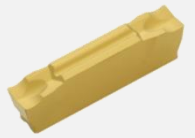


- Inserts are offered with double-ended, for better economical machining



Features

- Inserts are offered with two edges, for better economical machining

- Multi function operations

- Reduce cycle time & increase productivity with the ability to groove, turn, face or copy in an application.

- Shorten time & save on tool cost

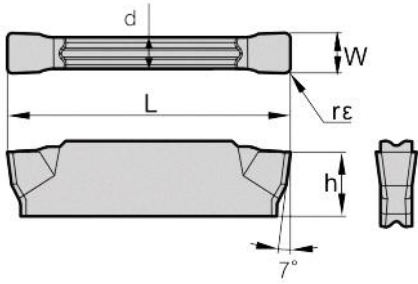
- Replaces a multitude of ISO tools, can reduce number of tools per operation and reduce inventory

- Flat Cutting Edge

- These tools have a flat geometry on its cutting edge to ensure excellent surface finishes. Even in high feed applications by using a wiper function, ensures excellent surface finishes in roughing operations.

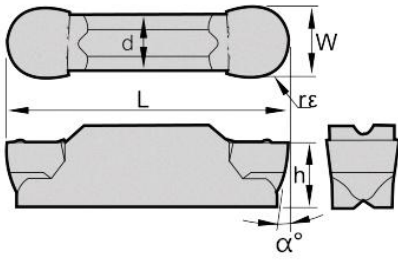


M.G.T Series



Picture	Designation	Coated						W±0.02	rε±0.05	L	d	h
		TCP9120	TCP9225	TPM8115	TPM8125	TPM8225	TCK5215					
	MGMN200-L				●			2.0	0.20	16.0	1.60	3.50
	MGMN250-L				●			2.5	0.20	18.4	2.00	3.85
	MGMN300-L				●			3.0	0.20	20.0	2.35	4.80
	MGMN400-L				●			4.0	0.30	21.0	3.30	4.80
	MGMN500-L				●			5.0	0.30	26.0	4.10	5.80
	MGMN200-H				●			2.0	0.20	16.0	1.60	3.50
	MGMN250-H				●			2.5	0.20	18.4	2.00	3.85
	MGMN300-H				●			3.0	0.20	20.0	2.35	4.80
	MGMN400-H				●			4.0	0.30	21.0	3.30	4.80
	MGMN500-H				●			5.0	0.30	26.0	4.10	5.80
	MGMN200-T				●			2.0	0.20	16.0	1.70	3.50
	MGMN250-T				●			2.5	0.20	18.4	2.00	3.85
	MGMN300-T				●			3.0	0.20	20.0	2.35	4.80
	MGMN400-T				●			4.0	0.30	21.0	3.30	4.80
	MGMN500-T				●			5.0	0.30	26.0	4.10	5.80
	MGMN150-G	●			●			1.5	0.15	16.0	1.20	3.50
	MGMN200-G	●			●			2.0	0.20	16.0	1.60	3.50
	MGMN250-G							2.5	0.20	18.5	2.00	3.85
	MGMN300-G							3.0	0.40	21.0	2.35	4.80
	MGMN400-G							4.0	0.40	21.0	3.30	4.80
	MGMN500-G							5.0	0.80	26.0	4.10	5.80
	MGMN200-M	●			●			2.0	0.80	16.0	1.20	3.50
	MGMN250-M	●			●		●	2.5	0.20	18.5	2.00	3.85
	MGMN300-M	●			●		●	3.0	0.20	21.0	2.35	4.80
	MGMN400-M	●			●		●	4.0	0.40	21.0	3.30	4.80
	MGMN500-M	●			●			5.0	0.40	26.0	4.10	5.80
	MGMN600-M	●			●			6.0	0.80	26.0	5.00	5.80
MGMN800-M							8.0	0.80	31.0	6.00	6.50	
	MGGN150-TU				●		●	1.5	0.15	16.0	1.20	3.50
	MGGN200-TU				●		●	2.0	0.20	16.0	1.20	3.50
	MGGN250-TU				●		●	2.5	0.20	18.5	2.00	3.85
	MGGN300-TU				●		●	3.0	0.20	21.0	2.35	4.80
	MGGN400-TU				●		●	4.0	0.20	21.0	3.30	4.80
	MGGN500-TU				●		●	5.0	0.40	26.0	4.10	5.80

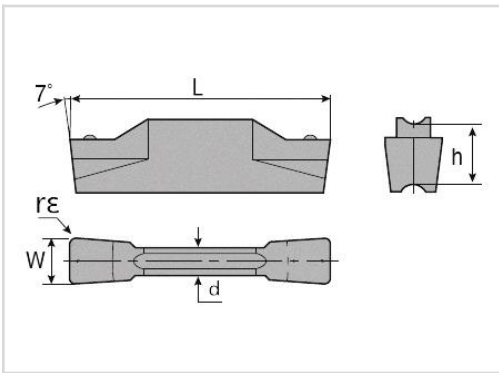
M.G.T Series



Picture	Designation	Coated						W ± 0.02	rε ± 0.05	L	d	h	α°
		TCPC912N	TCPC922R	TPMR11R	TPMR12R	TPMR22R	TCR521R						
	MRMN200-M				●			2.0	1.00	16.0	1.50	3.50	7°
	MRMN300-M				●			3.0	1.50	21.0	2.35	4.80	7°
	MRMN400-M				●			4.0	2.00	21.0	3.30	4.80	7°
	MRMN500-M				●			5.0	2.50	26.0	4.10	5.80	7°
	MRMN600-M							6.0	3.00	26.0	5.00	5.80	7°
	MRMN800-M							8.0	4.00	31.0	6.00	6.50	7°
	MRGN400-A						●	4.0	2.00	21.0	3.30	4.80	7°
	MRGN500-A						●	5.0	2.50	26.0	4.10	5.80	7°
	MRGA600-A						●	6.0	3.00	26.0	5.00	5.80	12°
	MRGA800-A						●	8.0	4.00	31.0	6.00	6.50	12°

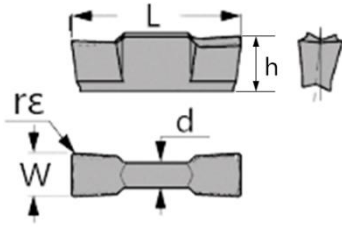
OPTICAL MACHINERY

T-Clamp Series



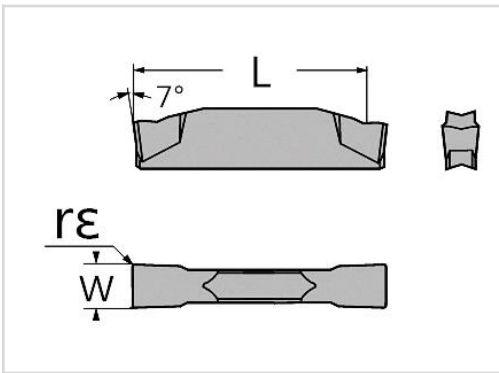
Picture	Designation	Coated						W±0.02	rε±0.05	L	d	h
		TCP9120	TCP9225	TPM8115	TPM8125	TPM8225	TCK5215					
	TDJ2				●			2.0	0.2	20.0	1.7	4.7
	TDJ3				●			3.0	0.2	20.0	2.4	4.7
	TDJ4				●			4.0	0.3	20.0	3.0	4.7
	TDJ5				●			5.0	0.3	25.0	4.0	5.2
	TDC2				●			2.0	0.2	20.0	1.7	4.7
	TDC3				●			3.0	0.2	20.0	2.4	4.7
	TDC4				●			4.0	0.3	20.0	3.0	4.7
	TDC5				●			5.0	0.3	25.0	4.0	5.2
	TDT2.00-E				●			2.0	0.2	20.0	1.7	4.7
	TDT3.00-E				●			3.0	0.2	20.0	2.2	4.7
	TDT4.00-E				●			4.0	0.4	20.0	3.0	4.7
	TDT5.00-E				●			5.0	0.4	25.0	4.0	5.2

Grooving & Parting



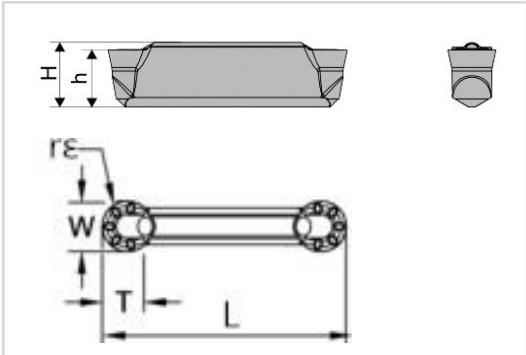
Picture	Designation	Coated						W±0.02	rε±0.05	L	d	h
		TCP9120	TCP9225	TPM8115	TPM8125	TPM8225	TCK5215					
	HFPR3003				●			3.0	0.3	19.0	2.1	5.40
	HFPR5004				●			5.0	0.4	19.0	3.4	5.75
	HGPL3003Y				●			3.0	0.3	16.0	2.3	5.40
	HGPL4004Y				●			4.0	0.4	19.0	2.8	5.60
	DGN2202J				●			2.2	0.2	19.8	1.90	5.80
	DGR2202J-6D				●			2.2	0.2	19.8	1.90	5.80
	DGR2202JS-6D				●			2.2	0.2	19.4	1.90	5.80
	DGR2202JS-15D				●			2.2	0.2	19.4	1.90	5.80
	DGN3102C				●			3.1	0.2	19.80	2.40	5.85
	DGN4002C				●			4.0	0.2	19.0	2.80	5.57

Grooving & Parting

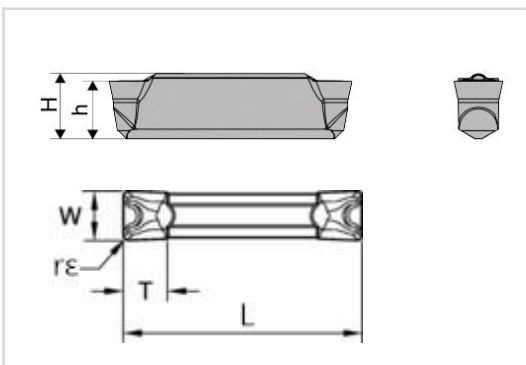


Picture	Designation	Coated						W±0.02	rε±0.05	L	d	h
		TCP9120	TCP9225	TPM8115	TPM8125	TPM8225	TCK5215					
	N123E2-0200-0004-GF			●	●			2.00	0.4	19.2	-	-
	N123E2-0260-0008-GF			●	●			2.60	0.8	19.2	-	-
	N123G2-0318-0008-GF			●	●			3.18	0.8	19.2	-	-
	N123H2-0400-0008-TM			●	●			4.00	0.8	23.4	-	-
	N123J2-0500-0008-TM			●	●			5.00	0.8	23.0	-	-
	N123J2-0500-0004-TF			●	●			5.00	0.4	23.3	-	-
	ZTED02503-MG	●	●		●	●	●	2.50	0.3	17.0	-	-
	ZTFD03003-MG	●	●		●	●	●	3.00	0.3	17.0	-	-
	ZTGD04004-MG	●	●		●	●	●	4.00	0.4	22.0	-	-
	ZTHD05004-MG	●	●		●	●	●	5.00	0.4	22.0	-	-
	ZTKD06008-MG	●	●		●	●	●	6.00	0.8	22.0	-	-

A4 Series



Picture	Designation	Coated					W ±0.02	RC RR	T	L1	h	H	
		TCP9120	TCP9225	TPM8115	TPM8125	TPM8225							TCCK5215
	A4R0305M03U00GMN						●	3.05	1.5	2.6	20.05	4.16	4.84
	A4R0405M04U00GMN						●	4.05	2.0	3.5	20.10	4.90	5.75
	A4R0505M05U00GMN						●	5.05	2.5	4.2	25.15	5.95	6.75
	A4R0605M06U00GMN						●	6.05	3.0	4.9	30.20	5.66	6.95



Picture	Designation	Coated					W ±0.02	RC RR	T	L1	h	H	
		TCP9120	TCP9225	TPM8115	TPM8125	TPM8225							TCCK5215
	A4G0305M03U04GMN						●	3.05	0.4	3.5	20.05	4.16	4.84
	A4G0405M04U08GMN						●	4.05	0.8	3.4	20.10	4.90	5.75
	A4G0505M05U08GMN						●	5.05	0.8	4.2	25.15	5.95	6.75
	A4G0605M06U08GMN						●	6.05	0.8	4.9	30.20	5.66	6.95