Carmex
Precision Tools Ltd.
x-treme thread cutting™

New

Swiss-Line

瑞士机床或小型机床使用

Metric 2014

Swiss-Line

瑞士型机床正在成为许多公司的大型车床和加工中心机床一种替代品。

- **Swiss Type machines are becoming a popular alternative to large lathes and machining centers in many companies.**
- **Carmex is introducing a new line of inserts and toolholders, developed for automatic lathes and Swiss Type machines.**

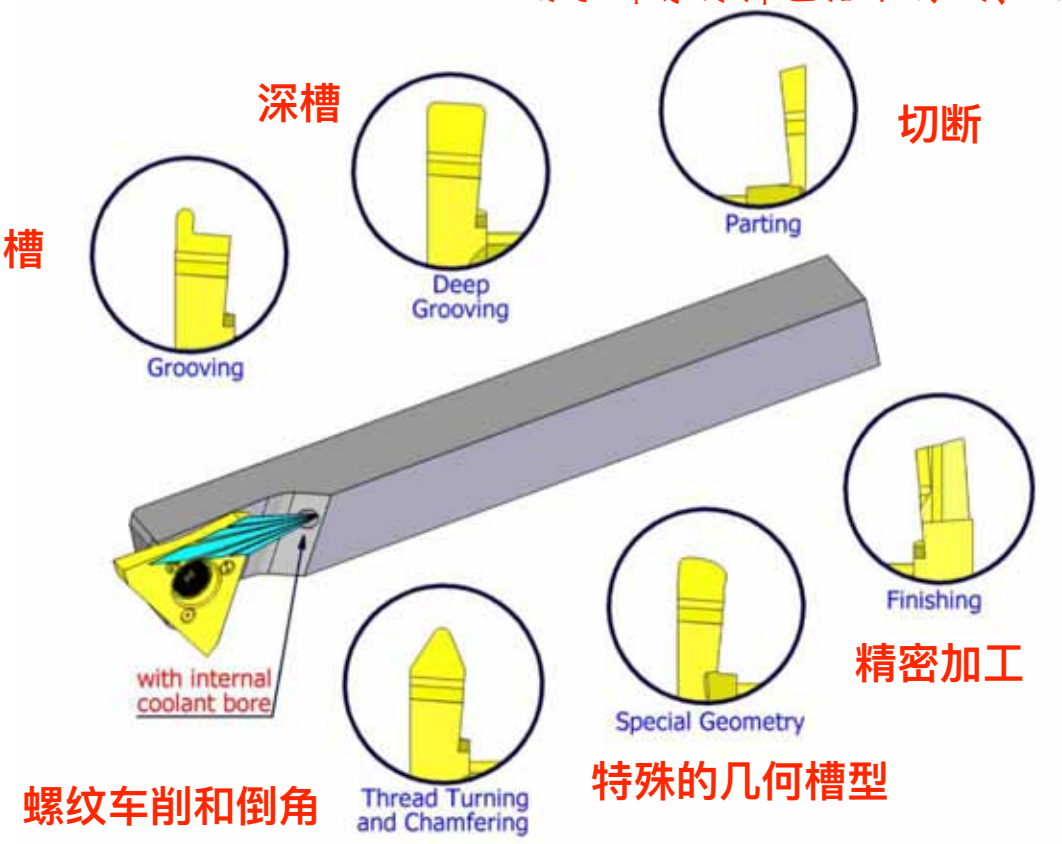
CARMEX 引入一个新的刀片和刀杆，用于瑞士自动车床、走心机。

- **Designed for economic parting, grooving, profiling and chamfering mass production.** 这个设计专为经济切断，开槽，仿形和倒角的批量生产。

Advantages

Advance sub-micron grade (K10-K30) - a combination of strength, toughness, wear resistance and edge sharpness.

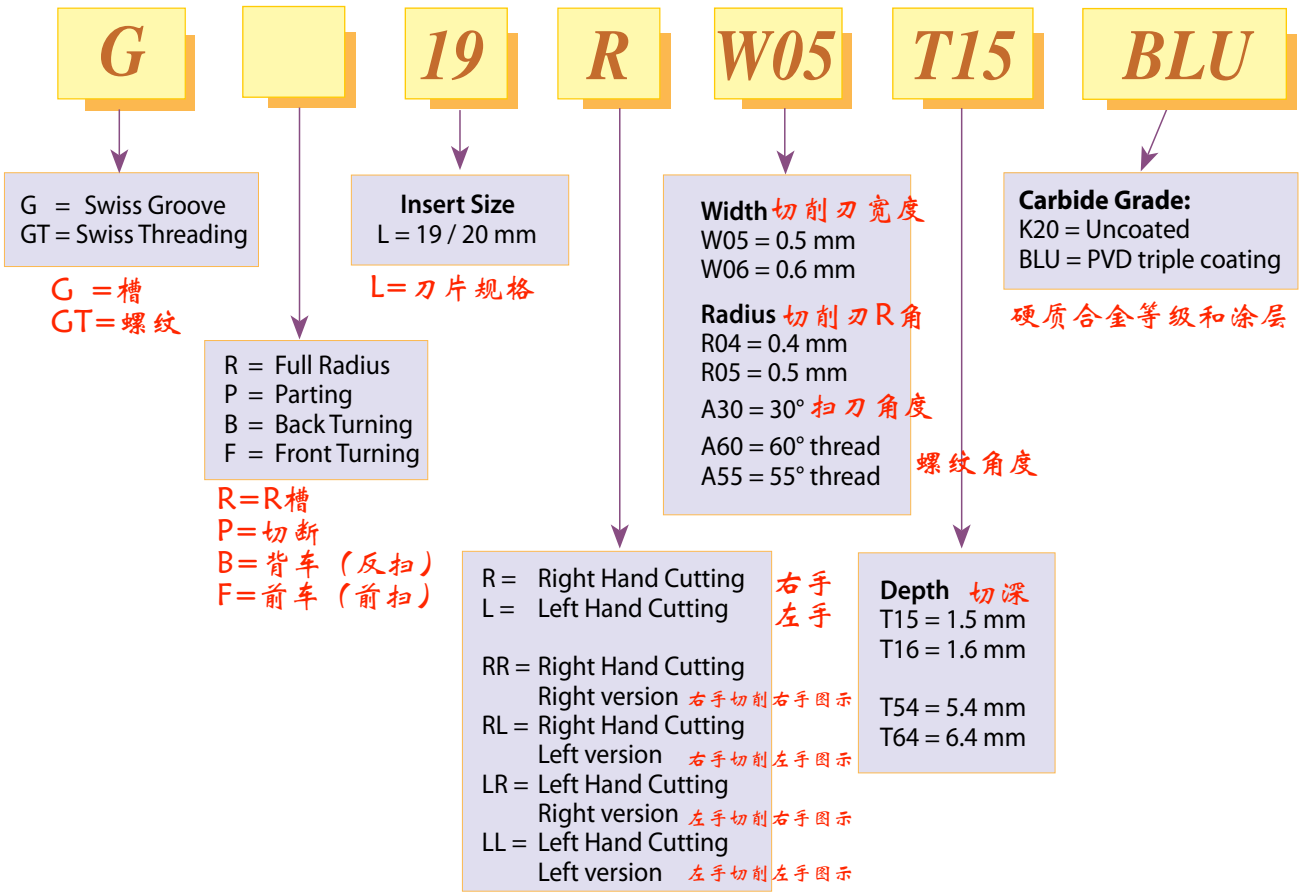
- Grounded cutting edges. 磨制切削刃
- Advance and unique PVD triple coating, for high wear and heat resistance. 独特的PVD三层涂层，高耐磨、耐热
- For most types of material, including Stainless Steels, Titanium and Super Alloys. 用于所有材料包括不锈钢、钛合金和超合金



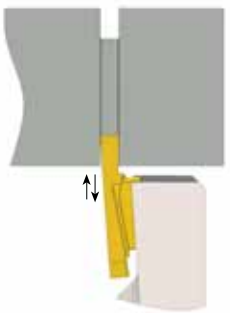
- Three cutting edges. 三个切削刃
- The insert can be indexed directly on the machine. 刀片可以直接在机床上转换位置
- Internal coolant to the cutting edge. 内冷液可以直接射到切削刃

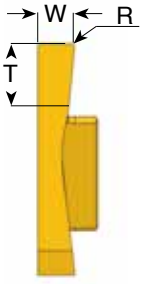
Product Identification - Inserts

刀片标识

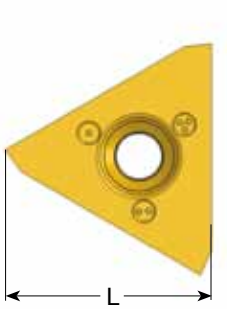


Grooving 切槽





Right Version



右手样式

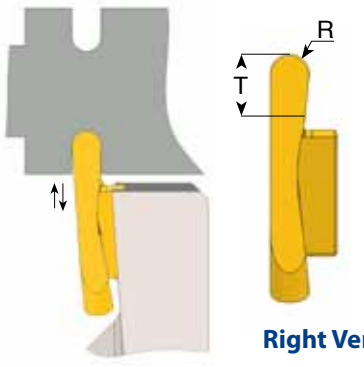
Right hand cutting 右手切削

L	Ordering Code	W ±0.02	T max	R	Feed mm/rev	
					Radial	Axial
19	G19 R W05 T15	0.5	1.5	0	0.01-0.06	0.02-0.10
	G19 R W06 T16	0.6	1.6	0	0.01-0.06	0.02-0.10
	G19 R W07 T17	0.75	1.7	0	0.01-0.06	0.02-0.10
	G19 R W08 T18	0.8	2.0	0.05	0.01-0.06	0.02-0.10
	G19 R W10 T22	1.0	2.5	0.05	0.02-0.07	0.02-0.10
	G19 R W12 T24	1.2	3.0	0.05	0.02-0.07	0.02-0.10
	G19 R W14 T28	1.4	3.0	0.05	0.03-0.08	0.02-0.10
	G19 R W15 T30	1.5	3.0	0.05	0.03-0.08	0.02-0.10
	G19 R W17 T34	1.7	4.0	0.05	0.04-0.09	0.02-0.20
20	G20 R W20 T40	2.0	4.0	0.1	0.05-0.10	0.02-0.20
	G20 R W22 T45	2.25	5.0	0.1	0.05-0.10	0.02-0.20
	G20 R W25 T50	2.5	6.0	0.1	0.05-0.10	0.02-0.20
	G20 R W30 T60	3.0	6.0	0.1	0.05-0.10	0.02-0.20

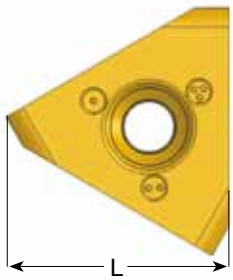
Left hand cutting 左手切削

L	Ordering Code	W ±0.02	T max	R	Feed mm/rev	
					Radial	Axial
19	G19 L W05 T15	0.5	1.5	0	0.01-0.06	0.02-0.10
	G19 L W06 T16	0.6	1.6	0	0.01-0.06	0.02-0.10
	G19 L W07 T17	0.75	1.7	0	0.01-0.06	0.02-0.10
	G19 L W08 T18	0.8	2.0	0.05	0.01-0.06	0.02-0.10
	G19 L W10 T22	1.0	2.5	0.05	0.02-0.07	0.02-0.10
	G19 L W12 T24	1.2	3.0	0.05	0.02-0.07	0.02-0.10
	G19 L W14 T28	1.4	3.0	0.05	0.03-0.08	0.02-0.10
	G19 L W15 T30	1.5	3.0	0.05	0.03-0.08	0.02-0.10
	G19 L W17 T34	1.7	4.0	0.05	0.04-0.09	0.02-0.20
20	G20 L W20 T40	2.0	4.0	0.1	0.05-0.10	0.02-0.20
	G20 L W22 T45	2.25	5.0	0.1	0.05-0.10	0.02-0.20
	G20 L W25 T50	2.5	6.0	0.1	0.05-0.10	0.02-0.20
	G20 L W30 T60	3.0	6.0	0.1	0.05-0.10	0.02-0.20

Grooving and Profiling (full radius) R槽



Right Version



右手样式

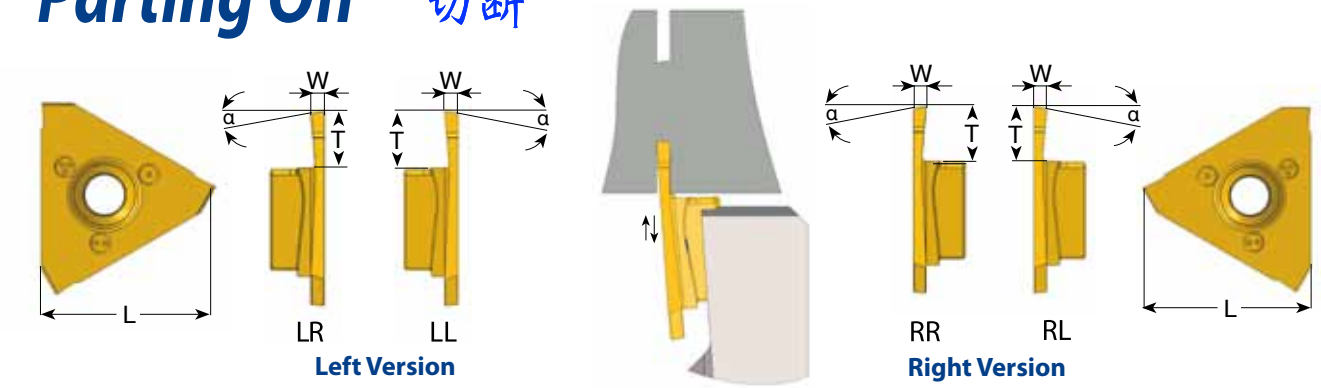
Right hand cutting 右手切削

L	Ordering Code	R ±0.03	T max	Feed mm/rev	
				Radial	Axial
19	**GR19 R R02 T15**	0.25	1.5	0.01-0.06	0.02-0.10
	GR19 R R04 T18	0.40	2.0	0.01-0.06	0.02-0.10
	GR19 R R05 T22	0.50	2.5	0.02-0.07	0.02-0.10
	GR19 R R06 T26	0.60	3.0	0.02-0.07	0.02-0.10
	GR19 R R08 T33	0.80	3.5	0.04-0.09	0.02-0.20
	GR19 R R10 T40	1.00	4.0	0.05-0.10	0.02-0.20
20	**GR20 R R12 T50**	1.25	6.0	0.05-0.10	0.02-0.20
	GR20 R R15 T60	1.50	6.0	0.05-0.10	0.02-0.20

Left hand cutting 左手切削

L	Ordering Code	R ±0.03	T max	Feed mm/rev	
				Radial	Axial
19	**GR19 L R02 T15**	0.25	1.5	0.01-0.06	0.02-0.10
	GR19 L R04 T18	0.40	2.0	0.01-0.06	0.02-0.10
	GR19 L R05 T22	0.50	2.5	0.02-0.07	0.02-0.10
	GR19 L R06 T26	0.60	3.0	0.02-0.07	0.02-0.10
	GR19 L R08 T33	0.80	3.5	0.04-0.09	0.02-0.20
	GR19 L R10 T40	1.00	4.0	0.05-0.10	0.02-0.20
20	**GR20 L R12 T50**	1.25	6.0	0.05-0.10	0.02-0.20
	GR20 L R15 T60	1.50	6.0	0.05-0.10	0.02-0.20

Parting Off 切断



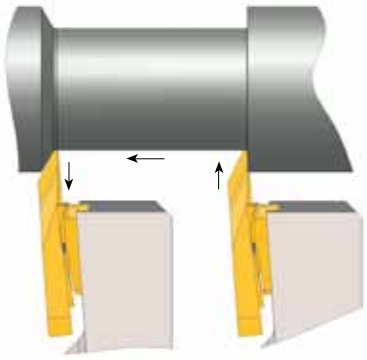
Right hand cutting 右手切削 右手样式

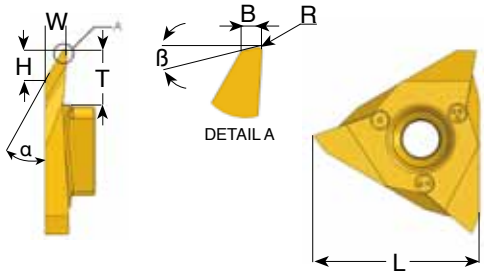
L	Ordering Code	W	α°	T max	Feed mm/rev Radial
19	GP19 RR W10 T54 GP19 RL W10 T54	1.0	15	5.4	0.02-0.09
	GP19 RR W12 T54 GP19 RL W12 T54	1.2	15	5.4	0.02-0.09
20	GP20 RR W15 T64 GP20 RL W15 T64	1.5	15	6.4	0.04-0.10
	GP20 RR W18 T64 GP20 RL W18 T64	1.8	15	6.4	0.04-0.10
	GP20 RR W20 T64 GP20 RL W20 T64	2.0	15	6.4	0.05-0.12
	GP20 RR W25 T64 GP20 RL W25 T64	2.5	15	6.4	0.05-0.12
	GP20 RR W30 T64 GP20 RL W30 T64	3.0	15	6.4	0.05-0.12

Left hand cutting 左手切削

L	Ordering Code	W	α°	T max	Feed mm/rev Radial
19	GP19 LR W10 T54 GP19 LL W10 T54	1.0	15	5.4	0.02-0.09
	GP19 LR W12 T54 GP19 LL W12 T54	1.2	15	5.4	0.02-0.09
20	GP20 LR W15 T64 GP20 LL W15 T64	1.5	15	6.4	0.04-0.10
	GP20 LR W18 T64 GP20 LL W18 T64	1.8	15	6.4	0.04-0.10
	GP20 LR W20 T64 GP20 LL W20 T64	2.0	15	6.4	0.05-0.12
	GP20 LR W25 T64 GP20 LL W25 T64	2.5	15	6.4	0.05-0.12
	GP20 LR W30 T64 GP20 LL W30 T64	3.0	15	6.4	0.05-0.12

Back Turning 背车刀 (扫刀)





Right Version

右手样式

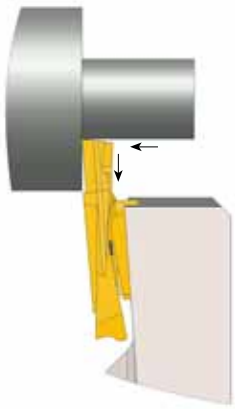
Right hand cutting 右手切削

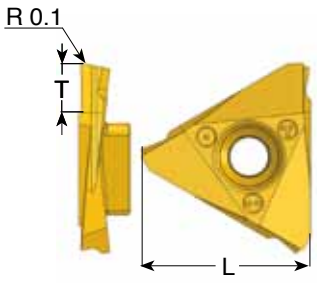
L	Ordering Code	α°	ß°	R	W	H	B	T	Feed mm/rev
19	GB19 R A30	30	12	0.1	3.4	4.3	0.5	5.4	0.05-0.15
20	GB20 R A30	30	12	0.1	3.4	4.3	0.5	6.4	0.05-0.15

Left hand cutting 左手切削

L	Ordering Code	α°	ß°	R	W	H	B	T	Feed mm/rev
19	GB19 L A30	30	12	0.1	3.4	4.3	0.5	5.4	0.05-0.15
20	GB20 L A30	30	12	0.1	3.4	4.3	0.5	6.4	0.05-0.15

Front Turning 车削





Right Version

右手样式

Right hand cutting 右手切削

L	Ordering Code	T	Feed mm/rev
19	GF19 R T54	5.4	0.05-0.15
20	GF20 R T64	6.4	0.05-0.15

Left hand cutting 左手切削

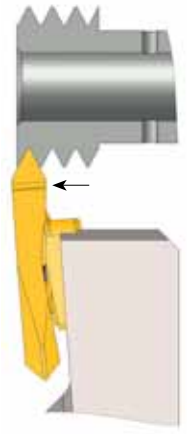
L	Ordering Code	T	Feed mm/rev
19	GF19 L T54	5.4	0.05-0.15
20	GF20 L T64	6.4	0.05-0.15

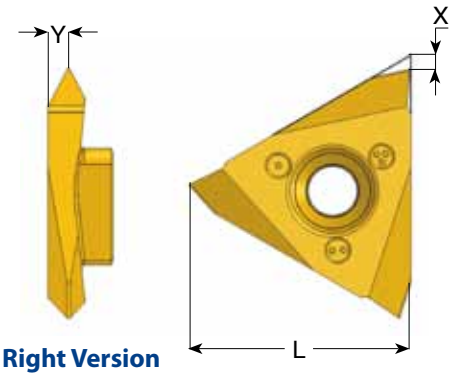
Threading - Partial Profile 60°

External Thread

60°范围牙螺纹

外螺纹





Right Version

右手样式

Right hand cutting 右手切削

L	mm	TPI	Ordering Code	X	Y
19	0.5-1.5	48-16	**GT19 R A60**	2.8	1.1
	1.75-3.0	14-8	**GT19 R G60**	2.8	1.7
	0.5-3.0	48-8	**GT19 R AG60**	2.8	1.7

Left hand cutting 左手切削

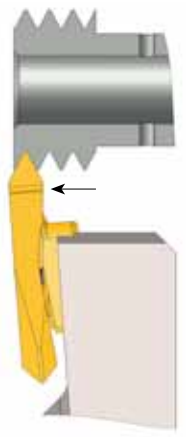
L	mm	TPI	Ordering Code	X	Y
19	0.5-1.5	48-16	**GT19 L A60**	2.8	1.1
	1.75-3.0	14-8	**GT19 L G60**	2.8	1.7
	0.5-3.0	48-8	**GT19 L AG60**	2.8	1.7

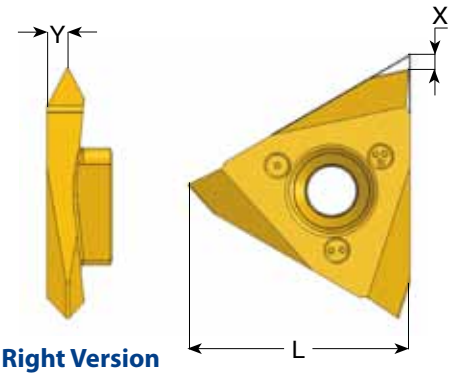
Threading - Partial Profile 55°

External Thread

55°范围牙螺纹

外螺纹





Right Version

右手样式

Right hand cutting 右手切削

L	mm	TPI	Ordering Code	X	Y
19	0.5-1.5	48-16	**GT19 R A55**	2.8	1.0
	1.75-3.0	14-8	**GT19 R G55**	2.8	1.7
	0.5-3.0	48-8	**GT19 R AG55**	2.8	1.7

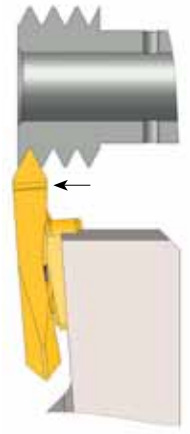
Left hand cutting 左手切削

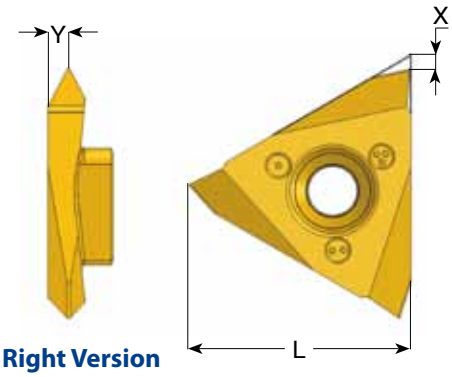
L	mm	TPI	Ordering Code	X	Y
19	0.5-1.5	48-16	**GT19 L A55**	2.8	1.0
	1.75-3.0	14-8	**GT19 L G55**	2.8	1.7
	0.5-3.0	48-8	**GT19 L AG55**	2.8	1.7

Threading - ISO metric 60°

External Thread

60° 带修光刃
外螺纹





Right Version

右手样式

Right hand cutting 右手切削

L	mm	Ordering Code	X	Y
19	0.5	GT19 R 0.5ISO	2.8	0.6
	0.7	GT19 R 0.7ISO	2.8	0.7
	0.75	GT19 R 0.75ISO	2.8	0.7
	0.8	GT19 R 0.8ISO	2.8	0.7
	1.0	GT19 R 1.0ISO	2.8	0.8
	1.25	GT19 R 1.25ISO	2.8	1.0
	1.5	GT19 R 1.5ISO	2.8	1.1
	1.75	GT19 R 1.75ISO	2.8	1.3

Left hand cutting 左手切削

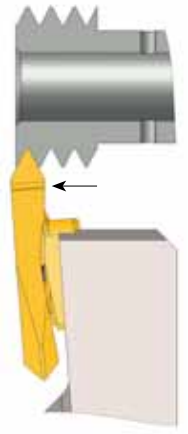
L	mm	Ordering Code	X	Y
19	0.5	GT19 L 0.5ISO	2.8	0.6
	0.7	GT19 L 0.7ISO	2.8	0.7
	0.75	GT19 L 0.75ISO	2.8	0.7
	0.8	GT19 L 0.8ISO	2.8	0.7
	1.0	GT19 L 1.0ISO	2.8	0.8
	1.25	GT19 L 1.25ISO	2.8	1.0
	1.5	GT19 L 1.5ISO	2.8	1.1
	1.75	GT19 L 1.75ISO	2.8	1.3

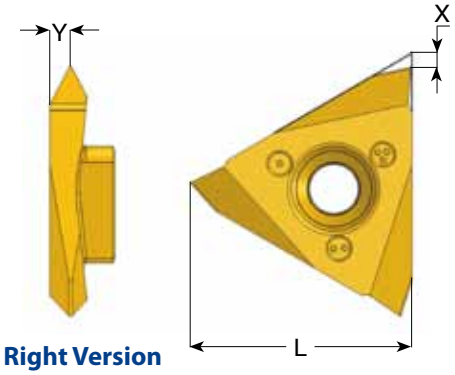
Threading - UN unified 60°

External Thread

60° 美制 UN

外螺纹





Right Version

右手样式

Right hand cutting 右手切削

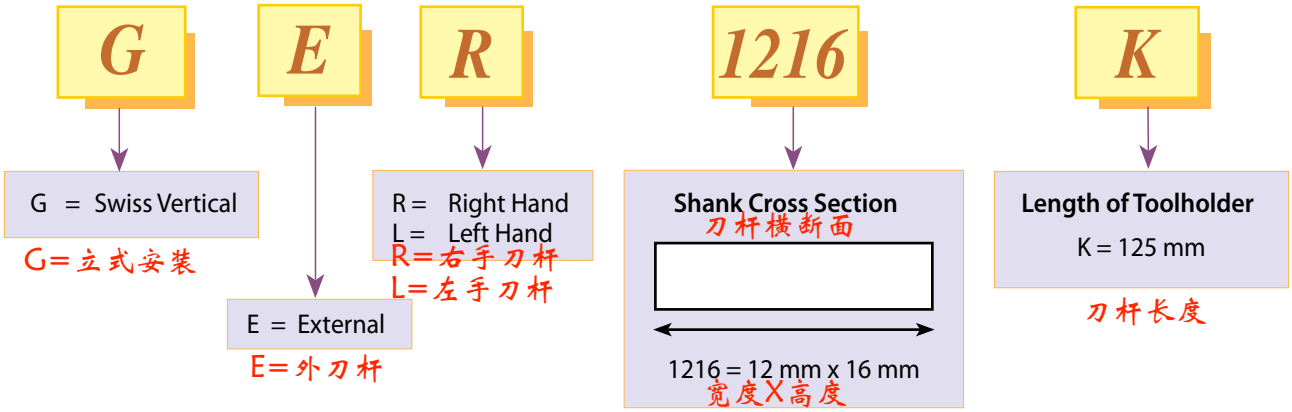
L	TPI	Ordering Code	X	Y
19	72	GT19 R 72UN	2.8	0.4
	56	GT19 R 56UN	2.8	0.6
	40	GT19 R 40UN	2.8	0.7
	32	GT19 R 32UN	2.8	0.7
	24	GT19 R 24UN	2.8	0.8
	20	GT19 R 20UN	2.8	1.0

Left hand cutting 左手切削

L	TPI	Ordering Code	X	Y
19	72	GT19 L 72UN	2.8	0.4
	56	GT19 L 56UN	2.8	0.6
	40	GT19 L 40UN	2.8	0.7
	32	GT19 L 32UN	2.8	0.7
	24	GT19 L 24UN	2.8	0.8
	20	GT19 L 20UN	2.8	1.0

Product Identification - Toolholders

刀杆标识

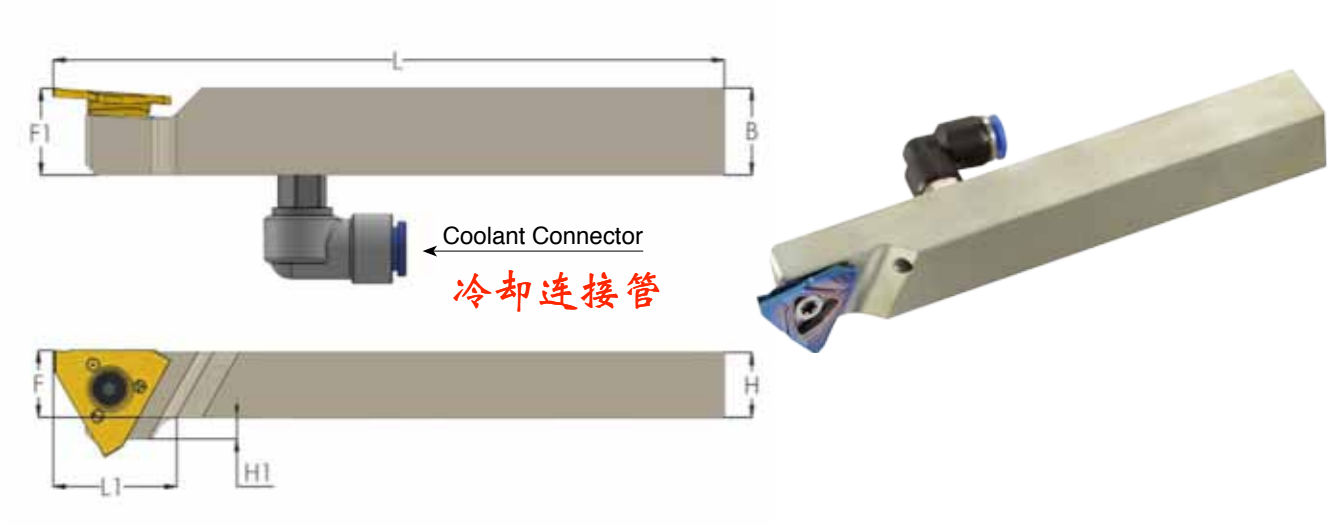


External Toolholders 外刀杆

- Coolant through toolholders, for external turning in Swiss type lathes machines. 内冷刀杆、瑞士机床或小型机床
- The high pressure coolant is directed towards the insert cutting edge in order to evacuate the chips created and avoid build up edge.
- Including a coolant connector for fast attachment on the machine.

高压冷却水直接射向刀片切削刃以利切屑排除

包括一个内冷接头与机床冷却装置快速连接



Right hand 右手刀杆

Ordering Code	B	H	L1	L	F	F1	H1	Insert Screw	Torx Key	*Coolant connector
** GER 0816 K	16	8	17	125	8	16	8	S21	K21	-
GER 1016 K	16	10	17	125	10	16	6	S21	K21	Ø4 / Ø6
GER 1216 K	16	12	17	125	12	16	4	S21	K21	Ø4 / Ø6
GER 1616 K	16	16	-	125	16	16	0	S21	K21	Ø4 / Ø6
GER 2020 K	20	20	-	125	20	20	0	S21	K21	Ø4 / Ø6
GER 2525 M	25	25	-	150	25	25	0	S21	K21	Ø4 / Ø6

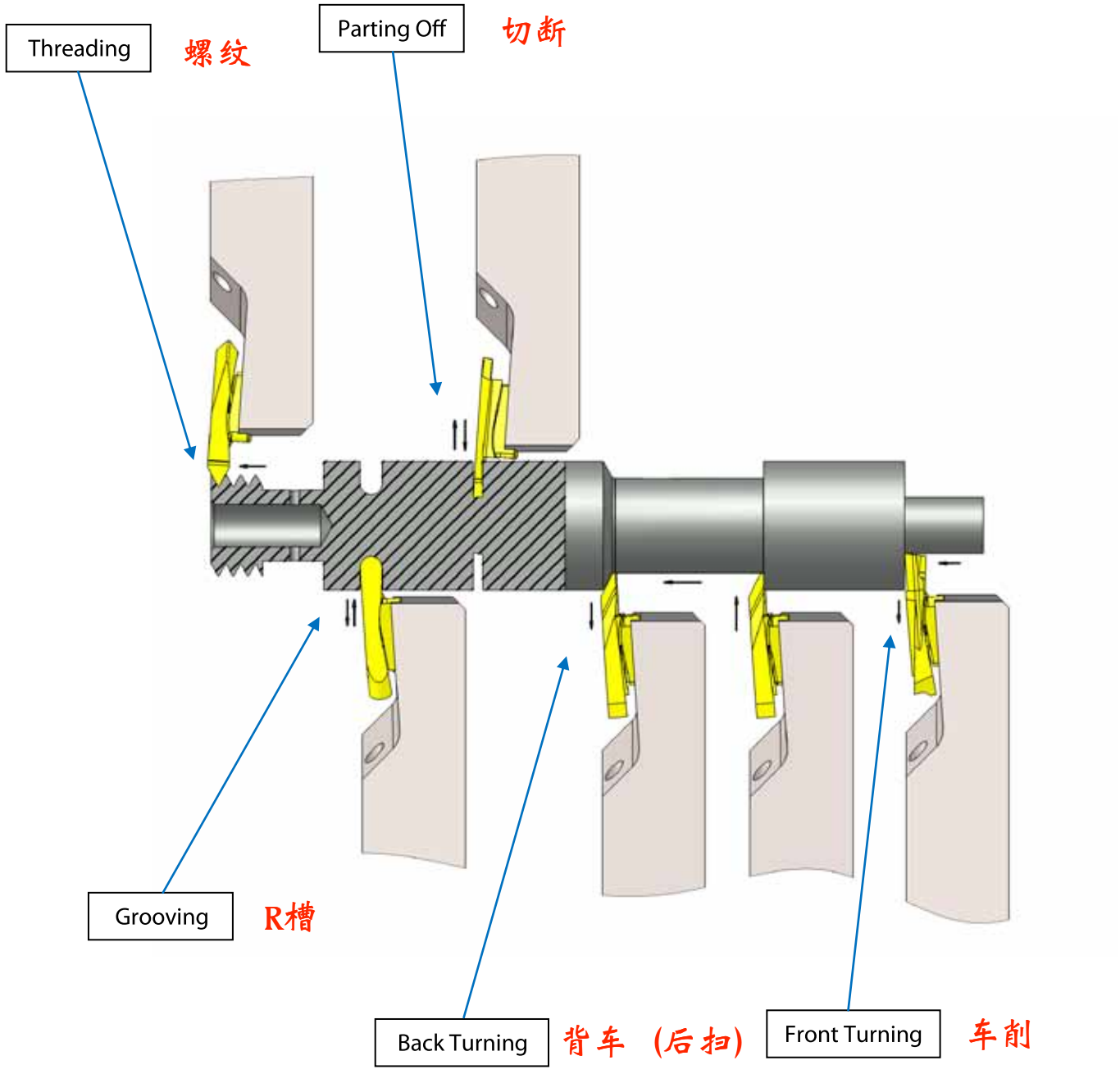
* Diameter of coolant pipe 冷却管直径
** Without coolant 不带冷却

Left hand 左手刀杆

Ordering Code	B	H	L1	L	F	F1	H1	Insert Screw	Torx Key	*Coolant connector
** GEL 0816 K	16	8	17	125	8	16	8	S21	K21	-
GEL 1016 K	16	10	17	125	10	16	6	S21	K21	Ø4 / Ø6
GEL 1216 K	16	12	17	125	12	16	4	S21	K21	Ø4 / Ø6
GEL 1616 K	16	16	-	125	16	16	0	S21	K21	Ø4 / Ø6
GEL 2020 K	20	20	-	125	20	20	0	S21	K21	Ø4 / Ø6
GEL 2525 M	25	25	-	150	25	25	0	S21	K21	Ø4 / Ø6

* Diameter of coolant pipe 冷却管直径
** Without coolant 不带冷却

Grooving - Parting Off - Turning - Profiling - Threading
Working Method



Carbide Grades

K20

Uncoated Sub-Micron carbide grade for Aluminum and non-ferrous materials, Stainless Steels and Titanium.

非涂层亚微粒硬质合金用于铝和非铁金属，不锈钢和钛合金

BLU

PVD triple layer coated Sub-Micron grade for Steel, Stainless Steels, Titanium and hard materials.

三层PVD涂层亚微粒硬质合金，用于钢，不锈钢，钛合金和硬钢

Cutting Data

ISO标准 ISO Standard		Materials 材料	Cutting Speed m/min 切削速度	
			K20 非涂层	BLU 蓝色涂层
钢	P	Low & Medium Carbon Steels <0.55%C	–	80–150
		High Carbon Steels ≥0.55%C	–	70–120
		Alloy Steels, Treated Steels	–	40–80
不锈钢	M	Stainless Steel–Free Cutting	30–80	60–120
		Stainless Steel–Austenitic	20–70	30–90
		Cast Steels	30–80	50–120
铸铁	K	Cast Iron	50–120	–
非铁金属	N	Aluminium ≤12%Si, Copper	120–250	–
		Aluminium >12%Si	90–200	–
		Synthetics, Duroplastics, Thermoplastics	70–150	–
镍基合金、钛合金	S	Nickel alloys, Titanium alloys.	20–50	30–70
硬钢HRC45-50	H	Hardened Steel, 45–50HRc	–	20–50

Carmex
Precision Tools Ltd.
x-treme thread cutting™

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