	10	6
DRMN1050090UX	10.50	38	85	125	12	6
DRMN1099090UX	10.99	41	100	150	12	6
DRMN1100090UX	11.00	41	100	150	12	6
DRMN1101090UX	11.01	41	100	150	12	6
DRMN1102090UX	11.02	41	100	150	12	6
DRMN1150090UX	11.50	41	100	150	12	6
DRMN1199090UX	11.99	44	100	150	12	6
DRMN1200090UX	12.00	44	100	150	12	6
DRMN1201090UX	12.01	44	100	150	12	6
DRMN1202090UX	12.02	44	100	150	12	6

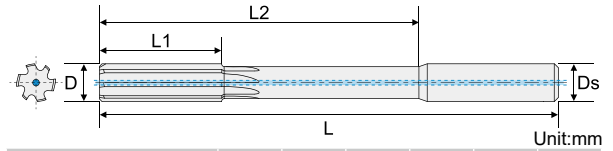
Holemaking

**DRSC - Straight flute · Internal Coolant**

直刃內冷鉸刀



- Internal coolant
- Straight flute
- Right hand cutting
- UNIX smooth coating
- D tolerance : H7
- Ds tolerance : h6
- Unequal flute spacing
- Hole tolerance : H7
- For blind hole / through hole



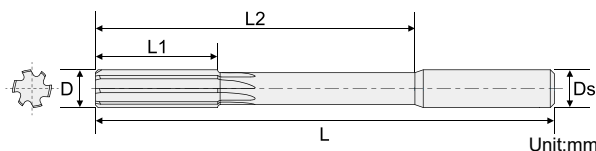
Order No.	D	L1	L2	L	Ds	F
DRSC0300090UX	3.00	15	35	60	4	4
DRSC0310090UX	3.10	15	35	60	4	4
DRSC0320090UX	3.20	15	35	60	4	4
DRSC0330090UX	3.30	15	35	60	4	4
DRSC0340090UX	3.40	15	35	60	4	4
DRSC0350090UX	3.50	18	35	60	4	4
DRSC0360090UX	3.60	18	35	60	4	4
DRSC0370090UX	3.70	18	35	60	4	4
DRSC0380090UX	3.80	18	35	60	4	4
DRSC0390090UX	3.90	18	35	60	4	4
DRSC0400090UX	4.00	19	50	75	4	4
DRSC0410090UX	4.10	19	50	75	6	4
DRSC0420090UX	4.20	19	50	75	6	4
DRSC0430090UX	4.30	19	50	75	6	4
DRSC0440090UX	4.40	19	50	75	6	4
DRSC0450090UX	4.50	21	50	75	6	4
DRSC0460090UX	4.60	21	50	75	6	4
DRSC0470090UX	4.70	21	50	75	6	4
DRSC0480090UX	4.80	21	50	75	6	4
DRSC0490090UX	4.90	21	50	75	6	4
DRSC0500090UX	5.00	23	50	75	6	6
DRSC0510090UX	5.10	23	50	75	6	6
DRSC0520090UX	5.20	23	50	75	6	6
DRSC0530090UX	5.30	23	50	75	6	6
DRSC0540090UX	5.40	23	50	75	6	6
DRSC0550090UX	5.50	26	50	75	6	6
DRSC0560090UX	5.60	26	50	75	6	6
DRSC0570090UX	5.70	26	50	75	6	6
DRSC0580090UX	5.80	26	50	75	6	6
DRSC0590090UX	5.90	26	50	75	6	6
DRSC0600090UX	6.00	26	65	100	6	6
DRSC0650090UX	6.50	28	65	100	8	6
DRSC0700090UX	7.00	31	70	109	8	6
DRSC0750090UX	7.50	31	70	109	8	6
DRSC0800090UX	8.00	33	80	109	8	6
DRSC0850090UX	8.50	33	80	125	10	6
DRSC0900090UX	9.00	36	85	125	10	6
DRSC0950090UX	9.50	36	85	125	10	6
DRSC1000090UX	10.00	38	85	125	10	6
DRSC1050090UX	10.50	38	85	125	12	6
DRSC1100090UX	11.00	41	100	150	12	6
DRSC1150090UX	11.50	41	100	150	12	6
DRSC1200090UX	12.00	44	100	150	12	6

Order No.	D	L1	L2	L	Ds	F

**DRSN - Straight flute · External Coolant** 直刃外冷鉸刀



- External coolant
- Straight flute
- Right hand cutting
- UNIX smooth coating
- D tolerance : H7
- Ds tolerance : h6
- Unequal flute spacing
- Hole tolerance : H7
- For blind hole / through hole



Order No.	D	L1	L2	L	Ds	F
DRSN0299090UX	2.99	15	35	60	4	4
DRSN0300090UX	3.00	15	35	60	4	4
DRSN0301090UX	3.01	15	35	60	4	4
DRSN0302090UX	3.02	15	35	60	4	4
DRSN0310090UX	3.10	15	35	60	4	4
DRSN0320090UX	3.20	15	35	60	4	4
DRSN0330090UX	3.30	15	35	60	4	4
DRSN0340090UX	3.40	15	35	60	4	4
DRSN0350090UX	3.50	18	35	60	4	4
DRSN0360090UX	3.60	18	35	60	4	4
DRSN0370090UX	3.70	18	35	60	4	4
DRSN0380090UX	3.80	18	35	60	4	4
DRSN0390090UX	3.90	18	35	60	4	4
DRSN0399090UX	3.99	19	50	75	4	4
DRSN0400090UX	4.00	19	50	75	4	4
DRSN0401090UX	4.01	19	50	75	4	4
DRSN0402090UX	4.02	19	50	75	4	4
DRSN0410090UX	4.10	19	50	75	6	4
DRSN0420090UX	4.20	19	50	75	6	4
DRSN0430090UX	4.30	19	50	75	6	4
DRSN0440090UX	4.40	19	50	75	6	4
DRSN0450090UX	4.50	21	50	75	6	4
DRSN0460090UX	4.60	21	50	75	6	4
DRSN0470090UX	4.70	21	50	75	6	4
DRSN0480090UX	4.80	21	50	75	6	4
DRSN0490090UX	4.90	21	50	75	6	4
DRSN0499090UX	4.99	23	50	75	6	6
DRSN0500090UX	5.00	23	50	75	6	6
DRSN0501090UX	5.01	23	50	75	6	6
DRSN0502090UX	5.02	23	50	75	6	6
DRSN0510090UX	5.10	23	50	75	6	6
DRSN0520090UX	5.20	23	50	75	6	6
DRSN0530090UX	5.30	23	50	75	6	6
DRSN0540090UX	5.40	23	50	75	6	6
DRSN0550090UX	5.50	26	50	75	6	6
DRSN0560090UX	5.60	26	50	75	6	6
DRSN0570090UX	5.70	26	50	75	6	6
DRSN0580090UX	5.80	26	50	75	6	6
DRSN0590090UX	5.90	26	50	75	6	6
DRSN0599090UX	5.99	26	65	100	6	6
DRSN0600090UX	6.00	26	65	100	6	6
DRSN0601090UX	6.01	26	65	100	6	6
DRSN0602090UX	6.02	26	65	100	6	6
DRSN0650090UX	6.50	28	65	100	8	6
DRSN0699090UX	6.99	31	70	109	8	6
DRSN0700090UX	7.00	31	70	109	8	6
DRSN0701090UX	7.01	31	70	109	8	6
DRSN0702090UX	7.02	31	70	109	8	6

Order No.	D	L1	L2	L	Ds	F
DRSN0750090UX	7.50	31	70	109	8	6
DRSN0799090UX	7.99	33	80	109	8	6
DRSN0800090UX	8.00	33	80	109	8	6
DRSN0801090UX	8.01	33	80	109	8	6
DRSN0802090UX	8.02	33	80	109	8	6
DRSN0850090UX	8.50	33	80	125	10	6
DRSN0899090UX	8.99	36	85	125	10	6
DRSN0900090UX	9.00	36	85	125	10	6
DRSN0901090UX	9.01	36	85	125	10	6
DRSN0902090UX	9.02	36	85	125	10	6
DRSN0950090UX	9.50	36	85	125	10	6
DRSN0999090UX	9.99	38	85	125	10	6
DRSN1000090UX	10.00	38	85	125	10	6
DRSN1001090UX	10.01	38	85	125	10	6
DRSN1002090UX	10.02	38	85	125	10	6
DRSN1050090UX	10.50	38	85	125	12	6
DRSN1099090UX	10.99	41	100	150	12	6
DRSN1100090UX	11.00	41	100	150	12	6
DRSN1101090UX	11.01	41	100	150	12	6
DRSN1102090UX	11.02	41	100	150	12	6
DRSN1150090UX	11.50	41	100	150	12	6
DRSN1199090UX	11.99	44	100	150	12	6
DRSN1200090UX	12.00	44	100	150	12	6
DRSN1201090UX	12.01	44	100	150	12	6
DRSN1202090UX	12.02	44	100	150	12	6
DRSN1300090UX	13.00	44	100	150	14	6
DRSN1400090UX	14.00	44	100	150	14	6
DRSN1600090UX	16.00	44	100	150	16	6
DRSN1800090UX	18.00	44	100	150	18	6
DRSN2000090UX	20.00	44	100	150	20	8

Holemaking

**Recommended Cutting Conditions** 建議切削數據

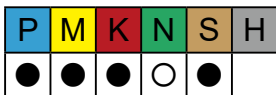
**DRMN, DRSN Series (External Coolant 外冷)**

Work Material		Drill Diameter	Ø3-6mm		Ø6.1~10mm		Ø10.1-12mm	
			Hardness	Vc (m/min)	Feed (mm/rev)	Vc (m/min)	Feed (mm/rev)	Vc (m/min)
P	Mild Steel	(<180HB)	10~20	0.03~0.12	10~20	0.06~0.2	10~20	0.1~0.22
	Carbon Steel	(180~280HB)	10~16	0.03~0.12	10~16	0.06~0.2	10~16	0.1~0.22
	Alloy Steel	(280~350HB)	8~12	0.03~0.12	8~12	0.06~0.2	8~12	0.1~0.22
M	Stainless Steel	-	-	-	-	-	-	-
K	Cast Iron	(<350Mpa)	8~16	0.03~0.12	8~16	0.06~0.02	8~16	0.1~0.22
	Ductile Cast Iron	(<450Mpa)	8~16	0.03~0.12	8~16	0.06~0.02	8~16	0.1~0.22
N	Aluminum <12% Si	-	20~30	0.03~0.13	20~30	0.07~0.23	20~30	0.1~0.28
	Aluminum >12% Si	-	20~30	0.03~0.13	20~30	0.07~0.23	20~30	0.1~0.28
S	Heat Resistant Alloy	-	-	-	-	-	-	-
H	Hardened Material	-	-	-	-	-	-	-

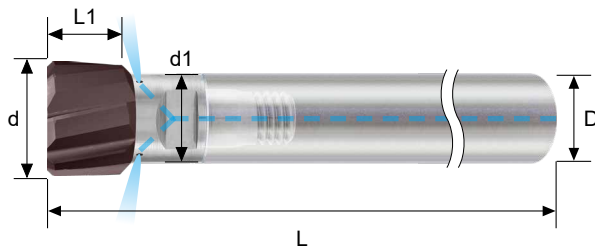
**DRSC Series (Internal Coolant 內冷)**

Work Material		Drill Diameter	Ø3-6mm		Ø6.1~10mm		Ø10.1-12mm	
			Hardness	Vc (m/min)	Feed (mm/rev)	Vc (m/min)	Feed (mm/rev)	Vc (m/min)
P	Mild Steel	(<180HB)	40~70	0.1~0.2	40~70	0.1~0.24	40~70	0.1~0.3
	Carbon Steel	(180~280HB)	25~50	0.1~0.2	25~50	0.1~0.24	25~50	0.1~0.3
	Alloy Steel	(280~350HB)	15~25	0.08~0.16	15~25	0.08~0.2	15~25	0.08~0.24
M	Stainless Steel	(<200HB)	8~15	0.08~0.16	8~15	0.08~0.18	8~15	0.08~0.2
K	Cast Iron	(<350Mpa)	35~60	0.1~0.32	35~60	0.1~0.36	35~60	0.1~0.4
	Ductile Cast Iron	(<450Mpa)	20~45	0.1~0.24	20~45	0.1~0.28	20~45	0.1~0.32
N	Aluminum <12% Si	-	110~195	0.12~0.32	110~195	0.12~0.36	110~195	0.12~0.4
	Aluminum >12% Si	-	105~180	0.12~0.32	105~180	0.12~0.36	105~180	0.12~0.4
S	Heat Resistant Alloy	-	8~15	0.08~0.16	8~15	0.08~0.18	8~15	0.08~0.2
H	Hardened Material	-	-	-	-	-	-	-

**DRMMC - Left spiral flute · Internal Coolant** 內冷模組化螺旋機械鉸刀



- Internal coolant    · Left spiral flute    · Right hand cutting    · UNIX coating
- d tolerance : H7
- For through hole    · Hole tolerance : H8

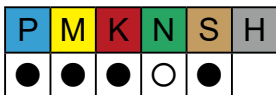


Order No.	Dia. (d)	CL (L1)	Neck Dia. (d1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)	Specifications	
								Reaming Head	Adapter
DRMMC8129910UX	12.99	8	11.7	—	119	10	8	DRMWC812990UX	ISWMEA10100060
DRMMC8129915UX	12.99	8	11.7	—	169	10	8	DRMWC812990UX	ISWMEA10150060
DRMMC8130010UX	13	8	11.7	—	119	10	8	DRMWC813000UX	ISWMEA10100060
DRMMC8130015UX	13	8	11.7	—	169	10	8	DRMWC813000UX	ISWMEA10150060
DRMMC8130110UX	13.01	8	11.7	—	119	10	8	DRMWC813010UX	ISWMEA10100060
DRMMC8130115UX	13.01	8	11.7	—	169	10	8	DRMWC813010UX	ISWMEA10150060
DRMMC8139910UX	13.99	8	12.6	—	119	11	8	DRMWC813990UX	ISWMEA11100060
DRMMC8139915UX	13.99	8	12.6	—	169	11	8	DRMWC813990UX	ISWMEA11150060
DRMMC8140010UX	14	8	12.6	—	119	11	8	DRMWC814000UX	ISWMEA11100060
DRMMC8140015UX	14	8	12.6	—	169	11	8	DRMWC814000UX	ISWMEA11150060
DRMMC8140110UX	14.01	8	12.6	—	119	11	8	DRMWC814010UX	ISWMEA11100060
DRMMC8140115UX	14.01	8	12.6	—	169	11	8	DRMWC814010UX	ISWMEA11150060
DRMMC8149907UX	14.99	10	13.5	—	97	12	8	DRMWC814990UX	ISWMEA12075060
DRMMC8149910UX	14.99	10	13.5	—	122	12	8	DRMWC814990UX	ISWMEA12100060
DRMMC8149915UX	14.99	10	13.5	—	172	12	8	DRMWC814990UX	ISWMEA12150060
DRMMC8149920UX	14.99	10	13.5	—	222	12	8	DRMWC814990UX	ISWMEA12200060
DRMMC8150007UX	15	10	13.5	—	97	12	8	DRMWC815000UX	ISWMEA12075060
DRMMC8150010UX	15	10	13.5	—	122	12	8	DRMWC815000UX	ISWMEA12100060
DRMMC8150015UX	15	10	13.5	—	172	12	8	DRMWC815000UX	ISWMEA12150060
DRMMC8150020UX	15	10	13.5	—	222	12	8	DRMWC815000UX	ISWMEA12200060
DRMMC8150107UX	15.01	10	13.5	—	97	12	8	DRMWC815010UX	ISWMEA12075060
DRMMC8150110UX	15.01	10	13.5	—	122	12	8	DRMWC815010UX	ISWMEA12100060
DRMMC8150115UX	15.01	10	13.5	—	172	12	8	DRMWC815010UX	ISWMEA12150060
DRMMC8150120UX	15.01	10	13.5	—	222	12	8	DRMWC815010UX	ISWMEA12200060
DRMMC8158707UX	15.875	10	14.3	—	97	12	8	DRMWC815870UX	ISWMEA12075060
DRMMC8158710UX	15.875	10	14.3	—	122	12	8	DRMWC815870UX	ISWMEA12100060
DRMMC8158715UX	15.875	10	14.3	—	172	12	8	DRMWC815870UX	ISWMEA12150060
DRMMC8158720UX	15.875	10	14.3	—	222	12	8	DRMWC815870UX	ISWMEA12200060

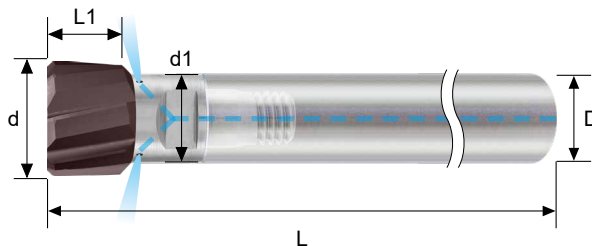
Holemaking

(continued)

**DRMMC - Left spiral flute · Internal Coolant** 內冷模組化螺旋機械鉸刀



- Internal coolant    · Left spiral flute    · Right hand cutting    · UNIX coating
- d tolerance : H7
- For through hole    · Hole tolerance : H8



Order No.	Dia. (d)	CL (L1)	Neck Dia. (d1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)	Specifications	
								Reaming Head	Adapter
DRMMC8159907UX	15.99	10	14.4	—	97	12	8	DRMWC815990UX	ISWMEA12075060
DRMMC8159910UX	15.99	10	14.4	—	122	12	8	DRMWC815990UX	ISWMEA12100060
DRMMC8159915UX	15.99	10	14.4	—	172	12	8	DRMWC815990UX	ISWMEA12150060
DRMMC8159920UX	15.99	10	14.4	—	222	12	8	DRMWC815990UX	ISWMEA12200060
DRMMC8160007UX	16	10	14.4	—	97	12	8	DRMWC816000UX	ISWMEA12075060
DRMMC8160010UX	16	10	14.4	—	122	12	8	DRMWC816000UX	ISWMEA12100060
DRMMC8160015UX	16	10	14.4	—	172	12	8	DRMWC816000UX	ISWMEA12150060
DRMMC8160020UX	16	10	14.4	—	222	12	8	DRMWC816000UX	ISWMEA12200060
DRMMC8160107UX	16.01	10	14.4	—	97	12	8	DRMWC816010UX	ISWMEA12075060
DRMMC8160110UX	16.01	10	14.4	—	122	12	8	DRMWC816010UX	ISWMEA12100060
DRMMC8160115UX	16.01	10	14.4	—	172	12	8	DRMWC816010UX	ISWMEA12150060
DRMMC8160120UX	16.01	10	14.4	—	222	12	8	DRMWC816010UX	ISWMEA12200060
DRMMC8169910UX	16.99	10	15.3	—	124	14	8	DRMWC816990UX	ISWMEA14100080
DRMMC8169915UX	16.99	10	15.3	—	174	14	8	DRMWC816990UX	ISWMEA14150080
DRMMC8169920UX	16.99	10	15.3	—	224	14	8	DRMWC816990UX	ISWMEA14200080
DRMMC8170010UX	17	10	15.3	—	124	14	8	DRMWC817000UX	ISWMEA14100080
DRMMC8170015UX	17	10	15.3	—	174	14	8	DRMWC817000UX	ISWMEA14150080
DRMMC8170020UX	17	10	15.3	—	224	14	8	DRMWC817000UX	ISWMEA14200080
DRMMC8170110UX	17.01	10	15.3	—	124	14	8	DRMWC817010UX	ISWMEA14100080
DRMMC8170115UX	17.01	10	15.3	—	174	14	8	DRMWC817010UX	ISWMEA14150080
DRMMC8170120UX	17.01	10	15.3	—	224	14	8	DRMWC817010UX	ISWMEA14200080
DRMMC8179910UX	17.99	10	16.2	—	124	15	8	DRMWC817990UX	ISWMEA15100080
DRMMC8179915UX	17.99	10	16.2	—	174	15	8	DRMWC817990UX	ISWMEA15150080
DRMMC8179920UX	17.99	10	16.2	—	224	15	8	DRMWC817990UX	ISWMEA15200080
DRMMC8180010UX	18	10	16.2	—	124	15	8	DRMWC818000UX	ISWMEA15100080
DRMMC8180015UX	18	10	16.2	—	174	15	8	DRMWC818000UX	ISWMEA15150080
DRMMC8180020UX	18	10	16.2	—	224	15	8	DRMWC818000UX	ISWMEA15200080
DRMMC8180110UX	18.01	10	16.2	—	124	15	8	DRMWC818010UX	ISWMEA15100080
DRMMC8180115UX	18.01	10	16.2	—	174	15	8	DRMWC818010UX	ISWMEA15150080
DRMMC8180120UX	18.01	10	16.2	—	224	15	8	DRMWC818010UX	ISWMEA15200080

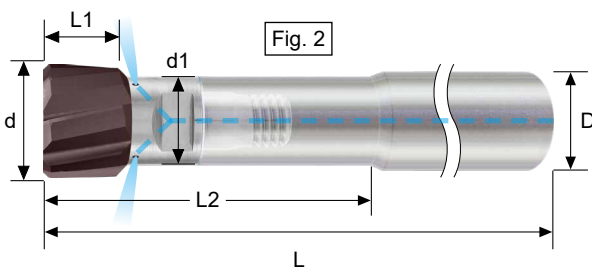
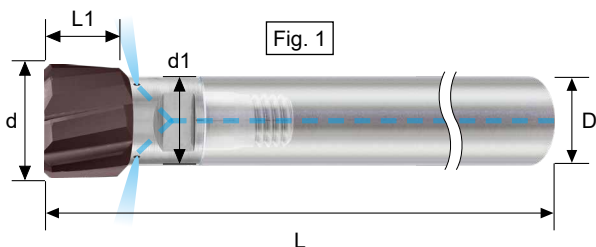
(continued)



**DRMMC - Left spiral flute · Internal Coolant** 內冷模組化螺旋機械鉸刀



- Internal coolant
- Left spiral flute
- Right hand cutting
- UNIX coating
- d tolerance : H7
- For through hole
- Hole tolerance : H8



Order No.	Dia. (d)	CL (L1)	Neck Dia. (d1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)	Fig.	Specifications	
									Reaming Head	Adapter
DRMMC8189910UX	18.99	10	17.1	-	127	16	8	1	DRMWC818990UX	ISWMEA16100080
DRMMC8189915UX	18.99	10	17.1	-	177	16	8	1	DRMWC818990UX	ISWMEA16150080
DRMMC8189920UX	18.99	10	17.1	-	227	16	8	1	DRMWC818990UX	ISWMEA16200080
DRMMC8189925UX	18.99	10	17.1	-	277	16	8	1	DRMWC818990UX	ISWMEA16250080
DRMMC8190010UX	19	10	17.1	-	127	16	8	1	DRMWC819000UX	ISWMEA16100080
DRMMC8190015UX	19	10	17.1	-	177	16	8	1	DRMWC819000UX	ISWMEA16150080
DRMMC8190020UX	19	10	17.1	-	227	16	8	1	DRMWC819000UX	ISWMEA16200080
DRMMC8190025UX	19	10	17.1	-	277	16	8	1	DRMWC819000UX	ISWMEA16250080
DRMMC8190110UX	19.01	10	17.1	-	127	16	8	1	DRMWC819010UX	ISWMEA16100080
DRMMC8190115UX	19.01	10	17.1	-	177	16	8	1	DRMWC819010UX	ISWMEA16150080
DRMMC8190120UX	19.01	10	17.1	-	227	16	8	1	DRMWC819010UX	ISWMEA16200080
DRMMC8190125UX	19.01	10	17.1	-	277	16	8	1	DRMWC819010UX	ISWMEA16250080
DRMMC8190510UX	19.05	10	17.1	-	127	16	8	1	DRMWC819050UX	ISWMEA16100080
DRMMC8190515UX	19.05	10	17.1	-	177	16	8	1	DRMWC819050UX	ISWMEA16150080
DRMMC8190520UX	19.05	10	17.1	-	227	16	8	1	DRMWC819050UX	ISWMEA16200080
DRMMC8190525UX	19.05	10	17.1	-	277	16	8	1	DRMWC819050UX	ISWMEA16250080
DRMMC8199915UX	19.99	12	18.0	77	177	17	8	2	DRMWC819990UX	ISWMEB20150102
DRMMC8199920UX	19.99	12	18.0	67	227	17	8	2	DRMWC819990UX	ISWMEB20150103
DRMMC8200015UX	20	12	18.0	77	177	17	8	2	DRMWC820000UX	ISWMEB20150102
DRMMC8200020UX	20	12	18.0	67	227	17	8	2	DRMWC820000UX	ISWMEB20150103
DRMMC8200115UX	20.01	12	18.0	77	177	17	8	2	DRMWC820010UX	ISWMEB20150102
DRMMC8200120UX	20.01	12	18.0	67	227	17	8	2	DRMWC820010UX	ISWMEB20150103

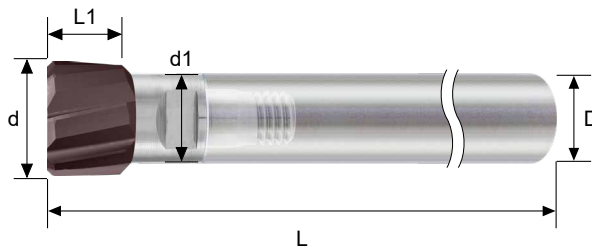
Holemaking



**DRMMN - Left spiral flute · External Coolant** 外冷模組化螺旋機械鉸刀

P	M	K	N	S	H
●		●			

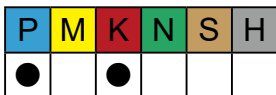
- External coolant    · Left spiral flute    · Right hand cutting    · UNIX coating
- d tolerance : H7
- For through hole    · Hole tolerance : H8



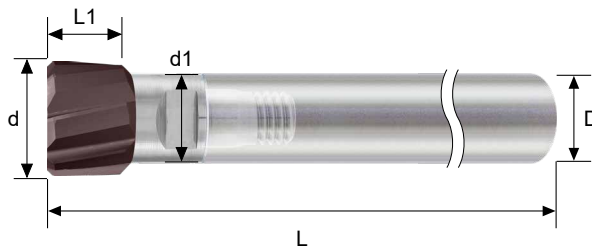
Order No.	Dia. (d)	CL (L1)	Neck Dia. (d1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)	Specifications	
								Reaming Head	Adapter
DRMMN8129910UX	12.99	8	11.7	-	119	10	8	DRMWN812990UX	ISWMEA10100060
DRMMN8129915UX	12.99	8	11.7	-	169	10	8	DRMWN812990UX	ISWMEA10150060
DRMMN8130010UX	13	8	11.7	-	119	10	8	DRMWN813000UX	ISWMEA10100060
DRMMN8130015UX	13	8	11.7	-	169	10	8	DRMWN813000UX	ISWMEA10150060
DRMMN8130110UX	13.01	8	11.7	-	119	10	8	DRMWN813010UX	ISWMEA10100060
DRMMN8130115UX	13.01	8	11.7	-	169	10	8	DRMWN813010UX	ISWMEA10150060
DRMMN8139910UX	13.99	8	12.6	-	119	11	8	DRMWN813990UX	ISWMEA11100060
DRMMN8139915UX	13.99	8	12.6	-	169	11	8	DRMWN813990UX	ISWMEA11150060
DRMMN8140010UX	14	8	12.6	-	119	11	8	DRMWN814000UX	ISWMEA11100060
DRMMN8140015UX	14	8	12.6	-	169	11	8	DRMWN814000UX	ISWMEA11150060
DRMMN8140110UX	14.01	8	12.6	-	119	11	8	DRMWN814010UX	ISWMEA11100060
DRMMN8140115UX	14.01	8	12.6	-	169	11	8	DRMWN814010UX	ISWMEA11150060
DRMMN8149907UX	14.99	10	13.5	-	97	12	8	DRMWN814990UX	ISWMEA12075060
DRMMN8149910UX	14.99	10	13.5	-	122	12	8	DRMWN814990UX	ISWMEA12100060
DRMMN8149915UX	14.99	10	13.5	-	172	12	8	DRMWN814990UX	ISWMEA12150060
DRMMN8149920UX	14.99	10	13.5	-	222	12	8	DRMWN814990UX	ISWMEA12200060
DRMMN8150007UX	15	10	13.5	-	97	12	8	DRMWN815000UX	ISWMEA12075060
DRMMN8150010UX	15	10	13.5	-	122	12	8	DRMWN815000UX	ISWMEA12100060
DRMMN8150015UX	15	10	13.5	-	172	12	8	DRMWN815000UX	ISWMEA12150060
DRMMN8150020UX	15	10	13.5	-	222	12	8	DRMWN815000UX	ISWMEA12200060
DRMMN8150107UX	15.01	10	13.5	-	97	12	8	DRMWN815010UX	ISWMEA12075060
DRMMN8150110UX	15.01	10	13.5	-	122	12	8	DRMWN815010UX	ISWMEA12100060
DRMMN8150115UX	15.01	10	13.5	-	172	12	8	DRMWN815010UX	ISWMEA12150060
DRMMN8150120UX	15.01	10	13.5	-	222	12	8	DRMWN815010UX	ISWMEA12200060
DRMMN8158707UX	15.875	10	14.3	-	97	12	8	DRMWN815870UX	ISWMEA12075060
DRMMN8158710UX	15.875	10	14.3	-	122	12	8	DRMWN815870UX	ISWMEA12100060
DRMMN8158715UX	15.875	10	14.3	-	172	12	8	DRMWN815870UX	ISWMEA12150060
DRMMN8158720UX	15.875	10	14.3	-	222	12	8	DRMWN815870UX	ISWMEA12200060

(continued)

**DRMMN - Left spiral flute · External Coolant** 外冷模組化螺旋機械鉸刀



- External coolant    · Left spiral flute    · Right hand cutting    · UNIX coating
- d tolerance : H7
- For through hole    · Hole tolerance : H8

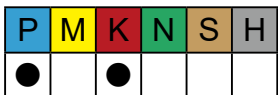


Order No.	Dia. (d)	CL (L1)	Neck Dia. (d1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)	Specifications	
								Reaming Head	Adapter
DRMMN8159907UX	15.99	10	14.4	—	97	12	8	DRMWN815990UX	ISWMEA12075060
DRMMN8159910UX	15.99	10	14.4	—	122	12	8	DRMWN815990UX	ISWMEA12100060
DRMMN8159915UX	15.99	10	14.4	—	172	12	8	DRMWN815990UX	ISWMEA12150060
DRMMN8159920UX	15.99	10	14.4	—	222	12	8	DRMWN815990UX	ISWMEA12200060
DRMMN8160007UX	16	10	14.4	—	97	12	8	DRMWN816000UX	ISWMEA12075060
DRMMN8160010UX	16	10	14.4	—	122	12	8	DRMWN816000UX	ISWMEA12100060
DRMMN8160015UX	16	10	14.4	—	172	12	8	DRMWN816000UX	ISWMEA12150060
DRMMN8160020UX	16	10	14.4	—	222	12	8	DRMWN816000UX	ISWMEA12200060
DRMMN8160107UX	16.01	10	14.4	—	97	12	8	DRMWN816010UX	ISWMEA12075060
DRMMN8160110UX	16.01	10	14.4	—	122	12	8	DRMWN816010UX	ISWMEA12100060
DRMMN8160115UX	16.01	10	14.4	—	172	12	8	DRMWN816010UX	ISWMEA12150060
DRMMN8160120UX	16.01	10	14.4	—	222	12	8	DRMWN816010UX	ISWMEA12200060
DRMMN8169910UX	16.99	10	15.3	—	124	14	8	DRMWN816990UX	ISWMEA14100080
DRMMN8169915UX	16.99	10	15.3	—	174	14	8	DRMWN816990UX	ISWMEA14150080
DRMMN8169920UX	16.99	10	15.3	—	224	14	8	DRMWN816990UX	ISWMEA14200080
DRMMN8170010UX	17	10	15.3	—	124	14	8	DRMWN817000UX	ISWMEA14100080
DRMMN8170015UX	17	10	15.3	—	174	14	8	DRMWN817000UX	ISWMEA14150080
DRMMN8170020UX	17	10	15.3	—	224	14	8	DRMWN817000UX	ISWMEA14200080
DRMMN8170110UX	17.01	10	15.3	—	124	14	8	DRMWN817010UX	ISWMEA14100080
DRMMN8170115UX	17.01	10	15.3	—	174	14	8	DRMWN817010UX	ISWMEA14150080
DRMMN8170120UX	17.01	10	15.3	—	224	14	8	DRMWN817010UX	ISWMEA14200080
DRMMN8179910UX	17.99	10	16.2	—	124	15	8	DRMWN817990UX	ISWMEA15100080
DRMMN8179915UX	17.99	10	16.2	—	174	15	8	DRMWN817990UX	ISWMEA15150080
DRMMN8179920UX	17.99	10	16.2	—	224	15	8	DRMWN817990UX	ISWMEA15200080
DRMMN8180010UX	18	10	16.2	—	124	15	8	DRMWN818000UX	ISWMEA15100080
DRMMN8180015UX	18	10	16.2	—	174	15	8	DRMWN818000UX	ISWMEA15150080
DRMMN8180020UX	18	10	16.2	—	224	15	8	DRMWN818000UX	ISWMEA15200080
DRMMN8180110UX	18.01	10	16.2	—	124	15	8	DRMWN818010UX	ISWMEA15100080
DRMMN8180115UX	18.01	10	16.2	—	174	15	8	DRMWN818010UX	ISWMEA15150080
DRMMN8180120UX	18.01	10	16.2	—	224	15	8	DRMWN818010UX	ISWMEA15200080

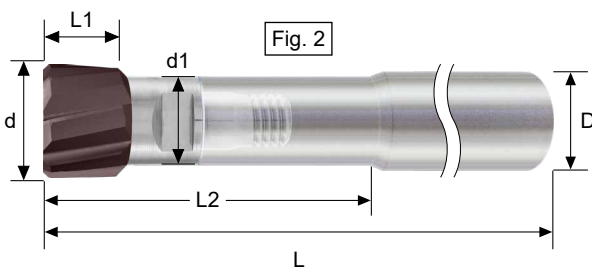
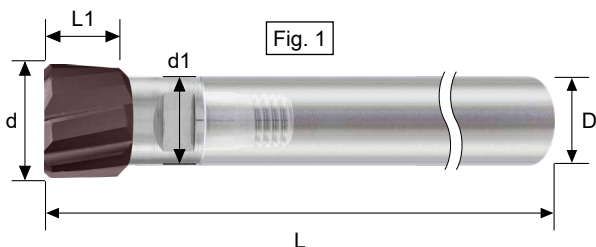
Holemaking

(continued)

**DRMMN - Left spiral flute · External Coolant** 外冷模組化螺旋機械鉸刀

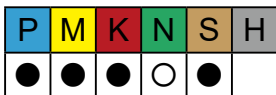


- External coolant
- Left spiral flute
- Right hand cutting
- UNIX coating
- d tolerance : H7
- Hole tolerance : H8
- For through hole

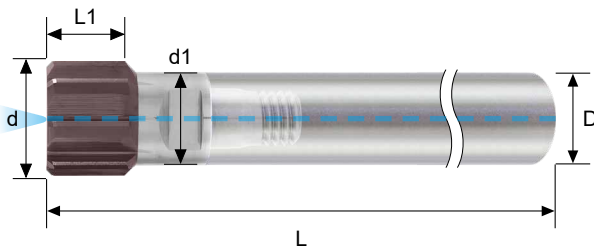


Order No.	Dia. (d)	CL (L1)	Neck Dia. (d1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)	Fig.	Specifications	
									Reaming Head	Adapter
DRMMN8189910UX	18.99	10	17.1	-	127	16	8	1	DRMWN818990UX	ISWMEA16100080
DRMMN8189915UX	18.99	10	17.1	-	177	16	8	1	DRMWN818990UX	ISWMEA16150080
DRMMN8189920UX	18.99	10	17.1	-	227	16	8	1	DRMWN818990UX	ISWMEA16200080
DRMMN8189925UX	18.99	10	17.1	-	277	16	8	1	DRMWN818990UX	ISWMEA16250080
DRMMN8190010UX	19	10	17.1	-	127	16	8	1	DRMWN819000UX	ISWMEA16100080
DRMMN8190015UX	19	10	17.1	-	177	16	8	1	DRMWN819000UX	ISWMEA16150080
DRMMN8190020UX	19	10	17.1	-	227	16	8	1	DRMWN819000UX	ISWMEA16200080
DRMMN8190025UX	19	10	17.1	-	277	16	8	1	DRMWN819000UX	ISWMEA16250080
DRMMN8190110UX	19.01	10	17.1	-	127	16	8	1	DRMWN819010UX	ISWMEA16100080
DRMMN8190115UX	19.01	10	17.1	-	177	16	8	1	DRMWN819010UX	ISWMEA16150080
DRMMN8190120UX	19.01	10	17.1	-	227	16	8	1	DRMWN819010UX	ISWMEA16200080
DRMMN8190125UX	19.01	10	17.1	-	277	16	8	1	DRMWN819010UX	ISWMEA16250080
DRMMN8190510UX	19.05	10	17.1	-	127	16	8	1	DRMWN819050UX	ISWMEA16100080
DRMMN8190515UX	19.05	10	17.1	-	177	16	8	1	DRMWN819050UX	ISWMEA16150080
DRMMN8190520UX	19.05	10	17.1	-	227	16	8	1	DRMWN819050UX	ISWMEA16200080
DRMMN8190525UX	19.05	10	17.1	-	277	16	8	1	DRMWN819050UX	ISWMEA16250080
DRMMN8199915UX	19.99	12	18.0	77	177	17	8	2	DRMWN819990UX	ISWMEB20150102
DRMMN8199920UX	19.99	12	18.0	67	227	17	8	2	DRMWN819990UX	ISWMEB20150103
DRMMN8200015UX	20	12	18.0	77	177	17	8	2	DRMWN820000UX	ISWMEB20150102
DRMMN8200020UX	20	12	18.0	67	227	17	8	2	DRMWN820000UX	ISWMEB20150103
DRMMN8200115UX	20.01	12	18.0	77	177	17	8	2	DRMWN820010UX	ISWMEB20150102
DRMMN8200120UX	20.01	12	18.0	67	227	17	8	2	DRMWN820010UX	ISWMEB20150103

**DRSMC - Straight flute · Internal Coolant** 內冷模組化直刃鉸刀



- Internal coolant    · Straight flute    · Right hand cutting    · UNIX coating
- d tolerance : H7
- For blind hole / through hole    · Hole tolerance : H8

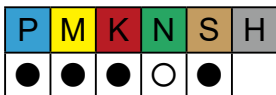


Order No.	Dia. (d)	CL (L1)	Neck Dia. (d1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)	Specifications	
								Reaming Head	Adapter
DRSMC8129910UX	12.99	8	11.7	-	119	10	8	DRSWC812990UX	ISWMEA10100060
DRSMC8129915UX	12.99	8	11.7	-	169	10	8	DRSWC812990UX	ISWMEA10150060
DRSMC8130010UX	13	8	11.7	-	119	10	8	DRSWC813000UX	ISWMEA10100060
DRSMC8130015UX	13	8	11.7	-	169	10	8	DRSWC813000UX	ISWMEA10150060
DRSMC8130110UX	13.01	8	11.7	-	119	10	8	DRSWC813010UX	ISWMEA10100060
DRSMC8130115UX	13.01	8	11.7	-	169	10	8	DRSWC813010UX	ISWMEA10150060
DRSMC8139910UX	13.99	8	12.6	-	119	11	8	DRSWC813990UX	ISWMEA11100060
DRSMC8139915UX	13.99	8	12.6	-	169	11	8	DRSWC813990UX	ISWMEA11150060
DRSMC8140010UX	14	8	12.6	-	119	11	8	DRSWC814000UX	ISWMEA11100060
DRSMC8140015UX	14	8	12.6	-	169	11	8	DRSWC814000UX	ISWMEA11150060
DRSMC8140110UX	14.01	8	12.6	-	119	11	8	DRSWC814010UX	ISWMEA11100060
DRSMC8140115UX	14.01	8	12.6	-	169	11	8	DRSWC814010UX	ISWMEA11150060
DRSMC8149907UX	14.99	10	13.5	-	97	12	8	DRSWC814990UX	ISWMEA12075060
DRSMC8149910UX	14.99	10	13.5	-	122	12	8	DRSWC814990UX	ISWMEA12100060
DRSMC8149915UX	14.99	10	13.5	-	172	12	8	DRSWC814990UX	ISWMEA12150060
DRSMC8149920UX	14.99	10	13.5	-	222	12	8	DRSWC814990UX	ISWMEA12200060
DRSMC8150007UX	15	10	13.5	-	97	12	8	DRSWC815000UX	ISWMEA12075060
DRSMC8150010UX	15	10	13.5	-	122	12	8	DRSWC815000UX	ISWMEA12100060
DRSMC8150015UX	15	10	13.5	-	172	12	8	DRSWC815000UX	ISWMEA12150060
DRSMC8150020UX	15	10	13.5	-	222	12	8	DRSWC815000UX	ISWMEA12200060
DRSMC8150107UX	15.01	10	13.5	-	97	12	8	DRSWC815010UX	ISWMEA12075060
DRSMC8150110UX	15.01	10	13.5	-	122	12	8	DRSWC815010UX	ISWMEA12100060
DRSMC8150115UX	15.01	10	13.5	-	172	12	8	DRSWC815010UX	ISWMEA12150060
DRSMC8150120UX	15.01	10	13.5	-	222	12	8	DRSWC815010UX	ISWMEA12200060
DRSMC8158707UX	15.875	10	14.3	-	97	12	8	DRSWC815870UX	ISWMEA12075060
DRSMC8158710UX	15.875	10	14.3	-	122	12	8	DRSWC815870UX	ISWMEA12100060
DRSMC8158715UX	15.875	10	14.3	-	172	12	8	DRSWC815870UX	ISWMEA12150060
DRSMC8158720UX	15.875	10	14.3	-	222	12	8	DRSWC815870UX	ISWMEA12200060

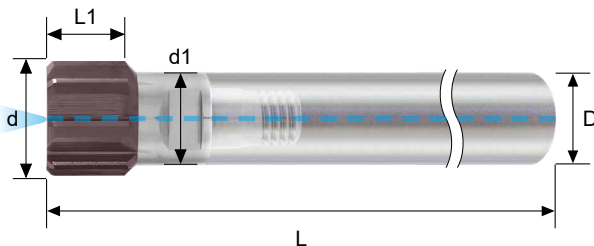
Holemaking

(continued)

**DRSMC - Straight flute · Internal Coolant** 內冷模組化直刃鉸刀



- Internal coolant    · Straight flute    · Right hand cutting    · UNIX coating
- d tolerance : H7
- For blind hole / through hole    · Hole tolerance : H8

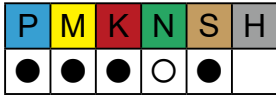


Order No.	Dia. (d)	CL (L1)	Neck Dia. (d1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)	Specifications	
								Reaming Head	Adapter
DRSMC8159907UX	15.99	10	14.4	—	97	12	8	DRSWC815990UX	ISWMEA12075060
DRSMC8159910UX	15.99	10	14.4	—	122	12	8	DRSWC815990UX	ISWMEA12100060
DRSMC8159915UX	15.99	10	14.4	—	172	12	8	DRSWC815990UX	ISWMEA12150060
DRSMC8159920UX	15.99	10	14.4	—	222	12	8	DRSWC815990UX	ISWMEA12200060
DRSMC8160007UX	16	10	14.4	—	97	12	8	DRSWC816000UX	ISWMEA12075060
DRSMC8160010UX	16	10	14.4	—	122	12	8	DRSWC816000UX	ISWMEA12100060
DRSMC8160015UX	16	10	14.4	—	172	12	8	DRSWC816000UX	ISWMEA12150060
DRSMC8160020UX	16	10	14.4	—	222	12	8	DRSWC816000UX	ISWMEA12200060
DRSMC8160107UX	16.01	10	14.4	—	97	12	8	DRSWC816010UX	ISWMEA12075060
DRSMC8160110UX	16.01	10	14.4	—	122	12	8	DRSWC816010UX	ISWMEA12100060
DRSMC8160115UX	16.01	10	14.4	—	172	12	8	DRSWC816010UX	ISWMEA12150060
DRSMC8160120UX	16.01	10	14.4	—	222	12	8	DRSWC816010UX	ISWMEA12200060
DRSMC8169910UX	16.99	10	15.3	—	124	14	8	DRSWC816990UX	ISWMEA14100080
DRSMC8169915UX	16.99	10	15.3	—	174	14	8	DRSWC816990UX	ISWMEA14150080
DRSMC8169920UX	16.99	10	15.3	—	224	14	8	DRSWC816990UX	ISWMEA14200080
DRSMC8170010UX	17	10	15.3	—	124	14	8	DRSWC817000UX	ISWMEA14100080
DRSMC8170015UX	17	10	15.3	—	174	14	8	DRSWC817000UX	ISWMEA14150080
DRSMC8170020UX	17	10	15.3	—	224	14	8	DRSWC817000UX	ISWMEA14200080
DRSMC8170110UX	17.01	10	15.3	—	124	14	8	DRSWC817010UX	ISWMEA14100080
DRSMC8170115UX	17.01	10	15.3	—	174	14	8	DRSWC817010UX	ISWMEA14150080
DRSMC8170120UX	17.01	10	15.3	—	224	14	8	DRSWC817010UX	ISWMEA14200080
DRSMC8179910UX	17.99	10	16.2	—	124	15	8	DRSWC817990UX	ISWMEA15100080
DRSMC8179915UX	17.99	10	16.2	—	174	15	8	DRSWC817990UX	ISWMEA15150080
DRSMC8179920UX	17.99	10	16.2	—	224	15	8	DRSWC817990UX	ISWMEA15200080
DRSMC8180010UX	18	10	16.2	—	124	15	8	DRSWC818000UX	ISWMEA15100080
DRSMC8180015UX	18	10	16.2	—	174	15	8	DRSWC818000UX	ISWMEA15150080
DRSMC8180020UX	18	10	16.2	—	224	15	8	DRSWC818000UX	ISWMEA15200080
DRSMC8180110UX	18.01	10	16.2	—	124	15	8	DRSWC818010UX	ISWMEA15100080
DRSMC8180115UX	18.01	10	16.2	—	174	15	8	DRSWC818010UX	ISWMEA15150080
DRSMC8180120UX	18.01	10	16.2	—	224	15	8	DRSWC818010UX	ISWMEA15200080

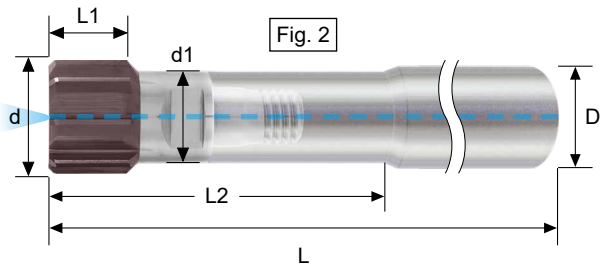
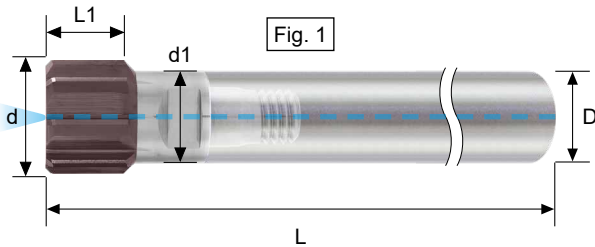
(continued)

DRSMC - Straight flute · Internal Coolant

內冷模組化直刃鉸刀



- Internal coolant
- Straight flute
- Right hand cutting
- UNIX coating
- d tolerance : H7
- For blind hole / through hole
- Hole tolerance : H8

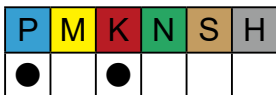


Order No.	Dia. (d)	CL (L1)	Neck Dia. (d1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)	Fig.	Specifications	
									Reaming Head	Adapter
DRSMC8189910UX	18.99	10	17.1	-	127	16	8	1	DRSWC818990UX	ISWMEA16100080
DRSMC8189915UX	18.99	10	17.1	-	177	16	8	1	DRSWC818990UX	ISWMEA16150080
DRSMC8189920UX	18.99	10	17.1	-	227	16	8	1	DRSWC818990UX	ISWMEA16200080
DRSMC8189925UX	18.99	10	17.1	-	277	16	8	1	DRSWC818990UX	ISWMEA16250080
DRSMC8190010UX	19	10	17.1	-	127	16	8	1	DRSWC819000UX	ISWMEA16100080
DRSMC8190015UX	19	10	17.1	-	177	16	8	1	DRSWC819000UX	ISWMEA16150080
DRSMC8190020UX	19	10	17.1	-	227	16	8	1	DRSWC819000UX	ISWMEA16200080
DRSMC8190025UX	19	10	17.1	-	277	16	8	1	DRSWC819000UX	ISWMEA16250080
DRSMC8190110UX	19.01	10	17.1	-	127	16	8	1	DRSWC819010UX	ISWMEA16100080
DRSMC8190115UX	19.01	10	17.1	-	177	16	8	1	DRSWC819010UX	ISWMEA16150080
DRSMC8190120UX	19.01	10	17.1	-	227	16	8	1	DRSWC819010UX	ISWMEA16200080
DRSMC8190125UX	19.01	10	17.1	-	277	16	8	1	DRSWC819010UX	ISWMEA16250080
DRSMC8190510UX	19.05	10	17.1	-	127	16	8	1	DRSWC819050UX	ISWMEA16100080
DRSMC8190515UX	19.05	10	17.1	-	177	16	8	1	DRSWC819050UX	ISWMEA16150080
DRSMC8190520UX	19.05	10	17.1	-	227	16	8	1	DRSWC819050UX	ISWMEA16200080
DRSMC8190525UX	19.05	10	17.1	-	277	16	8	1	DRSWC819050UX	ISWMEA16250080
DRSMC8199915UX	19.99	12	18.0	77	177	17	8	2	DRSWC819990UX	ISWMEB20150102
DRSMC8199920UX	19.99	12	18.0	67	227	17	8	2	DRSWC819990UX	ISWMEB20150103
DRSMC8200015UX	20	12	18.0	77	177	17	8	2	DRSWC820000UX	ISWMEB20150102
DRSMC8200020UX	20	12	18.0	67	227	17	8	2	DRSWC820000UX	ISWMEB20150103
DRSMC8200115UX	20.01	12	18.0	77	177	17	8	2	DRSWC820010UX	ISWMEB20150102
DRSMC8200120UX	20.01	12	18.0	67	227	17	8	2	DRSWC820010UX	ISWMEB20150103

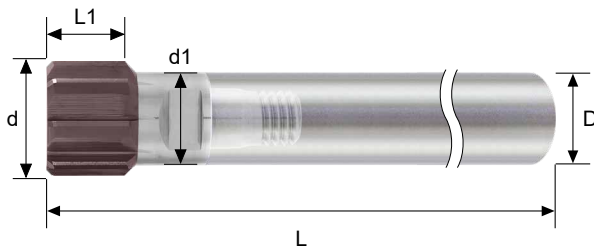
Holemaking



**DRSMC - Straight flute · Internal Coolant** 內冷模組化直刃鉸刀



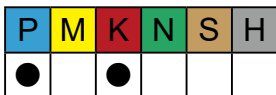
- External coolant    · Straight flute    · Right hand cutting    · UNIX coating
- d tolerance : H7
- For blind hole / through hole    · Hole tolerance : H8



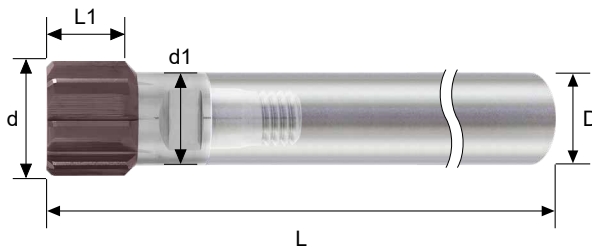
Order No.	Dia. (d)	CL (L1)	Neck Dia. (d1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)	Specifications	
								Reaming Head	Adapter
DRSMN8129910UX	12.99	8	11.7	—	119	10	8	DRSWN812990UX	ISWMEA10100060
DRSMN8129915UX	12.99	8	11.7	—	169	10	8	DRSWN812990UX	ISWMEA10150060
DRSMN8130010UX	13	8	11.7	—	119	10	8	DRSWN813000UX	ISWMEA10100060
DRSMN8130015UX	13	8	11.7	—	169	10	8	DRSWN813000UX	ISWMEA10150060
DRSMN8130110UX	13.01	8	11.7	—	119	10	8	DRSWN813010UX	ISWMEA10100060
DRSMN8130115UX	13.01	8	11.7	—	169	10	8	DRSWN813010UX	ISWMEA10150060
DRSMN8139910UX	13.99	8	12.6	—	119	11	8	DRSWN813990UX	ISWMEA11100060
DRSMN8139915UX	13.99	8	12.6	—	169	11	8	DRSWN813990UX	ISWMEA11150060
DRSMN8140010UX	14	8	12.6	—	119	11	8	DRSWN814000UX	ISWMEA11100060
DRSMN8140015UX	14	8	12.6	—	169	11	8	DRSWN814000UX	ISWMEA11150060
DRSMN8140110UX	14.01	8	12.6	—	119	11	8	DRSWN814010UX	ISWMEA11100060
DRSMN8140115UX	14.01	8	12.6	—	169	11	8	DRSWN814010UX	ISWMEA11150060
DRSMN8149907UX	14.99	10	13.5	—	97	12	8	DRSWN814990UX	ISWMEA12075060
DRSMN8149910UX	14.99	10	13.5	—	122	12	8	DRSWN814990UX	ISWMEA12100060
DRSMN8149915UX	14.99	10	13.5	—	172	12	8	DRSWN814990UX	ISWMEA12150060
DRSMN8149920UX	14.99	10	13.5	—	222	12	8	DRSWN814990UX	ISWMEA12200060
DRSMN8150007UX	15	10	13.5	—	97	12	8	DRSWN815000UX	ISWMEA12075060
DRSMN8150010UX	15	10	13.5	—	122	12	8	DRSWN815000UX	ISWMEA12100060
DRSMN8150015UX	15	10	13.5	—	172	12	8	DRSWN815000UX	ISWMEA12150060
DRSMN8150020UX	15	10	13.5	—	222	12	8	DRSWN815000UX	ISWMEA12200060
DRSMN8150107UX	15.01	10	13.5	—	97	12	8	DRSWN815010UX	ISWMEA12075060
DRSMN8150110UX	15.01	10	13.5	—	122	12	8	DRSWN815010UX	ISWMEA12100060
DRSMN8150115UX	15.01	10	13.5	—	172	12	8	DRSWN815010UX	ISWMEA12150060
DRSMN8150120UX	15.01	10	13.5	—	222	12	8	DRSWN815010UX	ISWMEA12200060
DRSMN8158707UX	15.875	10	14.3	—	97	12	8	DRSWN815870UX	ISWMEA12075060
DRSMN8158710UX	15.875	10	14.3	—	122	12	8	DRSWN815870UX	ISWMEA12100060
DRSMN8158715UX	15.875	10	14.3	—	172	12	8	DRSWN815870UX	ISWMEA12150060
DRSMN8158720UX	15.875	10	14.3	—	222	12	8	DRSWN815870UX	ISWMEA12200060

(continued)

**DRSMC - Straight flute · Internal Coolant** 內冷模組化直刃鉸刀



- External coolant    · Straight flute    · Right hand cutting    · UNIX coating
- d tolerance : H7
- For blind hole / through hole    · Hole tolerance : H8



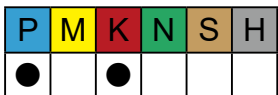
Order No.	Dia. (d)	CL (L1)	Neck Dia. (d1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)	Specifications	
								Reaming Head	Adapter
DRSMN8159907UX	15.99	10	14.4	—	97	12	8	DRSWN815990UX	ISWMEA12075060
DRSMN8159910UX	15.99	10	14.4	—	122	12	8	DRSWN815990UX	ISWMEA12100060
DRSMN8159915UX	15.99	10	14.4	—	172	12	8	DRSWN815990UX	ISWMEA12150060
DRSMN8159920UX	15.99	10	14.4	—	222	12	8	DRSWN815990UX	ISWMEA12200060
DRSMN8160007UX	16	10	14.4	—	97	12	8	DRSWN816000UX	ISWMEA12075060
DRSMN8160010UX	16	10	14.4	—	122	12	8	DRSWN816000UX	ISWMEA12100060
DRSMN8160015UX	16	10	14.4	—	172	12	8	DRSWN816000UX	ISWMEA12150060
DRSMN8160020UX	16	10	14.4	—	222	12	8	DRSWN816000UX	ISWMEA12200060
DRSMN8160107UX	16.01	10	14.4	—	97	12	8	DRSWN816010UX	ISWMEA12075060
DRSMN8160110UX	16.01	10	14.4	—	122	12	8	DRSWN816010UX	ISWMEA12100060
DRSMN8160115UX	16.01	10	14.4	—	172	12	8	DRSWN816010UX	ISWMEA12150060
DRSMN8160120UX	16.01	10	14.4	—	222	12	8	DRSWN816010UX	ISWMEA12200060
DRSMN8169910UX	16.99	10	15.3	—	124	14	8	DRSWN816990UX	ISWMEA14100080
DRSMN8169915UX	16.99	10	15.3	—	174	14	8	DRSWN816990UX	ISWMEA14150080
DRSMN8169920UX	16.99	10	15.3	—	224	14	8	DRSWN816990UX	ISWMEA14200080
DRSMN8170010UX	17	10	15.3	—	124	14	8	DRSWN817000UX	ISWMEA14100080
DRSMN8170015UX	17	10	15.3	—	174	14	8	DRSWN817000UX	ISWMEA14150080
DRSMN8170020UX	17	10	15.3	—	224	14	8	DRSWN817000UX	ISWMEA14200080
DRSMN8170110UX	17.01	10	15.3	—	124	14	8	DRSWN817010UX	ISWMEA14100080
DRSMN8170115UX	17.01	10	15.3	—	174	14	8	DRSWN817010UX	ISWMEA14150080
DRSMN8170120UX	17.01	10	15.3	—	224	14	8	DRSWN817010UX	ISWMEA14200080
DRSMN8179910UX	17.99	10	16.2	—	124	15	8	DRSWN817990UX	ISWMEA15100080
DRSMN8179915UX	17.99	10	16.2	—	174	15	8	DRSWN817990UX	ISWMEA15150080
DRSMN8179920UX	17.99	10	16.2	—	224	15	8	DRSWN817990UX	ISWMEA15200080
DRSMN8180010UX	18	10	16.2	—	124	15	8	DRSWN818000UX	ISWMEA15100080
DRSMN8180015UX	18	10	16.2	—	174	15	8	DRSWN818000UX	ISWMEA15150080
DRSMN8180020UX	18	10	16.2	—	224	15	8	DRSWN818000UX	ISWMEA15200080
DRSMN8180110UX	18.01	10	16.2	—	124	15	8	DRSWN818010UX	ISWMEA15100080
DRSMN8180115UX	18.01	10	16.2	—	174	15	8	DRSWN818010UX	ISWMEA15150080
DRSMN8180120UX	18.01	10	16.2	—	224	15	8	DRSWN818010UX	ISWMEA15200080

Holemaking

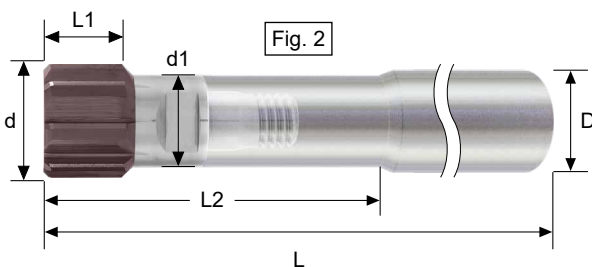
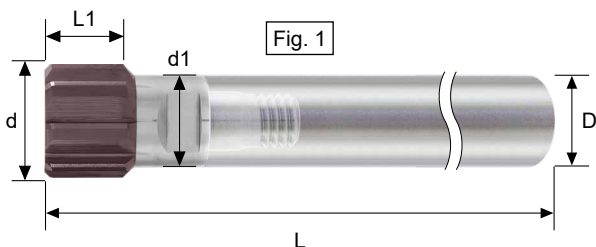
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**DRSMC - Straight flute · Internal Coolant** 內冷模組化直刃鉸刀



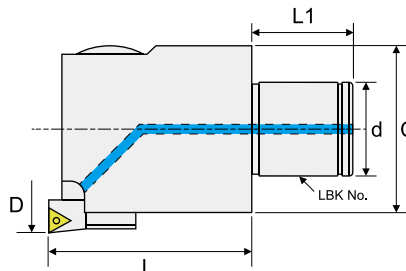
- External coolant
- Straight flute
- Right hand cutting
- UNIX coating
- d tolerance : H7
- For blind hole / through hole
- Hole tolerance : H8



Order No.	Dia. (d)	CL (L1)	Neck Dia. (d1)	EFF-L (L2)	OAL (L)	Shank (D)	Flutes (Z)	Fig.	Specifications	
									Reaming Head	Adapter
DRSMN8189910UX	18.99	10	17.1	-	127	16	8	1	DRSWN818990UX	ISWMEA16100080
DRSMN8189915UX	18.99	10	17.1	-	177	16	8	1	DRSWN818990UX	ISWMEA16150080
DRSMN8189920UX	18.99	10	17.1	-	227	16	8	1	DRSWN818990UX	ISWMEA16200080
DRSMN8189925UX	18.99	10	17.1	-	277	16	8	1	DRSWN818990UX	ISWMEA16250080
DRSMN8190010UX	19	10	17.1	-	127	16	8	1	DRSWN819000UX	ISWMEA16100080
DRSMN8190015UX	19	10	17.1	-	177	16	8	1	DRSWN819000UX	ISWMEA16150080
DRSMN8190020UX	19	10	17.1	-	227	16	8	1	DRSWN819000UX	ISWMEA16200080
DRSMN8190025UX	19	10	17.1	-	277	16	8	1	DRSWN819000UX	ISWMEA16250080
DRSMN8190110UX	19.01	10	17.1	-	127	16	8	1	DRSWN819010UX	ISWMEA16100080
DRSMN8190115UX	19.01	10	17.1	-	177	16	8	1	DRSWN819010UX	ISWMEA16150080
DRSMN8190120UX	19.01	10	17.1	-	227	16	8	1	DRSWN819010UX	ISWMEA16200080
DRSMN8190125UX	19.01	10	17.1	-	277	16	8	1	DRSWN819010UX	ISWMEA16250080
DRSMN8190510UX	19.05	10	17.1	-	127	16	8	1	DRSWN819050UX	ISWMEA16100080
DRSMN8190515UX	19.05	10	17.1	-	177	16	8	1	DRSWN819050UX	ISWMEA16150080
DRSMN8190520UX	19.05	10	17.1	-	227	16	8	1	DRSWN819050UX	ISWMEA16200080
DRSMN8190525UX	19.05	10	17.1	-	277	16	8	1	DRSWN819050UX	ISWMEA16250080
DRSMN8199915UX	19.99	12	18.0	77	177	17	8	2	DRSWN819990UX	ISWMEB20150102
DRSMN8199920UX	19.99	12	18.0	67	227	17	8	2	DRSWN819990UX	ISWMEB20150103
DRSMN8200015UX	20	12	18.0	77	177	17	8	2	DRSWN820000UX	ISWMEB20150102
DRSMN8200020UX	20	12	18.0	67	227	17	8	2	DRSWN820000UX	ISWMEB20150103
DRSMN8200115UX	20.01	12	18.0	77	177	17	8	2	DRSWN820010UX	ISWMEB20150102
DRSMN8200120UX	20.01	12	18.0	67	227	17	8	2	DRSWN820010UX	ISWMEB20150103

**DBP Finsih Boring Head · Internal Coolant** 捨棄式單刃精搪刀

- Finish boring head is suitable for finish boring
- Coolant nozzle easily cools the insert, elongating its working life.
- Boring diameter from 20mm to 202mm.



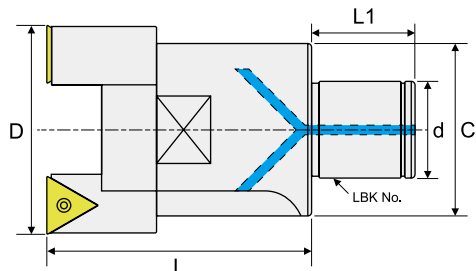
Order No.	LBK No.	D (Boring Range)	C	d	L1	L	Insert
IDBCBH20TC09	LBK1	20~26	19	11	13	35	TC..0902
IDBCBH25TC09	LBK2	25~33	24	14	16	40	
IDBCBH32TC09	LBK3	32~42	31	18	20	40	
IDBCBH40TC09	LBK4	40~55	39	22	24	50	
IDBCBH52TC11	LBK5	52~75	50	28	30	60	TC..1102
IDBCBH68TC11	LBK6	68~102	64	36	40	70	
IDBCBH100TC11	LBK6	100~152	90	36	40	70	
IDBCBH150TC11	LBK6	150~202	140	36	40	70	
IDBCBH100ATC11	LBK7	100~152	90	58	50	70	
IDBCBH150ATC11	LBK7	150~202	140	58	50	70	

※ For inserts, please refer to turning inserts 搭配刀片，請參考車刀片

Holemaking

**DBR Rough Boring Head · Internal Coolant** 捨棄式雙刀粗搪刀

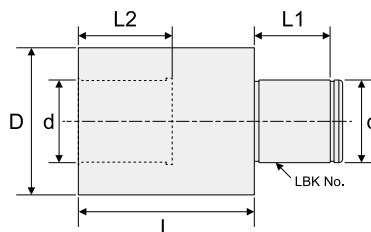
- Thickened cartridge with higher rigidity.
- Coolant nozzle easily cools the insert, elongating its working life.
- The design of chip pocket, improving chip flow of deep boring.
- Clamp plate solidifies cartridges and head, upgrading cutting rigidity.
- Patented step boring design; suitable for both level boring and step boring.



	Order No.	LBK No.	D (Boring Range)	C	d	L1	L	Insert
	IDBRBH25LACC06	LBK2	25~35	24	14	16	50	CC..06
	IDBRBH32LACC06	LBK3	32~45	31	18	20	60	CC..06
	IDBRBH32LATC11	LBK3	32~45	31	18	20	60	TC..11
	IDBRBH40LACC09	LBK4	40~55	39	22	24	74	CC..09
	IDBRBH40LATC16	LBK4	40~55	39	22	24	74	TC..16
	IDBRBH40LASC09	LBK4	40~55	39	22	24	74	SC..09
	IDBRBH52LACC09	LBK5	52~75	50	28	30	80	CC..09
	IDBRBH52LATC16	LBK5	52~75	50	28	30	80	TC..16
	IDBRBH52LASC09	LBK5	52~75	50	28	30	80	SC..09
	IDBRBH68LACC12	LBK6	68~100	66	36	40	90	CC..12
	IDBRBH68LATC16	LBK6	68~100	66	36	40	90	TC..16
	IDBRBH90LACC12	LBK6	90~130	88	36	40	100	CC..12
	IDBRBH90LATC16	LBK6	90~130	88	36	40	100	TC..16
	IDBRBH90ALACC12	LBK7	90~130	88	58	50	100	CC..12
	IDBRBH90ALATC16	LBK7	90~130	88	58	50	100	TC..16
	IDBRBH120ALACC12	LBK7	120~164	100	58	50	95	CC..12
	IDBRBH160ALACC12	LBK7	160~204	130	58	50	95	CC..12

※ For inserts, please refer to turning inserts 搭配刀片，請參考車刀片

**DBE Constant Diameter Extension** 等徑搪刀延長桿



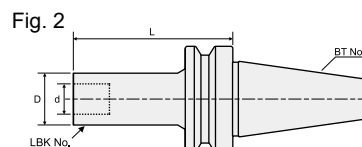
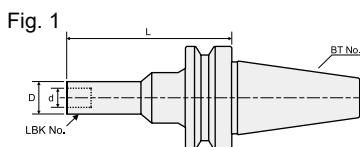
Order No.	LBK No.	d	D	L	L1	L2	Applicable Boring Heads
IDBELBK1130L	LBK1	11	19	30	13	15	IDBCBH20
IDBELBK2230L	LBK2	18	24	30	16	18	IDBCBH25; IDBRBH25
IDBELBK3330L	LBK3	22	31	30	20	22	IDBCBH32; IDBRBH32
IDBELBK4445L	LBK4	28	39	45	24	32	IDBCBH40; IDBRBH40
IDBELBK5560L	LBK5	36	50	60	30	42	IDBCBH52; IDBRBH52
IDBELBK6660L	LBK6	58	64	60	40	52	IDBCBH68; IDBCBH100; IDBCBH150; IDBRBH68; IDBRBH90
IDBELBK77105L	LBK7	14	88	105	50	26	IDBCBH100; IDBCBH150; IDBRBH90; IDBRBH120; IDBRBH160

Holemaking

Recommended Cutting Conditions 建議切削數據

Work Material		Hardness	Vc (m/min)	fr (mm/rev)
P	Mild Steel	(<180HB)	90~200	0.04~0.14
	Carbon Steel	(180~280HB)	60~180	0.04~0.15
	Alloy Steel	(280~350HB)	50~150	0.04~0.15
M	Stainless Steel	(<200HB)	60~230	0.07~0.12
K	Cast Iron	(<350Mpa)	120~230	0.04~0.13
	Ductile Cast Iron	(<450Mpa)	120~230	0.04~0.13
N	Aluminum <12% Si	-	120~700	0.04~0.25
	Aluminum >12% Si	-	120~700	0.04~0.25
S	Heat Resistant Alloy	-	20~80	0.04~0.05
H	Hardened Material	-	20~70	0.04~0.05

**DBBT Boring Taper Shank for DBP, DB Heads** 捨棄式搪刀刀柄



Order No.	Fig	LBK No.	L	D	d	Applicable Boring Heads
IDBBT30LBK1070L	2	LBK1	70	19	11	IDBCBH20
IDBBT30LBK2080L		LBK2	80	24	14	IDBCBH25; IDBRBH25
IDBBT30LBK3080L		LBK3	80	31	18	IDBCBH32; IDBRBH32
IDBBT30LBK4070L		LBK4	70	39	22	IDBCBH40; IDBRBH40
IDBBT30LBK5060L		LBK5	60	50	28	IDBCBH52; IDBRBH52
IDBBT30LBK6060L		LBK6	60	64	36	IDBCBH68; IDBRBH68; IDBRBH90
IDBBT40LBK1075L		LBK1	75	19	11	IDBCHB20
IDBBT40LBK1090L		LBK1	90			
IDBBT40LBK1105L		LBK1	105			
IDBBT40LBK2085L		LBK2	85			
IDBBT40LBK2100L		LBK2	100	24	14	IDBCBH25; IDBRBH25
IDBBT40LBK2115L		LBK2	115			
IDBBT40LBK3095L		LBK3	95	31	18	IDBCBH32; IDBRBH32
IDBBT40LBK3125L		LBK3	125			
IDBBT40LBK3155L		LBK3	155			
IDBBT40LBK4085L		LBK4	85	39	22	IDBCBH40; IDBRBH40
IDBBT40LBK4130L		LBK4	130			
IDBBT40LBK4175L		LBK4	175			
IDBBT40LBK5075L		LBK5	75			
IDBBT40LBK5125L		LBK5	125	50	28	IDBCBH52; IDBRBH52
IDBBT40LBK5175L	LBK5	175				
IDBBT40LBK6065L	LBK6	65	64	36	IDBCBH68; IDBCBH100; IDBCBH150; IDBRBH68; IDBRBH90	
IDBBT40LBK6115L	LBK6	115				
IDBBT40LBK6165L	LBK6	165				
IDBBT40LBK7100L	LBK7	100	88	58	IDBCBH100; IDBCBH150; IDBRBH90; IDBRBH120; IDBRBH160	
IDBBT50LBK1115L	1	LBK1	115	Ø31(L30) / Ø19	11	IDBCBH20
IDBBT50LBK1145L		LBK1	145			
IDBBT50LBK2125L		LBK2	125	Ø39(L15) / Ø24	14	IDBCBH25; RBH25
IDBBT50LBK2155L	LBK2	155				
IDBBT50LBK3125L	2	LBK3	125	31	18	IDBCBH32; RBH32
IDBBT50LBK3155L		LBK3	155			
IDBBT50LBK4115L		LBK4	115	39	22	IDBCBH40; RBH40
IDBBT50LBK4145L		LBK4	145			
IDBBT50LBK4175L	LBK4	175				
IDBBT50LBK4215L	1	LBK4	215	Ø50(L10) / Ø39	28	IDBCBH52; RBH52
IDBBT50LBK5105L	2	LBK5	105	50		
IDBBT50LBK5180L	2	LBK5	180			
IDBBT50LBK5240L	2	LBK5	240			
IDBBT50LBK5300L	1	LBK5	300	Ø64(L60) / Ø50	36	IDBCBH68; IDBCBH100; IDBCBH150; IDBRBH68; IDBRBH90
IDBBT50LBK6095L	2	LBK6	95	64		
IDBBT50LBK6170L		LBK6	170			
IDBBT50LBK6230L		LBK6	230			
IDBBT50LBK6290L		LBK6	290			
IDBBT50LBK6350L	1	LBK6	350	Ø90(L120) / Ø64	58	IDBCBH100; IDBCBH150; IDBRBH90; IDBRBH120; IDBRBH160
IDBBT50LBK7100L	2	LBK7	100	88		
IDBBT50LBK7150L		LBK7	150			
IDBBT50LBK7200L		LBK7	200			
IDBBT50LBK7250L		LBK7	250			
IDBBT50LBK7300L		LBK7	300			
IDBBT50LBK7350L		LBK7	350			
IDBBT50LBK7400L		LBK7	400			
IDBBT50LBK7450L		LBK7	450			
IDBBT50LBK7500L		LBK7	500			
IDBBT50LBK7550L		LBK7	550			

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	1. Check for suitable guide-bush 使用適合之鑽套 2. Reduce relief angle 減少間隙角度 3. Check for proper point angle & length of lips 檢查鑽頭尖端角度及兩邊長度是否對稱
	Generation of chattering & vibration 產生顫動、振動	1. Reduce relief angle 減少間隙角度 2. Grind web thinning 腹板削薄 3. Shortening length of drill 縮短鑽頭長度，增加剛性 4. Check for proper drill 檢查鑽頭角度研磨是否正確 5. Check for chuck & collet & socket 檢查夾具與鑽頭接觸情形 6. Pre-centering 預先鑽好中心孔 7. Inspect rigidity of the drill machine 提高工作機械的剛性
	Poor chip evacuation 切屑排出不易	1. Increase feed 加大每週進給量 2. Check for proper helix angle 選擇正確螺旋角 3. Check for proper chip space 加大槽寬比 4. Using step feed 採用間歇式進給
Deflection of hole 鑽孔傾斜	Drill won't enter work 剛切入時不良	1. Check for suitable guide-bush 使用適合之鑽套 2. Reduce feed 減少切入時之每週進給量 3. Pre-centering 預先鑽好中心孔
	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	1. Reduce cutting speed 降低切削速度 2. Check lip relief 加大間隙角 3. Increase coolant flow 充分供給切削液 4. Check for proper material 提高鑽頭之材質

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 切屑阻塞	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 切屑阻塞	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 切屑崩刃	Feed speed too high 進給速度太快	Decrease feed rate 減少每週進給量
	Tool 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

**Reamering Troubleshooting** 鉸孔加工異常原因及對策

Trouble 情況	Occurrences 原因	Countermeasures 對策
Hole size gets larger 孔太大	Run out at machine spindle, sleeve and reamer. 筒夾與刀具偏擺過大	Check for any run out of reamer diameter and biting section. 縮小筒夾與刀具偏擺
	Cutting speed or feed rate too high. 切削速度或進刀率太高	Reduce cutting speed or feed rate. 降低切削速度或進刀率
	Bevel lead angle too big. 刀具前端夾角太大	Reduce bevel lead angle. 減少刀具前端夾角
Hole size gets smaller 孔太小	The outer diameter of the reamer is seriously worn. 鉸刀磨損以致外徑變小	Use a new reamer 更換新鉸刀
	Cutting speed or feed rate too low. 切削速度或進刀率太慢	Increase cutting speed or feed rate. 提高切削速度或進刀率
	Heat expansion ratio of workpiece is too high. 鉸孔時溫度過高，導致孔膨脹後又收縮	Use cutting oil to reduce heat expansion. 使用冷卻液降低鉸孔時的溫度
Surface roughness of a hole is not sufficient 孔表面光潔度不佳	Cutting edge is worn 鉸刀變鈍	Use a new reamer 更換新鉸刀
	Cutting condition too high. 切削速度太快	Reduce cutting condition. 降低切削速度
	Stock amount is too large. 預鑽孔直徑太大	Reduce stock amount. 調整適合的預鑽孔直徑

Holemaking

**Cutting stock amount** 加工預留量

Working diameter 加工孔徑	Stock amount 預留量 (mm)
$\varnothing < 6$	0.1 ~ 0.2
$6 \leq \varnothing \leq 16$	0.2 ~ 0.3
$\varnothing > 16$	0.3 ~ 0.4