

# 刀片識別系統

Turning Insert Identification System

**1** C **2** N **3** M **4** G

- 1** 刀片形狀 Insert Shape
- 2** 離隙角 Relief Angle
- 3** 精度記號 Tolerance
- 4** 孔溝記號 Insert Hole

## 1 刀片形狀 Insert Shape

記號 Symbol	刀片形狀 Insert Shape	角度 Angle
R	圓形	—
S	90° 正方形	90°
T	60° 正三角形	60°
L	90° 長方形	90°
A	85° 平行四邊形	85°
B	82° 平行四邊形	82°
K	55° 平行四邊形	55°
C	80° 菱形	80°
D	55° 菱形	55°
E	75° 菱形	75°
M	86° 菱形	86°
V	35° 菱形	35°
H	120° 正六角形	120°
O	135° 正八角形	135°
P	108° 正五角形	108°
W	80° 桃形	80°

## 2 離隙角 Relief Angle

記號 Symbol	離隙角 Relief Angle	記號 Symbol	離隙角 Relief Angle
A	3°	F	25°
B	5°	G	30°
C	7°	N	0°
D	15°	P	11°
E	20°		

## 3 精度記號 Tolerance

記號 Symbol	內接圓公差 "IC" Inscribed Circle Tolerance		刀尖高度公差 "B" Corner Height Tolerance		厚度公差 "S" Thickness Tolerance	
	in	mm	in	mm	in	mm
C	±0.010	±0.025	±0.0005	±0.013	±0.001	±0.025
H	±0.005	±0.013	±0.0005	±0.013	±0.001	±0.025
E	±0.010	±0.025	±0.0010	±0.025	±0.001	±0.025
G	±0.010	±0.025	±0.0010	±0.025	±0.005	±0.13
M	±0.005	±0.05-±0.15	±0.005	±0.08-±0.02	±0.005	±0.13
U	±0.005	±0.08-±0.25	±0.005	±0.13-±0.38	±0.005	±0.13

## 4 孔溝記號 Insert Hole

記號 Symbol	孔溝記號 Insert Hole	記號 Symbol	孔溝記號 Insert Hole	記號 Symbol	孔溝記號 Insert Hole	記號 Symbol	孔溝記號 Insert Hole
N	[Symbol]	M	[Symbol]	Q	[Symbol]	C	[Symbol]
R	[Symbol]	G	[Symbol]	U	[Symbol]	J	[Symbol]
F	[Symbol]	W	[Symbol]	B	[Symbol]		
A	[Symbol]	T	[Symbol]	H	[Symbol]		

**5** 12 **6** 04 **7** 08 - **8** □ **9** □ **10** □

- 5** 尺寸 Size
- 6** 刀片厚度 Insert Thickness
- 7** 刀尖半徑 Corner Radius
- 8** 刀片方向 Feed Direction
- 9** 切邊狀況及排屑槽 Cutting Edge Condition & Chip Control

## 5 尺寸 Size 切刃長和內接圓記號 Cutting Edge Length, Diameter Of IC

內接圓 IC		公制切刃長度 Metric Cutting Edge Length								英制切刃長度 Inch Cutting Edge Length
in	mm	(R)	(S)	(T)	(C)	(D)	(V)	(W)		
5/32	3.97	03	03	06	—	04	—	—	1.2 (5)	
3/16	4.76	04	04	08	04	05	08	—	1.5 (6)	
7/23	5.56	05	05	09	05	06	09	03	1.8 (7)	
0.236	6.00	06	—	—	—	—	—	—	—	
1/4	6.35	06	06	11	06	07	11	04	2	
5/16	7.94	07	07	13	08	09	13	05	2.5	
0.315	8.00	08	—	—	—	—	—	—	—	
3/8	9.525	09	09	16	09	11	16	06	3	
0.394	10.00	10	—	—	—	—	—	—	—	
1/16	11.11	11	11	19	11	13	19	07	3.5	
0.472	12.00	12	—	—	—	—	—	—	—	
1/2	12.70	12	12	22	12	15	22	08	4	
9/16	14.29	14	14	24	14	17	24	09	4.5	
5/8	15.875	15	15	27	16	19	27	10	5	
0.630	16.00	16	—	—	—	—	—	—	—	
11/16	17.46	17	17	30	17	21	30	11	5.5	
3/4	19.05	19	19	33	19	23	33	13	6	
0.787	20.00	20	—	—	—	—	—	—	—	
7/8	22.22	22	22	38	22	27	38	15	7	
0.984	25.00	25	—	—	—	—	—	—	—	
1	25.40	25	25	44	25	31	44	17	8	
1-1/4	31.75	31	31	54	32	38	54	21	10	
1.260	32.00	32	—	—	—	—	—	—	—	

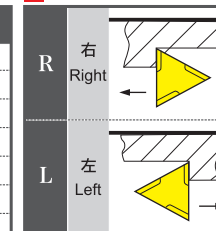
## 6 刀片厚度 Insert Thickness

記號 Symbol	英制 in	記號 Symbol	公制 mm
0.5 (1)	1/32	—	0.79
1 (2)	1/16	01	1.59
1.2	5/64	T1	1.98
1.5 (3)	3/32	02	2.38
2	1/8	03	3.18
2.5	5/32	T3	3.97
3	3/16	04	4.76
3.5	7/32	05	5.56
4	1/4	06	6.35
5	5/16	07	7.94
6	3/8	09	9.52
7	7/16	11	11.11
8	1/2	12	12.70

## 7 刀尖半徑 Corner Radius

記號 Symbol	英制 in	記號 Symbol	公制 mm
0	.004	01	0.1
0.5	.008	02	0.2
1	1/64	04	0.4
2	1/32	08	0.8
3	3/64	12	1.2
4	1/16	16	1.6
5	5/64	20	2.0
6	3/32	24	2.4
7	7/64	28	2.8
8	1/8	32	3.2
圓型刀片英制 round insert (in)		—	00
圓型刀片公制 round insert (mm)		—	M0

## 8 刀片方向 Feed Direction



## 9 10

切邊狀況及排屑槽 Cutting Edge Condition & Chip Control

※ 英制尺寸: ( ) 符號為小尺寸刀片 ※ Inch size: ( ) Symbol for small size insert

# 車削用材質

Recommend Material Grades For Turning

切削狀態 Cutting Status	JIS使用分類 JIS Classification					金屬陶瓷 Cermet				
	鎢鋼鍍鈦 Carbide With AlTiN Coating					金屬陶瓷 Cermet				
	高精度 High Precision	輕切削 Light Cutting		重切削 Roughing Cutting		高精度 High Precision	輕切削 Light Cutting		重切削 Roughing Cutting	
	01	10	20	30	40	01	10	20	30	40
<b>P</b> 鋼 Steel	ECP100、ECP2025、BEF606					BQJ606				
	ECP3015、BEF607					BQJ606F				
	ECP200、ECP300、ECP3025、BEF707、BEF706、ECP2020、EC400					BQW706				
	ECP3035、ECP510					E1200				
						E1500				
<b>M</b> 不鏽鋼 Stainless Steel	ECM050、BEJ657									
	ECM100、ECM2010、BEJ757、ECM2520									
	ECM200、BEJ750、BE4875、BEJ758									
	ECM2525、ECM2530、BEP706、BEJ759									
<b>K</b> 鑄鐵 Cast Iron	ECK1005、ECK100					BQJ606				
	ECK1015、BEG607、BEG607F					BQJ606F				
	ECK1025、ECK2020、ECK200					E1200				
	ECK300					E1500				
<b>N</b> 非鐵金屬 Non-Ferrous Metal	ECH01									
	ECH02、BG656									
	BEJ757									
	PCD100									
<b>H</b> 高硬度鋼 High Hardness Steel	CBN100									

# 各公司材質對照表

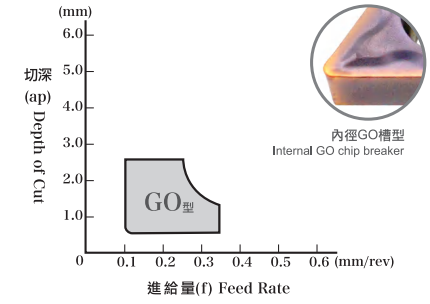
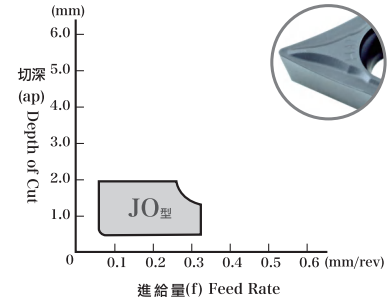
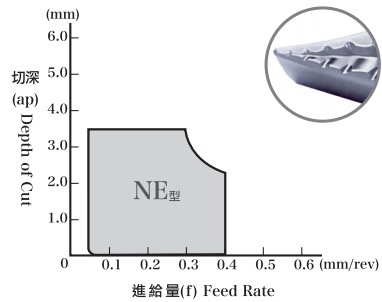
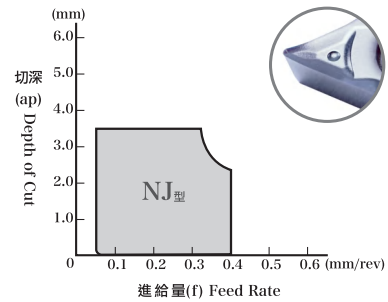
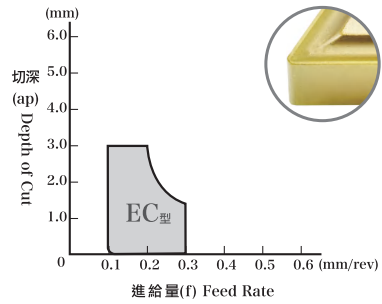
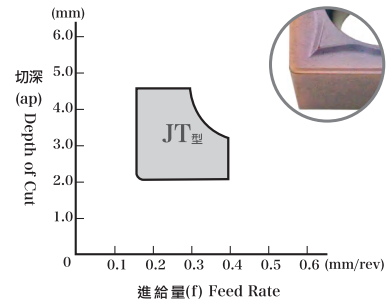
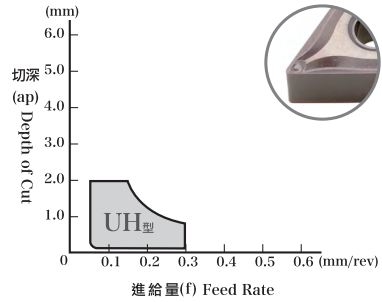
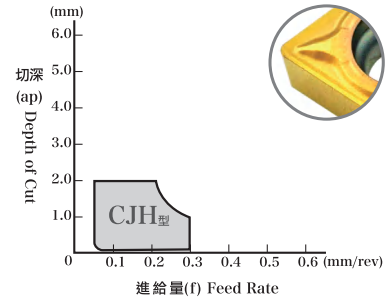
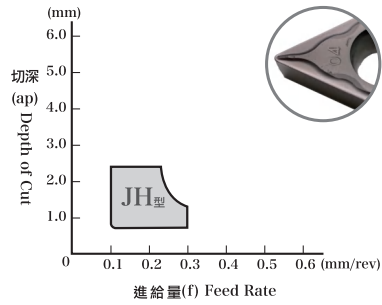
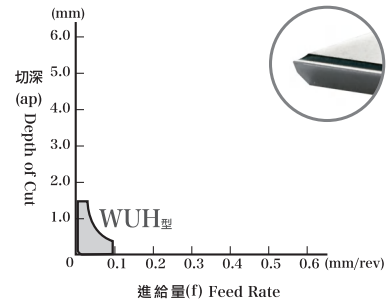
Grade Comparison Chart

※ 用途 Application：車削 Turning

加工件 Work Material	級別 Grade	益詮 Echain	住友電工 Sumitomo	三菱綜合材料 Mitsubishi	泰珂洛 Tungaloy	京瓷 Kyocera
<b>P</b> 鋼 Steel	P05	ECP100、ECP2005、BEF606	AC8015P	UE6105	T9105	CA5505
	P10	ECP3015、BEF607	AC8015P	UE6110	T9115	CA5515
	P20	ECP3025、ECP200、ECP2020、BEF706	AC8025P AC820P	UE6020	T9125	CA5525
	P30	ECP300、BEF707、EC400	AC8035P AC830P	UE6035	T9135	CA5535
	P40	ECP510、ECP3035	AC8035P	UE6035	T9135	PR660
<b>M</b> 不鏽鋼 Stainless Steel	M10	ECM050、BEJ657、ECM2010	AC6020M	US7020	T9115 AH905	PR1305 PRP05
	M20	ECM100、ECM120、BEJ757、ECM2020、BEJ759	AC6020M	VP15F	A725	PR1310 CA6525 PR9915
	M30	BEJ750、ECM200、ECM2530、ECM2525、BE4875、BEJ758	AC6030M	US735	AH725	PR930 PR1125
	M40	BEP706、EM2625	AC6040M		SH730	PR660 PR1125
<b>K</b> 鑄鐵 Cast Iron	K05	ECK1005	AC4010K	MC5005	T5105 T5115	CA4505 CA4010
	K10	ECK1015、ECK150、ECK100、BEG607	AC4010K AC4015K	MC5015	T5115	CA4505 CA4015 CA4115
	K20	ECK1025、ECK300、ECK200、ECK2020	AC420K AC425K	MC5025	T5125 T9125	CA4515 CA4020 CA4115
<b>N</b> 非鐵金屬 Non-Ferrous Metal		BEJ757、ECH01、ECH205、BG656	H1	H1		
<b>H</b> 高硬度鋼 High Hardness Steel		CBN100				
<b>金屬陶瓷 Cermet</b>		BQJ606、BQJ606F、BQJ706、E1500、E1200	T1500A T2500Z	NX2525	NS9530	TN60

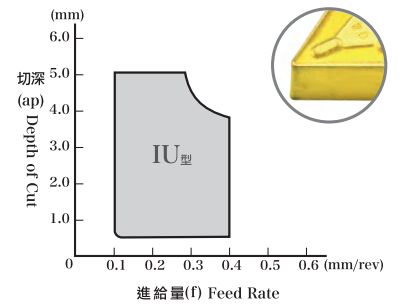
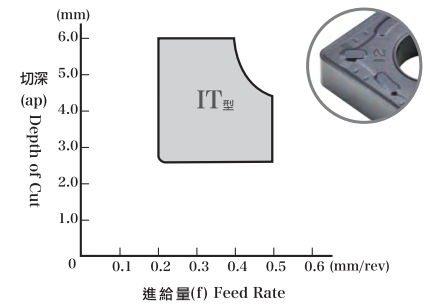
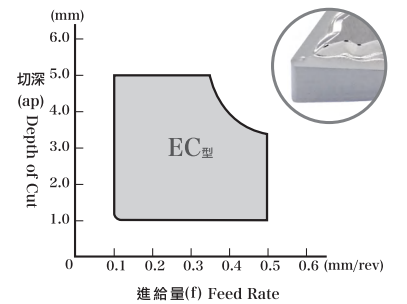
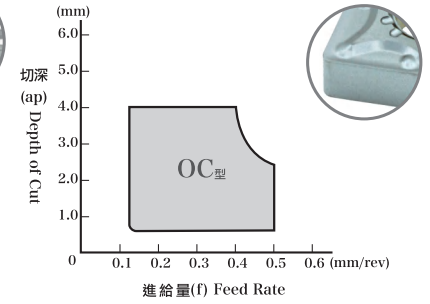
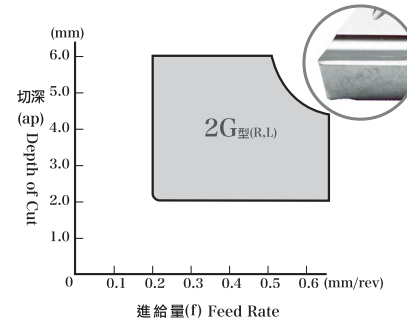
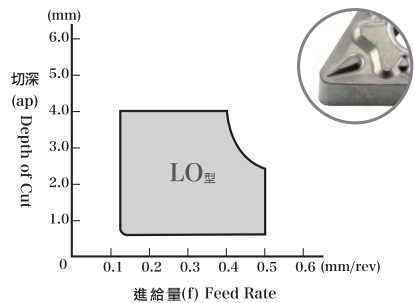
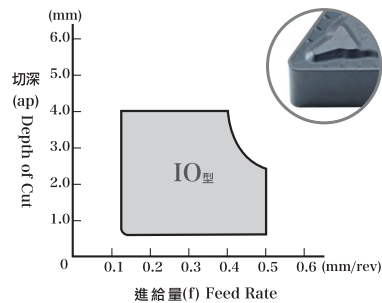
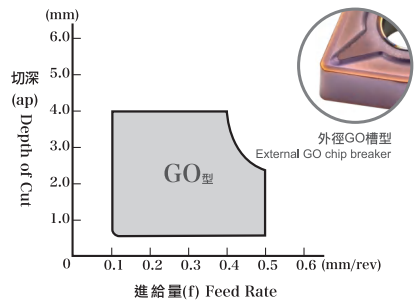
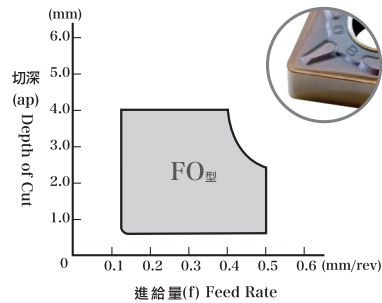
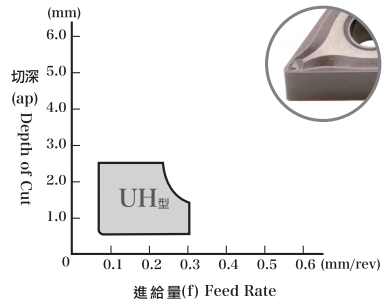
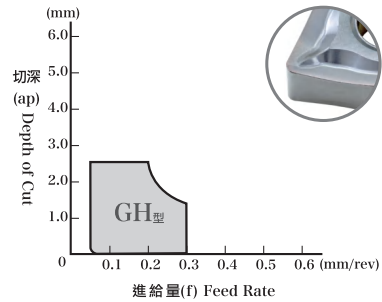
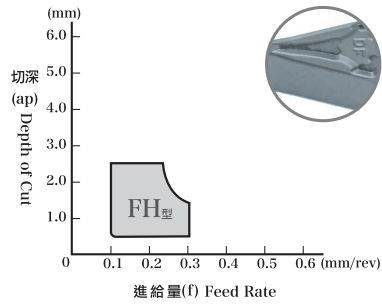
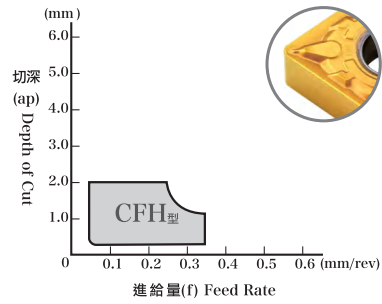
# 正角斷屑槽選擇

## Selection Of Chip Breaker



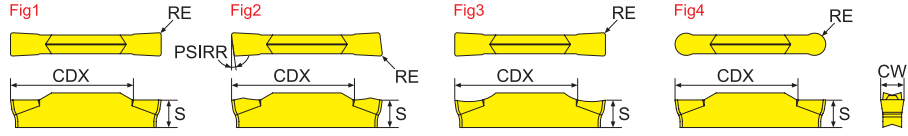
# 負角斷屑槽選擇

Selection Of Chip Breaker





●標準庫存 \*僅限中國地區銷售 ◎僅限台灣地區銷售 ◆材質介紹→參考A04頁 ◆切削條件→參考A09頁  
 ●Standard Stocks \*Sell in China only ◎Sell in Taiwan only Grade Ref,Page-A04 Cutting condition Ref,Page-A09



塗層硬質合金 Carbide Coated 金屬陶瓷 Cermet

形狀 Shape	型號 Model No	圖解 Fig	刀片厚度 S±0.1	刀片半徑 RE ±0.10	切削寬度 CW	最大加工槽溝深度 CDX	右側主偏角 PSIRR	塗層硬質合金 Carbide Coated										金屬陶瓷 Cermet		
								P	P	M	N	W35	BQJ606	BQW706	BQJ606F					
								BEF606	ECM100	ECM200	ECM2010	BEJ857	BEJ875	BEJ750	BEJ757					
	ECH300-SG	3	4.62	0.3	3	17	-				●	●								
圓頭切斷刀片 Round edge grooving insert 	ECR300-OI	4	4.62	1.5	3	17	-							●	●					
	ECR400-OI	4	4.7	2	4	22	-							●						
	ECR500-OI	4	4.85	2.5	5	22	-						●	●						
	ECR600-OI	4	5.1	3	6	22	-						●	●						