



Diamond Tools

Swiss-Line inserts with PCD, CVD and CBN tip



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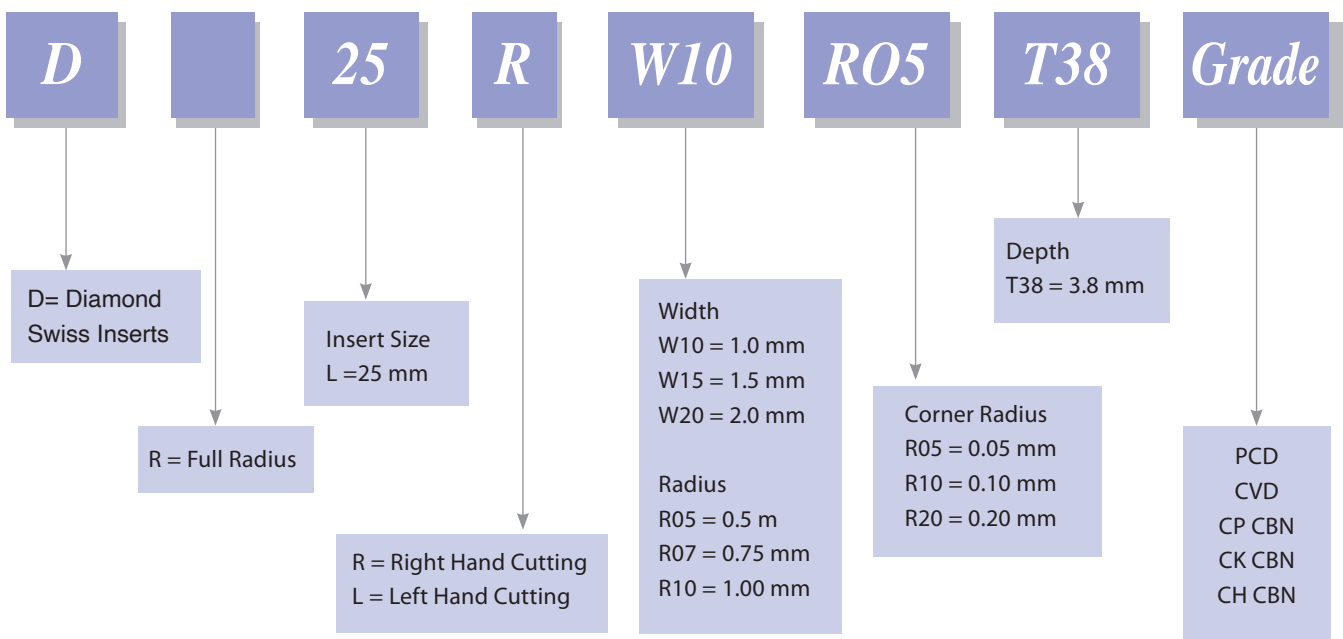
Metric

Diamond Tip Swiss-Line inserts

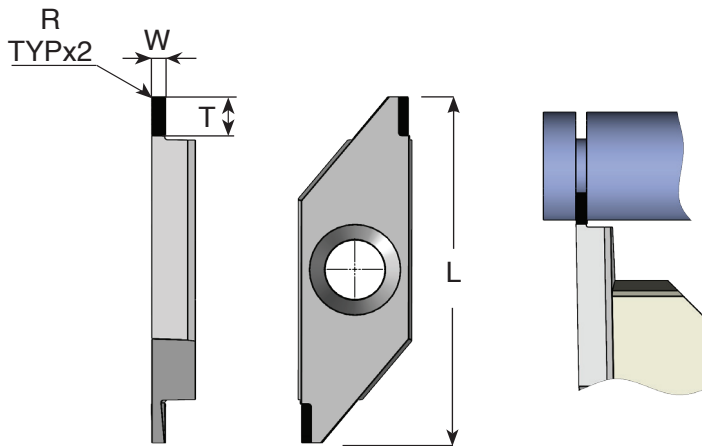
Carmex extend the Diamond Tools range offering a Swiss-Line Polygon inserts with PCD, CVD and CBN tip for External Grooving, Grooving and Profiling (full radius) including a side cutting

- Laser cut Diamond
- High precision carbide body
- Two cutting edges
- All inserts can be used with same toolholders

Product Identification



Grooving and Turning



Right Version

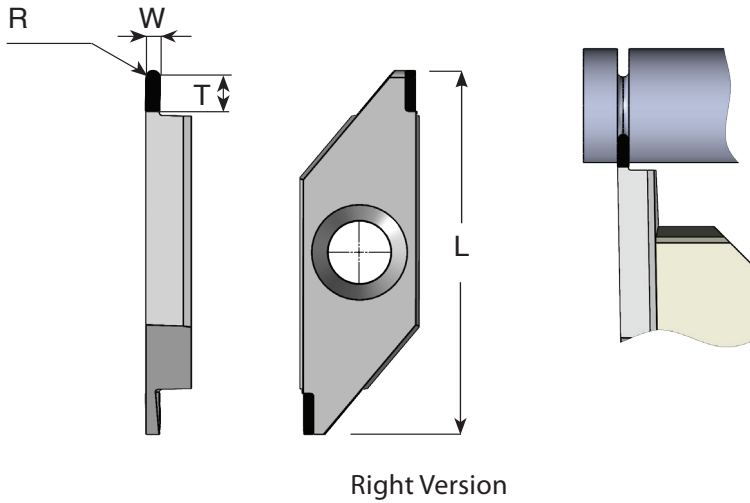
Right hand cutting

Insert Size L	Ordering Code	W	T max	R	Grade/Type				
					PCD	CVD	CP CBN	CK CBN	CH CBN
25	D25 R W10 R05 T38	1.0	3.8	0.05	•	•	•	•	•
	D25 R W10 R10 T38	1.0	3.8	0.10	•	•	•	•	•
	D25 R W15 R05 T38	1.5	3.8	0.05	•	•	•	•	•
	D25 R W15 R10 T38	1.5	3.8	0.10	•	•	•	•	•
	D25 R W20 R05 T38	2.0	3.8	0.05	•	•	•	•	•
	D25 R W20 R10 T38	2.0	3.8	0.10	•	•	•	•	•
	D25 R W20 R20 T38	2.0	3.8	0.20	•	•	•	•	•

Order Example: D25 R W10 T38 R10 T38 **CP CBN**

For L.H, specify D25 L Instead of D25 R

Grooving and Profiling (full radius)

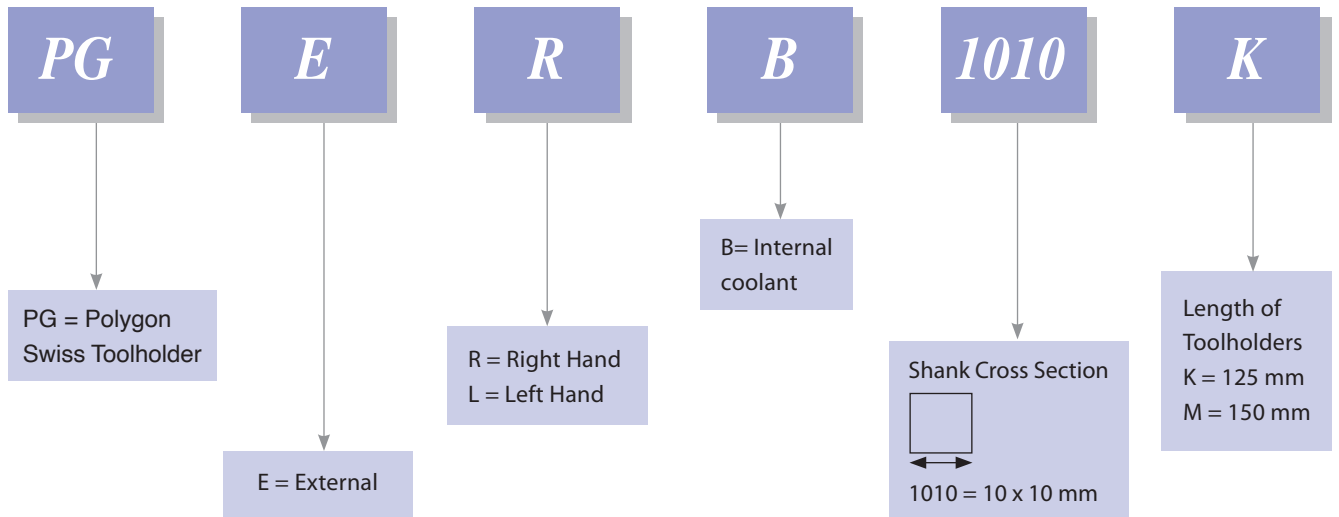


Right hand cutting

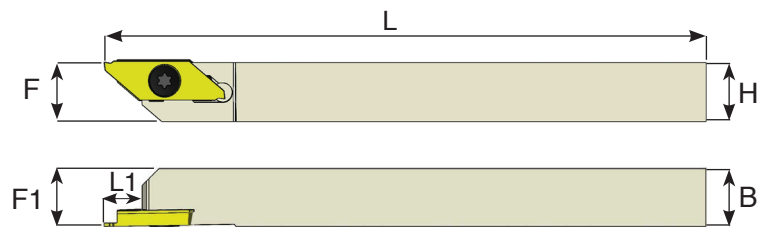
Insert Size L	Ordering Code	R	T max	W	Grade/Type				
					PCD	CVD	CP CBN	CK CBN	CH CBN
25	DR25 R R05 T38	0.50	3.8	1.0	•	•	•	•	•
	DR25 R R07 T38	0.75	3.8	1.5	•	•	•	•	•
	DR25 R R10 T38	1.00	3.8	2.0	•	•	•	•	•

Order Example: DR25 R R05 T38 **PCD**
 For L.H, specify DR25 L Instead of DR25 R

Product Identification



External Toolholder



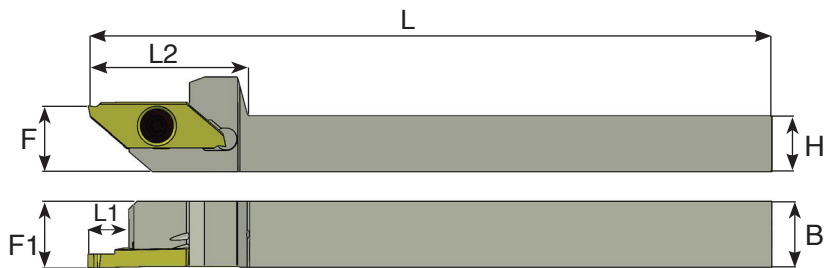
Right Version

Right hand cutting

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
	PGER 2525 M	25	25	8	150	25	25	S26PD	K11P

For L.H, specify PGEL... instead of PGER...

External Toolholders with internal coolant



Right Version



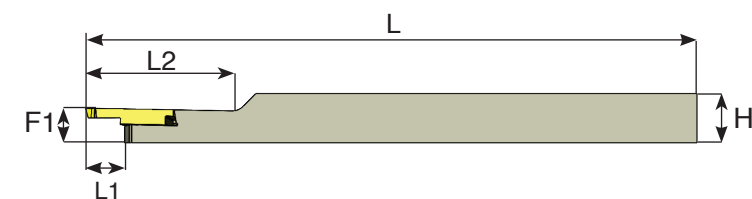
Right hand cutting

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

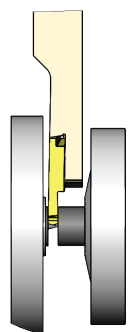
For L.H, specify PGEL instead of PGER

*Diameter of coolant pipe

External Toolholders Slim



Left Version



Left hand cutting

Insert Size	Ordering Code	B	H	L1	L	F	F1	Insert Screw + Torx	Key + Torx
25	PGELS 1010 K	10	10	8	125	10	7	24	S26PS
	PGELS 1212 K	12	12	8	125	12	7	30	S26PS

Technical Section - Cutting Data

ISO standard	PCD		CVD	
	Vc (m/min)	F (mm/rev)	Vc (m/min)	F (mm/rev)
Aluminum Alloys > 12% Si	100 - 4,000	0.005-0.300	100-1,800	0.005-0.25
Aluminum Alloys > 20% Si			100 - 700	0.005 - 0.20
Brass	100 - 2,000	0.008 - 0.150	100 - 3,000	0.005 - 0.12
Glass fiber/ Carbon fiber, composites			70 - 1,000	0.008 - 0.18
Copper			150 - 1,800	0.008 - 0.25
Graphite, coarse grain	100 - 4,000	0.01 - 0.150		
Graphite, fine grain			100 - 5,000	0.01 - 0.25
Acrylic (PMMA)	100 - 3,000	0.005 - 0.250	100 - 3,000	0.005 - 0.18
Magnesium	100 - 2,000	0.005 - 0.150	100 - 3,000	0.005 - 0.12
Plastics			120 - 2,000	0.01 - 0.30
Peek	100 - 300	0.01 - 0.500		
Gold, silver, Platinum			50 - 1,500	0.005 - 0.25
Zirconium			50 - 180	0.005 - 0.08

ISO standard	CP CBN		CK CBN		CH CBN	
	Vc (m/min)	F (mm/rev)	Vc (m/min)	F (mm/rev)	Vc (m/min)	F (mm/rev)
Tool Steel up to 72 HRc	45-190	0.005-0.03				
Powder metallurgical steels up to 72 HRc	45-170	0.005-0.04				
Co-Chrom Alloys	50-180	0.006-0.06				
Ni Alloys	50-350	0.005-0.04				
Titanium Alloys	50-200	0.005-0.04				
Hardened Stainless Steel	60-260	0.006-0.04				
Sintered Metal			200-300	0.007-0.10		
Grey Cast Iron (GG)			200-2,000	0.007-0.16		
Ductile Cast Iron (GGG)			100-800	0.007-0.07		
Ni, Co-, Fe-, Cr Alloys	80-360	0.007-0.04				
Hardened Steel up to 55 HRc	70-230	0.006-0.06			70-230	0.006-0.06
Hardened Steel up to 62 HRc					60-210	0.006-0.06
Hardened Steel up to 72 HRc					50-190	0.006-0.04
Hardened Sintered Metal					70-250	0.006-0.04
Hard/Soft Material					80-290	0.007-0.06



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