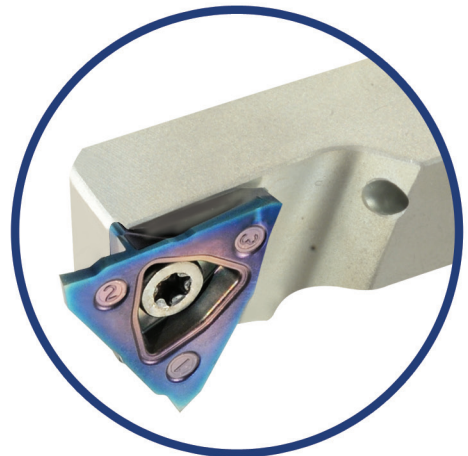
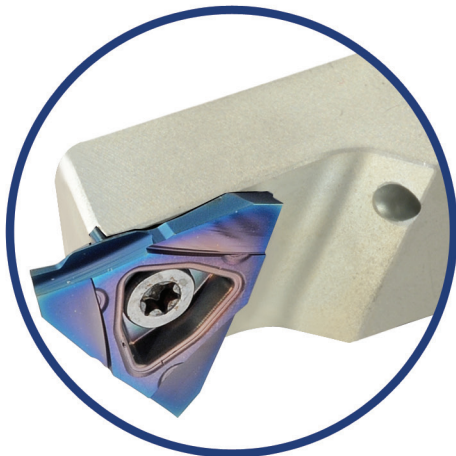
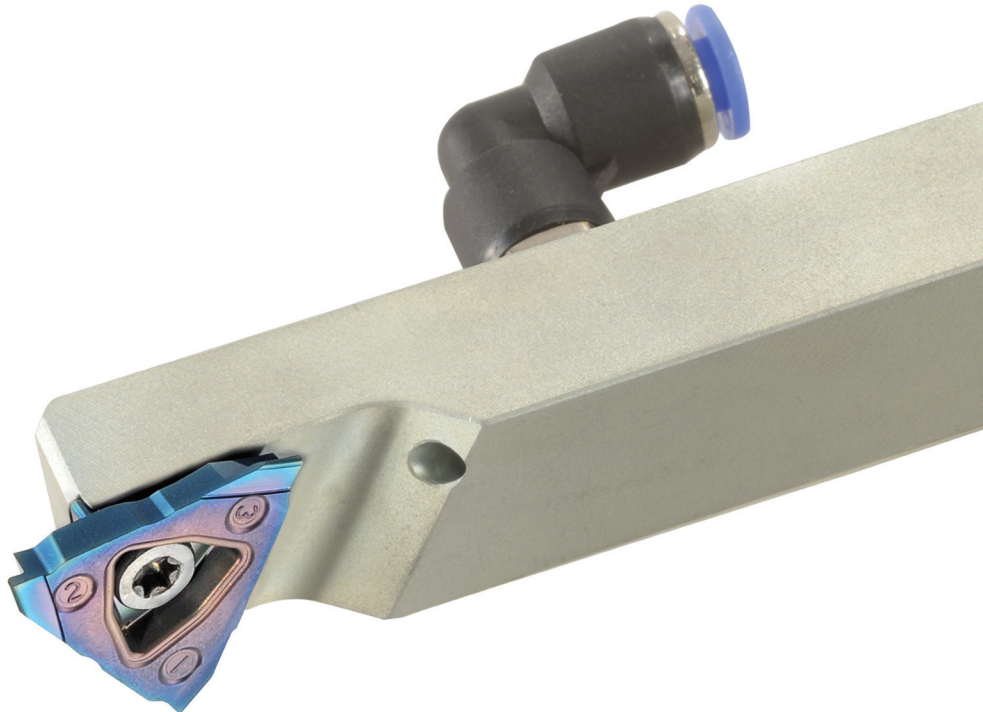




Carmex
Precision Tools Ltd.
x-treme thread cutting™

New

Swiss-Line



Inch 2015-2016

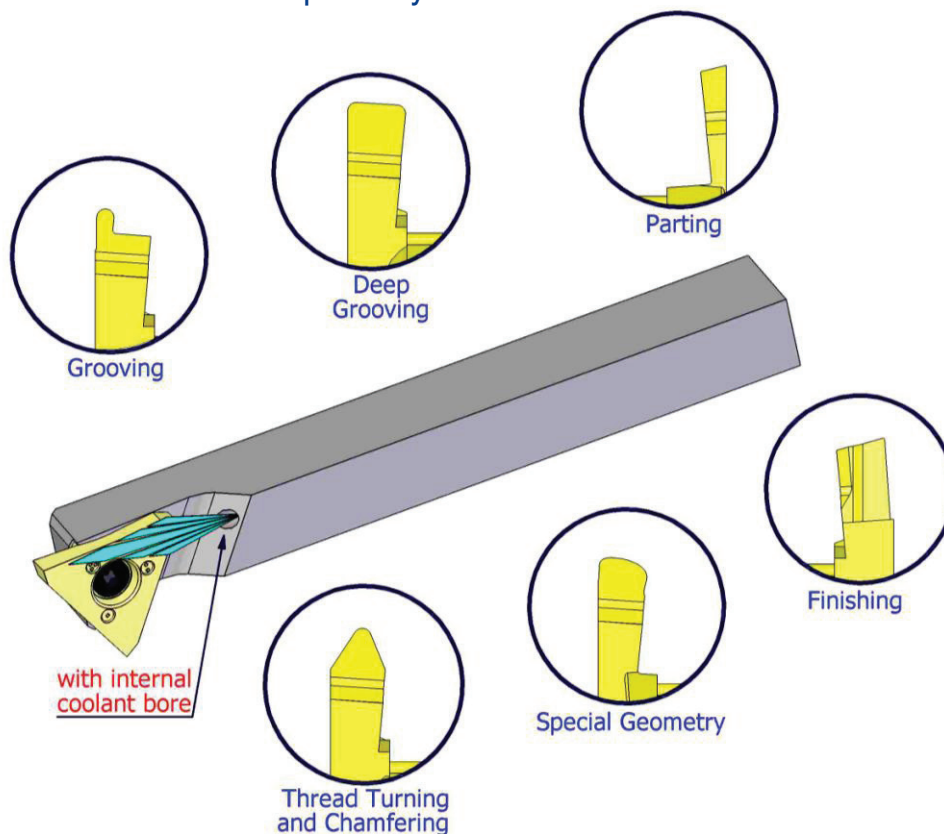
Swiss-Line

- Swiss style lathes 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 and Swiss style lathes.
- Designed for economic production of parting, grooving, profiling and chamfering.

Advantages

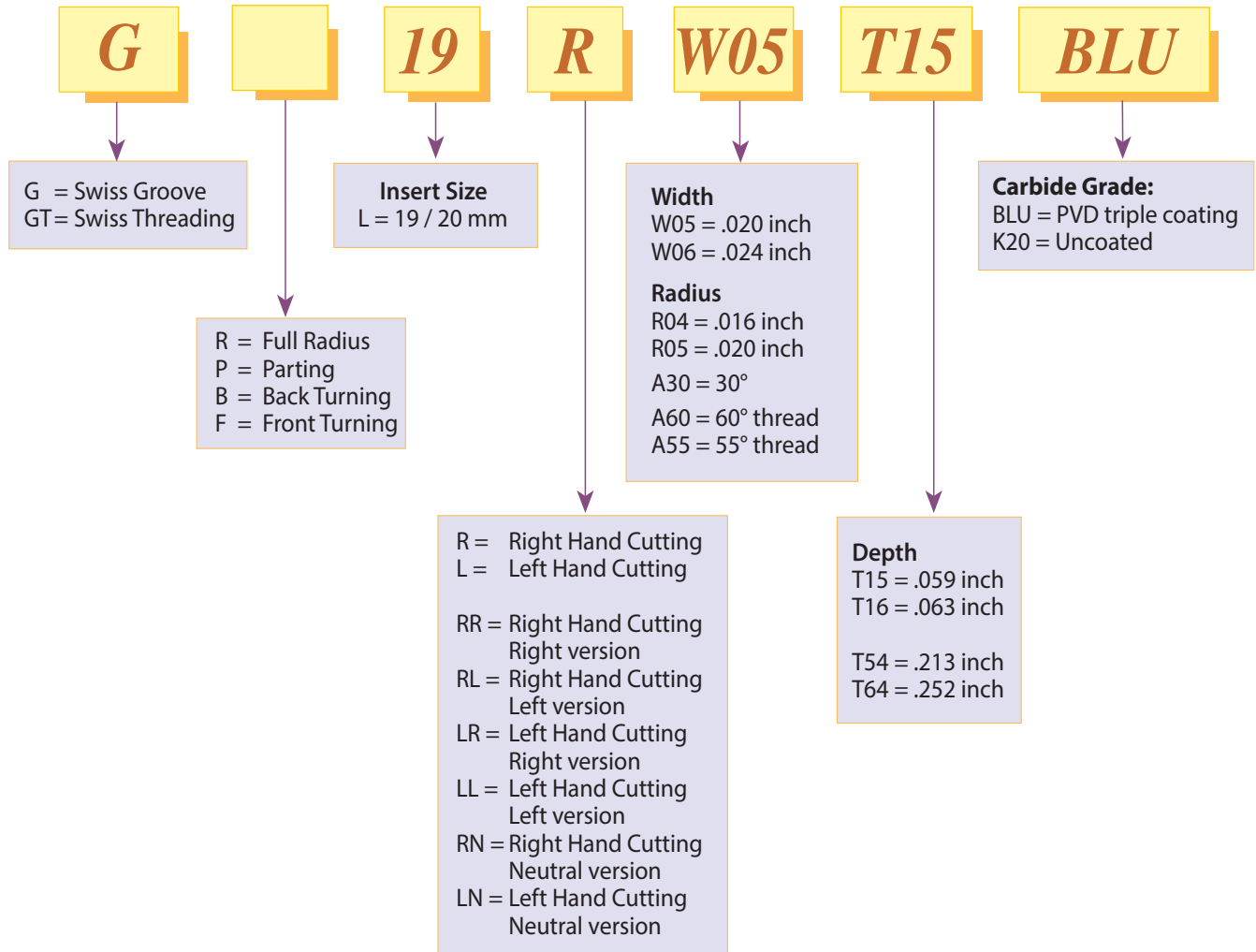
Advanced sub-micron grade (K10-K30) - a combination of strength, toughness, wear resistance and edge sharpness.

- Grounded cutting edges.
- Advanced and unique PVD triple coating, for high wear and heat resistance.
- For most types of material, including Stainless Steels, Titanium and Super Alloys.

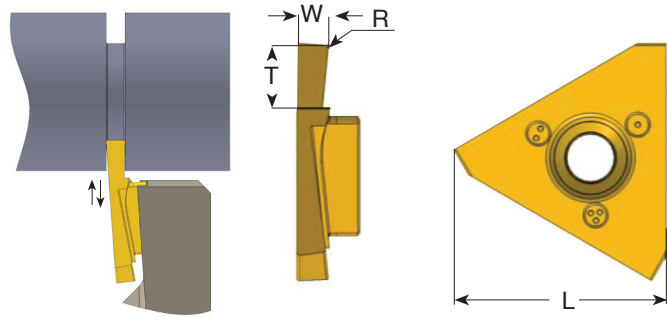


- Three cutting edges.
- The insert can be indexed directly on the machine.
- Internal coolant to the cutting edge.

Product Identification - Inserts



Grooving



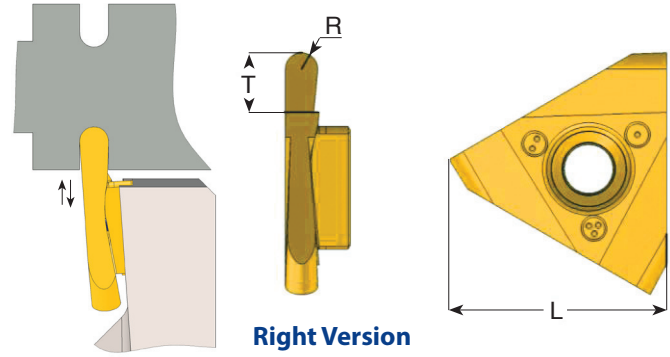
Right hand cutting

L	Ordering Code	W ±.001	T max	R	Feed Inch/rev	
					Radial	Axial
19	G19 R W05 T15	.020	.059	0	.0004-.0024	.001-.004
	G19 R W06 T16	.024	.063	0	.0004-.0024	.001-.004
	G19 R W07 T17	.030	.067	0	.0004-.0024	.001-.004
	G19 R W08 T18	.031	.079	.002	.0004-.0024	.001-.004
	G19 R W10 T22	.040	.098	.002	.001-.003	.001-.004
	G19 R W12 T24	.047	.118	.002	.001-.003	.001-.004
	G19 R W14 T28	.055	.118	.002	.001-.003	.001-.004
	G19 R W15 T30	.059	.118	.002	.001-.003	.001-.004
20	G19 R W17 T34	.067	.157	.002	.0016-.0035	.001-.008
	G20 R W20 T40	.079	.157	.004	.002-.004	.001-.008
	G20 R W22 T45	.089	.197	.004	.002-.004	.001-.008
	G20 R W25 T50	.098	.236	.004	.002-.004	.001-.008
	G20 R W30 T60	.118	.236	.004	.002-.004	.001-.008

Left hand cutting

L	Ordering Code	W ±.001	T max	R	Feed Inch/rev	
					Radial	Axial
19	G19 L W05 T15	.020	.059	0	.0004-.0024	.001-.004
	G19 L W06 T16	.024	.063	0	.0004-.0024	.001-.004
	G19 L W07 T17	.030	.067	0	.0004-.0024	.001-.004
	G19 L W08 T18	.031	.079	.002	.0004-.0024	.001-.004
	G19 L W10 T22	.040	.098	.002	.001-.003	.001-.004
	G19 L W12 T24	.047	.118	.002	.001-.003	.001-.004
	G19 L W14 T28	.055	.118	.002	.001-.003	.001-.004
	G19 L W15 T30	.059	.118	.002	.001-.003	.001-.004
20	G19 L W17 T34	.067	.157	.002	.0016-.0035	.001-.008
	G20 L W20 T40	.079	.157	.004	.002-.004	.001-.008
	G20 L W22 T45	.089	.197	.004	.002-.004	.001-.008
	G20 L W25 T50	.098	.236	.004	.002-.004	.001-.008
	G20 L W30 T60	.118	.236	.004	.002-.004	.001-.008

Grooving and Profiling (full radius)



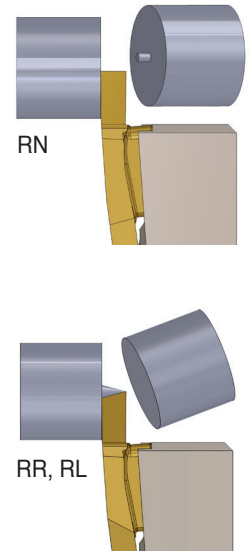
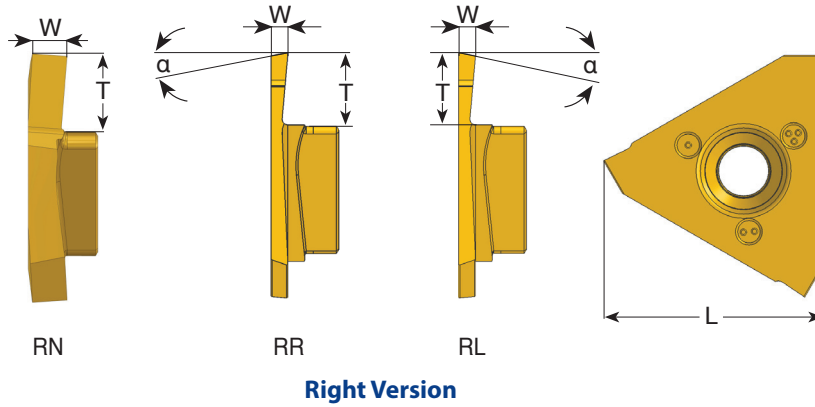
Right hand cutting

L	Ordering Code	R ±.0012	T max	Feed Inch/rev	
				Radial	Axial
19	GR19 R R02 T15	.010	.059	.0004-.003	.001-.004
	GR19 R R04 T18	.016	.079	.0004-.003	.001-.004
	GR19 R R05 T22	.020	.098	.001-.003	.001-.004
	GR19 R R06 T26	.024	.118	.001-.003	.001-.004
	GR19 R R08 T33	.031	.138	.0016-.0035	.001-.008
	GR19 R R10 T40	.040	.158	.002-.004	.001-.008
20	GR20 R R12 T50	.050	.236	.002-.004	.001-.008
	GR20 R R15 T60	.059	.236	.002-.004	.001-.008

Left hand cutting

L	Ordering Code	R ±.0012	T max	Feed Inch/rev	
				Radial	Axial
19	GR19 L R02 T15	.010	.059	.0004-.003	.001-.004
	GR19 L R04 T18	.016	.079	.0004-.003	.001-.004
	GR19 L R05 T22	.020	.098	.001-.003	.001-.004
	GR19 L R06 T26	.024	.118	.001-.003	.001-.004
	GR19 L R08 T33	.031	.138	.0016-.0035	.001-.008
	GR19 L R10 T40	.040	.158	.002-.004	.001-.008
20	GR20 L R12 T50	.050	.236	.002-.004	.001-.008
	GR20 L R15 T60	.059	.236	.002-.004	.001-.008

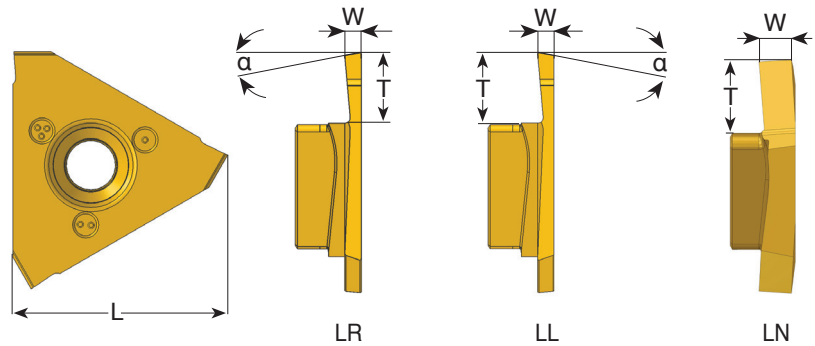
Parting Off



Right hand cutting

L	Ordering Code	W	α°	T max	Feed Inch/rev Radial
19	GP19 RR W10 T54	.039	15	.213	.001-.0035
	GP19 RL W10 T54	.039	15	.213	.001-.0035
	GP19 RN W10 T54	.039	0	.213	.001-.0035
	GP19 RR W12 T54	.047	15	.213	.001-.0035
	GP19 RL W12 T54	.047	15	.213	.001-.0035
	GP19 RN W12 T54	.047	0	.213	.001-.0035
20	GP20 RR W15 T64	.059	15	.252	.0016-.004
	GP20 RL W15 T64	.059	15	.252	.0016-.004
	GP20 RN W15 T64	.059	0	.252	.0016-.004
	GP20 RR W18 T64	.071	15	.252	.0016-.004
	GP20 RL W18 T64	.071	15	.252	.0016-.004
	GP20 RN W18 T64	.071	0	.252	.0016-.004
	GP20 RR W20 T64	.079	15	.252	.002-.0047
	GP20 RL W20 T64	.079	15	.252	.002-.0047
	GP20 RN W20 T64	.079	0	.252	.002-.0047
	GP20 RR W25 T64	.098	15	.252	.002-.0047
	GP20 RL W25 T64	.098	15	.252	.002-.0047
	GP20 RN W25 T64	.098	0	.252	.002-.0047
	GP20 RR W30 T64	.118	15	.252	.002-.0047
	GP20 RL W30 T64	.118	15	.252	.002-.0047
GP20 RN W30 T64	.118	0	.252	.002-.0047	

Parting Off

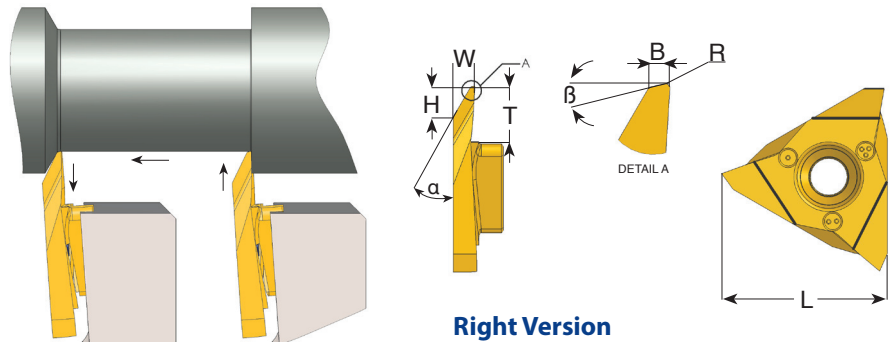


Left Version

Left hand cutting

L	Ordering Code	W	α°	T max	Feed Inch/rev Radial
19	GP19 LR W10 T54	.039	15	.213	.001-.0035
	GP19 LL W10 T54	.039	15	.213	.001-.0035
	GP19 LN W10 T54	.039	0	.213	.001-.0035
	GP19 LR W12 T54	.047	15	.213	.001-.0035
	GP19 LL W12 T54	.047	15	.213	.001-.0035
	GP19 LN W12 T54	.047	0	.213	.001-.0035
20	GP20 LR W15 T64	.059	15	.252	.0016-.004
	GP20 LL W15 T64	.059	15	.252	.0016-.004
	GP20 LN W15 T64	.059	0	.252	.0016-.004
	GP20 LR W18 T64	.071	15	.252	.0016-.004
	GP20 LL W18 T64	.071	15	.252	.0016-.004
	GP20 LN W18 T64	.071	0	.252	.0016-.004
	GP20 LR W20 T64	.079	15	.252	.002-.0047
	GP20 LL W20 T64	.079	15	.252	.002-.0047
	GP20 LN W20 T64	.079	0	.252	.002-.0047
	GP20 LR W25 T64	.098	15	.252	.002-.0047
	GP20 LL W25 T64	.098	15	.252	.002-.0047
	GP20 LN W25 T64	.098	0	.252	.002-.0047
	GP20 LR W30 T64	.118	15	.252	.002-.0047
	GP20 LL W30 T64	.118	15	.252	.002-.0047
GP20 LN W30 T64	.118	0	.252	.002-.0047	

Back Turning



Right hand cutting

L	Ordering Code	α°	β°	R	W	H	B	T	Feed Inch/rev
19	GB19 R A30	30	12	.004	.134	.169	.02	.213	.002-.006
20	GB20 R A30	30	12	.004	.134	.169	.02	.252	.002-.006

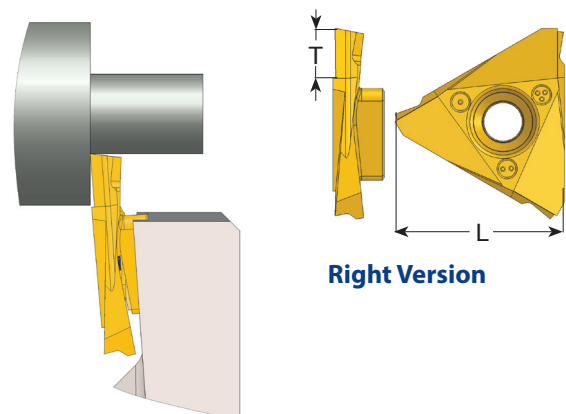
Left hand cutting

L	Ordering Code	α°	β°	R	W	H	B	T	Feed Inch/rev
19	GB19 L A30	30	12	.004	.134	.169	.02	.213	.002-.006
20	GB20 L A30	30	12	.004	.134	.169	.02	.252	.002-.006

Front Turning

Right hand cutting

L	Ordering Code	T	Feed Inch/rev
19	GF19 R T54	.213	.002-.006
20	GF20 R T64	.252	.002-.006

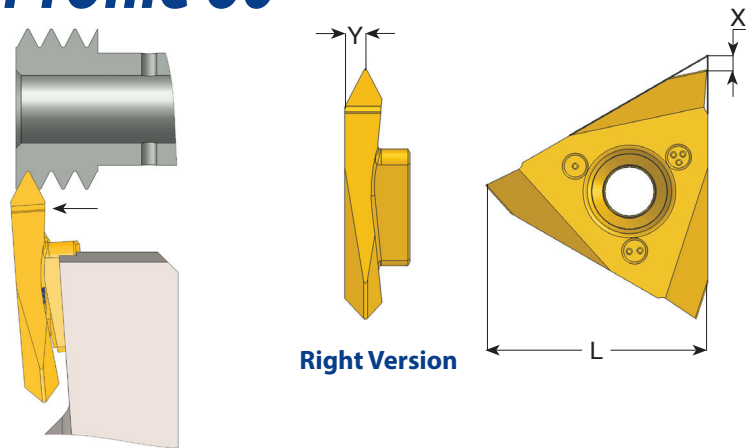


Left hand cutting

L	Ordering Code	T	Feed Inch/rev
19	GF19 L T54	.213	.002-.006
20	GF20 L T64	.252	.002-.006

Threading - Partial Profile 60°

External Thread



Right hand cutting

L	mm	TPI	Ordering Code	X	Y
19	0.5-1.5	48-16	GT19 R A60	.11	.043
	1.75-3.0	14-8	GT19 R G60	.11	.067
	0.5-3.0	48-8	GT19 R AG60	.11	.067

Left hand cutting

L	mm	TPI	Ordering Code	X	Y
19	0.5-1.5	48-16	GT19 L A60	.11	.043
	1.75-3.0	14-8	GT19 L G60	.11	.067
	0.5-3.0	48-8	GT19 L AG60	.11	.067

Threading - Partial Profile 55°

External Thread

Right hand cutting

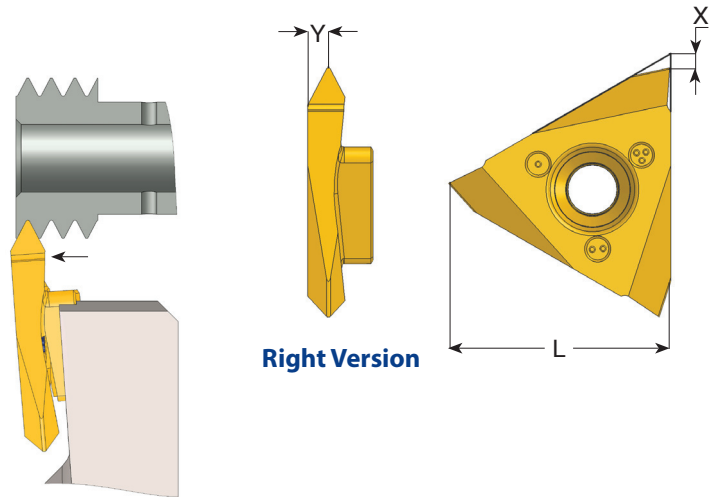
L	mm	TPI	Ordering Code	X	Y
19	0.5-1.5	48-16	GT19 R A55	.11	.039
	1.75-3.0	14-8	GT19 R G55	.11	.067
	0.5-3.0	48-8	GT19 R AG55	.11	.067

Left hand cutting

L	mm	TPI	Ordering Code	X	Y
19	0.5-1.5	48-16	GT19 L A55	.11	.039
	1.75-3.0	14-8	GT19 L G55	.11	.067
	0.5-3.0	48-8	GT19 L AG55	.11	.067

Threading - ISO metric 60°

External Thread



Right Version

Right hand cutting

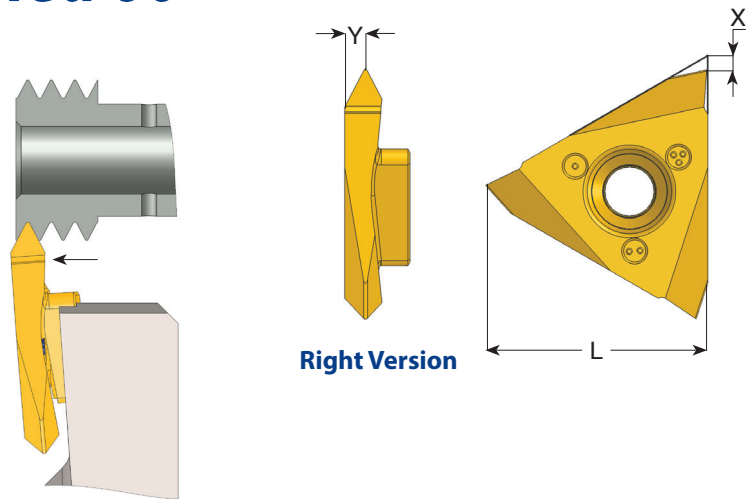
L	mm	Ordering Code	X	Y
19	0.5	GT19 R 0.5ISO	.11	.024
	0.7	GT19 R 0.7ISO	.11	.028
	0.75	GT19 R 0.75ISO	.11	.028
	0.8	GT19 R 0.8ISO	.11	.028
	1.0	GT19 R 1.0ISO	.11	.032
	1.25	GT19 R 1.25ISO	.11	.039
	1.5	GT19 R 1.5ISO	.11	.043
	1.75	GT19 R 1.75ISO	.11	.051

Left hand cutting

L	mm	Ordering Code	X	Y
19	0.5	GT19 L 0.5ISO	.11	.024
	0.7	GT19 L 0.7ISO	.11	.028
	0.75	GT19 L 0.75ISO	.11	.028
	0.8	GT19 L 0.8ISO	.11	.028
	1.0	GT19 L 1.0ISO	.11	.032
	1.25	GT19 L 1.25ISO	.11	.039
	1.5	GT19 L 1.5ISO	.11	.043
	1.75	GT19 L 1.75ISO	.11	.051

Threading - UN unified 60°

External Thread



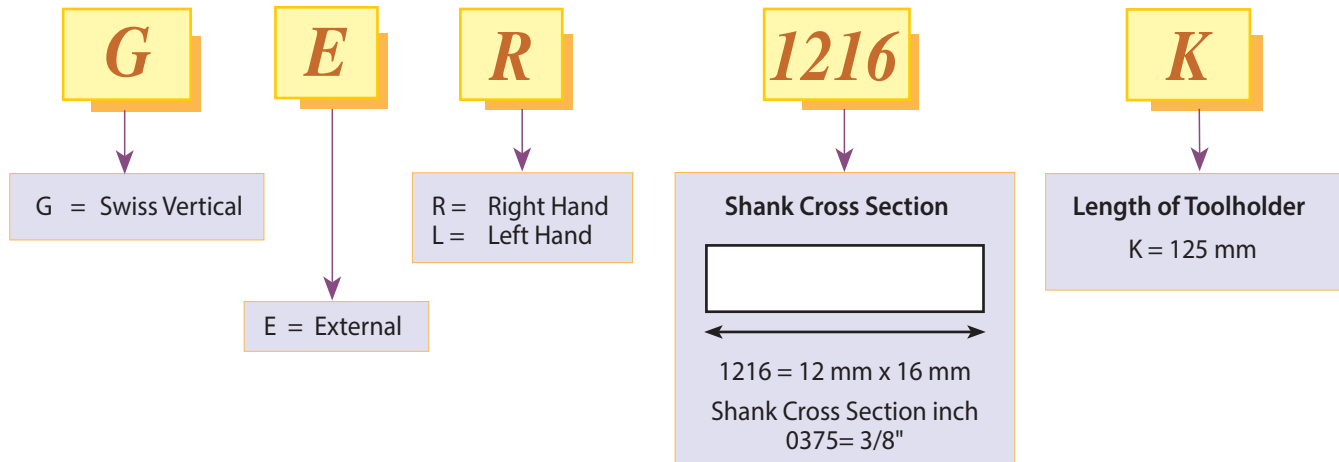
Right hand cutting

L	TPI	Ordering Code	X	Y
19	72	GT19 R 72UN	.11	.016
	56	GT19 R 56UN	.11	.024
	40	GT19 R 40UN	.11	.028
	32	GT19 R 32UN	.11	.028
	24	GT19 R 24UN	.11	.032
	20	GT19 R 20UN	.11	.039

Left hand cutting

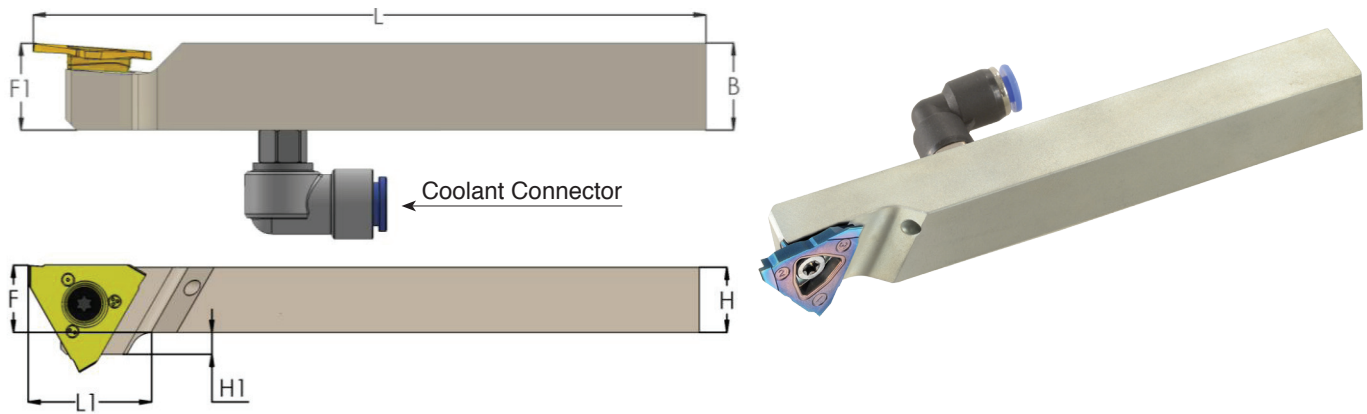
L	TPI	Ordering Code	X	Y
19	72	GT19 L 72UN	.11	.016
	56	GT19 L 56UN	.11	.024
	40	GT19 L 40UN	.11	.028
	32	GT19 L 32UN	.11	.028
	24	GT19 L 24UN	.11	.032
	20	GT19 L 20UN	.11	.039

Product Identification - Toolholders



External Toolholders

- Coolant through toolholders, for external turning in Swiss style lathes.
- 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 a quick setup on the machine.



Right hand - Metric holders

Ordering Code	B (mm)	H (mm)	L1	L	F	F1	H1	Insert Screw	Torx Key	*Coolant connector (mm)
GER 0816 K	16	8	.67	4.9	.32	.63	.32	S21	K21	Ø4 / Ø6
GER 1016 K	16	10	.67	4.9	.39	.63	.24	S21	K21	Ø4 / Ø6
GER 1216 K	16	12	.67	4.9	.47	.63	.16	S21	K21	Ø4 / Ø6
GER 1616 K	16	16	-	4.9	.63	.63	0	S21	K21	Ø4 / Ø6
GER 2020 K	20	20	-	4.9	.79	.79	0	S21	K21	Ø4 / Ø6
GER 2525 M	25	25	-	5.9	.98	.98	0	S21	K21	Ø4 / Ø6

* Diameter of coolant pipe

Right hand - Inch holders

Ordering Code	B	H	L1	L	F	F1	H1	Insert Screw	Torx Key	*Coolant connector (mm)
GER 0375 K	.625	.375	.67	4.9	.38	.63	.25	S21	K21	Ø4 / Ø6
GER 0500 K	.625	.500	.67	4.9	.50	.63	.13	S21	K21	Ø4 / Ø6
GER 0625 K	.625	.625	-	4.9	.63	.63	0	S21	K21	Ø4 / Ø6
GER 0750 K	.750	.750	-	4.9	.75	.75	0	S21	K21	Ø4 / Ø6
GER 1000 M	1.000	1.000	-	5.9	1.00	1.00	0	S21	K21	Ø4 / Ø6

* Diameter of coolant pipe

Left hand - Metric holders

Ordering Code	B (mm)	H (mm)	L1	L	F	F1	H1	Insert Screw	Torx Key	*Coolant connector (mm)
GEL 0816 K	16	8	.67	4.9	.32	.63	.32	S21	K21	Ø4 / Ø6
GEL 1016 K	16	10	.67	4.9	.39	.63	.24	S21	K21	Ø4 / Ø6
GEL 1216 K	16	12	.67	4.9	.47	.63	.16	S21	K21	Ø4 / Ø6
GEL 1616 K	16	16	-	4.9	.63	.63	0	S21	K21	Ø4 / Ø6
GEL 2020 K	20	20	-	4.9	.79	.79	0	S21	K21	Ø4 / Ø6
GEL 2525 M	25	25	-	5.9	.98	.98	0	S21	K21	Ø4 / Ø6

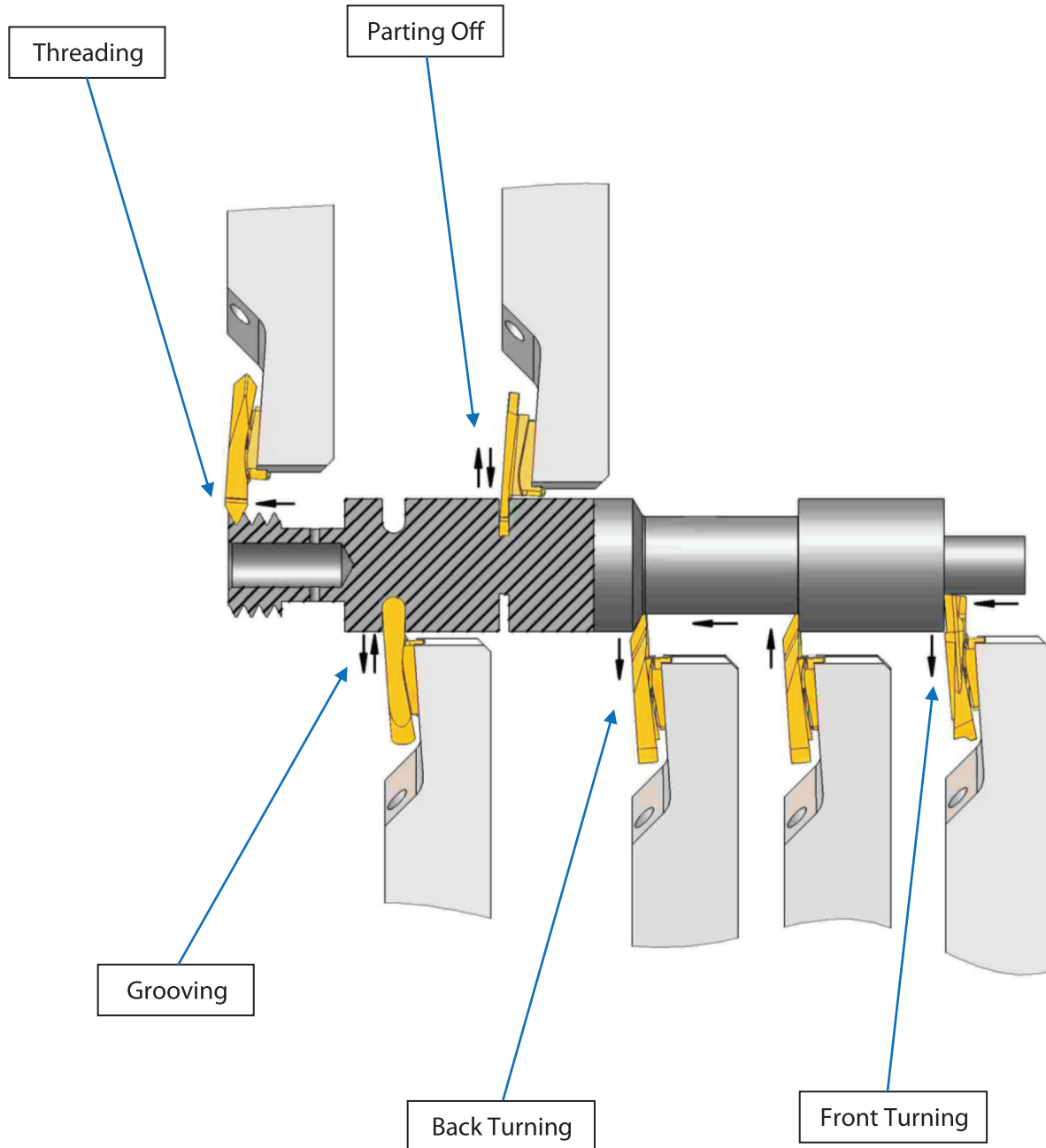
* Diameter of coolant pipe

Left hand - Inch holders

Ordering Code	B	H	L1	L	F	F1	H1	Insert Screw	Torx Key	*Coolant connector (mm)
GEL 0375 K	.625	.375	.67	4.9	.38	.63	.25	S21	K21	Ø4 / Ø6
GEL 0500 K	.625	.500	.67	4.9	.50	.63	.13	S21	K21	Ø4 / Ø6
GEL 0625 K	.625	.625	-	4.9	.63	.63	0	S21	K21	Ø4 / Ø6
GEL 0750 K	.750	.750	-	4.9	.75	.75	0	S21	K21	Ø4 / Ø6
GEL 1000 M	1.000	1.000	-	5.9	1.00	1.00	0	S21	K21	Ø4 / Ø6

* Diameter of coolant pipe

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



Carbide Grades

BLU

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

K20

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

Cutting Data

ISO Standard	Materials	Cutting Speed inch/min	
		K20	BLU
P	Low & Medium Carbon Steels <0.55%C	-	3.15-5.9
	High Carbon Steels ≥0.55%C	-	2.75-4.7
	Alloy Steels, Treated Steels	-	1.6-3.15
M	Stainless Steel-Free Cutting	1.2-3.15	2.35-4.7
	Stainless Steel-Austenitic	0.8-2.75	1.2-3.5
	Cast Steels	1.2-3.15	2.0-4.7
K	Cast Iron	2.0-4.7	-
N	Aluminium ≤12%Si, Copper	4.7-9.85	-
	Aluminium >12%Si	3.5-7.8	-
	Synthetics, Duroplastics, Thermoplastics	2.75-5.9	-
S	Nickel Alloys, Titanium Alloys	0.8-2.0	1.2-2.75
H	Hardened Steel, 45-50HRC	-	0.8-2.0



Carmex
Precision Tools Ltd.
x-treme thread cutting™