CMTéc

INDEXABLE CUTTING TOOLS

捨棄式刀具系列

2021- No.26

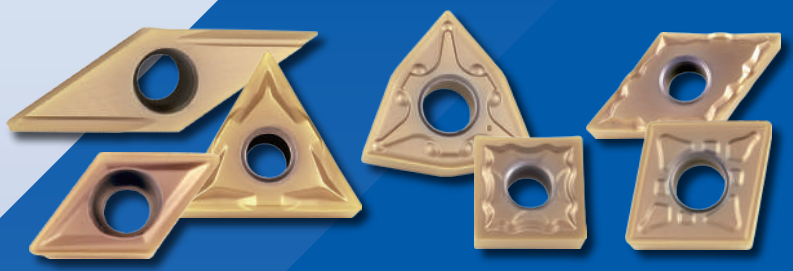
公司簡介 | COMPANY PROFILE

CMTéc 西門德克刀具成立於1987年，秉持著「不斷研發、精益求精」之理念創立台灣知名品牌，持續在航太、汽車、機械、模具、電子和醫療等各大工業領域，針對不同加工材質，研發高精準、高效率、高壽命之切削刀具（銑、鑽、鉸、搪、車、切斷、螺紋），堅持提供客戶高品質之產品。

我們製造技術技藝精湛，專業生產鎢鋼銑刀、鑽頭、鉸刀、銑牙刀、鋸片、捨棄式刀片/ 刀具、PCD超硬刀具，並協助業界精密零件開發所需之特殊成型刀具，從刀具3 D 模擬、幾何參數設計、刀具研磨、測試、銷售、再生研磨，皆有最頂尖的專業團隊負責，提供客戶完整的解決方案。

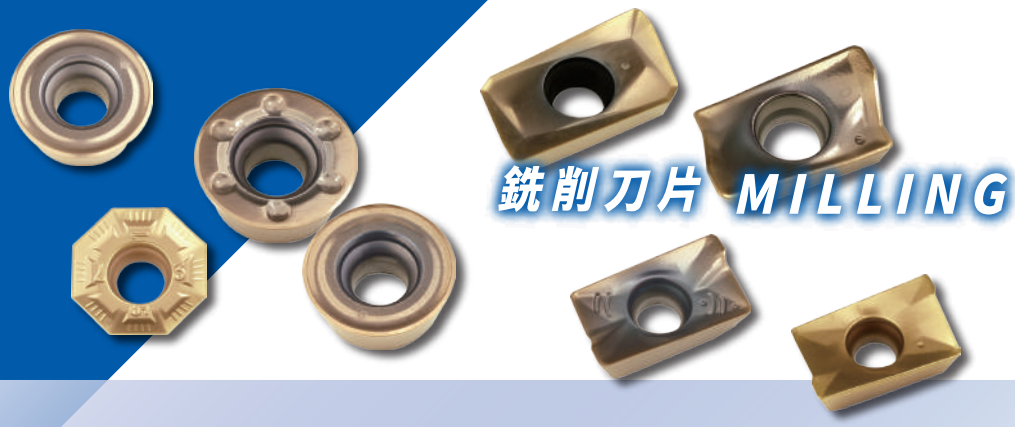
西門德克刀具廣獲國內外大廠青睞，產品行銷全球，如歐洲、亞洲、美國、日本、中國大陸等國家，並於台灣、大陸地區的廈門、昆山、寧波、東莞已設立數個服務據點，提供客戶即時需求與優越服務。

車削刀片 TURNING



CUSTOM- Designed Inserts & Toolholders

→ 專業客製化非標、成型刀片&刀桿，歡迎洽詢訂購。



銑削刀片 MILLING

CMTéc a professional cutting tool manufacturer in Taiwan, was established in 1987 with Mr. Chen. Our mission is continuous develope and excelsior, to present high quality products and service to our customers in all industries such as aerospace, automotive, mold & die, electronics and medical equipments, etc. We continuously develop high precision, efficiency a nd long-life cutting tools for different materials processing.

All our products are made in Taiwan with Swiss technology. We use the best carbide material made in Europe and put focus on end mills, drills, reamers, thread, slitting saws, inserts, PCD inserts and the other special tools, especially in customized products. From 3D simulation, geometric design, grinding, to inspecting, all of them are handled by the most professional team to provide customers with complete solutions.

CMTec is one of the leading manufacturers in Taiwan, and trusted by companies worldwide. Our products are exported to the whole world, like Europe, South-East Asia, U.S.A., Japan and Mainland China...etc. We have several branches providing high quality products and services to customers.

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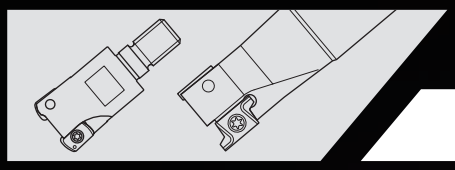

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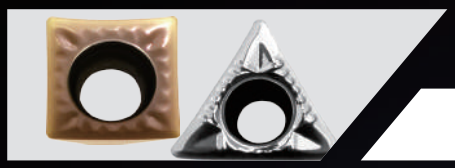

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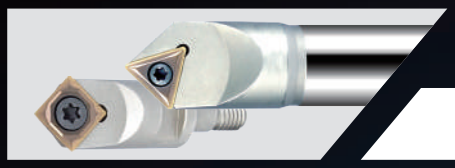

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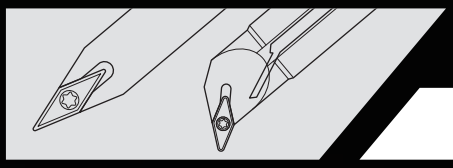

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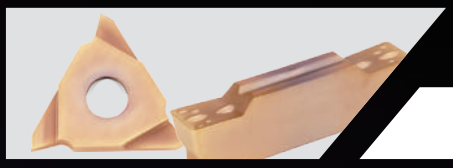

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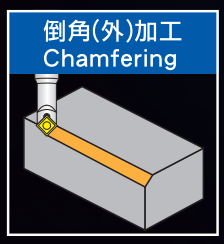
NEW

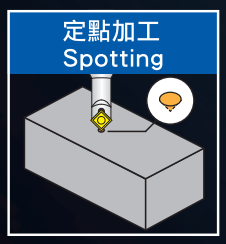
參閱 P.140

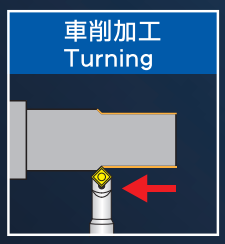
ECSC

多功能捨棄式倒角刀桿

Multipurpose Chamfering Cutter







- 一把可倒角、定點、雕刻加工完美結合的多功能切削刀具。
  A perfect multi-functional cutting tools in chamfering, spotting and engraving.
- 適合碳素鋼、合金鋼、不銹鋼、鑄鐵、鋁合金之應用。
  For carbon steel, alloy steel, stainless steel, cast iron and aluminum alloy machining.
- 適用於CNC銑床、CNC車床和CNC車銑複合加工機。
  Applicable to CNC milling machine, CNC turning machine and mill-turn machine.
- 共有4個切削刃設計，降低客戶刀具使用量。
  Total 4 cutting edges for cost-effective cutting.
- 加工震動小、穩定性高。
  Less vibration and higher stability.

CMTec

LNMX / LOMX

More Feed & More Performance

刀片雙面使用，降低客戶加工成本!

完美實現高進給面銑、仿形加工!

NEW

參閱 P.09

- 加工深度最高可達到1mm。
  Productivity- High feed rates with axial depth of cut up to 1mm.
- 高進給銑削增加切屑排出量，提高生產力。
  High Feed Milling- Increase chip removal capability and productivity.
- 高剛性的正角刀片，降低加工切削阻力，實現高效率銑削。
  Strong positive inserts for reducing cutting forces and fulfill efficient milling.
- 可雙面使用，共有4個切削刃，用於經濟型高效銑削，降低客戶加工成本。
  Cost savings- double-sided deigned with total 4 cutting edges for cost-effective milling.
- 刀片內接圓R角有1.5和1.6mm兩種，提供客戶編程設定。
  There are two inscribed circle diameter 1.5mm and 1.6mm, providing customer with programming.

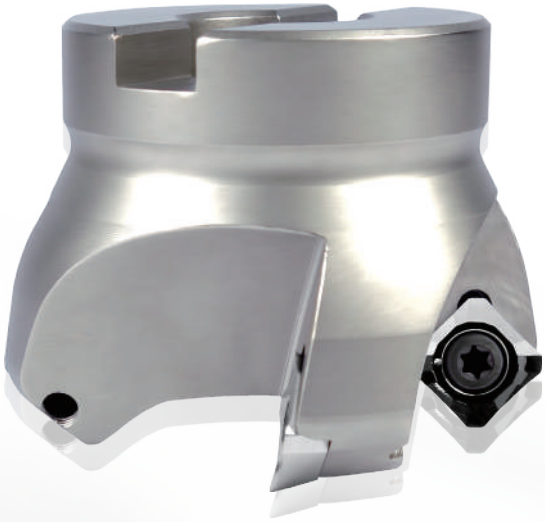
NEW

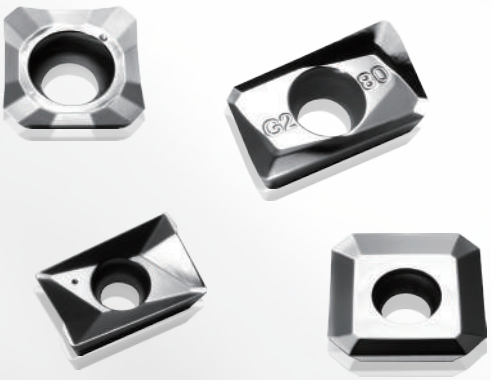
參閱 P.11

ALUMINUM

銑削用｜鎢鋼鋁用銑刀片

Milling Insert For Aluminum





鋁件專用 切削輕快

排屑順暢・刀口鋒利・不黏刀

- 提供多種切削工具：銑刀桿、銑刀頭、面銑刀盤。
  Available in multiple mounting configurations：end mill, thread shank mill and face mill type.
- 提供刀具Φ16~260mm，讓您依不同工件尺寸，有更多的刀具選擇。
  Diameters from 16mm up to 260mm, for machining different size of workpiece.
- 特殊拋光技術，降低加工時的摩擦係數，增強抗黏屑效果。
  The special polishing technology reduce friction and increase chip removel.
- 適合鋁合金、銅合金之應用。
  For aluminum alloy and copper alloy machining.
- 適合粗、中、精加工。
  Use for roughing cutting, semi finishing, finishing.

CMTéc

GROOVING / PARTING

鎢鋼切槽/切斷車刀片

NEW

參閱 P.214

高精度・高強度・堅固耐用

走心式車床加工・唯一推薦!

- 切斷深度最高可達到30mm。
  Cutting depths up to 30mm.
- 提供切槽寬度0.33~4.1mm，適合各種尺寸的零組件之凹槽加工。
  Inserts are available in widths from 0.33mm up to 4.10mm, for all grooving operations.
- 提供圓槽型切槽車刀片(R角1.0~2.0R)，適合各種尺寸的零組件之仿形加工。
  We provide Indexable insert for grooving full radius slots (1.0R ~ 2.0R), for all size components profiling.
- 適用於CNC車床、走心式車床和CNC車銑複合加工機。
  Applicable to CNC turning machine, traveling-spindle CNC lathes and mill-turn machine.
- 適合碳素鋼、合金鋼、不銹鋼、鑄鐵、鋁合金之應用。
  For carbon steel, alloy steel, stainless steel, cast iron and aluminum alloy machining.

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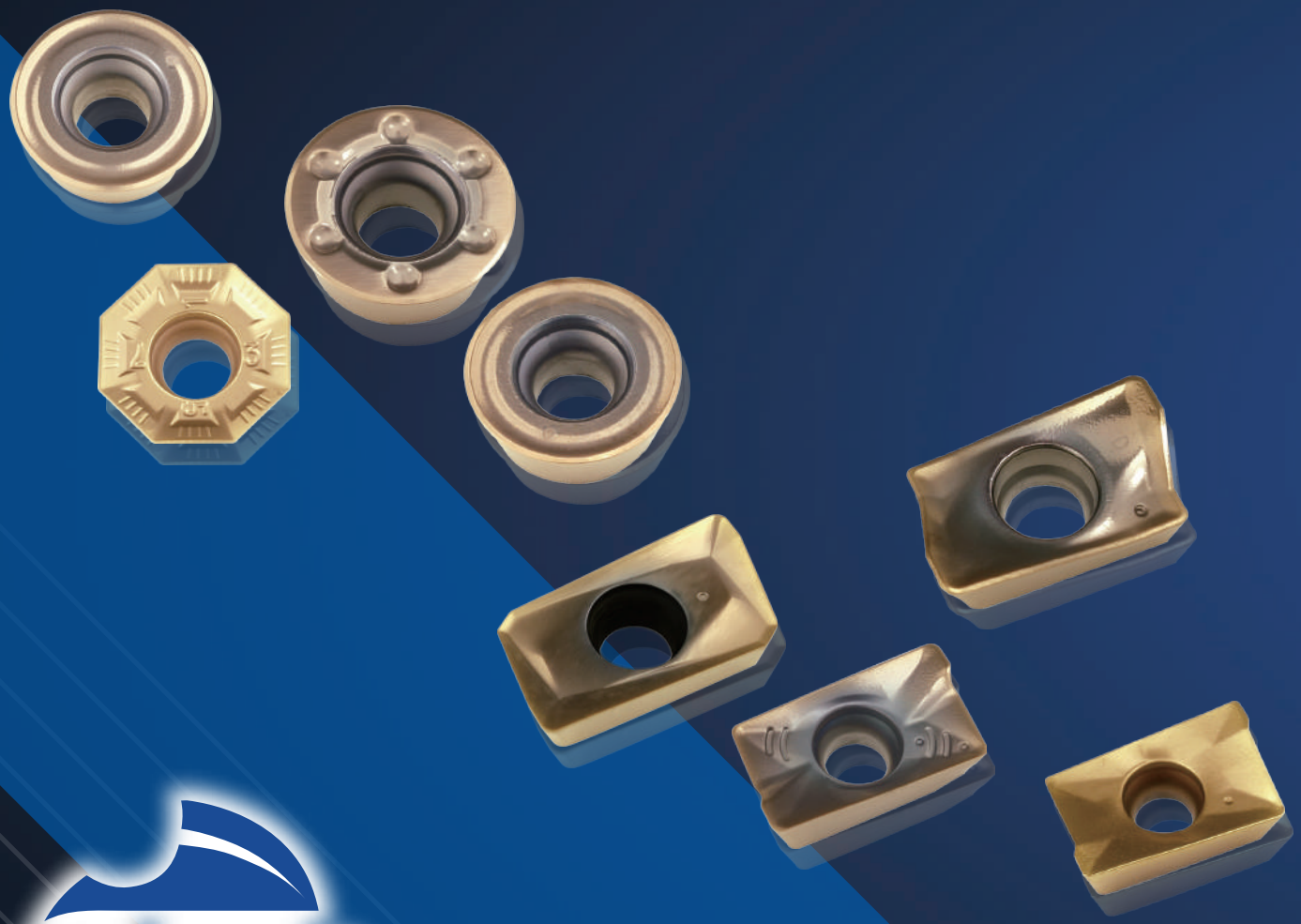
鎢鋼銑刀片系列

CARBIDE MILLING INSERT SERIES

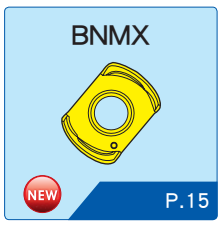


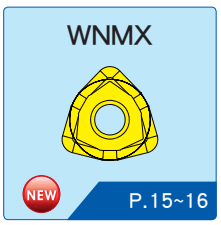
CMTéc

西門德克

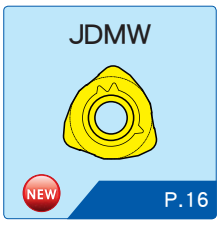
高進給面銑加工、仿形加工【高效率型】
High Feed Face Milling & Copy Milling

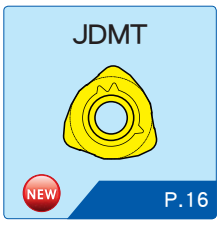
刀片可雙面使用
Double-Sided Inserts

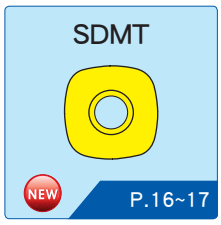


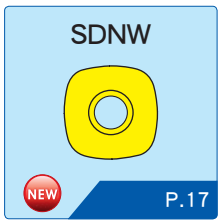


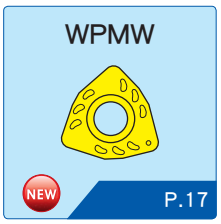
刀片單面使用
Single-Sided Inserts





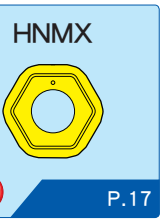


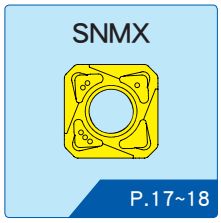




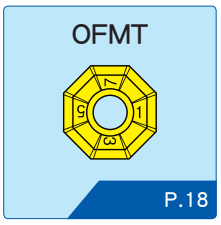
面銑加工
Face Milling

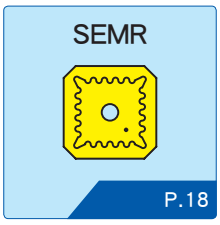
刀片可雙面使用
Double-Sided Inserts

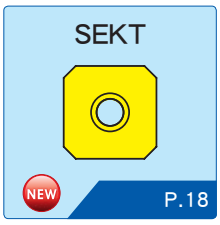


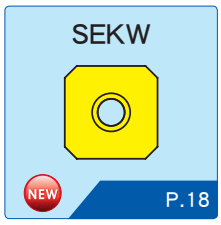


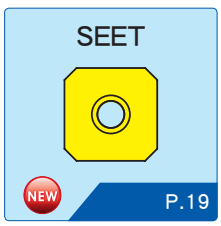
刀片單面使用
Single-Sided Inserts

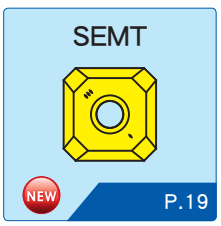


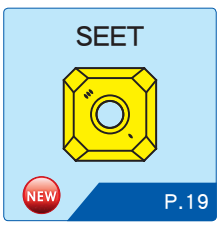


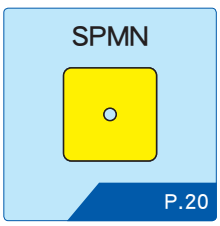






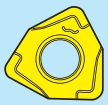




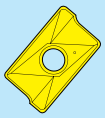


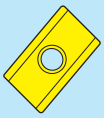
面銑加工
側銑加工
Face Milling
Side Milling

刀片可雙面使用
Double-Sided
Inserts

XNMX  NEW P.20

刀片單面使用
Single-Sided
Inserts

APKT  NEW P.20~21

APET  NEW P.21

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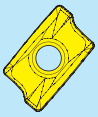
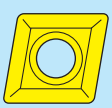
AXMT  P.22

CPMT  P.22

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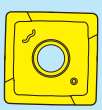
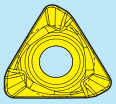
SOMT  NEW P.22

TPKR  P.23

TPMX  NEW P.23

W390  NEW P.23

ANRT  P.23

ADMT  NEW P.23

仿形加工
【高精度型】
Copy Milling-
High Precision

刀片單面使用
Single-Sided
Inserts

CMP  P.24

仿形加工
【粗加工應用】
Copy Milling-
Roughing

刀片單面使用
Single-Sided
Inserts

WP26  NEW P.24

仿形加工
面銑加工
Copy Milling
Face Milling

刀片單面使用
Single-Sided
Inserts

RDKW / RDMT

NEW
P.25~27

RDMX / RDMW

NEW
P.25~27

RPMT / RPMW

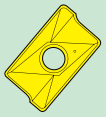
NEW
P.27~28

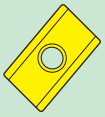
鋁合金專用
鎢鋼銑刀片
Carbide Milling
Inserts For
Aluminum Alloy

刀片單面使用
Single-Sided
Inserts

SEMT

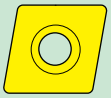
NEW
P.19

APKT

NEW
P.20

APET

NEW
P.21

APGT

NEW
P.22

CCGT

NEW
P.171

DCGT

NEW
P.172

銑刀片 ISO
編碼規範
ISO Designations
For Milling Insert
P.12~14

銑刀片斷屑槽
Milling Chip
Breaker Design
P.13

銑刀片材質碼
Milling Insert
Grades
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Milling
Toolholders
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切削條件表
【銑削】
Cutting
Condition Table
P.111

斷屑槽幾何
對照表
Insert Chip Breaker
Comparison Table
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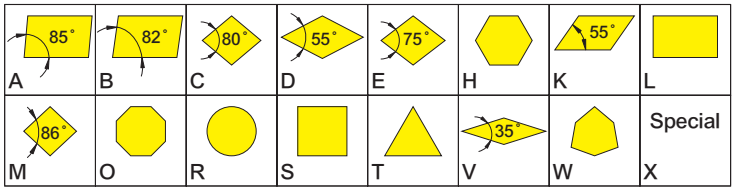
銑刀片材質碼
對照表
Milling Insert Grade
Comparison Table
P.137~138

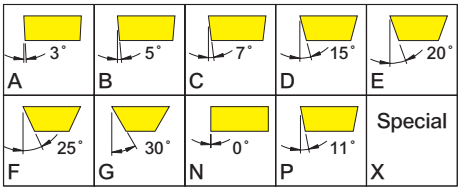
銑刀片 ISO 編碼規範
ISO DESIGNATIONS FOR MILLING INSERT

A	P	M	T		16	04	08	P	D	E	R
1	2	3	4		5	6	7	8	9	10	11

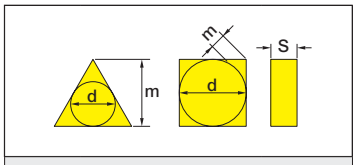
1 刀片形狀 Insert Shape



2 刀片離隙角 Clearance Angle



3 刀片公差 Tolerances Class

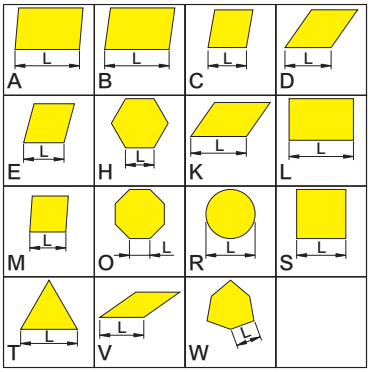


Range of Tolerance			
代號	m±	d±	S±
A	0.005	0.025	0.025
F	0.005	0.013	0.025
C	0.013	0.025	0.025
H	0.013	0.013	0.025
E	0.025	0.025	0.025
G	0.025	0.025	0.130
J	0.005	0.05~0.15	0.025
K	0.013	0.05~0.15	0.025
L	0.025	0.05~0.15	0.025
M	0.08~0.18	0.05~0.15	0.130
N	0.08~0.18	0.05~0.15	0.025
U	0.13~0.38	0.08~0.25	0.130

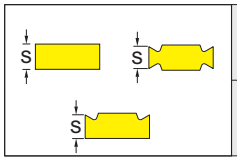
4 刀片溝孔 Chipbreaker and Hole

代號 Code	孔 Hole	斷屑槽 Chip Breaker Design	溝孔形狀 Hole Type	
N	無孔	無		
R		單面		
F		雙面		
A	有孔	無		
M		單面		
G		雙面		
W	有孔單面 40~60°	無		
T		單面		
Q	有孔雙面 40~60°	無		
U		雙面		
B	有孔單面 70~90°	無		
H		單面		
C	有孔雙面 70~90°	無		
J		雙面		
X	特殊溝孔 Special Shape			

5 刀片邊長 Insert Length

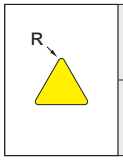


6 刀片厚度 Insert Thickness



代號 Code	01	T1	02	T2	03	T3	04	05	06	07	08
S (mm)	1.59	1.98	2.38	2.78	3.18	3.97	4.76	5.56	6.35	7.94	9.52

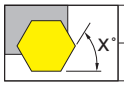
7 刀尖 R 角 Corner Radius



代號 Code	00	01	015	018	02	035	04	08	10	12	16	24	MO
R (mm)	尖刃	0.1	0.15	0.18	0.2	0.35	0.4	0.8	1.0	1.2	1.6	2.4	圓形 Round

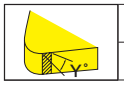
–	RG	–	CM6032
	12		13

8 主偏角 Entering Angle



A	D	E	F	H	P	X			
45°	60°	75°	85°	87°	90°	特殊			

9 修光刃 Wiper Angle

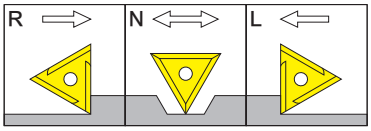


A	B	C	D	E	F	G	N	P	X
3°	5°	7°	15°	20°	25°	30°	0°	11°	特殊

10 刀口種類 Cutting Edge

F	E	T	S
尖角 Sharp	圓角 Rounded	倒角 Chamfer	倒角 + 圓角 Chamfer+Rounded

11 切削方向 Cutting Direction



12 銑刀片斷屑槽 Chip Breaker Design

斷屑槽 Chip Breaker		應 用 Application
AL	適合鋁合金加工 For Aluminum	・鋒利的大正前角刀口設計，適合非鐵系金屬加工之應用。 Large positive rake angle with sharp cutting edge for Non-ferrous metal.
FG	精加工 Finishing	・鋒利的大正前角刀口設計，適合鋼材精加工之應用。 Large positive rake angle with sharp cutting edge for finishing cutting in steel.
SM SG	半精加工 Semi Finishing	・鋒利的刀口設計，適合鋼材、不銹鋼和難切削材質的半精加工之應用。 Sharp geometry design for semi finishing cutting in steel, stainless and difficult-to-cut material.

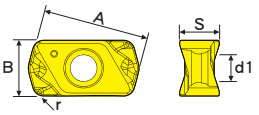
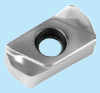
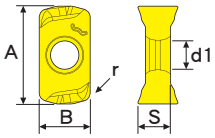
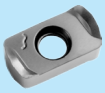
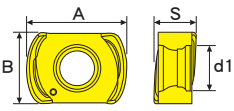
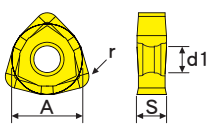
斷屑槽 Chip Breaker		應 用 Application
MF MM MG	中加工 Medium	・低切削阻力的刀口設計，適合鋼材、不銹鋼和鑄鐵的中加工之應用。 Low cutting force for medium cutting in steel, stainless and cast iron.
RG	粗加工 Roughing	・高剛性的刀口設計，適合鋼材、合金鋼和調質鋼的粗加工之應用。 Strong geometry design for rough cutting in steel, alloy steel and hardened steel.
HG	重粗加工 Heavy Roughing	・強力的刀口設計，適合鑄件和鍛造件的重粗加工之應用。 Strong negative and big chamfering cutting edge for roughing forging and cast skin.

13 銑刀片材質碼 Milling Insert Grades

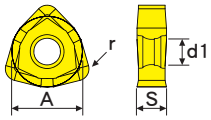
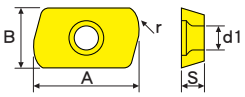
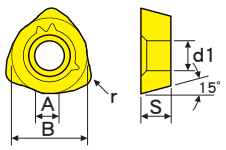
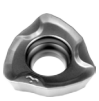
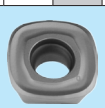
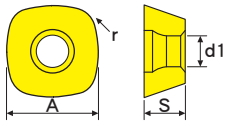
材質碼 Grade Type	塗層種類 Coating Type	特色 Features	加工特性 Application	加工材質 Work Material						產業應用範圍 Industry Area
				P	M	K	N	S	H	
CM10 (銀白色)	無塗層 Uncoated	・優越的耐磨性。 ・Superior wear resistance.	・適合精，中加工。 Finishing and medium cutting. ・適合鋁合金加工。 For aluminum alloy.	–	–	–	◎	–	–	・自行車和汽車零件。 Bike and auto parts. ・電子零件。 Electronic parts.
CM6022 (金色)	PVD (物理)	・高耐磨性。 ・High wear resistance.	・適合連續加工，精加工。 Continuous finishing cutting. ・適合調質鋼，鑄鐵加工。 For hardened steel and cast iron.	◎	◎	◎	–	○	◎	・模具產業。 Mold & die. ・硬質零件。 Hardened parts. ・航太零件。 Aircraft parts.
CM6123 (金色) 高階版 Upgrade				◎	◎	◎	–	◎	◎	
CM5332 (金色)	PVD (物理)	・耐磨性 。 ・Wear resistance . ・耐衝擊性。 ・Impact resistance.	・適合中加工。 Medium finishing. ・適合碳素鋼，合金鋼，不銹鋼，高溫合金加工。 For carbon steel, alloy steel, stainless steel and high temperature alloy.	◎	◎	◎	–	–	○	・汽車零件。 Auto parts. ・機械零件。 Machinery parts. ・航太零件。 Aircraft parts.
CM6032 (金色)				◎	◎	◎	–	○	○	
CM6133 (金色) 高階版 Upgrade				◎	◎	◎	–	◎	◎	
CM6143 (金色)	PVD (物理)	・高耐衝擊性。 ・High impact resistance. ・高韌性。 ・High toughness.	・適合粗加工或斷續加工。 Roughing or interrupted cutting. ・適合碳素鋼，合金鋼，不銹鋼，高溫合金加工。 For carbon steel, alloy steel, stainless steel and high temperature alloy.	◎	◎	◎	–	◎	–	・汽車零件。 Auto parts. ・機械零件。 Machinery parts. ・航太零件。 Aircraft parts.

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　–：不推薦 NO Recommend

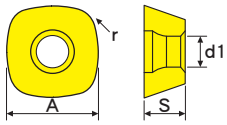
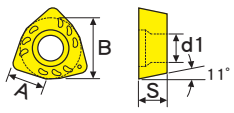
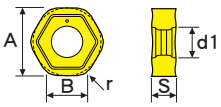
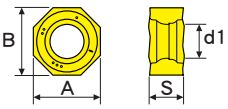
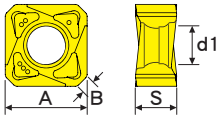
加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎	◎	◎	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend －：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	◎	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	◎	
	N	鋁合金 Aluminum Alloys	－	－	－	－	－	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	◎	○	◎	◎	
	H	調質鋼 Hardened Steels	◎	◎	○	◎	－	

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6022	CM6123	CM6032	CM6133	CM6143	A	B	S	r	d1		
應用於高進給面銑加工、仿形加工【刀片可雙面使用】。 High Feed Face Milling & Copy Milling【Double-Sided Inserts】.													
 T NEW F S M R	LNMX0303-SG	●	●	●	●	●	11.59	6.00	4.29	－	2.85		34 35 36
 T NEW F S M R	LNMX0303-MG	●	●	●	●	●	11.59	6.00	4.29	－	2.85		
 K NEW F S M R	LOGX030310-SG			●	●		11.9	6.20	3.96	－	3.45		37 38 39
 K NEW F S M R	LOGX030310-MG			●	●		11.9	6.20	3.96	－	3.45		
 T F S M R	BNMX0603-SG	●	●	●	●	●	9.00	6.38	3.75	－	3.20		40 41 42
 T F S M R	BNMX0603-MG	●	●	●	●	●	9.00	6.38	3.75	－	3.20		
 T F S M R	BNMX0603-RG	●	●	●	●	●	9.00	6.38	3.75	－	3.20		
 T NEW F S M R	BNMX0904-MG	●	●	●	●	●	11.9	9.18	4.80	－	4.20		40 41 42
 K NEW F S M R	WNMX09T316-MG	●		●	●	●	9.52	－	3.97	1.6	3.60		43 44
 K F S M R	WNMX09T316-RG	●	●	●	●	●	9.52	－	3.97	1.6	3.60		

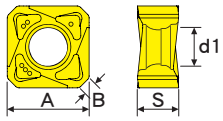
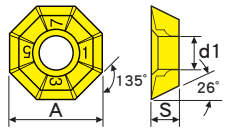
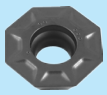
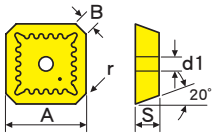
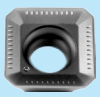
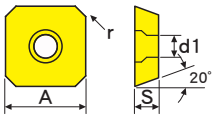
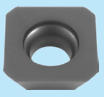
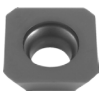
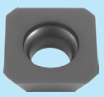
加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎	◎	◎	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend －：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	◎	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	◎	
	N	鋁合金 Aluminum Alloys	－	－	－	－	－	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	◎	○	◎	◎	
	H	調質鋼 Hardened Steels	◎	◎	○	◎	－	

刀 片 Insert				訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
					CM6022	CM6123	CM6032	CM6133	CM6143	A	B	S	r	d1		
應用於高進給面銑加工、仿形加工【刀片可雙面使用】。 High Feed Face Milling & Copy Milling【Double-Sided Inserts】.																
	S			WNMX130516-MG	●	●	●	●	●	12.7	－	6.02	1.60	4.70		44
	F	S	M	R												
應用於高進給面銑加工、仿形加工【刀片單面使用】。 High Feed Face Milling & Copy Milling【Single-Sided Inserts】.																
	S			ISR145	●		●	●	●	12.0	7.0	3.00	1.45	3.40		－
	F	S	M	R												
	S			ISR145-F	●		●	●	●	12.0	7.0	3.00	1.45	3.40		
	F	S	M	R												
	M			JDMW120420ZDSR-MG	●		●	●	●	2.5	12.0	4.76	2.00	4.75		45
	F	S	M	R												
	M			JDMW120420ZDSR-RG	●	●	●	●	●	2.5	12.0	4.76	2.00	4.75		
	F	S	M	R												
	M			JDMW140520ZDSR-MG			●	●		2.8	14.0	5.56	2.00	5.75		45
	F	S	M	R												
	M			JDMW140520ZDSR-RG			●	●		2.8	14.0	5.56	2.00	5.75		
	F	S	M	R												
	M			JDMT140520ZDSR-MG			●	●	●	2.8	14.0	5.56	2.00	5.75		
	F	S	M	R												
	H			SDMT1205ZDSN-MG	●		●	●	●	12.7	－	5.56	15.0	4.60		46
	F	S	M	R												

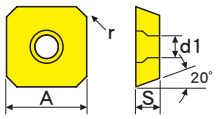
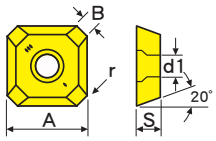
加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎	◎	◎	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend －：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	◎	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	◎	
	N	鋁合金 Aluminum Alloys	－	－	－	－	－	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	◎	○	◎	◎	
	H	調質鋼 Hardened Steels	◎	◎	○	◎	－	

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6022	CM6123	CM6032	CM6133	CM6143	A	B	S	r	d1		
應用於高進給面銑加工、仿形加工【刀片單面使用】。 High Feed Face Milling & Copy Milling【Single-Sided Inserts】.													
 H	SDMT1205ZDTN-MG		●	●	●	●	12.7	－	5.56	15.0	4.6		46
F S M R													
 H	SDMT1205ZDTN-RG		●	●	●	●	12.7	－	5.56	15.0	4.6		
F S M R													
 H NEW	SDNW1205ZDSN-MG			●	●		12.7	－	5.56	15.0	4.6		
F S M R													
 H NEW	SDNW1205ZDTN-RG	●	●	●	●	●	12.7	－	5.56	15.0	4.6		
F S M R													
應用於高進給面銑加工、仿形加工【刀片單面使用】。 High Feed Face Milling & Copy Milling【Single-Sided Inserts】.													
 T NEW	WPMW080615ZPSR-MG			●	●		8.0	12.87	6.35	1.5	5.5		－
F S M R													
 T NEW	WPMW080615ZPSR-RG			●	●		8.0	12.87	6.35	1.5	5.5		
F S M R													
應用於面銑加工【刀片可雙面使用】。 Face Milling【Double-Sided Inserts】.													
 W NEW	HNMX0704-SG			●	●	●	12.7	6.8	4.45	1.2	4.9		47
F S M R													
 W NEW	ONMX0505-RG	●		●	●	●	12.7	12.7	6.40	－	6.0		49
F S M R													
 W	SNMX1205-MG	●		●	●	●	12.7	1.50	6.40	－	6.0		48 49
F S M R													

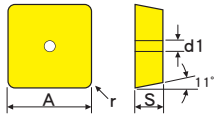
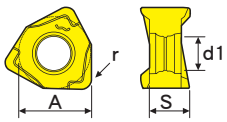
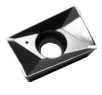
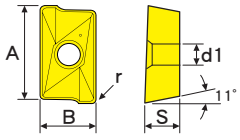
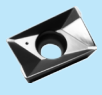
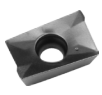
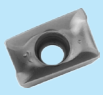
加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎	◎	◎	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend －：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	◎	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	◎	
	N	鋁合金 Aluminum Alloys	－	－	－	－	－	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	◎	○	◎	◎	
	H	調質鋼 Hardened Steels	◎	◎	○	◎	－	

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6022	CM6123	CM6032	CM6133	CM6143	A	B	S	r	d1		
應用於面銑加工【刀片可雙面使用】。 Face Milling【Double-Sided Inserts】.													
 W F S M R	SNMX1205-RG	●		●	●	●	12.7	1.50	6.40	－	6.0		48 49
應用於面銑加工【刀片單面使用】。 Face Milling【Single-Sided Inserts】.													
 T F S M R	OFMT05T3TN-MG			●	●	●	12.7	－	3.80	0.6	4.6		50
 T F S M R	OFMT05T3TN-RG			●	●	●	12.7	－	3.80	0.6	4.6		
 T F S M R	SEMR1203AFSN-RG			●	●		12.7	1.60	3.18	1.0	2.0		－
 K NEW F S M R	SEKT1204AFEN-MG			●	●		12.7	－	4.76	0.8	5.5		51
 K F S M R	SEKT1204AFTN-RG			●	●	●	12.7	－	4.76	0.8	5.5		
 K NEW F S M R	SEKW1204AFEN			●	●		12.7	－	4.76	0.8	5.5		
 K NEW F S M R	SEKW1204AFSN-F			●	●		12.7	－	4.76	0.8	5.5		
 K F S M R	SEKW1204AFTN			●	●		12.7	－	4.76	0.8	5.5		

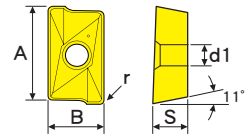
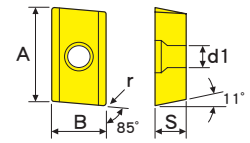
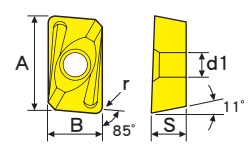
加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎	◎	—	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	—	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	—	
	N	鋁合金 Aluminum Alloys	○	—	—	—	◎	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	○	◎	◎	—	
	H	調質鋼 Hardened Steels	—	○	◎	—	—	

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6022	CM6032	CM6133	CM6143	CM10	A	B	S	r	d1		
應用於面銑加工【刀片單面使用】。 Face Milling【Single-Sided Inserts】.													
K	SEET1204AFFN-AL					●	12.7	—	4.76	0.8	5.5		51
F S M R													
K	SEET1204AFFN-FG	●					12.7	—	4.76	0.8	5.5		
F S M R													
M	SEMT13T3AGEN-MG	●	●	●	●		13.4	1.9	3.97	1.5	4.2		52
F S M R													
M	SEMT13T3AGSN-MG	●	●	●	●		13.4	1.9	3.97	1.5	4.2		
F S M R													
M	SEMT13T3AGEN-MG	●	●	●	●		13.4	1.9	3.97	1.5	4.2		
F S M R													
M	SEMT13T3AGTN-MG	●	●	●	●		13.4	1.9	3.97	1.5	4.2		
F S M R													
M	SEMT13T3AGTN-RG		●	●	●		13.4	1.9	3.97	1.5	4.2		
F S M R													
M	SEMT13T3AGTN-HG		●	●	●		13.4	1.9	3.97	1.5	4.2		
F S M R													
M	SEET13T3AGFN-AL					●	13.4	1.9	3.97	1.5	4.2		
F S M R													
M	SEET13T3AGFN-FG	●					13.4	1.9	3.97	1.5	4.2		
F S M R													

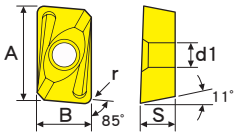
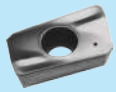
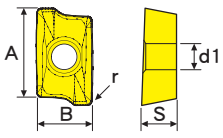
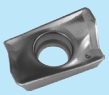
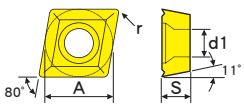
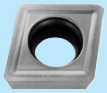
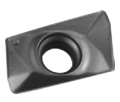
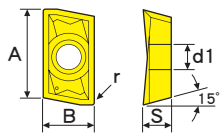
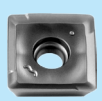
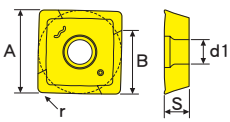
加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎	◎	—	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	—	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	—	
	N	鋁合金 Aluminum Alloys	○	—	—	—	◎	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	○	◎	◎	—	
	H	調質鋼 Hardened Steels	—	○	◎	—	—	

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6022	CM6032	CM6133	CM6143	CM10	A	B	S	r	d1		
應用於面銑加工【刀片單面使用】。 Face Milling【Single-Sided Inserts】.													
	SPMN120308		●				12.7	—	3.18	0.8	2.00		53
F S M R													
應用於面銑、側銑加工【刀片可雙面使用】。 Face Milling & Side Milling【Double-Sided Inserts】.													
S 	XNMX040304-SG	●	●	●			6.7	—	3.28	0.4	3.15		54 55 56
F S M R													
S 	XNMX040304-MG	●	●	●			6.7	—	3.28	0.4	3.15		
	XNMX040308-MG	●	●	●	●		6.7	—	3.28	0.8	3.15		
F S M R													
S  NEW	XNMX080608-MG	●	●	●	●		12.53	—	6.50	0.8	4.50		56
F S M R													
S  NEW	XNMX080608-RG		●	●	●		12.53	—	6.50	0.8	4.50		
F S M R													
應用於面銑、側銑加工【刀片單面使用】。 Face Milling & Side Milling【Single-Sided Inserts】.													
I  NEW	APKT100304PDER-AL					●	10.5	6.7	3.50	0.4	2.80		57
F S M R													
I  NEW	APKT100304PDER-SG	●					10.5	6.7	3.50	0.4	2.80		
F S M R													
I 	APKT100304PDER-MG	●	●	●	●		10.5	6.7	3.50	0.4	2.80		
	APKT100308PDER-MG	●	●	●	●		10.5	6.7	3.50	0.8	2.80		
F S M R													
I 	APKT100304PDER-RG		●	●			10.5	6.7	3.50	0.4	2.80		
F S M R													

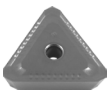
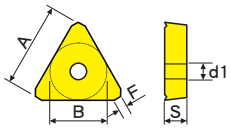
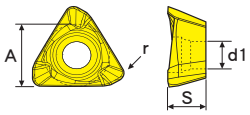
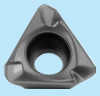
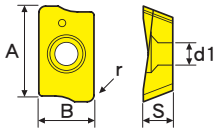
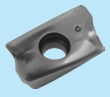
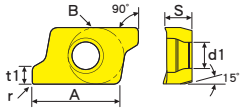
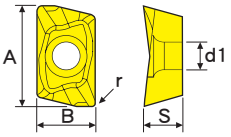
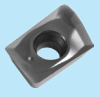
加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎	◎	—	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	—	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	—	
	N	鋁合金 Aluminum Alloys	○	—	—	—	◎	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	○	◎	◎	—	
	H	調質鋼 Hardened Steels	—	○	◎	—	—	

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6022	CM6032	CM6133	CM6143	CM10	A	B	S	r	d1		
應用於面銑、側銑加工【刀片單面使用】。 Face Milling & Side Milling【Single-Sided Inserts】.													
T	APKT160408PDER-MG	●	●	●	●		16.3	9.52	5.25	0.8	4.5		58
F S M R													
I	APKT160408PDER-RG	●	●	●	●		16.3	9.52	5.25	0.8	4.5		
F S M R													
I	APKT170516PEER-RG	●	●	●	●		18.5	10.7	5.56	1.6	4.5		58
F S M R													
I NEW	APET160402PDFR-AL					●	16.3	9.52	5.25	0.2	4.5		58
	APET160404PDFR-AL					●	16.3	9.52	5.25	0.4	4.5		
F S M R													
I NEW	APET160402PDFR-FG	●					16.3	9.52	5.25	0.2	4.5		
	APET160404PDFR-FG	●					16.3	9.52	5.25	0.4	4.5		
F S M R													
S	APMT103508PDER-RG	●	●	●	●		10.64	6.50	3.50	0.8	3.0		59
F S M R													
M	APMT113508PDER-MG	●	●	●	●		11.0	6.35	3.50	0.8	2.8		60 61 63 65
	APMT113516PDER-MG			●	●		11.0	6.35	3.50	1.6	2.8		
F S M R													
M	APMT113508PDER-RG	●	●	●	●		11.0	6.35	3.50	0.8	2.8		
F S M R													
M	APMT113508PDER-HG		●	●	●		11.0	6.35	3.50	0.8	2.8		
F S M R													
M	APMT160408PDER-MG	●	●	●	●		16.5	9.52	4.76	0.8	4.4		62 64 66
	APMT160416PDER-MG			●	●		16.5	9.52	4.76	1.6	4.4		
F S M R													

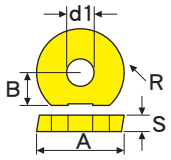
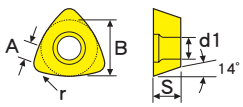
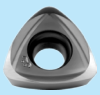
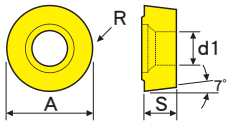
加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎	◎	—	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	—	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	—	
	N	鋁合金 Aluminum Alloys	○	—	—	—	◎	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	○	◎	◎	—	
	H	調質鋼 Hardened Steels	—	○	◎	—	—	

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6022	CM6032	CM6133	CM6143	CM10	A	B	S	r	d1		
應用於面銑、側銑加工【刀片單面使用】。 Face Milling & Side Milling【Single-Sided Inserts】.													
 M F S M R	APMT160408PDER-RG	●	●	●	●		16.5	9.52	4.76	0.8	4.4		62 64 66
 M F S M R	APMT160408PDER-HG	●	●	●	●		16.5	9.52	4.76	0.8	4.4		
 M NEW F S M R	APGT160408PDER-AL					●	16.5	9.52	4.76	0.8	4.4		
 M NEW F S M R	APGT160408PDER-FG	●					16.5	9.52	4.76	0.8	4.4		
 S F S M R	AXMT123508PEER-RG	●	●	●	●		12.18	6.93	3.58	0.8	3.4		67
 S F S M R	AXMT170508PEER-RG		●	●	●		17.5	10.2	5.56	0.8	4.6		68
	AXMT170516PEER-RG		●	●	●		17.5	10.2	5.56	1.6	4.6		69 70
 H F S M R	CPMT090308-MG		●				9.52	—	3.18	0.8	4.4		—
 H F S M R	CPMT120408-MG		●				12.7	—	4.76	0.8	5.5		—
 H F S M R	JDMT150508R-MG		●	●	●		15.1	9.12	5.00	0.8	4.5		71
 S NEW F S M R	SOMT08T308-SG			●			8.5	5.6	3.30	0.8	2.8		72
	SOMT140408-SG			●	●		13.8	10.3	3.90	0.8	4.1		

加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎	◎	◎	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend －：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	◎	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	◎	
	N	鋁合金 Aluminum Alloys	－	－	－	－	－	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	◎	○	◎	◎	
	H	調質鋼 Hardened Steels	◎	◎	○	◎	－	

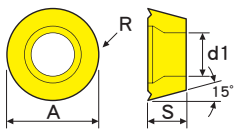
刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6022	CM6123	CM6032	CM6133	CM6143	A	B	S	r	d1		
應用於面銑、側銑加工【刀片單面使用】。 Face Milling & Side Milling【Single-Sided Inserts】.													
 I F S M R	TPKR1603PPR-MG			●	●		16.5	9.52	3.10	－	2.20		－
	TPKR1603PPR-RG			●	●	●	16.5	9.52	3.10	－	2.20		
 T NEW F S M R	TPMX100408-SG			●	●		6.90	－	4.00	0.8	3.00		73 74 75
 T NEW F S M R	TPMX100408-MG	●	●	●	●	●	6.90	－	4.00	0.8	3.00		
 T NEW F S M R	TPMX150508-MG	●	●	●	●	●	10.7	－	5.00	0.8	4.85		73
 S F S M R	W39011T308-MG	●	●	●	●	●	11.0	6.90	3.59	0.8	2.80		76
	W39011T320-MG	●	●	●	●		11.0	6.90	3.59	2.0	2.80		
 S NEW F S M R	W390180612-SG			●	●	●	15.4	11.0	6.33	1.2	4.20		－
 S F S M R	ANRT070204-RG	●	●	●	●	●	6.40	4.30	2.38	0.4	2.20		77 ~ 81
	ANRT100308-RG	●	●	●	●	●	9.30	6.35	3.40	0.8	2.90		
 S NEW F S M R	ADMT060208-SG			●	●		7.00	4.09	2.45	0.8	2.00		82 83
 S F S M R	ADMT060204-MG	●		●	●		7.00	4.09	2.45	0.4	2.00		
	ADMT060208-MG	●	●	●	●	●	7.00	4.09	2.45	0.8	2.00		
	ADMT060216-MG				●	●	7.00	4.09	2.45	1.6	2.00		
 S NEW F S M R	ADMT10T308-SG			●	●	●	11.08	6.86	3.80	0.8	3.00		－

加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎	◎	◎	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend －：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	◎	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	◎	
	N	鋁合金 Aluminum Alloys	－	－	－	－	－	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	◎	○	◎	◎	
	H	調質鋼 Hardened Steels	◎	◎	○	◎	－	

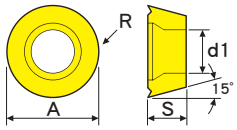
刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6022	CM6123	CM6032	CM6133	CM6143	A	B	S	R 角	d1		
應用於仿形加工 - 高精度型【刀片單面使用】。 Copy Milling- High Precision【Single-Sided Inserts】.													
W  F S M R	CMP32D12-SM	●					12	6.00	2.50	6R	5.0		84 85
	CMP32D16-SM	●					16	6.00	3.00	8R	5.0		
	CMP32D20-SM	●					20	6.00	3.00	10R	5.0		
	CMP32D25-SM	●					25	9.00	4.00	12.5R	6.0		
	CMP32D32-SM	●					32	10.0	5.00	16R	8.0		
W  F S M R	CMP32D12-MM	●					12	6.00	2.50	6R	5.0		
	CMP32D16-MM	●					16	6.00	3.00	8R	5.0		
	CMP32D20-MM	●					20	6.00	3.00	10R	5.0		
	CMP32D25-MM	●					25	9.00	4.00	12.5R	6.0		
	CMP32D32-MM	●					32	10.0	5.00	16R	8.0		
應用於仿形加工 - 粗加工用【刀片單面使用】。 Copy Milling- Roughing【Single-Sided Inserts】.													
W  NEW F S M R	WP26339R14-RG	●	●	●	●	●	－	9.52	3.97	1.2	4.4		86 87
W  NEW F S M R	WP26379R25-RG	●	●	●	●	●	1.1	13.0	5.56	2.0	5.5		86 87 88
應用於仿形加工、面銑加工【刀片單面使用】。 Copy Milling & Face Milling【Single-Sided Inserts】.													
S  NEW F S M R	RCMT1204MO-FG	●		●			12.0	－	4.76	6R	4.2		－

加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎	◎	◎	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend －：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	◎	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	◎	
	N	鋁合金 Aluminum Alloys	－	－	－	－	－	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	◎	○	◎	◎	
	H	調質鋼 Hardened Steels	◎	◎	○	◎	－	

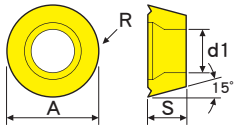
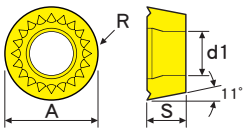
刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6022	CM6123	CM6032	CM6133	CM6143	A	R 角	S	d1	－		
RD 銑刀片系列 RD Insert Series： 應用於仿形加工、面銑加工【刀片單面使用】。 Copy Milling & Face Milling【Single-Sided Inserts】.													
 S F S M R	RDKW0501MOE	●		●	●	●	5	2.5R	1.59	2.20	－		89 93
 S F S M R	RDKW0501MOT	●		●	●	●	5	2.5R	1.59	2.20	－		
 S F S M R	RDKW0702MOE	●		●	●	●	7	3.5R	2.38	2.80	－		90 93
 S NEW F S M R	RDKW0702MOS-F			●	●		7	3.5R	2.38	2.80	－		
 S F S M R	RDKW0702MOT	●		●	●	●	7	3.5R	2.38	2.80	－		
 T F S M R	RDMT1003MOE	●		●	●	●	10	5.0R	3.18	3.90	－		91 93 95
 T F S M R	RDMT1003MOT	●	●	●	●	●	10	5.0R	3.18	3.90	－		
 K F S M R	RDMX1003MOE	●		●	●	●	10	5.0R	3.18	4.15	－		
 K F S M R	RDMX1003MOT	●		●	●	●	10	5.0R	3.18	4.15	－		
 H F S M R	RDMT10T3MOE	●		●	●	●	10	5.0R	3.97	4.50	－		92 94 96



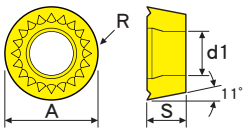
加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎	◎	◎	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend －：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	◎	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	◎	
	N	鋁合金 Aluminum Alloys	－	－	－	－	－	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	◎	○	◎	◎	
	H	調質鋼 Hardened Steels	◎	◎	○	◎	－	

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6022	CM6123	CM6032	CM6133	CM6143	A	R 角	S	d1	－		
RD 銑刀片系列 RD Insert Series： 應用於仿形加工、面銑加工【刀片單面使用】。 Copy Milling & Face Milling【Single-Sided Inserts】.													
 H	RDMT10T3MOT	●		●	●	●	10	5R	3.97	4.5	－		92 94 96
F S M R													
 H	RDMW10T3MOE			●	●		10	5R	3.97	4.5	－		
F S M R													
 H	RDMW10T3MOT			●	●		10	5R	3.97	4.5	－		
F S M R													
 T	RDMT12T3MOE	●		●	●		12	6R	3.97	4.1	－		
F S M R													
 T	RDMT12T3MOT	●		●	●		12	6R	3.97	4.1	－		
F S M R													
 L	RDMX12T3MOE	●		●	●	●	12	6R	3.97	4.1	－		－
F S M R													
 L	RDMX12T3MOT	●		●	●	●	12	6R	3.97	4.1	－		
F S M R													
 H	RDMT1204MOE	●		●	●	●	12	6R	4.76	4.4	－		
F S M R													
 H	RDMT1204MOT	●		●	●	●	12	6R	4.76	4.4	－		92
F S M R													
 W	RDMW1204MOE	●		●	●	●	12	6R	4.76	4.4	－		
F S M R													

加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎	◎	◎	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend －：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	◎	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	◎	
	N	鋁合金 Aluminum Alloys	－	－	－	－	－	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	◎	○	◎	◎	
	H	調質鋼 Hardened Steels	◎	◎	○	◎	－	

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6022	CM6123	CM6032	CM6133	CM6143	A	R 角	S	d1	－		
RD 銑刀片系列 RD Insert Series： 應用於仿形加工、面銑加工【刀片單面使用】。 Copy Milling & Face Milling【Single-Sided Inserts】.													
 W	RDMW1204MOS-F				●	●	12	6R	4.76	4.4	－		92
F S M R													
 W	RDMW1204MOT	●		●	●	●	12	6R	4.76	4.4	－		
F S M R													
 H	RDMT1604MOT	●		●	●	●	16	8R	4.76	5.5	－		97
F S M R													
 H	RDMW1604MOE	●		●	●	●	16	8R	4.76	5.5	－		
F S M R													
 H	RDMW1604MOS-F	●		●	●	●	16	8R	4.76	5.5	－		
F S M R													
 H	RDMW1604MOT	●	●	●	●	●	16	8R	4.76	5.5	－		
F S M R													
RP 銑刀片系列 RP Insert Series： 應用於仿形加工、面銑加工【刀片單面使用】。 Copy Milling & Face Milling【Single-Sided Inserts】.													
 M	RPMT08T2MOE			●	●	●	8	4R	2.78	3.2	－		98
F S M R													
 M	RPMT08T2MOT			●	●	●	8	4R	2.78	3.2	－		
F S M R													
 M	RPMW1003MOE	●		●	●	●	10	5R	3.18	4.6	－		98 99
F S M R													

加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎	◎	◎	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend －：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	◎	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	◎	
	N	鋁合金 Aluminum Alloys	－	－	－	－	－	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	◎	○	◎	◎	
	H	調質鋼 Hardened Steels	◎	◎	○	◎	－	

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6022	CM6123	CM6032	CM6133	CM6143	A	R 角	S	d1	－		
RP 銑刀片系列 RP Insert Series： 應用於仿形加工、面銑加工【刀片單面使用】。 Copy Milling & Face Milling【Single-Sided Inserts】.													
 M	RPMW1003MOS-F				●		10	5R	3.18	4.6	－		98
F S M R													
 M	RPMW1003MOT	●		●	●	●	10	5R	3.18	4.6	－		98 99
F S M R													
 M	RPMT10T3MOE			●	●	●	10	5R	3.97	4.3	－		98
F S M R													
 M	RPMT10T3MOT			●	●	●	10	5R	3.97	4.3	－		
F S M R													
 M	RPMT1204MOE	●		●	●	●	12	6R	4.76	4.3	－		98 99 100
F S M R													
 M	RPMT1204MOT	●		●	●	●	12	6R	4.76	4.3	－		
F S M R													
 M	RPMW1204MOE			●	●	●	12	6R	4.76	4.3	－		
F S M R													
 M	RPMW1204MOT			●	●	●	12	6R	4.76	4.3	－		
F S M R													

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銑刀桿系列

MILLING TOOLS SERIES

CMTéc

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高進給面銑加工、仿形加工【高效率型】
High Feed Face Milling & Copy Milling

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Double-Sided Inserts

P.34 Φ16~32

P.35 Φ17~32

P.36 Φ50

P.37 Φ16~33

P.38 Φ16~33

P.39 Φ40~50

P.40 Φ16~35

P.41 Φ16~42

P.42 Φ50~100

P.43 Φ25~32

P.44 Φ50~80

刀片單面使用
Single-Sided Inserts

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P.46 Φ50~80

P.87 Φ32~50

P.88 Φ50~160

面銑加工
Face Milling

刀片可雙面使用
Double-Sided Inserts

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P.48 Φ50~160

P.49 Φ50~100

刀片單面使用
Single-Sided Inserts

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P.51 Φ50~160

P.52 Φ50~260

P.53 Φ80~300

面銑加工
側銑加工
Face Milling
Side Milling

刀片可雙面使用
Double-Sided Inserts

P.54 Φ20~32

P.55 Φ17~32

P.56 Φ50~160

面銑加工
側銑加工
Face Milling
Side Milling

刀片單面使用
Single-Sided
Inserts

P.57 Φ16~32

P.58 Φ24~32

P.59 Φ15~25

P.60 Φ14.2~32.0

P.62 Φ25~35

P.63 Φ11~36

P.64 Φ25~35

P.65 Φ40~80

P.66 Φ40~125

P.67 Φ10~33

P.68 Φ25~33

P.69 Φ26~35

P.70 Φ40~125

P.71 Φ25~35

P.72 Φ50~80

P.73 Φ20~40

P.74 Φ21~33

P.75 Φ50~63

P.76 Φ16~35

P.77 Φ6~21

P.78 Φ16~35

P.80 Φ9~35

P.81 Φ50~66

P.82 Φ10~17

P.83 Φ10~25

仿形加工
【高精度型】
Copy Milling-
High Precision

刀片單面使用
Single-Sided
Inserts

P.84 6~16R

P.85 6~16R

仿形加工 【粗加工應用】 Copy Milling- Roughing	刀片單面使用 Single-Sided Inserts	HBWP NEW  P.86 12.5~25.0R			
仿形加工 面銑加工 Copy Milling Face Milling	刀片單面使用 Single-Sided Inserts	ERD  P.89 Φ10~17	ERD  P.90 Φ15~35	ERD  P.91 Φ20~35	
ERD  P.92 Φ25~40	HRD  P.93 Φ12~42	HRD  P.94 Φ20~42	FRDX  P.95 Φ50~80	FRD  P.96 Φ40~86	
FRD  P.97 Φ50~160	ERP  P.98 Φ20~40	HRP  P.99 Φ25~35	FRP  P.100 Φ50~100		
T 型加工 T-Slot Milling	刀片單面使用 Single-Sided Inserts	ETCC  P.101 Φ21~50	FTCC  P.102 Φ100~125		
鳩尾槽加工 Dovetail Milling	刀片單面使用 Single-Sided Inserts	EDDC  P.103 Φ16~60			
鎢鋼銑刀頭 Thread- Carbide End Mills	CHS  P.104 Φ8~32	CHCR  P.105 Φ8~20	CHB  P.106 4.0~12.5R		

鎢鋼抗震刀桿
Carbide
Vibration Holder

P.107 Φ8~32

P.108 Φ11.7~31.5

扭力扳手
Torque Wrench

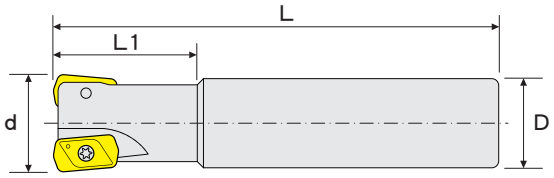
P.109 T6~20

鎢鋼銑刀片
Carbide Milling
Inserts
P.09

切削條件表
【銑削】
Cutting
Condition Table
P.111

斷屑槽幾何
對照表
Insert Chip Breaker
Comparison Table
P.136

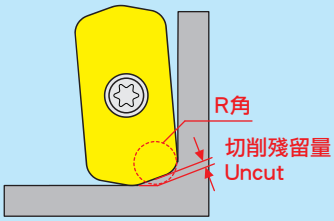
銑刀片材質碼
對照表
Milling Insert Grade
Comparison Table
P.137~138



Milling Table 01

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
ELN03-02016-100L	16	30	100	16	2	LNMX0303..	TS2535	ETF07
ELN03-03020-150L	20	50	150	20	3			
ELN03-04020-130L	20	50	130	20	4			
ELN03-04025-150L	25	60	150	25	4			
ELN03-06032-150L	32	70	150	32	6			

R 角編程設定 Programming- Corner R		
刀片 Insert	內接圓 R 角 Input. R	切削殘留量 Uncut
LNMX0303	1.5 mm	0.5 mm

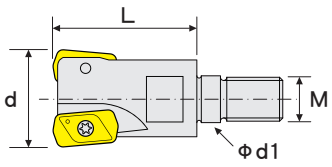


▶ 搭配刀片 Insert → Page：P.15　　▶ 切削條件表 Cutting Condition Table → Page：P.111

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	◎	—	◎	◎	—	○

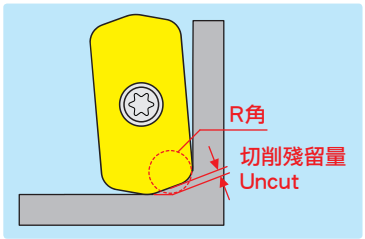
◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 01

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
HLN03-02017	17	26	8.5	M8	2	LNMX0303..	TS2535	ETF07
HLN03-03021	21	32	10.5	M10	3			
HLN03-04026	26	38	12.5	M12	4			
HLN03-04032	32	41	17.0	M16	4			

R 角編程設定 Programming- Corner R		
刀片 Insert	內接圓 R 角 Input. R	切削殘留量 Uncut
LNMX0303	1.5 mm	0.5 mm

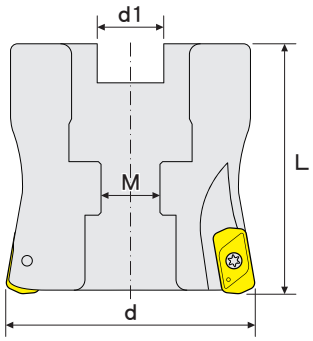


搭配刀片 Insert → Page：P.15
切削條件表 Cutting Condition Table → Page：P.111
鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	◎	—	◎	◎	—	○

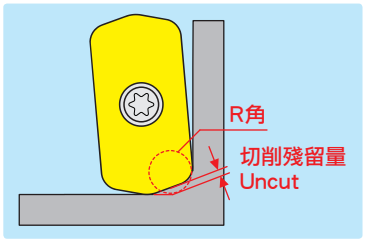
◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 01

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
FLN03-05050-2200	50	50	22.00	—	5	LNMX0303..	TS2535	ETF07
FLN03-08050-2200	50	50	22.00	—	8			

R 角編程設定 Programming- Corner R		
刀片 Insert	內接圓 R 角 Input. R	切削殘留量 Uncut
LNMX0303	1.5 mm	0.5 mm

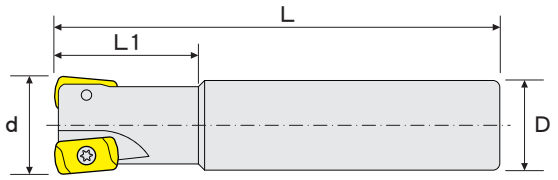


▶ 搭配刀片 Insert → Page：P.15　　▶ 切削條件表 Cutting Condition Table → Page：P.111

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	◎	—	◎	◎	—	○

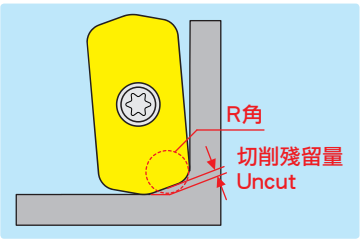
◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



02

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
ELO03-02016-150L	16	30	150	16	2	LOGX0303..	MS3007K	ETF08
ELO03-02017-150L	17	25	150	16	2			
ELO03-03020-150L	20	35	150	20	3			
ELO03-03021-150L	21	30	150	20	3			
ELO03-04025-150L	25	40	150	25	4			
ELO03-04025-200L	25	40	200	25	4			
ELO03-04026-150L	26	35	150	25	4			
ELO03-04026-200L	26	35	200	25	4			
ELO03-05032-150L	32	50	150	32	5			
ELO03-05032-200L	32	50	200	32	5			
ELO03-05033-150L	33	40	150	32	5			
ELO03-05033-200L	33	40	200	32	5			

R 角編程設定 Programming- Corner R		
刀片 Insert	內接圓 R 角 Input. R	切削殘留量 Uncut
LOGX0303	1.6 mm	0.39 mm



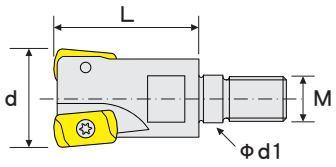
搭配刀片 Insert → Page：P.15

切削條件表 Cutting Condition Table → Page：P.111

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	◎	—	◎	◎	—	○

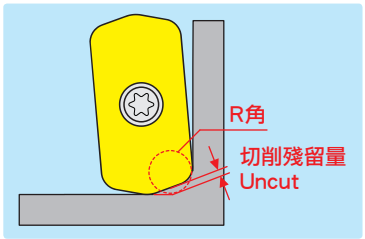
◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 02

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
HLO03-02016	16	25	8.5	M8	2	LOGX0303..	MS3007K	ETF08
HLO03-02017	17	25	8.5	M8	2			
HLO03-03020	20	30	10.5	M10	3			
HLO03-03021	21	30	10.5	M10	3			
HLO03-04025	25	35	12.5	M12	4			
HLO03-04026	26	35	12.5	M12	4			
HLO03-05032	32	40	17.0	M16	5			
HLO03-05033	33	40	17.0	M16	5			

R 角編程設定 Programming- Corner R		
刀片 Insert	內接圓 R 角 Input. R	切削殘留量 Uncut
LOGX0303	1.6 mm	0.39 mm



搭配刀片 Insert → Page：P.15
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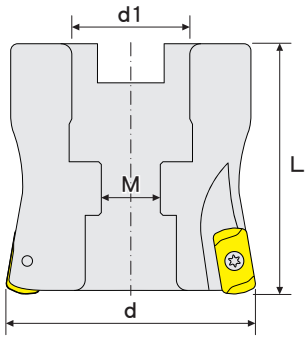
鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	◎	—	◎	◎	—	○

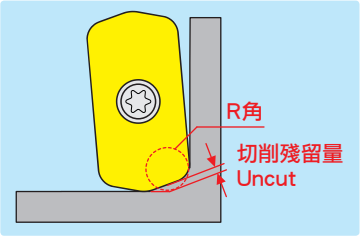
◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 02

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
FLO03-06040-1600	40	40	16.00	M8.5	6	LOGX0303..	MS3007K	ETF08
FLO03-08050-2200	50	50	22.00	M11.0	8			

R 角編程設定 Programming- Corner R		
刀片 Insert	內接圓 R 角 Input. R	切削殘留量 Uncut
LOGX0303	1.6 mm	0.39 mm



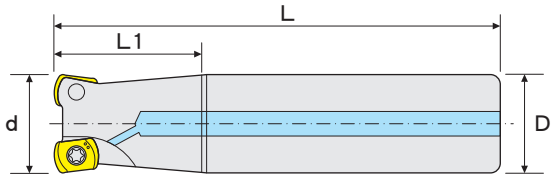
搭配刀片 Insert → Page：P.15

切削條件表 Cutting Condition Table → Page：P.111

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	◎	—	◎	◎	—	○

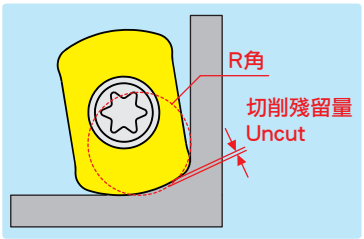
◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 03

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EBN06-02016-150L	16	30	150	16	2	BNMX0603..	MS2506E	ETF08
EBN06-02016-200L	16	30	200	16	2			
EBN06-02017-150L	17	30	150	16	2			
EBN06-02017-200L	17	30	200	16	2			
EBN06-03020-150L	20	30	150	20	3			
EBN06-03020-200L	20	30	200	20	3			
EBN06-03021-150L	21	30	150	20	3			
EBN06-03021-200L	21	30	200	20	3			
EBN06-04025-150L	25	35	150	25	4			
EBN06-04025-200L	25	35	200	25	4			
EBN06-04026-150L	26	35	150	25	4			
EBN06-04026-200L	26	35	200	25	4			
EBN06-05032-150L	32	40	150	32	5			
EBN06-05032-200L	32	40	200	32	5			
EBN06-05033-150L	33	40	150	32	5			
EBN06-05033-200L	33	40	200	32	5			
EBN06-05035-150L	35	40	150	32	5			
EBN06-05035-200L	35	40	200	32	5			
EBN09-03025-150L	25	40	150	25	3	BNMX0904..	TS4009	ETF15
EBN09-03032-150L	32	40	150	32	3			

R 角編程設定 Programming- Corner R		
刀片 Insert	內接圓 R 角 Input. R	切削殘留量 Uncut
BNMX0603	2.0 mm	0.42 mm
BNMX0904	2.5 mm	0.61 mm



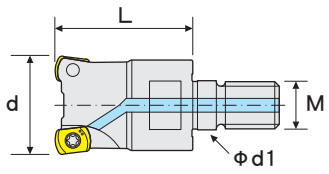
搭配刀片 Insert → Page：P.15

切削條件表 Cutting Condition Table → Page：P.112

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	◎	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend

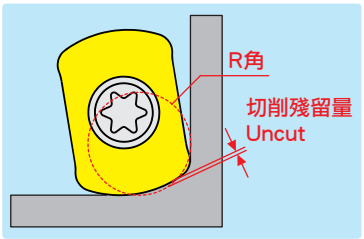


Milling Table 03

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
HBN06-02016	16	25	8.5	M8	2	BNMX0603..	MS2506E	ETF08
HBN06-02017	17	25	8.5	M8	2			
HBN06-03020	20	30	10.5	M10	3			
HBN06-03021	21	30	10.5	M10	3			
HBN06-04025	25	35	12.5	M12	4			
HBN06-04026	26	35	12.5	M12	4			
HBN06-04032	32	40	17.0	M16	4			
HBN06-05032	32	40	17.0	M16	5			
HBN06-04035	35	43	17.0	M16	4			
HBN06-05035	35	43	17.0	M16	5			
HBN06-06040	40	43	17.0	M16	6			
HBN06-06042	42	43	17.0	M16	6			
HBN09-03025-C	25	35	12.5	M12	3	BNMX0904..	TS3504	ETF15
HBN09-04032-C	32	40	17.0	M16	4			
HBN09-04035-C	35	43	17.0	M16	4			
HBN09-05042-C	42	43	17.0	M16	5			

R 角編程設定
Programming- Corner R

刀片 Insert	內接圓 R 角 Input. R	切削殘留量 Uncut
BNMX0603	2.0 mm	0.42 mm
BNMX0904	2.5 mm	0.61 mm

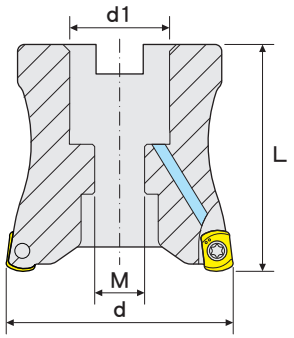


搭配刀片 Insert → Page：P.15
切削條件表 Cutting Condition Table → Page：P.112
鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	◎	—	◎	◎	—	○

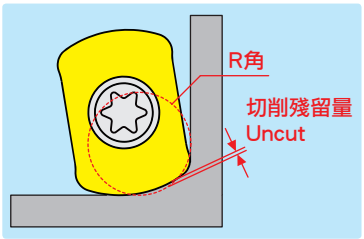
◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 03

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
FBN06-07050-2200-C	50	50	22.00	—	7	BNMX0603..	MS2506E	ETF08
FBN06-07052-2200-C	52	50	22.00	—	7			
FBN09-06050-2200-C	50	50	22.00	—	6	BNMX0904..	TS3504	ETF15
FBN09-06052-2200-C	52	50	22.00	—	6			
FBN09-07063-2200-C	63	50	22.00	—	7		TS4009	
FBN09-07063-2700-C	63	50	27.00	—	7		TS3504	
FBN09-07066-2700-C	66	50	27.00	—	7			
FBN09-08080-2700-C	80	50	27.00	—	8			
FBN09-08100-3200-C	100	50	32.00	—	8			

R 角編程設定 Programming- Corner R		
刀片 Insert	內接圓 R 角 Input. R	切削殘留量 Uncut
BNMX0603	2.0 mm	0.42 mm
BNMX0904	2.5 mm	0.61 mm



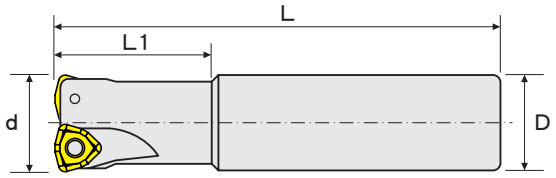
搭配刀片 Insert → Page：P.15

切削條件表 Cutting Condition Table → Page：P.112

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	◎	—	◎	◎	—	○

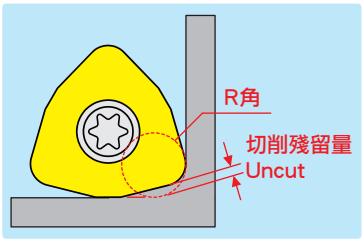
◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 04

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EWN09-02025-150L	25	40	150	25	2	WNMX09T3..	TS3006	ETF10
EWN09-03032-150L	32	40	150	32	3			

R 角編程設定 Programming- Corner R		
刀片 Insert	內接圓 R 角 Input. R	切削殘留量 Uncut
WNMX09T3	2.5 mm	0.6 mm
WNMX1305	3.0 mm	1.0 mm



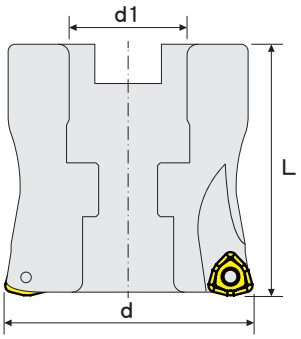
搭配刀片 Insert → Page：P.15,16

切削條件表 Cutting Condition Table → Page：P.113

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	◎	—	◎	◎	—	○

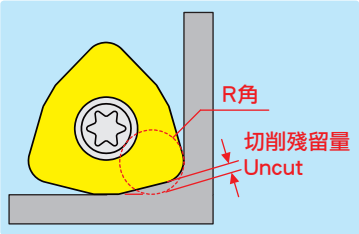
◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 04

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
FWN09-05050-2200	50	50	22.00	—	5	WNMX09T3..	TS3006	ETF10
FWN09-05063-2200	63	50	22.00	—	5			
FWN09-05050-2200-C	50	50	22.00	—	5			
FWN09-05063-2200-C	63	50	22.00	—	5			
FWN13-05063-2200	63	50	22.00	—	5	WNMX1305..	TS4006	ETF15
FWN13-07080-2700	80	50	27.00	—	7			

R 角編程設定 Programming- Corner R		
刀片 Insert	內接圓 R 角 Input. R	切削殘留量 Uncut
WNMX09T3	2.5 mm	0.6 mm
WNMX1305	3.0 mm	1.0 mm



搭配刀片 Insert → Page：P.15,16

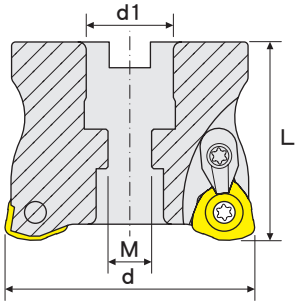
切削條件表 Cutting Condition Table → Page：P.113

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	◎	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend

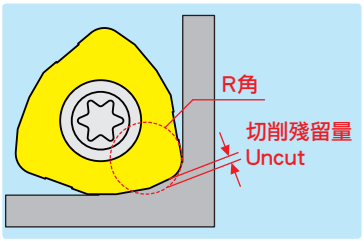
FJD 高進給型銑刀盤
HIGH FEED FACE MILLING CUTTERS- FJD



Milling Table 05

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench	Screw	Clamp	Wrench
	d	L	d1	M							
FJD12-03050-2200	50	50	22.00	M11	3	JDMW1204..	MS4011G	–	–	MC35-3V	ETF15
FJD12-04050-2200	50	50	22.00	M11	4						
FJD12-04063-2200	63	50	22.00	M11	4						
FJD12-04063-2540	63	50	25.40	M13	4						
FJD12-04066-2540	66	50	25.40	M13	4						
FJD12-04080-2540	80	50	25.40	M13	4						
FJD12-06080-2540	80	50	25.40	M13	6						
FJD14-04063-2200	63	50	22.00	M11	4	JDMT1405.. JDMW1405..	MS5011A	–	–	MC50V	ETF20
FJD14-04063-2540	63	50	25.40	M13	4						
FJD14-04066-2540	66	50	25.40	M13	4						
FJD14-04080-3175	80	63	31.75	M17	4						
FJD14-05100-3175	100	63	31.75	M17	5						

R 角編程設定 Programming- Corner R		
刀片 Insert	內接圓 R 角 Input. R	切削殘留量 Uncut
JDMW1204	3.0 mm	0.63 mm
JDMT1405 / JDMW1405	3.0 mm	0.64 mm



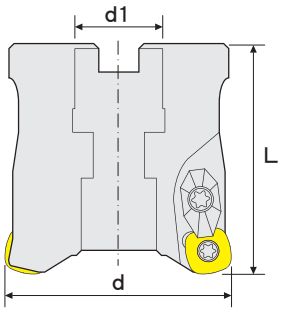
搭配刀片 Insert → Page：P.16

切削條件表 Cutting Condition Table → Page：P.114

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	◎	—	◎	◎	—	○

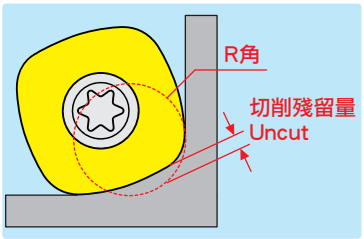
◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 06

訂購編號 Order No.	尺寸 Dimensions (mm)			刀片數量 Teeth	搭配刀片 Insert	Clamp	Screw	Screw	Wrench
	d	L	d1						
FSD12-03050-2200	50	50	22.00	3	SDMT1205.. SDNW1205..	YR-06	MS4008ES	MS4011A	ETF15
FSD12-03050-2222	50	50	22.22	3					
FSD12-04050-2200	50	50	22.00	4					
FSD12-04050-2222	50	50	22.22	4					
FSD12-03063-2200	63	50	22.00	3					
FSD12-03063-2222	63	50	22.22	3					
FSD12-04063-2200	63	50	22.00	4					
FSD12-04063-2222	63	50	22.22	4					
FSD12-04080-3175	80	55	31.75	4					
FSD12-04080-3200	80	55	32.00	4					
FSD12-05080-3175	80	55	31.75	5					
FSD12-05080-3200	80	55	32.00	5					

R 角編程設定 Programming- Corner R		
刀片 Insert	內接圓 R 角 Input. R	切削殘留量 Uncut
SDMT1205 SDNW1205	4.5 mm	0.83 mm



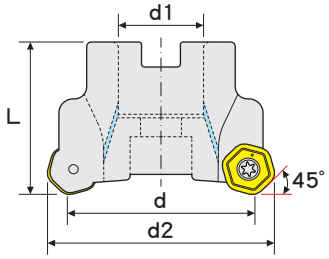
搭配刀片 Insert → Page：P.16,17

切削條件表 Cutting Condition Table → Page：P.115

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	◎	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 07

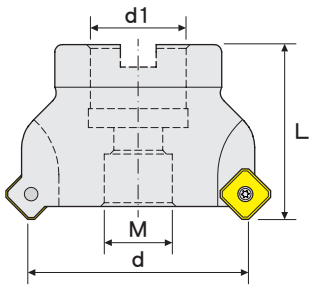
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	d2	L	d1				
FHN07-05050-2200-C	50	58.7	40	22.00	5	HNMX0704..	TS4005	ETF15
FHN07-06063-2200-C	63	71.7	40	22.00	6			
FHN07-08080-2700-C	80	88.7	50	27.00	8			
FHN07-09100-3200-C	100	108.7	50	32.00	9			

▶ 搭配刀片 Insert → Page：P.17　　▶ 切削條件表 Cutting Condition Table → Page：P.115

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 08

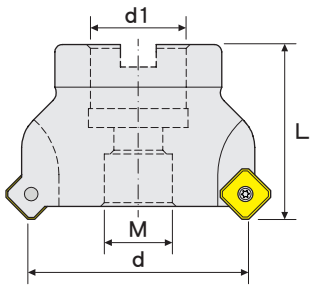
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
FSN12-04050-2200-C	50	40	22.00	M11	4	SNMX1205..	MS4014M	ETF15
FSN12-05050-2200-C	50	40	22.00	M11	5			
FSN12-05063-2200-C	63	40	22.00	M11	5			
FSN12-06063-2200-C	63	40	22.00	M11	6			
FSN12-06080-2700-C	80	50	27.00	M13	6			
FSN12-07080-2700-C	80	50	27.00	M13	7			
FSN12-08080-2700-C	80	50	27.00	M13	8			
FSN12-07100-3200-C	100	50	32.00	M45	7			
FSN12-08100-3200-C	100	50	32.00	M45	8			
FSN12-09100-3200-C	100	50	32.00	M45	9			
FSN12-10125-4000-C	125	63	40.00	M53	10			
FSN12-12160-4000-C	160	63	40.00	M55	12			

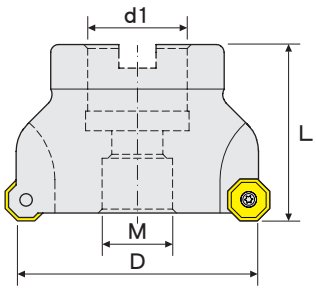
▶ 搭配刀片 Insert → Page：P.17,18 ▶ 切削條件表 Cutting Condition Table → Page：P.116

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend





Milling Table 08

訂購編號 Order No.	尺寸 Dimensions (mm)					刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	D	L	d1	M				
FON05-04050-2200	50	52.9	40	22.00	—	4	ONMX0505.. SNMX1205..	TS4015	ETF15
FON05-05063-2200	63	65.9	40	22.00	—	5			
FON05-06080-2700	80	82.9	50	27.00	—	6			
FON05-08100-3200	100	102.9	50	32.00	—	8			

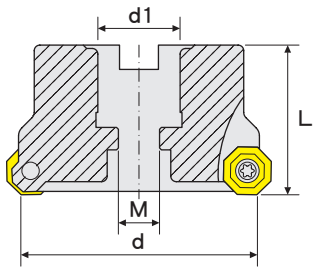
▶ 搭配刀片 Insert → Page：P.17,18 ▶ 切削條件表 Cutting Condition Table → Page：P.116

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

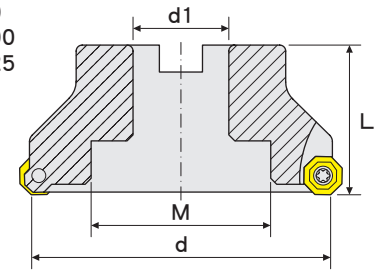
應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend

Φ50
Φ63



Φ80
Φ100
Φ125



09

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
FOF05-05050-2200	50	40	22.00	M11	5	OFMT05T3..	MS4011A	ETF15
FOF05-06063-2200	63	40	22.00	M11	6			
FOF05-06063-2540	63	50	25.40	M13	6			
FOF05-07080-2540	80	50	25.40	M13	7			
FOF05-07080-2700	80	50	27.00	M38	7			
FOF05-08100-3175	100	50	31.75	M46	8			
FOF05-08100-3200	100	50	32.00	M46	8			
FOF05-09125-3810	125	63	38.10	M60	9			
FOF05-09125-4000	125	63	40.00	M60	9			
FOF05-11160-5080	160	63	50.80	M80	11			

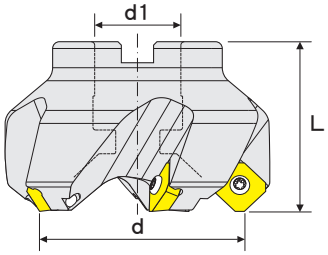
搭配刀片 Insert → Page：P.18

切削條件表 Cutting Condition Table → Page：P.117

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	○	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 10

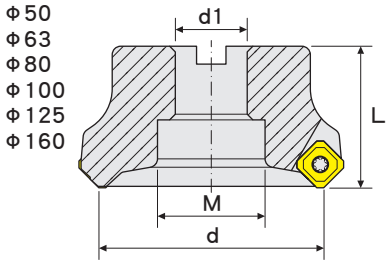
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
FSE12-04050-2200	50	40	22.00	—	4	SE..1204..	CS45	ETF15
FSE12-05063-2540	63	50	25.40	—	5			
FSE12-06080-2540	80	50	25.40	—	6			
FSE12-06100-3175	100	50	31.75	—	6			
FSE12-08125-3810	125	63	38.10	—	8			
FSE12-10160-5080	160	63	50.80	—	10			

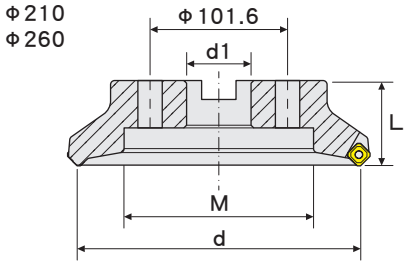
搭配刀片 Insert → Page：P.18,19　　切削條件表 Cutting Condition Table → Page：P.117

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	○	◎	◎	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend





Milling Table 11

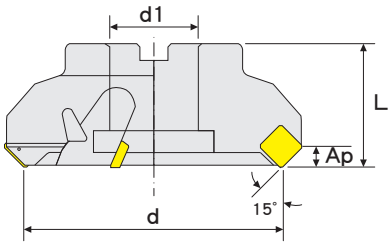
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Shim	Screw	Wrench	Screw	Wrench
	d	L	d1	M							
FSE13-03050-2200	50	40	22.00	M11	3	SE..13T3..	SSS445N	MDS05 035 ST	PL35	MS3512B	ETF15
FSE13-04063-2200	63	40	22.00	M11	4						
FSE13-03050-2540	50	50	25.40	M13	3						
FSE13-04063-2540	63	50	25.40	M13	4						
FSE13-04080-2540	80	50	25.40	M38	4						
FSE13-04080-2700	80	50	27.00	M38	4						
FSE13-05100-3175	100	50	31.75	M45	5						
FSE13-05100-3200	100	50	32.00	M45	5						
FSE13-06125-3810	125	63	38.10	M60	6						
FSE13-06125-4000	125	63	40.00	M60	6						
FSE13-07160-4000	160	63	40.00	M80	7						
FSE13-07160-5080	160	63	50.80	M80	7						
FSE13-08210-4762	210	63	47.62	M140	8						
FSE13-10260-4762	260	63	47.62	M180	10						

搭配刀片 Insert → Page：P.19　　切削條件表 Cutting Condition Table → Page：P.118

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	○	◎	◎	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 12

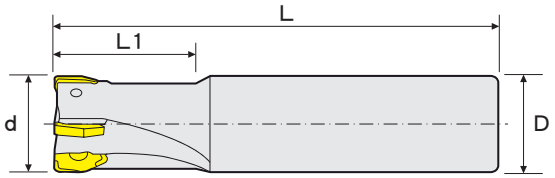
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Shim	Screw	Wrench	Screw	Wrench
	d	L	d1	Ap							
FSP12-05080-2540	80	55	25.40	8.5	5	SPMN1203..	Y-5253	Y-5252 M4.0-0.7	Y-5251 5/16-24	Y-5254 5/16-24	ETF15
FSP12-06100-3175	100	55	31.75	8.5	6						
FSP12-08125-3810	125	60	38.10	8.5	8						
FSP12-10160-5080	160	60	50.80	8.5	10						
FSP12-12200-4762	200	65	47.62	8.5	12						
FSP12-16250-4762	250	65	47.62	8.5	16						
FSP12-20300-4762	300	65	47.62	8.5	20						

搭配刀片 Insert → Page：P.20　　切削條件表 Cutting Condition Table → Page：P.118

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	○	—	—	○	◎	—	—

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 13

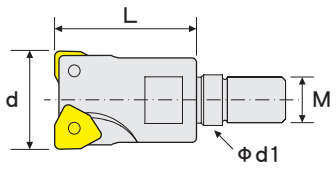
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EXN04-03020-110L-C	20	28	110	20	3	XNMX0403..	MS2506E	ETF08
EXN04-03020-150L-C	20	28	150	20	3			
EXN04-04025-120L-C	25	28	120	25	4			
EXN04-04025-170L-C	25	28	170	25	4			
EXN04-05032-130L-C	32	30	130	32	5			
EXN04-05032-200L-C	32	30	195	32	5			

▶ 搭配刀片 Insert → Page：P.20　　▶ 切削條件表 Cutting Condition Table → Page：P.119

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 13

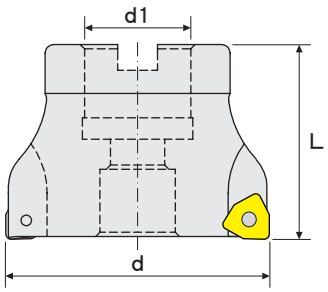
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
HXN04-02017-C	17	26	8.5	M8	2	XNMX0403..	TS2512	ETF08
HXN04-03020-C	20	28	10.5	M10	3		MS2506E	
HXN04-03021-C	21	32	10.5	M10	3		TS2512	
HXN04-04025-C	25	30	12.5	M12	4		MS2506E	
HXN04-04026-C	26	38	12.5	M12	4		TS2512	
HXN04-05032-C	32	40	17.0	M16	5		MS2506E	

▶ 搭配刀片 Insert → Page：P.20
▶ 切削條件表 Cutting Condition Table → Page：P.119
▶ 鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 13

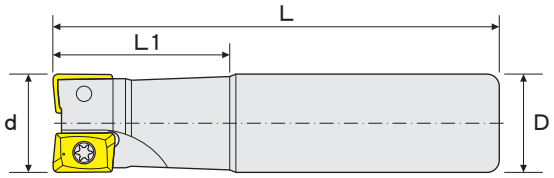
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
FXN04-06050-2200	50	50	22.00	—	6	XNMX0403..	TS2512	ETF08
FXN04-07063-2200	63	50	22.00	—	7			
FXN04-07063-2540	63	50	25.40	—	7			
FXN04-07040-1600-C	40	40	16.00	—	7	XNMX0403..	MS2506E	ETF08
FXN04-09050-2200-C	50	40	22.00	—	9			
FXN08-04050-2200-C	50	40	22.00	—	4	XNMX0806..	MS4011A	ETF15
FXN08-05050-2200-C	50	40	22.00	—	5			
FXN08-06063-2200-C	63	40	22.00	—	6			
FXN08-07063-2200-C	63	40	22.00	—	7			
FXN08-07080-2700-C	80	50	27.00	—	7			
FXN08-09080-2700-C	80	50	27.00	—	9			
FXN08-08100-3200-C	100	50	32.00	—	8			
FXN08-11100-3200-C	100	50	32.00	—	11			
FXN08-11125-4000-C	125	63	40.00	—	11			
FXN08-12160-4000-C	160	63	40.00	—	12			

搭配刀片 Insert → Page：P.20　　切削條件表 Cutting Condition Table → Page：P.119

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 14

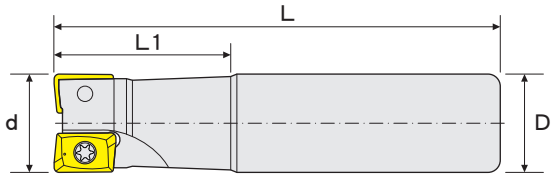
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EAP10-02016-100L	16	28	100	16	2	APKT1003..	MS2506B	ETF09
EAP10-02016-150L	16	28	150	16	2			
EAP10-02016-200L	16	28	200	16	2			
EAP10-02017-150L	17	26	150	16	2			
EAP10-02017-200L	17	26	200	16	2			
EAP10-02018-100L	18	30	100	20	2			
EAP10-02018-150L	18	30	150	20	2			
EAP10-02018-200L	18	30	200	20	2			
EAP10-02019-120L	19	30	120	20	2			
EAP10-02020-100L	20	30	100	20	2			
EAP10-02020-150L	20	30	150	20	2			
EAP10-02020-200L	20	30	200	20	2			
EAP10-03020-100L	20	30	100	20	3			
EAP10-03020-150L	20	30	150	20	3			
EAP10-03020-200L	20	30	200	20	3			
EAP10-02021-120L	21	30	120	20	2			
EAP10-02021-150L	21	30	150	20	2			
EAP10-02021-200L	21	30	200	20	2			
EAP10-03021-150L	21	30	150	20	3			
EAP10-03021-200L	21	30	200	20	3			
EAP10-03025-125L	25	30	125	25	3			
EAP10-03025-150L	25	30	150	25	3			
EAP10-03025-200L	25	30	200	25	3			
EAP10-03026-150L	26	30	150	25	3			
EAP10-03026-200L	26	30	200	25	3			
EAP10-04026-150L	26	30	150	25	4			
EAP10-04026-200L	26	30	200	25	4			
EAP10-04032-150L	32	40	150	32	4			
EAP10-04032-200L	32	40	200	32	4			

搭配刀片 Insert → Page：P.20　　切削條件表 Cutting Condition Table → Page：P.120

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	◎	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



14

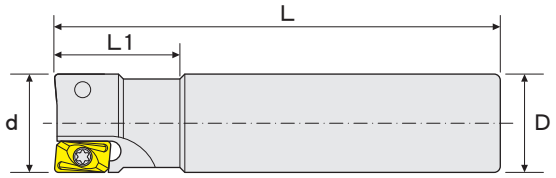
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EAPT16-02024-125L	24	40	125	25	2	APKT1604.. APET1604..	MS4009A	ETF15
EAPT16-02025-125L	25	40	125	25	2			
EAPT16-02025-150L	25	40	150	25	2			
EAPT16-02025-200L	25	40	200	25	2			
EAPT16-02026-150L	26	30	150	25	2			
EAPT16-02026-200L	26	30	200	25	2			
EAPT16-02026-250L	26	30	250	25	2			
EAPT16-03032-150L	32	45	150	32	3		MS4011A	ETF15
EAPT16-03032-200L	32	45	200	32	3			
EAPT16-03032-250L	32	45	250	32	3			
EAPT16-03033-150L	33	35	150	32	3			
EAPT16-03033-200L	33	35	200	32	3			
EAPT16-03033-250L	33	35	250	32	3			
EAPT16-03033-300L	33	35	300	32	3			
EAPT16-02035-150L	35	35	150	32	2			
EAPT16-02035-200L	35	35	200	32	2			
EAPT16-03035-150L	35	35	150	32	3			
EAPT16-03035-200L	35	35	200	32	3			
EAPT17-02025-150L	25	35	150	25	2	APKT1705..	MS4009A	ETF15
EAPT17-02025-200L	25	35	200	25	2			
EAPT17-02026-150L	26	35	150	25	2			
EAPT17-02026-200L	26	35	200	25	2			
EAPT17-03032-150L	32	40	150	32	3			
EAPT17-03032-200L	32	40	200	32	3			
EAPT17-03032-250L	32	40	250	32	3			

▶ 搭配刀片 Insert → Page：P.21　　▶ 切削條件表 Cutting Condition Table → Page：P.120

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	◎	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



15

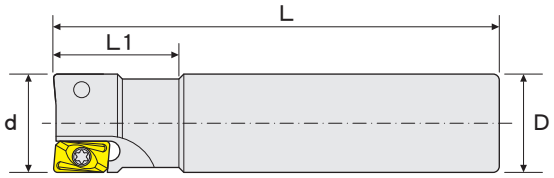
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EAPM10-02015-100L	15	25	100	16	2	APMT1035..	MS2506A	ETF09
EAPM10-02016-150L	16	25	150	16	2			
EAPM10-02016-200L	16	25	200	16	2			
EAPM10-03020-150L	20	30	150	20	3			
EAPM10-03020-200L	20	30	200	20	3			
EAPM10-02022-150L	22	25	150	20	2			
EAPM10-03022-150L	22	25	150	20	3			
EAPM10-03025-150L	25	35	150	25	3			
EAPM10-03025-200L	25	35	200	25	3			

搭配刀片 Insert → Page：P.21　　切削條件表 Cutting Condition Table → Page：P.121

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 15

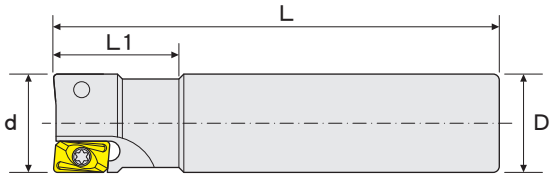
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EAP11-020142-100L	14.2	20	100	16	2	APMT1135..	MS2506E	ETF08
EAP11-020155-100L	15.5	25	100	16	2			
EAP11-02016-100L	16	28	100	16	2			
EAP11-02016-150L	16	28	150	16	2			
EAP11-02016-200L	16	28	200	16	2			
EAP11-02017-150L	17	20	150	16	2			
EAP11-02017-200L	17	20	200	16	2			
EAP11-02018-100L	18	28	100	20	2			
EAP11-02018-150L	18	28	150	20	2			
EAP11-02020-100L	20	28	100	20	2			
EAP11-02020-150L	20	28	150	20	2			
EAP11-02020-200L	20	28	200	20	2			
EAP11-03020-110L	20	28	110	20	3			
EAP11-03020-125L	20	28	125	20	3			
EAP11-03020-150L	20	25	150	20	3			
EAP11-03020-200L	20	25	200	20	3			
EAP11-02021-150L	21	25	150	20	2			
EAP11-02021-200L	21	25	200	20	2			
EAP11-03021-150L	21	25	150	20	3			
EAP11-03021-200L	21	25	200	20	3			
EAP11-030213-150L	21.3	25	150	20	3			
EAP11-02022-150L	22	25	150	20	2			
EAP11-02022-200L	22	25	200	20	2			
EAP11-03022-150L	22	25	150	20	3			
EAP11-03024-120L	24	35	120	25	3			
EAP11-03024-150L	24	35	150	25	3			
EAP11-03025-100L	25	35	100	25	3			
EAP11-03025-120L	25	35	120	25	3			
EAP11-03025-150L	25	35	150	25	3			
EAP11-03025-200L	25	35	200	25	3			
EAP11-04025-100L	25	35	100	25	4			

搭配刀片 Insert → Page：P.21　　切削條件表 Cutting Condition Table → Page：P.121

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



15

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EAP11-04025-120L	25	35	120	25	4	APMT1135..	MS2506E	ETF08
EAP11-04025-150L	25	35	150	25	4			
EAP11-04025-200L	25	35	200	25	4			
EAP11-03026-150L	26	35	150	25	3			
EAP11-03026-200L	26	35	200	25	3			
EAP11-04026-150L	26	35	150	25	4			
EAP11-04026-200L	26	35	200	25	4			
EAP11-03032-150L	32	35	150	32	3			
EAP11-03032-200L	32	35	200	32	3			
EAP11-04032-130L	32	35	130	32	4			
EAP11-04032-150L	32	35	150	32	4			
EAP11-04032-200L	32	35	200	32	4			
EAP11-05032-130L	32	35	130	32	5			

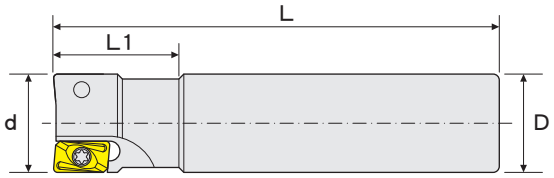
搭配刀片 Insert → Page：P.21

切削條件表 Cutting Condition Table → Page：P.121

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 15

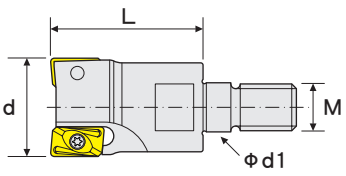
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EAP16-02025-120L	25	40	120	25	2	APMT1604.. APGT1604..	MS4009A	ETF15
EAP16-02025-150L	25	40	150	25	2			
EAP16-02025-200L	25	40	200	25	2			
EAP16-02026-150L	26	40	150	25	2			
EAP16-02026-200L	26	40	200	25	2			
EAP16-02029-150L	29	40	150	32	2			
EAP16-02032-150L	32	45	150	32	2			
EAP16-02032-200L	32	45	200	32	2			
EAP16-02032-250L	32	45	250	32	2			
EAP16-03032-130L	32	45	130	32	3			
EAP16-03032-150L	32	45	150	32	3			
EAP16-03032-200L	32	45	200	32	3			
EAP16-03032-250L	32	45	250	32	3			
EAP16-02033-150L	33	35	150	32	2		MS4011A	
EAP16-02033-200L	33	35	200	32	2			
EAP16-02033-250L	33	35	250	32	2			
EAP16-03033-150L	33	35	150	32	3			
EAP16-03033-200L	33	35	200	32	3			
EAP16-03033-250L	33	35	250	32	3			
EAP16-03035-150L	35	35	150	32	3			
EAP16-03035-200L	35	35	200	32	3			
EAP16-03035-250L	35	35	250	32	3			

搭配刀片 Insert → Page：P.21,22　　切削條件表 Cutting Condition Table → Page：P.121

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	◎	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



15

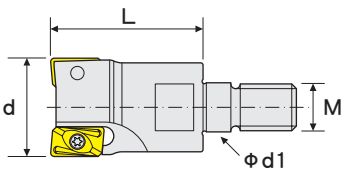
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
HAP11-01011	11	21	5.5	M5	1	APMT1135..	MS2506E	ETF08
HAP11-01013	13	23	6.5	M6	1			
HAP11-02016	16	25	8.5	M8	2			
HAP11-02017	17	25	8.5	M8	2			
HAP11-02020	20	30	10.5	M10	2			
HAP11-03020	20	30	10.5	M10	3			
HAP11-02021	21	30	10.5	M10	2			
HAP11-03021	21	30	10.5	M10	3			
HAP11-02022	22	30	10.5	M10	2			
HAP11-03022	22	30	10.5	M10	3			
HAP11-03025	25	35	12.5	M12	3			
HAP11-04025	25	35	12.5	M12	4			
HAP11-03026	26	35	12.5	M12	3			
HAP11-04026	26	35	12.5	M12	4			
HAP11-04032	32	43	17.0	M16	4			
HAP11-05032	32	43	17.0	M16	5			
HAP11-04033	33	43	17.0	M16	4			
HAP11-05033	33	43	17.0	M16	5			
HAP11-04035	35	43	17.0	M16	4			
HAP11-05035	35	43	17.0	M16	5			
HAP11-05036	36	43	17.0	M16	5			

▶ 搭配刀片 Insert → Page：P.21
▶ 切削條件表 Cutting Condition Table → Page：P.121
▶ 鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



15

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
HAP16-02025	25	38	12.5	M12	2	APMT1604.. APGT1604..	MS4009A	ETF15
HAP16-02026	26	38	12.5	M12	2			
HAP16-02032	32	43	17.0	M16	2			
HAP16-03032	32	43	17.0	M16	3			
HAP16-02033	33	43	17.0	M16	2		MS4011A	ETF15
HAP16-03033	33	43	17.0	M16	3			
HAP16-03035	35	43	17.0	M16	3			

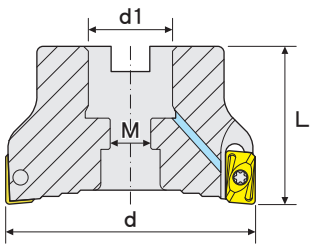
▶ 搭配刀片 Insert → Page：P.21,22　　▶ 切削條件表 Cutting Condition Table → Page：P.121

▶ 鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	◎	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



15

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
FAP11-05040-1600	40	40	16.00	M9	5	APMT1135..	MS2506E	ETF08
FAP11-05050-2200	50	40	22.00	M11	5			
FAP11-07050-2200	50	40	22.00	M11	7			
FAP11-08063-2200	63	40	22.00	M11	8			
FAP11-09080-2700	80	50	27.00	M13	9			
FAP11-08063-2540	63	50	25.40	M13	8			
FAP11-09080-2540	80	50	25.40	M13	9			

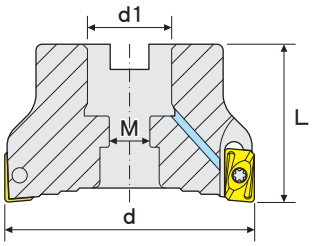
搭配刀片 Insert → Page：P.21　　切削條件表 Cutting Condition Table → Page：P.121

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

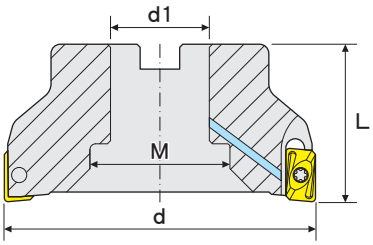
應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend

Φ40
Φ50
Φ63
Φ66
Φ80



Φ100
Φ125



15

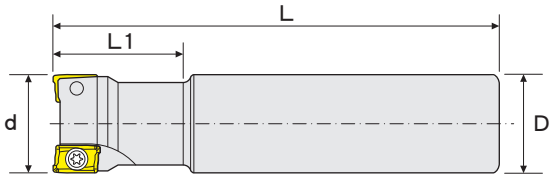
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
FAP16-04040-1600	40	40	16.00	M9	4	APMT1604.. APGT1604..	MS4011A	ETF15
FAP16-04050-2200	50	50	22.00	M11	4			
FAP16-05050-2200	50	50	22.00	M11	5			
FAP16-05063-2200	63	50	22.00	M11	5			
FAP16-06063-2200	63	50	22.00	M11	6			
FAP16-06080-2700	80	50	27.00	M13	6			
FAP16-08080-2700	80	50	27.00	M13	8			
FAP16-08100-3200	100	50	32.00	M45	8			
FAP16-09125-4000	125	63	40.00	M60	9			
FAP16-04050-2540	50	50	25.40	M13	4			
FAP16-05060-2540	60	50	25.40	M13	5			
FAP16-05063-2540	63	50	25.40	M13	5			
FAP16-04066-2540	66	50	25.40	M13	4			
FAP16-05066-2540	66	50	25.40	M13	5			
FAP16-06080-2540	80	50	25.40	M13	6			
FAP16-08100-3175	100	50	31.75	M45	8			
FAP16-08110-3175	110	50	31.75	M45	8			
FAP16-09125-3810	125	50	38.10	M60	9			

搭配刀片 Insert → Page：P.21,22　　切削條件表 Cutting Condition Table → Page：P.121

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	◎	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 16

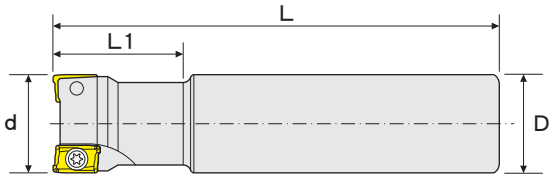
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EAX12-01010-100L	10	15	100	16	1	AXMT1235..	MS3005A	ETF09
EAX12-01011-100L	11	15	100	16	1			
EAX12-01012-100L	12	15	100	16	1			
EAX12-02016-100L	16	25	100	16	2		MS3006A	ETF09
EAX12-02016-150L	16	25	150	16	2			
EAX12-02016-200L	16	25	200	16	2			
EAX12-02017-100L	17	25	100	16	2			
EAX12-02017-150L	17	25	150	16	2			
EAX12-02017-200L	17	25	200	16	2			
EAX12-02020-150L	20	30	150	20	2			
EAX12-02020-200L	20	30	200	20	2			
EAX12-03020-150L	20	30	150	20	3			
EAX12-03020-200L	20	30	200	20	3			
EAX12-03021-150L	21	30	150	20	3			
EAX12-03021-200L	21	30	200	20	3			
EAX12-03022-110L	22	30	110	20	3			
EAX12-03022-150L	22	30	150	20	3			
EAX12-03022-200L	22	30	200	20	3			
EAX12-03025-150L	25	35	150	25	3			
EAX12-03025-200L	25	35	200	25	3			
EAX12-04025-150L	25	35	150	25	4			
EAX12-04025-200L	25	35	200	25	4			
EAX12-03026-150L	26	35	150	25	3			
EAX12-03026-200L	26	35	200	25	3			
EAX12-03026-250L	26	35	250	25	3			
EAX12-04026-150L	26	35	150	25	4			
EAX12-04026-200L	26	35	200	25	4			
EAX12-05032-150L	32	40	150	32	5			
EAX12-05032-200L	32	40	200	32	5			
EAX12-05033-150L	33	40	150	32	5			
EAX12-05033-200L	33	40	200	32	5			

搭配刀片 Insert → Page：P.22　　切削條件表 Cutting Condition Table → Page：P.122

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 16

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EAX17-02025-120L	25	35	120	25	2	AXMT1705..	CS40	ETF15
EAX17-02028-120L	28	35	120	25	2			
EAX17-03030-130L	30	40	130	25	3			
EAX17-03032-130L	32	40	130	32	3			
EAX17-03035-130L	35	40	130	32	3			
EAX17-04040-170L	40	50	170	32	4			
EAX17-05050-170L	50	50	170	32	5			
EAX17-06063-170L	63	50	170	32	6			
EAX17-05050-135L	50	25	135	32	5			
EAX17-06063-135L	63	25	135	32	6			
EAX17-02025-170L	25	50	170	25	2			
EAX17-02026-150L	26	35	150	25	2			
EAX17-02026-200L	26	35	200	25	2			
EAX17-02026-250L	26	35	250	25	2			
EAX17-02026-300L	26	35	300	25	2			
EAX17-02028-170L	28	50	170	25	2			
EAX17-02030-180L	30	60	180	25	2			
EAX17-02032-180L	32	60	180	32	2			
EAX17-02033-150L	33	40	150	32	2			
EAX17-02033-200L	33	40	200	32	2			
EAX17-02033-250L	33	40	250	32	2			
EAX17-02033-300L	33	40	300	32	2			
EAX17-02033-350L	33	40	350	32	2			
EAX17-03033-150L	33	40	150	32	3			
EAX17-03033-200L	33	40	200	32	3			
EAX17-03033-250L	33	40	250	32	3			
EAX17-03033-300L	33	40	300	32	3			
EAX17-03033-350L	33	40	350	32	3			

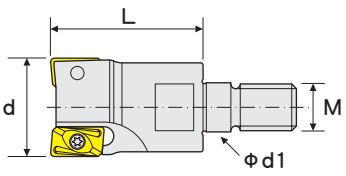
搭配刀片 Insert → Page：P.22

切削條件表 Cutting Condition Table → Page：P.122

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



16

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
HAX17-02026	26	35	12.5	M12	2	AXMT1705..	CS40	ETF15
HAX17-02033	33	40	17.0	M16	2			
HAX17-03033	33	40	17.0	M16	3			
HAX17-02035	35	40	17.0	M16	2			
HAX17-03035	35	40	17.0	M16	3			

搭配刀片 Insert → Page：P.22

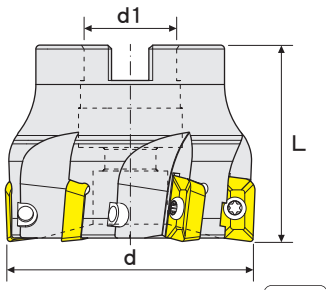
切削條件表 Cutting Condition Table → Page：P.122

鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 16

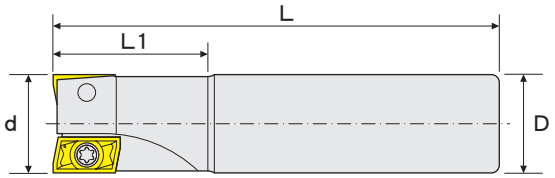
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
FAX17-04040-1600	40	40	16.00	—	4	AXMT1705..	CS40	ETF15
FAX17-05050-2200	50	40	22.00	—	5			
FAX17-06063-2200	63	40	22.00	—	6			
FAX17-04080-2540	80	50	25.40	—	4			
FAX17-05100-3175	100	63	31.75	—	5			
FAX17-06125-3810	125	63	38.10	—	6			
FAX17-07080-2540	80	50	25.40	—	7			
FAX17-08100-3175	100	63	31.75	—	8			
FAX17-09125-3810	125	63	38.10	—	9			

搭配刀片 Insert → Page：P.22　　切削條件表 Cutting Condition Table → Page：P.122

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	○	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



17

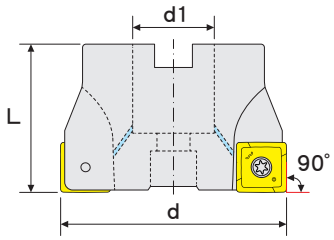
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EJD15-02025-125L	25	40	125	25	2	JDMT1505..	MS4009A	ETF15
EJD15-02025-150L	25	40	150	25	2			
EJD15-02025-200L	25	40	200	25	2			
EJD15-02025-250L	25	40	250	25	2			
EJD15-02026-150L	26	40	150	25	2			
EJD15-02026-200L	26	40	200	25	2			
EJD15-02030-125L	30	35	125	25	2			
EJD15-02030-150L	30	35	150	25	2			
EJD15-02030-200L	30	35	200	25	2			
EJD15-03032-150L	32	45	150	32	3			
EJD15-03032-200L	32	45	200	32	3			
EJD15-03032-250L	32	45	250	32	3			
EJD15-03032-300L	32	45	300	32	3			
EJD15-03033-150L	33	45	150	32	3			
EJD15-03033-200L	33	45	200	32	3			
EJD15-03033-250L	33	45	250	32	3			
EJD15-03033-300L	33	45	300	32	3			
EJD15-03035-150L	35	45	150	32	3			
EJD15-03035-200L	35	45	200	32	3			
EJD15-03035-250L	35	45	250	32	3			
EJD15-03035-300L	35	45	300	32	3			

搭配刀片 Insert → Page：P.22　　切削條件表 Cutting Condition Table → Page：P.123

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 18

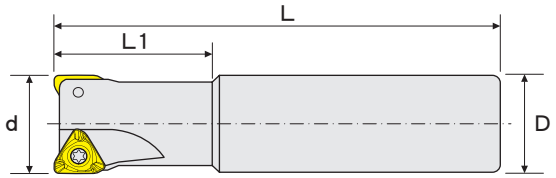
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
FSO14-04050-2200-C	50	40	22.00	—	4	SOMT1404..	TS3505	ETF15
FSO14-05063-2200-C	63	40	22.00	—	5			
FSO14-07080-2700-C	80	50	27.00	—	7			

搭配刀片 Insert → Page：P.22　　切削條件表 Cutting Condition Table → Page：P.123

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



19

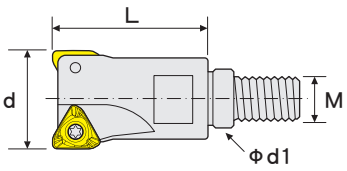
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
ETP10-02020-130L	20	50	130	20	2	TPMX1004..	TS2517	ETF08
ETP10-03025-150L	25	55	150	25	3			
ETP15-03033-200L	33	45	200	32	3	TPMX1505..	TS4014	ETF15
ETP15-04040-200L	40	45	200	32	4			

搭配刀片 Insert → Page：P.23　　切削條件表 Cutting Condition Table → Page：P.124

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 19

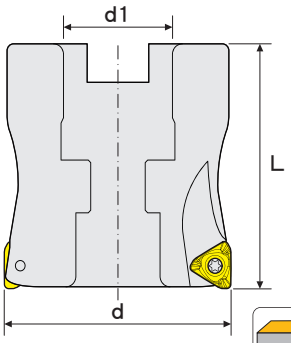
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
HTP10-02021	21	35	18	M10	2	TPMX1004..	TS2517	ETF08
HTP10-03026	26	35	21	M12	3			
HTP10-05033	33	43	29	M16	5			

▶ 搭配刀片 Insert → Page：P.23
▶ 切削條件表 Cutting Condition Table → Page：P.124
▶ 鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



19

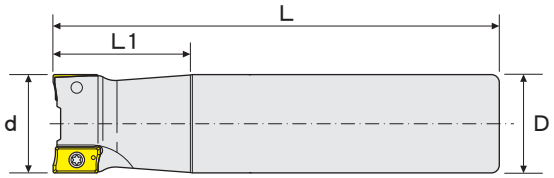
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
FTP10-07050-2200	50	50	22.00	—	7	TPMX1004..	TS2517	ETF08
FTP10-09063-2200	63	50	22.00	—	9			

搭配刀片 Insert → Page：P.23　　切削條件表 Cutting Condition Table → Page：P.124

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



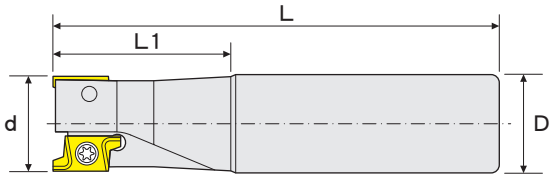
Milling Table 20

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EW390-02016-150L	16	28	150	16	2	W39011T3..	MS2506B	ETF09
EW390-02016-200L	16	28	200	16	2			
EW390-02017-150L	17	20	150	16	2			
EW390-02017-200L	17	20	200	16	2			
EW390-02018-150L	18	20	150	16	2			
EW390-02018-200L	18	20	200	16	2			
EW390-02020-150L	20	30	150	20	2			
EW390-02020-200L	20	30	200	20	2			
EW390-03020-150L	20	30	150	20	3			
EW390-03020-200L	20	30	200	20	3			
EW390-02021-150L	21	20	150	20	2			
EW390-02021-200L	21	20	200	20	2			
EW390-03021-150L	21	20	150	20	3			
EW390-03021-200L	21	20	200	20	3			
EW390-02022-150L	22	30	150	20	2			
EW390-02022-200L	22	30	200	20	2			
EW390-03022-150L	22	30	150	20	3			
EW390-03025-150L	25	35	150	25	3			
EW390-03025-200L	25	35	200	25	3			
EW390-04025-150L	25	35	150	25	4			
EW390-04025-200L	25	35	200	25	4			
EW390-03026-150L	26	25	150	25	3			
EW390-03026-200L	26	25	200	25	3			
EW390-04026-150L	26	25	150	25	4			
EW390-04026-200L	26	25	200	25	4			
EW390-04030-150L	30	40	150	32	4			
EW390-04030-200L	30	40	200	32	4			
EW390-04030-250L	30	40	250	32	4			
EW390-04032-150L	32	40	150	32	4			
EW390-04032-200L	32	40	200	32	4			
EW390-04032-250L	32	40	250	32	4			
EW390-04033-150L	33	32	150	32	4			
EW390-04033-200L	33	32	200	32	4			
EW390-04033-250L	33	32	250	32	4			
EW390-04035-150L	35	32	150	32	4			
EW390-04035-200L	35	32	200	32	4			
EW390-04035-250L	35	32	250	32	4			

搭配刀片 Insert → Page：P.23　　切削條件表 Cutting Condition Table → Page：P.125

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 21

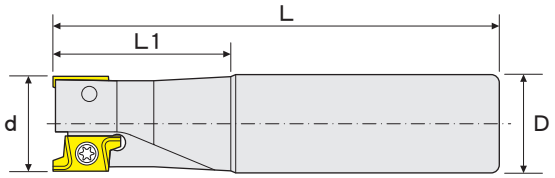
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
ERT07-01006-100L	6	20	100	10	1	ANRT0702..	MS2004A	ETF06
ERT07-01008-100L	8	20	100	10	1			
ERT07-01009-100L	9	20	100	10	1			
ERT07-02010-100L	10	25	100	10	2			
ERT07-02010-150L	10	25	150	10	2			
ERT07-02011-100L	11	20	100	10	2			
ERT07-02011-150L	11	20	150	10	2			
ERT07-02012-100L	12	25	100	12	2		MS2005A	ETF06
ERT07-02012-150L	12	25	150	12	2			
ERT07-02013-100L	13	20	100	12	2			
ERT07-02013-150L	13	20	150	12	2			
ERT07-03016-150L	16	30	150	16	3			
ERT07-03016-200L	16	30	200	16	3			
ERT07-03017-150L	17	25	150	16	3			
ERT07-03017-200L	17	25	200	16	3			
ERT07-04020-150L	20	35	150	20	4			
ERT07-04020-200L	20	35	200	20	4			
ERT07-04021-150L	21	25	150	20	4			

搭配刀片 Insert → Page：P.23　　切削條件表 Cutting Condition Table → Page：P.126

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 21

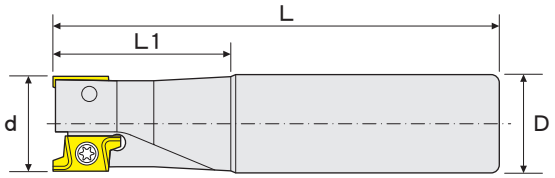
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
ERT10-02016-150L	16	30	150	16	2	ANRT1003..	MS2506B	ETF09
ERT10-02016-200L	16	30	200	16	2			
ERT10-02017-150L	17	25	150	16	2			
ERT10-02017-200L	17	25	200	16	2			
ERT10-02020-150L	20	35	150	20	2			
ERT10-02020-200L	20	35	200	20	2			
ERT10-03020-150L	20	35	150	20	3			
ERT10-03020-200L	20	35	200	20	3			
ERT10-02021-150L	21	30	150	20	2			
ERT10-02021-200L	21	30	200	20	2			
ERT10-03021-150L	21	30	150	20	3			
ERT10-03021-200L	21	30	200	20	3			
ERT10-02025-150L	25	40	150	25	2			
ERT10-02025-200L	25	40	200	25	2			
ERT10-03025-150L	25	40	150	25	3			
ERT10-03025-200L	25	40	200	25	3			
ERT10-03025-250L	25	40	250	25	3			
ERT10-02026-150L	26	30	150	25	2			
ERT10-02026-200L	26	30	200	25	2			
ERT10-03026-150L	26	30	150	25	3			
ERT10-03026-200L	26	30	200	25	3			
ERT10-03026-250L	26	30	250	25	3			
ERT10-04032-150L	32	40	150	32	4			
ERT10-04032-200L	32	40	200	32	4			
ERT10-04032-250L	32	40	250	32	4			
ERT10-04032-300L	32	40	300	32	4			
ERT10-05032-150L	32	40	150	32	5			
ERT10-05032-200L	32	40	200	32	5			
ERT10-05032-250L	32	40	250	32	5			
ERT10-05032-300L	32	40	300	32	5			
ERT10-04033-150L	33	35	150	32	4			

搭配刀片 Insert → Page：P.23　　切削條件表 Cutting Condition Table → Page：P.126

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 21

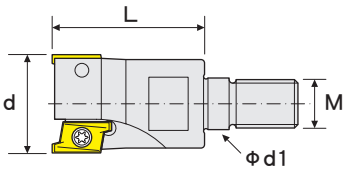
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
ERT10-04033-200L	33	35	200	32	4	ANRT1003..	MS2506B	ETF09
ERT10-04033-250L	33	35	250	32	4			
ERT10-04033-300L	33	35	300	32	4			
ERT10-05033-150L	33	35	150	32	5			
ERT10-05033-200L	33	35	200	32	5			
ERT10-05033-250L	33	35	250	32	5			
ERT10-05033-300L	33	35	300	32	5			
ERT10-04035-150L	35	35	150	32	4			
ERT10-04035-200L	35	35	200	32	4			
ERT10-04035-250L	35	35	250	32	4			
ERT10-04035-300L	35	35	300	32	4			
ERT10-05035-150L	35	35	150	32	5			
ERT10-05035-200L	35	35	200	32	5			
ERT10-05035-250L	35	35	250	32	5			
ERT10-05035-300L	35	35	300	32	5			

搭配刀片 Insert → Page：P.23　　切削條件表 Cutting Condition Table → Page：P.126

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 21

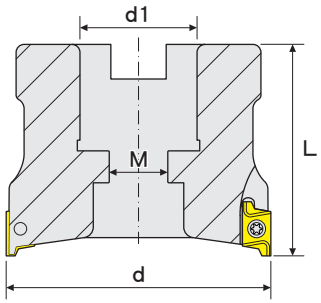
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
HRT07-01009	9	18	4.5	M4	1	ANRT0702..	MS2004A	ETF06
HRT07-02010	10	18	5.5	M5	2			
HRT07-02011	11	18	5.5	M5	2			
HRT07-02012	12	20	6.5	M6	2		MS2005A	
HRT07-02013	13	20	6.5	M6	2			
HRT07-03016	16	23	8.5	M8	3			
HRT07-03017	17	23	8.5	M8	3			
HRT07-04020	20	30	10.5	M10	4			
HRT07-04021	21	30	10.5	M10	4			
HRT10-02016	16	30	8.5	M8	2	ANRT1003..	MS2506B	ETF09
HRT10-02017	17	30	8.5	M8	2			
HRT10-02020	20	30	10.5	M10	2			
HRT10-03020	20	30	10.5	M10	3			
HRT10-02021	21	30	10.5	M10	2			
HRT10-03021	21	30	10.5	M10	3			
HRT10-03025	25	35	12.5	M12	3			
HRT10-03026	26	35	12.5	M12	3			
HRT10-04026	26	35	12.5	M12	4			
HRT10-04032	32	43	17.0	M16	4			
HRT10-05032	32	43	17.0	M16	5			
HRT10-04033	33	43	17.0	M16	4			
HRT10-05033	33	43	17.0	M16	5			
HRT10-04035	35	43	17.0	M16	4			
HRT10-05035	35	43	17.0	M16	5			

▶ 搭配刀片 Insert → Page：P.23
▶ 切削條件表 Cutting Condition Table → Page：P.126
▶ 鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 21

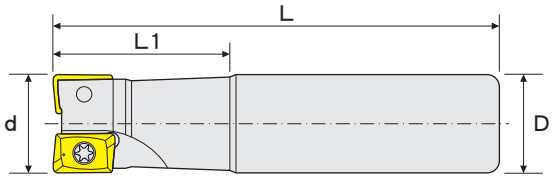
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
FRT10-04050-2200	50	40	22.00	M11	4	ANRT1003..	MS2508B	ETF09
FRT10-06050-2200	50	40	22.00	M11	6			
FRT10-07050-2200	50	40	22.00	M11	7			
FRT10-04063-2540	63	50	25.40	M13	4			
FRT10-06063-2540	63	50	25.40	M13	6			
FRT10-04066-2540	66	50	25.40	M13	4			
FRT10-06066-2540	66	50	25.40	M13	6			

搭配刀片 Insert → Page：P.23　　切削條件表 Cutting Condition Table → Page：P.126

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 22

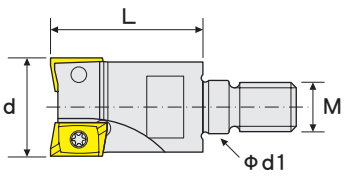
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EAD06-02010-120L	10	20	120	10	2	ADMT0602..	MS1804B	ETF06
EAD06-02011-110L	11	13	110	10	2			
EAD06-02011-150L	11	13	150	10	2			
EAD06-02012-100L	12	25	100	12	2			
EAD06-02012-130L	12	25	130	12	2			
EAD06-03012-100L	12	25	100	12	3			
EAD06-03012-130L	12	25	130	12	3			
EAD06-02013-130L	13	18	130	12	2			
EAD06-03013-130L	13	18	130	12	3			
EAD06-04016-150L	16	28	150	16	4			
EAD06-04016-200L	16	28	200	16	4			
EAD06-04017-150L	17	20	150	16	4			

搭配刀片 Insert → Page：P.23　　切削條件表 Cutting Condition Table → Page：P.127

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 22

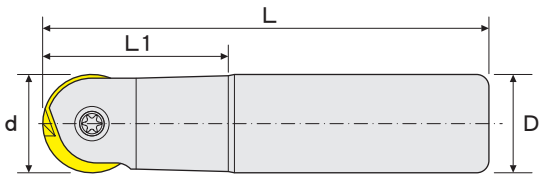
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
HAD06-02010	10	16	5.5	M5	2	ADMT0602..	MS1804A	ETF06
HAD06-02011	11	16	5.5	M5	2			
HAD06-02012	12	18	6.5	M6	2			
HAD06-03012	12	18	6.5	M6	3			
HAD06-02013	13	18	6.5	M6	2			
HAD06-03013	13	18	6.5	M6	3			
HAD06-04016	16	20	8.5	M8	4			
HAD06-04018	18	18	6.5	M8	4			
HAD06-04020	20	24	10.5	M10	4			
HAD06-05020	20	24	10.5	M10	5			
HAD06-04025	25	28	12.5	M12	4			
HAD06-05025	25	28	12.5	M12	5			

▶ 搭配刀片 Insert → Page：P.23
▶ 切削條件表 Cutting Condition Table → Page：P.127
▶ 鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 23

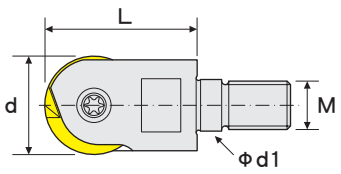
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EBCM08-01008-100L	8	20	100	8	1	—	MGR3008	ETF08
EBCM10-01010-100L	10	25	100	10	1	—	MGR4010	ETL15
EBCM10-01010-150L	10	36	150	12	1	—		
EBCM12-01012-150L	12	32	150	12	1	CMP32D12..	MGR5012	ETL20
EBCM12-01012-200L	12	58	200	16	1			
EBCM16-01016-150L	16	36	150	16	1	CMP32D16..	MGR5016	ETL20
EBCM16-01016-200L	16	36	200	16	1			
EBCM20-01020-150L	20	45	150	20	1	CMP32D20..	MGR5020	ETL20
EBCM20-01020-200L	20	45	200	20	1			
EBCM20-01020-250L	20	76	250	25	1			
EBCM25-01025-200L	25	45	200	25	1	CMP32D25..	MGR6025	ETL30
EBCM25-01025-250L	25	45	250	25	1			
EBCM25-01025-300L	25	98	300	32	1			
EBCM32-01032-200L	32	50	200	32	1	CMP32D32..	MGR8030	ETL30
EBCM32-01032-250L	32	50	250	32	1			
EBCM32-01032-300L	32	50	300	32	1			

▶ 搭配刀片 Insert → Page：P.24　　▶ 切削條件表 Cutting Condition Table → Page：P.128

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	○	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 23

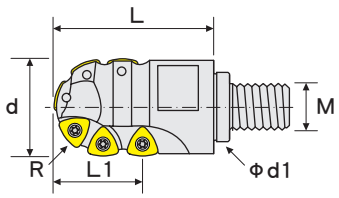
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L	d1	M				
HBCM08-01008	8	16	4.5	M4	1	—	MGR3008	ETF08
HBCM10-01010	10	20	5.5	M5	1	—	MGR4010	ETL15
HBCM12-01012	12	22	6.5	M6	1	CMP32D12..	MGR5012	ETL20
HBCM16-01016	16	28	8.5	M8	1	CMP32D16..	MGR5016	ETL20
HBCM20-01020	20	30	10.5	M10	1	CMP32D20..	MGR5020	ETL20
HBCM25-01025	25	40	12.5	M12	1	CMP32D25..	MGR6025	ETL30
HBCM32-01032	32	43	17.0	M16	1	CMP32D32..	MGR8030	ETL30

▶ 搭配刀片 Insert → Page：P.24
▶ 切削條件表 Cutting Condition Table → Page：P.128
▶ 鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	○	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 25

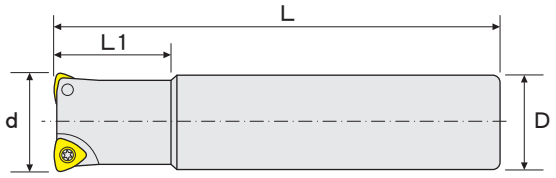
訂購編號 Order No.	尺寸 Dimensions (mm)						刃數 Flute	搭配刀片 Insert	Screw	Wrench
	R	d	L1	L	d1	M				
HBWP2614-02025	12.5R	25	21	42	12.5	M12	2	WP26339R14..	TS4023	ETF15
HBWP2614-02030	15.0R	30	23	50	12.5	M12	2			
HBWP2614-02032	16.0R	32	23	50	17.0	M16	2			
HBWP2625-02040	20.0R	40	38	65	28.0	M18	2	WP26379R25..	TS5007	ETF20
HBWP2625-02050	25.0R	50	45	80	36.0	M25	2			

▶ 搭配刀片 Insert → Page：P.24
▶ 切削條件表 Cutting Condition Table → Page：P.130
▶ 鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 24

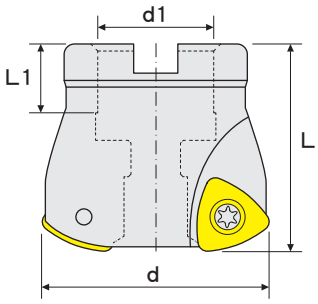
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EWP2614-03032-150L	32	28	150	32	3	WP26339R14..	TS4005	ETF15
EWP2614-03035-180L	35	40	180	32	3			
EWP2614-03035-230L	35	40	230	32	3			
EWP2614-04040-200L	40	40	200	32	4			
EWP2625-02040-200L	40	45	200	32	2	WP26379R25..	TS5002	ETF20
EWP2625-03050-200L	50	45	200	32	3			

搭配刀片 Insert → Page：P.24　　切削條件表 Cutting Condition Table → Page：P.129

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 24

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	d1				
FWP2625-03050-2200	50	21	50	22.00	3	WP26379R25..	TS5002	ETF20
FWP2625-04063-2200	63	21	50	22.00	4			
FWP2625-05080-2700	80	23	50	27.00	5			
FWP2625-06100-3200	100	26	50	32.00	6			
FWP2625-07125-4000	125	38	63	40.00	7			
FWP2625-08160-4000	160	38	63	40.00	8			

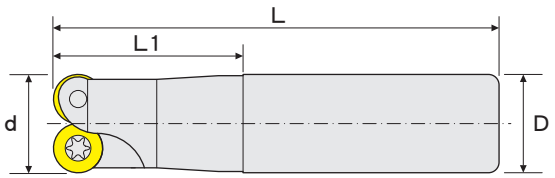
搭配刀片 Insert → Page：P.24　　切削條件表 Cutting Condition Table → Page：P.129

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend

ERD 圓角型銑刀桿
CORNER ROUNDING MILLING CUTTERS- ERD



Milling Table 26

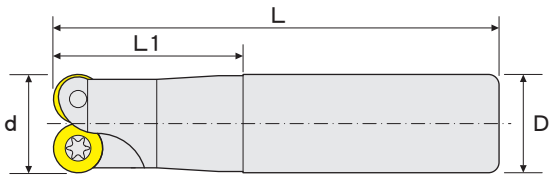
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
ERD05-02010-100L	10	18	100	10	2	RD..0501..	MS2003A	ETF06
ERD05-02011-100L	11	15	100	10	2		MS2004A	
ERD05-02011-150L	11	15	150	10	2			
ERD05-02012-100L	12	22	100	12	2			
ERD05-03012-100L	12	22	100	12	3			
ERD05-03012-150L	12	22	150	12	3			
ERD05-02013-100L	13	18	100	12	2			
ERD05-03013-100L	13	18	100	12	3			
ERD05-03013-150L	13	18	150	12	3			
ERD05-04016-150L	16	30	150	16	4			
ERD05-04016-200L	16	30	200	16	4			
ERD05-04017-150L	17	20	150	16	4			
ERD05-04017-200L	17	20	200	16	4			

搭配刀片 Insert → Page：P.25　　切削條件表 Cutting Condition Table → Page：P.131

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 26

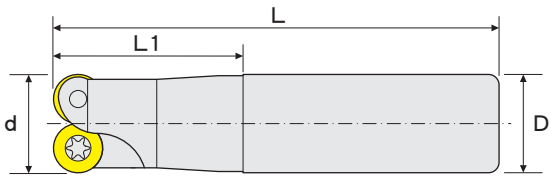
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
ERD07-02015-100L	15	25	100	16	2	RD..0702..	MS2505E	ETF08
ERD07-02015-150L	15	25	150	16	2			
ERD07-02016-150L	16	25	150	16	2		MS2506E	ETF08
ERD07-02016-200L	16	25	200	16	2			
ERD07-03016-150L	16	25	150	16	3			
ERD07-03016-200L	16	25	200	16	3			
ERD07-02017-150L	17	20	150	16	2			
ERD07-02017-200L	17	20	200	16	2			
ERD07-03017-150L	17	20	150	16	3			
ERD07-03017-200L	17	20	200	16	3			
ERD07-03020-150L	20	35	150	20	3			
ERD07-03020-200L	20	35	200	20	3			
ERD07-03021-150L	21	25	150	20	3			
ERD07-03021-200L	21	25	200	20	3			
ERD07-04025-150L	25	40	150	25	4			
ERD07-04025-200L	25	40	200	25	4			
ERD07-04025-250L	25	40	250	25	4			
ERD07-05025-150L	25	40	150	25	5		MS2505E	ETF08
ERD07-05025-200L	25	40	200	25	5			
ERD07-05025-250L	25	40	250	25	5			
ERD07-04026-150L	26	25	150	25	4		MS2506E	ETF08
ERD07-04026-200L	26	25	200	25	4			
ERD07-04026-250L	26	25	250	25	4			
ERD07-05026-150L	26	25	150	25	5			
ERD07-05026-200L	26	25	200	25	5			
ERD07-05026-250L	26	25	250	25	5			
ERD07-05035-150L	35	30	150	32	5			
ERD07-05035-200L	35	30	200	32	5			
ERD07-05035-250L	35	30	250	32	5			
ERD07-05035-300L	35	30	300	32	5			
ERD07-06035-150L	35	30	150	32	6			
ERD07-06035-200L	35	30	200	32	6			
ERD07-06035-250L	35	30	250	32	6			
ERD07-06035-300L	35	30	300	32	6			

▶ 搭配刀片 Insert → Page：P.25　　▶ 切削條件表 Cutting Condition Table → Page：P.131

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



26

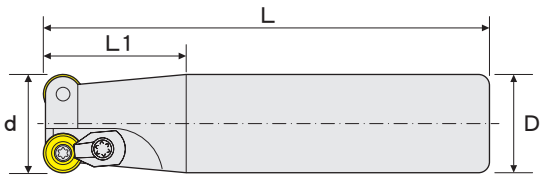
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench	Clamp	Wrench
	d	L1	L	D						
ERDX10-02020-150L	20	40	150	20	2	RD..1003..	MS3507A	—	—	ETF15
ERDX10-02020-200L	20	40	200	20	2					
ERDX10-02021-150L	21	25	150	20	2					
ERDX10-02021-200L	21	25	200	20	2					
ERDX10-03025-150L	25	40	150	25	3					
ERDX10-03025-200L	25	40	200	25	3					
ERDX10-03025-250L	25	40	250	25	3					
ERDX10-03026-150L	26	25	150	25	3					
ERDX10-03026-200L	26	25	200	25	3					
ERDX10-03026-250L	26	25	250	25	3					
ERDX10-03030-150L	30	25	150	25	3		MS3509A	—	—	ETF15
ERDX10-03030-200L	30	25	200	25	3					
ERDX10-03030-250L	30	25	250	25	3					
ERDX10-03032-150L	32	40	150	32	3		MS3509A	MC35-3V	—	ETF15
ERDX10-03032-200L	32	40	200	32	3					
ERDX10-03032-250L	32	40	250	32	3					
ERDX10-03032-300L	32	40	300	32	3					
ERDX10-03035-150L	35	35	150	32	3					
ERDX10-03035-200L	35	35	200	32	3					
ERDX10-03035-250L	35	35	250	32	3					
ERDX10-03035-300L	35	35	300	32	3					
ERDX10-04035-150L	35	35	150	32	4					
ERDX10-04035-200L	35	35	200	32	4					
ERDX10-04035-250L	35	35	250	32	4					
ERDX10-04035-300L	35	35	300	32	4					

搭配刀片 Insert → Page：P.25　　切削條件表 Cutting Condition Table → Page：P.131

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 26

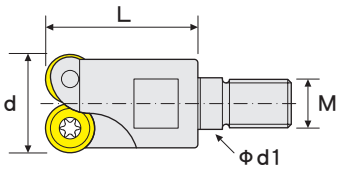
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench	Clamp	Wrench
	d	L1	L	D						
ERD10-02025-150L	25	45	150	25	2	RD..10T3..	MS4009B	—	MC35-3V	ETF15
ERD10-02025-200L	25	45	200	25	2					
ERD10-02025-250L	25	45	250	25	2					
ERD10-02026-150L	26	30	150	25	2					
ERD10-02026-200L	26	30	200	25	2					
ERD10-02026-250L	26	30	250	25	2					
ERD10-02030-150L	30	30	150	25	2					
ERD10-02030-200L	30	30	200	25	2					
ERD10-02030-250L	30	30	250	25	2					
ERD10-03030-150L	30	30	150	25	3					
ERD10-03030-200L	30	30	200	25	3					
ERD10-03030-250L	30	30	250	25	3					
ERD10-03032-150L	32	45	150	32	3					
ERD10-03032-200L	32	45	200	32	3					
ERD10-03032-250L	32	45	250	32	3					
ERD10-03032-300L	32	45	300	32	3					
ERD10-03035-150L	35	30	150	32	3					
ERD10-03035-200L	35	30	200	32	3					
ERD10-03035-250L	35	30	250	32	3					
ERD10-03035-300L	35	30	300	32	3					
ERD10-03040-150L	40	30	150	32	3					
ERD10-03040-200L	40	30	200	32	3					
ERD10-03040-250L	40	30	250	32	3					
ERD10-03040-300L	40	30	300	32	3					
ERD12-02025-100L	25	45	100	25	2	RD..1204..	MS4009A	—	MC35-3V	ETF15
ERD12-02025-150L	25	45	150	25	2					
ERD12-02025-200L	25	45	200	25	2					

搭配刀片 Insert → Page：P.25,26,27　　切削條件表 Cutting Condition Table → Page：P.131

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 26

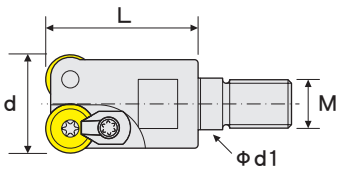
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench	Clamp	Wrench
	d	L	d1	M						
HRD05-02012	12	18	6.5	M6	2	RD..0501..	MS2004A	ETF06	–	–
HRD05-03012	12	18	6.5	M6	3					
HRD05-02013	13	18	6.5	M6	2					
HRD05-03013	13	18	6.5	M6	3					
HRD05-04016	16	23	8.5	M8	4					
HRD05-04017	17	23	8.5	M8	4					
HRD07-02015	15	23	8.5	M8	2	RD..0702..	MS2505E	ETF08	–	–
HRD07-02016	16	23	8.5	M8	2		MS2506E	ETF08	–	–
HRD07-03016	16	23	8.5	M8	3					
HRD07-02017	17	23	8.5	M8	2					
HRD07-03017	17	23	8.5	M8	3					
HRD07-03020	20	30	10.5	M10	3					
HRD07-02021	21	30	10.5	M10	2					
HRD07-03021	21	30	10.5	M10	3					
HRD07-03022	22	30	10.5	M10	3					
HRD07-04025	25	35	12.5	M12	4					
HRD07-05025	25	35	12.5	M12	5		MS2505E	ETF08	–	–
HRD07-04026	26	35	12.5	M12	4		MS2506E	ETF08	–	–
HRD07-05026	26	35	12.5	M12	5					
HRD07-05035	35	43	17.0	M16	5					
HRD07-06035	35	43	17.0	M16	6					
HRDX10-02020	20	30	10.5	M10	2	RD..1003..	MS3507A	ETF15	–	–
HRDX10-02021	21	30	10.5	M10	2					
HRDX10-03025	25	35	12.5	M12	3					
HRDX10-03026	26	35	12.5	M12	3					
HRDX10-03030	30	35	12.5	M12	3		MS3509A	ETF15	–	–
HRDX10-03032	32	43	17.0	M16	3		MS3509A	–	MC35-3V	ETF15
HRDX10-03035	35	43	17.0	M16	3					
HRDX10-04035	35	43	17.0	M16	4					
HRDX10-04040	40	43	17.0	M16	4					
HRDX10-04042	42	43	17.0	M16	4					
HRDX10-05042	42	43	17.0	M16	5					

▶ 搭配刀片 Insert → Page：P.25
▶ 切削條件表 Cutting Condition Table → Page：P.131
▶ 鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 26

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench	Clamp	Wrench
	d	L	d1	M						
HRD10-02020	20	30	10.5	M10	2	RD..10T3..	MS4008B	ETF15	—	—
HRD10-02021	21	30	10.5	M10	2		MS4009B	ETF15	—	—
HRD10-02025	25	35	12.5	M12	2		MS4009B	—	MC35-3V	ETF15
HRD10-03025	25	35	12.5	M12	3		MS4009B	ETF15	—	—
HRD10-02026	26	35	12.5	M12	2		MS4009B	—	MC35-3V	ETF15
HRD10-03026	26	35	12.5	M12	3		MS4009B	ETF15	—	—
HRD10-02030	30	43	17.0	M16	2		MS4009B	—	MC35-3V	ETF15
HRD10-03032	32	43	17.0	M16	3					
HRD10-03035	35	43	17.0	M16	3					
HRD10-04035	35	43	17.0	M16	4					
HRD10-04040	40	43	17.0	M16	4					
HRD10-04042	42	43	17.0	M16	4					
HRD10-05042	42	43	17.0	M16	5		MS4009B	ETF15	—	—

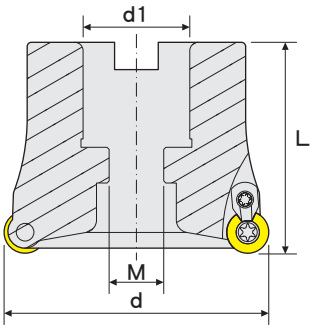
▶ 搭配刀片 Insert → Page：P.25,26　　▶ 切削條件表 Cutting Condition Table → Page：P.131

▶ 鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 26

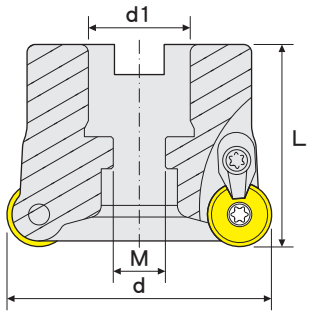
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Clamp	Screw	Wrench
	d	L	d1	M						
FRDX10-04050-2200	50	40	22.00	M11	4	RD..1003..	MS3509A	MC35-3V	—	ETF15
FRDX10-05050-2200	50	40	22.00	M11	5					
FRDX10-06052-2200	52	40	22.00	M11	6					
FRDX10-04050-2540	50	50	25.40	M13	4					
FRDX10-05050-2540	50	50	25.40	M13	5					
FRDX10-05063-2540	63	50	25.40	M13	5					
FRDX10-06063-2540	63	50	25.40	M13	6					
FRDX10-06066-2540	66	50	25.40	M13	6					
FRDX10-06080-2540	80	50	25.40	M13	6					

搭配刀片 Insert → Page：P.25　　切削條件表 Cutting Condition Table → Page：P.131

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 26

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench	Clamp	Wrench
	d	L	d1	M						
FRD10-05040-1600	40	40	16.00	M9	5	RD..10T3..	MS4009B	—	MC35-3V	ETF15
FRD10-04050-2200	50	50	22.00	M11	4					
FRD10-05050-2200	50	50	22.00	M11	5					
FRD10-05052-2200	52	50	22.00	M11	5					
FRD10-04050-2540	50	50	25.40	M13	4					
FRD10-05063-2540	63	50	25.40	M13	5					
FRD10-06080-2540	80	50	25.40	M13	6					
FRD10-06086-2540	86	50	25.40	M13	6					

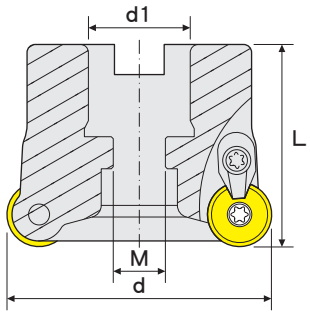
搭配刀片 Insert → Page：P.25,26　　切削條件表 Cutting Condition Table → Page：P.131

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend

FRD 圓角型銑刀盤
CORNER ROUNDING FACE MILLING CUTTERS- FRD



Milling Table 26

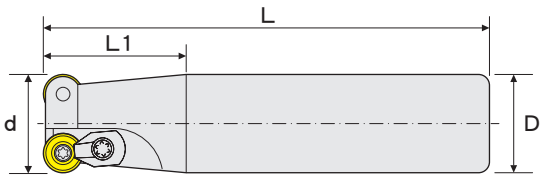
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench	Clamp	Wrench
	d	L	d1	M						
FRD16-03050-2200	50	50	22.00	M11	3	RD..1604..	MS5011A	—	MC50V	ETF20
FRD16-04052-2200	52	50	22.00	M11	4					
FRD16-05063-2700	63	50	27.00	M13	5					
FRD16-04066-2700	66	50	27.00	M13	4					
FRD16-05066-2700	66	50	27.00	M13	5					
FRD16-05080-2700	80	50	27.00	M13	5					
FRD16-06080-2700	80	50	27.00	M13	6					
FRD16-03063-2540	63	50	25.40	M13	3					
FRD16-04063-2540	63	50	25.40	M13	4					
FRD16-05063-2540	63	50	25.40	M13	5					
FRD16-04066-2540	66	50	25.40	M13	4					
FRD16-05066-2540	66	50	25.40	M13	5					
FRD16-04072-2540	72	50	25.40	M13	4					
FRD16-05080-2540	80	50	25.40	M13	5					
FRD16-06100-3175	100	50	31.75	M45	6					
FRD16-08160-5080	160	60	50.80	M64	8					

▶ 搭配刀片 Insert → Page：P.27　　▶ 切削條件表 Cutting Condition Table → Page：P.131

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 27

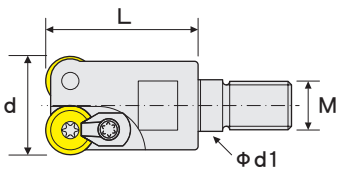
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench	Clamp	Wrench
	d	L1	L	D						
ERP08-02020-150L	20	35	150	20	2	RP..08T2..	MS2506A	ETF09	MC35-3V	ETF15
ERP08-02020-200L	20	35	200	20	2					
ERP10-02025-150L	25	40	150	25	2	RP..10T3..	MS3509A	–	MC35-3V	ETF15
ERP10-02025-200L	25	40	200	25	2					
ERP10-02025-250L	25	40	250	25	2					
ERP10-02026-150L	26	35	150	25	2					
ERP10-02026-200L	26	35	200	25	2					
ERP10-02026-250L	26	35	250	25	2					
ERP12-02025-150L	25	45	150	25	2	RP..1204..	MS4009A	–	MC35-3V	ETF15
ERP12-02025-200L	25	45	200	25	2					
ERP12-02025-250L	25	45	250	25	2					
ERP12-02026-150L	26	35	150	25	2					
ERP12-02026-200L	26	35	200	25	2					
ERP12-02026-250L	26	35	250	25	2					
ERP12-02032-150L	32	45	150	32	2		MS4011A	–	MC35-3V	ETF15
ERP12-02032-200L	32	45	200	32	2					
ERP12-03032-150L	32	45	150	32	3					
ERP12-03032-200L	32	45	200	32	3					
ERP12-03032-250L	32	45	250	32	3					
ERP12-03040-150L	40	35	150	32	3					
ERP12-03040-200L	40	35	200	32	3					
ERP12-03040-250L	40	35	250	32	3					
ERPX10-02020-150L	20	35	150	20	2	RP..1003..	MS4009A	ETF15	–	–
ERPX10-02020-200L	20	35	200	20	2					
ERPX10-02021-150L	21	25	150	20	2					
ERPX10-02021-200L	21	25	200	20	2					
ERPX10-02025-150L	25	40	150	25	2		MS4009A	–	MC35-3V	ETF15
ERPX10-02025-200L	25	40	200	25	2					
ERPX10-02026-150L	26	30	150	25	2					
ERPX10-02026-200L	26	30	200	25	2					

▶ 搭配刀片 Insert → Page：P.27,28　　▶ 切削條件表 Cutting Condition Table → Page：P.132

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 27

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench	Clamp	Wrench
	d	L	d1	M						
HRP12-02025	25	35	12.5	M12	2	RP..1204..	MS4009A	–	MC35-3V	ETF15
HRP12-02026	26	35	12.5	M12	2					
HRPX10-02020	20	30	10.5	M10	2	RP..1003..	MS4009A	ETF15	–	–
HRPX10-02021	21	30	10.5	M10	2					
HRPX10-02025	25	35	12.5	M12	2		MS4009A	–	MC35-3V	ETF15
HRPX10-03025	25	35	12.5	M12	3		MS4009A	ETF15	–	–
HRPX10-02026	26	35	12.5	M12	2		MS4009A	–	MC35-3V	ETF15
HRPX10-03030	30	35	12.5	M12	3					
HRPX10-03035	35	43	17.0	M16	3					
HRPX10-04035	35	43	17.0	M16	4					

搭配刀片 Insert → Page：P.27,28

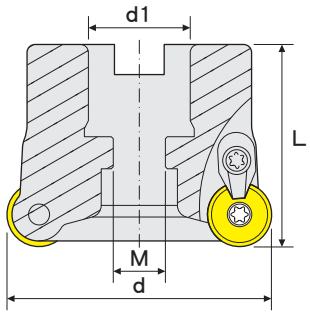
切削條件表 Cutting Condition Table → Page：P.132

鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 27

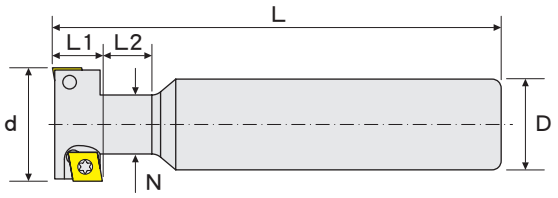
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench	Clamp	Wrench
	d	L	d1	M						
FRP12-04050-2200	50	50	22.00	M11	4	RP..1204..	MS4011A	—	MC35-3V	ETF15
FRP12-04050-2540	50	50	25.40	M13	4					
FRP12-05063-2540	63	50	25.40	M13	5					
FRP12-05066-2540	66	50	25.40	M13	5					
FRP12-06080-2540	80	50	25.40	M13	6					
FRP12-06100-3175	100	50	31.75	M13	6					

搭配刀片 Insert → Page：P.28　　切削條件表 Cutting Condition Table → Page：P.132

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



28

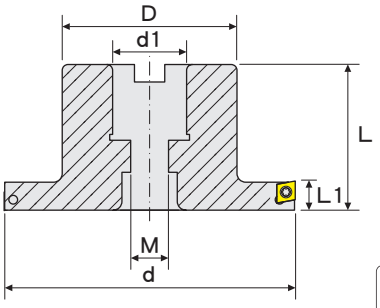
訂購編號 Order No.	尺寸 Dimensions (mm)						刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L2	N	L	D				
ETCC06-02021-100L	21	9	16	10.0	100	16	2	CCMT0602.. CCGT0602..	MS2506A	ETF09
ETCC06-04040-150L	40	9	17	19.8	150	20	4			
ETCC06-04025-090L	25	11	17	12.5	90	20	4			
ETCC06-04030-100L	30	11	20	14.0	100	25	4			
ETCC06-04040-150L-110C	40	11	15	19.8	150	20	4			
ETCC09-04040-110L	40	18	27	20.0	110	25	4	CCMT09T3.. CCGT09T3..	MS4011A	ETF15
ETCC09-04050-150L	50	18	15	24.8	150	25	4			
ETCC12-04050-140L	50	22	34	26.0	140	32	4	CCMT1204.. CCGT1204..	MS5011A	ETF20

搭配刀片 Insert → Page：P.171　　切削條件表 Cutting Condition Table → Page：P.133

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63		HRC<30		HRC<30
	◎	◎	◎	—	—	◎	◎	◎	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 28

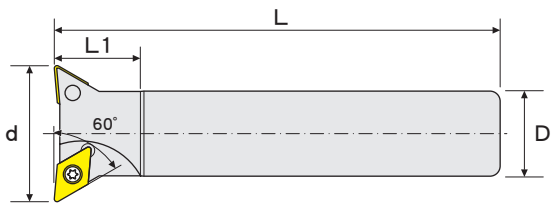
訂購編號 Order No.	尺寸 Dimensions (mm)					刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D	d1				
FTCC06-08100-2540	100	8	50	60	25.40	8	CCMT0602.. CCGT0602..	MS2506A	ETF09
ETCC06-10125-3175	125	10	50	70	31.75	10			

搭配刀片 Insert → Page：P.171　　切削條件表 Cutting Condition Table → Page：P.133

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	◎	◎	◎	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



29

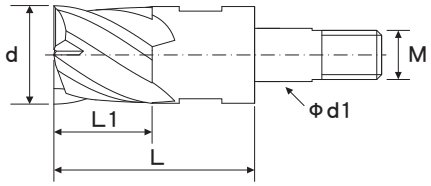
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
EDDC07-01016-100L	16	20	100	16	1	DCMT0702.. DCGT0702..	MS2506A	ETF09
EDDC07-01020-100L	20	25	100	20	1			
EDDC07-03025-120L	25	25	120	20	3			
EDDC07-03030-120L	30	25	120	20	3			
EDDC11-03040-150L	40	25	150	25	3	DCMT11T3.. DCGT11T3..	MS4011A	ETF15
EDDC11-03044-150L	44	25	150	25	3			
EDDC11-03050-120L	50	30	120	25	3			
EDDC11-03050-150L	50	30	150	32	3			
EDDC11-04056-150L	56	30	150	32	4			
EDDC11-04060-150L	60	30	150	32	4			

搭配刀片 Insert → Page：P.172　　切削條件表 Cutting Condition Table → Page：P.133

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	◎	◎	◎	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



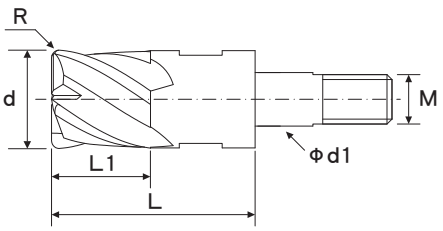
Milling Table 30

白刀訂購編號 Uncoated Order No.	鍍膜訂購編號 Coated Order No.	尺寸 Dimensions (mm)					刃數 Flutes	Wrench
		d	L1	L	螺紋 Thread	D		
CHS40800	CHS40800A	8	8	17.0	M4×0.7	4.5	4	TC06
CHS41000	CHS41000A	10	10	20.0	M5×0.8	5.5	4	TC07
CHS41200	CHS41200A	12	12	23.2	M6×1.0	6.5	4	TC08
CHS41600	CHS41600A	16	16	30.0	M8×1.25	8.5	4	TC11
CHS42000	CHS42000A	20	20	37.2	M10×1.5	10.5	4	TC15
CHS42500	CHS42500A	25	25	44.7	M12×1.75	12.5	4	TC19
CHS43200	CHS43200A	32	32	55.2	M16×2.0	17.0	4	TC24

鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108　切削條件表 Cutting Condition Table → Page：P.134

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	○	◎	○	—

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



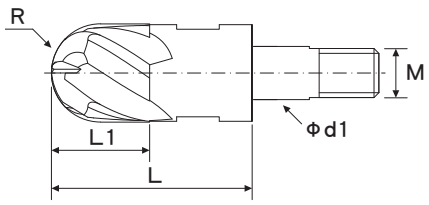
Milling Table 30

白刀訂購編號 Uncoated Order No.	鍍膜訂購編號 Coated Order No.	尺寸 Dimensions (mm)						刃數 Flutes	Wrench
		d	R 角	L1	L	螺紋 Thread	D		
CHCR4080005	CHCR4080005A	8	0.5R	8	17.0	M4×0.7	4.5	4	TC06
CHCR4080010	CHCR4080010A	8	1.0R	8	17.0	M4×0.7	4.5	4	TC06
CHCR4080020	CHCR4080020A	8	2.0R	8	17.0	M4×0.7	4.5	4	TC06
CHCR4100005	CHCR4100005A	10	0.5R	10	20.0	M5×0.8	5.5	4	TC07
CHCR4100010	CHCR4100010A	10	1.0R	10	20.0	M5×0.8	5.5	4	TC07
CHCR4100020	CHCR4100020A	10	2.0R	10	20.0	M5×0.8	5.5	4	TC07
CHCR4120010	CHCR4120010A	12	1.0R	12	23.2	M6×1.0	6.5	4	TC08
CHCR4120020	CHCR4120020A	12	2.0R	12	23.2	M6×1.0	6.5	4	TC08
CHCR4120030	CHCR4120030A	12	3.0R	12	23.2	M6×1.0	6.5	4	TC08
CHCR4160010	CHCR4160010A	16	1.0R	16	30.0	M8×1.25	8.5	4	TC11
CHCR4160020	CHCR4160020A	16	2.0R	16	30.0	M8×1.25	8.5	4	TC11
CHCR4160030	CHCR4160030A	16	3.0R	16	30.0	M8×1.25	8.5	4	TC11
CHCR4200020	CHCR4200020A	20	2.0R	20	37.2	M10×1.5	10.5	4	TC15
CHCR4200030	CHCR4200030A	20	3.0R	20	37.2	M10×1.5	10.5	4	TC15
CHCR4200040	CHCR4200040A	20	4.0R	20	37.2	M10×1.5	10.5	4	TC15

鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108　切削條件表 Cutting Condition Table → Page：P.134

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	○	◎	○	—

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



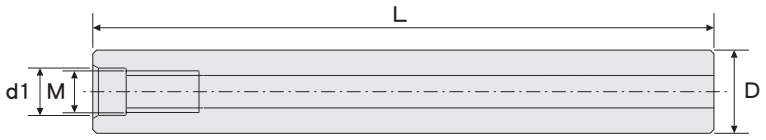
Milling Table 31

白刀訂購編號 Uncoated Order No.	鍍膜訂購編號 Coated Order No.	尺寸 Dimensions (mm)					刃數 Flutes	Wrench
		半徑 R	L1	L	螺紋 Thread	D		
CHB40400	CHB40400A	4.0R	8	17.0	M4×0.7	4.5	4	TC06
CHB40500	CHB40500A	5.0R	10	20.0	M5×0.8	5.5	4	TC07
CHB40600	CHB40600A	6.0R	12	23.2	M6×1.0	6.5	4	TC08
CHB40800	CHB40800A	8.0R	16	30.0	M8×1.25	8.5	4	TC11
CHB41000	CHB41000A	10.0R	20	37.2	M10×1.5	10.5	4	TC15
CHB41250	CHB41250A	12.5R	25	44.7	M12×1.75	12.5	4	TC19

鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.107,108　切削條件表 Cutting Condition Table → Page：P.135

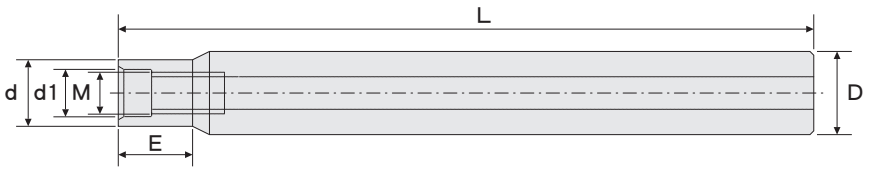
應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	○	◎	○	—

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend

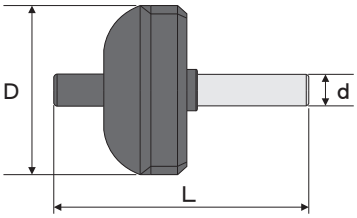


訂購編號 Order No.	尺寸 Dimensions (mm)			
	螺紋 Thread	柄徑 D	d1	全長 L
LCL008-060L	M4 × 0.7	8	4.5	60
LCL008-100L	M4 × 0.7	8	4.5	100
LCL008-120L	M4 × 0.7	8	4.5	120
LCL010-075L	M5 × 0.8	10	5.5	75
LCL010-100L	M5 × 0.8	10	5.5	100
LCL010-150L	M5 × 0.8	10	5.5	150
LCL012-075L	M6 × 1.0	12	6.5	75
LCL012-100L	M6 × 1.0	12	6.5	100
LCL012-150L	M6 × 1.0	12	6.5	150
LCL012-200L	M6 × 1.0	12	6.5	200
LCL016-100L	M8 × 1.25	16	8.5	100
LCL016-150L	M8 × 1.25	16	8.5	150
LCL016-200L	M8 × 1.25	16	8.5	200
LCL016-250L	M8 × 1.25	16	8.5	250
LCL020-100L	M10 × 1.5	20	10.5	100
LCL020-150L	M10 × 1.5	20	10.5	150
LCL020-200L	M10 × 1.5	20	10.5	200
LCL020-250L	M10 × 1.5	20	10.5	250
LCL020-300L	M10 × 1.5	20	10.5	300
LCL025-100L	M12 × 1.75	25	12.5	100
LCL025-150L	M12 × 1.75	25	12.5	150
LCL025-200L	M12 × 1.75	25	12.5	200
LCL025-250L	M12 × 1.75	25	12.5	250
LCL025-300L	M12 × 1.75	25	12.5	300
LCL032-100L	M16 × 2.0	32	17.0	100
LCL032-150L	M16 × 2.0	32	17.0	150
LCL032-200L	M16 × 2.0	32	17.0	200
LCL032-250L	M16 × 2.0	32	17.0	250
LCL032-300L	M16 × 2.0	32	17.0	300

鎢鋼抗震刀桿 - 頸型
CARBIDE ANTI-VIBRATION HOLDER- NECK



訂購編號 Order No.	尺寸 Dimensions (mm)					
	螺紋 Thread	刃徑 d	d1	有效長 E	全長 L	柄徑 D
LCN011-075L-030E	M6 × 1.0	11.7	6.5	30	75	12
LCN011-100L-040E	M6 × 1.0	11.7	6.5	40	100	12
LCN011-150L-050E	M6 × 1.0	11.7	6.5	50	150	12
LCN015-100L-040E	M8 × 1.25	15.7	8.5	40	100	16
LCN015-150L-050E	M8 × 1.25	15.7	8.5	50	150	16
LCN019-100L-040E	M10 × 1.5	19.5	10.5	40	100	20
LCN019-150L-050E	M10 × 1.5	19.5	10.5	50	150	20
LCN019-200L-060E	M10 × 1.5	19.5	10.5	60	200	20
LCN024-100L-040E	M12 × 1.75	24.5	12.5	40	100	25
LCN024-150L-050E	M12 × 1.75	24.5	12.5	50	150	25
LCN024-200L-060E	M12 × 1.75	24.5	12.5	60	200	25
LCN024-250L-080E	M12 × 1.75	24.5	12.5	80	250	25
LCN031-100L-040E	M16 × 2.0	31.5	17.0	40	100	32
LCN031-150L-050E	M16 × 2.0	31.5	17.0	50	150	32
LCN031-200L-060E	M16 × 2.0	31.5	17.0	60	200	32
LCN031-250L-080E	M16 × 2.0	31.5	17.0	80	250	32

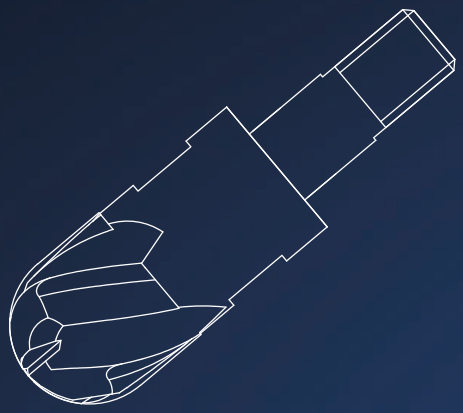


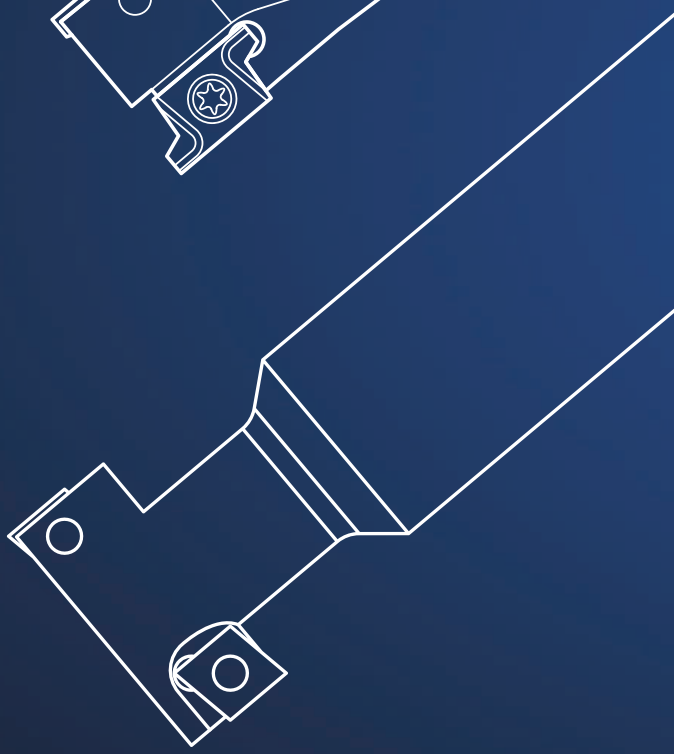
訂購編號 Order No.	d	L	D	建議使用起子頭 Bit Torx	扭力值 Torque	
					N.m	In-ld
TH06	10	76.25	52	T6	0.6	5.3
TH07				T7	0.9	8.0
TH08				T8	1.2	10.6
TH09				T9	1.4	12.4
TH10				T10	2.0	17.7
TH15				T15	3.0	26.6
TH20				T20	5.0	44.3

特色 / Features：
1. 適用於需要固定扭力設定要求的工業和工作。
   Preset torque tool for industrial applicabons.
2. 符合人體工學的 T 型握把設計，操作容易，使用安全。
   Ergonomic T-handle provides user comfort and safety.
3. 更換式接桿，方便使用者依不同使用場合而調整。
   Removable extension shaft allows for increased access.
4. 當施力到達固定值時，握把會有一回轉力及 " 喀嚓 " 聲來提醒使用者，避免超過扭力值而造成物件損壞。
   Tactile overrun when torque is reached preventing damage to fasteners.

切削條件表【銑削】

CUTTING CONDITION TABLE



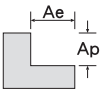


CMTéc

西門德克

Table 01 ELN / HLN / FLN 高進給型銑刀桿 切削條件表

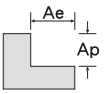
HIGH FEED MILLING CUTTERS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~50	—	HRC<30	HRC<30
切削速度 Vc	120~250m/min	50~120m/min	100~180m/min	120~250m/min	50~100m/min
每刃進給量 fz (mm)	0.3~1.6	0.3~1.0	0.3~1.2	0.3~1.6	0.3~0.8
加工深度 Ap (mm)	0.3~0.9	0.3~0.7	0.3~0.9	0.3~0.9	0.3~0.7
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

Table 02 ELO / HLO / FLO 高進給型銑刀桿 切削條件表

HIGH FEED MILLING CUTTERS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~50	—	HRC<30	HRC<30
切削速度 Vc	120~250m/min	50~120m/min	100~180m/min	120~250m/min	50~100m/min
每刃進給量 fz (mm)	0.3~1.6	0.3~1.0	0.3~1.2	0.3~1.6	0.3~0.8
加工深度 Ap (mm)	0.3~0.9	0.3~0.7	0.3~0.9	0.3~0.9	0.3~0.7
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

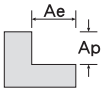
※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

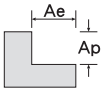
Table 03 EBN / HBN / FBN 高進給型銑刀桿 切削條件表

HIGH FEED MILLING CUTTERS- CUTTING CONDITION TABLE

使用銑刀片型號：BNMX0603 For BNMX0603 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~50	—	HRC<30	HRC<30
切削速度 Vc	120~250m/min	50~120m/min	100~180m/min	120~250m/min	50~100m/min
每刃進給量 fz (mm)	0.3~1.6	0.3~1.0	0.3~1.2	0.3~1.6	0.3~0.8
加工深度 Ap (mm)	0.3~0.9	0.3~0.7	0.3~0.9	0.3~0.9	0.3~0.7
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

使用銑刀片型號：BNMX0904 For BNMX0904 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	120~250m/min	50~120m/min	100~180m/min	120~250m/min	50~100m/min
每刃進給量 fz (mm)	0.3~1.8	0.3~1.2	0.3~1.4	0.3~1.8	0.3~1.0
加工深度 Ap (mm)	0.3~1.4	0.3~1.2	0.3~1.2	0.3~1.4	0.3~1.2
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

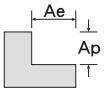
※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

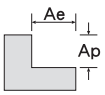
Table 04 EWN / FWN 高進給型銑刀桿 切削條件表

HIGH FEED MILLING CUTTERS- CUTTING CONDITION TABLE

使用銑刀片型號：WNMX09T3　For WNMX09T3 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	120~250m/min	50~120m/min	100~180m/min	120~250m/min	50~100m/min
每刃進給量 fz (mm)	0.3~1.5	0.3~1.1	0.3~1.2	0.3~1.5	0.3~1.0
加工深度 Ap (mm)	0.40~1.35	0.4~1.0	0.4~1.0	0.40~1.35	0.4~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

使用銑刀片型號：WNMX1305　For WNMX1305 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	120~250m/min	50~120m/min	100~180m/min	120~250m/min	50~100m/min
每刃進給量 fz (mm)	0.3~1.7	0.3~1.3	0.3~1.4	0.3~1.7	0.3~1.2
加工深度 Ap (mm)	0.4~1.7	0.4~1.3	0.4~1.4	0.4~1.7	0.4~1.3
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

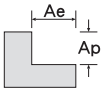
※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

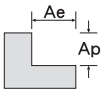
Table 05 FJD 高進給型銑刀盤 切削條件表

HIGH FEED FACE MILLING CUTTERS- CUTTING CONDITION TABLE

使用銑刀片型號：JDMW1204 For JDMW1204 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	120~250m/min	50~120m/min	100~180m/min	120~250m/min	50~100m/min
每刃進給量 fz (mm)	0.3~1.3	0.3~1.0	0.3~1.0	0.3~1.3	0.3~1.0
加工深度 Ap (mm)	0.3~1.5	0.3~1.0	0.3~1.0	0.3~1.5	0.3~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

使用銑刀片型號：JDMW1405 For JDMW1405 Inserts

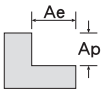
加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	120~250m/min	50~120m/min	100~180m/min	120~250m/min	50~100m/min
每刃進給量 fz (mm)	0.3~1.5	0.3~1.2	0.3~1.2	0.3~1.5	0.3~1.2
加工深度 Ap (mm)	0.5~2.0	0.5~1.5	0.5~1.5	0.5~2.0	0.5~1.5
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

Table 06 FSD 高進給型銑刀盤 切削條件表

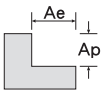
HIGH FEED FACE MILLING CUTTERS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	120~250m/min	50~120m/min	100~180m/min	120~250m/min	50~100m/min
每刃進給量 fz (mm)	0.3~1.5	0.3~1.2	0.3~1.2	0.3~1.5	0.3~1.2
加工深度 Ap (mm)	0.3~1.5	0.3~1.0	0.3~1.0	0.3~1.5	0.3~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

Table 07 FHN 面銑刀盤 切削條件表

FACE MILLING CUTTERS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	60~140m/min	100~250m/min	40~80m/min
每刃進給量 fz (mm)	0.1~0.3	0.08~0.25	0.1~0.3	0.08~0.20
加工深度 Ap (mm)	0.3~3.5	0.3~2.0	0.3~3.5	0.3~2.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 			

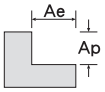
※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

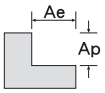
Table 08 FSN / FON 面銑刀盤 切削條件表

FACE MILLING CUTTERS- CUTTING CONDITION TABLE

使用銑刀片型號：SNMX1205 For SNMX1205 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	80~200m/min	40~80m/min	60~120m/min	80~200m/min	40~70m/min
每刃進給量 fz (mm)	0.1~0.3	0.08~0.25	0.08~0.25	0.1~0.3	0.08~0.20
加工深度 Ap (mm)	0.3~5.0	0.3~2.0	0.3~3.5	0.3~5.0	0.3~2.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

使用銑刀片型號：ONMX0505 For ONMX0505 Inserts

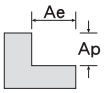
加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	80~200m/min	40~80m/min	60~120m/min	80~200m/min	40~70m/min
每刃進給量 fz (mm)	0.1~0.3	0.08~0.25	0.08~0.25	0.1~0.3	0.08~0.20
加工深度 Ap (mm)	0.3~2.0	0.3~1.5	0.3~1.5	0.3~2.0	0.3~1.5
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

Table 09 FOF 面銑刀盤 切削條件表

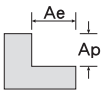
FACE MILLING CUTTERS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.1~0.3	0.08~0.25	0.08~0.25	0.1~0.3	0.08~0.25
加工深度 Ap (mm)	0.3~2.8	0.3~1.7	0.3~1.7	0.3~2.8	0.3~1.7
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

Table 10 FSE..12 面銑刀盤 切削條件表

FACE MILLING CUTTERS- CUTTING CONDITION TABLE

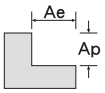
加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	—	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	150~300m/min	50~100m/min
每刃進給量 fz (mm)	0.1~0.3	0.08~0.25	0.08~0.25	0.1~0.3	0.1~0.4	0.08~0.25
加工深度 Ap (mm)	0.3~4.0	0.3~2.0	0.3~3.0	0.3~4.0	0.3~4.0	0.3~2.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 					

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

Table 11 FSE..13 面銑刀盤 切削條件表

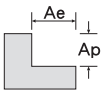
FACE MILLING CUTTERS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	—	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	150~300m/min	50~100m/min
每刃進給量 fz (mm)	0.1~0.3	0.08~0.25	0.08~0.25	0.1~0.3	0.1~0.4	0.08~0.25
加工深度 Ap (mm)	0.3~4.0	0.3~2.0	0.3~3.0	0.3~4.0	0.3~4.0	0.3~2.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 					

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

Table 12 FSP 面銑刀盤 切削條件表

FACE MILLING CUTTERS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SUS304	FC,FCD
硬度 Hardness	HRC<30	HRC30~45	—	HRC<30
切削速度 Vc	100~200m/min	80~150m/min	80~160m/min	100~200m/min
每刃進給量 fz (mm)	0.1~0.3	0.05~0.20	0.1~0.3	0.1~0.3
加工深度 Ap (mm)	0.5~2.5	0.5~2.0	0.5~2.5	0.5~2.5
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 			

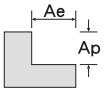
※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

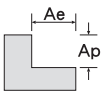
Table 13 EXN / HXN / FXN 直角型銑刀桿 切削條件表

SHOULDER MILLING CUTTERS- CUTTING CONDITION TABLE

使用銑刀片型號：XNMX0403 For XNMX0403 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~180m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.10~0.16	0.08~0.12	0.08~0.12	0.10~0.16	0.08~0.12
加工深度 Ap (mm)	0.3~3.0	0.3~1.5	0.3~1.5	0.3~3.0	0.3~1.5
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

使用銑刀片型號：XNMX0806 For XNMX0806 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~180m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.1~0.2	0.08~0.15	0.08~0.15	0.1~0.2	0.08~0.15
加工深度 Ap (mm)	0.3~4.0	0.3~2.0	0.3~2.0	0.3~4.0	0.3~2.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

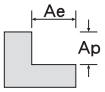
※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

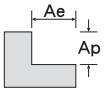
Table 14 EAP / HAP / FAP 直角型銑刀桿 切削條件表

SHOULDER MILLING CUTTERS- CUTTING CONDITION TABLE

使用銑刀片型號：APKT1003 For APKT1003 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	—	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	150~300m/min	50~100m/min
每刃進給量 fz (mm)	0.10~0.25	0.07~0.15	0.08~0.18	0.10~0.25	0.10~0.25	0.07~0.15
加工深度 Ap (mm)	0.3~3.0	0.3~1.0	0.3~2.0	0.3~3.0	0.3~4.0	0.3~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 					

使用銑刀片型號：APKT1604, APET1604 For APKT1604 & APET1604 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	—	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	150~300m/min	50~100m/min
每刃進給量 fz (mm)	0.1~0.3	0.1~0.2	0.10~0.22	0.1~0.3	0.1~0.3	0.1~0.2
加工深度 Ap (mm)	0.5~3.0	0.5~1.0	0.5~2.0	0.5~3.0	0.5~4.0	0.5~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 					

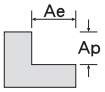
※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

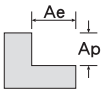
Table 15 EAP / HAP / FAP 直角型銑刀桿 切削條件表

SHOULDER MILLING CUTTERS- CUTTING CONDITION TABLE

使用銑刀片型號：APMT1035 / APMT1135 For APMT1035 / APMT1135 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	—	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	—	50~100m/min
每刃進給量 fz (mm)	0.10~0.25	0.07~0.15	0.08~0.18	0.10~0.25	—	0.07~0.15
加工深度 Ap (mm)	0.3~3.0	0.3~1.0	0.3~2.0	0.3~3.0	—	0.3~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 					

使用銑刀片型號：APMT1604, APGT1604 For APMT1604 & APGT1604 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	—	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	150~300m/min	50~100m/min
每刃進給量 fz (mm)	0.1~0.3	0.1~0.2	0.10~0.22	0.1~0.3	0.1~0.3	0.1~0.2
加工深度 Ap (mm)	0.5~3.0	0.5~1.0	0.5~2.0	0.5~3.0	0.5~4.0	0.5~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 					

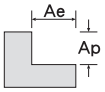
※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

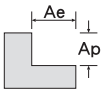
Table 16 EAX / HAX / FAX 直角型銑刀桿 切削條件表

SHOULDER MILLING CUTTERS- CUTTING CONDITION TABLE

使用銑刀片型號：AXMT1235 For AXMT1235 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.10~0.25	0.07~0.15	0.08~0.18	0.10~0.25	0.07~0.15
加工深度 Ap (mm)	0.3~3.0	0.3~1.0	0.3~2.0	0.3~3.0	0.3~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

使用銑刀片型號：AXMT1705 For AXMT1705 Inserts

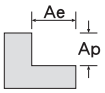
加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.1~0.3	0.1~0.2	0.10~0.22	0.1~0.3	0.1~0.2
加工深度 Ap (mm)	0.5~3.0	0.5~1.0	0.5~2.0	0.5~3.0	0.5~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

Table 17 EJD 直角型銑刀桿 切削條件表

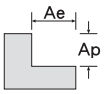
SHOULDER MILLING CUTTERS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.1~0.3	0.1~0.2	0.10~0.22	0.1~0.3	0.1~0.2
加工深度 Ap (mm)	0.5~3.0	0.5~1.0	0.5~2.0	0.5~3.0	0.5~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

Table 18 FSO 直角型銑刀盤 切削條件表

SHOULDER FACE MILLING CUTTERS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	—	HRC<30
切削速度 Vc	120~250m/min	50~100m/min	80~160m/min	120~250m/min	150~300m/min	50~100m/min
每刃進給量 fz (mm)	0.05~0.15	0.03~0.10	0.04~0.12	0.05~0.15	0.05~0.15	0.03~0.10
加工深度 Ap (mm)	0.3~8.0	0.3~6.0	0.3~8.0	0.3~8.0	0.3~9.0	0.3~6.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 					

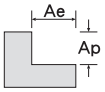
※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

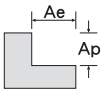
Table 19 ETP / HTP / FTP 直角型銑刀桿 切削條件表

SHOULDER MILLING CUTTERS- CUTTING CONDITION TABLE

使用銑刀片型號：TPMX1004 For TPMX1004 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.08~0.20	0.05~0.12	0.05~0.15	0.08~0.20	0.05~0.10
加工深度 Ap (mm)	0.3~5.0	0.3~2.0	0.3~2.0	0.3~5.0	0.3~2.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

使用銑刀片型號：TPMX1505 For TPMX1505 Inserts

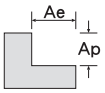
加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.12~0.30	0.10~0.18	0.1~0.2	0.12~0.30	0.10~0.18
加工深度 Ap (mm)	0.5~5.0	0.5~2.0	0.5~2.0	0.5~5.0	0.5~2.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

Table 20 EW390 直角型銑刀桿 切削條件表

SHOULDER MILLING CUTTERS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.10~0.22	0.07~0.15	0.08~0.20	0.10~0.22	0.07~0.15
加工深度 Ap (mm)	0.5~3.0	0.5~1.0	0.5~2.0	0.5~3.0	0.5~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

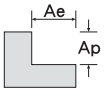
※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

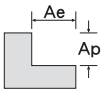
Table 21 ERT / HRT / FRT 直角型銑刀桿 切削條件表

SHOULDER MILLING CUTTERS- CUTTING CONDITION TABLE

使用銑刀片型號：ANRT0702 For ANRT0702 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.08~0.20	0.05~0.13	0.05~0.15	0.08~0.20	0.05~0.12
加工深度 Ap (mm)	0.3~2.0	0.3~1.0	0.3~2.0	0.3~2.0	0.3~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

使用銑刀片型號：ANRT1003 For ANRT1003 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.10~0.22	0.07~0.15	0.08~0.18	0.10~0.22	0.07~0.15
加工深度 Ap (mm)	0.5~2.0	0.5~1.0	0.5~2.0	0.5~2.0	0.5~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

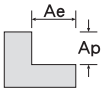
※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

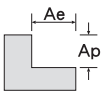
Table 22 EAD / HAD / FAD 直角型銑刀桿 切削條件表

SHOULDER MILLING CUTTERS- CUTTING CONDITION TABLE

使用銑刀片型號：ADMT0602 For ADMT0602 Inserts

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.08~0.20	0.05~0.13	0.05~0.15	0.08~0.20	0.05~0.13
加工深度 Ap (mm)	0.3~2.0	0.3~1.0	0.3~2.0	0.3~2.0	0.3~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

使用銑刀片型號：ADMT10T3 For ADMT10T3 Inserts

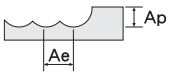
加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~160m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.10~0.22	0.07~0.15	0.07~0.18	0.10~0.22	0.07~0.15
加工深度 Ap (mm)	0.5~2.0	0.5~1.0	0.5~2.0	0.5~2.0	0.5~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

Table 23 EBCM / HBCM 高精度球型銑刀桿 切削條件表

HIGH PRECISION- BALL NOSED CUTTERS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SKT,SKD	SUS304	FC,FCD	Al 5052/6061/7075
硬度 Hardness	HRC<30	HRC30~45	HRC45~55	—	HRC<30	—
切削速度 Vc	100~250m/min	80~150m/min	50~120m/min	80~160m/min	100~200m/min	150~300m/min
外徑 Diameter	每轉進給量 f (mm/rev)	每轉進給量 f (mm/rev)	每轉進給量 f (mm/rev)	每轉進給量 f (mm/rev)	每轉進給量 f (mm/rev)	每轉進給量 f (mm/rev)
8~16mm	0.3~0.6	0.25~0.60	0.2~0.5	0.25~0.60	0.3~0.6	0.3~0.7
20~32mm	0.35~0.70	0.30~0.65	0.25~0.55	0.25~0.70	0.5~0.8	0.35~0.70
備註 Remarks	Ap=0.05D Ae=0.15D 		Ap=0.04D Ae=0.1D	Ap=0.05D Ae=0.15D	Ap=0.05D Ae=0.15D	Ap=0.05D Ae=0.15D

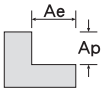
※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = f(每轉進給量) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

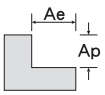
Table 24 EWP / FWP 高進給型銑刀桿 切削條件表

HIGH FEED MILLING CUTTERS- CUTTING CONDITION TABLE

使用銑刀片型號：WP26339R14 For WP26339R14 Inserts

加工材質 Material	碳素鋼 Carbon Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	80~160m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.3~1.5	0.3~1.2	0.3~1.5	0.3~1.0
加工深度 Ap (mm)	0.4~1.5	0.4~1.0	0.4~1.5	0.4~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 			

使用銑刀片型號：WP26379R25 For WP26379R25 Inserts

加工材質 Material	碳素鋼 Carbon Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	80~160m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.3~1.5	0.3~1.2	0.3~1.5	0.3~1.0
加工深度 Ap (mm)	0.4~2.0	0.4~1.5	0.4~2.0	0.4~1.5
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 			

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

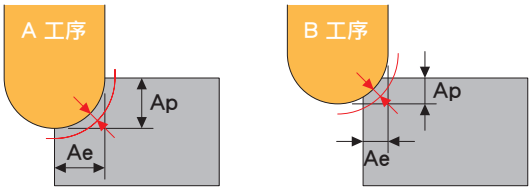
1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

Table 25 HBWP 球型銑刀頭(粗加工) 切削條件表

BALL NOSED CUTTERS- ROUGHING- CUTTING CONDITION TABLE

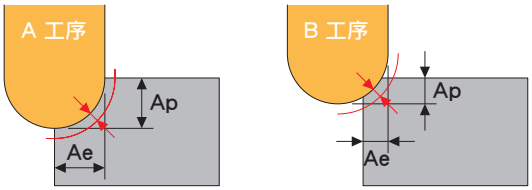
使用銑刀片型號：WP26339R14　For WP26339R14 Inserts

加工材質 Material	碳素鋼 Carbon Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	80~160m/min	100~250m/min	50~100m/min
A 工序 每刃進給量 fz (mm)	0.16~0.30	0.08~0.14	0.16~0.30	0.08~0.12
B 工序 每刃進給量 fz (mm)	0.2~0.4	0.10~0.18	0.2~0.4	0.10~0.18
備註 Remarks	A 工序：Ap = 0.50D, Ae = 0.50D B 工序：Ap = 0.25D, Ae = 0.25D			



使用銑刀片型號：WP26379R25　For WP26379R25 Inserts

加工材質 Material	碳素鋼 Carbon Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	80~160m/min	100~250m/min	50~100m/min
A 工序 每刃進給量 fz (mm)	0.20~0.35	0.08~0.15	0.20~0.35	0.08~0.12
B 工序 每刃進給量 fz (mm)	0.25~0.45	0.1~0.2	0.25~0.45	0.1~0.2
備註 Remarks	A 工序：Ap = 0.50D, Ae = 0.50D B 工序：Ap = 0.25D, Ae = 0.25D			



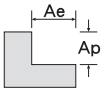
※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

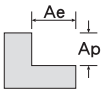
Table 26 ERD / HRD / FRD 圓角型銑刀桿 切削條件表

CORNER ROUNDING MILLING CUTTERS- CUTTING CONDITION TABLE

※ 外徑 ≦ 10mm Diameter ≦ 10mm

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~180m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.1~0.6	0.08~0.30	0.08~0.30	0.1~0.6	0.08~0.30
加工深度 Ap (mm)	0.3~1.5	0.3~1.0	0.3~1.5	0.3~1.5	0.3~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

※ 外徑 > 10mm Diameter > 10mm

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~180m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.15~0.80	0.1~0.3	0.15~0.40	0.15~0.80	0.1~0.3
加工深度 Ap (mm)	0.5~1.5	0.5~1.0	0.5~1.5	0.5~1.5	0.5~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

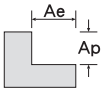
※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

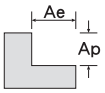
Table 27 ERP / HRP / FRP 圓角型銑刀桿 切削條件表

CORNER ROUNDING MILLING CUTTERS- CUTTING CONDITION TABLE

※ 外徑 ≦ 10mm Diameter ≦ 10mm

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~180m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.1~0.6	0.08~0.30	0.08~0.30	0.1~0.6	0.08~0.30
加工深度 Ap (mm)	0.3~1.5	0.3~1.0	0.3~1.5	0.3~1.5	0.3~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

※ 外徑 > 10mm Diameter > 10mm

加工材質 Material	碳素鋼 Carbon Steels	調質鋼 Hardened Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<40	HRC40~55	—	HRC<30	HRC<30
切削速度 Vc	100~250m/min	50~100m/min	80~180m/min	100~250m/min	50~100m/min
每刃進給量 fz (mm)	0.15~0.80	0.1~0.3	0.15~0.40	0.15~0.80	0.1~0.3
加工深度 Ap (mm)	0.5~1.5	0.5~1.0	0.5~1.5	0.5~1.5	0.5~1.0
備註 Remarks	※ 面銑加工寬度(Ae)建議 = 外徑 < 80%。 Recommended cutting width(Ae) for face milling is less than 80% of diameter. 				

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

Table 28 ETCC / FTCC- T型銑刀桿 切削條件表

T-SLOT MILLING CUTTERS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SUS304	FC,FCD	Al 5052 / 6061 / 7075	Ti-6Al-4V
硬度 Hardness	HRC<40	—	HRC<30	—	HRC<30
切削速度 Vc	70~120m/min	50~150m/min	70~120m/min	100~200m/min	40~80m/min
每刃進給量 fz (mm)	0.02~0.10	0.02~0.08	0.02~0.10	0.05~0.10	0.02~0.06
備註 Remarks					

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

Table 29 EDDC 鳩尾槽型銑刀桿 切削條件表

DOVETAIL CUTTERS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SUS304	FC,FCD	Al 5052 / 6061 / 7075	Ti-6Al-4V
硬度 Hardness	HRC<30	—	HRC<30	—	HRC<30
切削速度 Vc	70~120m/min	50~100m/min	70~120m/min	100~200m/min	40~80m/min
每刃進給量 fz (mm)	0.02~0.10	0.02~0.08	0.02~0.10	0.05~0.10	0.02~0.06
備註 Remarks					

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

Table 30 CHS / CHCR 鎖牙式- S220鎢鋼銑刀頭 4刃 切削條件表

SOLID CARBIDE END MILLS- CUTTING CONDITION TABLE

側銑加工 Side Milling

加工材質 Material	碳素鋼 Carbon Steels		合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels		鋁合金 Aluminum Alloys	
工件料號 Material Code	S35C,S45C,S50C		SCM,SKT,SKD		SKT,SKD		SUS304		Al 5052 / 6061 / 7075	
硬度 Hardness	HRC<20		HRC20~30		HRC30~45		—		—	
切削速度 Vc	120m/min		100m/min		65m/min		65m/min		170m/min	
外徑 Diameter	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)
8mm	4,780	1,000	3,980	800	2,590	520	2,590	620	6,770	1,090
10mm	3,810	920	3,190	770	2,070	420	2,070	500	5,420	870
12mm	3,190	770	2,660	640	1,730	350	1,730	420	4,520	730
16mm	2,390	580	1,990	480	1,300	260	1,300	320	3,390	550
20mm	1,910	450	1,600	390	1,040	210	1,040	250	2,710	440
25mm	1,530	370	1,280	310	830	170	830	200	2,170	350
備註 Remarks	Ap≦0.5D Ae≦0.15D		Ap≦0.5D Ae≦0.15D		Ap≦0.5D Ae≦0.1D		Ap≦0.5D Ae≦0.1D		Ap≦0.5D Ae≦0.2D	

溝銑加工 Slot Milling

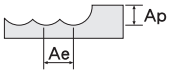
加工材質 Material	碳素鋼 Carbon Steels		合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels		鋁合金 Aluminum Alloys	
工件料號 Material Code	S35C,S45C,S50C		SCM,SKT,SKD		SKT,SKD		SUS304		Al 5052 / 6061 / 7075	
硬度 Hardness	HRC<20		HRC20~30		HRC30~45		—		—	
切削速度 Vc	90m/min		70m/min		50m/min		50m/min		150m/min	
外徑 Diameter	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)
8mm	3,590	720	2,790	560	1,990	320	1,990	400	5,970	900
10mm	2,870	600	2,230	450	1,600	250	1,600	320	4,780	720
12mm	2,390	500	1,860	380	1,330	220	1,330	270	3,980	600
16mm	1,800	380	1,400	280	1,000	150	1,000	200	2,990	450
20mm	1,440	300	1,120	230	800	130	800	150	2,390	360
25mm	1,150	250	900	180	640	100	640	130	1,910	290
備註 Remarks	Ap≦0.3D		Ap≦0.3D		Ap≦0.1D		Ap≦0.25D		Ap≦0.3D	

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

Table 31 CHB 鎖牙式- S220鎢鋼球型銑刀頭 4刃 切削條件表

SOLID CARBIDE END MILLS- CUTTING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels		合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels		鋁合金 Aluminum Alloys	
工件料號 Material Code	S35C,S45C,S50C		SCM,SKT,SKD		SKT,SKD		SUS304		Al 5052 / 6061 / 7075	
硬度 Hardness	HRC<20		HRC20~30		HRC30~45		—		—	
切削速度 Vc	120m/min		100m/min		65m/min		65m/min		170m/min	
半徑 R	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)	S (rpm)	F (mm/min)
4.0R	4,780	1,440	3,980	1,200	2,590	520	2,590	650	6,770	1,700
5.0R	3,810	1,150	3,190	960	2,070	420	2,070	520	5,420	1,470
6.0R	3,190	960	2,660	800	1,730	350	1,730	440	4,520	1,360
8.0R	2,390	720	1,990	600	1,300	260	1,300	330	3,390	1,020
10.0R	1,910	580	1,600	480	1,040	210	1,040	260	2,710	820
12.5R	1,530	460	1,280	390	830	170	830	210	2,170	650
備註 Remarks	Ap=0.05D Ae=0.15D 				Ap=0.04D Ae=0.1D		Ap=0.05D Ae=0.15D		Ap=0.05D Ae=0.15D	

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

斷屑槽幾何對照表 INSERT CHIP BREAKER COMPARISON TABLE

ISO 材質 Material Group	加工型態 Application	西門德克 CMTec	三菱 Mitsubishi	住友 Sumitomo	泰珂洛 Tungaloy	京瓷 Kyocera	日立 Hitachi	山特維克 Sandvik	肯納 Kennametal	特固克 TaeguTec
P 鋼 Alloy Steels	精加工		FH	FA	TF	GP		QF	FF	FA
			FS, FY	FL	NS, ZF	XP	FE			EA, SF, FC
	半精加工	SP	SH, C	SU	TS, AS, TSF	HQ	CE, B	PF		FG
			SA, SY	LU	NM, ZF, 11	XQ, CQ	BE		FN	FC, ML
			SW	LUW	ASW, AFW	WP, WQ		WF	FW	WS
				SX	ZM, 27	XS	AB, CT		LF	
	中加工	MP	MA, MV	GU	TM, 37, 38	HS, PS	AH	PM, QM	MP, MG	MT, PC
		MG, RG	MH	UX	DM	CS, GS ,PT	AE, AY	SM	MN	RT
			MW	GUW				WM	MW	WT
	粗加工	RP	GH	MU	TH, 51	HT, GT	RE, AR	MG, PR	RP, RN	
			MT	MX						MT
	重加工	HP	HA, HZ, HX, HBS	HG	TU, 57	HX	TE, UE	MM, PR, QR	RM, MR	RH
			HH, HXD	HP	65		H	HR	RH	RH, HZ
			HV	HU			HE			HY
			HCS	HW			HX			
M 不銹鋼 Stainless Steels	精加工		SH, C	SU	SS	GU	SE	MF	FP	FG
	中加工	MM	MS	EX	SA	SU	DE	23	MS	EM
				GU	SM	HU		MM, PR, QR	MP	
	粗加工		ES	HM	S	ST				VF
		RP	GH	MU	CM, 33			HR		RT
K 鑄鐵 Cast Iron	泛用加工			UZ		GC	V	KF	UN	
		RP	GH	UX		ZS	RE	KM, KR	UM	RT

銑刀片材質碼對照表 MILLING INSERT GRADE COMPARISON CHART

ISO 材質 Material Group	ISO 材料代號 ISO Code		西門德克 CMTec	三菱 Mitsubishi	日立 Hitachi	住友 Sumitomo	泰珂洛 Tungaloy	克勞伊 Korloy	特固克 TaeguTec
P 鋼 Alloy Steels	↑ 硬 Hard	P10			JP4115	ACP100		PC2005 PC2010	TT2510
		P20	CM6022 CM6032	MP6120 VP15TF	JP4020 JP4120 CP9020 CY150	ACP200	AH725 AH120 AH330	PC3600 PC3700 PC2510	TT7080 TT7030
		P30	CM6032	VP15TF MP6120 MP6130 VP30RT	JS4045 CY250 CY25	ACP300 ACP3000	AH725 AH130 AH140 AH730	PC5300	TT9080 TT9030
	軟 Soft ↓	P40	CM6143	VP30RT	JS4060 JS4160 JX1060		AH140 AH3035	PC5400	TT8080 TT8020
M 不銹鋼 Stainless Steels	↑ 硬 Hard	M10				ACM100 ACK300			
		M20	CM6032	VP15TF MP7130 MP7140 VP20RT	JP4020 JP4120	ACM200 ACP200	AH725 AH120 AH330 GH110	PC210F PC5300	TT9080 TT9030
		M30	CM6143	VP15TF MP7130 MP7140 VP30RT	JS4045 CY250 CY25	ACM300 ACP200	AH725 AH130 AH730 GH130	PC9530	TT8080 TT8020
	軟 Soft ↓	M40	CM6143	MP7140 VP30RT	JM4160	ACP300 ACM300	AH140 AH3135 AH4035	PC5400 PC9540	
K 鑄鐵 Cast Iron	↑ 硬 Hard	K01		MP8010	ATH80D TH308		AH110 GH110 AH330		
		K10	CM6022	MP8010	TH3015 CY100H		AH110 AH120 GH110 AH725 AH330	PC6510	TT7515 TT6080
		K20	CM6032	VP15TF VP20RT	CY150 JP4120 CY9020	ACK200 ACK300	GH130		TT7515 TT6080
	軟 Soft ↓	K30	CM6143	VP15TF VP20RT	CY250 JS4045	ACK300		PC5300	TT3080

銑刀片材質碼對照表 MILLING INSERT GRADE COMPARISON CHART

ISO 材質 Material Group	ISO 材料代號 ISO Code		西門德克 CMTec	山特維克 Sandvik	伊斯卡 Iscar	肯納 Kennametal	山高 SECO	瓦爾特 Walter
P 鋼 Alloy Steels	↑ 硬 Hard	P10		GC1010	IC903 IC4100 IC4050	KC715M KC930M KC935M		WKP25 WKP25S WPP20 WKK20S
		P20	CM6123	GC1010 GC1030 GC1130 GC2030	IC8080 IC810 IC380	KC715M KC930M KC935M	F25M MP3000	WSM20
		P30	CM6133	GC1010 GC1030 GC1130 GC2030	IC830 IC928 IC330	KC735M KC530M KC537M	F30M F40M MP3000	WSM30 WSM35
	軟 Soft ↓	P40	CM6143	GC2030 GC1030 GC1130		KC735M KC537M KCPM40	F40M T60M	WKP45 WP45S WSP45
M 不銹鋼 Stainless Steels	↑ 硬 Hard	M10		GC1025 GC1030	IC903	KC715M KC515M		
		M20	CM6123 CM6023	GC1025 GC1030 GC1040 GC2230	IC908 IC928	KC635M KC730M KC525M KCPM40	F25M MP3000	WSM35 WXM35
		M30	CM6133 CM6033	S30T GC1040 GC2230	IC328 IC330 IC830	KC530M KC537M K735M KCPM40	F30M F40M MP3000	WSM35 WXM35
	軟 Soft ↓	M40	CM6143 CM6043		IC328 IC300 IC330		F40M	WSP45 WSM45S
K 鑄鐵 Cast Iron	↑ 硬 Hard	K01						
		K10	CM6123	GC1010	IC350 IC810	KC514M KC515M KC527M KC635M	MK1500	WAK15
		K20	CM6133	GC1010 GC1020	IC5100 IC830	KC514M KC610M KC520M KC620M	MK1500 MK2000 T150M	WAK15 WKK25 WKP25S
	軟 Soft ↓	K30	CM6143	GC1020	IC810 IC908 IC910 IC928 IC950	KC522M KC725M KC524M KC735M	MK2000 MK2050	WKP35S WPP20

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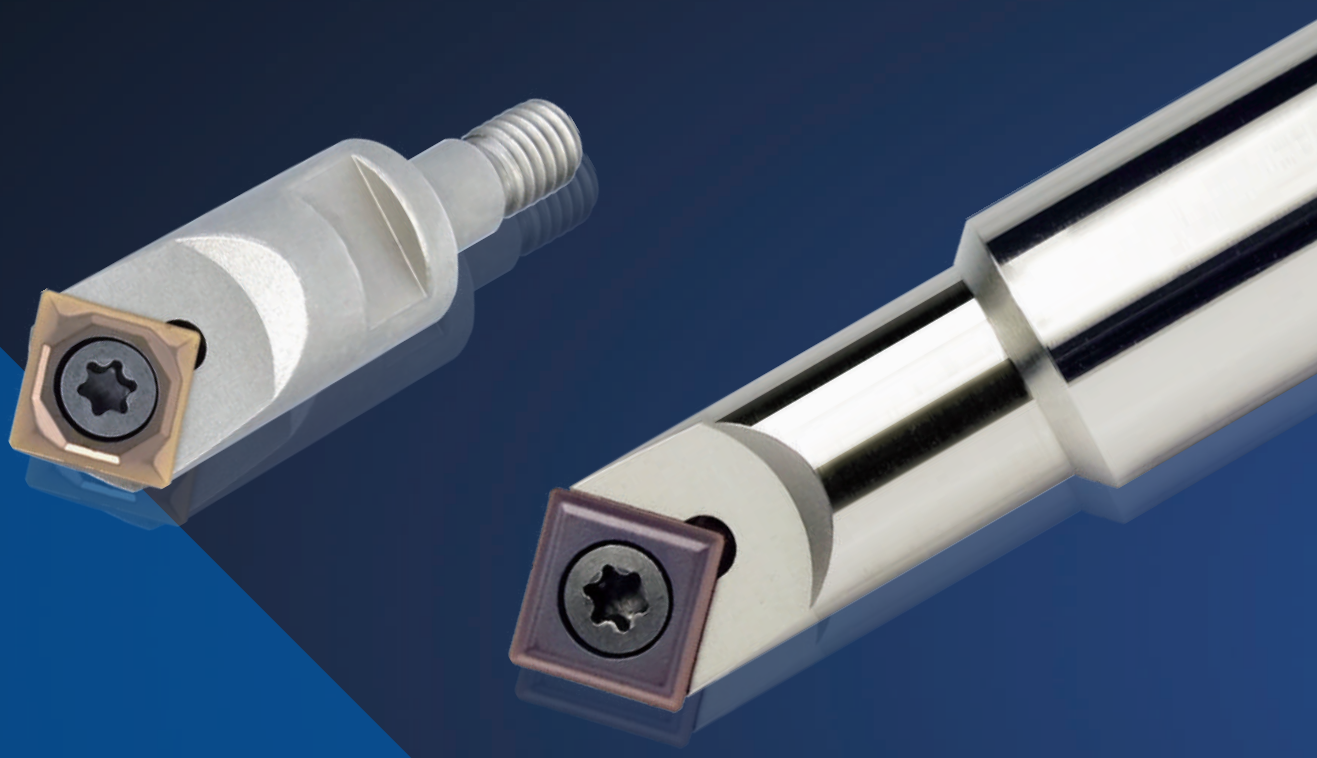
鎢鋼倒角銑刀片系列

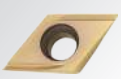
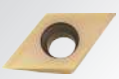
CARBIDE CHAMFERING INSERT SERIES



CMTéc

西門德克

鎢鋼倒角銑刀片 Carbide Chamfering Inserts

SCGX NEW  P.141 0.4 r (鋁用)	SCGX NEW  P.141 0.4 r	SCMX NEW  P.141 0.4 r	TCGX NEW  P.141 0.8 r (鋁用)	
TCGX NEW  P.141 0.8 r	TCMX NEW  P.141 0.8 r	OCEX NEW  P.141 0.1~0.4 r	OCEX NEW  P.141 0.4~0.8 r	SPMG  P.142 0.4~0.8 r

多功能倒角加工 Multipurpose Chamfering

刀片單面使用 Single-Sided Inserts

ECSC NEW  P.143 Φ13	HCSC NEW  P.143 Φ13	ECTCX NEW  P.144 Φ20	
ECOC NEW  P.145 Φ12			

倒角加工 Chamfering

刀片單面使用 Single-Sided Inserts

ECSP NEW  P.146 Φ15~50

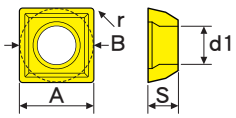
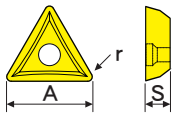
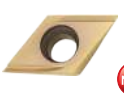
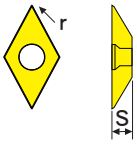
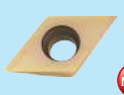
鎢鋼抗震刀桿 Carbide Vibration Holder

LCL  P.147 Φ8~32	LCN  P.148 Φ11.7~31.5

切削條件表 Chamfering Condition Table

P.149~150

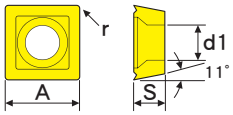
加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎	◎	—	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎	◎	—	
	K	鑄鐵 Cast Iron	◎	◎	◎	◎	—	
	N	鋁合金 Aluminum Alloys	○	—	—	—	◎	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	○	◎	◎	—	
	H	調質鋼 Hardened Steels	—	○	◎	—	—	

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6012	CM6032	CM6133	CM6143	CM10	A	B	S	r	d1		
應用於倒角加工、定點加工、開 V 槽加工、雕刻加工【刀片單面使用】。 Chamfering & Countersinking, Spotting, V-Grooving, Engraving【Single-Sided Inserts】.													
 NEW F S M R	SCGX09T304-AG					●	9.53	9.53	3.97	0.4	4.4		143
 NEW F S M R	SCGX09T304-FG	●					9.53	9.53	3.97	0.4	4.4		
 NEW F S M R	SCMX09T304-SM		●				9.53	9.53	3.97	0.4	4.4		
 NEW F S M R	TCGX16T308-AG					●	16.5	—	3.97	0.8	—		144
 NEW F S M R	TCGX16T308-FG	●					16.5	—	3.97	0.8	—		
 NEW F S M R	TCMX16T308-MP		●				16.5	—	3.97	0.8	—		
 NEW F S M R	DCEX11T301-XF		●				—	—	3.97	0.1	—		145
	DCEX11T302-XF		●				—	—	3.97	0.2	—		
	DCEX11T304-XF		●				—	—	3.97	0.4	—		
 NEW F S M R	DCEX11T304-XR		●				—	—	3.97	0.4	—		
	DCEX11T308-XR		●				—	—	3.97	0.8	—		

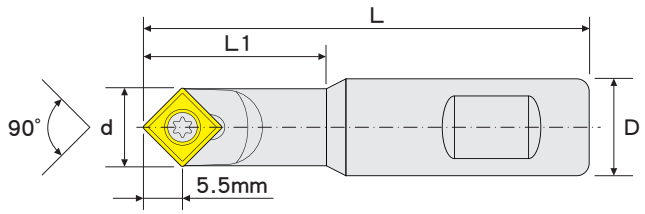
切削條件表 Chamfering Condition Table → Page：P.149

加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎			◎：第一推薦 First Recommend ○：第二推薦 Second Recommend －：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎			
	K	鑄鐵 Cast Iron	◎	◎	◎			
	N	鋁合金 Aluminum Alloys	－	－	－			F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	◎	◎			
	H	調質鋼 Hardened Steels	○	◎	－			

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6032	CM6133	CM6143			A	B	S	r	d1		
應用於倒角加工【刀片單面使用】。 Chamfering【Single-Sided Inserts】.													
T	SPMG050204-MG	●	●	●			5.00	－	2.38	0.4	2.30		146
F S M R													
T	SPMG060204-MG	●	●	●			6.00	－	2.38	0.4	2.65		
F S M R													
T	SPMG07T308-MG	●	●	●			7.94	－	3.97	0.8	2.85		
F S M R													
T	SPMG090408-MG	●	●	●			9.80	－	4.30	0.8	4.05		
F S M R													
T	SPMG090408-RG	●	●	●			9.80	－	4.30	0.8	4.05		
F S M R													
T	SPMG110408-MG	●	●	●			11.5	－	4.80	0.8	4.45		－
F S M R													
T	SPMG110408-RG	●	●	●			11.5	－	4.80	0.8	4.45		
F S M R													

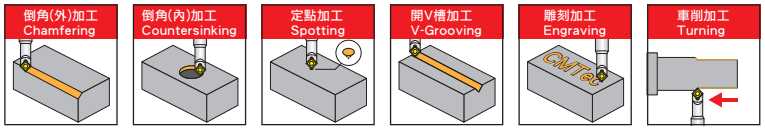


切削條件表 Chamfering Condition Table → Page：P.150

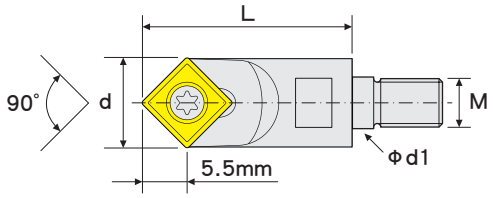


Milling Table 01

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	L1	L	D				
ECSC09-01013-100L	13	29	100	10	1	SCGX..09T3.. SCMX..09T3..	TS3520	ETF15
ECSC09-01013-100L-12	13	29	100	12	1			
ECSC09-01013-100L-16	13	29	100	16	1			
ECSC09-01013-150L-16	13	29	150	16	1			

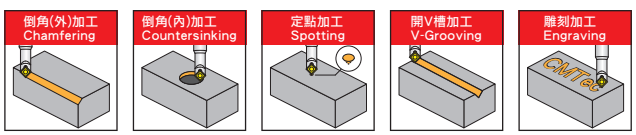


搭配刀片 Insert → Page：P.141
切削條件表 Chamfering Condition Table → Page：P.149



Milling Table 01

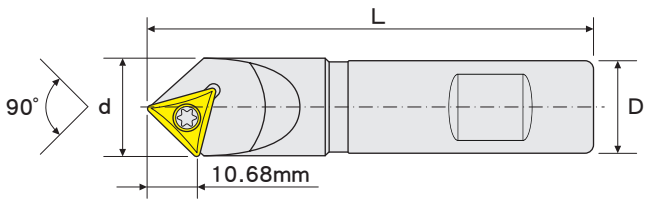
訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	開口扳手 Single Open-end Wrench	Screw	Wrench
	d	L1	d1	M					
HCSC09-01013	13	30	6.5	M6	1	SCGX..09T3.. SCMX..09T3..	TC08	TS3520	ETF15



搭配刀片 Insert → Page：P.141
切削條件表 Chamfering Condition Table → Page：P.149
鎢鋼抗震刀桿 Carbide Anti-Vibration Holder → Page：P.147~148

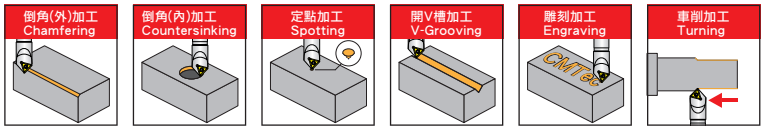
應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	◎	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 01

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	—	L	D				
ECTCX16-01020-120L	20	—	120	20	1	TCGX16T3.. TCMX16T3..	TS3521	ETF15
ECTCX16-01020-150L	20	—	150	20	1			

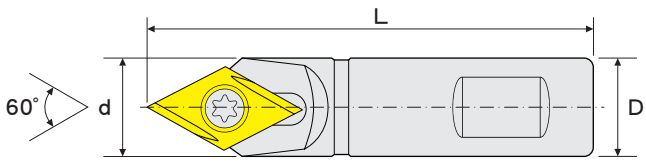


搭配刀片 Insert → Page：P.141　　切削條件表 Chamfering Condition Table → Page：P.149

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

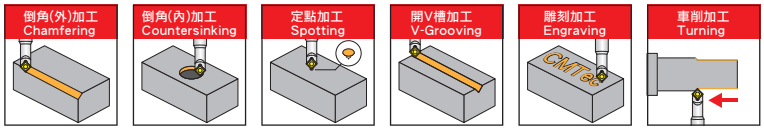
應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	○	◎	◎	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 01

訂購編號 Order No.	尺寸 Dimensions (mm)				刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	—	L	D				
ECDC11-01012-060L	12	—	60	10	1	DCEX11T3..	TS3520	ETF15
ECDC11-01012-100L	12	—	100	12	1			

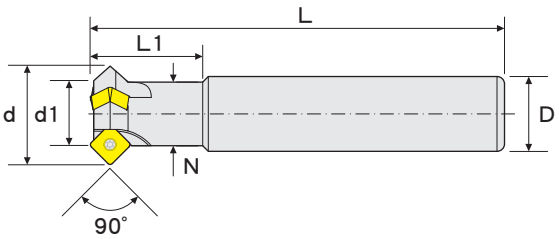


▶ 搭配刀片 Insert → Page：P.141　　▶ 切削條件表 Chamfering Condition Table → Page：P.149

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

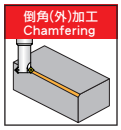
應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	○	◎	—	○

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 02

訂購編號 Order No.	尺寸 Dimensions (mm)						刀片數量 Teeth	搭配刀片 Insert	Screw	Wrench
	d	d1	L1	N	L	D				
ECSP05-02015-120L	15	8.26	20	10	120	12	2	SPMG0502..	TS2003	ETF06
ECSP05-03017-150L	17	10.26	25	11	150	16	3			
ECSP05-03019-150L	19	12.26	30	13	150	16	3			
ECSP05-04024-150L	24	17.26	35	18	150	20	4			
ECSP06-03022-120L	22	13.85	30	16	120	16	3	SPMG0602..	TS2205	ETF06
ECSP07-03027-120L	27	16.44	30	17	120	20	3	SPMG07T3..	TS2511	ETF08
ECSP09-02030-150L	30	16.80	40	19	150	20	2	SPMG0904..	TS3504	ETF15
ECSP09-03040-150L	40	26.80	40	29	150	25	3			
ECSP09-04050-150L	50	36.80	40	39	150	25	4			



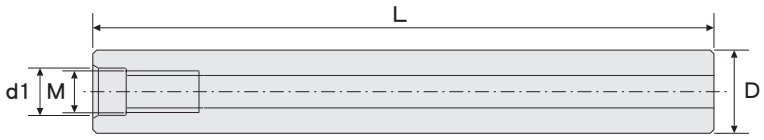
搭配刀片 Insert → Page：P.142

切削條件表 Chamfering Condition Table → Page：P.150

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

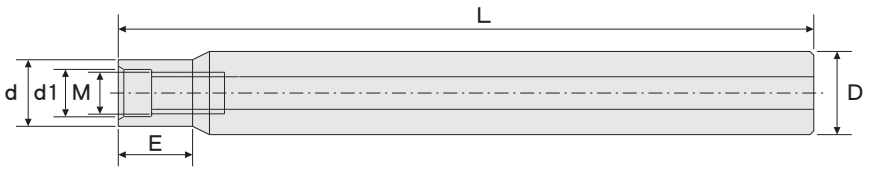
應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	○	—	◎	◎	—	○

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



訂購編號 Order No.	尺寸 Dimensions (mm)			
	螺紋 Thread	柄徑 D	d1	全長 L
LCL008-060L	M4 × 0.7	8	4.5	60
LCL008-100L	M4 × 0.7	8	4.5	100
LCL008-120L	M4 × 0.7	8	4.5	120
LCL010-075L	M5 × 0.8	10	5.5	75
LCL010-100L	M5 × 0.8	10	5.5	100
LCL010-150L	M5 × 0.8	10	5.5	150
LCL012-075L	M6 × 1.0	12	6.5	75
LCL012-100L	M6 × 1.0	12	6.5	100
LCL012-150L	M6 × 1.0	12	6.5	150
LCL012-200L	M6 × 1.0	12	6.5	200
LCL016-100L	M8 × 1.25	16	8.5	100
LCL016-150L	M8 × 1.25	16	8.5	150
LCL016-200L	M8 × 1.25	16	8.5	200
LCL016-250L	M8 × 1.25	16	8.5	250
LCL020-100L	M10 × 1.5	20	10.5	100
LCL020-150L	M10 × 1.5	20	10.5	150
LCL020-200L	M10 × 1.5	20	10.5	200
LCL020-250L	M10 × 1.5	20	10.5	250
LCL020-300L	M10 × 1.5	20	10.5	300
LCL025-100L	M12 × 1.75	25	12.5	100
LCL025-150L	M12 × 1.75	25	12.5	150
LCL025-200L	M12 × 1.75	25	12.5	200
LCL025-250L	M12 × 1.75	25	12.5	250
LCL025-300L	M12 × 1.75	25	12.5	300
LCL032-100L	M16 × 2.0	32	17.0	100
LCL032-150L	M16 × 2.0	32	17.0	150
LCL032-200L	M16 × 2.0	32	17.0	200
LCL032-250L	M16 × 2.0	32	17.0	250
LCL032-300L	M16 × 2.0	32	17.0	300

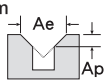
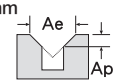
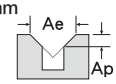
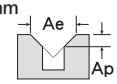
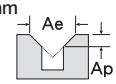
鎢鋼抗震刀桿 - 頸型
CARBIDE ANTI-VIBRATION HOLDER- NECK

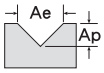
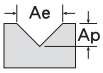
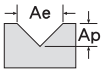
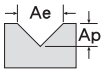
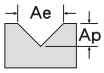


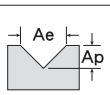
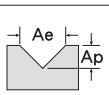
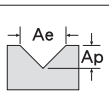
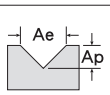
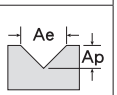
訂購編號 Order No.	尺寸 Dimensions (mm)					
	螺紋 Thread	刃徑 d	d1	有效長 E	全長 L	柄徑 D
LCN011-075L-030E	M6 × 1.0	11.7	6.5	30	75	12
LCN011-100L-040E	M6 × 1.0	11.7	6.5	40	100	12
LCN011-150L-050E	M6 × 1.0	11.7	6.5	50	150	12
LCN015-100L-040E	M8 × 1.25	15.7	8.5	40	100	16
LCN015-150L-050E	M8 × 1.25	15.7	8.5	50	150	16
LCN019-100L-040E	M10 × 1.5	19.5	10.5	40	100	20
LCN019-150L-050E	M10 × 1.5	19.5	10.5	50	150	20
LCN019-200L-060E	M10 × 1.5	19.5	10.5	60	200	20
LCN024-100L-040E	M12 × 1.75	24.5	12.5	40	100	25
LCN024-150L-050E	M12 × 1.75	24.5	12.5	50	150	25
LCN024-200L-060E	M12 × 1.75	24.5	12.5	60	200	25
LCN024-250L-080E	M12 × 1.75	24.5	12.5	80	250	25
LCN031-100L-040E	M16 × 2.0	31.5	17.0	40	100	32
LCN031-150L-050E	M16 × 2.0	31.5	17.0	50	150	32
LCN031-200L-060E	M16 × 2.0	31.5	17.0	60	200	32
LCN031-250L-080E	M16 × 2.0	31.5	17.0	80	250	32

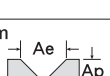
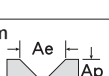
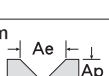
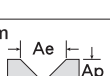
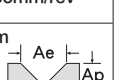
Table 01 ECSC / HCSC / ECDC / ECTCX 多功能倒角型銑刀桿 切削條件表

INDEXABLE TOOLS- MULTIPURPOSE- CHAMFERING CONDITION TABLE

加工方式 Cutting Mode	倒角加工 Chamfering				
加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075
硬度 Hardness	HRC<20	HRC20~30	—	HRC<30	—
切削速度 Vc	150~300m/min	100~250m/min	60~120m/min	150~250m/min	150~350m/min
每轉進給量 f	0.15~0.20mm/rev	0.1~0.2mm/rev	0.1~0.2mm/rev	0.15~0.25mm/rev	0.15~0.30mm/rev
切削量 Cutting Amount (mm)	Ap=0.5~1mm 	Ap=0.5~1mm 	Ap=0.5~1mm 	Ap=0.5~1mm 	Ap=0.5~1mm 

加工方式 Cutting Mode	定點加工 Spotting				
加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075
硬度 Hardness	HRC<20	HRC20~30	—	HRC<30	—
切削速度 Vc	60~250m/min	50~200m/min	60~120m/min	100~200m/min	100~300m/min
每轉進給量 f	0.05~0.10mm/rev	0.04~0.06mm/rev	0.03~0.06mm/rev	0.05~0.10mm/rev	0.05~0.10mm/rev
切削量 Cutting Amount (mm)	Ap≦5.5mm 	Ap≦5.5mm 	Ap≦5.5mm 	Ap≦5.5mm 	Ap≦5.5mm 

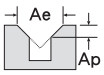
加工方式 Cutting Mode	開V槽加工 V-Grooving				
加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075
硬度 Hardness	HRC<20	HRC20~30	—	HRC<30	—
切削速度 Vc	60~250m/min	50~200m/min	60~120m/min	100~200m/min	100~300m/min
每轉進給量 f	0.05~0.07mm/rev	0.04~0.06mm/rev	0.03~0.06mm/rev	0.05~0.07mm/rev	0.05~0.07mm/rev
切削量 Cutting Amount (mm)	Ap≦5.5mm 	Ap≦5.5mm 	Ap≦5.5mm 	Ap≦5.5mm 	Ap≦5.5mm 

加工方式 Cutting Mode	雕刻加工 Engraving				
加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075
硬度 Hardness	HRC<20	HRC20~30	—	HRC<30	—
切削速度 Vc	60~250m/min	50~200m/min	60~120m/min	100~200m/min	100~300m/min
每轉進給量 f	0.02~0.05mm/rev	0.02~0.03mm/rev	0.01~0.02mm/rev	0.02~0.05mm/rev	0.02~0.05mm/rev
切削量 Cutting Amount (mm)	Ap=0.2~1mm 	Ap=0.2~1mm 	Ap=0.2~1mm 	Ap=0.2~1mm 	Ap=0.2~1mm 

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = f(每轉進給量) × S(主軸轉速)

Table 02 ECSP 倒角型銑刀桿 切削條件表

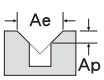
INDEXABLE TOOLS- CHAMFERING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SUS304	FC,FCD	Ti-6Al-4V
硬度 Hardness	HRC<30	HRC30~45	—	HRC<30	HRC<30
加工方式 Cutting Mode	倒角加工 Chamfering				
切削速度 Vc	100~250m/min	50~100m/min	80~180m/min	100~250m/min	40~100m/min
外徑 Diameter	每刃進給量 fz (mm)	每刃進給量 fz (mm)	每刃進給量 fz (mm)	每刃進給量 fz (mm)	每刃進給量 fz (mm)
11~15mm	0.06~0.12	0.03~0.06	0.05~0.10	0.06~0.12	0.03~0.06
16~22mm	0.06~0.12	0.03~0.06	0.05~0.10	0.06~0.12	0.03~0.06
23~33mm	0.06~0.12	0.03~0.06	0.05~0.10	0.06~0.12	0.03~0.06
34~41mm	0.12~0.24	0.05~0.10	0.10~0.17	0.12~0.24	0.05~0.10
42~50mm	0.12~0.25	0.05~0.10	0.10~0.17	0.12~0.25	0.05~0.10
備註 Remarks	Ap=0.5~1.0mm 				

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = fz(每刃進給量) × Z(刃數) × S(主軸轉速)

Table 03 ECTC 倒角型銑刀桿 切削條件表

INDEXABLE TOOLS- CHAMFERING CONDITION TABLE

加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075
硬度 Hardness	HRC<30	HRC30~45	—	HRC<30	—
加工方式 Cutting Mode	倒角加工 Chamfering				
切削速度 Vc	100~250m/min	50~100m/min	80~180m/min	100~250m/min	150~350m/min
外徑 Diameter	每轉進給量 f (mm/rev)	每轉進給量 f (mm/rev)	每轉進給量 f (mm/rev)	每轉進給量 f (mm/rev)	每轉進給量 f (mm/rev)
20~25mm	0.06~0.12	0.03~0.06	0.05~0.10	0.06~0.12	0.12~0.25
30~40mm	0.12~0.24	0.05~0.10	0.10~0.17	0.12~0.24	0.15~0.30
備註 Remarks	Ap=0.5~1.0mm 				

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = f(每轉進給量) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

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鎢鋼鑽刀片系列

CARBIDE DRILLING INSERT SERIES

CMTéc

西門德克

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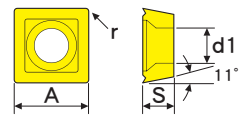
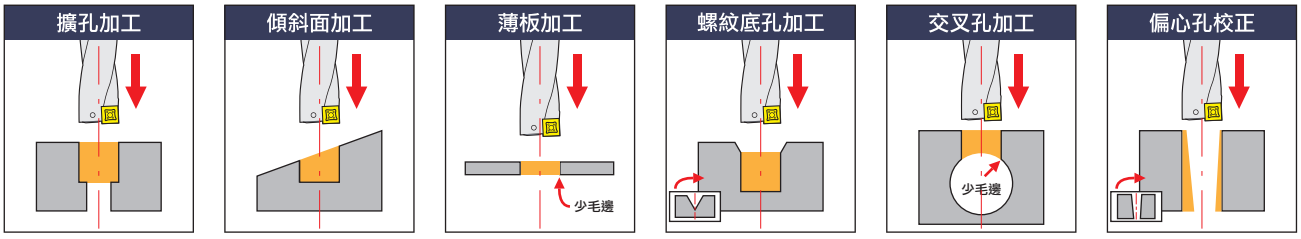
多功能鑽削加工 Multipurpose Drilling	刀片單面使用 Single-Sided Inserts	 P.155 Φ12.5~41.0	 P.157 Φ12.5~41.0	 P.159 Φ12.5~41.0
鑽削加工 Drilling	刀片單面使用 Single-Sided Inserts	 P.161 Φ18~40	 P.162 Φ18~40	 P.163 Φ21~40

切削條件表【鑽削】Drilling Condition Table P.164

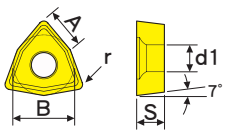
加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎			◎：第一推薦 First Recommend ○：第二推薦 Second Recommend －：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎			
	K	鑄鐵 Cast Iron	◎	◎	◎			
	N	鋁合金 Aluminum Alloys	－	－	－			F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	◎	◎			
	H	調質鋼 Hardened Steels	○	◎	－			

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6032	CM6133	CM6143			A	B	S	r	d1		
應用於盲孔加工、穿孔加工【刀片單面使用】。 Blind Hole Drilling & Through Hole Drilling【Single-Sided Inserts】.													
T	SPMG050204-MG	●	●	●			5.00	－	2.38	0.4	2.30		155 ~ 160
F S M R													
T	SPMG060204-MG	●	●	●			6.00	－	2.38	0.4	2.65		
F S M R													
T	SPMG07T308-MG	●	●	●			7.94	－	3.97	0.8	2.85		
F S M R													
T	SPMG090408-MG	●	●	●			9.80	－	4.30	0.8	4.05		
F S M R													
T	SPMG090408-RG	●	●	●			9.80	－	4.30	0.8	4.05		
F S M R													
T	SPMG110408-MG	●	●	●			11.5	－	4.80	0.8	4.45		
F S M R													
T	SPMG110408-RG	●	●	●			11.5	－	4.80	0.8	4.45		
F S M R													

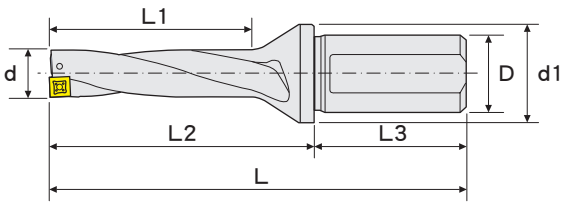
▶ 切削條件表 Drilling Condition Table → Page：P.164



加工材質								
	P	鋼材 Alloy Steels	◎	◎	◎			◎：第一推薦 First Recommend ○：第二推薦 Second Recommend －：不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	◎	◎	◎			
	K	鑄鐵 Cast Iron	◎	◎	◎			
	N	鋁合金 Aluminum Alloys	－	－	－			F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	◎	◎			
	H	調質鋼 Hardened Steels	○	◎	－			

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6032	CM6133	CM6143			A	B	S	r	d1		
應用於盲孔加工、穿孔加工【刀片單面使用】。 Blind Hole Drilling & Through Hole Drilling【Single-Sided Inserts】.													
	WCMT030208-MM	●	●	●			3.8	5.56	2.38	0.8	2.8		161 ~ 163
F S M R													
	WCMT040208-MM	●	●	●			4.3	6.35	2.38	0.8	3.0		
F S M R													
	WCMT050308-MM	●	●	●			5.4	7.94	3.18	0.8	3.4		
F S M R													
	WCMT06T308-MM	●	●	●			6.5	9.53	3.97	0.8	4.0		
F S M R													
	WCMT080412-MM	●	●	●			8.7	12.7	4.76	1.2	4.3		—
F S M R													

切削條件表 Drilling Condition Table → Page：P.164



Milling Table 01

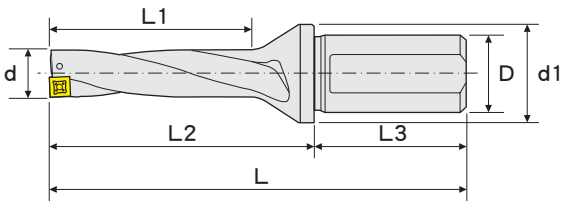
訂購編號 Order No.	尺寸 Dimensions (mm)							搭配刀片 Insert	Screw	Wrench
	d	L1	L2	L3	L	D	d1			
DSP05-020125-02D-C	12.5	26	44	50	94	20	25	SPMG0502..	TS2003	ETF06
DSP05-02013-02D-C	13.0	26	44	50	94	20	25			
DSP05-020135-02D-C	13.5	28	46	50	96	20	25			
DSP05-02014-02D-C	14.0	28	46	50	96	20	25			
DSP05-020145-02D-C	14.5	30	49	50	99	20	25			
DSP05-02015-02D-C	15.0	30	49	50	99	20	25			
DSP06-020155-02D-C	15.5	32	52	56	108	25	33	SPMG0602..	TS2205	ETF06
DSP06-02016-02D-C	16.0	32	52	56	108	25	33			
DSP06-020165-02D-C	16.5	34	54	56	110	25	33			
DSP06-02017-02D-C	17.0	34	54	56	110	25	33			
DSP06-020175-02D-C	17.5	36	57	56	113	25	33			
DSP06-02018-02D-C	18.0	36	57	56	113	25	33			
DSP06-020185-02D-C	18.5	38	59	56	115	25	33			
DSP06-02019-02D-C	19.0	38	59	56	115	25	33			
DSP06-020195-02D-C	19.5	40	63	56	119	25	33			
DSP06-02020-02D-C	20.0	40	63	56	119	25	33			
DSP06-020205-02D-C	20.5	42	65	56	121	25	33			
DSP06-02021-02D-C	21.0	42	65	56	121	25	33			
DSP06-020215-02D-C	21.5	44	67	56	123	25	33			
DSP07-02022-02D-C	22.0	44	67	56	123	25	43	SPMG07T3..	TS2511	ETF08
DSP07-020225-02D-C	22.5	46	71	60	131	32	43			
DSP07-02023-02D-C	23.0	46	71	60	131	32	43			
DSP07-020235-02D-C	23.5	48	74	60	134	32	43			
DSP07-02024-02D-C	24.0	48	74	60	134	32	43			
DSP07-020245-02D-C	24.5	50	77	60	137	32	43			
DSP07-02025-02D-C	25.0	50	77	60	137	32	43			
DSP07-020255-02D-C	25.5	52	79	60	139	32	43			
DSP07-02026-02D-C	26.0	52	79	60	139	32	43			
DSP07-020265-02D-C	26.5	54	81	60	142	32	43			
DSP07-02027-02D-C	27.0	54	81	60	142	32	43			
DSP07-020275-02D-C	27.5	56	84	60	144	32	43			

▶ 搭配刀片 Insert → Page：P.153　　▶ 切削條件表 Drilling Condition Table → Page：P.164

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	○	◎	—	—

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 01

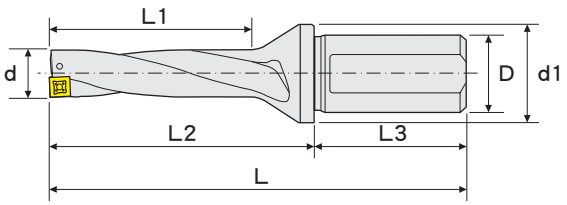
訂購編號 Order No.	尺寸 Dimensions (mm)							搭配刀片 Insert	Screw	Wrench
	d	L1	L2	L3	L	D	d1			
DSP09-02028-02D-C	28.0	56	84	60	144	32	43	SPMG0904..	TS3504	ETF15
DSP09-020285-02D-C	28.5	58	86	60	146	32	43			
DSP09-02029-02D-C	29.0	58	86	60	146	32	43			
DSP09-020295-02D-C	29.5	60	88	60	148	32	43			
DSP09-02030-02D-C	30.0	60	88	60	148	32	43			
DSP09-020305-02D-C	30.5	62	90	60	150	32	43			
DSP09-02031-02D-C	31.0	62	90	60	150	32	43			
DSP09-020315-02D-C	31.5	64	92	60	152	32	43			
DSP09-02032-02D-C	32.0	64	92	60	152	32	43			
DSP09-020325-02D-C	32.5	66	94	60	154	32	43			
DSP09-02033-02D-C	33.0	66	94	60	154	32	43			
DSP11-02034-02D-C	34.0	68	96	60	156	32	43	SPMG1104..	TS4006	ETF15
DSP11-02035-02D-C	35.0	70	98	60	158	32	43			
DSP11-02036-02D-C	36.0	72	100	60	160	32	43			
DSP11-02037-02D-C	37.0	74	102	60	162	32	43			
DSP11-02038-02D-C	38.0	76	104	60	164	32	43			
DSP11-02039-02D-C	39.0	78	106	60	166	32	43			
DSP11-02040-02D-C	40.0	80	115	60	175	40	53			
DSP11-02041-02D-C	41.0	82	117	60	177	40	53			

▶ 搭配刀片 Insert → Page：P.153　　▶ 切削條件表 Drilling Condition Table → Page：P.164

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	○	◎	—	—

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 01

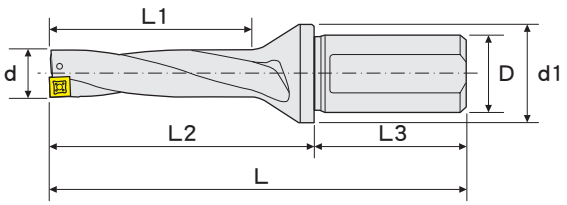
訂購編號 Order No.	尺寸 Dimensions (mm)							搭配刀片 Insert	Screw	Wrench
	d	L1	L2	L3	L	D	d1			
DSP05-020125-03D-C	12.5	39	57	50	107	20	25	SPMG0502..	TS2003	ETF06
DSP05-02013-03D-C	13.0	39	57	50	107	20	25			
DSP05-020135-03D-C	13.5	42	60	50	110	20	25			
DSP05-02014-03D-C	14.0	42	60	50	110	20	25			
DSP05-020145-03D-C	14.5	45	64	50	114	20	25			
DSP05-02015-03D-C	15.0	45	64	50	114	20	25			
DSP06-020155-03D-C	15.5	48	68	56	124	25	33	SPMG0602..	TS2202	ETF06
DSP06-02016-03D-C	16.0	48	68	56	124	25	33			
DSP06-020165-03D-C	16.5	51	71	56	127	25	33			
DSP06-02017-03D-C	17.0	51	71	56	127	25	33			
DSP06-020175-03D-C	17.5	54	75	56	131	25	33			
DSP06-02018-03D-C	18.0	54	75	56	131	25	33			
DSP06-020185-03D-C	18.5	57	78	56	134	25	33			
DSP06-02019-03D-C	19.0	57	78	56	134	25	33			
DSP06-020195-03D-C	19.5	60	83	56	139	25	33			
DSP06-02020-03D-C	20.0	60	83	56	139	25	33			
DSP06-020205-03D-C	20.5	63	86	56	142	25	33			
DSP06-02021-03D-C	21.0	63	86	56	142	25	33			
DSP06-020215-03D-C	21.5	66	89	56	145	25	33			
DSP07-02022-03D-C	22.0	66	89	56	145	25	43	SPMG07T3..	TS2511	ETF08
DSP07-020225-03D-C	22.5	69	94	60	154	32	43			
DSP07-02023-03D-C	23.0	69	94	60	154	32	43			
DSP07-020235-03D-C	23.5	72	98	60	158	32	43			
DSP07-02024-03D-C	24.0	72	98	60	158	32	43			
DSP07-020245-03D-C	24.5	75	102	60	162	32	43			
DSP07-02025-03D-C	25.0	75	102	60	162	32	43			
DSP07-020255-03D-C	25.5	78	105	60	165	32	43			
DSP07-02026-03D-C	26.0	78	105	60	165	32	43			
DSP07-020265-03D-C	26.5	81	108	60	168	32	43			
DSP07-02027-03D-C	27.0	81	108	60	168	32	43			
DSP07-020275-03D-C	27.5	84	112	60	172	32	43			

▶ 搭配刀片 Insert → Page：P.153　　▶ 切削條件表 Drilling Condition Table → Page：P.164

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	○	◎	—	—

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 01

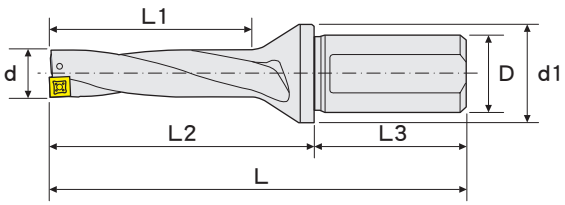
訂購編號 Order No.	尺寸 Dimensions (mm)							搭配刀片 Insert	Screw	Wrench
	d	L1	L2	L3	L	D	d1			
DSP09-02028-03D-C	28.0	84	112	60	172	32	43	SPMG0904..	TS3504	ETF15
DSP09-020285-03D-C	28.5	87	115	60	175	32	43			
DSP09-02029-03D-C	29.0	87	115	60	175	32	43			
DSP09-020295-03D-C	29.5	90	118	60	178	32	43			
DSP09-02030-03D-C	30.0	90	118	60	178	32	43			
DSP09-020305-03D-C	30.5	93	121	60	181	32	43			
DSP09-02031-03D-C	31.0	93	121	60	181	32	43			
DSP09-020315-03D-C	31.5	96	124	60	184	32	43			
DSP09-02032-03D-C	32.0	96	124	60	184	32	43			
DSP09-020325-03D-C	32.5	99	127	60	187	32	43			
DSP09-02033-03D-C	33.0	99	127	60	187	32	43			
DSP11-02034-03D-C	34.0	102	130	60	190	32	43	SPMG1104..	TS4006	ETF15
DSP11-02035-03D-C	35.0	105	133	60	193	32	43			
DSP11-02036-03D-C	36.0	108	136	60	196	32	43			
DSP11-02037-03D-C	37.0	111	139	60	199	32	43			
DSP11-02038-03D-C	38.0	114	142	60	202	32	43			
DSP11-02039-03D-C	39.0	117	145	60	205	32	43			
DSP11-02040-03D-C	40.0	120	155	60	215	40	53			
DSP11-02041-03D-C	41.0	123	158	60	218	40	53			

▶ 搭配刀片 Insert → Page：P.153　　▶ 切削條件表 Drilling Condition Table → Page：P.164

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	○	◎	—	—

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 01

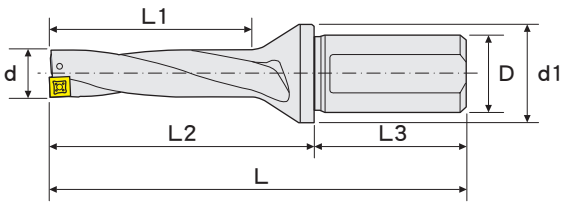
訂購編號 Order No.	尺寸 Dimensions (mm)							搭配刀片 Insert	Screw	Wrench
	d	L1	L2	L3	L	D	d1			
DSP05-020125-04D-C	12.5	52	70	50	120	20	25	SPMG0502..	TS2003	ETF06
DSP05-02013-04D-C	13.0	52	70	50	120	20	25			
DSP05-020135-04D-C	13.5	56	74	50	124	20	25			
DSP05-02014-04D-C	14.0	56	74	50	124	20	25			
DSP05-020145-04D-C	14.5	60	79	50	129	20	25			
DSP05-02015-04D-C	15.0	60	79	50	129	20	25			
DSP06-020155-04D-C	15.5	64	84	56	140	25	33	SPMG0602..	TS2202	ETF06
DSP06-02016-04D-C	16.0	64	84	56	140	25	33			
DSP06-020165-04D-C	16.5	68	88	56	144	25	33			
DSP06-02017-04D-C	17.0	68	88	56	144	25	33			
DSP06-020175-04D-C	17.5	72	92	56	148	25	33			
DSP06-02018-04D-C	18.0	72	92	56	148	25	33			
DSP06-020185-04D-C	18.5	76	96	56	152	25	33			
DSP06-02019-04D-C	19.0	76	96	56	152	25	33			
DSP06-020195-04D-C	19.5	80	100	56	156	25	33			
DSP06-02020-04D-C	20.0	80	100	56	156	25	33			
DSP06-020205-04D-C	20.5	84	104	56	160	25	33			
DSP06-02021-04D-C	21.0	84	104	56	160	25	33			
DSP06-020215-04D-C	21.5	88	108	56	164	25	33			
DSP07-02022-04D-C	22.0	88	108	56	164	25	43	SPMG07T3..	TS2511	ETF08
DSP07-020225-04D-C	22.5	92	117	60	177	32	43			
DSP07-02023-04D-C	23.0	92	117	60	177	32	43			
DSP07-020235-04D-C	23.5	96	121	60	181	32	43			
DSP07-02024-04D-C	24.0	96	121	60	181	32	43			
DSP07-020245-04D-C	24.5	100	125	60	185	32	43			
DSP07-02025-04D-C	25.0	100	125	60	185	32	43			
DSP07-020255-04D-C	25.5	104	129	60	189	32	43			
DSP07-02026-04D-C	26.0	104	129	60	189	32	43			
DSP07-020265-04D-C	26.5	108	136	60	196	32	43			
DSP07-02027-04D-C	27.0	108	136	60	196	32	43			
DSP07-020275-04D-C	27.5	112	140	60	200	32	43			

▶ 搭配刀片 Insert → Page：P.153　　▶ 切削條件表 Drilling Condition Table → Page：P.164

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	○	◎	—	—

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 01

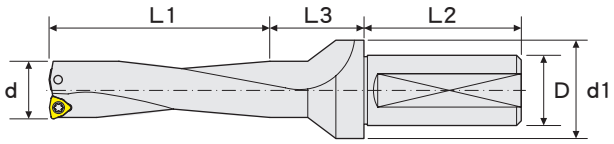
訂購編號 Order No.	尺寸 Dimensions (mm)							搭配刀片 Insert	Screw	Wrench
	d	L1	L2	L3	L	D	d1			
DSP09-02028-04D-C	28.0	112	140	60	200	32	43	SPMG0904..	TS3504	ETF15
DSP09-020285-04D-C	28.5	116	144	60	204	32	43			
DSP09-02029-04D-C	29.0	116	144	60	204	32	43			
DSP09-020295-04D-C	29.5	120	148	60	208	32	43			
DSP09-02030-04D-C	30.0	120	148	60	208	32	43			
DSP09-020305-04D-C	30.5	124	152	60	212	32	43			
DSP09-02031-04D-C	31.0	124	152	60	212	32	43			
DSP09-020315-04D-C	31.5	128	156	60	216	32	43			
DSP09-02032-04D-C	32.0	128	156	60	216	32	43			
DSP09-020325-04D-C	32.5	132	160	60	220	32	43			
DSP09-02033-04D-C	33.0	132	160	60	220	32	43			
DSP11-02034-04D-C	34.0	136	164	60	224	32	43	SPMG1104..	TS4006	ETF15
DSP11-02035-04D-C	35.0	140	168	60	228	32	43			
DSP11-02036-04D-C	36.0	144	172	60	232	32	43			
DSP11-02037-04D-C	37.0	148	176	60	236	32	43			
DSP11-02038-04D-C	38.0	152	180	60	240	32	43			
DSP11-02039-04D-C	39.0	156	184	60	244	32	43			
DSP11-02040-04D-C	40.0	160	195	60	265	40	53			
DSP11-02041-04D-C	41.0	164	199	60	269	40	53			

▶ 搭配刀片 Insert → Page：P.153　　▶ 切削條件表 Drilling Condition Table → Page：P.164

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	○	◎	—	—

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 02

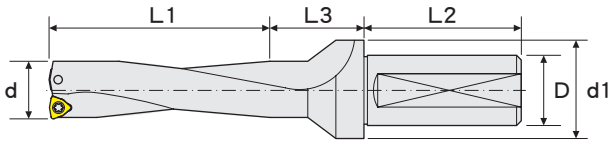
訂購編號 Order No.	尺寸 Dimensions (mm)						搭配刀片 Insert	Screw	Wrench
	d	L1	L2	L3	D	d1			
DW03-02018-02D-C	18.0	36	52	24	20	29	WC..0302..	MS2506E	ETF08
DW03-02019-02D-C	19.0	38	52	24	20	29			
DW03-02020-02D-C	20.0	40	52	24	20	29			
DW03-02018-02D-116L-C	18.0	36	56	24	25	35			
DW03-02018-02D-117L-C	18.5	37	56	24	25	35			
DW03-02019-02D-118L-C	19.0	38	56	24	25	35			
DW03-02020-02D-120L-C	20.0	40	56	24	25	35			
DW04-02021-02D-C	21.0	42	56	24	25	35	WC..0402..	MS2506E	ETF08
DW04-02022-02D-C	22.0	44	56	24	25	35			
DW04-02023-02D-C	23.0	46	56	24	25	35			
DW04-02024-02D-C	24.0	48	56	24	25	35			
DW04-02025-02D-C	25.0	50	56	24	25	35			
DW05-02026-02D-C	26.0	52	60	29	32	43	WC..0503..	MS3008E	ETF09
DW05-02027-02D-C	27.0	54	60	29	32	43			
DW05-02028-02D-C	28.0	56	60	29	32	43			
DW05-02029-02D-C	29.0	58	60	29	32	43			
DW05-02030-02D-C	30.0	60	60	29	32	43			
DW06-02031-02D-C	31.0	62	60	29	32	43	WC..06T3..	MS3510E	ETF10
DW06-02032-02D-C	32.0	64	60	29	32	43			
DW06-02033-02D-C	33.0	66	60	29	32	43			
DW06-02034-02D-C	34.0	68	60	29	32	43			
DW06-02035-02D-C	35.0	70	60	29	32	43			
DW06-02036-02D-C	36.0	72	60	29	32	43			
DW06-02037-02D-C	37.0	74	60	29	32	43			
DW06-02038-02D-C	38.0	76	60	29	32	43			
DW06-02039-02D-C	39.0	78	60	29	32	43			
DW06-02040-02D-C	40.0	80	60	29	32	43			

▶ 搭配刀片 Insert → Page：P.154　　▶ 切削條件表 Drilling Condition Table → Page：P.164

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	○	◎	—	—

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend



Milling Table 02

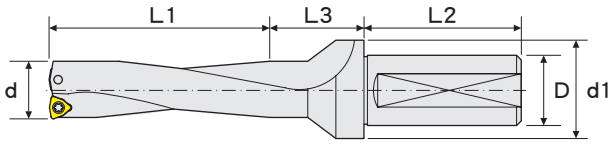
訂購編號 Order No.	尺寸 Dimensions (mm)						搭配刀片 Insert	Screw	Wrench
	d	L1	L2	L3	D	d1			
DW03-02018-03D-C	18.0	54	52	24	20	29	WC..0302..	MS2506E	ETF08
DW03-02019-03D-C	19.0	57	52	24	20	29			
DW03-02020-03D-C	20.0	60	52	24	20	29			
DW03-02018-03D-134L-C	18.0	54	56	24	25	35			
DW03-02018-03D-135L-C	18.5	55.5	56	24	25	35			
DW03-02019-03D-137L-C	19.0	57	56	24	25	35			
DW03-02020-03D-140L-C	20.0	60	56	24	25	35			
DW04-02021-03D-C	21.0	63	56	24	25	35	WC..0402..	MS2506E	ETF08
DW04-02022-03D-C	22.0	66	56	24	25	35			
DW04-02023-03D-C	23.0	69	56	24	25	35			
DW04-02024-03D-C	24.0	72	56	24	25	35			
DW04-02025-03D-C	25.0	75	56	24	25	35			
DW05-02026-03D-C	26.0	78	60	29	32	43	WC..0503..	MS3008E	ETF09
DW05-02027-03D-C	27.0	81	60	29	32	43			
DW05-02028-03D-C	28.0	84	60	29	32	43			
DW05-02029-03D-C	29.0	87	60	29	32	43			
DW05-02030-03D-C	30.0	90	60	29	32	43			
DW06-02031-03D-C	31.0	93	60	29	32	43	WC..06T3..	MS3510E	ETF10
DW06-02032-03D-C	32.0	96	60	29	32	43			
DW06-02033-03D-C	33.0	99	60	29	32	43			
DW06-02034-03D-C	34.0	102	60	29	32	43			
DW06-02035-03D-C	35.0	105	60	29	32	43			
DW06-02036-03D-C	36.0	108	60	29	32	43			
DW06-02037-03D-C	37.0	111	60	29	32	43			
DW06-02038-03D-C	38.0	114	60	29	32	43			
DW06-02039-03D-C	39.0	117	60	29	32	43			
DW06-02040-03D-C	40.0	120	60	29	32	43			

▶ 搭配刀片 Insert → Page：P.154 ▶ 切削條件表 Drilling Condition Table → Page：P.164

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	○	◎	—	—

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend



Milling Table 02

訂購編號 Order No.	尺寸 Dimensions (mm)						搭配刀片 Insert	Screw	Wrench
	d	L1	L2	L3	D	d1			
DW04-02021-04D-C	21.0	84	56	24	25	35	WC..0402..	MS2506E	ETF08
DW04-02022-04D-C	22.0	88	56	24	25	35			
DW04-02023-04D-C	23.0	92	56	24	25	35			
DW04-02024-04D-C	24.0	96	56	24	25	35			
DW04-02025-04D-C	25.0	100	56	24	25	35			
DW05-02026-04D-C	26.0	104	60	29	32	43	WC..0503..	MS3008E	ETF09
DW05-02027-04D-C	27.0	108	60	29	32	43			
DW05-02028-04D-C	28.0	112	60	29	32	43			
DW05-02029-04D-C	29.0	116	60	29	32	43			
DW05-02030-04D-C	30.0	120	60	29	32	43			
DW06-02031-04D-C	31.0	124	60	29	32	43	WC..06T3..	MS3510E	ETF10
DW06-02032-04D-C	32.0	128	60	29	32	43			
DW06-02033-04D-C	33.0	132	60	29	32	43			
DW06-02034-04D-C	34.0	136	60	29	32	43			
DW06-02035-04D-C	35.0	140	60	29	32	43			
DW06-02036-04D-C	36.0	144	60	29	32	43			
DW06-02037-04D-C	37.0	148	60	29	32	43			
DW06-02038-04D-C	38.0	152	60	29	32	43			
DW06-02039-04D-C	39.0	156	60	29	32	43			
DW06-02040-04D-C	40.0	160	60	29	32	43			

搭配刀片 Insert → Page：P.154　　切削條件表 Drilling Condition Table → Page：P.164

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	—	HRC<30	—	HRC<30
	◎	◎	◎	—	—	○	◎	—	—

◎：第一推薦 First Recommend　○：第二推薦 Second Recommend　—：不推薦 NO Recommend

Table 01 DSP 快速鑽頭 切削條件表

INDEXABLE- HIGH SPEED DRILLS- DRILLING CONDITION TABLE

加工材質 Material	工件料號 Material Code	硬度 Hardness	切削速度 Vc (m/min)	每轉進給量 f (mm/rev)				
				Φ13~15	Φ16~21	Φ22~27	Φ28~33	Φ34~41
碳素鋼 Carbon Steels	S35C,S45C,S50C	HRC<30	100~150	0.04~0.08	0.05~0.09	0.06~0.12	0.07~0.13	0.08~0.15
		HRC30~45	70~140	0.04~0.07	0.05~0.08	0.05~0.09	0.06~0.12	0.07~0.14
調質鋼 Hardened Steels	SKT,SKD	HRC45~55	—	—	—	—	—	—
不銹鋼 Stainless Steels	SUS304	—	80~140	0.04~0.08	0.05~0.09	0.05~0.10	0.06~0.12	0.07~0.14
鑄鐵 Cast Iron	FC,FCD	HRC<30	100~150	0.05~0.08	0.06~0.11	0.07~0.13	0.08~0.15	0.10~0.18
鋁合金 Aluminum Alloys	Al 5052 / 6061 / 7075	—	150~250	0.04~0.08	0.05~0.10	0.06~0.13	0.07~0.15	0.08~0.18
高溫合金 High Temp Alloys	Ti-6Al-4V	HRC<30	30~60	0.02~0.04	0.03~0.05	0.03~0.05	0.04~0.06	0.05~0.08
備註 Remarks	※ 4倍長請調降主軸轉速(S)和每轉進給量(f) 10%。 When 4xD, please reduce 10% of rpm and feed per tooth.							

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = f(每轉進給量) × S(主軸轉速)

Table 02 DW 快速鑽頭 切削條件表

INDEXABLE- HIGH SPEED DRILLS- DRILLING CONDITION TABLE

加工材質 Material	工件料號 Material Code	硬度 Hardness	切削速度 Vc (m/min)	每轉進給量 f (mm/rev)				
				Φ14~20.5	Φ22~25.5	Φ26~30	Φ31~39	Φ40~60
碳素鋼 Carbon Steels	S35C,S45C,S50C	HRC<30	90~140	0.06~0.09	0.06~0.11	0.07~0.13	0.08~0.18	0.10~0.25
		HRC30~45	70~120	0.05~0.07	0.05~0.09	0.06~0.11	0.07~0.14	0.08~0.17
調質鋼 Hardened Steels	SKT,SKD	HRC45~55	—	—	—	—	—	—
不銹鋼 Stainless Steels	SUS304	—	60~140	0.05~0.09	0.05~0.10	0.06~0.13	0.07~0.15	0.08~0.18
鑄鐵 Cast Iron	FC,FCD	HRC<30	90~140	0.06~0.10	0.06~0.12	0.07~0.14	0.08~0.16	0.10~0.20
鋁合金 Aluminum Alloys	Al 5052 / 6061 / 7075	—	150~250	0.06~0.11	0.08~0.13	0.09~0.15	0.11~0.18	0.12~0.25
高溫合金 High Temp Alloys	Ti-6Al-4V	HRC<30	30~60	0.03~0.05	0.03~0.06	0.04~0.08	0.05~0.10	0.06~0.12
備註 Remarks	※ 4倍長請調降主軸轉速(S)和每轉進給量(f) 10%。 When 4xD, please reduce 10% of rpm and feed per tooth.							

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

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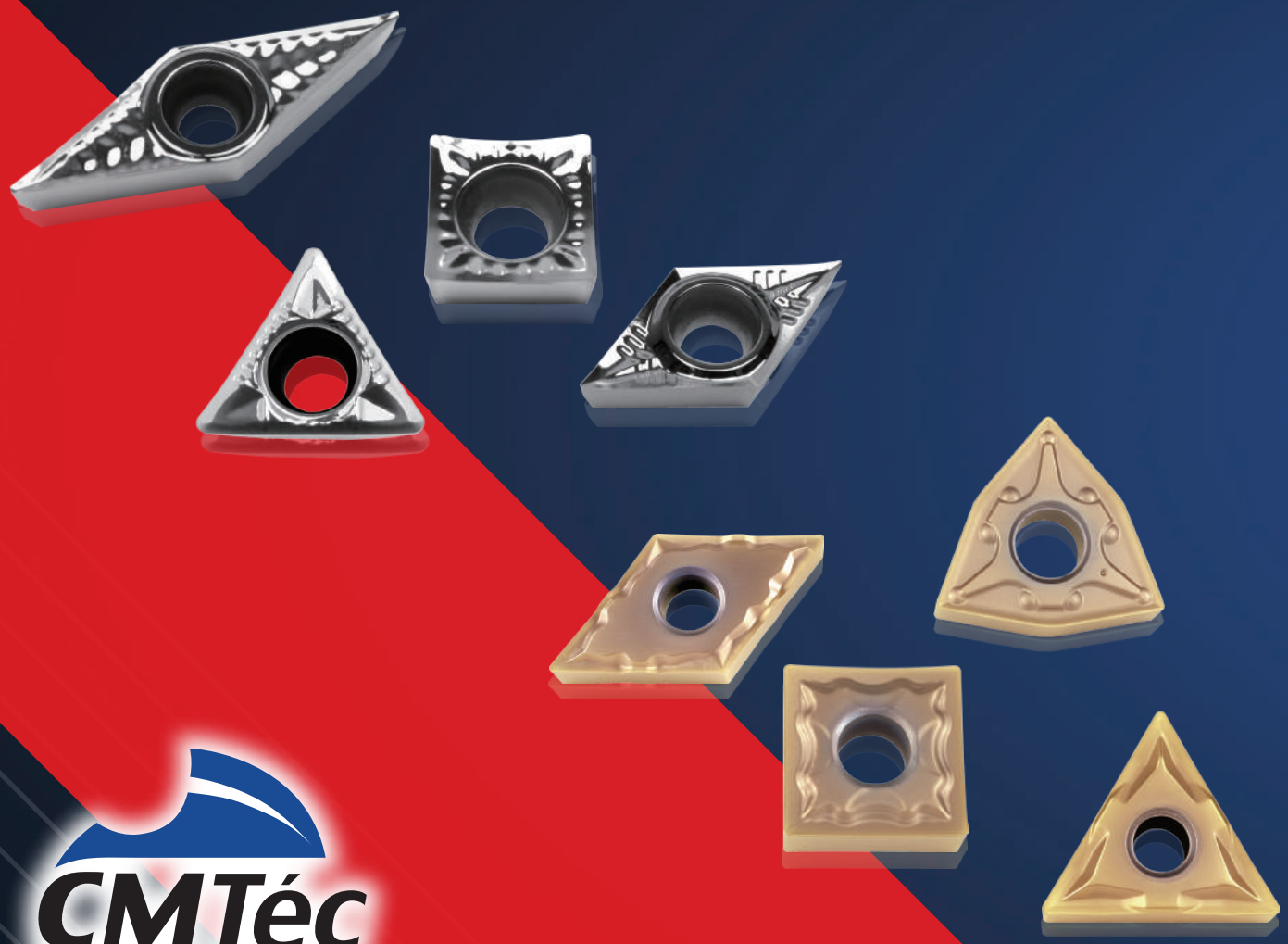
鎢鋼車刀片系列

CARBIDE TURNING INSERT SERIES

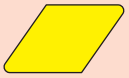


CMTéc

西門德克

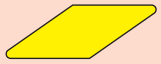
正角型 - 鎢鋼車刀片 Positive- Carbide Turning Inserts

CCMT 平行四邊形  P.171

DCMT 菱形 55°  P.172

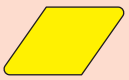
SCMT 正方型  P.173

TCMT 正三角形  P.174

VBMT 菱形 35°  P.175

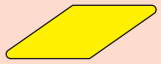
負角型 - 鎢鋼車刀片 Negative- Carbide Turning Inserts

CNMG 平行四邊形  P.177

DNMG 菱形 55°  P.178

SNMG 正方型  P.178

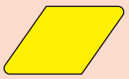
TNMG 正三角形  P.179

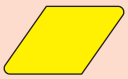
VNMG 菱形 35°  P.180

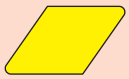
WNMG 桃形  P.181

精密研磨級 - 鎢鋼車刀片 Precision Grinding- Carbide Grade Turning Inserts

CCGT 平行四邊形  P.171

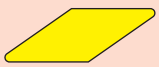
DCGT 菱形 55°  P.172

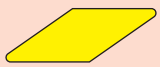
DCET 菱形 55°  P.172

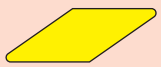
DCEW 菱形 55°  P.172

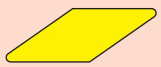
SCGT 正方型  P.173

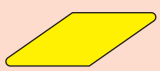
TCGT 正三角形  P.174

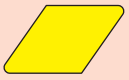
VBET 菱形 35°  P.175

VBEW 菱形 35°  P.175

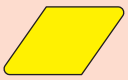
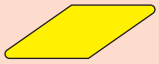
VCGT 菱形 35°  P.176

VCET 菱形 35°  P.176

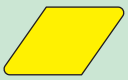
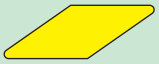
VCEW 菱形 35°  P.176

DNGX 菱形 55°  P.178

PCD 聚晶鑽石 - 鎢鋼車刀片 Polycrystalline Compound Diamond Carbide Turning Inserts

CCGW 平行四邊形  P.171
DCGW 菱形 55°  P.173
VCGW 菱形 35°  P.176
TNGA 正三角型  P.180

鋁合金專用 - 鎢鋼車刀片 Carbide Turning Inserts For Aluminum Alloy

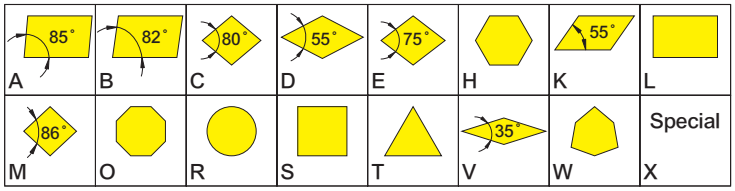
CCGT 平行四邊形  P.171
DCGT 菱形 55°  P.172
SCGT 正方型  P.173
TCGT 正三角形  P.174
VCGT 菱形 35°  P.176

車刀片 ISO 編碼規範 ISO Designations For Turning Insert P.168~170
車刀片斷屑槽 Turning Chip Breaker Design P.169
車刀片材質碼 Turning Insert Grades P.170
切削條件表【車削】Turning Condition Table P.182~183
刀片損壞分析與解決方法 Failure Analysis And Solution P.184

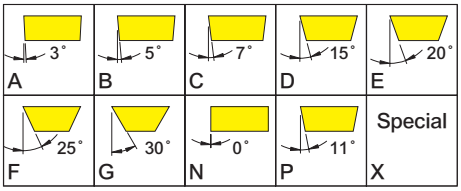
車刀片 ISO 編碼規範
ISO DESIGNATIONS FOR TURNING INSERT

T	N	M	G	16	04	08	(N)	–	RG	–
1	2	3	4	5	6	7	8		9	

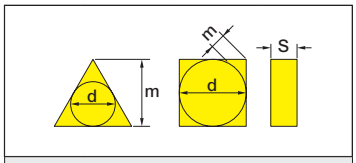
1 刀片形狀 Insert Shape



2 刀片離隙角 Clearance Angle



3 刀片公差 Tolerances Class



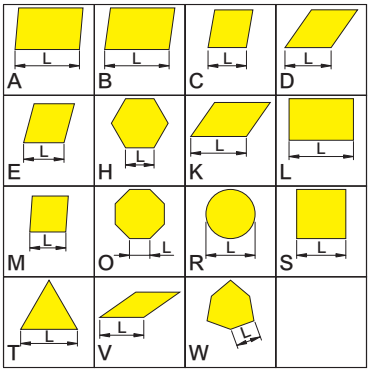
Range of Tolerance

代號	m±	d±	S±
A	0.005	0.025	0.025
F	0.005	0.013	0.025
C	0.013	0.025	0.025
H	0.013	0.013	0.025
E	0.025	0.025	0.025
G	0.025	0.025	0.130
J	0.005	0.05~0.15	0.025
K	0.013	0.05~0.15	0.025
L	0.025	0.05~0.15	0.025
M	0.08~0.18	0.05~0.15	0.130
N	0.08~0.18	0.05~0.15	0.025
U	0.13~0.38	0.08~0.25	0.130

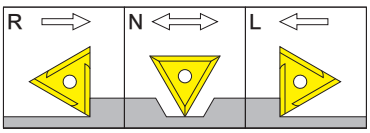
4 刀片溝孔 Chipbreaker and Hole

代號 Code	孔 Hole	斷屑槽 Chip Breaker Design	溝孔形狀 Hole Type
N	無孔	無	
R		單面	
F		雙面	
A	有孔	無	
M		單面	
G		雙面	
W	有孔單面 40~60°	無	
T		單面	
Q	有孔雙面 40~60°	無	
U		雙面	
B	有孔單面 70~90°	無	
H		單面	
C	有孔雙面 70~90°	無	
J		雙面	
X	特殊溝孔 Special Shape		

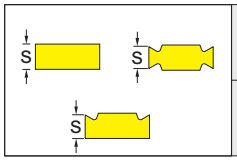
5 刀片邊長 Insert Length



8 切削方向 Cutting Direction

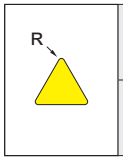


6 刀片厚度 Insert Thickness



代號 Code	01	T1	02	T2	03	T3	04	05	06	07	08
S (mm)	1.59	1.98	2.38	2.78	3.18	3.97	4.76	5.56	6.35	7.94	9.52

7 刀尖 R 角 Corner Radius



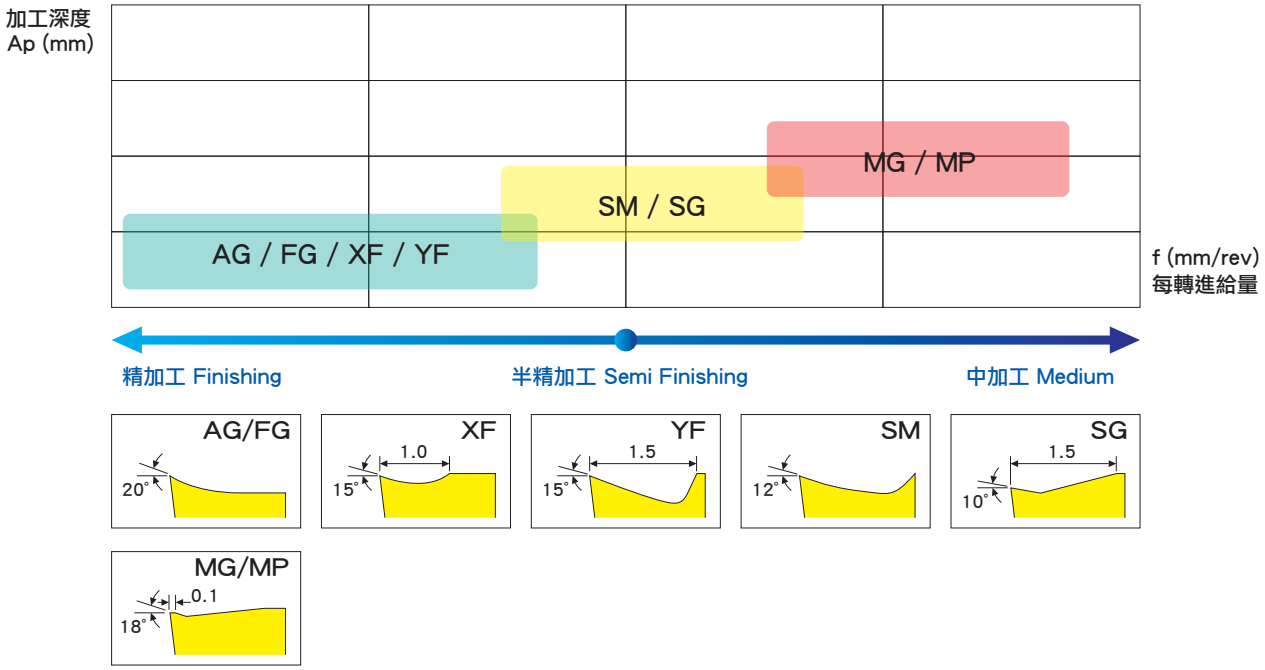
代號 Code	00	01	015	018	02	035	04	08	10	12	16	24	MO
R (mm)	尖刃	0.1	0.15	0.18	0.2	0.35	0.4	0.8	1.0	1.2	1.6	2.4	圓形 Round

CM6025

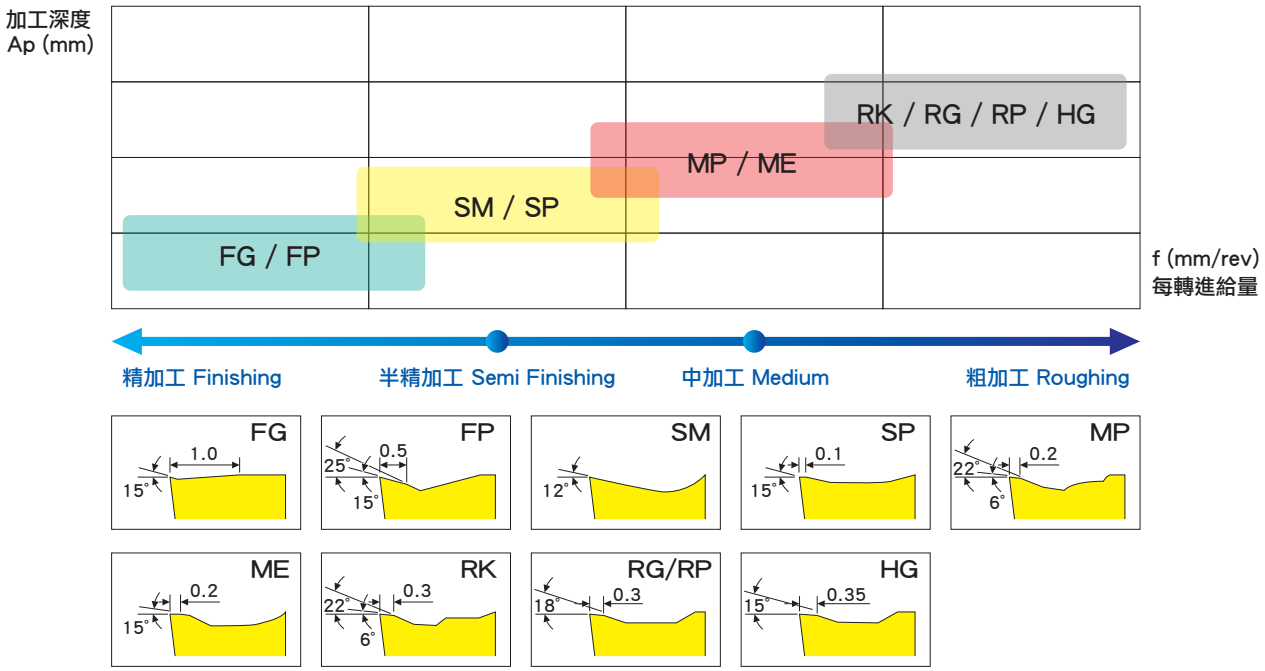
10

9 車刀片斷屑槽
Chip Breaker Design

正角型斷屑槽 Positive



負角型斷屑槽 Negative



10 車刀片材質碼 Turning Insert Grades

材質碼 Grade Type	基體應用範圍 Substrate Classification	塗層種類 Coating Type	加工特性 Application	加工材質 Work Material						產業應用範圍 Industry Area
				P	M	K	N	S	H	
CM10 (銀白色)	K05 ~ K10	無塗層 Uncoated	· 適合精 , 中加工。 Finishing and medium cutting. · 適合鋁合金加工。 For aluminum alloy.	—	—	—	◕	—	—	· 自行車和汽車零件。 Bike and auto parts. · 電子零件。 Electronic parts.
CM1010 (彩色)	K05 ~ K10	CVD (化學)	· 適合精 , 中加工。 Finishing and medium cutting. · 適合含矽鋁合金加工。 For aluminum alloy with silicon.	—	—	—	◕	—	—	· 自行車和汽車零件。 Bike and auto parts. · 鋁合金鋼圈。 Aluminum rim.
CM6010 (金色)	K05 ~ K10	PVD (物理)	· 適合連續加工 , 精加工。 Continuous finishing cutting. · 適合大部分金屬材質精修加工。 For finishing application.	●	●	●	○	○	—	· 汽車和機械零件。 Auto and machinery parts. · 航太零件。 Aircraft parts.
CM5515 (金色)	K10 ~ K20	PVD (物理)	· 適合連續加工 , 精加工。 Continuous finishing cutting. · 適合大部分金屬材質精修加工。 For finishing application.	●	●	●	○	●	●	· 汽車和機械零件。 Auto and machinery parts. · 航太零件。 Aircraft parts.
CM4525 (白金色)	K20 ~ K30	PVD (物理)	· 適合中加工或淺斷續加工。 Medium or light interrupted cutting. · 適合不銹鋼 , 高溫合金加工。 For stainless steel, high temperature alloy.	❁	✱	—	—	✱	❁	· 汽車和機械零件。 Auto and machinery parts. · 航太零件。 Aircraft parts.
CM6025 (金色)	K20 ~ K30	PVD (物理)	· 適合中加工或淺斷續加工。 Medium or light interrupted cutting. · 適合碳素鋼加工。 For carbon steel.	✱	❁	❁	—	❁	❁	· 碳鋼零件製造。 Carbon steel parts manufacturing.
CM6035 (金色)	K30 ~ K40	PVD (物理)	· 適合粗加工或斷續加工。 Roughing or interrupted cutting. · 適合碳素鋼材加工。 For carbon steel.	✱	❁	❁	—	❁	❁	· 鋼鐵零件製造。 Steel parts manufacturing.
CM7535 (金色)	K30 ~ K40	CVD (化學)	· 適合粗加工或斷續加工。 Roughing or interrupted cutting. · 適合合金鋼 , 調質鋼 , 鑄鐵加工。 For alloy steel, cast iron and hardened steel.	✱	❁	✱	—	❁	✱	· 汽車和機械零件。 Auto and machinery parts. · 模具產業。 Mold & die.

● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◕ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
✱ 第一推薦 / ❁ 第二推薦：斷續加工 Interrupted Cutting
— 不推薦 NO Recommend

※ 當加工調質鋼 (≧ 40HRC) 時，建議使用 PCBN 車刀片加工。PCBN 車刀片歡迎洽詢訂製。
For machining hardened steel(≧ 40HRC), PCBN turning inserts is recommended. Please contact for more customized info.

加工材質								
	P	鋼材 Alloy Steels	●	❂	✱	–	–	● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting ◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting ✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting – 不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	●	✱	❂	–	–	
	K	鑄鐵 Cast Iron	●	–	❂	–	–	
	N	鋁合金 Aluminum Alloys	○	–	–	◐	◐	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	✱	❂	–	–	
	H	調質鋼 Hardened Steels	–	❂	❂	–	–	

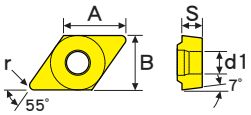
刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6010	CM4525	CM6025	CM10	PCD 聚晶鑽石	A	B	S	r	d1		
	CCGT060202-FA				●		6.40	6.35	2.38	0.2	2.8		
	CCGT060204-FA				●		6.40	6.35	2.38	0.4	2.8		
	CCGT09T304-FA				●		9.70	9.53	3.97	0.4	4.4		
	CCGT09T308-FA				●		9.70	9.53	3.97	0.8	4.4		
F S M R	CCGT120404-FA				●		12.9	12.7	4.76	0.4	5.5		
	CCGT060202-FB	●					6.40	6.35	2.38	0.2	2.8		
	CCGT060204-FB	●					6.40	6.35	2.38	0.4	2.8		
	CCGT09T304-FB	●					9.70	9.53	3.97	0.4	4.4		
	CCGT09T308-FB	●					9.70	9.53	3.97	0.8	4.4		
F S M R	CCGT120404-FB	●					12.9	12.7	4.76	0.4	5.5		
	CCMT060204-MP			●			6.40	6.35	2.38	0.4	2.8		
	CCMT09T304-MP			●			9.70	9.53	3.97	0.4	4.4		
	CCMT09T308-MP			●			9.70	9.53	3.97	0.8	4.4		
F S M R													
	CCMT060204-MK		●	●			6.40	6.35	2.38	0.4	2.8		外徑刀桿 190 191
	CCMT09T304-MK		●	●			9.70	9.53	3.97	0.4	4.4		
	CCMT09T308-MK		●	●			9.70	9.53	3.97	0.8	4.4		
F S M R	CCMT120408-MK		●	●			12.9	12.7	4.76	0.8	5.5		
	CCGW060202-PC					●	6.35	6.35	2.38	0.2	2.8		內徑刀桿 203
	CCGW060204-PC					●	6.35	6.35	2.38	0.4	2.8		
	CCGW09T302-PC					●	9.52	9.52	3.97	0.2	4.4		
	CCGW09T304-PC					●	9.52	9.52	3.97	0.4	4.4		
	CCGW09T308-PC					●	9.52	9.52	3.97	0.8	4.4		
	CCGW120402-PC					●	12.7	12.7	4.76	0.2	5.5		
	CCGW120404-PC					●	12.7	12.7	4.76	0.4	5.5		
F S M R	CCGW120408-PC					●	12.7	12.7	4.76	0.8	5.5		
	CCGW060202P07-PC					●	6.35	6.35	2.38	0.2	2.8		
	CCGW060204P07-PC					●	6.35	6.35	2.38	0.4	2.8		
	CCGW09T302P07-PC					●	9.52	9.52	3.97	0.2	4.4		
	CCGW09T304P07-PC					●	9.52	9.52	3.97	0.4	4.4		
	CCGW09T308P07-PC					●	9.52	9.52	3.97	0.8	4.4		
	CCGW120402P07-PC					●	12.7	12.7	4.76	0.2	5.5		
	CCGW120404P07-PC					●	12.7	12.7	4.76	0.4	5.5		
F S M R	CCGW120408P07-PC					●	12.7	12.7	4.76	0.8	5.5		

► 切削條件表 Turning Condition Table → Page：P.182

加工材質								
	P	鋼材 Alloy Steels	●	●	❁	✱	–
	M	不銹鋼 Stainless Steels	●	●	✱	❁	–
	K	鑄鐵 Cast Iron	●	●	–	❁	–
	N	鋁合金 Aluminum Alloys	○	○	–	–	◕
	S	高溫合金 High Temp Alloys	○	●	✱	❁	–
	H	調質鋼 Hardened Steels	–	●	❁	❁	–

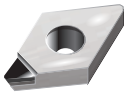
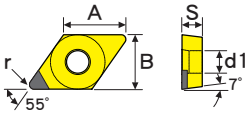
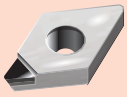
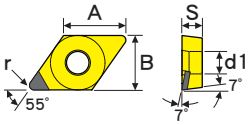
● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◕ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
✱ 第一推薦 / ❁ 第二推薦：斷續加工 Interrupted Cutting
– 不推薦 NO Recommend

F：精加工 Finishing
S：半精加工 Semi Finishing
M：中加工 Medium
R：粗加工 Roughing

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6010	CM5515	CM4525	CM6025	CM10	A	B	S	r	d1		
	DCGT070202-FA					●	7.75	6.35	2.38	0.2	2.8		外徑刀桿 192 193 內徑刀桿 204
	DCGT070204-FA					●	7.75	6.35	2.38	0.4	2.8		
	DCGT11T302-FA					●	11.6	9.53	3.97	0.2	4.4		
	DCGT11T304-FA					●	11.6	9.53	3.97	0.4	4.4		
F S M R	DCGT11T308-FA					●	11.6	9.53	3.97	0.8	4.4		
	DCGT070202-FB	●					7.75	6.35	2.38	0.2	2.8		
	DCGT070204-FB	●					7.75	6.35	2.38	0.4	2.8		
	DCGT11T302-FB	●					11.6	9.53	3.97	0.2	4.4		
	DCGT11T304-FB	●					11.6	9.53	3.97	0.4	4.4		
F S M R	DCGT11T308-FB	●					11.6	9.53	3.97	0.8	4.4		
	DCET11T301R-FX		●				11.6	9.53	3.97	0.1	4.4		
	DCET11T302R-FX		●				11.6	9.53	3.97	0.2	4.4		
	DCET11T304R-FX		●				11.6	9.53	3.97	0.4	4.4		
F S M R													
	DCET11T301L-FX		●				11.6	9.53	3.97	0.1	4.4		
	DCET11T302L-FX		●				11.6	9.53	3.97	0.2	4.4		
	DCET11T304L-FX		●				11.6	9.53	3.97	0.4	4.4		
F S M R													
	DCET11T301R-FY		●				11.6	9.53	3.97	0.1	4.4		
	DCET11T302R-FY		●				11.6	9.53	3.97	0.2	4.4		
	DCET11T304R-FY		●				11.6	9.53	3.97	0.4	4.4		
F S M R													
	DCET11T301L-FY		●				11.6	9.53	3.97	0.1	4.4		
	DCET11T302L-FY		●				11.6	9.53	3.97	0.2	4.4		
	DCET11T304L-FY		●				11.6	9.53	3.97	0.4	4.4		
F S M R													
	DCEW11T301		●				11.6	9.53	3.97	0.1	4.4		
	DCEW11T302		●				11.6	9.53	3.97	0.2	4.4		
	DCEW11T304		●				11.6	9.53	3.97	0.4	4.4		
F S M R													
	DCMT11T304-MP				●		11.6	9.53	3.97	0.4	4.4		
	DCMT11T308-MP				●		11.6	9.53	3.97	0.8	4.4		
F S M R													
	DCMT070204-MK			●	●		7.75	6.35	2.38	0.4	2.8		
	DCMT11T304-MK			●	●		11.6	9.53	3.97	0.4	4.4		
	DCMT11T308-MK			●	●		11.6	9.53	3.97	0.8	4.4		
F S M R													

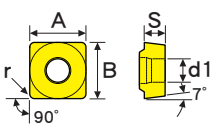
▶ 切削條件表 Turning Condition Table → Page：P.182

加工材質								
	P	鋼材 Alloy Steels					—	● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting ◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting ✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting — 不推薦 NO Recommend
	M	不銹鋼 Stainless Steels					—	
	K	鑄鐵 Cast Iron					—	
	N	鋁合金 Aluminum Alloys					◐	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys					—	
	H	調質鋼 Hardened Steels					—	

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6010	CM5515	CM4525	CM6025	PCD 聚晶鑽石	A	B	S	r	d1		
	DCGW070202-PC					●	7.94	6.35	2.38	0.2	2.8		外徑刀桿 192 193
	DCGW070204-PC					●	7.94	6.35	2.38	0.4	2.8		
	DCGW11T302-PC					●	11.6	9.52	3.97	0.2	4.4		
F S M R	DCGW11T304-PC					●	11.6	9.52	3.97	0.4	4.4		
	DCGW070202P07-PC					●	7.94	6.35	2.38	0.2	2.8		內徑刀桿 204
	DCGW070204P07-PC					●	7.94	6.35	2.38	0.4	2.8		
	DCGW11T302P07-PC					●	11.6	9.52	3.97	0.2	4.4		
F S M R	DCGW11T304P07-PC					●	11.6	9.52	3.97	0.4	4.4		

切削條件表 Turning Condition Table → Page：P.182

加工材質								
	P	鋼材 Alloy Steels	●		❂	✱	—	● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting ◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting ✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting — 不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	●		✱	❂	—	
	K	鑄鐵 Cast Iron	●		—	❂	—	
	N	鋁合金 Aluminum Alloys	○		—	—	◐	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○		✱	❂	—	
	H	調質鋼 Hardened Steels	—		❂	❂	—	

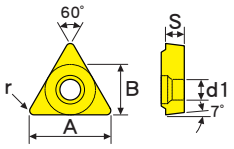
刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6010	CM5515	CM4525	CM6025	CM10	A	B	S	r	d1		
	SCGT09T304-FA					●	9.53	9.53	3.97	0.4	4.4		外徑刀桿 194
	SCGT09T308-FA					●	9.53	9.53	3.97	0.8	4.4		
F S M R													
	SCGT09T304-FB	●					9.53	9.53	3.97	0.4	4.4		
	SCGT09T308-FB	●					9.53	9.53	3.97	0.8	4.4		
F S M R													
	SCMT09T304-SP				●		9.53	9.53	3.97	0.4	4.4		
F S M R													
	SCMT09T304-MP				●		9.53	9.53	3.97	0.4	4.4		
F S M R													
	SCMT09T304-MK			●	●		9.53	9.53	3.97	0.4	4.4		
	SCMT09T308-MK			●	●		9.53	9.53	3.97	0.8	4.4		
F S M R													

切削條件表 Turning Condition Table → Page：P.182

加工材質							
	P	鋼材 Alloy Steels	●		❁	✱	–
	M	不銹鋼 Stainless Steels	●		✱	❁	–
	K	鑄鐵 Cast Iron	●		–	❁	–
	N	鋁合金 Aluminum Alloys	○		–	–	◐
	S	高溫合金 High Temp Alloys	○		✱	❁	–
	H	調質鋼 Hardened Steels	–		❁	❁	–

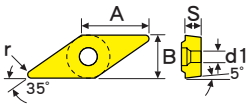
● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
✱ 第一推薦 / ❁ 第二推薦：斷續加工 Interrupted Cutting
– 不推薦 NO Recommend

F：精加工 Finishing
S：半精加工 Semi Finishing
M：中加工 Medium
R：粗加工 Roughing

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6010	CM5515	CM4525	CM6025	CM10	A	B	S	r	d1		
	TCGT090204-FA					●	9.6	5.56	2.38	0.4	2.5		外徑刀桿 195
	TCGT110204-FA					●	11.0	6.35	2.38	0.4	2.8		
	TCGT16T304-FA					●	16.5	9.53	3.97	0.4	4.4		
F S M R	TCGT16T308-FA					●	16.5	9.53	3.97	0.8	4.4		
	TCGT090204-FB	●					9.6	5.56	2.38	0.4	2.5		
	TCGT110204-FB	●					11.0	6.35	2.38	0.4	2.8		
	TCGT16T304-FB	●					16.5	9.53	3.97	0.4	4.4		
F S M R	TCGT16T308-FB	●					16.5	9.53	3.97	0.8	4.4		
	TCMT110204-MP				●		11.0	6.35	2.38	0.4	2.8		內徑刀桿 207
F S M R													
	TCMT110204-MK			●	●		11.0	6.35	2.38	0.4	2.8		
	TCMT16T304-MK			●	●		16.5	9.53	3.97	0.4	4.4		
	TCMT16T308-MK			●	●		16.5	9.53	3.97	0.8	4.4		
F S M R													

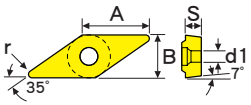
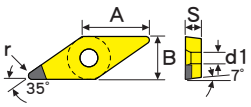
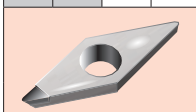
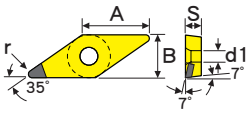
切削條件表 Turning Condition Table → Page：P.182

加工材質								
	P	鋼材 Alloy Steels		●	❁	✱		● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting ◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting ✱ 第一推薦 / ❁ 第二推薦：斷續加工 Interrupted Cutting – 不推薦 NO Recommend
	M	不銹鋼 Stainless Steels		●	✱	❁		
	K	鑄鐵 Cast Iron		●	–	❁		
	N	鋁合金 Aluminum Alloys		○	–	–		F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys		●	✱	❁		
	H	調質鋼 Hardened Steels		●	❁	❁		

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6010	CM5515	CM4525	CM6025	CM10	A	B	S	r	d1		
	VBET110301R-FX		●				11.1	6.35	3.18	0.1	2.8		外徑刀桿 197 內徑刀桿 208 209
	VBET110302R-FX		●				11.1	6.35	3.18	0.2	2.8		
	VBET110304R-FX		●				11.1	6.35	3.18	0.4	2.8		
F S M R													
	VBET110301L-FX		●				11.1	6.35	3.18	0.1	2.8		
	VBET110302L-FX		●				11.1	6.35	3.18	0.2	2.8		
	VBET110304L-FX		●				11.1	6.35	3.18	0.4	2.8		
F S M R													
	VBET110301R-FY		●				11.1	6.35	3.18	0.1	2.8		
	VBET110302R-FY		●				11.1	6.35	3.18	0.2	2.8		
	VBET110304R-FY		●				11.1	6.35	3.18	0.4	2.8		
F S M R													
	VBET110301L-FY		●				11.1	6.35	3.18	0.1	2.8		
	VBET110302L-FY		●				11.1	6.35	3.18	0.2	2.8		
	VBET110304L-FY		●				11.1	6.35	3.18	0.4	2.8		
F S M R													
	VBEW110301		●				11.1	6.35	3.18	0.1	2.8		
	VBEW110302		●				11.1	6.35	3.18	0.2	2.8		
	VBEW110304		●				11.1	6.35	3.18	0.4	2.8		
F S M R													
	VBMT160404-MK			●	●		16.6	9.53	4.76	0.4	4.4		
	VBMT160408-MK			●	●		16.6	9.53	4.76	0.8	4.4		
F S M R													

切削條件表 Turning Condition Table → Page：P.182

加工材質								
	P	鋼材 Alloy Steels	●	●		–	–	● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting ◕ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting ✱ 第一推薦 / ❁ 第二推薦：斷續加工 Interrupted Cutting – 不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	●	●		–	–	
	K	鑄鐵 Cast Iron	●	●		–	–	
	N	鋁合金 Aluminum Alloys	○	○		◕	◕	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	○	●		–	–	
	H	調質鋼 Hardened Steels	–	●		–	–	

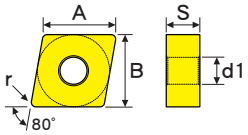
刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6010	CM5515	CM4525	CM10	PCD 聚晶鑽石	A	B	S	r	d1		
	VCGT110302-FA				●		11.1	6.35	3.18	0.2	2.8		外徑刀桿 198 內徑刀桿 210 211
	VCGT110304-FA				●		11.1	6.35	3.18	0.4	2.8		
	VCGT160402-FA				●		16.6	9.52	4.76	0.2	4.4		
	VCGT160404-FA				●		16.6	9.52	4.76	0.4	4.4		
F S M R	VCGT160408-FA				●		16.6	9.52	4.76	0.8	4.4		
	VCGT110302-FB	●					11.1	6.35	3.18	0.2	2.8		
	VCGT110304-FB	●					11.1	6.35	3.18	0.4	2.8		
	VCGT160402-FB	●					16.6	9.52	4.76	0.2	4.4		
	VCGT160404-FB	●					16.6	9.52	4.76	0.4	4.4		
F S M R	VCGT160408-FB	●					16.6	9.52	4.76	0.8	4.4		
	VCET110301R-FX		●				11.1	6.35	3.18	0.1	2.8		
	VCET110302R-FX		●				11.1	6.35	3.18	0.2	2.8		
	VCET110304R-FX		●				11.1	6.35	3.18	0.4	2.8		
F S M R													
	VCET110301L-FX		●				11.1	6.35	3.18	0.1	2.8		
	VCET110302L-FX		●				11.1	6.35	3.18	0.2	2.8		
	VCET110304L-FX		●				11.1	6.35	3.18	0.4	2.8		
F S M R													
	VCET110301R-FY		●				11.1	6.35	3.18	0.1	2.8		
	VCET110302R-FY		●				11.1	6.35	3.18	0.2	2.8		
	VCET110304R-FY		●				11.1	6.35	3.18	0.4	2.8		
F S M R													
	VCET110301L-FY		●				11.1	6.35	3.18	0.1	2.8		
	VCET110302L-FY		●				11.1	6.35	3.18	0.2	2.8		
	VCET110304L-FY		●				11.1	6.35	3.18	0.4	2.8		
F S M R													
	VCEW110301		●				11.1	6.35	3.18	0.1	2.8		
	VCEW110302		●				11.1	6.35	3.18	0.2	2.8		
	VCEW110304		●				11.1	6.35	3.18	0.4	2.8		
F S M R													
	VCGT110301-SP		●				11.1	6.35	3.18	0.1	2.8		
	VCGT110302-SP		●				11.1	6.35	3.18	0.2	2.8		
	VCGT110304-SP		●				11.1	6.35	3.18	0.4	2.8		
F S M R													
	VCGW110302-PC					●	11.1	6.35	3.18	0.2	2.8		
	VCGW110304-PC					●	11.1	6.35	3.18	0.4	2.8		
	VCGW160402-PC					●	16.5	9.52	4.76	0.2	4.4		
F S M R	VCGW160404-PC					●	16.5	9.52	4.76	0.4	4.4		
	VCGW110302P07-PC					●	11.1	6.35	3.18	0.2	2.8		
	VCGW110304P07-PC					●	11.1	6.35	3.18	0.4	2.8		
	VCGW160402P07-PC					●	16.5	9.52	4.76	0.2	4.4		
F S M R	VCGW160404P07-PC					●	16.5	9.52	4.76	0.4	4.4		

切削條件表 Turning Condition Table → Page：P.182

加工材質							
	P	鋼材 Alloy Steels	❁	✱	✱	✱	
	M	不銹鋼 Stainless Steels	✱	❁	❁	❁	
	K	鑄鐵 Cast Iron	–	❁	❁	✱	
	N	鋁合金 Aluminum Alloys	–	–	–	–	
	S	高溫合金 High Temp Alloys	✱	❁	❁	❁	
	H	調質鋼 Hardened Steels	❁	❁	❁	✱	

● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◕ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
✱ 第一推薦 / ❁ 第二推薦：斷續加工 Interrupted Cutting
– 不推薦 NO Recommend

F：精加工 Finishing
S：半精加工 Semi Finishing
M：中加工 Medium
R：粗加工 Roughing

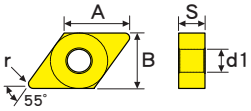
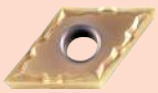
刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM4525	CM6025	CM6035	CM7535		A	B	S	r	d1		
	CNMG120404-FP	●	●				12.9	12.7	4.76	0.4	5.16		外徑刀桿 189 190 內徑刀桿 202
	CNMG120408-FP	●	●				12.9	12.7	4.76	0.8	5.16		
F S M R													
	CNMG120404-SM	●	●				12.9	12.7	4.76	0.4	5.16		
	CNMG120408-SM	●	●				12.9	12.7	4.76	0.8	5.16		
F S M R													
	CNMG120404-SP		●				12.9	12.7	4.76	0.4	5.16		
	CNMG120408-SP		●				12.9	12.7	4.76	0.8	5.16		
F S M R													
	CNMG120404-MP	●	●	●	●		12.9	12.7	4.76	0.4	5.16		
	CNMG120408-MP	●	●	●	●		12.9	12.7	4.76	0.8	5.16		
	CNMG120412-MP	●	●	●	●		12.9	12.7	4.76	1.2	5.16		
F S M R													
F S M R													
	CNMG120408-RG		●	●			12.9	12.7	4.76	0.8	5.16		
F S M R													
	CNMG120408-RK		●	●			12.9	12.7	4.76	0.8	5.16		
	CNMG120412-RK		●				12.9	12.7	4.76	1.2	5.16		
F S M R													
	CNMG120408-HG		●	●			12.9	12.7	4.76	0.8	5.16		
	CNMG120412-HG		●				12.9	12.7	4.76	1.2	5.16		
F S M R													

切削條件表 Turning Condition Table → Page：P.183

加工材質							
	P	鋼材 Alloy Steels		❋	❋	❋	●
	M	不銹鋼 Stainless Steels		❁	❁	❁	●
	K	鑄鐵 Cast Iron		❁	❁	❋	●
	N	鋁合金 Aluminum Alloys		–	–	–	○
	S	高溫合金 High Temp Alloys		❁	❁	❁	●
	H	調質鋼 Hardened Steels		❁	❁	❋	●

● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
❋ 第一推薦 / ❁ 第二推薦：斷續加工 Interrupted Cutting
– 不推薦 NO Recommend

F：精加工 Finishing
S：半精加工 Semi Finishing
M：中加工 Medium
R：粗加工 Roughing

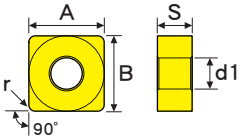
刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM4525	CM6025	CM6035	CM7535	CM5515	A	B	S	r	d1		
	DNGX110401-FP					●	11.6	9.52	4.76	0.1	4.5		–
F S M R	DNGX110402-FP					●	11.6	9.52	4.76	0.2	4.5		
	DNMG150404-SP		●				15.5	12.7	4.76	0.4	5.16		外徑刀桿 191 192
F S M R													
	DNMG150404-MP				●		15.5	12.7	4.76	0.4	5.16		
	DNMG150408-MP				●		15.5	12.7	4.76	0.8	5.16		
F S M R													
	DNMG110408-RG		●				11.6	9.52	4.76	0.8	3.81		
	DNMG150408-RG		●	●			15.5	12.7	4.76	0.8	5.16		
F S M R													

▶ 切削條件表 Turning Condition Table → Page：P.183

加工材質							
	P	鋼材 Alloy Steels		❋	❋	❋	
	M	不銹鋼 Stainless Steels		❁	❁	❁	
	K	鑄鐵 Cast Iron		❁	❁	❋	
	N	鋁合金 Aluminum Alloys		–	–	–	
	S	高溫合金 High Temp Alloys		❁	❁	❁	
	H	調質鋼 Hardened Steels		❁	❁	❋	

● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
❋ 第一推薦 / ❁ 第二推薦：斷續加工 Interrupted Cutting
– 不推薦 NO Recommend

F：精加工 Finishing
S：半精加工 Semi Finishing
M：中加工 Medium
R：粗加工 Roughing

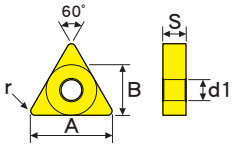
刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM4525	CM6025	CM6035	CM7535	CM5515	A	B	S	r	d1		
	SNMG120404-SM		●				12.7	12.7	4.76	0.4	5.16		外徑刀桿 193
F S M R													
	SNMG120404-MP				●		12.7	12.7	4.76	0.4	5.16		
	SNMG120408-MP				●		12.7	12.7	4.76	0.8	5.16		
	SNMG120412-MP				●		12.7	12.7	4.76	1.2	5.16		
F S M R													
	SNMG120408-RK		●	●			12.7	12.7	4.76	0.8	5.16		內徑刀桿 205
	SNMG120412-RK		●				12.7	12.7	4.76	1.2	5.16		
F S M R													

▶ 切削條件表 Turning Condition Table → Page：P.183

加工材質							
	P	鋼材 Alloy Steels	❁	✱	✱	✱	
	M	不銹鋼 Stainless Steels	✱	❁	❁	❁	
	K	鑄鐵 Cast Iron	–	❁	❁	✱	
	N	鋁合金 Aluminum Alloys	–	–	–	–	
	S	高溫合金 High Temp Alloys	✱	❁	❁	❁	
	H	調質鋼 Hardened Steels	❁	❁	❁	✱	

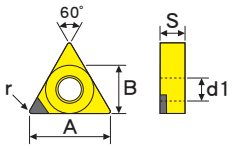
● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◕ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
✱ 第一推薦 / ❁ 第二推薦：斷續加工 Interrupted Cutting
– 不推薦 NO Recommend

F：精加工 Finishing
S：半精加工 Semi Finishing
M：中加工 Medium
R：粗加工 Roughing

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM4525	CM6025	CM6035	CM7535	CM5515	A	B	S	r	d1		
	TNMG160408-FP	●	●				16.5	9.53	4.76	0.8	3.81		外徑刀桿 194 195 內徑刀桿 205 206
F S M R													
	TNMG160408-SM	●	●				16.5	9.53	4.76	0.8	3.81		
F S M R													
	TNMG160404-SP		●				16.5	9.53	4.76	0.4	3.81		
	TNMG160408-SP		●				16.5	9.53	4.76	0.8	3.81		
F S M R													
	TNMG160404R-ME		●				16.5	9.53	4.76	0.4	3.81		
	TNMG160408R-ME		●				16.5	9.53	4.76	0.8	3.81		
F S M R													
	TNMG160404L-ME		●				16.5	9.53	4.76	0.4	3.81		
	TNMG160408L-ME		●				16.5	9.53	4.76	0.8	3.81		
F S M R													
	TNMG160404-MP		●		●		16.5	9.53	4.76	0.4	3.81		
	TNMG160408-MP		●		●		16.5	9.53	4.76	0.8	3.81		
	TNMG160412-MP		●				16.5	9.53	4.76	1.2	3.81		
F S M R													
	TNMG160408-RK		●				16.5	9.53	4.76	0.8	3.81		
F S M R													
	TNMG160408-HG		●	●			16.5	9.53	4.76	0.8	3.81		
	TNMG160412-HG		●				16.5	9.53	4.76	1.2	3.81		
F S M R													
													–
F S M R													

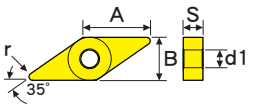
切削條件表 Turning Condition Table → Page：P.183

加工材質								
	P	鋼材 Alloy Steels					—	● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting ◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting ✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting — 不推薦 NO Recommend
	M	不銹鋼 Stainless Steels					—	
	K	鑄鐵 Cast Iron					—	
	N	鋁合金 Aluminum Alloys					◐	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys					—	
	H	調質鋼 Hardened Steels					—	

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
						PCD 聚晶鑽石	A	B	S	r	d1		
	TNGA160402-PC					●	16.5	9.52	4.76	0.2	3.81		194 195 205 206
	TNGA160404-PC					●	16.5	9.52	4.76	0.4	3.81		
	TNGA160408-PC					●	16.5	9.52	4.76	0.8	3.81		
F S M R													

► 切削條件表 Turning Condition Table → Page：P.183

加工材質								
	P	鋼材 Alloy Steels	❂	✱	✱	✱		● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting ◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting ✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting — 不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	✱	❂	❂	❂		
	K	鑄鐵 Cast Iron	—	❂	❂	✱		
	N	鋁合金 Aluminum Alloys	—	—	—	—		F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	✱	❂	❂	❂		
	H	調質鋼 Hardened Steels	❂	❂	❂	✱		

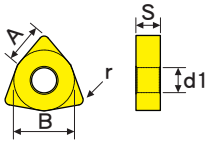
刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM4525	CM6025	CM6035	CM7535	CM5515	A	B	S	r	d1		
	VNMG160404-MP	●	●		●		16.5	9.53	4.76	0.4	3.81		外徑刀桿 196 內徑刀桿 207
	VNMG160408-MP				●		16.5	9.53	4.76	0.8	3.81		
F S M R													
	VNMG160408-RG		●	●			16.5	9.53	4.76	0.8	3.81		
F S M R													

► 切削條件表 Turning Condition Table → Page：P.183

加工材質							
	P	鋼材 Alloy Steels	❂	✠	✠	✠	
	M	不銹鋼 Stainless Steels	✠	❂	❂	❂	
	K	鑄鐵 Cast Iron	–	❂	❂	✠	
	N	鋁合金 Aluminum Alloys	–	–	–	–	
	S	高溫合金 High Temp Alloys	✠	❂	❂	❂	
	H	調質鋼 Hardened Steels	❂	❂	❂	✠	

● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
✠ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting
– 不推薦 NO Recommend

F：精加工 Finishing
S：半精加工 Semi Finishing
M：中加工 Medium
R：粗加工 Roughing

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM4525	CM6025	CM6035	CM7535	CM5515	A	B	S	r	d1		
	WNMG080408-FP		●	●			8.7	12.7	4.76	0.8	5.16		外徑刀桿 199 內徑刀桿 212
F S M R													
	WNMG080404-SP	●	●				8.7	12.7	4.76	0.4	5.16		
	WNMG080408-SP		●				8.7	12.7	4.76	0.8	5.16		
F S M R													
	WNMG080404-MP	●	●		●		8.7	12.7	4.76	0.4	5.16		
	WNMG080408-MP	●	●		●		8.7	12.7	4.76	0.8	5.16		
	WNMG080412-MP	●	●		●		8.7	12.7	4.76	1.2	5.16		
F S M R													
	WNMG080408-RK		●				8.7	12.7	4.76	0.8	5.16		
F S M R													
	WNMG080408-HG		●	●			8.7	12.7	4.76	0.8	5.16		
	WNMG080412-HG		●	●			8.7	12.7	4.76	1.2	5.16		
F S M R													

切削條件表 Turning Condition Table → Page：P.183

正角型車刀片 POSITIVE INSERT

斷屑槽 Chip Breaker	ISO 材質 Material Group	加工材質 Material		硬度 Hardness	切削速度 Vc (m/min)	每轉進給量 f (mm/rev)	加工深度 (單邊) Ap (mm) (Indicates Radius)
MP	P	碳素鋼 Carbon Steels	S35C,S45C,S50C	HRC<20	80 ~ 160	0.10 ~ 0.30	0.20 ~ 2.00
MG						0.10 ~ 0.50	0.20 ~ 3.00
XF						0.05 ~ 0.15	0.20 ~ 1.50
YF						0.05 ~ 0.18	0.20 ~ 1.00
FG						0.05 ~ 0.18	0.20 ~ 2.00
MP		合金鋼 Alloy Steels	SCM,SKT,SKD	HRC20~40	60 ~ 100	0.10 ~ 0.30	0.20 ~ 2.00
MG						0.10 ~ 0.45	0.20 ~ 2.50
XF						0.05 ~ 0.15	0.20 ~ 1.50
YF						0.05 ~ 0.18	0.20 ~ 1.00
FG						0.05 ~ 0.18	0.20 ~ 2.00
MP	M	不銹鋼 Stainless Steels	SUS304	—	60 ~ 100	0.10 ~ 0.25	0.20 ~ 1.50
MG						0.10 ~ 0.30	0.20 ~ 2.00
XF						0.05 ~ 0.15	0.10 ~ 1.50
YF						0.05 ~ 0.18	0.10 ~ 1.00
FG						0.05 ~ 0.18	0.10 ~ 1.50
MP	K	鑄鐵 Cast Iron	FC,FCD	HRC<30	80 ~ 150	0.10 ~ 0.30	0.20 ~ 2.00
MG						0.10 ~ 0.50	0.20 ~ 3.00
XF						0.05 ~ 0.15	0.20 ~ 1.50
YF						0.05 ~ 0.18	0.20 ~ 1.00
FG						0.05 ~ 0.18	0.20 ~ 2.00
AG	N	鋁合金 Aluminum Alloys	Al 5052 / 6061 / 7075	—	100 ~ 300	0.10 ~ 0.40	0.30 ~ 4.00
PC					300 ~ 1,000	0.05 ~ 0.25	0.10 ~ 1.00
MP	S	鈦合金 Titanium Alloys	TiAl6V4	—	30 ~ 70	0.10 ~ 0.20	0.20 ~ 1.00
MG						0.10 ~ 0.25	0.20 ~ 1.00
XF						0.05 ~ 0.10	0.10 ~ 1.00
YF						0.05 ~ 0.13	0.10 ~ 0.50
FG						0.05 ~ 0.13	0.10 ~ 1.00

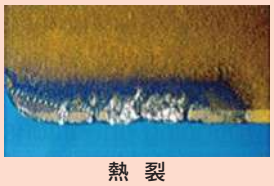
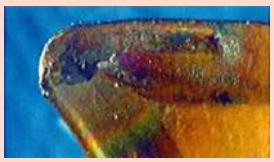
※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π (3.14)　　F(進給速度) = f(每轉進給量) × S(主軸轉速)
※ 建議先採用最低切削速度和每轉進給量參數加工，如加工狀況良好，再慢慢調高參數。
We recommend starting with slow speeds and feeds. If processing goes well, you can raise parameters gradually.

負角型車刀片 NEGATIVE INSERT

斷屑槽 Chip Breaker	ISO 材質 Material Group	加工材質 Material		硬度 Hardness	切削速度 Vc (m/min)	每轉進給量 f (mm/rev)	加工深度 (單邊) Ap (mm) (Indicates Radius)
FP	P	碳素鋼 Carbon Steels	S35C,S45C,S50C	HRC<20	80 ~ 160	0.10 ~ 0.30	1.00 ~ 3.00
SM						0.15 ~ 0.35	0.80 ~ 3.00
SP						0.08 ~ 0.25	0.80 ~ 3.00
MP						0.18 ~ 0.50	0.80 ~ 4.00
ME						0.15 ~ 0.35	1.00 ~ 4.00
RK						0.20 ~ 0.50	1.00 ~ 4.50
RG						0.25 ~ 0.58	1.50 ~ 5.50
RP						0.25 ~ 0.58	1.50 ~ 5.50
HG						0.20 ~ 0.60	1.50 ~ 6.00
FP		合金鋼 Alloy Steels	SCM,SKT,SKD	HRC20~40	60 ~ 100	0.10 ~ 0.30	1.00 ~ 3.00
SM						0.15 ~ 0.35	0.80 ~ 3.00
SP						0.08 ~ 0.25	0.80 ~ 3.00
MP						0.18 ~ 0.45	0.80 ~ 3.50
ME						0.15 ~ 0.30	1.00 ~ 3.50
RK						0.20 ~ 0.47	1.00 ~ 4.00
RG						0.25 ~ 0.54	1.50 ~ 5.00
RP						0.25 ~ 0.54	1.50 ~ 5.00
HG						0.20 ~ 0.55	1.50 ~ 5.50
FP	M	不銹鋼 Stainless Steels	SUS304	—	60 ~ 100	0.08 ~ 0.25	0.50 ~ 1.50
SM						0.10 ~ 0.30	0.10 ~ 3.00
SP						0.10 ~ 0.30	0.20 ~ 3.00
MP						0.15 ~ 0.35	0.30 ~ 3.50
ME						0.15 ~ 0.35	0.30 ~ 3.50
RK						0.20 ~ 0.53	0.40 ~ 3.50
RG						0.20 ~ 0.53	0.40 ~ 3.50
RP						0.20 ~ 0.53	0.40 ~ 3.50
HG						0.20 ~ 0.55	0.40 ~ 3.50
FP	K	鑄鐵 Cast Iron	FC,FCD	HRC<30	80 ~ 150	0.10 ~ 0.30	1.00 ~ 3.50
SM						0.15 ~ 0.35	0.80 ~ 3.00
SP						0.08 ~ 0.25	0.80 ~ 3.00
MP						0.18 ~ 0.50	0.80 ~ 4.00
ME						0.15 ~ 0.35	1.00 ~ 4.00
RK						0.20 ~ 0.50	1.00 ~ 4.50
RG						0.25 ~ 0.58	1.50 ~ 5.50
RP						0.25 ~ 0.58	1.50 ~ 5.50
HG						0.20 ~ 0.60	1.50 ~ 6.00
PC	N	鋁合金 Aluminum Alloys	Al 5052 / 6061 / 7075	—	300 ~ 1,000	0.05 ~ 0.25	0.10 ~ 2.00
FP	S	鈦合金 Titanium Alloys	TiAl6V4	—	30 ~ 70	0.08 ~ 0.20	0.50 ~ 1.00
SM						0.10 ~ 0.25	0.10 ~ 1.00
SP						0.10 ~ 0.25	0.20 ~ 1.00
MP						0.15 ~ 0.30	0.30 ~ 1.00
ME						0.15 ~ 0.30	0.30 ~ 1.00
RK						0.20 ~ 0.30	0.40 ~ 1.00
RG						0.20 ~ 0.30	0.40 ~ 1.00
RP						0.20 ~ 0.30	0.40 ~ 1.00
HG						0.20 ~ 0.30	0.40 ~ 1.00

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π (3.14)　　F(進給速度) = f(每轉進給量) × S(主軸轉速)
※ 建議先採用最低切削速度和每轉進給量參數加工，如加工狀況良好，再慢慢調高參數。
We recommend starting with slow speeds and feeds. If processing goes well, you can raise parameters gradually.

刀片損壞分析與解決方法 FAILURE ANALYSIS AND SOLUTION

刀片損壞狀況 Failure Status	原 因 Reason	解決方法 Solution
 熱 裂 Thermal Cracking	· 切削速度 (Vc) 過高，而產生高熱。 Intermittent heating of the cutting edge. High speed, high volume metal removal.	· 選擇耐熱更高的材質碼。 Use heat resistant grades. · 使用正角型刀片。 Use positive rake insert. · 使用較大 R 角的刀片。 Increase nose radius. · 降低切削速度 (Vc)、每轉進給量 (f) 或切深 (Ap)。 Reduce speed, feed or depth of cut.
 崩刃 (欠損) Tipping	· 刀片材質太脆。 Cutting tool excessively brittle.	· 選擇韌性更高的材質碼。 Use tougher grades. · 使用負角型刀片。 Ues negative rake insert. · 使用較大 R 角的刀片。 Increase nose radius. · 使用刀口強度較佳的刀片。 Use increased edge land. · 降低切削速度 (Vc) 和每轉進給量 (f)。 Reduce cutting speed and feed.
 磨 耗 Flank Wear	· 刀片材質太軟。 Cutting tool too soft. · 切削速度 (Vc) 過高。 Machine speed too fast.	· 選擇硬度更高或更耐磨的材質碼。 Use harder and more wear resisitanat grades. · 降低切削速度 (Vc)。 Reduce cutting speed. · 增加每轉進給量 (f)。 Increase feed. · 使用冷卻液。 Use coolant.
 凹 陷 Notching	· 被加工材質產生硬化，而造成嚴重磨損。 Cutting material working harden cause serious wear of insert.	· 降低切削速度 (Vc) 和每轉進給量 (f)。 Reduce cutting speed and feed. · 降低切深 (Ap)。 Reduce depth of cut.
 黏屑 (溶著) Bulite-Up-Edge(Bue)	· 切削速度 (Vc) 過低。 Cutting speed too slow for material being machined.	· 提高切削速度 (Vc)。 Increase cutting speed. · 選擇摩擦係數較低的材質碼。 Use friction reducing grades. · 使用潤滑性較高的冷卻液。 Use high lubricity coolant.
 塑性變形 Deformation	· 切削速度 (Vc) 或每轉進給量 (f) 過高。 Heavy feeds or higher cutting speed.	· 選擇硬度更高的材質碼。 Use a harder gardes. · 選擇熱傳導係數高的材質碼。 Use more heat resistant grades. · 降低切削速度 (Vc) 或每轉進給量 (f)。 Reduce cutting speed or feed.
 月牙窪磨損 Crater Wear	· 加工材質和刀片之間發生化學反應，並被切削速度 (Vc) 放大。 It is due to a chemical reaction between the workpiece material and insert and is amplified by cutting speed.	· 選擇硬度更高的材質碼。 Use a harder gardes. · 降低切削速度 (Vc) 和每轉進給量 (f)。 Reduce cutting speed and feed.

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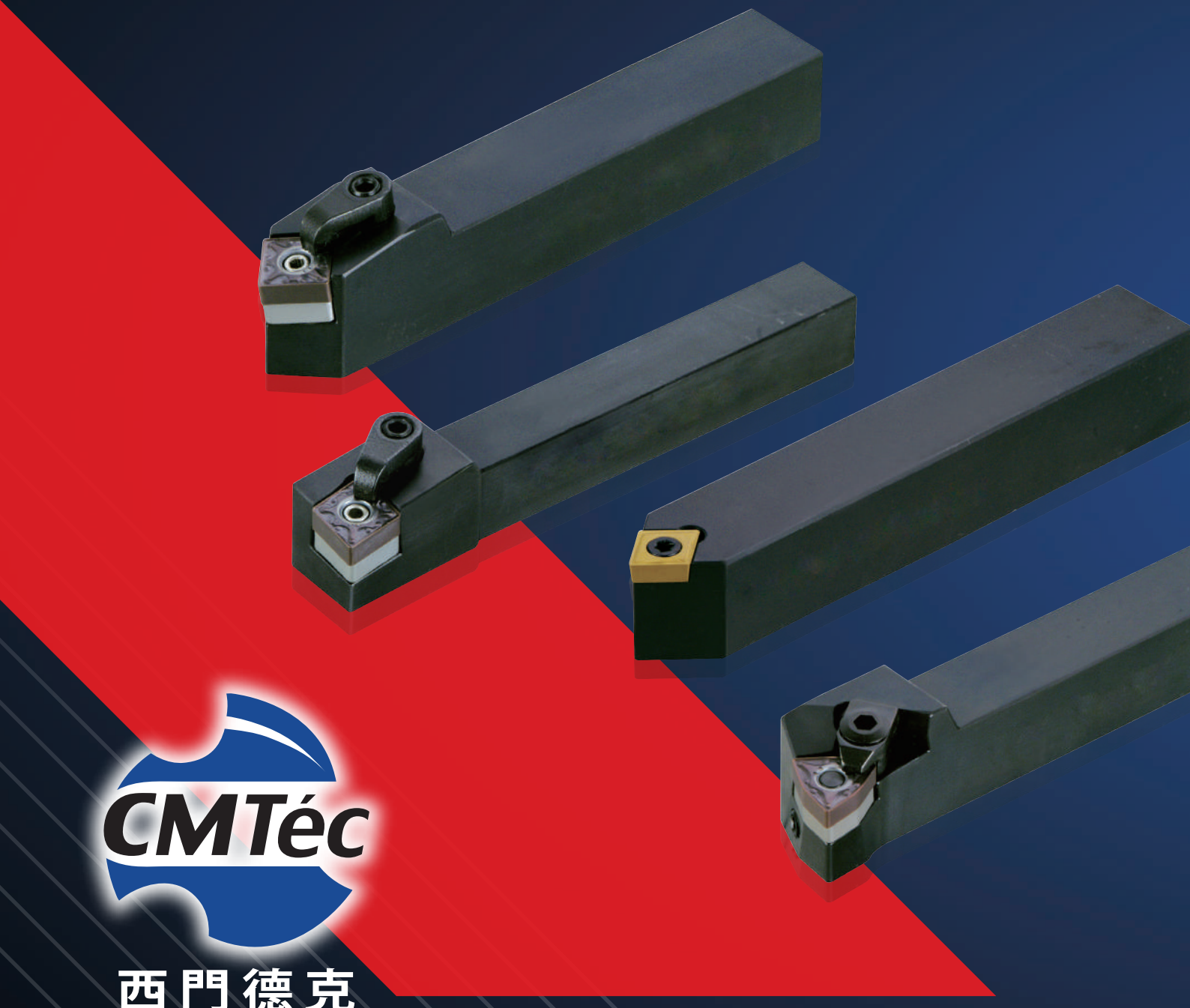
外徑車刀桿系列

EXTERNAL TURNING HOLDER SERIES



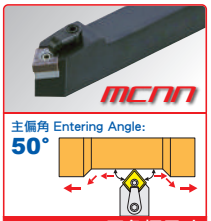
CMTéc

西門德克

外徑車刀桿 External Turning Toolholders

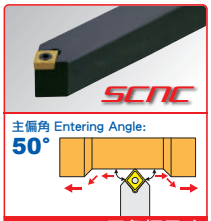
四角柄尺寸
P.189 16~32D

四角柄尺寸
P.189 16~32D



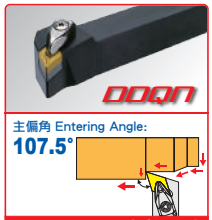
四角柄尺寸
P.190 16~32D

四角柄尺寸
P.190 10~32D



四角柄尺寸
P.191 12~25D

四角柄尺寸
P.191 20~25D

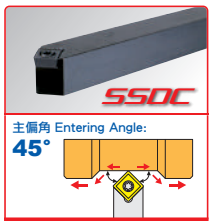


四角柄尺寸
P.192 20~32D

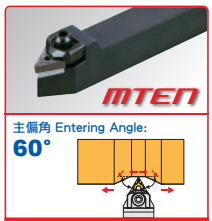
四角柄尺寸
P.192 10~25D

四角柄尺寸
P.193 12~25D

四角柄尺寸
P.193 20~25D



四角柄尺寸
P.194 12~25D



四角柄尺寸
P.194 16~25D

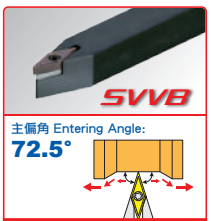
四角柄尺寸
P.195 20~25D

四角柄尺寸
P.195 10~16D

四角柄尺寸
P.196 20~32D

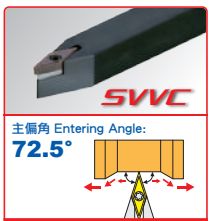
四角柄尺寸
P.196 16~25D

四角柄尺寸
P.197 12~25D

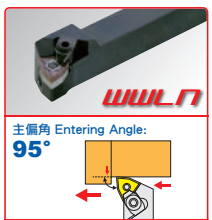


四角柄尺寸
P.197 10~32D

四角柄尺寸
P.198 12~25D



四角柄尺寸
P.198 10~32D

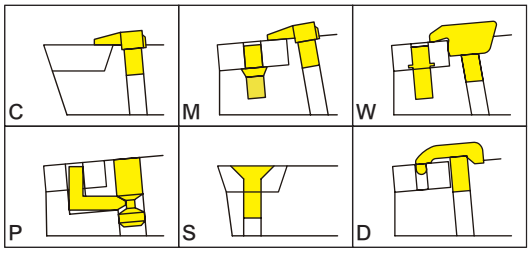


四角柄尺寸
P.199 20~25D

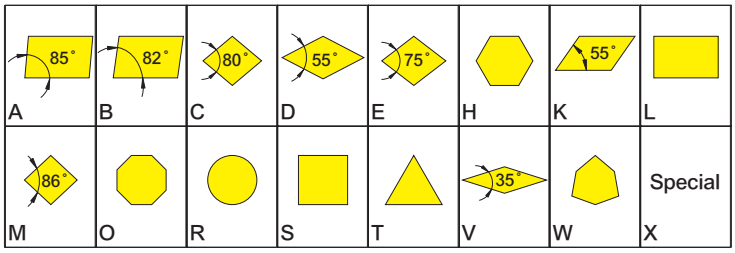
外徑車刀桿 ISO 編碼規範
ISO DESIGNATIONS FOR EXTERNAL TURNING TOOLS

M	C	L	N	R	–	20	20	K	–	12	
1	2	3	4	5		6	7	8		9	10

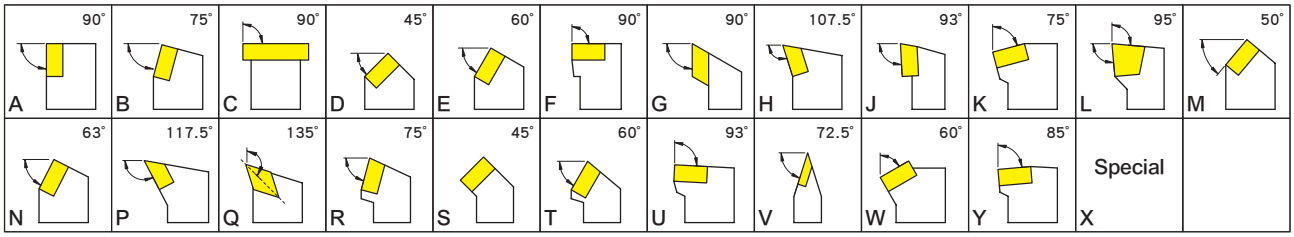
1 刀片夾持方式 Type Of Locking



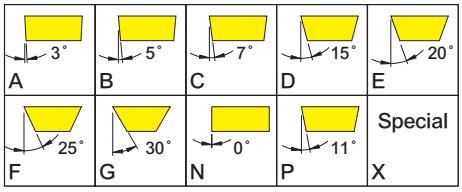
2 刀片形狀 Insert Shape



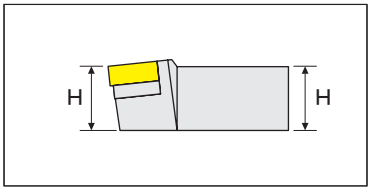
3 主偏角 Entering Angle



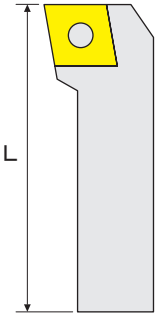
4 刀片離隙角 Clearance Angle



6 刀桿高度 Shank Height

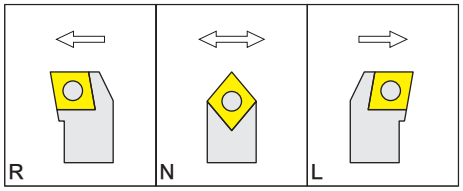


8 刀桿全長 Shank Length

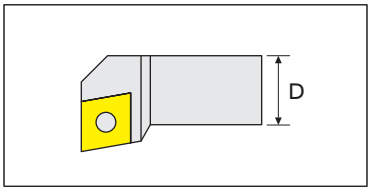


代號 Code	尺寸 (mm)
A	32
B	40
C	50
D	60
E	70
F	80
G	90
H	100
J	110
K	125
L	140
M	150
N	160
P	170
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
Y	500
X	Special

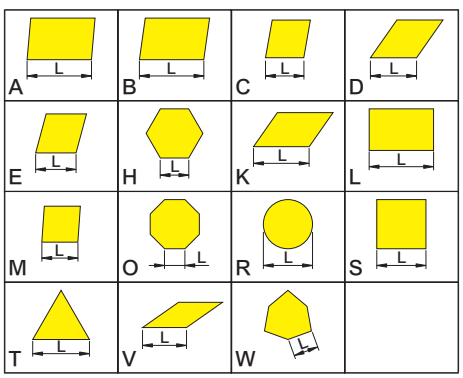
5 切削方向 Cutting Direction



7 刀桿寬度 Shank Width



9 刀片邊長 Insert Length

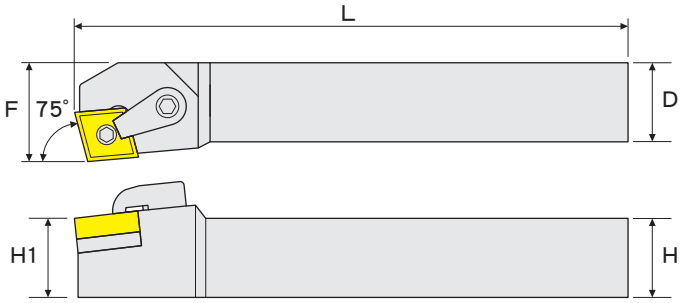


10 特殊記號 Optional Code

S	20	R	–	M	C	L	N	R	–	12	
11	7	8		1	2	3	4	5		9	10

11 刀桿設計 Shank Design

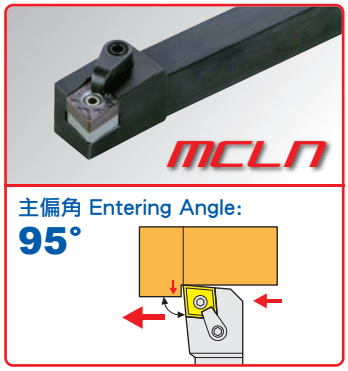
代號 Code	設 計 Design
S	鋼材柄。 Steel Shank.
A	鋼材柄 + 中心出水孔。 Steel Shank + Coolant Hole.
B	抗震鋼材柄。 Steel Shank + Device Anti-Vibration.
C	鎢鋼柄。 Cemented Carbide Shank With Steel Head.
D	抗震鋼材柄 + 中心出水孔。 Steel Shank + Device Anti-Vibration + Coolant Hole.
E	鎢鋼柄 + 中心出水孔。 Cemented Carbide Shank With Steel Head + Coolant Hole.
F	抗震鎢鋼柄。 Cemented Carbide Shank With Steel Head + Device Anti-Vibration.
G	抗震鎢鋼柄 + 中心出水孔。 Cemented Carbide Shank With Steel Head + Device Anti-Vibration + Coolant Hole.
H	重金屬。 Heavy Metal Shank.
J	重金屬 + 中心出水孔。 Heavy Metal Shank + Coolant Hole.

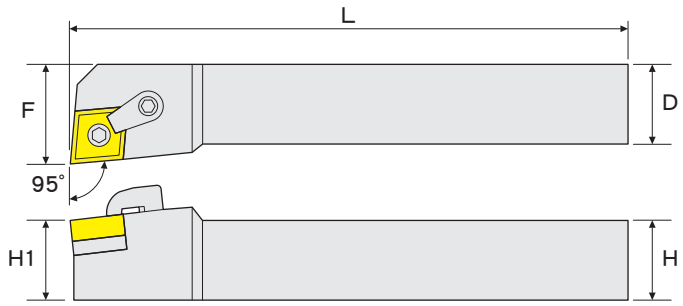


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Pin	Shim	Wrench	Screw	Clamp	Wrench
	H1 / H	F	L	D							
MCKN$^{R}_{L}$-1616K-12	16	20	125	16	CN..1204..	MLP46-A	CMS432	PL25	MS625TX	MC620	ETL15
MCKN$^{R}_{L}$-2020K-12	20	25	125	20							
MCKN$^{R}_{L}$-2525M-12	25	32	150	25					MS630TX		
MCKN$^{R}_{L}$-3232P-12	32	40	170	32							

搭配刀片 Insert → Page：P.177
切削條件表 Turning Condition Table → Page：P.183

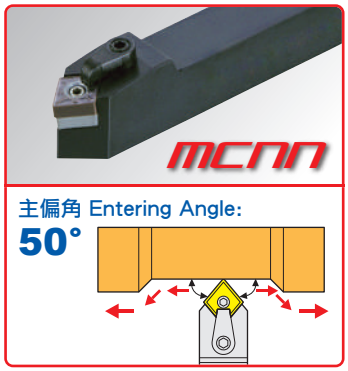


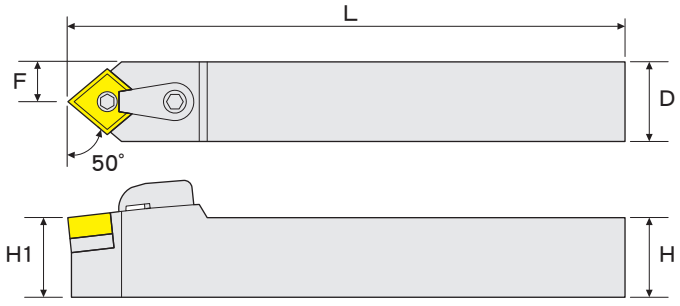


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Pin	Shim	Wrench	Screw	Clamp	Wrench
	H1 / H	F	L	D							
MCLN$^{R}_{L}$-1616K-12	16	20	125	16	CN..1204..	MLP46-A	CMS432	PL25	MS625TX	MC620	ETL15
MCLN$^{R}_{L}$-2020K-12	20	25	125	20							
MCLN$^{R}_{L}$-2525M-12	25	32	150	25					MS630TX		
MCLN$^{R}_{L}$-3232P-12	32	40	170	32							

搭配刀片 Insert → Page：P.177
切削條件表 Turning Condition Table → Page：P.183

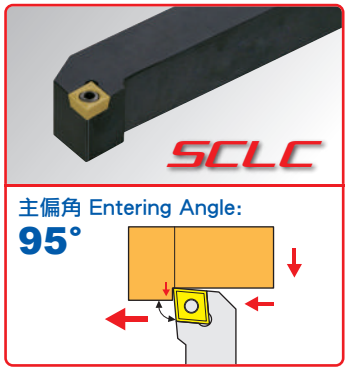


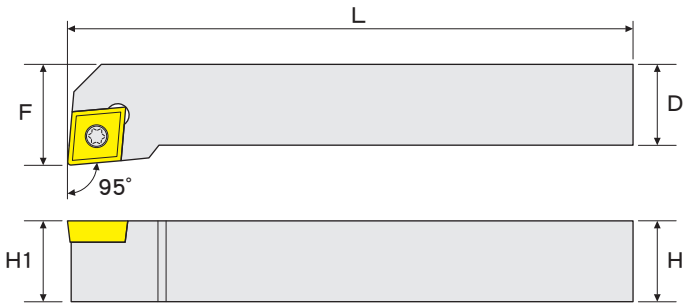


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Pin	Shim	Wrench	Screw	Clamp	Wrench
	H1 / H	F	L	D							
MCNNN-1616K-12	16	8.0	125	16	CN..1204..	MLP46-A	CMS432	PL25	MS625TX	MC620	ETL15
MCNNN-2020K-12	20	10.0	125	20							
MCNNN-2525M-12	25	12.5	150	25					MS630TX		
MCNNN-3232P-12	32	16.0	170	32							

搭配刀片 Insert → Page：P.177
切削條件表 Turning Condition Table → Page：P.183

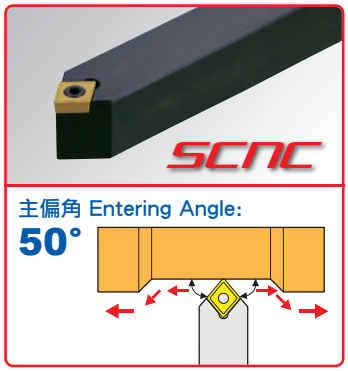


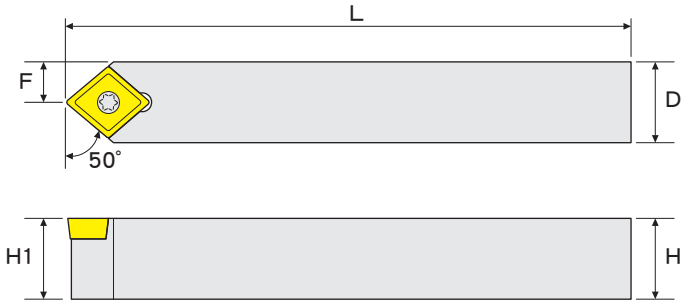


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Screw	Wrench
	H1 / H	F	L	D			
SCLC$^{R}/_{L}$-1010H-06	10	12	100	10	CC..0602..	MS2506A	ETF09
SCLC$^{R}/_{L}$-1010K-06	10	12	125	10			
SCLC$^{R}/_{L}$-1212H-09	12	16	100	12	CC..09T3..	MS4011A	ETF15
SCLC$^{R}/_{L}$-1212K-09	12	16	125	12			
SCLC$^{R}/_{L}$-1616K-09	16	20	125	16			
SCLC$^{R}/_{L}$-2020K-09	20	25	125	20			
SCLC$^{R}/_{L}$-2525M-09	25	32	150	25			
SCLC$^{R}/_{L}$-2020K-12	20	25	125	20	CC..1204..	MS5011A	ETF20
SCLC$^{R}/_{L}$-2525M-12	25	32	150	25			
SCLC$^{R}/_{L}$-3232P-12	32	40	170	32			

搭配刀片 Insert → Page：P.171
切削條件表 Turning Condition Table → Page：P.182

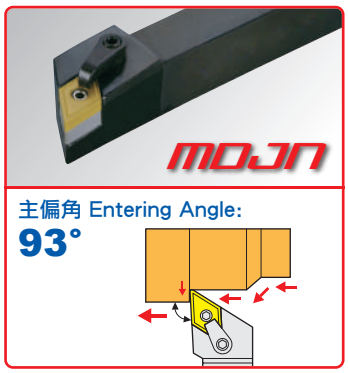


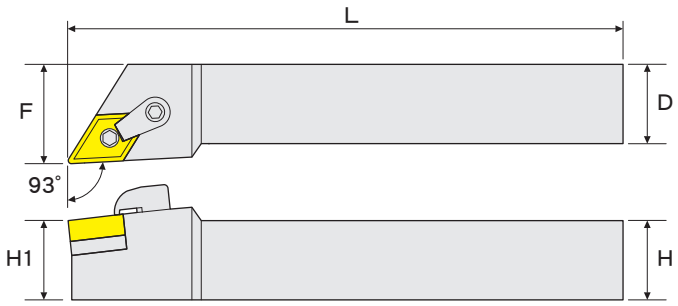


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Screw	Wrench
	H1 / H	F	L	D			
SCNCN-1616K-06	16	8.0	125	16	CC..0602..	MS2506A	ETF09
SCNCN-1212H-09	12	6.0	100	12	CC..09T3..	MS4011A	ETF15
SCNCN-1212K-09	12	6.0	125	12			
SCNCN-1616K-09	16	8.0	125	16			
SCNCN-2020K-09	20	10.0	125	20			
SCNCN-2525M-09	25	12.5	150	25			
SCNCN-2020K-12	20	10.0	125	20	CC..1204..	MS5011A	ETF20
SCNCN-2525M-12	25	12.5	150	25			

搭配刀片 Insert → Page：P.171
切削條件表 Turning Condition Table → Page：P.182

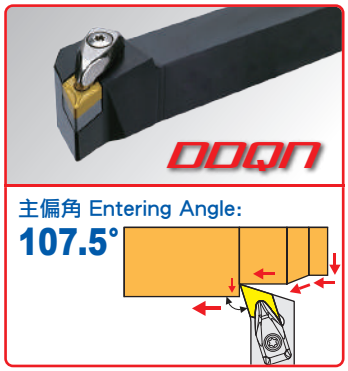


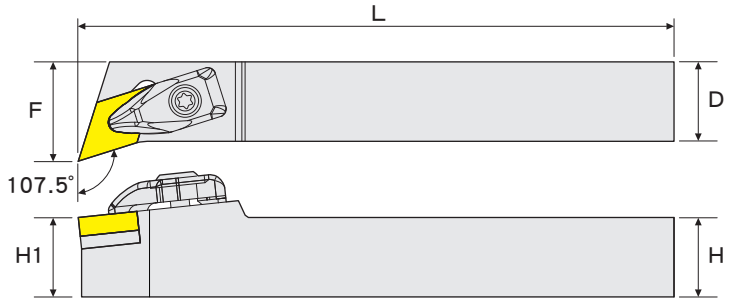


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Pin	Shim	Wrench	Screw	Clamp	Wrench
	H1 / H	F	L	D							
MDJN$^{R}/_{L}$-2020K-1504	20	25	125	20	DN..1504..	MLP46L-A	DMS442	PL25	MS625TX	MC622	ETL15
MDJN$^{R}/_{L}$-2525M-1504	25	32	150	25					MS630TX		

搭配刀片 Insert → Page：P.178
切削條件表 Turning Condition Table → Page：P.183

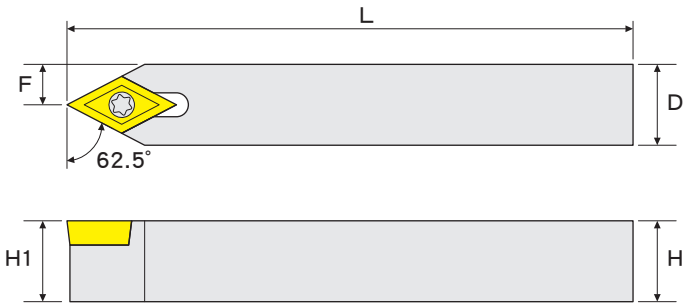




右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Shim	Screw	Wrench	Clamp	Wrench
	H1 / H	F	L	D						
DDQN$^{R}/_{L}$-2020K-1504	20	25	125	20	DN..1504..	DMS442	MS6013F	PL40	MCD430	ETL20
DDQN$^{R}/_{L}$-2525M-1504	25	32	150	25						
DDQN$^{R}/_{L}$-3232P-1504	32	40	170	32						

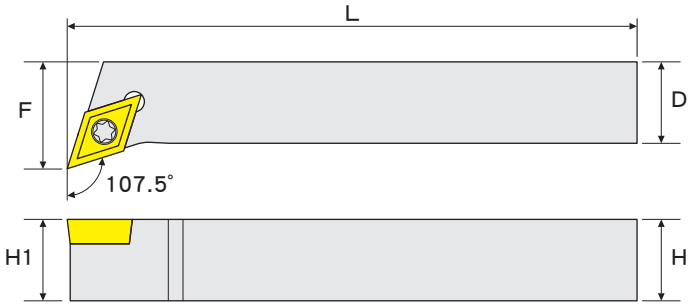
搭配刀片 Insert → Page：P.178
切削條件表 Turning Condition Table → Page：P.183



右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Screw	Wrench
	H1 / H	F	L	D			
SDNCN-1010H-07	10	5.0	100	10	DC..0702..	MS2506B	ETF09
SDNCN-1212H-07	12	6.0	100	12			
SDNCN-1616K-07	16	8.0	125	16			
SDNCN-1212H-11	12	6.0	100	12	DC..11T3..	MS4011A	ETF15
SDNCN-1212K-11	12	6.0	125	12			
SDNCN-1616K-11	16	8.0	125	16			
SDNCN-2020K-11	20	10.0	125	20			
SDNCN-2525M-11	25	12.5	150	25			

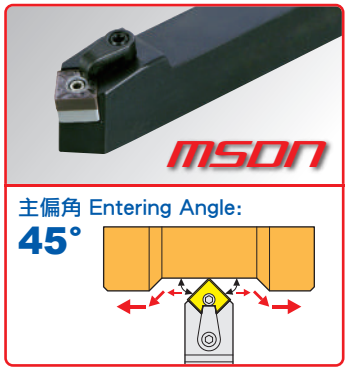
搭配刀片 Insert → Page：P.172,173
切削條件表 Turning Condition Table → Page：P.182

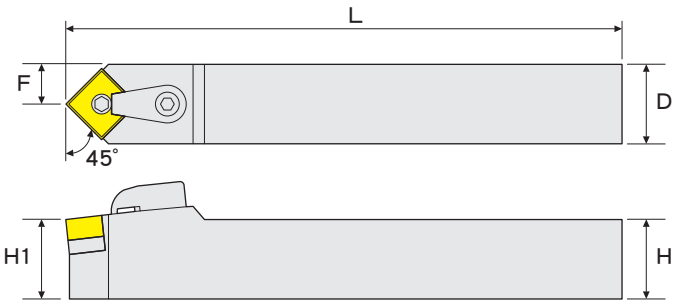


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Screw	Wrench
	H1 / H	F	L	D			
SDQC$^{R}/_{L}$-1212H-11	12	16	100	12	DC..11T3..	MS4011A	ETF15
SDQC$^{R}/_{L}$-1616K-11	16	20	125	16			
SDQC$^{R}/_{L}$-2020K-11	20	25	125	20			
SDQC$^{R}/_{L}$-2525M-11	25	32	150	25			

搭配刀片 Insert → Page：P.172,173
切削條件表 Turning Condition Table → Page：P.182

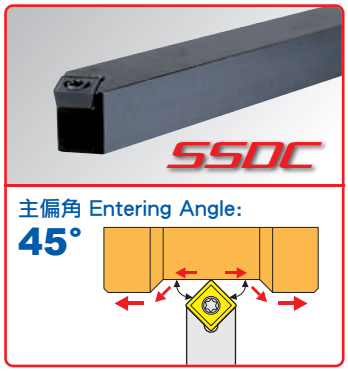


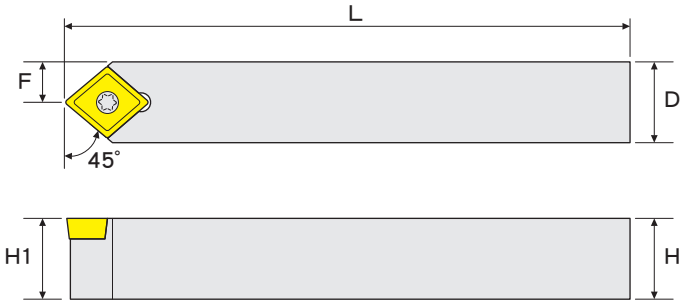


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Pin	Shim	Wrench	Screw	Clamp	Wrench
	H1 / H	F	L	D							
MSDNN-2020K-12	20	10.0	125	20	SN..1204..	MLP46-A	SMS432	PL25	MS625TX	MC620	ETL15
MSDNN-2525M-12	25	12.5	150	25					MS630TX		

搭配刀片 Insert → Page：P.178
切削條件表 Turning Condition Table → Page：P.183

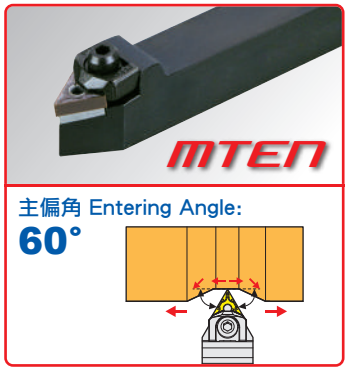


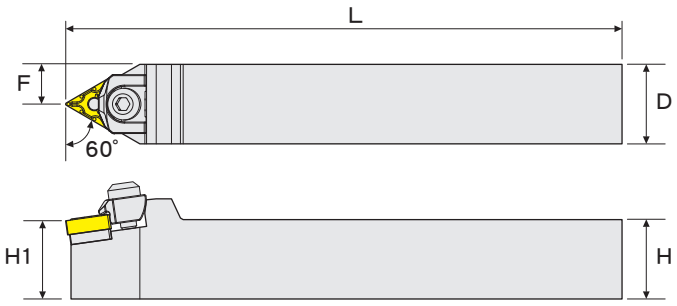


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Screw	Wrench
	H1 / H	F	L	D			
SSDCN-1212H-09	12	6.0	100	12	SC..09T3..	MS4011A	ETF15
SSDCN-1616K-09	16	8.0	125	16			
SSDCN-2020K-09	20	10.0	125	20			
SSDCN-2525M-09	25	12.5	150	25			

搭配刀片 Insert → Page：P.173
切削條件表 Turning Condition Table → Page：P.182

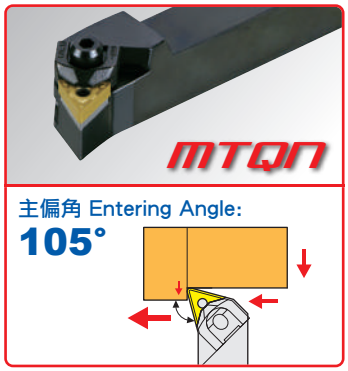


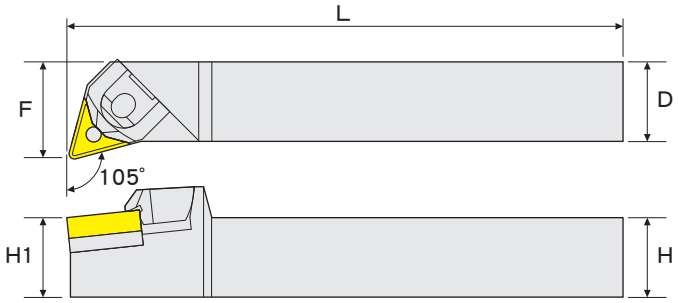


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Pin	Shim	Wrench	Screw	Clamp	Wrench
	H1 / H	F	L	D							
MTENN-1216K-16	12	8.0	125	16	TN..1604..	MCP3	TWS322	PL30	MCS3S-09	MCW3-P40	PL40
MTENN-1616K-16	16	8.0	125	16							
MTENN-2020K-16	20	10.0	125	20							
MTENN-2525M-16	25	12.5	150	25							

搭配刀片 Insert → Page：P.179,180
切削條件表 Turning Condition Table → Page：P.183

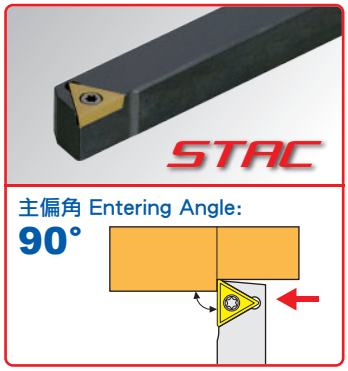


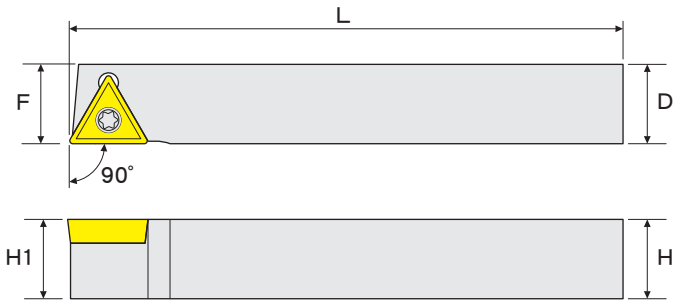


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Pin	Screw	Wrench	Shim	Clamp	Wrench
	H1 / H	F	L	D							
MTQN$^{R}/_{L}$-2020K-16	20	25	125	20	TN..1604..	MCP3	MCS3S-11	PL30	TWS322	MCW3-P40	PL40
MTQN$^{R}/_{L}$-2525M-16	25	32	150	25							

搭配刀片 Insert → Page：P.179,180
切削條件表 Turning Condition Table → Page：P.183

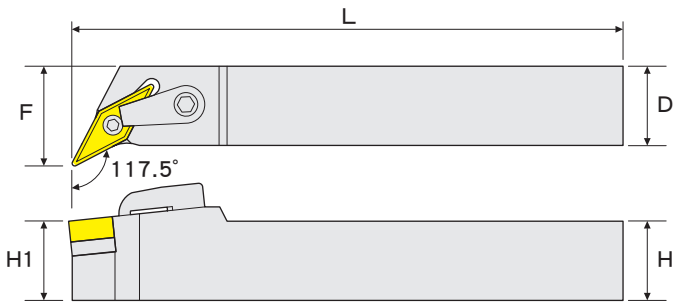




右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Screw	Wrench
	H1 / H	F	L	D			
STACR-1010H-11	10	10	100	10	TC..1102..	MS2506A	ETF09
STACR-1212H-11	12	12	100	12			
STACR-1616K-11	16	16	125	16			
STACR-1616K-16	16	16	125	16	TC..16T3..	MS4011A	ETF15

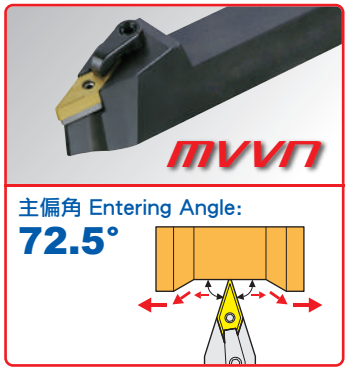
搭配刀片 Insert → Page：P.174
切削條件表 Turning Condition Table → Page：P.182

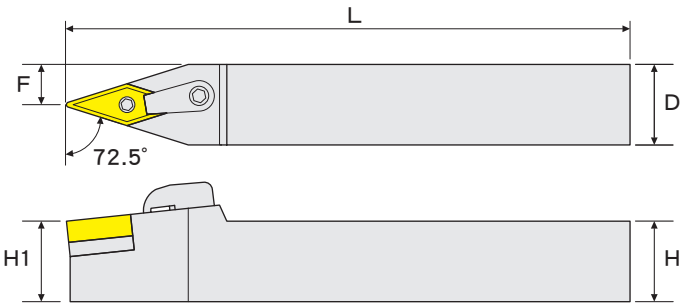


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Pin	Shim	Wrench	Screw	Clamp	Wrench
	H1 / H	F	L	D							
MVQN$^{R}_{L}$-2020K-16	20	25	125	20	VN..1604..	MLP34L-A	VMS322	PL20	MS625TX	MC622	ETL15
MVQN$^{R}_{L}$-2525M-16	25	32	150	25					MS630TX		
MVQN$^{R}_{L}$-3232P-16	32	40	170	32							

搭配刀片 Insert → Page：P.180
切削條件表 Turning Condition Table → Page：P.183

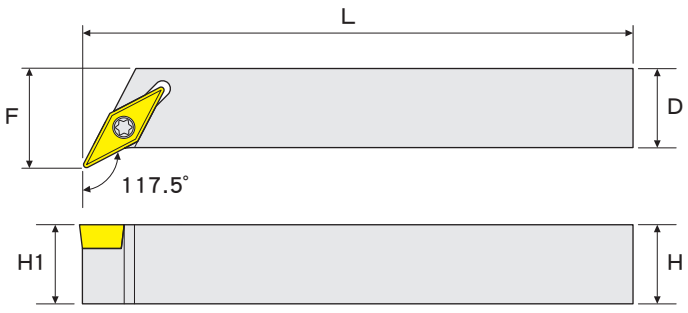




右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Pin	Shim	Wrench	Screw	Clamp	Wrench
	H1 / H	F	L	D							
MVVNN-1616K-16	16	8.0	125	16	VN..1604..	MLP34L-A	VMS322	PL20	MS625TX	MC622	ETL15
MVVNN-2020K-16	20	10.0	125	20							
MVVNN-2525M-16	25	12.5	150	25					MS630TX		

搭配刀片 Insert → Page：P.180
切削條件表 Turning Condition Table → Page：P.183

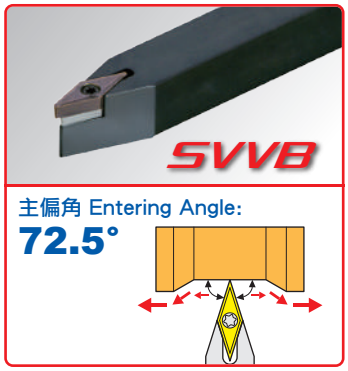


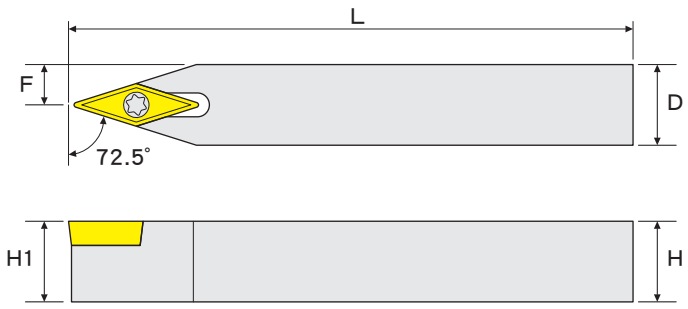
右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	配 件 Spare Parts
	H1 / H	F	L	D		
SVQB$^{R}/_{L}$-1212H-11	12	16.5	100	12	VB..1103..	1
SVQB$^{R}/_{L}$-1212K-11	12	16.5	125	12		
SVQB$^{R}/_{L}$-1616K-11	16	20.5	125	16		
SVQB$^{R}/_{L}$-2020K-11	20	25.0	125	20		
SVQB$^{R}/_{L}$-2020K-16	20	25.0	125	20	VB..1604..	2
SVQB$^{R}/_{L}$-2525M-16	25	32.0	150	25		

配 件 Spare Parts	Shim	Screw	Wrench	Screw	Wrench	Clamp	Wrench
1	–	–	–	MS2506A	ETF09	–	–
2	VSS322	MDS05035S	PL35	MS3512B	ETF15	–	–

搭配刀片 Insert → Page：P.175
切削條件表 Turning Condition Table → Page：P.182



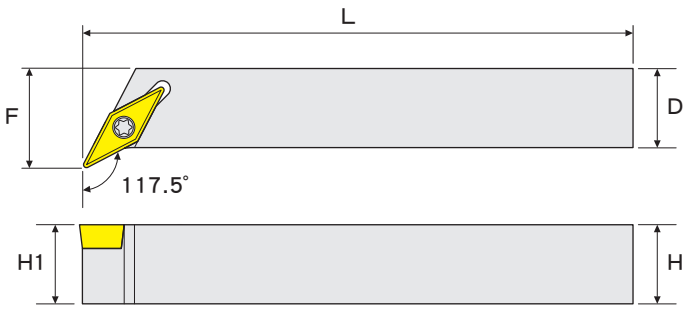


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	配 件 Spare Parts
	H1 / H	F	L	D		
SVVBN-1010H-11	10	5.0	100	10	VB..1103..	1
SVVBN-1212H-11	12	6.0	100	12		
SVVBN-1212K-11	12	6.0	125	12		
SVVBN-1616K-11	16	8.0	125	16		
SVVBN-2020K-11	20	10.0	125	20		
SVVBN-2525M-11	25	12.5	150	25		
SVVBN-1616K-16	16	8.0	125	16	VB..1604..	2
SVVBN-2020K-16	20	10.0	125	20		
SVVBN-2525M-16	25	12.5	150	25		
SVVBN-3232P-16	32	16.0	170	32		

配 件 Spare Parts	Shim	Screw	Wrench	Screw	Wrench	Clamp	Wrench
1	–	–	–	MS2506A	ETF09	–	–
2	VSS322	MDS05035S	PL35	MS3512B	ETF15	–	–

搭配刀片 Insert → Page：P.175
切削條件表 Turning Condition Table → Page：P.182

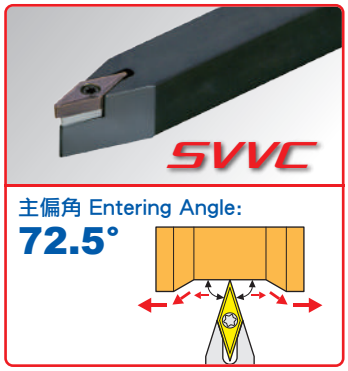


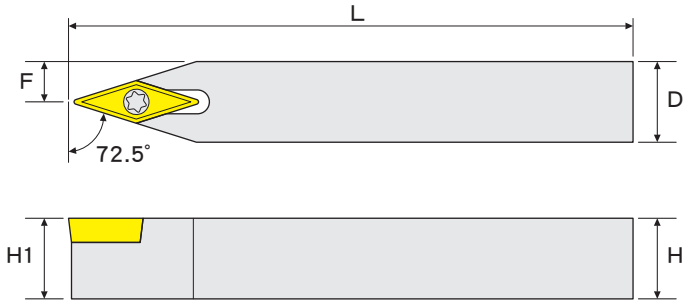
右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	配 件 Spare Parts
	H1 / H	F	L	D		
SVQC$^{R}/_{L}$-1212H-11	12	16.5	100	12	VC..1103..	1
SVQC$^{R}/_{L}$-1212K-11	12	16.5	125	12		
SVQC$^{R}/_{L}$-1616K-11	16	20.5	125	16		
SVQC$^{R}/_{L}$-2020K-11	20	25.0	125	20		
SVQC$^{R}/_{L}$-2020K-16	20	25.0	125	20	VC..1604..	2
SVQC$^{R}/_{L}$-2525M-16	25	32.0	150	25		

配 件 Spare Parts	Shim	Screw	Wrench	Screw	Wrench	Clamp	Wrench
1	–	–	–	MS2506A	ETF09	–	–
2	VSS322	MDS05035S	PL35	MS3512B	ETF15	–	–

搭配刀片 Insert → Page：P.176
切削條件表 Turning Condition Table → Page：P.182



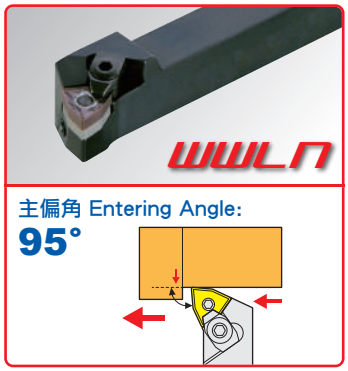


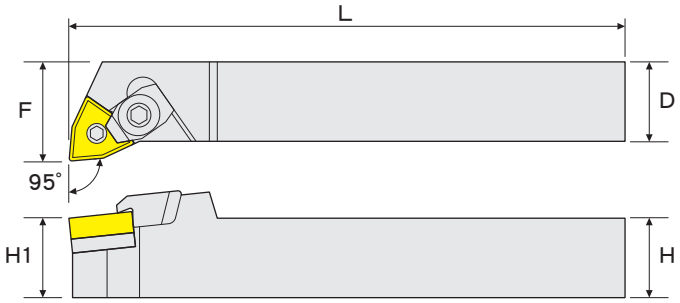
右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	配 件 Spare Parts
	H1 / H	F	L	D		
SVVCN-1010H-11	10	5.0	100	10	VC..1103..	1
SVVCN-1212H-11	12	6.0	100	12		
SVVCN-1212K-11	12	6.0	125	12		
SVVCN-1616K-11	16	8.0	125	16		
SVVCN-2020K-11	20	10.0	125	20		
SVVCN-2525M-11	25	12.5	150	25		
SVVCN-1616K-16	16	8.0	125	16	VC..1604..	2
SVVCN-2020K-16	20	10.0	125	20		
SVVCN-2525M-16	25	12.5	150	25		
SVVCN-3232P-16	32	16.0	170	32		

配 件 Spare Parts	Shim	Screw	Wrench	Screw	Wrench	Clamp	Wrench
1	–	–	–	MS2506A	ETF09	–	–
2	VSS322	MDS05035S	PL35	MS3512B	ETF15	–	–

搭配刀片 Insert → Page：P.176
切削條件表 Turning Condition Table → Page：P.182





右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Pin	Screw	Wrench	Shim	Clamp	Wrench
	H1 / H	F	L	D							
WWLN$^{R}/_{L}$-1620K-08	16	25	125	20	WN..0804..	MCP4	MCS3S-09	PL30	WNS432	WCW6-P4	PL40
WWLN$^{R}/_{L}$-2020K-08	20	25	125	20							
WWLN$^{R}/_{L}$-2525M-08	25	32	150	25							

搭配刀片 Insert → Page：P.181

切削條件表 Turning Condition Table → Page：P.183

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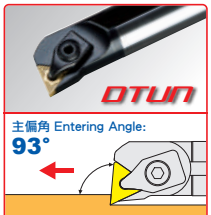
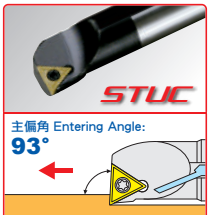
最小車徑 Φ13~50
P.204

最小車徑 Φ30~70
P.205

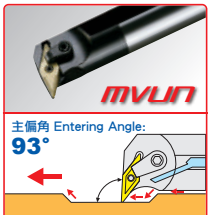
最小車徑 Φ25~40
P.205



最小車徑 Φ28~40
P.206

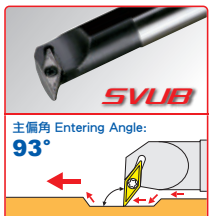


最小車徑 Φ12~38
P.207



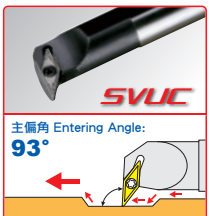
最小車徑 Φ32~60
P.207

最小車徑 Φ16~50
P.208

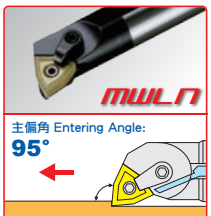


最小車徑 Φ22~50
P.209

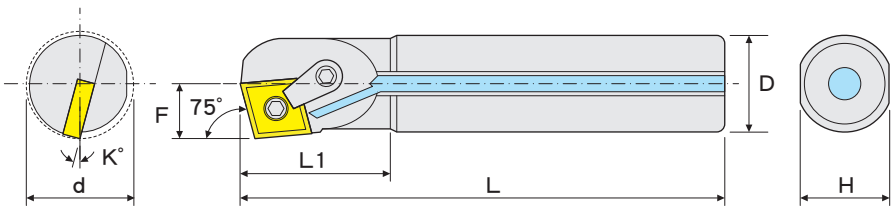
最小車徑 Φ16~50
P.210



最小車徑 Φ16~50
P.211



最小車徑 Φ25~70
P.212

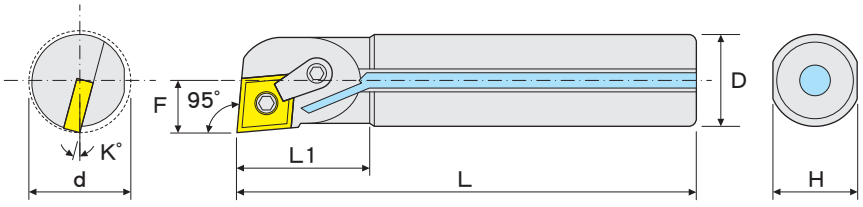


d = 最小車徑 d = Min. Bore Dia. / 右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)						最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	H	L	D	K			
S20R-MCKN$^{R}/_{L}$-12	A20R-MCKN$^{R}/_{L}$-12	13.0	40	18	200	20	15°	25	CN..1204..	1
S25R-MCKN$^{R}/_{L}$-12	A25R-MCKN$^{R}/_{L}$-12	15.5	40	23	200	25	13°	30		
S32S-MCKN$^{R}/_{L}$-12	A32S-MCKN$^{R}/_{L}$-12	19.5	48	30	250	32	13°	40		2
S40T-MCKN$^{R}/_{L}$-12	A40T-MCKN$^{R}/_{L}$-12	25.5	55	37	300	40	12°	50		
S50U-MCKN$^{R}/_{L}$-12	A50U-MCKNR-12	30.5	60	47	350	50	10°	60		
S60V-MCKN$^{R}/_{L}$-12	–	35.5	60	57	400	60	9°	70		

配 件 Spare Parts	Shim	Pin	Wrench	Clamp	Screw	Wrench
1	–	MLP44-A	PL25	MC620	MS620TX	ETL15
2	CMS432	MLP46-A	PL25	MC620	MS625TX	ETL15

搭配刀片 Insert → Page：P.177
切削條件表 Turning Condition Table → Page：P.183

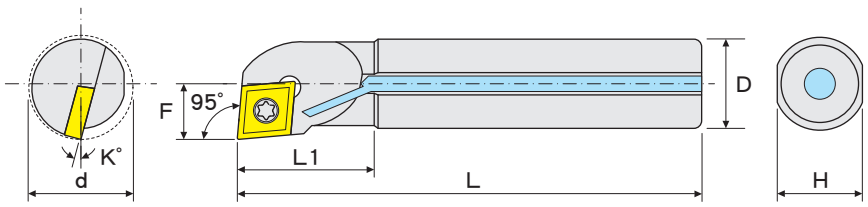


d = 最小車徑 d = Min. Bore Dia. / 右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)						最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	H	L	D	K			
S20R-MCLN$^{R}/_{L}$-12	A20R-MCLN$^{R}/_{L}$-12	13.0	40	18	200	20	15°	25	CN..1204..	1
S25R-MCLN$^{R}/_{L}$-12	A25R-MCLN$^{R}/_{L}$-12	15.5	40	23	200	25	13°	30		
S32S-MCLN$^{R}/_{L}$-12	A32S-MCLN$^{R}/_{L}$-12	19.5	48	30	250	32	13°	40		2
S40T-MCLN$^{R}/_{L}$-12	A40T-MCLN$^{R}/_{L}$-12	25.5	55	37	300	40	12°	50		
S50U-MCLN$^{R}/_{L}$-12	–	30.5	60	47	350	50	10°	60		
S60V-MCLN$^{R}/_{L}$-12	A60V-MCLN$^{R}/_{L}$-12	35.5	60	57	400	60	9°	70		

配 件 Spare Parts	Shim	Pin	Wrench	Clamp	Screw	Wrench
1	–	MLP44-A	PL25	MC620	MS620TX	ETL15
2	CMS432	MLP46-A	PL25	MC620	MS625TX	ETL15

搭配刀片 Insert → Page：P.177
切削條件表 Turning Condition Table → Page：P.183



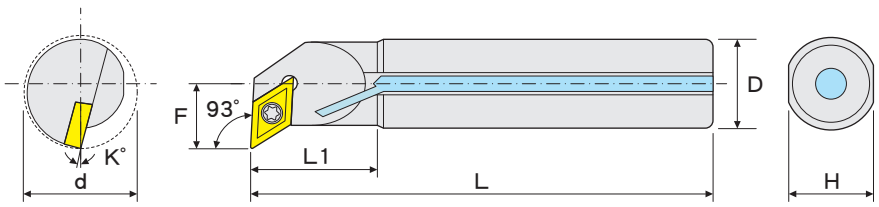
d = 最小車徑 d = Min. Bore Dia. / 右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)						最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	H	L	D	K			
S08K-SCLC$^{R}/_{L}$-06	A08K-SCLC$^{R}/_{L}$-06	5.0	20	7	125	8	15°	10	CC..0602..	1
S08K-SCLC$^{R}/_{L}$-06-D09	A08K-SCLC$^{R}/_{L}$-06-D09	4.5	20	7	125	8	15°	9		
S10K-SCLC$^{R}/_{L}$-06	A10K-SCLC$^{R}/_{L}$-06	6.0	22	9	125	10	13°	12		
S10K-SCLC$^{R}/_{L}$-06-D11	A10K-SCLC$^{R}/_{L}$-06-D11	5.5	22	9	125	10	13°	11		
S12M-SCLC$^{R}/_{L}$-06	A12M-SCLC$^{R}/_{L}$-06	8.0	26	11	150	12	10°	16		
S12M-SCLC$^{R}/_{L}$-06-D13	A12M-SCLC$^{R}/_{L}$-06-D13	6.5	26	11	150	12	10°	13		
S14Q-SCLC$^{R}/_{L}$-06	A14Q-SCLC$^{R}/_{L}$-06	8.0	26	13	180	14	10°	16		
S16Q-SCLC$^{R}/_{L}$-06	A16Q-SCLC$^{R}/_{L}$-06	10.0	32	15	180	16	7°	20		
S12M-SCLC$^{R}/_{L}$-09	A12M-SCLC$^{R}/_{L}$-09	8.0	26	11	150	12	10°	16	CC..09T3..	2
S14Q-SCLC$^{R}/_{L}$-09	A14Q-SCLC$^{R}/_{L}$-09	8.0	26	13	180	14	10°	16		
S15Q-SCLC$^{R}/_{L}$-09	A15Q-SCLC$^{R}/_{L}$-09	8.5	32	14	180	15	10°	17		
S16Q-SCLC$^{R}/_{L}$-09	A16Q-SCLC$^{R}/_{L}$-09	10.0	32	15	180	16	7°	20		
S16Q-SCLC$^{R}/_{L}$-09-D18	A16Q-SCLC$^{R}/_{L}$-09-D18	9.0	32	15	180	16	7°	18		
S18Q-SCLC$^{R}/_{L}$-09	A18Q-SCLC$^{R}/_{L}$-09	10.0	32	17	180	18	7°	20		
S20R-SCLC$^{R}/_{L}$-09	A20R-SCLC$^{R}/_{L}$-09	13.0	40	18	200	20	5°	25		3
S22R-SCLC$^{R}/_{L}$-09	—	13.0	40	20	200	22	5°	25		
S25R-SCLC$^{R}/_{L}$-09	A25R-SCLC$^{R}/_{L}$-09	15.0	40	23	200	25	5°	30		4
S32S-SCLC$^{R}/_{L}$-09	A32S-SCLC$^{R}/_{L}$-09	19.5	48	30	250	32	5°	38		
S32S-SCLC$^{R}/_{L}$-12	A32S-SCLC$^{R}/_{L}$-12	20.0	48	30	250	32	5°	38	CC..1204..	5
S40T-SCLC$^{R}/_{L}$-12	A40T-SCLC$^{R}/_{L}$-12	26.0	55	37	300	40	3°	50		
S40V-SCLC$^{R}/_{L}$-12	A40V-SCLC$^{R}/_{L}$-12	26.0	55	37	400	40	3°	50		

配 件 Spare Parts	Screw	Wrench
1	MS2506A	ETF09
2	MS4008A	ETF15
3	MS4009A	ETF15
4	MS4011A	ETF15
5	MS5011A	ETF20

▶ 搭配刀片 Insert → Page：P.171

▶ 切削條件表 Turning Condition Table → Page：P.182



d = 最小車徑 d = Min. Bore Dia. / 右車刀桿圖示 Right-Hand Shown

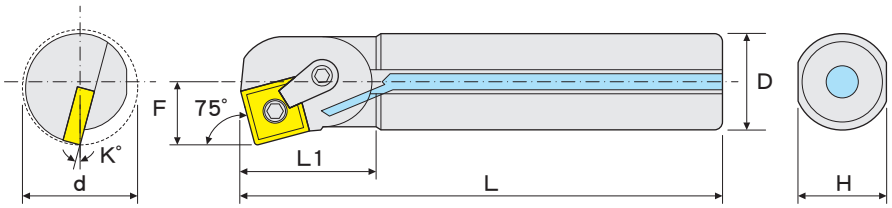
鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)						最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	H	L	D	K			
S10K-SDUC$^{R}/_{L}$-07	A10K-SDUC$^{R}/_{L}$-07	7.0	25	9	125	10	13°	13	DC..0702..	1
S12M-SDUC$^{R}/_{L}$-07	A12M-SDUC$^{R}/_{L}$-07	8.5	30	11	150	12	10°	16		
S16Q-SDUC$^{R}/_{L}$-07	A16Q-SDUC$^{R}/_{L}$-07	11.0	30	15	180	16	7°	20		
S20R-SDUC$^{R}/_{L}$-07	A20R-SDUC$^{R}/_{L}$-07	12.5	40	18	200	20	7°	25		
S16Q-SDUC$^{R}/_{L}$-11	A16Q-SDUC$^{R}/_{L}$-11	11.0	30	15	180	16	7°	20	DC..11T3..	2
S20R-SDUC$^{R}/_{L}$-11	A20R-SDUC$^{R}/_{L}$-11	13.0	40	18	200	20	7°	25		
S25R-SDUC$^{R}/_{L}$-11	A25R-SDUC$^{R}/_{L}$-11	16.0	45	23	200	25	5°	32		
S25S-SDUC$^{R}/_{L}$-11	–	16.0	45	23	250	25	5°	32		
S32S-SDUC$^{R}/_{L}$-11	A32S-SDUC$^{R}/_{L}$-11	20.0	48	30	250	32	5°	40		
S40T-SDUC$^{R}/_{L}$-11	A40T-SDUC$^{R}/_{L}$-11	26.0	55	37	300	40	3°	50		

鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)						最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	H	L	D	K			
C10K-SDUC$^{R}/_{L}$-07	E10K-SDUC$^{R}/_{L}$-07	7.0	25	9.2	125	10	13°	13	DC..0702..	1
C10M-SDUCR-07	E10M-SDUCR-07	7.0	25	9.2	150	10	13°	13		
C12M-SDUC$^{R}/_{L}$-07	E12M-SDUC$^{R}/_{L}$-07	8.5	30	11.2	150	12	10°	16		
C12Q-SDUCR-07	E12Q-SDUCR-07	8.5	30	11.2	180	12	10°	16		
C16R-SDUCR-07	E16R-SDUCR-07	11.0	30	15.2	200	16	7°	20		
C16R-SDUC$^{R}/_{L}$-11	E16R-SDUC$^{R}/_{L}$-11	11.0	30	15.2	200	16	7°	20	DC..11T3..	2
C20R-SDUC$^{R}/_{L}$-11	E20R-SDUC$^{R}/_{L}$-11	13.0	40	19.2	200	20	7°	25		
C25S-SDUCR-11	E25S-SDUCR-11	16.0	45	24.2	250	25	5°	32		

配 件 Spare Parts	Screw	Wrench
1	MS2506B	ETF09
2	MS4009A	ETF15

▶ 搭配刀片 Insert → Page：P.172,173

▶ 切削條件表 Turning Condition Table → Page：P.182



d = 最小車徑 d = Min. Bore Dia. / 右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)						最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	H	L	D	K			
S25R-MSKN$^{R}/_{L}$-12	A25R-MSKN$^{R}/_{L}$-12	15.0	40	23	200	25	13°	30	SN..1204..	1
S32S-MSKN$^{R}/_{L}$-12	A32S-MSKN$^{R}/_{L}$-12	19.5	48	30	250	32	13°	40		2
S40T-MSKN$^{R}/_{L}$-12	–	25.5	55	37	300	40	12°	50		
S50U-MSKN$^{R}/_{L}$-12	–	30.5	60	47	350	50	10°	60		
S60V-MSKN$^{R}/_{L}$-12	–	36.0	60	57	400	60	9°	70		

配 件 Spare Parts	Shim	Pin	Wrench	Clamp	Screw	Wrench
1	–	MLP44-A	PL25	MC620	MS620TX	ETL15
2	SMS432	MLP46-A	PL25	MC620	MS625TX	ETL15

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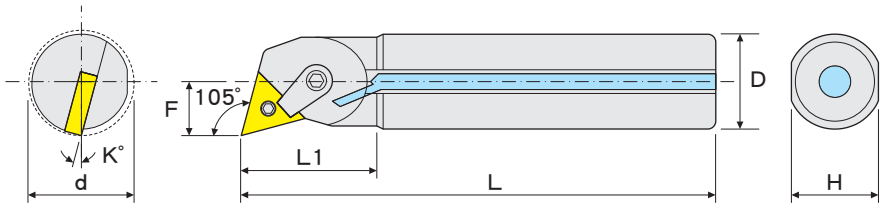
切削條件表 Turning Condition Table → Page：P.183

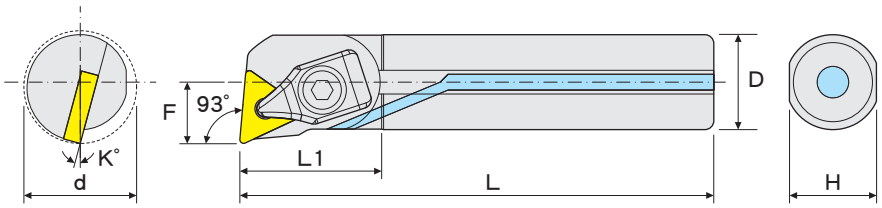


d = 最小車徑 d = Min. Bore Dia. / 右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)						最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	H	L	D	K			
S20R-MTQN$^{R}/_{L}$-16	A20R-MTQN$^{R}/_{L}$-16	13	40	18	200	20	15°	25	TN..1604..	1
S25R-MTQN$^{R}/_{L}$-16	A25R-MTQN$^{R}/_{L}$-16	15	40	23	200	25	13°	30		
S32S-MTQN$^{R}/_{L}$-16	A32S-MTQN$^{R}/_{L}$-16	20	48	30	250	32	13°	40		2

配 件 Spare Parts	Shim	Pin	Wrench	Clamp	Screw	Wrench
1	–	MLP33L-A	PL20	MC515	MS520TX	ETL10
2	TWS322	MLP34L-A	PL20	MC620	MS625TX	ETL15

搭配刀片 Insert → Page：P.179,180
切削條件表 Turning Condition Table → Page：P.183

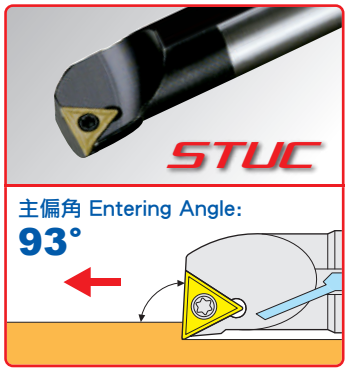


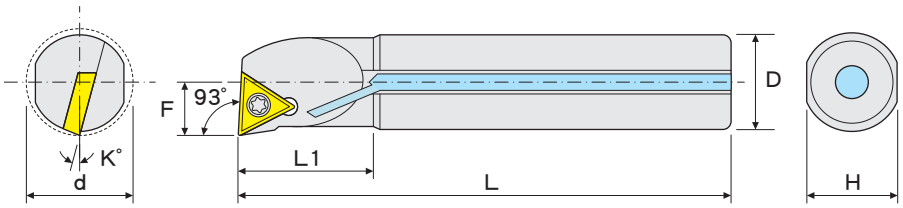
d = 最小車徑 d = Min. Bore Dia. / 右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)						最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	H	L	D	K			
S20R-DTUN$^{R}/_{L}$-16	A20R-DTUN$^{R}/_{L}$-16	14.0	40	18	200	20	15°	28	TN..1604..	1
S25R-DTUN$^{R}/_{L}$-16	A25R-DTUN$^{R}/_{L}$-16	15.5	40	23	200	25	13°	30		
S25S-DTUN$^{R}/_{L}$-16	—	15.5	40	23	250	25	13°	30		
S32S-DTUN$^{R}/_{L}$-16	A32S-DTUN$^{R}/_{L}$-16	19.5	48	30	250	32	13°	40		2

配 件 Spare Parts	Shim	Screw	Wrench	Clamp	Wrench
1	—	—	—	MCD324	ETL20
2	TWS322	MS4008H	PL25	MCD324B	PL40

▶ 搭配刀片 Insert → Page：P.179,180 ▶ 切削條件表 Turning Condition Table → Page：P.183



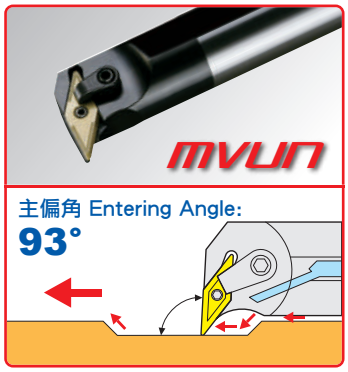


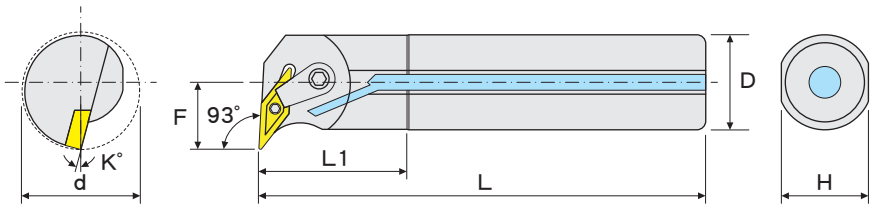
d = 最小車徑 d = Min. Bore Dia. / 右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)						最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	H	L	D	K			
S10K-STUC$^{R}/_{L}$-11	A10K-STUC$^{R}/_{L}$-11	6.0	22	9	125	10	13°	12	TC..1102..	1
S12M-STUC$^{R}/_{L}$-11	A12M-STUC$^{R}/_{L}$-11	8.0	26	11	150	12	10°	16		
S12M-STUC$^{R}/_{L}$-11-D13	A12M-STUC$^{R}/_{L}$-11-D13	6.5	26	11	150	12	10°	13		
S16Q-STUC$^{R}/_{L}$-11	A16Q-STUC$^{R}/_{L}$-11	10.0	32	15	180	16	7°	20		
S16Q-STUC$^{R}/_{L}$-11-D18	A16Q-STUC$^{R}/_{L}$-11-D18	9.0	32	15	180	16	7°	18		
S20R-STUC$^{R}/_{L}$-16	A20R-STUC$^{R}/_{L}$-16	13.0	40	18	200	20	7°	25	TC..16T3..	2
S25R-STUC$^{R}/_{L}$-16	A25R-STUC$^{R}/_{L}$-16	15.0	40	23	200	25	5°	30		
S32S-STUC$^{R}/_{L}$-16	A32S-STUC$^{R}/_{L}$-16	20.0	48	30	250	32	5°	38		
S32T-STUC$^{R}/_{L}$-16	A32T-STUC$^{R}/_{L}$-16	20.0	48	30	300	32	5°	38		

配 件 Spare Parts	Screw	Wrench
1	MS2506A	ETF09
2	MS4011A	ETF15

▶ 搭配刀片 Insert → Page：P.174　　▶ 切削條件表 Turning Condition Table → Page：P.182



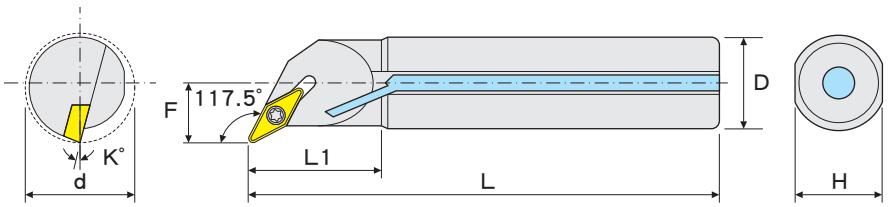


d = 最小車徑 d = Min. Bore Dia. / 右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)						最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	H	L	D	K			
S25R-MVUN$^{R}/_{L}$-16	A25R-MVUN$^{R}/_{L}$-16	18	45	23	200	25	13°	32	VN..1604..	1
S32S-MVUN$^{R}/_{L}$-16	A32S-MVUN$^{R}/_{L}$-16	21	50	30	250	32	13°	40		2
S40T-MVUN$^{R}/_{L}$-16	A40T-MVUN$^{R}/_{L}$-16	26	55	37	300	40	10°	50		
S50U-MVUN$^{R}/_{L}$-16	A50U-MVUN$^{R}/_{L}$-16	32	60	47	350	50	9°	60		

配 件 Spare Parts	Shim	Pin	Wrench	Clamp	Screw	Wrench
1	—	MLP33L-A	PL20	MC515	MS520TX	ETL10
2	VMS322	MLP34L-A	PL20	MC620	MS625TX	ETL15

▶ 搭配刀片 Insert → Page：P.180　　▶ 切削條件表 Turning Condition Table → Page：P.183

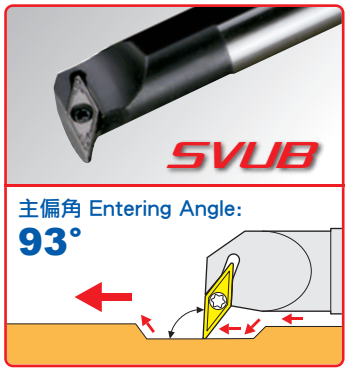


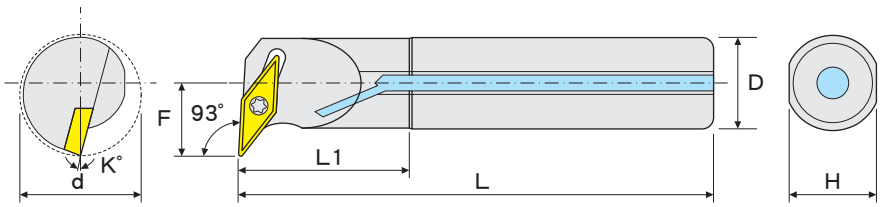
d = 最小車徑 d = Min. Bore Dia. / 右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)						最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	H	L	D	K			
S12M-SVQB$^{R}/_{L}$-11	A12M-SVQB$^{R}/_{L}$-11	9.0	28	11	150	12	10°	16	VB..1103..	1
S16Q-SVQB$^{R}/_{L}$-11	A16Q-SVQB$^{R}/_{L}$-11	11.0	35	15	180	16	7°	20		
S20R-SVQB$^{R}/_{L}$-11	A20R-SVQB$^{R}/_{L}$-11	13.0	40	18	200	20	7°	25		
S20R-SVQB$^{R}/_{L}$-16	A20R-SVQB$^{R}/_{L}$-16	13.5	40	18	200	20	5°	27	VB..1604..	2
S25R-SVQB$^{R}/_{L}$-16	A25R-SVQB$^{R}/_{L}$-16	16.0	45	23	200	25	5°	32		
S25S-SVQB$^{R}/_{L}$-16	A25S-SVQB$^{R}/_{L}$-16	16.0	45	23	250	25	5°	32		
S32S-SVQB$^{R}/_{L}$-16	A32S-SVQB$^{R}/_{L}$-16	20.0	48	30	250	32	5°	40		3
S32V-SVQB$^{R}/_{L}$-16	–	20.0	48	30	400	32	5°	40		
S40T-SVQB$^{R}/_{L}$-16	–	25.5	60	37	300	40	5°	50		
S40V-SVQB$^{R}/_{L}$-16	–	25.5	60	37	400	40	5°	50		

配 件 Spare Parts	Shim	Screw	Wrench	Screw	Wrench
1	–	–	–	MS2506A	ETF09
2	–	–	–	MS3509B	ETF15
3	VSS322	MDS05035S	PL35	MS3512B	ETF15

▶ 搭配刀片 Insert → Page：P.175　　▶ 切削條件表 Turning Condition Table → Page：P.182





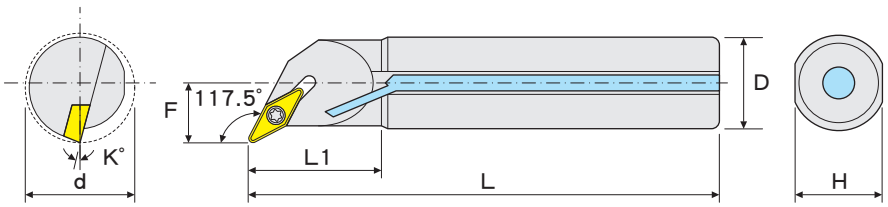
d = 最小車徑 d = Min. Bore Dia. / 右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)						最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	H	L	D	K			
S16Q-SVUB$^{R}/_{L}$-11	A16Q-SVUB$^{R}/_{L}$-11	13	30	15	180	16	7°	22	VB..1103..	1
S20R-SVUB$^{R}/_{L}$-11	A20R-SVUB$^{R}/_{L}$-11	15	40	18	200	20	7°	27		
S25R-SVUB$^{R}/_{L}$-16	A25R-SVUB$^{R}/_{L}$-16	18	45	23	200	25	5°	32	VB..1604..	2
S25S-SVUB$^{R}/_{L}$-16	A25S-SVUB$^{R}/_{L}$-16	18	45	23	250	25	5°	32		
S32S-SVUB$^{R}/_{L}$-16	A32S-SVUB$^{R}/_{L}$-16	22	50	30	250	32	5°	40		3
S40T-SVUB$^{R}/_{L}$-16	A40T-SVUB$^{R}/_{L}$-16	27	55	37	300	40	5°	50		
S40U-SVUB$^{R}/_{L}$-16	–	27	55	37	350	40	5°	50		
S40V-SVUB$^{R}/_{L}$-16	–	27	55	37	400	40	5°	50		

配 件 Spare Parts	Shim	Screw	Wrench	Screw	Wrench
1	–	–	–	MS2506A	ETF09
2	–	–	–	MS3509B	ETF15
3	VSS322	MDS05035S	PL35	MS3512B	ETF15
4	–	–	–	MS2005A	ETF06

搭配刀片 Insert → Page：P.175

切削條件表 Turning Condition Table → Page：P.182



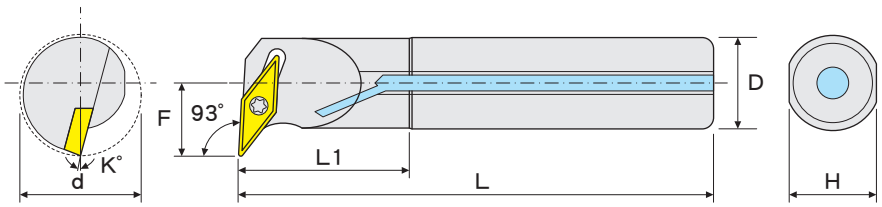
d = 最小車徑 d = Min. Bore Dia. / 右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)						最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	H	L	D	K			
S12M-SVQC$^{R}/_{L}$-11	A12M-SVQC$^{R}/_{L}$-11	9.0	28	11	150	12	10°	16	VC..1103..	1
S16Q-SVQC$^{R}/_{L}$-11	A16Q-SVQC$^{R}/_{L}$-11	11.0	35	15	180	16	7°	20		
S20R-SVQC$^{R}/_{L}$-11	A20R-SVQC$^{R}/_{L}$-11	13.0	40	18	200	20	7°	25		
S20R-SVQC$^{R}/_{L}$-16	A20R-SVQC$^{R}/_{L}$-16	13.5	40	18	200	20	5°	27	VC..1604..	2
S25R-SVQC$^{R}/_{L}$-16	A25R-SVQC$^{R}/_{L}$-16	16.0	45	23	200	25	5°	32		
S25S-SVQC$^{R}/_{L}$-16	A25S-SVQC$^{R}/_{L}$-16	16.0	45	23	250	25	5°	32		
S32S-SVQC$^{R}/_{L}$-16	A32S-SVQC$^{R}/_{L}$-16	20.0	48	30	250	32	5°	40		3
S40T-SVQC$^{R}/_{L}$-16	–	25.5	60	37	300	40	5°	50		
S40V-SVQC$^{R}/_{L}$-16	–	25.5	60	37	400	40	5°	50		

配 件 Spare Parts	Shim	Screw	Wrench	Screw	Wrench
1	–	–	–	MS2506A	ETF09
2	–	–	–	MS3509B	ETF15
3	VSS322	MDS05035S	PL35	MS3512B	ETF15

搭配刀片 Insert → Page：P.176

切削條件表 Turning Condition Table → Page：P.182



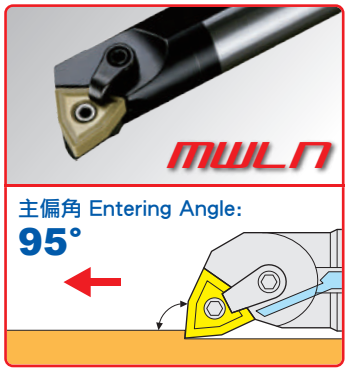
d = 最小車徑 d = Min. Bore Dia. / 右車刀桿圖示 Right-Hand Shown

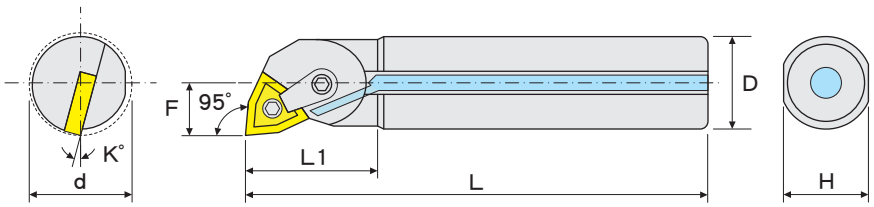
鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)						最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	H	L	D	K			
S12M-SVUC$^{R}_{L}$-08	A12M-SVUC$^{R}_{L}$-08	9.5	26	11	150	12	10°	16	VC..0802..	4
S16Q-SVUC$^{R}_{L}$-11	A16Q-SVUC$^{R}_{L}$-11	13.0	30	15	180	16	7°	22	VC..1103..	1
S20R-SVUC$^{R}_{L}$-11	A20R-SVUC$^{R}_{L}$-11	15.0	40	18	200	20	7°	27		
S25R-SVUC$^{R}_{L}$-16	A25R-SVUC$^{R}_{L}$-16	18.0	45	23	200	25	5°	32	VC..1604..	2
S25S-SVUC$^{R}_{L}$-16	A25S-SVUC$^{R}_{L}$-16	18.0	45	23	250	25	5°	32		
S32S-SVUC$^{R}_{L}$-16	A32S-SVUC$^{R}_{L}$-16	22.0	50	30	250	32	5°	40		3
S40T-SVUC$^{R}_{L}$-16	A40T-SVUC$^{R}_{L}$-16	27.0	55	37	300	40	5°	50		
S40U-SVUC$^{R}_{L}$-16	A40U-SVUC$^{R}_{L}$-16	27.0	55	37	350	40	5°	50		
S40V-SVUC$^{R}_{L}$-16	A40V-SVUC$^{R}_{L}$-16	27.0	55	37	400	40	5°	50		

配 件 Spare Parts	Shim	Screw	Wrench	Screw	Wrench
1	–	–	–	MS2506A	ETF09
2	–	–	–	MS3509B	ETF15
3	VSS322	MDS05035S	PL35	MS3512B	ETF15
4	–	–	–	MS2005A	ETF06

搭配刀片 Insert → Page：P.176

切削條件表 Turning Condition Table → Page：P.182





d = 最小車徑 d = Min. Bore Dia. / 右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)						最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	H	L	D	K			
S20R-MWLN$^{R}/_{L}$-08	A20R-MWLN$^{R}/_{L}$-08	13.0	40	18	200	20	15°	25	WN..0804..	1
S25R-MWLN$^{R}/_{L}$-08	A25R-MWLN$^{R}/_{L}$-08	15.0	40	23	200	25	13°	30		
S32S-MWLN$^{R}/_{L}$-08	A32S-MWLN$^{R}/_{L}$-08	20.0	48	30	250	32	13°	40		2
S40T-MWLN$^{R}/_{L}$-08	A40T-MWLN$^{R}/_{L}$-08	25.5	55	37	300	40	10°	50		3
S50U-MWLN$^{R}/_{L}$-08	–	30.5	60	47	350	50	9°	60		
S50V-MWLN$^{R}/_{L}$-08	A50V-MWLN$^{R}/_{L}$-08	30.5	60	47	400	50	9°	60		
S60V-MWLN$^{R}/_{L}$-08	–	35.5	60	57	400	60	8°	70		

配 件 Spare Parts	Shim	Pin	Wrench	Clamp	Screw	Wrench
1	–	MLP44-A	PL25	MC515	MS520TX	ETL10
2	WMS432	MLP46-A	PL25	MC515	MS520TX	ETL10
3	WMS432	MLP46-A	PL25	MC620	MS625TX	ETL15

▶ 搭配刀片 Insert → Page：P.181

▶ 切削條件表 Turning Condition Table → Page：P.183

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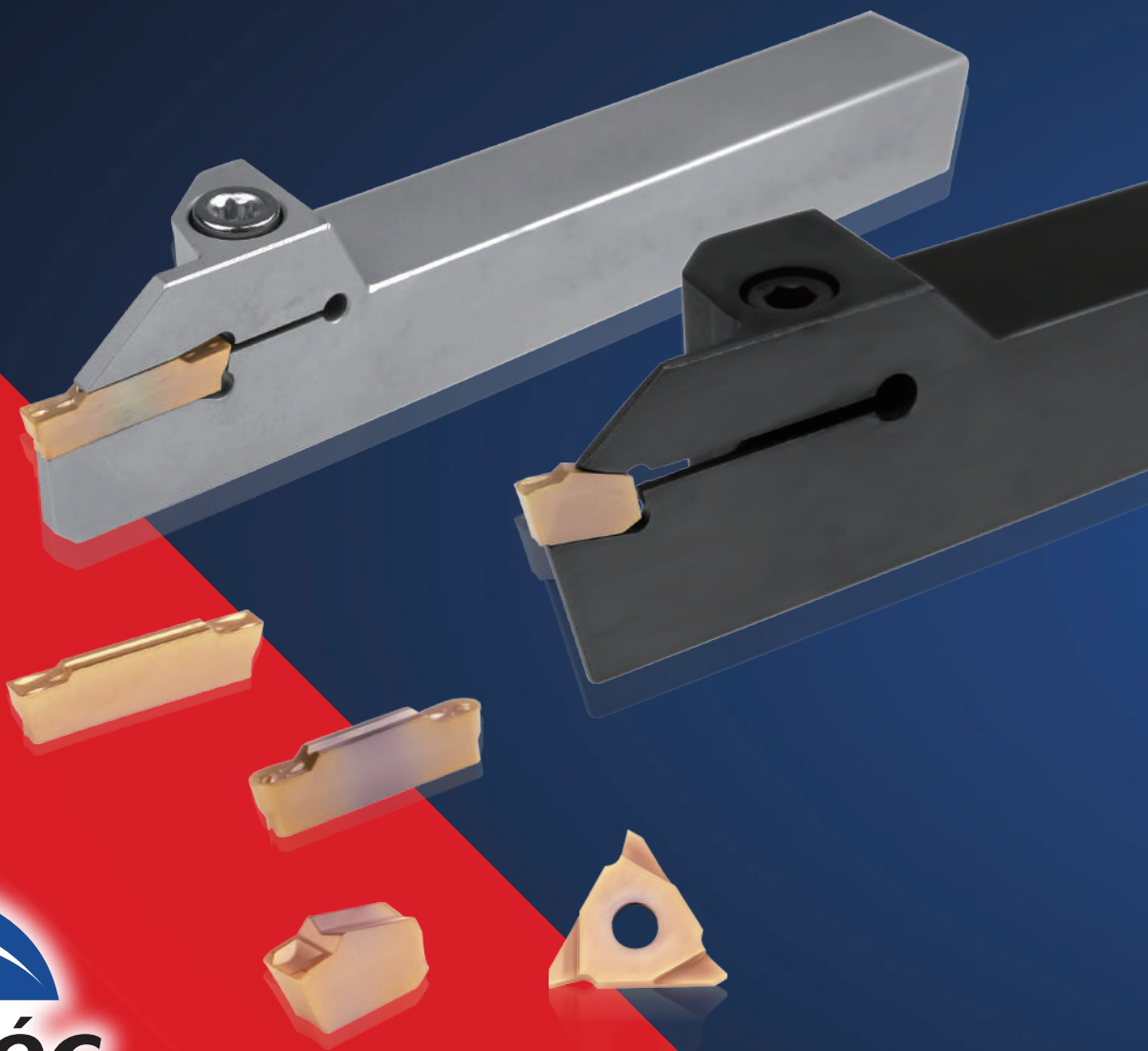
鎢鋼切槽/切斷車刀片系列

CARBIDE GROOVING / PARTING INSERT SERIES



CMTéc

西門德克

鎢鋼切槽 / 切斷車刀片 Carbide Grooving / Parting Inserts

切槽寬度 P.215 2.0~4.0W

切槽寬度 P.216 2.0~3.0W

切槽寬度 P.216 2.2~4.1W

切槽寬度 P.217 0.33~2.5W

鎢鋼圓槽車刀片 Carbide Radius Inserts

R 角尺寸 P.215 1.0~2.0R

R 角尺寸 P.218 0.25~0.75R

外徑切槽 / 切斷車刀桿 External Grooving / Parting Toolholders

四角柄尺寸 P.220 16~25D

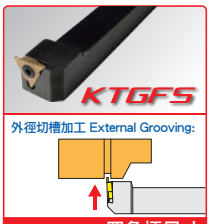
四角柄尺寸 P.221 12~32D

全長尺寸 P.222 110~150L

P.222

四角柄尺寸 P.223 16~25D

四角柄尺寸 P.224 10~25D



四角柄尺寸 P.224 16~20D

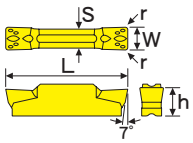
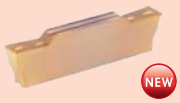
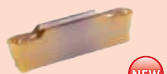
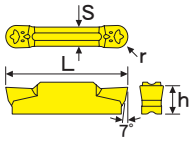
四角柄尺寸 P.225 10~25D

切削條件表【切槽 & 切斷】Grooving & Parting Condition Table P.226

切削方式 CUTTING MODE

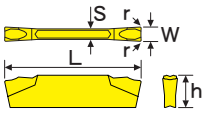
車刀片系列 Inserts		切槽寬度 W Groove Width	切槽加工 Grooving	切斷加工 Parting	橫向加工 Plunge Turning	斜向加工 Ramping	仿形加工 Copy
	MGMN	2.0~4.0W	○	○	○	○	X
	MRMN (圓槽型)	2.0~4.0W (1.0~2.0R)	○	X	○	X	○
	GMM	2.0~3.0W	○	○	○	○	X
	TGTN	2.2~4.1W	○	○	X	X	X
	TGF	0.33~2.5W	○	X	X	X	X
	TGF (圓槽型)	0.5~1.5W (0.25~0.75R)	○	X	X	X	X

加工材質								
	P	鋼材 Alloy Steels	●	●	❋			● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting ● 第一推薦 / ◔ 第二推薦：一般加工 General Cutting ❋ 第一推薦 / ❁ 第二推薦：斷續加工 Interrupted Cutting – 不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	●	●	❋			
	K	鑄鐵 Cast Iron	●	●	❋			
	N	鋁合金 Aluminum Alloys	–	–	–			F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	◔	●	❋			
	H	調質鋼 Hardened Steels	◔	●	–			

刀 片 Insert	訂購編號 Order No.	材質碼 Grade					尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page
		CM6032	CM6133	CM6143			W	r	L	h	S		
 NEW	MGMN200-SG	●	●	●			2.0	0.2	16	3.5	1.60		220
F S M R													
 NEW	MGMN300-MG	●	●	●			3.0	0.4	21	4.8	2.35		
F S M R													
 NEW	MGMN400-MG	●	●	●			4.0	0.4	21	4.8	3.30		
F S M R													
 NEW	MRMN200-MG	●	●	●			2.0	1.0	16	3.5	1.60		220
F S M R													
 NEW	MRMN300-MG	●	●	●			3.0	1.5	21	4.8	2.35		
F S M R													
 NEW	MRMN400-MG	●	●	●			4.0	2.0	21	4.8	3.30		
F S M R													

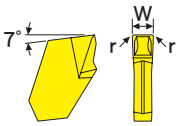
切削條件表 Cutting Condition Table → Page：P.226

加工材質								
	P	鋼材 Alloy Steels	●	●	❋			● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting ● 第一推薦 / ◔ 第二推薦：一般加工 General Cutting ❋ 第一推薦 / ❁ 第二推薦：斷續加工 Interrupted Cutting – 不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	●	●	❋			
	K	鑄鐵 Cast Iron	●	●	❋			
	N	鋁合金 Aluminum Alloys	–	–	–			F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	◔	●	❋			
	H	調質鋼 Hardened Steels	◔	●	–			

刀 片 Insert	訂購編號 Order No.	材質碼 Grade CM6032	CM6133	CM6143			尺寸 Dimension (mm) W	r	L	h	S	刀片 2D 圖 Drawing	刀桿頁數 Tool Page
 NEW	GMM2020-MR	●	●	●			2.0	0.20	20	4.3	1.5		221
	GMM2520-MR	●	●				2.5	0.20	20	4.3	1.9		
	GMM3020-MR	●	●				3.0	0.25	20	4.3	2.3		
F S M R													

▶ 切削條件表 Cutting Condition Table → Page：P.226

加工材質								
	P	鋼材 Alloy Steels	●	●	❋			● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting ● 第一推薦 / ◔ 第二推薦：一般加工 General Cutting ❋ 第一推薦 / ❁ 第二推薦：斷續加工 Interrupted Cutting – 不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	●	●	❋			
	K	鑄鐵 Cast Iron	●	●	❋			
	N	鋁合金 Aluminum Alloys	–	–	–			F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	◔	●	❋			
	H	調質鋼 Hardened Steels	◔	●	–			

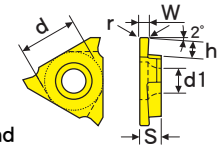
刀 片 Insert	訂購編號 Order No.	材質碼 Grade CM6032	CM6133	CM6143			尺寸 Dimension (mm) W	r	L	h	S	刀片 2D 圖 Drawing	刀桿頁數 Tool Page
	TGTN0220	●	●	●			2.2	0.20	–	–	–		222 223
	TGTN0310	●	●	●			3.1	0.20	–	–	–		
	TGTN0410	●	●	●			4.1	0.25	–	–	–		
F S M R													

▶ 切削條件表 Cutting Condition Table → Page：P.226

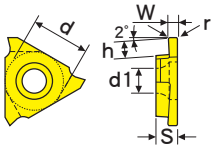
加工材質						
	P	鋼材 Alloy Steels	●	–		
	M	不銹鋼 Stainless Steels	●	–		
	K	鑄鐵 Cast Iron	●	–		
	N	鋁合金 Aluminum Alloys	○	◐		
	S	高溫合金 High Temp Alloys	●	–		
	H	調質鋼 Hardened Steels	●	–		

● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting
– 不推薦 NO Recommend

右車刀片 Right Hand



左車刀片 Left Hand



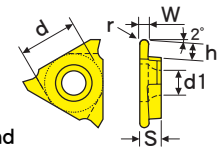
刀片 Insert	訂購編號 Order No.	材質碼 Grade				尺寸 Dimension (mm)						切深 Depth Of Cut		刀桿頁數 Tool Page
		CM5515	CM10			W	h	r	S	d	d1	外徑切槽 最大切深 O.D. (Max)	內徑切槽 最大切深 I.D. (Max)	
	TGF32R033	●				0.33	1.0	0.05	3.18	9.52	4.4	0.8	0.5	224
	TGF32L033	●				0.33	1.0	0.05	3.18	9.52	4.4	0.8	0.5	
	TGF32R050	●				0.50	1.4	0.05	3.18	9.52	4.4	1.2	0.8	
	TGF32L050	●				0.50	1.4	0.05	3.18	9.52	4.4	1.2	0.8	
	TGF32R075	●				0.75	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32L075	●				0.75	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32R095	●				0.95	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32L095	●				0.95	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32R100	●				1.00	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32L100	●				1.00	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32R110	●				1.10	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32L110	●				1.10	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32R125	●				1.25	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32L125	●				1.25	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32R135	●				1.35	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32L135	●				1.35	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32R145	●				1.45	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32L145	●				1.45	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32R150	●				1.50	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32L150	●				1.50	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32R165	●				1.65	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32L165	●				1.65	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32R175	●				1.75	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32L175	●				1.75	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32R180	●				1.80	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32L180	●				1.80	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32R185	●				1.85	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32L185	●				1.85	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32R200	●				2.00	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
	TGF32L200	●				2.00	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
NEW	TGF32R250	●				2.50	2.5	0.10	3.18	9.52	4.4	2.0	1.5	
F S M R	TGF32L250	●				2.50	2.5	0.10	3.18	9.52	4.4	2.0	1.5	

切削條件表 Cutting Condition Table → Page：P.226

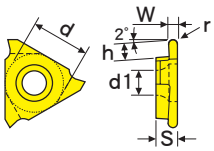
加工材質						
	P	鋼材 Alloy Steels	●	–		
	M	不銹鋼 Stainless Steels	●	–		
	K	鑄鐵 Cast Iron	●	–		
	N	鋁合金 Aluminum Alloys	○	◐		
	S	高溫合金 High Temp Alloys	●	–		
	H	調質鋼 Hardened Steels	●	–		

● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting
– 不推薦 NO Recommend

右車刀片 Right Hand



左車刀片 Left Hand



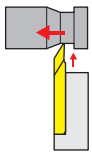
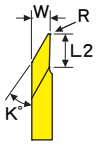
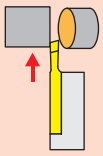
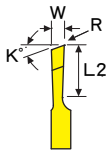
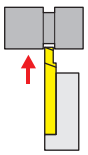
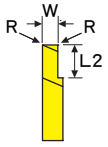
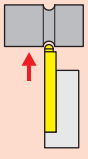
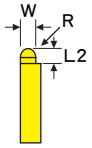
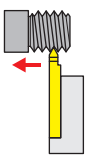
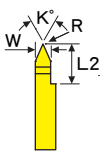
刀 片 Insert	訂購編號 Order No.	材質碼 Grade				尺寸 Dimension (mm)						切深 Depth Of Cut		刀桿頁數 Tool Page
		CM5515	CM10			W	h	r	S	d	d1	外徑切槽 最大切深 O.D. (Max)	內徑切槽 最大切深 I.D. (Max)	
	TGF32R025R	●				0.50	1.4	0.25	3.18	9.52	4.4	1.2	0.8	224
	TGF32L025R	●				0.50	1.4	0.25	3.18	9.52	4.4	1.2	0.8	
	TGF32R037R	●				0.75	2.5	0.375	3.18	9.52	4.4	2.0	1.5	
	TGF32L037R	●				0.75	2.5	0.375	3.18	9.52	4.4	2.0	1.5	
	TGF32R050R	●				1.00	2.5	0.50	3.18	9.52	4.4	2.0	1.5	
	TGF32L050R	●				1.00	2.5	0.50	3.18	9.52	4.4	2.0	1.5	
	TGF32R062R	●				1.25	2.5	0.625	3.18	9.52	4.4	2.0	1.5	
	TGF32L062R	●				1.25	2.5	0.625	3.18	9.52	4.4	2.0	1.5	
	TGF32R075R	●				1.50	2.5	0.75	3.18	9.52	4.4	2.0	1.5	
	TGF32L075R	●				1.50	2.5	0.75	3.18	9.52	4.4	2.0	1.5	

NEW

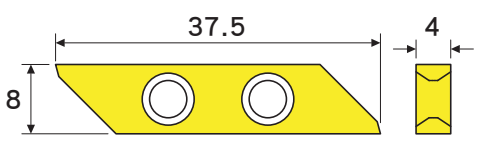
F S M R

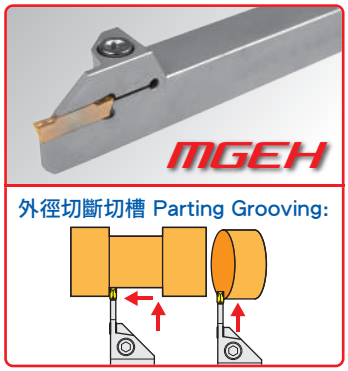
切削條件表 Cutting Condition Table → Page：P.226

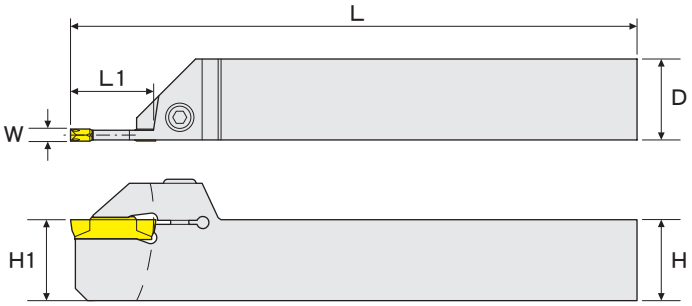
加工材質								
	P	鋼材 Alloy Steels	●	◐				● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting ◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting ✱ 第一推薦 / ✲ 第二推薦：斷續加工 Interrupted Cutting – 不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	●	◐				
	K	鑄鐵 Cast Iron	●	◐				
	N	鋁合金 Aluminum Alloys	○	◔				F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing
	S	高溫合金 High Temp Alloys	●	◐				
	H	調質鋼 Hardened Steels	●	◐				

刀片 Insert	訂購編號 Order No.	材質碼 Grade CM5515	CM6015				尺寸 Dimension (mm) W	R	L2	K	Pitch	刀片 2D 圖 Drawing	刀桿頁數 Tool Page
	SAKBR20005	●					2.0	–	5.0	35	–	後掃車刀片 Back Turning 	225
	SAKBR20015	●					2.0	0.10	5.0	35	–		
	SAKBR20025	●					2.0	0.20	5.0	35	–		
	SAKBR30015	●					3.0	0.10	5.0	35	–		
F S M R	SAKBR30025	●					3.0	0.20	5.0	35	–		
	SAKCR15018	●					1.5	0.10	8.5	15	–	切斷車刀片 Parting Off 	
	SAKCR20019	●					2.0	0.10	9.0	15	–		
	SAKCR25019	●					2.5	0.10	9.0	15	–		
F S M R	SAKCR30019	●					3.0	0.10	9.0	15	–		
	SAKGR10013	●					1.0	0.10	3.0	–	–	切槽車刀片 Grooving 	
	SAKGR15013	●					1.5	0.10	3.0	–	–		
	SAKGR15025	●					1.5	0.20	5.0	–	–		
	SAKGR15027	●					1.5	0.20	7.0	–	–		
	SAKGR20015	●					2.0	0.10	5.0	–	–		
	SAKGR20025	●					2.0	0.20	5.0	–	–		
	SAKGR20027	●					2.0	0.20	7.0	–	–		
	SAKGR20029	●					2.0	0.20	9.0	–	–		
	SAKGR25015	●					2.5	0.10	5.0	–	–		
	SAKGR25025	●					2.5	0.20	5.0	–	–		
	SAKGR25029	●					2.5	0.20	9.0	–	–		
	SAKGR30015	●					3.0	0.10	5.0	–	–		
	SAKGR30019	●					3.0	0.10	9.0	–	–		
	SAKGR30025	●					3.0	0.20	5.0	–	–		
	SAKGR30027	●					3.0	0.20	7.0	–	–		
F S M R	SAKGR30029	●					3.0	0.20	9.0	–	–		
	SAKPR10053	●					1.0	0.50	3.0	–	–	圓槽車刀片 Radius 	
	SAKPR15075	●					1.5	0.75	5.0	–	–		
	SAKPR20105	●					2.0	1.00	5.0	–	–		
	SAKPR25125	●					2.5	1.25	5.0	–	–		
F S M R	SAKPR30158	●					3.0	1.50	8.0	–	–		
	SAKTR20655	●					2.0	0.05	6.0	55	0.05~2	螺紋車刀片 Threading 	
	SAKTR30655	●					3.0	0.10	6.0	55	0.10~3		
	SAKTR20660	●					2.0	0.05	6.0	60	0.05~2		
F S M R	SAKTR30660	●					3.0	0.10	6.0	60	0.10~3		

切削條件表 Cutting Condition Table → Page：P.226



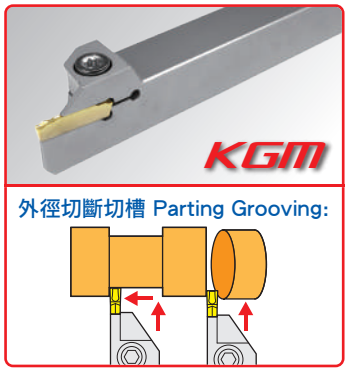


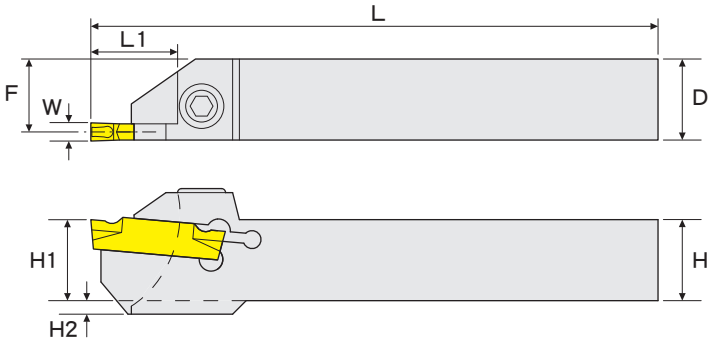


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)						搭配刀片 Insert	Screw	Wrench
	H1 / H	F	L1	L	D	W			
MGEH$^{R}/_{L}$-1616K-2T-16T	16	16.25	16	125	16	2.0	MGMN200.. MRMN200..	HTMT520	ETL25
MGEH$^{R}/_{L}$-2020K-2T-20T	20	20.25	20	125	20	2.0		HTMT525	ETL25
MGEH$^{R}/_{L}$-2525M-2T-20T	25	25.25	20	150	25	2.0		HTMT525	ETL25
MGEH$^{R}/_{L}$-1616K-3T-20T	16	16.30	20	125	16	3.0	MGMN300.. MRMN300..	HTMT520	ETL25
MGEH$^{R}/_{L}$-2020K-3T-20T	20	20.30	20	125	20	3.0		HTMT525	ETL25
MGEHR-2525M-3T-20T	25	25.30	20	150	25	3.0		HTMT525	ETL25
MGEHR-2525M-4T-20T	25	25.35	20	150	25	4.0	MGMN400.. MRMN400..	HTMT525	ETL25

搭配刀片 Insert → Page：P.215
切削條件表 Turning Condition Table → Page：P.226



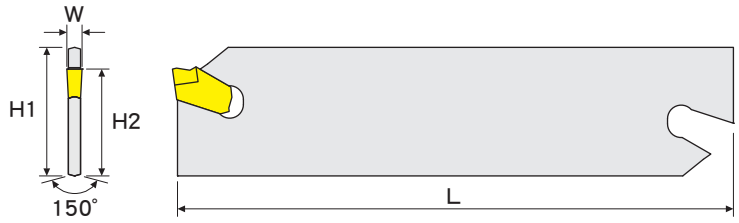


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)					W (mm)		搭配刀片 Insert	Screw	Wrench
	H1 / H	F	L1	L	D	Min	Max			
KGM$^{R}_{L}$-1212K-1.5-L10	12	11.4	10	125	12	1.5	2.0	GMM2020..	HTM416	PL30
KGM$^{R}_{L}$-1616K-1.5-L10	16	15.4	10	125	16	1.5	2.0		HTMT520	ETL25
KGM$^{R}_{L}$-2020K-1.5-L10	20	19.4	10	125	20	1.5	2.0		HTMT525	ETL25
KGM$^{R}_{L}$-2525M-1.5-L10	25	24.4	10	150	25	1.5	2.0		HTMT525	ETL25
KGM$^{R}_{L}$-1212K-2T-L10	12	11.1	10	125	12	2.0	3.0	GMM2020.. GMM2520.. GMM3020..	HTM416	PL30
KGM$^{R}_{L}$-1616K-2T-L10	16	15.1	10	125	16	2.0	3.0		HTMT520	ETL25
KGM$^{R}_{L}$-2020K-2T-L10	20	19.1	10	125	20	2.0	3.0		HTMT525	ETL25
KGM$^{R}_{L}$-2525M-2T-L10	25	24.1	10	150	25	2.0	3.0		HTMT525	ETL25
KGM$^{R}_{L}$-1212K-2T-L13	12	11.1	13	125	12	2.0	3.0		HTM420	PL30
KGM$^{R}_{L}$-1616K-2T-L13	16	15.1	13	125	16	2.0	3.0		HTMT520	ETL25
KGM$^{R}_{L}$-2020K-2T-L13	20	19.1	13	125	20	2.0	3.0		HTMT525	ETL25
KGM$^{R}_{L}$-2525M-2T-L13	25	24.1	13	150	25	2.0	3.0		HTMT525	ETL25
KGM$^{R}_{L}$-1212K-2T-L17	12	11.1	17	125	12	2.0	3.0		HTM420	PL30
KGM$^{R}_{L}$-1616K-2T-L17	16	15.1	17	125	16	2.0	3.0		HTMT520	ETL25
KGM$^{R}_{L}$-2020K-2T-L17	20	19.1	17	125	20	2.0	3.0		HTMT525	ETL25
KGM$^{R}_{L}$-2525M-2T-L17	25	24.1	17	150	25	2.0	3.0		HTMT525	ETL25
KGM$^{R}_{L}$-1616K-3T-L16	16	14.8	16	125	16	3.0	4.0	GMM3020..	HTMT520	ETL25
KGM$^{R}_{L}$-2020K-3T-L16	20	18.8	16	125	20	3.0	4.0		HTMT525	ETL25
KGM$^{R}_{L}$-2525M-3T-L16	25	23.8	16	150	25	3.0	4.0		HTMT525	ETL25
KGM$^{R}_{L}$-1616K-3T-L20	16	14.8	20	125	16	3.0	4.0		HTMT525	ETL25
KGM$^{R}_{L}$-2020K-3T-L20	20	18.8	20	125	20	3.0	4.0		HTMT525	ETL25
KGM$^{R}_{L}$-2525M-3T-L20	25	23.8	20	150	25	3.0	4.0		HTMT525	ETL25
KGMR-3232P-3T-L20	32	30.8	20	170	32	3.0	4.0		HTMT525	ETL25

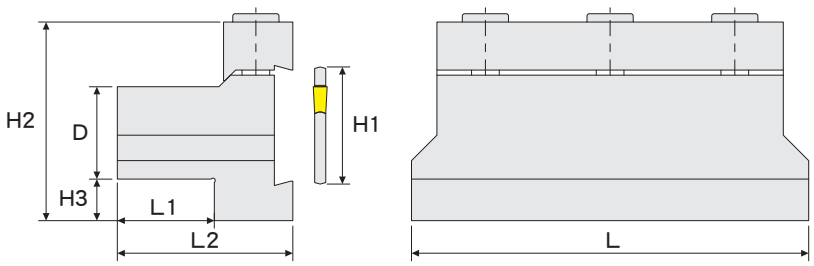
搭配刀片 Insert → Page：P.216

切削條件表 Turning Condition Table → Page：P.226



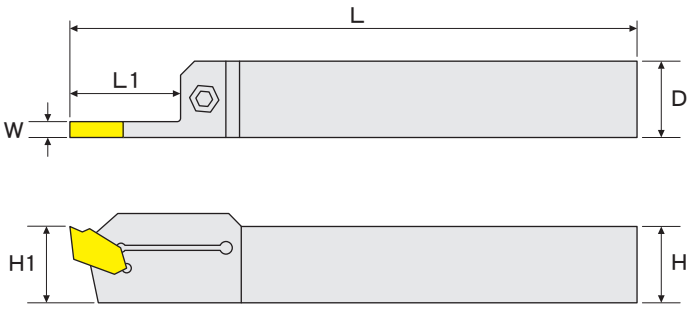
鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	切斷板座 Tool Block	Wrench
	H1	H2	L	W			
SGIH26-2	26	21.4	110	2.2	TGTN0220..	SGTBU..-26	ESG-1
SGIH26-3	26	21.4	110	3.1	TGTN0310..		
SGIH26-4	26	21.4	110	4.1	TGTN0410..		
SGIH32-2	32	25.0	150	2.2	TGTN0220..	SGTBU..-32	
SGIH32-3	32	25.0	150	3.1	TGTN0310..		
SGIH32-4	32	25.0	150	4.1	TGTN0410..		

▶ 搭配刀片 Insert → Page：P.216
▶ 切削條件表 Turning Condition Table → Page：P.226



切斷板座 Tool Block

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)							搭配刀板 Blade	Screw	Wrench
	H1	H2	H3	L1	L2	L	D			
SGTBU20-26	26	43	9	21	38	86	20	SGIH26-..	HTM630	PL50
SGTBU25-26	26	43	4	23	40	86	25			
SGTBU20-32	32	50	13	21	40	110	20	SGIH32-..		
SGTBU25-32	32	50	8	23	42	110	25			

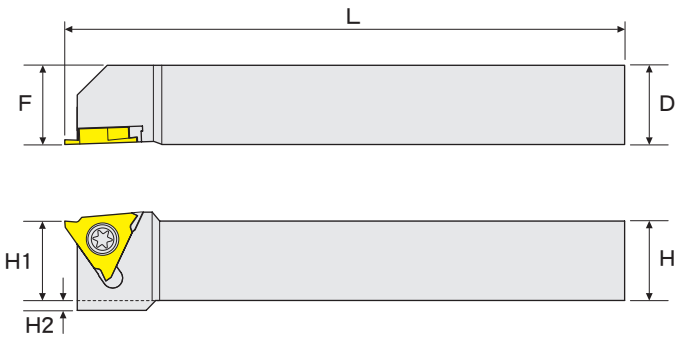


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)					搭配刀片 Insert	Screw	Wrench
	H1 / H	L1	L	D	W			
SGTHR1616-2	16	16	110	16	2	TGTN0220..	HTM521	PL40
SGTHR2020-2	20	18	125	20	2			
SGTHR2020-3	20	20	125	20	3	TGTN0310..	HTM625	PL50
SGTHR2525-3	25	25	150	25	3			
SGTHR2525-4	25	30	150	25	4	TGTN0410..	HTM625	PL50

搭配刀片 Insert → Page：P.216

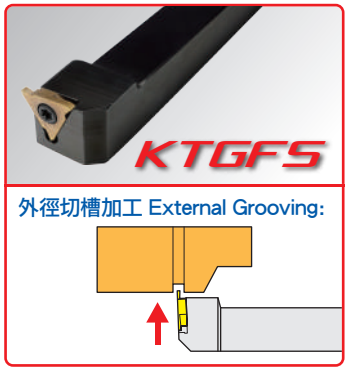
切削條件表 Turning Condition Table → Page：P.226

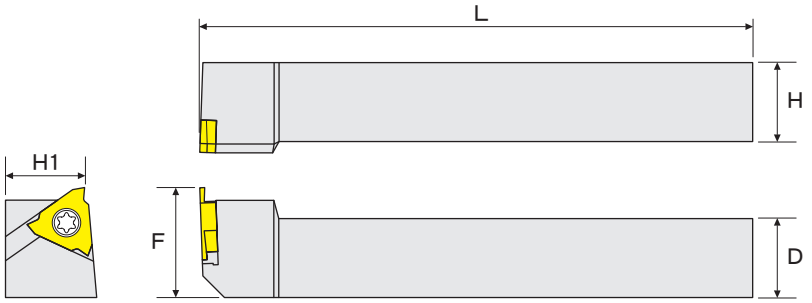


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)					搭配刀片 Insert	Screw	Wrench
	H1/H	F	H2	L	D			
KTGF$^{R}/_{L}$-1010K-16F	10	10	4	125	10	TGF32R.. / TGF32L..	MS4009A	ETF15
KTGFR-1012K-16F	10	12	2	125	12	TGF32R..	MS4011A	
KTGF$^{R}/_{L}$-1212K-16F	12	12	2	125	12	TGF32R.. TGF32L..		
KTGF$^{R}/_{L}$-1616K-16F	16	16	–	125	16			
KTGFR-2020K-16F	20	20	–	125	20	TGF32R..		
KTGF$^{R}/_{L}$-1616K-16	16	20	–	125	16	TGF32R.. TGF32L..		
KTGF$^{R}/_{L}$-2020K-16	20	25	–	125	20			
KTGF$^{R}/_{L}$-2525M-16	25	32	–	150	25			

搭配刀片 Insert → Page：P.217,218　　切削條件表 Turning Condition Table → Page：P.226

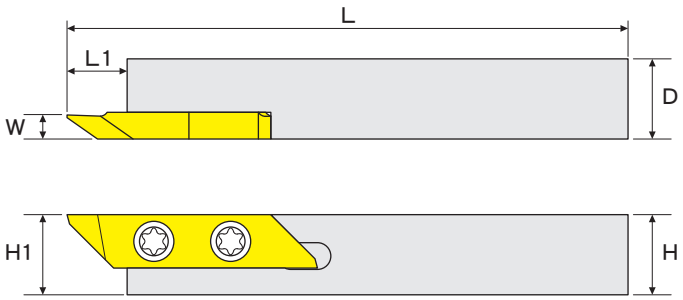




左車刀桿圖示 Left-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	Screw	Wrench
	H1 / H	F	L	D			
KTGFSL-1616K-16	16	22	125	16	TGF32R..	MS4009A	ETF15
KTGFSL-2020K-16	20	26	125	20			

搭配刀片 Insert → Page：P.217,218　　切削條件表 Turning Condition Table → Page：P.226



訂購編號 Order No.	尺寸 Dimensions (mm)					搭配刀片 Insert	Screw	Wrench
	H / H1	L1	L	D	W			
SAKG$^{R}/_{L}$-1010K-374	10	9	125	10	4	SAK..	MS3509A	ETF15
SAKG$^{R}/_{L}$-1212K-374	12	9	125	12	4			
SAKG$^{R}/_{L}$-1212M-374	12	9	150	12	4			
SAKG$^{R}/_{L}$-1616M-374	16	9	150	16	4			
SAKG$^{R}/_{L}$-2020K-374	20	9	125	20	4			
SAKG$^{R}/_{L}$-2525M-374	25	9	150	25	4			

搭配刀片 Insert → Page：P.219
切削條件 Turning Condition Table → Page：P.226

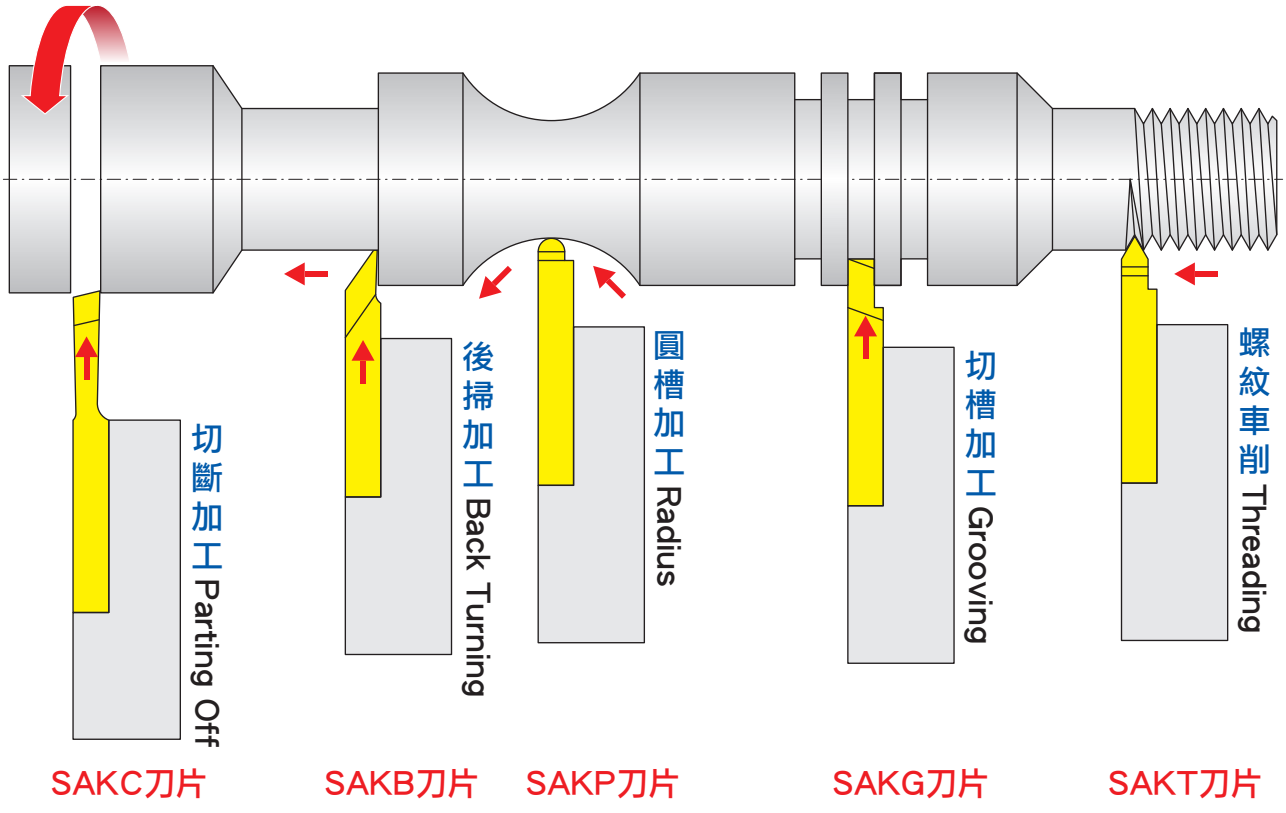
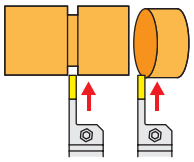


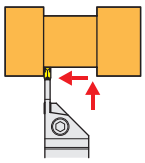
Table 切槽 / 切斷車刀片 切削條件表

CARBIDE GROOVING / PARTING INSERTS- CUTTING CONDITION TABLE

切槽加工 & 切斷加工 GROOVING & PARTING

加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075	Ti-6Al-4V
硬度 Hardness	HRC<30	HRC30~40	—	HRC<30	—	HRC<30
切削速度 Vc	50~130m/min	50~130m/min	50~100m/min	50~150m/min	80~200m/min	50~100m/min
每轉進給量 f (mm/rev)	0.03~0.07	0.03~0.07	0.02~0.06	0.03~0.08	0.03~0.10	0.02~0.07
備註 Remarks	※ 建議先採用最低切削速度和每轉進給量參數加工，如加工狀況良好，再慢慢調高參數。 We recommend starting with slow speeds and feeds. If processing goes well, you can raise parameters gradually. 					

橫向加工 PLUNGE TURNING

加工材質 Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels	不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
工件料號 Material Code	S35C,S45C,S50C	SCM,SKT,SKD	SUS304	FC,FCD	Al 5052 / 6061 / 7075	Ti-6Al-4V
硬度 Hardness	HRC<30	HRC30~40	—	HRC<30	—	HRC<30
切削速度 Vc	50~130m/min	50~130m/min	50~100m/min	50~150m/min	80~200m/min	50~100m/min
每轉進給量 f (mm/rev)	0.02~0.07	0.02~0.07	0.02~0.06	0.02~0.08	0.03~0.10	0.02~0.06
備註 Remarks	※ 建議先採用最低切削速度和每轉進給量參數加工，如加工狀況良好，再慢慢調高參數。 We recommend starting with slow speeds and feeds. If processing goes well, you can raise parameters gradually. 					

※ 切削公式 / Cutting formula：S(主軸轉速) = Vc(切削速度) × 1000 / D(外徑) / π(3.14)　　F(進給速度) = f(每轉進給量) × S(主軸轉速)

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。 When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。 When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。 When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統…等而改變。
   These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.

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鎢鋼螺紋車刀片系列

CARBIDE THREADING INSERT SERIES

CMTéc

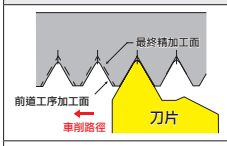
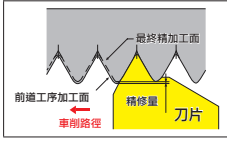
西門德克

鎢鋼外螺紋車刀片 Carbide Thread Inserts- External

泛用型 Partial Profile	ER 右刀片 - 泛用型 55°	EL 左刀片 - 泛用型 55°	ER 右刀片 - 泛用型 60°	EL 左刀片 - 泛用型 60°
	 NEW	 NEW	 NEW	 NEW
	螺距 Pitch P.231 0.5~3.0	螺距 Pitch P.231 0.5~3.0	螺距 Pitch P.231 0.5~3.0	螺距 Pitch P.231 0.5~3.0
全牙型 Full Profile	ER 右刀片 - ISO 規格 60°	EL 左刀片 - ISO 規格 60°	ER 右刀片 - UN 規格 60°	EL 左刀片 - UN 規格 60°
	 NEW	 NEW	 NEW	 NEW
	螺距 Pitch P.232 0.35~3.00	螺距 Pitch P.232 0.35~3.00	螺距 Tpi P.233 Tpi 40~8	螺距 Tpi P.233 Tpi 40~8

鎢鋼內螺紋車刀片 Carbide Thread Inserts- Internal

泛用型 Partial Profile	IR 右刀片 - 泛用型 55°	IL 左刀片 - 泛用型 55°	IR 右刀片 - 泛用型 60°	IL 左刀片 - 泛用型 60°
	 NEW	 NEW	 NEW	 NEW
	螺距 Pitch P.234 0.5~3.0	螺距 Pitch P.234 0.5~3.0	螺距 Pitch P.234 0.5~3.0	螺距 Pitch P.234 0.5~3.0
全牙型 Full Profile	IR 右刀片 - ISO 規格 60°	IL 左刀片 - ISO 規格 60°	IR 右刀片 - UN 規格 60°	IL 左刀片 - UN 規格 60°
	 NEW	 NEW	 NEW	 NEW
	螺距 Pitch P.235 0.35~3.00	螺距 Pitch P.235 0.35~3.00	螺距 Tpi P.236 Tpi 40~8	螺距 Tpi P.236 Tpi 40~8

類 型 Type		說 明 Description
	泛用型 Partial Profile	可加工一定範圍的螺距，如一片刀片可加工螺距 0.5~1.5mm。 The same partial profile type can be used to cut threads with different pitch from 0.5mm to 1.5mm.
	全牙型 Full Profile	可加工單一尺寸的螺距，加工牙型完整性佳、毛邊較少。 Each thread pitch of a particular standard requires a different insert. It gives you better dimensional accuracy, and a well finished thread with no burrs.

※ 外螺紋右刀片、外螺紋左刀片、內螺紋右刀片、內螺紋左刀片，四種刀片不能共用。
External right hand threading insert, external left hand threading insert, internal right hand threading insert and internal left hand threading insert are separate.

外徑螺紋車刀桿 External Threading Toolholders

四角柄尺寸
P.238 10~32D

四角柄尺寸
P.238 10~32D

四角柄尺寸
P.239 12~25D

內徑螺紋車刀桿 Internal Threading Toolholders

最小車徑
P.240 Φ24~36

最小車徑
P.240 Φ13~36

螺紋車刀片編碼規範 Designations For Threading Insert
P.230

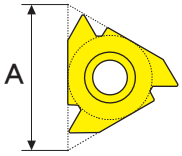
切削條件表【螺紋車削】Threading Condition Table
P.241~242

技術資料 Technical Data
P.243~244

螺紋車刀片編碼規範
DESIGNATIONS FOR THREADING INSERT

11	E	R	A	60
1	2	3	4	5

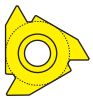
1 刀片邊長 Insert Length

代號 2 碼 2 Code	A 尺寸 Size	圖 示 Diagram
11	11mm	
16	16mm	

2 螺紋類型 Application

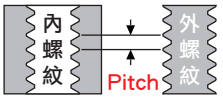
代號 1 碼 1 Code	圖 示 Diagram
E	外螺紋 External 
I	內螺紋 Internal 

3 刀片方向 Hand of Insert

代號 1 碼 1 Code	說 明 Description	外螺紋 Thread External	內螺紋 Thread Internal
R	右刀片 Right Hand Insert		
L	左刀片 Left Hand Insert		

4 螺距 Thread Pitch

泛用型 Partial Profile			圖 示 Diagram
代號 Code	螺距 Pitch (mm)	牙 / 吋 Tpi (Inch)	
A	0.5 ~ 1.5	48 ~ 16	
AG	0.5 ~ 3.0	48 ~ 8	
G	1.75 ~ 3.0	14 ~ 8	
全牙型 Full Profile			
代號 Code	螺距 Pitch (mm)	牙 / 吋 Tpi (Inch)	
0.75	0.75	—	
36	—	36	
40	—	40	



※ Tpi(牙 / 吋) 英制換算成公制公式 :
25.4 ÷ Tpi = Pitch (mm)
Ex. 36 Tpi →
25.4 ÷ 36 = 0.7mm

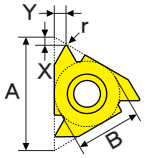
5 螺紋牙型 Thread Profile

泛用型 Partial Profile	
代號 Code	說 明 Description
55	泛用型 55° Partial Profile 55°
60	泛用型 60° Partial Profile 60°

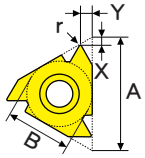
全牙型 Full Profile	
代號 Code	說 明 Description
ISO	ISO 規格 60° ISO Metric 60°
UN	UN 美製規格 60° UN Metric 60°

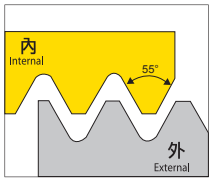
加工材質						
	P	鋼材 Alloy Steels	●	◐		● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting ◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting ✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting － 不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	●	◐		
	K	鑄鐵 Cast Iron	●	◐		
	N	鋁合金 Aluminum Alloys	○	◔		
	S	高溫合金 High Temp Alloys	●	◐		
	H	調質鋼 Hardened Steels	●	◐		

右車刀片 Right Hand



左車刀片 Left Hand

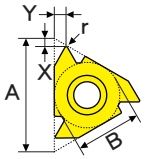


刀片 Insert	訂購編號 Order No.	材質碼 Grade CM5515	CM6015		螺距 Pitch 公制 (mm)	Tpi (牙/吋)	尺寸 Dimension (mm) A	B	r	X	Y	螺紋 Thread
	11ERA55	●			0.5~1.5	48~16	11	6.35	0.05	0.8	0.9	
	11ELA55	●			0.5~1.5	48~16	11	6.35	0.05	0.8	0.9	
	16ERA55	●			0.5~1.5	48~16	16	9.52	0.05	0.8	0.9	
	16ELA55	●			0.5~1.5	48~16	16	9.52	0.05	0.8	0.9	
	16ERAG55	●			0.5~3.0	48~8	16	9.52	0.05	1.2	1.7	
	16ELAG55	●			0.5~3.0	48~8	16	9.52	0.05	1.2	1.7	
	16ERG55	●			1.75~3.0	14~8	16	9.52	0.17	1.2	1.7	
NEW	16ELG55	●			1.75~3.0	14~8	16	9.52	0.17	1.2	1.7	

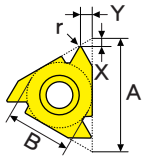
▶ 刀桿頁數 Tool → Page：P.238,239　　▶ 切削條件表 Turning Condition Table → Page：P.241

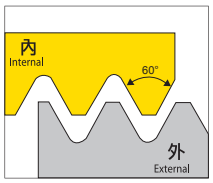
加工材質						
	P	鋼材 Alloy Steels	●	◐		● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting ◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting ✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting － 不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	●	◐		
	K	鑄鐵 Cast Iron	●	◐		
	N	鋁合金 Aluminum Alloys	○	◔		
	S	高溫合金 High Temp Alloys	●	◐		
	H	調質鋼 Hardened Steels	●	◐		

右車刀片 Right Hand



左車刀片 Left Hand



刀片 Insert	訂購編號 Order No.	材質碼 Grade CM5515	CM6015		螺距 Pitch 公制 (mm)	Tpi (牙/吋)	尺寸 Dimension (mm) A	B	r	X	Y	螺紋 Thread
	11ERA60	●			0.5~1.5	48~16	11	6.35	0.05	0.8	0.9	
	11ELA60	●			0.5~1.5	48~16	11	6.35	0.05	0.8	0.9	
	16ERA60	●	●		0.5~1.5	48~16	16	9.52	0.05	0.8	0.9	
	16ELA60	●	●		0.5~1.5	48~16	16	9.52	0.05	0.8	0.9	
	16ERAG60	●			0.5~3.0	48~8	16	9.52	0.05	1.2	1.7	
	16ELAG60	●			0.5~3.0	48~8	16	9.52	0.05	1.2	1.7	
	16ERG60	●			1.75~3.0	14~8	16	9.52	0.17	1.2	1.7	
NEW	16ELG60	●	●		1.75~3.0	14~8	16	9.52	0.17	1.2	1.7	

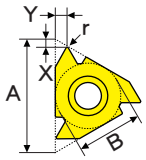
▶ 刀桿頁數 Tool → Page：P.238,239　　▶ 切削條件表 Turning Condition Table → Page：P.241

※ 25.4 ÷ Tpi (英制單位 Inch) = Pitch (公制單位 Metric)

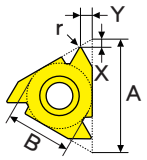
加工材質					
	P	鋼材 Alloy Steels	●	◐	
	M	不銹鋼 Stainless Steels	●	◐	
	K	鑄鐵 Cast Iron	●	◐	
	N	鋁合金 Aluminum Alloys	○	◔	
	S	高溫合金 High Temp Alloys	●	◐	
	H	調質鋼 Hardened Steels	●	◐	

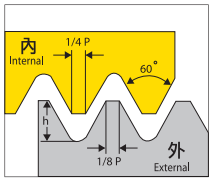
● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting
－ 不推薦 NO Recommend

右車刀片 Right Hand



左車刀片 Left Hand



刀片 Insert	訂購編號 Order No.	材質碼 Grade CM5515	CM6015		螺距 Pitch 公制 (mm)	尺寸 Dimension (mm) A	B	r	X	Y	螺紋 Thread
	11ER0.35ISO	●			0.35	11	6.35	0.04	0.8	0.4	
	11EL0.35ISO	●			0.35	11	6.35	0.04	0.8	0.4	
	11ER0.40ISO	●			0.40	11	6.35	0.04	0.7	0.4	
	11ER0.45ISO	●			0.45	11	6.35	0.05	0.7	0.4	
	11ER0.50ISO	●			0.50	11	6.35	0.05	0.6	0.6	
	11EL0.50ISO	●			0.50	11	6.35	0.05	0.6	0.6	
	11ER0.60ISO	●			0.60	11	6.35	0.07	0.6	0.6	
	11ER0.70ISO	●			0.70	11	6.35	0.07	0.6	0.6	
	11ER0.75ISO	●			0.75	11	6.35	0.08	0.6	0.6	
	11EL0.75ISO	●			0.75	11	6.35	0.08	0.6	0.6	
	11ER0.80ISO	●			0.80	11	6.35	0.09	0.6	0.6	
	11ER1.00ISO	●			1.00	11	6.35	0.12	0.7	0.7	
	11EL1.00ISO	●			1.00	11	6.35	0.12	0.7	0.7	
	11ER1.25ISO	●			1.25	11	6.35	0.15	0.8	0.9	
	11ER1.50ISO	●			1.50	11	6.35	0.18	0.8	1.0	
	11EL1.50ISO	●			1.50	11	6.35	0.18	0.8	1.0	
	16ER0.75ISO	●	●		0.75	16	9.52	0.08	0.6	0.6	
	16EL0.75ISO	●	●		0.75	16	9.52	0.08	0.6	0.6	
	16ER0.80ISO	●	●		0.80	16	9.52	0.09	0.6	0.6	
	16EL0.80ISO	●	●		0.80	16	9.52	0.09	0.6	0.6	
	16ER1.00ISO	●	●		1.00	16	9.52	0.12	0.7	0.7	
	16EL1.00ISO	●	●		1.00	16	9.52	0.12	0.7	0.7	
	16ER1.25ISO	●			1.25	16	9.52	0.15	0.8	0.9	
	16EL1.25ISO	●	●		1.25	16	9.52	0.15	0.8	0.9	
	16ER1.50ISO	●	●		1.50	16	9.52	0.18	0.8	1.0	
	16EL1.50ISO	●	●		1.50	16	9.52	0.18	0.8	1.0	
	16ER1.75ISO	●	●		1.75	16	9.52	0.21	0.9	1.2	
	16EL1.75ISO	●	●		1.75	16	9.52	0.21	0.9	1.2	
	16ER2.00ISO	●			2.00	16	9.52	0.25	1.0	1.3	
	16EL2.00ISO	●	●		2.00	16	9.52	0.25	1.0	1.3	
	16ER2.50ISO	●	●		2.50	16	9.52	0.31	1.1	1.5	
	16EL2.50ISO	●	●		2.50	16	9.52	0.31	1.1	1.5	
	16ER3.00ISO	●			3.00	16	9.52	0.38	1.2	1.6	
NEW	16EL3.00ISO	●	●		3.00	16	9.52	0.38	1.2	1.6	

公差 Tolerance Class
6g / 6H

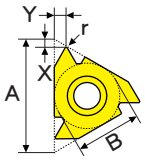
▶ 刀桿頁數 Tool → Page：P.238,239
▶ 切削條件表 Turning Condition Table → Page：P.241

※ 25.4 ÷ Tpi (英制單位 Inch) = Pitch (公制單位 Metric)

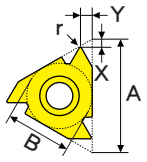
加工材質					
	P	鋼材 Alloy Steels	●	◐	
	M	不銹鋼 Stainless Steels	●	◐	
	K	鑄鐵 Cast Iron	●	◐	
	N	鋁合金 Aluminum Alloys	○	◔	
	S	高溫合金 High Temp Alloys	●	◐	
	H	調質鋼 Hardened Steels	●	◐	

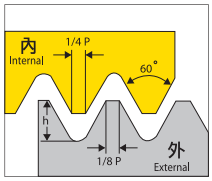
● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting
－ 不推薦 NO Recommend

右車刀片 Right Hand



左車刀片 Left Hand



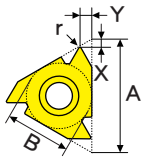
刀片 Insert	訂購編號 Order No.	材質碼 Grade CM5515	CM6015		螺距 Pitch Tpi (牙/吋)	尺寸 Dimension (mm) A	B	r	X	Y	螺紋 Thread
	11ER32UN	●			32	11	6.35	0.09	0.6	0.6	 公差 Tolerance Class 2A / 2B
	11ER28UN	●			28	11	6.35	0.10	0.6	0.7	
	11EL28UN	●			28	11	6.35	0.10	0.6	0.7	
	11ER18UN	●			18	11	6.35	0.17	0.8	1.0	
	11ER16UN	●			16	11	6.35	0.18	0.9	1.1	
	16ER40UN	●			40	16	9.52	0.06	0.6	0.6	
	16EL40UN	●			40	16	9.52	0.06	0.6	0.6	
	16ER36UN	●			36	16	9.52	0.07	0.6	0.6	
	16EL36UN	●			36	16	9.52	0.07	0.6	0.6	
	16ER32UN	●			32	16	9.52	0.09	0.6	0.6	
	16EL32UN	●			32	16	9.52	0.09	0.6	0.6	
	16ER28UN	●			28	16	9.52	0.10	0.6	0.7	
	16EL28UN	●			28	16	9.52	0.10	0.6	0.7	
	16ER26UN	●			26	16	9.52	0.11	0.7	0.8	
	16EL26UN	●			26	16	9.52	0.11	0.7	0.8	
	16ER24UN	●			24	16	9.52	0.12	0.7	0.8	
	16EL24UN	●			24	16	9.52	0.12	0.7	0.8	
	16ER20UN	●			20	16	9.52	0.15	0.8	0.9	
	16EL20UN	●			20	16	9.52	0.15	0.8	0.9	
	16ER18UN	●			18	16	9.52	0.17	0.8	1.0	
	16EL18UN	●			18	16	9.52	0.17	0.8	1.0	
	16ER16UN	●			16	16	9.52	0.18	0.9	1.1	
	16EL16UN	●			16	16	9.52	0.18	0.9	1.1	
	16ER14UN	●			14	16	9.52	0.22	1.0	1.2	
	16EL14UN	●			14	16	9.52	0.22	1.0	1.2	
	16ER13UN	●			13	16	9.52	0.24	1.0	1.3	
	16EL13UN	●			13	16	9.52	0.24	1.0	1.3	
	16ER12UN	●			12	16	9.52	0.26	1.1	1.4	
	16EL12UN	●			12	16	9.52	0.26	1.1	1.4	
	16ER11.5UN	●			11.5	16	9.52	0.27	1.1	1.5	
	16EL11.5UN	●			11.5	16	9.52	0.27	1.1	1.5	
	16ER11UN	●			11	16	9.52	0.28	1.1	1.5	
	16EL11UN	●			11	16	9.52	0.28	1.1	1.5	
	16ER10UN	●			10	16	9.52	0.32	1.1	1.5	
	16EL10UN	●			10	16	9.52	0.32	1.1	1.5	
	16ER9UN	●			9	16	9.52	0.36	1.2	1.7	
	16EL9UN	●			9	16	9.52	0.36	1.2	1.7	
	16ER8UN	●			8	16	9.52	0.41	1.2	1.6	
NEW	16EL8UN	●			8	16	9.52	0.41	1.2	1.6	

▶ 刀桿頁數 Tool → Page：P.238,239
▶ 切削條件表 Turning Condition Table → Page：P.242

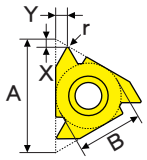
加工材質					
	P	鋼材 Alloy Steels	●	◐	
	M	不銹鋼 Stainless Steels	●	◐	
	K	鑄鐵 Cast Iron	●	◐	
	N	鋁合金 Aluminum Alloys	○	◔	
	S	高溫合金 High Temp Alloys	●	◐	
	H	調質鋼 Hardened Steels	●	◐	

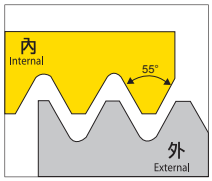
● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting
－ 不推薦 NO Recommend

右車刀片 Right Hand



左車刀片 Left Hand



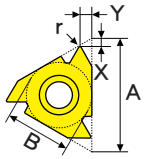
刀片 Insert	訂購編號 Order No.	材質碼 Grade CM5515	CM6015		螺距 Pitch 公制 (mm)	Tpi (牙/吋)	尺寸 Dimension (mm) A	B	r	X	Y	螺紋 Thread
	11IRA55	●			0.5~1.5	48~16	11	6.35	0.05	0.8	0.9	
	11ILA55	●			0.5~1.5	48~16	11	6.35	0.05	0.8	0.9	
	16IRA55	●			0.5~1.5	48~16	16	9.52	0.05	0.8	0.9	
	16ILA55	●			0.5~1.5	48~16	16	9.52	0.05	0.8	0.9	
	16IRAG55	●			0.5~3.0	48~8	16	9.52	0.05	1.2	1.7	
	16ILAG55	●			0.5~3.0	48~8	16	9.52	0.05	1.2	1.7	
	16IRG55	●			1.75~3.0	14~8	16	9.52	0.12	1.2	1.7	
NEW	16ILG55	●			1.75~3.0	14~8	16	9.52	0.12	1.2	1.7	

刀桿頁數 Tool → Page：P.240　　切削條件表 Turning Condition Table → Page：P.241

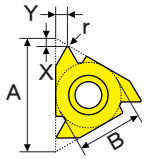
加工材質					
	P	鋼材 Alloy Steels	●	◐	
	M	不銹鋼 Stainless Steels	●	◐	
	K	鑄鐵 Cast Iron	●	◐	
	N	鋁合金 Aluminum Alloys	○	◔	
	S	高溫合金 High Temp Alloys	●	◐	
	H	調質鋼 Hardened Steels	●	◐	

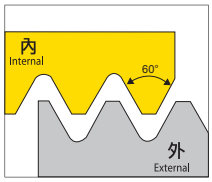
● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting
－ 不推薦 NO Recommend

右車刀片 Right Hand



左車刀片 Left Hand



刀片 Insert	訂購編號 Order No.	材質碼 Grade CM5515	CM6015		螺距 Pitch 公制 (mm)	Tpi (牙/吋)	尺寸 Dimension (mm) A	B	r	X	Y	螺紋 Thread
	11IRA60	●			0.5~1.5	48~16	11	6.35	0.05	0.8	0.9	
	11ILA60	●			0.5~1.5	48~16	11	6.35	0.05	0.8	0.9	
	16IRA60	●	●		0.5~1.5	48~16	16	9.52	0.05	0.8	0.9	
	16ILA60	●	●		0.5~1.5	48~16	16	9.52	0.05	0.8	0.9	
	16IRAG60	●	●		0.5~3.0	48~8	16	9.52	0.05	1.2	1.7	
	16ILAG60	●	●		0.5~3.0	48~8	16	9.52	0.05	1.2	1.7	
	16IRG60	●	●		1.75~3.0	14~8	16	9.52	0.12	1.2	1.7	
NEW	16ILG60	●	●		1.75~3.0	14~8	16	9.52	0.12	1.2	1.7	

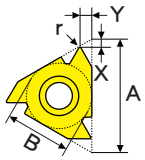
刀桿頁數 Tool → Page：P.240　　切削條件表 Turning Condition Table → Page：P.241

※ 25.4 ÷ Tpi (英制單位 Inch) = Pitch (公制單位 Metric)

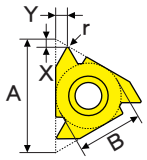
加工材質					
	P	鋼材 Alloy Steels	●	◐	
	M	不銹鋼 Stainless Steels	●	◐	
	K	鑄鐵 Cast Iron	●	◐	
	N	鋁合金 Aluminum Alloys	○	◔	
	S	高溫合金 High Temp Alloys	●	◐	
	H	調質鋼 Hardened Steels	●	◐	

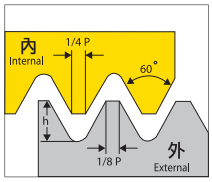
● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting
－ 不推薦 NO Recommend

右車刀片 Right Hand



左車刀片 Left Hand



刀片 Insert	訂購編號 Order No.	材質碼 Grade CM5515	CM6015		螺距 Pitch 公制 (mm)	尺寸 Dimension (mm) A	B	r	X	Y	螺紋 Thread
	11IR0.35ISO	●			0.35	11	6.35	0.02	0.8	0.3	
	11IL0.35ISO	●			0.35	11	6.35	0.02	0.8	0.3	
	11IR0.40ISO	●			0.40	11	6.35	0.02	0.8	0.4	
	11IR0.50ISO	●			0.50	11	6.35	0.03	0.6	0.6	
	11IL0.50ISO	●			0.50	11	6.35	0.03	0.6	0.6	
	11IR0.70ISO	●			0.70	11	6.35	0.04	0.6	0.6	
	11IR0.75ISO	●			0.75	11	6.35	0.04	0.6	0.6	
	11IL0.75ISO	●			0.75	11	6.35	0.04	0.6	0.6	
	11IR0.80ISO	●			0.80	11	6.35	0.04	0.6	0.6	
	11IR1.00ISO	●			1.00	11	6.35	0.05	0.6	0.7	
	11IL1.00ISO	●			1.00	11	6.35	0.05	0.6	0.7	
	11IR1.25ISO	●			1.25	11	6.35	0.07	0.8	0.8	
	11IL1.25ISO	●			1.25	11	6.35	0.07	0.8	0.8	
	11IR1.50ISO	●			1.50	11	6.35	0.08	0.8	1.0	
	11IL1.50ISO	●			1.50	11	6.35	0.08	0.8	1.0	
	16IR0.75ISO	●	●		0.75	16	9.52	0.04	0.6	0.6	
	16IL0.75ISO	●	●		0.75	16	9.52	0.04	0.6	0.6	
	16IR0.80ISO	●	●		0.80	16	9.52	0.04	0.6	0.6	
	16IL0.80ISO	●	●		0.80	16	9.52	0.04	0.6	0.6	
	16IR1.00ISO	●	●		1.00	16	9.52	0.05	0.6	0.7	
	16IL1.00ISO	●	●		1.00	16	9.52	0.05	0.6	0.7	
	16IR1.25ISO	●	●		1.25	16	9.52	0.07	0.8	0.9	
	16IL1.25ISO	●	●		1.25	16	9.52	0.07	0.8	0.9	
	16IR1.50ISO	●	●		1.50	16	9.52	0.10	0.8	1.0	
	16IL1.50ISO	●	●		1.50	16	9.52	0.10	0.8	1.0	
	16IR1.75ISO	●	●		1.75	16	9.52	0.12	0.9	1.2	
	16IL1.75ISO	●	●		1.75	16	9.52	0.12	0.9	1.2	
	16IR2.00ISO	●	●		2.00	16	9.52	0.13	1.0	1.3	
	16IL2.00ISO	●	●		2.00	16	9.52	0.13	1.0	1.3	
	16IR2.50ISO	●	●		2.50	16	9.52	0.15	1.1	1.5	
	16IL2.50ISO	●	●		2.50	16	9.52	0.15	1.1	1.5	
	16IR3.00ISO	●	●		3.00	16	9.52	0.18	1.1	1.5	
NEW	16IL3.00ISO	●	●		3.00	16	9.52	0.18	1.1	1.5	

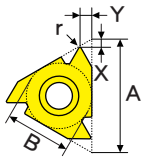
公差 Tolerance Class
6g / 6H

▶ 刀桿頁數 Tool → Page：P.240
▶ 切削條件表 Turning Condition Table → Page：P.241

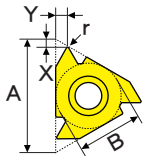
※ 25.4 ÷ Tpi (英制單位 Inch) = Pitch (公制單位 Metric)

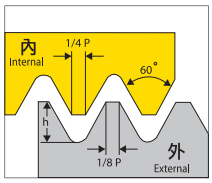
加工材質						
	P	鋼材 Alloy Steels	●	◕		● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting ◕ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting ✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting — 不推薦 NO Recommend
	M	不銹鋼 Stainless Steels	●	◕		
	K	鑄鐵 Cast Iron	●	◕		
	N	鋁合金 Aluminum Alloys	○	◔		
	S	高溫合金 High Temp Alloys	●	◕		
	H	調質鋼 Hardened Steels	●	◕		

右車刀片 Right Hand



左車刀片 Left Hand



刀片 Insert	訂購編號 Order No.	材質碼 Grade CM5515	CM6015		螺距 Pitch Tpi (牙/吋)	尺寸 Dimension (mm) A	B	r	X	Y	螺紋 Thread
	11IR32UN	●			32	11	6.35	0.04	0.6	0.6	 公差 Tolerance Class 2A / 2B
	11IL32UN	●			32	11	6.35	0.04	0.6	0.6	
	11IR28UN	●			28	11	6.35	0.04	0.6	0.7	
	11IL28UN	●			28	11	6.35	0.04	0.6	0.7	
	11IR24UN	●			24	11	6.35	0.05	0.7	0.8	
	11IL24UN	●			24	11	6.35	0.05	0.7	0.8	
	11IR20UN	●			20	11	6.35	0.06	0.8	0.9	
	11IL20UN	●			20	11	6.35	0.06	0.8	0.9	
	11IR18UN	●			18	11	6.35	0.07	0.8	1.0	
	11IL18UN	●			18	11	6.35	0.07	0.8	1.0	
	11IR16UN	●			16	11	6.35	0.09	0.9	1.1	
NEW	11IL16UN	●			16	11	6.35	0.09	0.9	1.1	

► 刀桿頁數 Tool → Page：P.240

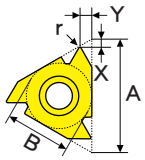
► 切削條件表 Turning Condition Table → Page：P.242

※ 25.4 ÷ Tpi (英制單位 Inch) = Pitch (公制單位 Metric)

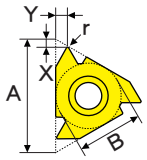
加工材質					
	P	鋼材 Alloy Steels	●	◐	
	M	不銹鋼 Stainless Steels	●	◐	
	K	鑄鐵 Cast Iron	●	◐	
	N	鋁合金 Aluminum Alloys	○	◔	
	S	高溫合金 High Temp Alloys	●	◐	
	H	調質鋼 Hardened Steels	●	◐	

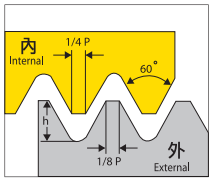
● 第一推薦 / ○ 第二推薦：連續加工 Continuous Cutting
◐ 第一推薦 / ◔ 第二推薦：一般加工 General Cutting
✱ 第一推薦 / ❂ 第二推薦：斷續加工 Interrupted Cutting
－ 不推薦 NO Recommend

右車刀片 Right Hand



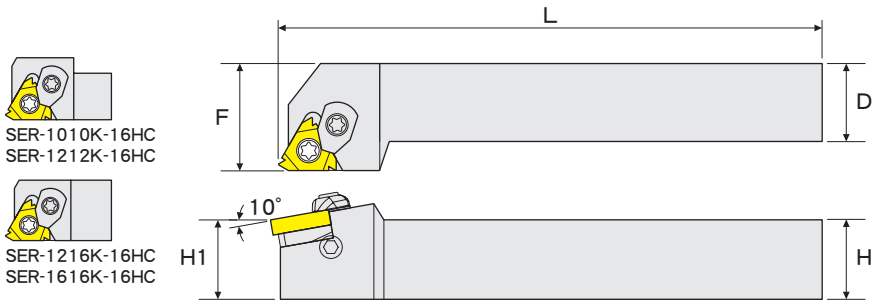
左車刀片 Left Hand



刀片 Insert	訂購編號 Order No.	材質碼 Grade CM5515	CM6015		螺距 Pitch Tpi (牙/吋)	尺寸 Dimension (mm) A	B	r	X	Y	螺紋 Thread
	16IR40UN	●			40	16	9.52	0.03	0.6	0.6	 公差 Tolerance Class 2A / 2B
	16IL40UN	●			40	16	9.52	0.03	0.6	0.6	
	16IR36UN	●			36	16	9.52	0.03	0.6	0.6	
	16IL36UN	●			36	16	9.52	0.03	0.6	0.6	
	16IR32UN	●			32	16	9.52	0.04	0.6	0.6	
	16IL32UN	●			32	16	9.52	0.04	0.6	0.6	
	16IR28UN	●			28	16	9.52	0.04	0.6	0.7	
	16IL28UN	●			28	16	9.52	0.04	0.6	0.7	
	16IR26UN	●			26	16	9.52	0.04	0.7	0.8	
	16IL26UN	●			26	16	9.52	0.04	0.7	0.8	
	16IR24UN	●			24	16	9.52	0.05	0.7	0.8	
	16IL24UN	●			24	16	9.52	0.05	0.7	0.8	
	16IR20UN	●			20	16	9.52	0.06	0.8	0.9	
	16IL20UN	●			20	16	9.52	0.06	0.8	0.9	
	16IR18UN	●			18	16	9.52	0.07	0.8	1.0	
	16IL18UN	●			18	16	9.52	0.07	0.8	1.0	
	16IR16UN	●			16	16	9.52	0.09	0.9	1.1	
	16IL16UN	●			16	16	9.52	0.09	0.9	1.1	
	16IR14UN	●			14	16	9.52	0.10	0.9	1.2	
	16IL14UN	●			14	16	9.52	0.10	0.9	1.2	
	16IR13UN	●			13	16	9.52	0.11	1.0	1.3	
	16IL13UN	●			13	16	9.52	0.11	1.0	1.3	
	16IR12UN	●			12	16	9.52	0.12	1.1	1.4	
	16IL12UN	●			12	16	9.52	0.12	1.1	1.4	
	16IR11.5UN	●			11.5	16	9.52	0.13	1.1	1.5	
	16IL11.5UN	●			11.5	16	9.52	0.13	1.1	1.5	
	16IR11UN	●			11	16	9.52	0.14	1.1	1.5	
	16IL11UN	●			11	16	9.52	0.14	1.1	1.5	
	16IR10UN	●			10	16	9.52	0.15	1.1	1.5	
	16IL10UN	●			10	16	9.52	0.15	1.1	1.5	
	16IR9UN	●			9	16	9.52	0.17	1.2	1.7	
	16IL9UN	●			9	16	9.52	0.17	1.2	1.7	
	16IR8UN	●			8	16	9.52	0.19	1.1	1.5	
NEW	16IL8UN	●			8	16	9.52	0.19	1.1	1.5	

▶ 刀桿頁數 Tool → Page：P.240
▶ 切削條件表 Turning Condition Table → Page：P.242

※ 25.4 ÷ Tpi (英制單位 Inch) = Pitch (公制單位 Metric)

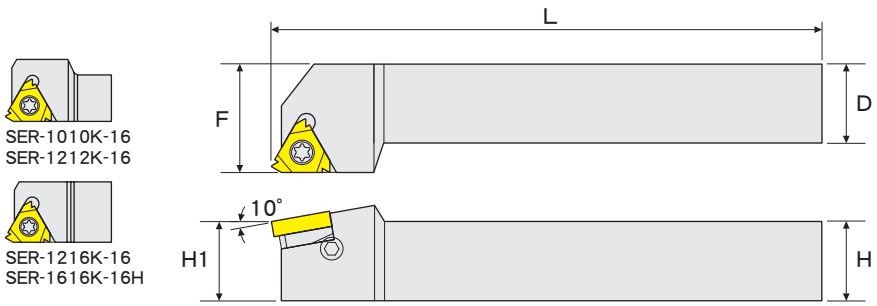


右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	配 件 Spare Parts
	H1 / H	F	L	D		
SE$^{R}/_{L}$-1010K-16HC	10	10	125	10	16ER.. 16EL..	1
SE$^{R}/_{L}$-1212K-16HC	12	12	125	12		
SE$^{R}/_{L}$-1216K-16HC	12	16	125	16		
SE$^{R}/_{L}$-1616K-16HC	16	16	125	16		
SE$^{R}/_{L}$-1616K-16CL	16	20	125	16		2
SE$^{R}/_{L}$-2020K-16CL	20	25	125	20		
SE$^{R}/_{L}$-2525M-16CL	25	32	150	25		
SE$^{R}/_{L}$-3232P-16CL	32	40	170	32		

配 件 Spare Parts	Screw	Shim	Screw	Wrench	Clamp	Wrench
1	MS3509A	–	–	–	–	ETF15
2	MS3512A	GXN16 / GXE16	HTM309	PL25	MC35-3V	ETF15

▶ 搭配刀片 Insert → Page：P.231~233
▶ 切削條件表 Turning Condition Table → Page：P.241,242



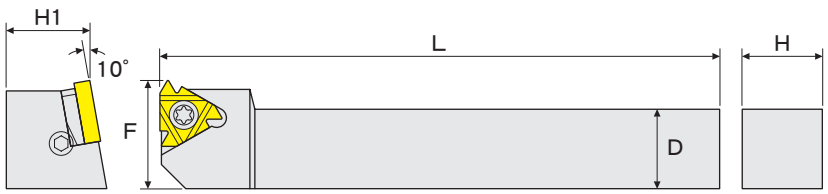
右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	配 件 Spare Parts
	H1 / H	F	L	D		
SE$^{R}/_{L}$-1216K-16	12	16	125	16	16ER.. 16EL..	1
SE$^{R}/_{L}$-1010K-16H	10	10	125	10		
SE$^{R}/_{L}$-1212K-16H	12	12	125	12		
SE$^{R}/_{L}$-1616K-16H	16	16	125	16		
SE$^{R}/_{L}$-1616K-16	16	20	125	16		2
SE$^{R}/_{L}$-2020K-16	20	25	125	20		
SE$^{R}/_{L}$-2525M-16	25	32	150	25		
SE$^{R}/_{L}$-3232P-16	32	40	170	32		

配 件 Spare Parts	Screw	Shim	Screw	Wrench	Wrench
1	MS3509A	–	–	–	ETF15
2	MS3512A	GXN16 / GXE16	HTM309	PL25	ETF15

▶ 搭配刀片 Insert → Page：P.231~233

※ SER 刀桿搭配 GXE 墊片；SEL 刀桿搭配 GXN 墊片。



右車刀桿圖示 Right-Hand Shown

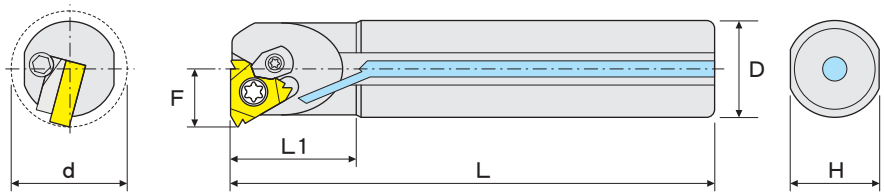
鋼材柄訂購編號 Order No. (Steel Shank)	尺寸 Dimension (mm)				搭配刀片 Insert	配 件 Spare Parts
	H1 / H	F	L	D		
SKE$^{R}/_{L}$-1212K-16	12	18	125	12	16ER.. 16EL..	1
SKE$^{R}/_{L}$-1616K-16	16	22	125	16		2
SKE$^{R}/_{L}$-2020K-16	20	27	125	20		
SKE$^{R}/_{L}$-2525M-16	25	34	150	25		

配 件 Spare Parts	Screw	Shim	Screw	Wrench	Wrench
1	MS3509A	–	–	–	ETF15
2	MS3512A	GXN16 / GXE16	HTM309	PL25	ETF15

※ SER 刀桿搭配 GXE 墊片；SEL 刀桿搭配 GXN 墊片。 SER right hand tools shim is GXE16 | SEL left hand tools shim is GXN16.

搭配刀片 Insert → Page：P.231~233

切削條件表 Turning Condition Table → Page：P.241,242



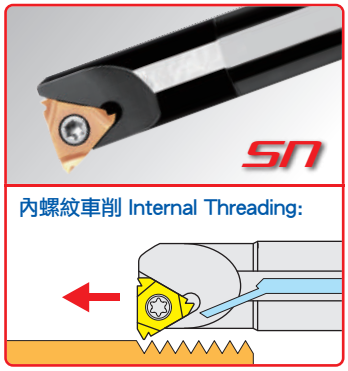
右車刀桿圖示 Right-Hand Shown

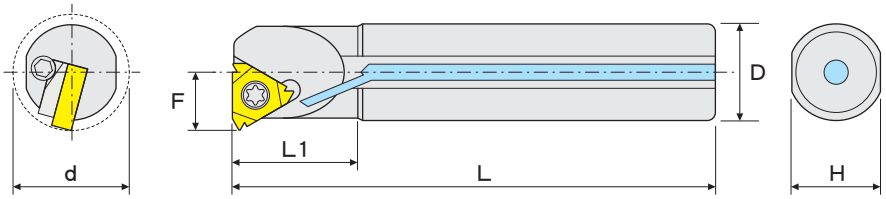
鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)				最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	L	D			
SN$^{R}/_{L}$-0020R-16CL	SN$^{R}/_{L}$-A0020R-16CL	12.0	40	200	20	24	16IR.. 16IL..	1
SN$^{R}/_{L}$-0025R-16CL	SN$^{R}/_{L}$-A0025R-16CL	14.5	45	200	25	29		
SN$^{R}/_{L}$-0032S-16CL	SN$^{R}/_{L}$-A0032S-16CL	18.5	45	250	32	36		

配 件 Spare Parts	Screw	Shim	Screw	Wrench	Clamp	Wrench
1	MS3512A	GXN16 / GXE16	HTM309	PL25	MC35-3V	ETF15

※ SER 刀桿搭配 GXE 墊片；SEL 刀桿搭配 GXN 墊片。 SER right hand tools shim is GXE16 | SEL left hand tools shim is GXN16.

搭配刀片 Insert → Page：P.234~237　　切削條件表 Turning Condition Table → Page：P.241,242





右車刀桿圖示 Right-Hand Shown

鋼材柄訂購編號 Order No. (Steel Shank)		尺寸 Dimension (mm)				最小車徑 d	搭配刀片 Insert	配 件 Spare Parts
無出水孔 Non-coolant	出水孔 Coolant	F	L1	L	D			
SN$^{R}/_{L}$-0010K-11-S10	SN$^{R}/_{L}$-A0010K-11-S10	6.5	22	125	10	13	11IR.. 11IL..	1
SN$^{R}/_{L}$-0012M-11-S12	SN$^{R}/_{L}$-A0012M-11-S12	8.0	26	150	12	16		
SN$^{R}/_{L}$-0016Q-16	SN$^{R}/_{L}$-A0016Q-16	10.0	36	180	16	19	16IR.. 16IL..	2
SN$^{R}/_{L}$-0020R-16	SN$^{R}/_{L}$-A0020R-16	12.0	40	200	20	24		3
SN$^{R}/_{L}$-0025R-16	SN$^{R}/_{L}$-A0025R-16	14.5	45	200	25	29		
SN$^{R}/_{L}$-0032S-16	SN$^{R}/_{L}$-A0032S-16	18.5	45	250	32	36		

配 件 Spare Parts	Screw	Wrench	Shim	Screw	Wrench
1	MS2507G	ETF08	–	–	–
2	MS3509A	ETF15	–	–	–
3	MS3512A	ETF15	GXN16 / GXE16	HTM309	PL25

※ SER 刀桿搭配 GXE 墊片；SEL 刀桿搭配 GXN 墊片。 SER right hand tools shim is GXE16 | SEL left hand tools shim is GXN16.

搭配刀片 Insert → Page：P.234~237　　切削條件表 Turning Condition Table → Page：P.241,242

螺紋車削 THREADING

螺距 Pitch (mm)	外螺紋 (ISO 規格 60°) EXTERNAL (ISO METRIC 60°) 走刀數 No. of Passes																總切深 (單邊) All Cut
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
0.50	0.102	0.102	0.076	0.076	–	–	–	–	–	–	–	–	–	–	–	–	0.356
0.75	0.178	0.152	0.102	0.076	–	–	–	–	–	–	–	–	–	–	–	–	0.508
0.80	0.178	0.152	0.127	0.076	–	–	–	–	–	–	–	–	–	–	–	–	0.533
1.00	0.178	0.178	0.127	0.102	0.076	–	–	–	–	–	–	–	–	–	–	–	0.660
1.25	0.178	0.178	0.152	0.127	0.102	0.076	–	–	–	–	–	–	–	–	–	–	0.813
1.50	0.229	0.203	0.178	0.152	0.127	0.076	–	–	–	–	–	–	–	–	–	–	0.965
1.75	0.229	0.203	0.152	0.152	0.127	0.102	0.102	0.076	–	–	–	–	–	–	–	–	1.143
2.00	0.254	0.229	0.178	0.152	0.152	0.127	0.102	0.076	–	–	–	–	–	–	–	–	1.270
2.50	0.279	0.254	0.203	0.178	0.152	0.127	0.127	0.102	0.102	0.076	–	–	–	–	–	–	1.600
3.00	0.279	0.254	0.203	0.178	0.152	0.152	0.127	0.127	0.127	0.102	0.102	0.076	–	–	–	–	1.880
3.50	0.330	0.305	0.254	0.203	0.178	0.178	0.152	0.152	0.152	0.127	0.102	0.076	–	–	–	–	2.210
4.00	0.330	0.330	0.254	0.229	0.178	0.178	0.152	0.152	0.152	0.127	0.127	0.127	0.102	0.076	–	–	2.515
4.50	0.381	0.330	0.279	0.229	0.229	0.203	0.178	0.178	0.152	0.152	0.152	0.127	0.127	0.102	–	–	2.819
5.00	0.406	0.381	0.330	0.279	0.229	0.229	0.203	0.178	0.178	0.178	0.152	0.152	0.127	0.102	–	–	3.124
5.50	0.432	0.406	0.330	0.279	0.229	0.229	0.203	0.178	0.178	0.178	0.152	0.152	0.127	0.127	0.127	0.102	3.429
6.00	0.457	0.432	0.356	0.305	0.279	0.229	0.229	0.203	0.203	0.178	0.178	0.152	0.152	0.152	0.127	0.102	3.734

螺距 Pitch (mm)	內螺紋 (ISO 規格 60°) INTERNAL (ISO METRIC 60°) 走刀數 No. of Passes																總切深 (單邊) All Cut
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
0.50	0.102	0.102	0.076	0.076	–	–	–	–	–	–	–	–	–	–	–	–	0.356
0.75	0.178	0.127	0.102	0.076	–	–	–	–	–	–	–	–	–	–	–	–	0.483
0.80	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1.00	0.178	0.152	0.102	0.102	0.076	–	–	–	–	–	–	–	–	–	–	–	0.610
1.25	0.203	0.178	0.127	0.102	0.102	0.076	–	–	–	–	–	–	–	–	–	–	0.787
1.50	0.254	0.203	0.152	0.102	0.102	0.076	–	–	–	–	–	–	–	–	–	–	0.889
1.75	0.229	0.203	0.152	0.127	0.102	0.102	0.102	0.076	–	–	–	–	–	–	–	–	1.092
2.00	0.254	0.229	0.178	0.152	0.127	0.102	0.102	0.076	–	–	–	–	–	–	–	–	1.219
2.50	0.279	0.229	0.178	0.152	0.152	0.127	0.102	0.102	0.102	0.076	–	–	–	–	–	–	1.499
3.00	0.279	0.229	0.203	0.152	0.152	0.152	0.127	0.102	0.102	0.102	0.102	0.076	–	–	–	–	1.778
3.50	0.305	0.279	0.229	0.203	0.178	0.152	0.152	0.152	0.127	0.102	0.102	0.076	–	–	–	–	2.057
4.00	0.330	0.305	0.229	0.203	0.178	0.152	0.152	0.152	0.127	0.127	0.102	0.102	0.102	0.076	–	–	2.337
4.50	0.356	0.330	0.279	0.229	0.203	0.178	0.152	0.152	0.152	0.152	0.127	0.127	0.102	0.102	–	–	2.642
5.00	0.381	0.356	0.305	0.254	0.229	0.203	0.178	0.152	0.152	0.152	0.152	0.152	0.127	0.102	–	–	2.896
5.50	0.381	0.356	0.305	0.254	0.229	0.203	0.178	0.178	0.152	0.152	0.152	0.152	0.152	0.127	0.127	0.102	3.200
6.00	0.406	0.406	0.356	0.279	0.229	0.229	0.203	0.178	0.178	0.152	0.152	0.152	0.152	0.152	0.127	0.102	3.454

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	–	HRC<30	–	HRC<30
切削速度 Vc (m/min)	60~140	60~120	40~100	20~60	–	40~120	60~120	–	20~60

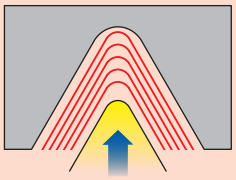
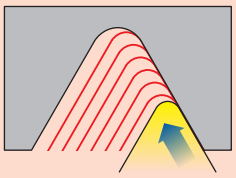
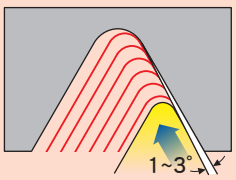
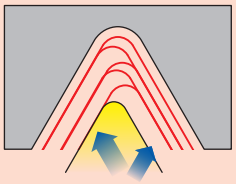
螺紋車削 THREADING

螺距 Tpi (牙/吋)	外螺紋 (UN 美製規格 60°) EXTERNAL (UN METRIC 60°) 走刀數 No. of Passes																總切深 (單邊) All Cut
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
32	0.178	0.152	0.127	0.076	–	–	–	–	–	–	–	–	–	–	–	–	0.533
28	0.178	0.152	0.127	0.102	0.076	–	–	–	–	–	–	–	–	–	–	–	0.635
24	0.178	0.178	0.152	0.127	0.076	–	–	–	–	–	–	–	–	–	–	–	0.711
20	0.203	0.178	0.152	0.127	0.102	0.076	–	–	–	–	–	–	–	–	–	–	0.838
18	0.229	0.203	0.152	0.152	0.127	0.076	–	–	–	–	–	–	–	–	–	–	0.940
16	0.229	0.203	0.152	0.152	0.127	0.102	0.076	–	–	–	–	–	–	–	–	–	1.041
14	0.229	0.229	0.178	0.152	0.127	0.102	0.102	0.076	–	–	–	–	–	–	–	–	1.194
13	0.254	0.229	0.178	0.152	0.152	0.127	0.102	0.076	–	–	–	–	–	–	–	–	1.270
12	0.279	0.229	0.203	0.152	0.152	0.152	0.127	0.076	–	–	–	–	–	–	–	–	1.372
11	0.279	0.254	0.203	0.178	0.152	0.152	0.127	0.102	0.076	–	–	–	–	–	–	–	1.499
10	0.279	0.229	0.203	0.178	0.152	0.152	0.152	0.127	0.102	0.076	–	–	–	–	–	–	1.651
9	0.279	0.229	0.203	0.178	0.152	0.152	0.152	0.127	0.127	0.102	0.076	–	–	–	–	–	1.778
8	0.305	0.254	0.229	0.178	0.178	0.152	0.152	0.152	0.127	0.127	0.102	0.076	–	–	–	–	2.032

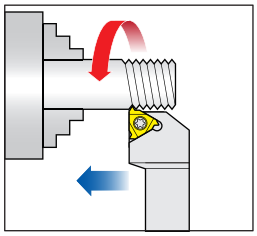
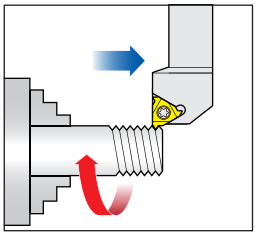
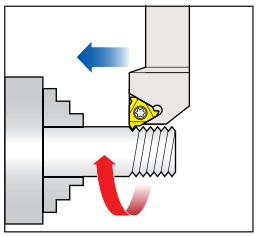
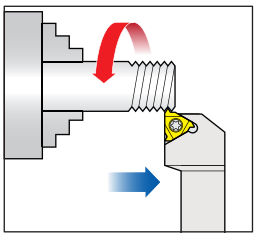
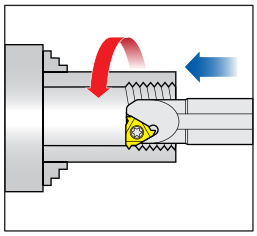
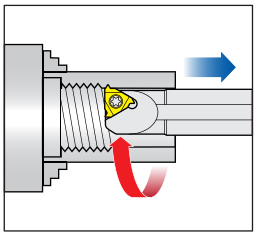
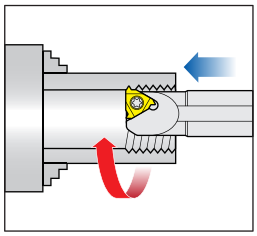
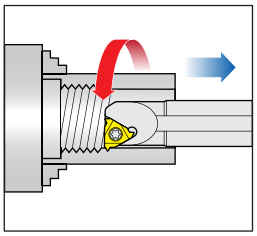
螺距 Tpi (牙/吋)	內螺紋 (UN 美製規格 60°) INTERNAL (UN METRIC 60°) 走刀數 No. of Passes																總切深 (單邊) All Cut
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
32	0.178	0.152	0.102	0.076	–	–	–	–	–	–	–	–	–	–	–	–	0.508
28	0.178	0.152	0.102	0.102	0.076	–	–	–	–	–	–	–	–	–	–	–	0.610
24	0.178	0.152	0.152	0.102	0.076	–	–	–	–	–	–	–	–	–	–	–	0.660
20	0.203	0.178	0.127	0.102	0.102	0.076	–	–	–	–	–	–	–	–	–	–	0.787
18	0.229	0.178	0.152	0.127	0.102	0.076	–	–	–	–	–	–	–	–	–	–	0.864
16	0.229	0.178	0.152	0.127	0.102	0.102	0.076	–	–	–	–	–	–	–	–	–	0.940
14	0.229	0.203	0.152	0.152	0.102	0.102	0.102	0.076	–	–	–	–	–	–	–	–	1.118
13	0.254	0.229	0.152	0.152	0.127	0.102	0.102	0.076	–	–	–	–	–	–	–	–	1.194
12	0.279	0.229	0.178	0.152	0.127	0.102	0.102	0.076	–	–	–	–	–	–	–	–	1.245
11	0.279	0.229	0.178	0.152	0.152	0.127	0.102	0.102	0.076	–	–	–	–	–	–	–	1.397
10	0.279	0.229	0.152	0.152	0.152	0.127	0.102	0.102	0.102	0.076	–	–	–	–	–	–	1.499
9	0.279	0.229	0.178	0.152	0.152	0.152	0.127	0.102	0.102	0.102	0.076	–	–	–	–	–	1.651
8	0.305	0.279	0.203	0.178	0.152	0.152	0.127	0.102	0.102	0.102	0.102	0.076	–	–	–	–	1.880

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63	–	HRC<30	–	HRC<30
切削速度 Vc (m/min)	60~140	60~120	40~100	20~60	–	40~120	60~120	–	20~60

螺紋車削 THREADING

螺紋車削 進刀方式 Infeed Methods	特色 Features	
	優點 Advantages	缺點 Disadvantages
 徑向式進刀 Radial Infeed	・最容易使用 (螺紋的標準程序)。 Easiest to use.(Standard programme for threading) ・應用廣泛 (切削條件易更改)。 Wide application.(Cutting conditions easy to change.) ・徑向式進刀是最簡單、快速的加工方式。 Radial infeed is the simplest and quickest method. ・適合螺距小於 1.5mm(16Tpi) 加工。 For pitches of less than 1.5mm(16Tpi). ・適合切屑較短的材質。 For material with short chips. ・適合硬質材質的加工。 For work with hardened material. ・切削刃左右兩側磨損均勻。 Uniform wear of the right and left sides of the cutting edge.	・後段加工切削刃接觸工件面積大而產生震動。 Subject to vibration in the later passes due to long cutting edge in contact with workpiece. ・切屑控制困難。 Difficult chip control. ・無法使用在大螺距的螺紋加工。 Ineffective for large pitch threading. ・R 角加工負荷大。 Heavy load on the nose radius.
 側向進刀 Flank Infeed	・工序容易使用 (螺紋的半標準程序)。 Relatively easy to use.(Semi-standard program for threading.) ・適合大螺距和容易加工材質之應用。 Suitable for large pitch threads or materials that peel easily. ・降低切削阻力。 Reduced cutting force. ・良好排屑。 Good chip discharge.	・刀片右側磨損較大。 Large flank wear of the right side of a cutting edge. ・加工深度不易修改 (需要重新編程)。 Relatively difficult to change cutting depth. (Re-programming necessary)
 改進式側向進刀 Flank Infeed(Modified)	・防止切削刃右側磨損。 Preventing flank wear on the right side of the cutting edge. ・適合大螺距和容易加工材質之應用。 Suitable for large pitch threads or materials that peel easily. ・降低切削阻力。 Reduced cutting force. ・良好排屑。 Good chip discharge.	・加工工序複雜。 Complex machining programming. ・加工深度不易修改 (需要重新編程)。 Difficult to change cutting depth. (NC programming necessary)
 交替式進刀 Incremental Infeed	・適合大螺距和容易加工材質之應用。 Good for large pitch or materials that peel easily. ・切削刃左右兩側磨損均勻。 Uniform wear of the right and left ・降低切削阻力。 Reduced cutting force.	・加工工序複雜。 Complex machining programming. ・加工深度不易修改 (需要重新編程)。 Difficult to change cutting depth. (NC programming necessary) ・排屑控制困難。 Chips control is difficult.

螺紋車削 THREADING

螺紋 Thread	刀具進給方向 Thread Methods	
外螺紋 - 右螺紋 External- Right Hand Thread	 右車刀桿 Right Hand	 左車刀桿 Left Hand
外螺紋 - 左螺紋 External- Left Hand Thread	 左車刀桿 Left Hand	 右車刀桿 Right Hand
內螺紋 - 右螺紋 Internal- Right Hand Thread	 右車刀桿 Right Hand	 左車刀桿 Left Hand
內螺紋 - 左螺紋 Internal- Left Hand Thread	 左車刀桿 Left Hand	 右車刀桿 Right Hand

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