

Swiss-Line

- 瑞士式車床又稱為走心式車床，正在成為許多公司大型車床和加工中心的熱門替代品。
- CPT 提供大型、多功能的刀片和刀柄產品線，專為自動車床和瑞士式車床而開發。
- 專為經濟地生產切斷、切槽、仿形螺紋和倒角而設計。

多邊形刀片和刀柄

CPT 提供新型多邊形刀片和刀柄，用於走心式車床上的外圓車削、切槽、切割和螺紋加工，擴展了走心式車床的產品範圍，專為小型零件加工而設計。



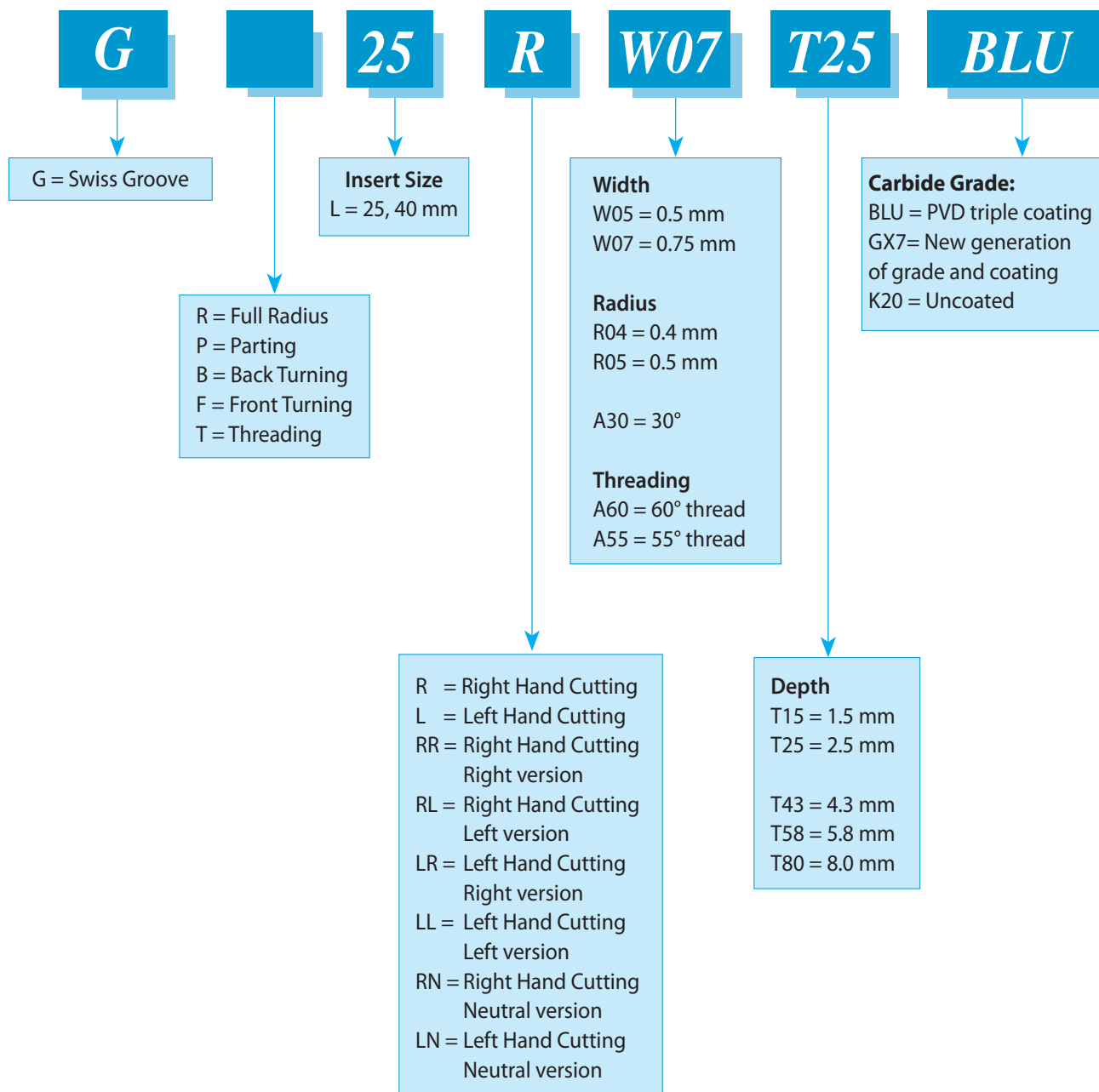
特色

- 高精度研磨刀片。
- 所有刀片均可與相同的刀柄一起使用。
- 最新硬質合金和塗層技術的結合，保證了最長的刀具壽命和更高的生產率。
- 與多種材料相容。
- 塗層刀柄具有耐磨性。

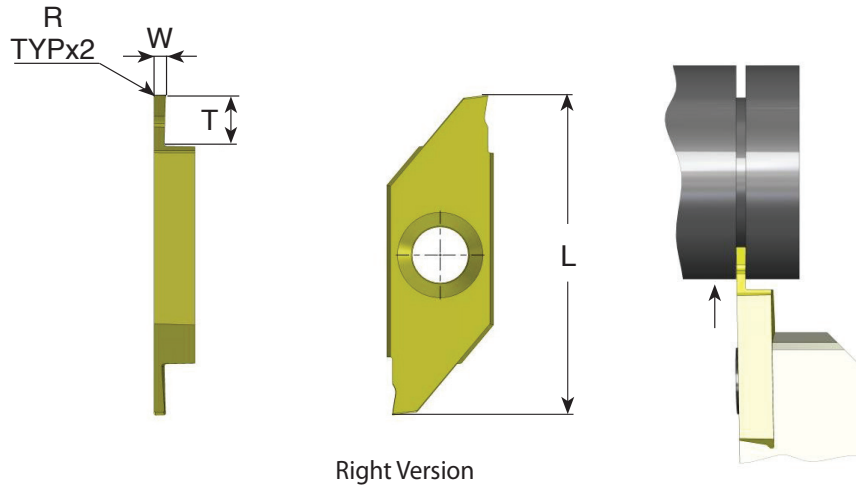
Carbide grades 刀片牌號: BLU, GX7, K20

Product Identification - Ordering Codes

Polygon Inserts



Grooving and Turning 切槽和車削



Right hand cutting 右手切削

Insert Size L	Ordering Code	W ± 0.02	T max	R	Feed mm/rev
25	G25 R W05 T15	0.5	1.5	0	0.01-0.06
	G25 R W07 T25	0.75	2.5	0	0.02-0.07
	G25 R W10 T27	1.0	2.7	0.05	0.02-0.09
	G25 R W12 T30	1.2	3.0	0.05	0.02-0.10
	G25 R W15 T38	1.5	3.8	0.05	0.02-0.12
	G25 R W20 T38	2.0	3.8	0.05	0.02-0.13
	G25 R W25 T38	2.5	3.8	0.05	0.02-0.14
40	G40 R W30 T80	3.0	8.0	0.05	0.02-0.14
	G40 R W40 T80	4.0	8.0	0.05	0.02-0.14

	K20	BLU	GX7*
P		●	●
M	●	●	●
K	●	○	○
N	●		
S	○	○	●
H		≤45 HRc	≤58 HRc

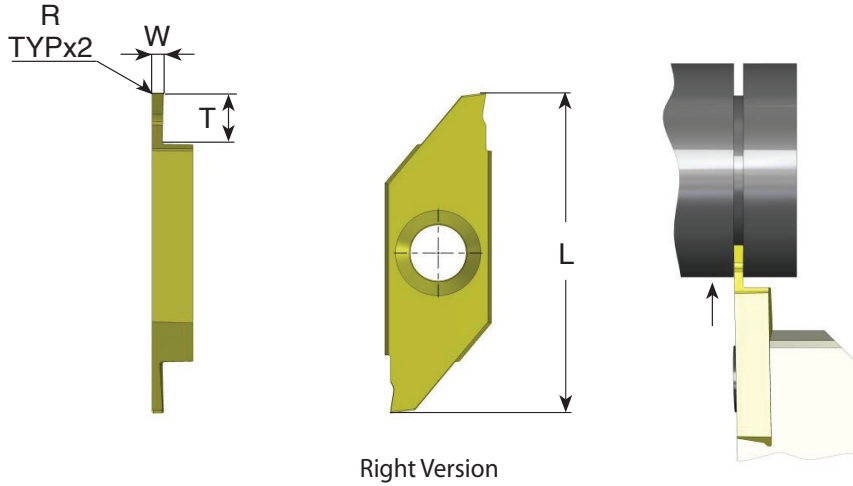
For L.H, specify G25 L instead of G25 R

* Available for insert size G25... only

Grooving, Circlip Ring Grooves

切槽、擋圈環槽

DIN 471/472

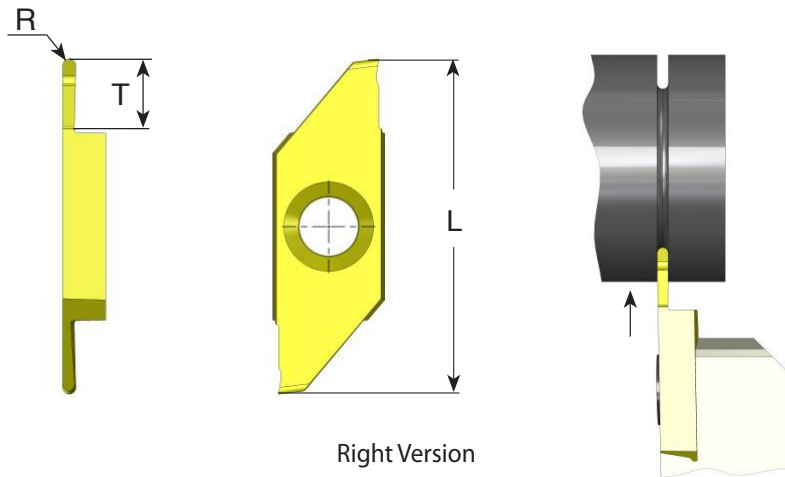


Right hand cutting 右手切削

Insert Size L	Ordering Code	Nom` groove width	W-0.05	T max	R	Feed Inch/rev		K20	BLU	GX7
							P	M	K	N
25	GD25 R W05 T16	0.50	0.57	1.6	0	0.01-0.06	●	●	●	
	GD25 R W06 T17	0.60	0.67	1.7	0	0.01-0.06	●	○	○	
	GD25 R W07 T19	0.70	0.77	1.9	0	0.02-0.07	●			
	GD25 R W08 T22	0.80	0.87	2.2	0	0.02-0.09	○	○	●	
	GD25 R W09 T24	0.90	0.97	2.4	0	0.02-0.09				
	GD25 R W12 T31	1.10	1.24	3.1	0.05	0.02-0.10				
	GD25 R W14 T33	1.30	1.44	3.3	0.05	0.02-0.12				
	GD25 R W17 T33	1.60	1.74	3.3	0.05	0.02-0.13				
	GD25 R W19 T39	1.85	1.99	3.9	0.05	0.02-0.13				
	GD25 R W22 T45	2.15	2.29	4.5	0.05	0.02-0.14				
	GD25 R W27 T55	2.65	2.79	5.5	0.05	0.02-0.14				
									≤45 HRc	≤58 HRc

For L.H, specify GD25 L instead of GD25 R
Nom` = nominal

Grooving and Profiling (full radius) 切槽和仿形加工 (全半徑)



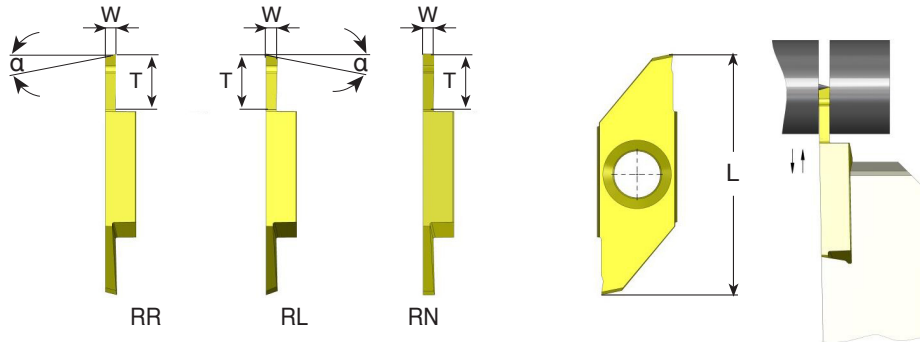
Right hand cutting 右手切削

Insert Size L	Ordering Code	R±0.03	T max	Feed mm/rev
25	GR25 R R02 T15	0.25	1.5	0.01-0.06
	GR25 R R04 T25	0.40	2.5	0.02-0.07
	GR25 R R05 T27	0.50	2.7	0.02-0.09

For L.H, specify GR25 L instead of GR25 R

	K20	BLU	GX7
P		●	●
M	●	●	●
K	●	○	○
N	●		
S	○	○	●
H		≤45 HRc	≤58 HRc

Parting Off and Grooving 切斷和切槽



Right Version

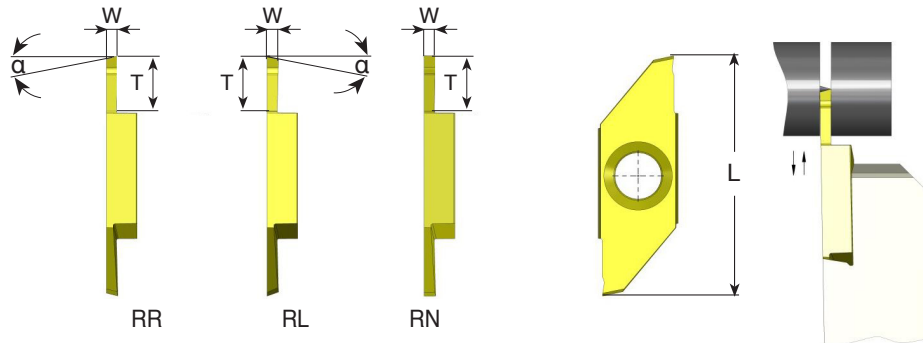
Right hand cutting 右手切削

Insert Size L	Ordering Code	W	α°	T max	Feed mm/rev			
						K20	BLU	GX7
25	GP25 RR W05 T30	0.5	15	3.0	0.02-0.06	P	●	●
	GP25 RL W05 T30	0.5	15	3.0	0.02-0.06	M	●	●
	GP25 RN W05 T30	0.5	0	3.0	0.02-0.06	K	○	○
	GP25 RR W07 T43	0.7	15	4.3	0.02-0.08	N	●	
	GP25 RL W07 T43	0.7	15	4.3	0.02-0.08	S	○	○
	GP25 RN W07 T43	0.7	0	4.3	0.02-0.08	H		
	GP25 RR W08 T50	0.8	15	5.0	0.02-0.08		≤45 HRc	≤58 HRc
	GP25 RL W08 T50	0.8	15	5.0	0.02-0.08			
	GP25 RN W08 T50	0.8	0	5.0	0.02-0.08			
	GP25 RR W10 T58	1.0	15	5.8	0.02-0.13			
	GP25 RL W10 T58	1.0	15	5.8	0.02-0.13			
	GP25 RN W10 T58	1.0	0	5.8	0.02-0.13			
	GP25 RR W12 T58	1.2	15	5.8	0.02-0.13			
	GP25 RL W12 T58	1.2	15	5.8	0.02-0.13			
	GP25 RN W12 T58	1.2	0	5.8	0.02-0.13			
	GP25 RR W15 T58	1.5	15	5.8	0.02-0.13			
	GP25 RL W15 T58	1.5	15	5.8	0.02-0.13			
	GP25 RN W15 T58	1.5	0	5.8	0.02-0.13			
	GP25 RR W18 T58	1.8	15	5.8	0.02-0.13			
	GP25 RL W18 T58	1.8	15	5.8	0.02-0.13			
	GP25 RN W18 T58	1.8	0	5.8	0.02-0.13			
	GP25 RR W20 T58	2.0	15	5.8	0.02-0.13			
	GP25 RL W20 T58	2.0	15	5.8	0.02-0.13			
	GP25 RN W20 T58	2.0	0	5.8	0.02-0.13			
	GP25 RR W20 T75	2.0	15	7.5	0.02-0.10			
GP25 RL W20 T75	2.0	15	7.5	0.02-0.10				
GP25 RN W20 T75	2.0	0	7.5	0.02-0.10				
GP25 RR W25 T58	2.5	15	5.8	0.04-0.13				
GP25 RL W25 T58	2.5	15	5.8	0.04-0.13				
GP25 RN W25 T58	2.5	0	5.8	0.04-0.13				

For L.H, specify GP25 LR instead of GP25 RR
 GP25 LL instead of GP25 RL
 GP25 LN instead of GP25 RN

● First choice ○ Alternative

Parting Off and Grooving 切斷和切槽



Right Version

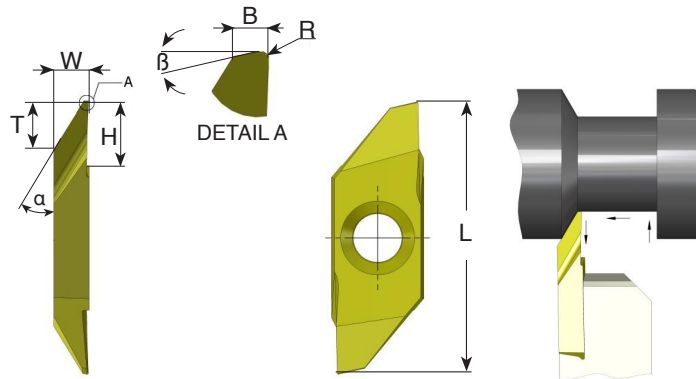
Right hand cutting

Insert Size L	Ordering Code	W	α°	T max	Feed mm/rev
40	GP40 RR W15 T80	1.5	15	8.0	0.03-0.08
	GP40 RL W15 T80	1.5	15	8.0	0.03-0.08
	GP40 RN W15 T80	1.5	0	8.0	0.03-0.08
	GP40 RR W18 T95	1.8	15	9.5	0.03-0.08
	GP40 RL W18 T95	1.8	15	9.5	0.03-0.08
	GP40 RN W18 T95	1.8	0	9.5	0.03-0.08
	GP40 RR W20 T110	2.0	15	11.0	0.03-0.08
	GP40 RL W20 T110	2.0	15	11.0	0.03-0.08
	GP40 RN W20 T110	2.0	0	11.0	0.03-0.08
	GP40 RR W25 T130	2.5	15	13.0	0.03-0.08
	GP40 RL W25 T130	2.5	15	13.0	0.03-0.08
	GP40 RN W25 T130	2.5	0	13.0	0.03-0.08
	GP40 RR W30 T130	3.0	15	13.0	0.03-0.08
	GP40 RL W30 T130	3.0	15	13.0	0.03-0.08
GP40 RN W30 T130	3.0	0	13.0	0.03-0.08	

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify GP40 LR instead of GP40 RR
 GP40 LL instead of GP40 RL
 GP40 LN instead of GP40 RN

Back Turning 後掃刀



Right Version

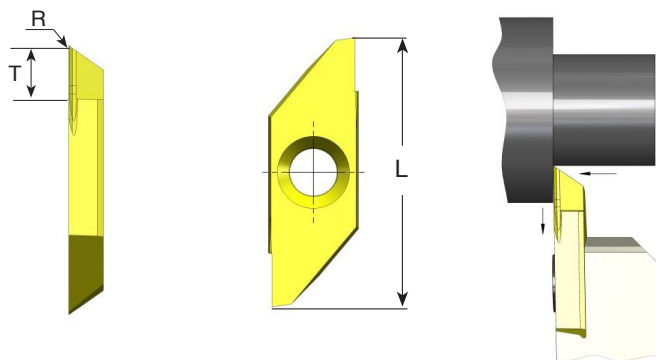
Right hand cutting 右手切削

Insert Size L	Ordering Code	α°	β°	R	W	T _{max}	B	H	Feed mm/rev
25	GB25 R A30 R03	30	15	0.03	3.0	4.0	0.5	8.0	0.05-0.12
	GB25 R A30 R10	30	15	0.10	3.0	4.0	0.5	8.0	0.05-0.12
	GB25 R A30 R20	30	15	0.20	3.0	4.0	0.5	8.0	0.05-0.12

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify GB25 L instead of GB25 R

Front Turning 前掃刀



Right Version

Right hand cutting 右手切削

Insert Size L	Ordering Code	T _{max}	R	Feed mm/rev
25	GF25 R T40	4.0	0.05	0.05-0.12
	GF25 R T40 R10	4.0	0.10	0.05-0.12
	GF25 R T70	7.0	0.05	0.05-0.08

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

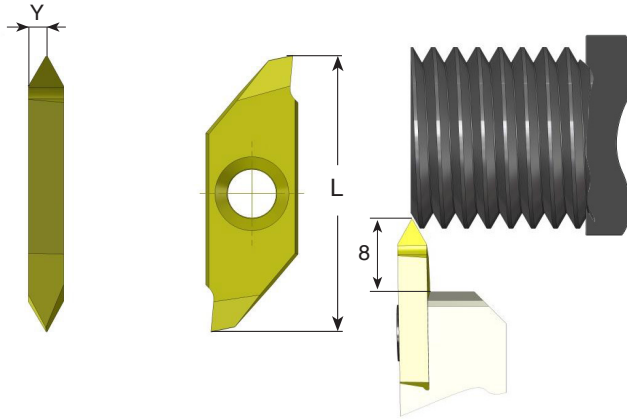
For L.H, specify GF25 L instead of GF25 R

● First choice

○ Alternative

Threading - Partial Profile 60°

螺紋加工 - 部分輪廓 60°



Right Version

Right hand cutting 右手切削

Insert Size L	Ordering Code	Pitch Range		Y
		mm	TPI	
25	GT25 R A60	0.25-0.8	100-32	0.7
	GT25 R G60	1.0-3.0	24-8	1.6

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify GT25 L instead of GT25 R

Threading - Partial Profile 55°

螺紋加工 - 部分輪廓 55°

Right hand cutting 右手切削

Insert Size L	Ordering Code	Pitch Range		Y
		mm	TPI	
25	GT25 R A55	0.5-1.5	48-16	1.0
	GT25 R G55	1.75-3.0	14-8	1.6

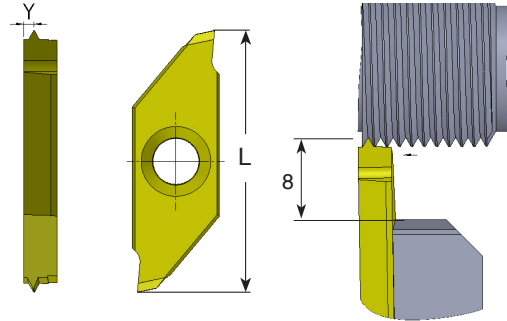
	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify GT25 L instead of GT25 R

Threading - ISO metric 60° Full Profile

螺紋加工 - ISO 公制 60° 全輪廓

External thread
外螺紋



Right Version

Right hand cutting 右手切削

Insert Size L	Ordering Code	Pitch mm	Y
25	GT25 R 0.5 ISO	0.5	0.6
	GT25 R 0.6 ISO	0.6	0.6
	GT25 R 0.7 ISO	0.7	0.7
	GT25 R 0.75 ISO	0.75	0.7
	GT25 R 0.8 ISO	0.8	0.7
	GT25 R 1.0 ISO	1.0	0.8
	GT25 R 1.25 ISO	1.25	1.0
	GT25 R 1.5 ISO	1.5	1.1

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify GT25 L instead of GT25 R

Threading - UN unified 60° Full Profile

螺紋加工 - UN 統一 60° 全輪廓

External thread 外螺紋

Right hand cutting 右手切削

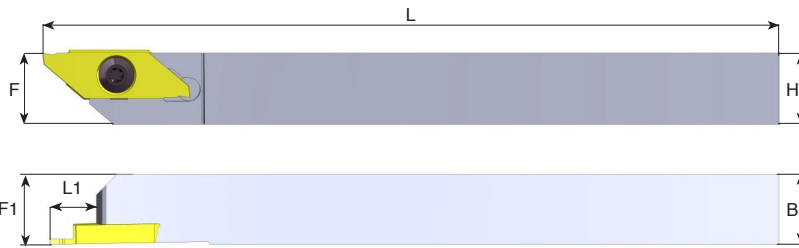
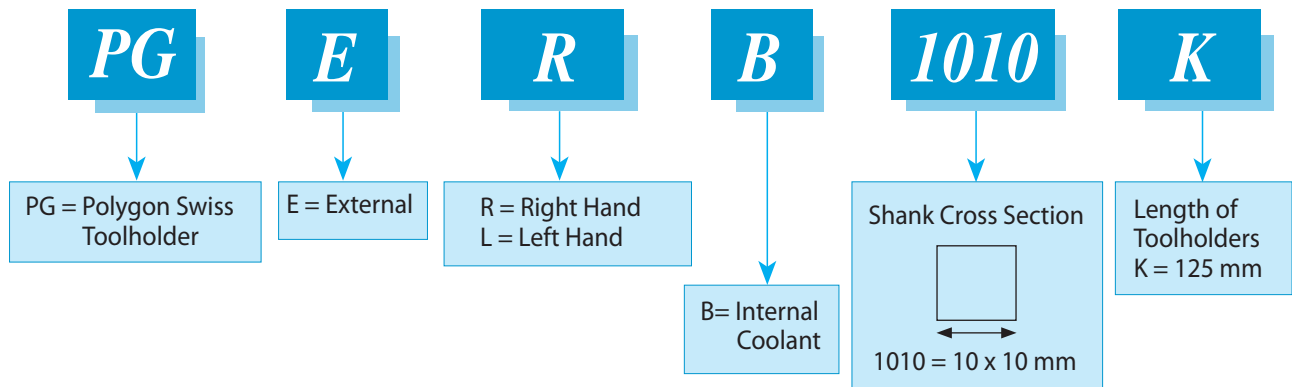
Insert Size L	Ordering Code	Pitch TPI	Y
25	GT25 R 56 UN	56	0.6
	GT25 R 40 UN	40	0.7
	GT25 R 32 UN	32	0.7
	GT25 R 24 UN	24	0.8

	K20	BLU
P		●
M	●	●
K	●	○
N	●	
S	●	●
H		≤45 HRc

For L.H, specify GT25 L instead of GT25 R

External Toolholders 刀柄

Product Identification - Ordering Codes



Right Version



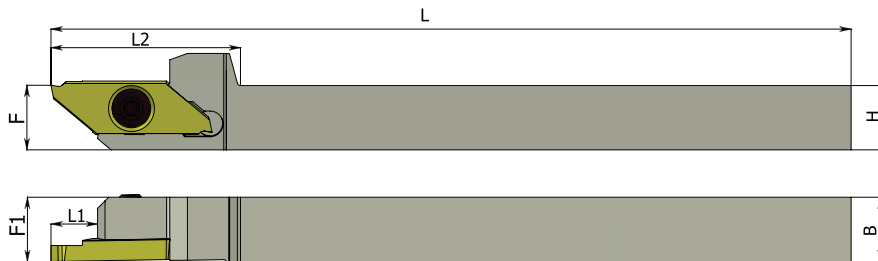
Right hand cutting 右手切削

Insert Size	Ordering Code	B	H	L1	L	F	F1	Insert Screw Torx+	Key Torx+
25	PGER 0808 K	8	8	8	125	10	10	S26PD	K11P
	PGER 1010 K	10	10	8	125	10	10	S26PD	K11P
	PGER 1212 K	12	12	8	125	12	12	S26PD	K11P
	PGER 1616 K	16	16	8	125	16	16	S26PD	K11P
	PGER 2020 K	20	20	8	125	20	20	S26PD	K11P
40	PGER 1010 K40	10	10	13	125	10	10	S26PD	K11P
	PGER 1212 K40	12	12	13	125	12	12	S26PD	K11P
	PGER 1616 K40	16	16	13	125	16	16	S26PD	K11P
	PGER 2020 K40	20	20	13	125	20	20	S26PD	K11P
	PGER 2525 M40	25	25	13	150	25	25	S26PD	K11P

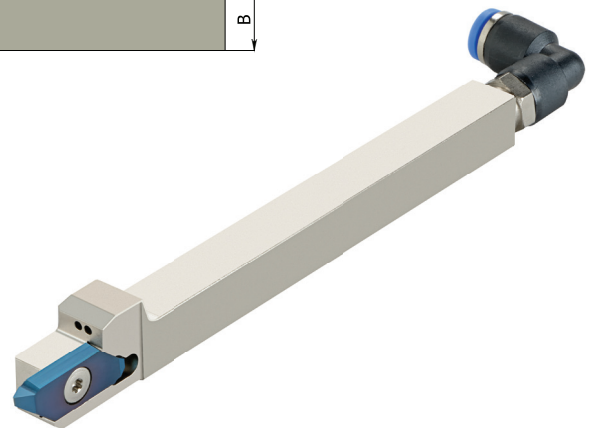
For L.H, specify PGE **L** instead of PGE **R**

External Toolholders 刀柄

with internal coolant 帶內冷



Right Version



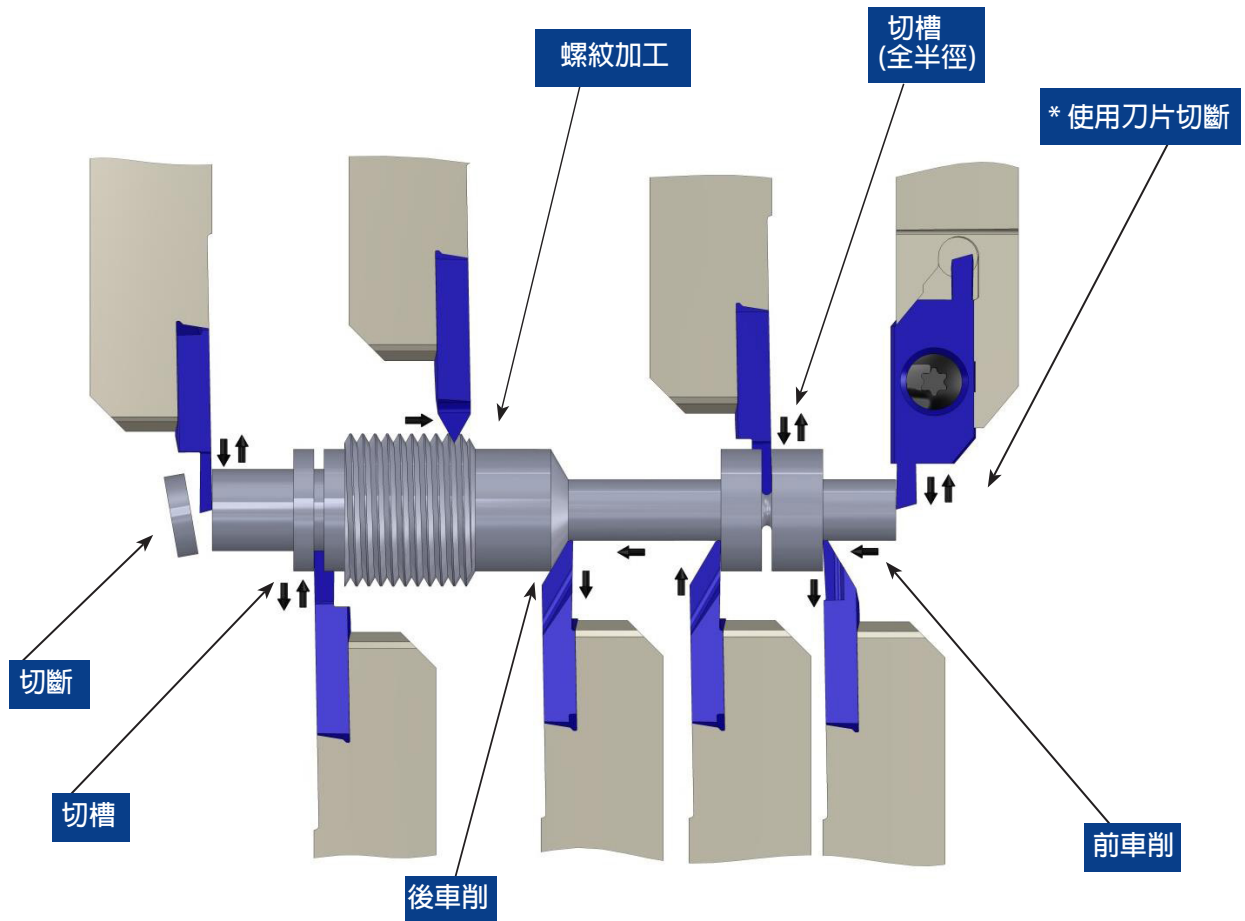
Right hand cutting 右手切削

Insert Size	Ordering Code	B	H	L1	L2	L	F	F1	Insert Screw Torx+	Key Torx+	*Coolant connector
25	PGERB 1010 K	10	10	8	30	125	10	10	S26PD	K11P	Ø4 / Ø6
	PGERB 1212 K	12	12	8	30	125	12	12	S26PD	K11P	Ø4 / Ø6
	PGERB 1616 K	16	16	8	30	125	16	16	S26PD	K11P	Ø4 / Ø6

For L.H, specify PGE L B instead of PGE R B

* Coolant pipe diameter

Working Method 加工方式



* Available upon request (grooving, parting, threading)

Polygon Swiss Line 多邊形走心式車床刀

Carbide Grades 牌號說明

BLU

PVD triple layer coated Sub-Micron grade 適用於鋼、不鏽鋼、鈦和硬材料。

GX7

New generation of PVD triple layer coated Sub-Micron grade 適用於各種材料，如：鋼、不鏽鋼、鈦和硬度高達 58 HRC 的硬質材料。具有高韌性，可優化性能。

K20

用於鋁和非鐵金屬材料、不鏽鋼和鈦的無塗層牌號。

Cutting Data 切削參數

ISO Standard	Materials	Cutting Speed m/min		
		K20	BLU	GX7*
P	Low & Medium Carbon Steels <0.55%C	-	80-150	70-160
	High Carbon Steels ≥0.55%C	-	70-120	60-130
	Alloy Steels, Treated Steels	-	40-80	40-100
M	Stainless Steel-Free Cutting	30-80	60-120	60-140
	Stainless Steel-Austenitic	20-70	30-90	30-120
	Cast Steels	30-80	50-120	50-140
K	Cast Iron	50-120	60-130	60-140
N	Aluminum ≤12%Si, Copper	120-250	-	-
	Aluminum >12%Si	90-200	-	-
	Synthetics, Duroplastics, Thermoplastics	70-150	-	-
S	Nickel Alloys, Titanium Alloys	20-50	30-70	30-90
H	Hardened Steel, 45-50HRc	-	20-50	20-70
	Hardened Steel, 50-58HRc	-	-	20-60

* Available for grooving and parting off, with G25 insert size