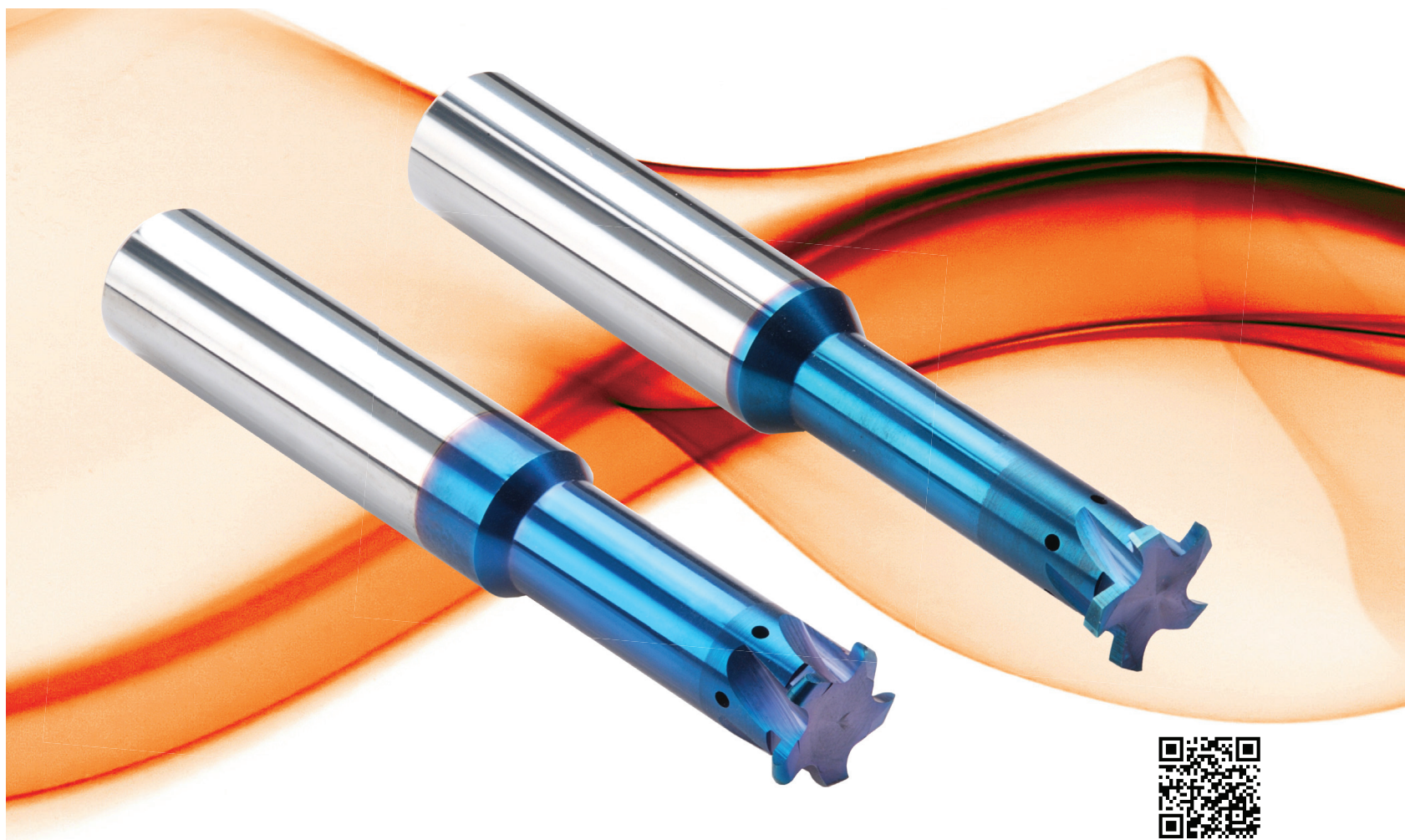


Solid Carbide Grooving Tools | B13



Demonstration

For Grooving Deep Parts

Advantages

Carbide grade: MT8 Sub-micron grade with advanced PVD triple coating (ISO K10-K20). Extremely high heat resistant and smooth cutting operation. For high performance and normal machining conditions. General purpose for all materials.

- Enables machining in deep holes.
- Coolant through the flutes is very effective for deep holes.
- Spiral flutes allow smooth cutting action.
- Longer tool life due to special multi-layer coating.
- Shorter machining time due to multi (3 to 5) flutes.

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through the flutes

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Full Radius Groove Milling with internal
coolant through the flutes
Deep Groove Milling
Technical Section

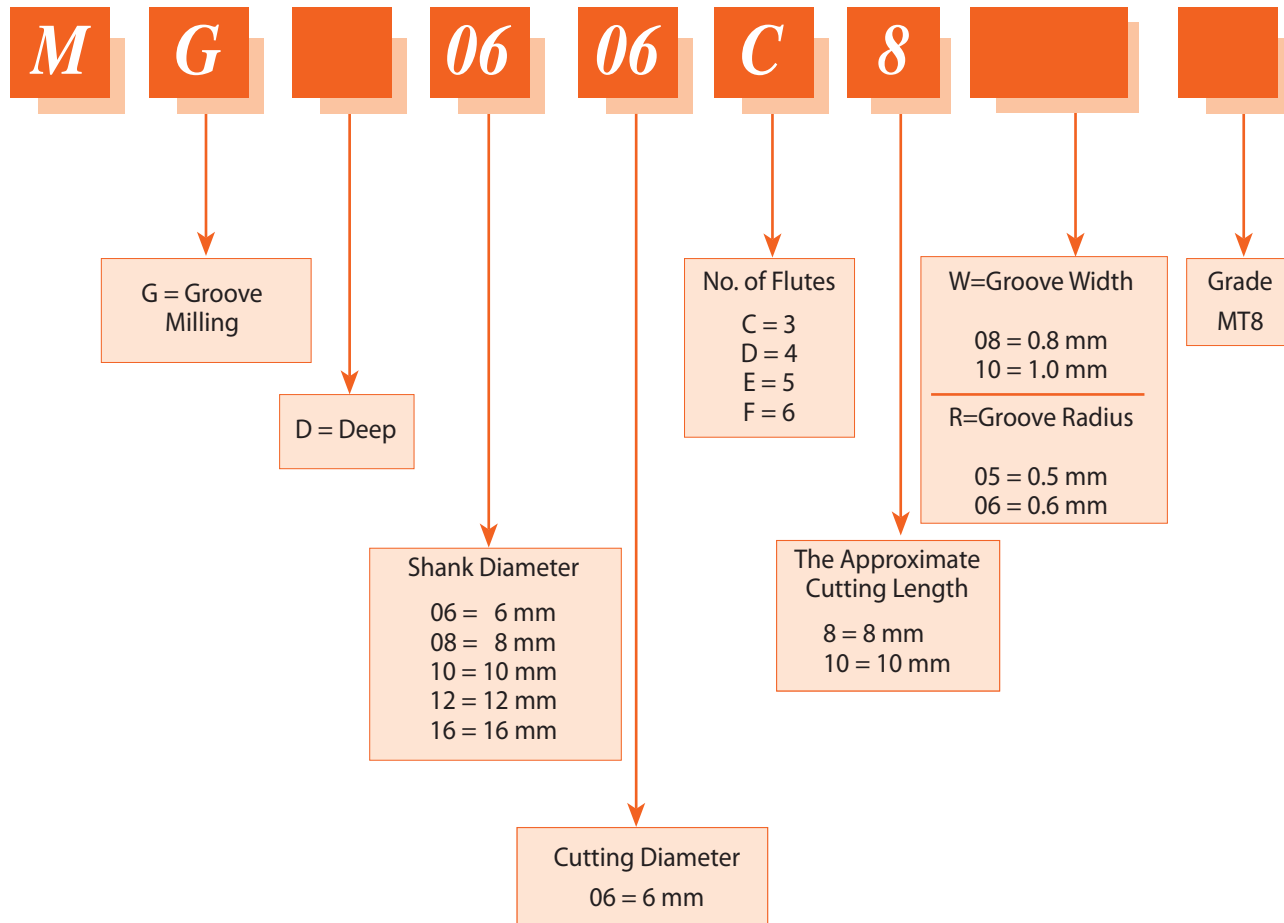
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Product Identification Groove Milling Ordering Codes

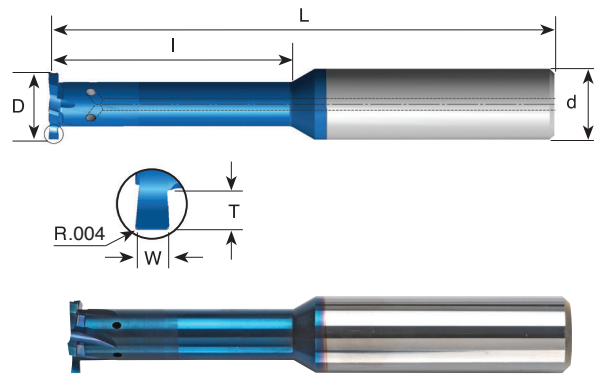


Solid Carbide Grooving Tools



Groove Milling

with internal coolant through the flutes



For grooving deep parts

W ±.001	T Max.	Groove Dia. (min.)	Ordering Code	d mm	D	No. of Flutes	I	L	Internal Coolant
.020	.02	Ø>.12	MG 0603 C5 W05	6	.118	3	.20	2.0	
.039	.02	Ø>.12	MG 0603 C5 W10	6	.118	3	.20	2.0	
.020	.02	Ø>.16	MG 0604 C4 W05	6	.157	3	.17	2.0	
.039	.02	Ø>.16	MG 0604 C4 W10	6	.157	3	.17	2.0	
.020	.03	Ø>.24	MG 0606 C8 W05	6	.236	3	.31	2.0	
.028	.03	Ø>.24	MG 0606 C8 W07	6	.236	3	.31	2.0	
.031	.03	Ø>.24	MG 0606 C8 W08	6	.236	3	.31	2.3	C
.035	.04	Ø>.24	MG 0606 C11 W09	6	.236	3	.43	2.3	
.039	.04	Ø>.24	MG 0606 C7 W10	6	.236	3	.28	2.3	
.039	.04	Ø>.24	MG 0606 C14 W10	6	.236	3	.55	2.3	
.059	.04	Ø>.24	MG 0606 C7 W15	6	.236	3	.28	2.3	
.028	.05	Ø>.31	MG 08078 D24 W07	8	.307	4	.94	2.5	
.031	.05	Ø>.31	MG 08078 D24 W08	8	.307	4	.94	2.5	
.039	.05	Ø>.31	MG 08078 D10 W10	8	.307	4	.39	2.5	C
.039	.05	Ø>.31	MG 08078 D24 W10	8	.307	4	.94	2.5	
.059	.06	Ø>.31	MG 08078 D15 W15	8	.307	4	.59	2.5	C
.079	.06	Ø>.31	MG 08078 D15 W20	8	.307	4	.59	2.5	C
.039	.08	Ø>.39	MG 10098 D20 W10	10	.386	4	.79	2.9	
.047	.06	Ø>.39	MG 10098 D20 W12	10	.386	4	.79	2.9	C
.059	.08	Ø>.39	MG 10098 D20 W15	10	.386	4	.79	2.9	C
.079	.08	Ø>.39	MG 10098 D20 W20	10	.386	4	.79	2.9	C
.059	.09	Ø>.47	MG 1212 E30 W15	12	.472	5	1.18	3.3	C
.079	.09	Ø>.47	MG 1212 E30 W20	12	.472	5	1.18	3.3	C
.118	.09	Ø>.47	MG 1212 E30 W30	12	.472	5	1.18	3.3	C
.055	.07	Ø>.63	MG 1616 E30 W14	16	.630	5	1.18	4.0	C
.067	.08	Ø>.63	MG 1616 E40 W17	16	.630	5	1.57	4.0	C
.077	.10	Ø>.63	MG 1616 E45 W19	16	.630	5	1.77	4.0	C

Order example: MG 10098D20 W12 MT8

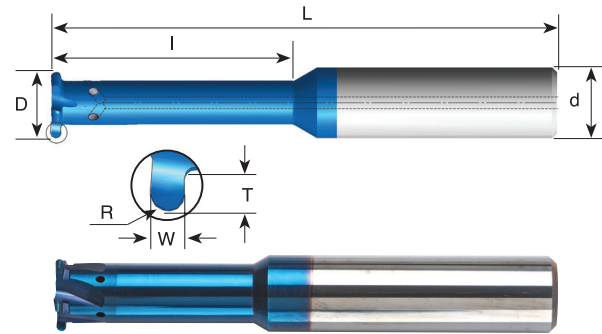
C = Internal coolant



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Full Radius Groove Milling

with internal coolant through the flutes



For grooving deep parts

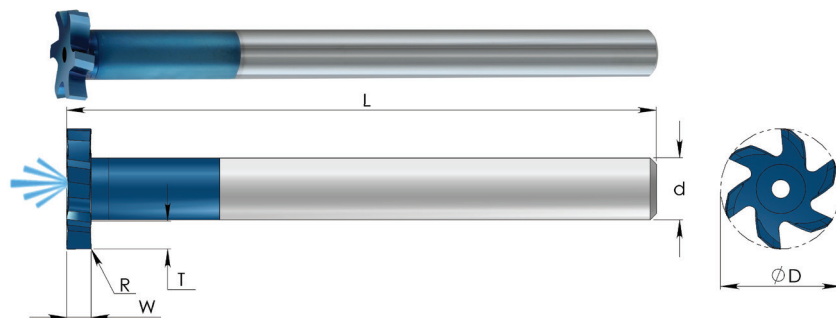
R	W ± .001	T Max.	Groove Dia. (min.)	Ordering Code	d mm	D	No. of Flutes	I	L	
.020	.039	.02	Ø>.16	MG 0604 C4 R05	6	.157	3	.17	2.0	
.020	.039	.03	Ø>.24	MG 0606 C8 R05	6	.236	3	.31	2.3	C
.030	.059	.04	Ø>.24	MG 0606 C7 R075	6	.236	3	.28	2.3	
.020	.039	.04	Ø>.35	MG 10088 D16 R05	10	.346	4	.63	2.9	
.030	.059	.06	Ø>.35	MG 10088 D16 R075	10	.346	4	.63	2.9	
.039	.079	.06	Ø>.35	MG 10088 D16 R10	10	.346	4	.63	2.9	
.020	.039	.06	Ø>.39	MG 1010 D20 R05	10	.394	4	.79	2.9	
.024	.047	.04	Ø>.39	MG 1010 D20 R06	10	.394	4	.79	2.9	C
.030	.059	.08	Ø>.39	MG 1010 D20 R075	10	.394	4	.79	2.9	C
.039	.079	.08	Ø>.39	MG 1010 D20 R10	10	.394	4	.79	2.9	C
.035	.071	.06	Ø>.47	MG 1212 D30 R09	12	.472	4	1.18	3.3	C
.039	.079	.06	Ø>.63	MG 1616 E40 R10	16	.630	5	1.57	4.0	C
.059	.118	.09	Ø>.63	MG 1616 E40 R15	16	.630	5	1.57	4.0	C

Order example: MG 1010 D20 R06 MT8

C = Internal coolant

Deep Groove Milling

with internal coolant bore



W ± .001	R	T (max.)	Groove Dia. (min.)	Ordering Code	d mm	D	No. of Flutes	L
.059	.004	.18	Ø>.77	MGD 10195 F W15	10	.768	6	5.0
.079	.004	.18	Ø>.77	MGD 10195 F W20	10	.768	6	5.0
.098	.004	.18	Ø>.77	MGD 10195 F W25	10	.768	6	5.0
.118	.004	.18	Ø>.77	MGD 10195 F W30	10	.768	6	5.0
.138	.004	.18	Ø>.77	MGD 10195 F W35	10	.768	6	5.0
.157	.004	.18	Ø>.77	MGD 10195 F W40	10	.768	6	5.0
.197	.004	.18	Ø>.77	MGD 10195 F W50	10	.768	6	5.0

* Same tool for internal and external grooving

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Solid Carbide Grooving Tools



Technical Section

Cutting Data

ISO	Materials	Cutting Speed ft/min	Feed inch/tooth Cutting Diameter = D												
			Ø.06	Ø.08	Ø.12	Ø.16	Ø.20	Ø.24	Ø.28	Ø.31	Ø.35	Ø.39	Ø.47	Ø.55	Ø.63
P	Low and Medium Carbon Steels <0.55%C	200-390	.0011	.0014	.0019	.0025	.0030	.0036	.0039	.0041	.0044	.0044	.0047	.0050	.0050
	High Carbon Steels ≥0.55%C	200 - 300	.0008	.0014	.0017	.0022	.0025	.0028	.0033	.0036	.0039	.0039	.0044	.0047	.0050
	Alloy Steels, Treated Steels	160 - 260	.0008	.0011	.0014	.0014	.0017	.0019	.0019	.0022	.0025	.0028	.0033	.0036	.0039
M	Stainless Steels - Free Cutting	230 - 330	.0006	.0008	.0014	.0014	.0017	.0017	.0019	.0022	.0025	.0028	.0030	.0033	.0036
	Stainless Steels - Austenitic	200 - 300	.0006	.0008	.0011	.0014	.0017	.0017	.0019	.0022	.0025	.0028	.0030	.0033	.0036
	Cast Steels	230 - 300	.0008	.0011	.0014	.0014	.0017	.0019	.0019	.0022	.0025	.0028	.0033	.0036	.0039
K	Cast Iron	130 - 260	.0011	.0014	.0019	.0025	.0030	.0036	.0039	.0041	.0044	.0044	.0047	.0050	.0050
N	Aluminum ≤12%Si, Copper	330 - 660	.0011	.0014	.0019	.0025	.0030	.0036	.0039	.0041	.0044	.0044	.0047	.0050	.0050
	Aluminum >12% Si	200 - 460	.0008	.0008	.0011	.0014	.0017	.0017	.0019	.0022	.0025	.0028	.0030	.0036	.0037
	Synthetics, Duroplastics, Thermoplastics	160 - 660	.0025	.0030	.0033	.0039	.0044	.0050	.0052	.0052	.0052	.0052	.0052	.0055	.0055
S	Nickel Alloys, Titanium Alloys	70 - 130	.0008	.0008	.0011	.0011	.0014	.0017	.0017	.0017	.0019	.0019	.0019	.0022	.0022
H	Hardened Steel, 45-50HRc	60 - 70	.0008	.0011	.0014	.0014	.0017	.0017	.0019	.0019	.0022	.0022	.0025	.0028	.0030



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