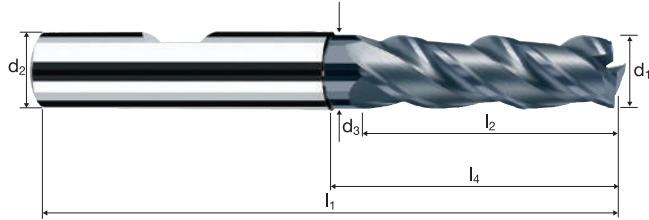


# Cylindrical end mills

Smooth-edged, medium length version, short neck



HM MG10	$\lambda$ 40° $\gamma$ 6°
45°	
Vario	

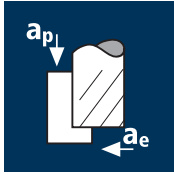


Roughing	Finishing

Rm < 850	Rm 850-1100	Rm 1100-1300					Inox Stainless	Ti Titanium	GG(G) Tool Steel Nickel-Alloys
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Ø Code	d <sub>1</sub> e8	d <sub>2</sub> h6	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	45°	α	z	POLYCHROM	
											Example: Order-N°.	Coating
180	3.00	6.00	2.80	63	14.00	20.00	26.63	0.10	3.5°	3		●
220	4.00	6.00	3.70	63	17.00	22.00	26.95	0.10	2.5°	3		●
260	5.00	6.00	4.60	63	19.00	24.00	27.27	0.15	1.5°	3		●
300	6.00	6.00	5.50	63	19.00	25.34	26.00	0.15	0.0°	3		●
391	8.00	8.00	7.40	72	28.00	34.29	35.00	0.15	0.0°	3		●
450	10.00	10.00	9.20	84	34.00	42.20	43.00	0.20	0.0°	3		●
501	12.00	12.00	11.00	97	40.00	50.13	51.00	0.20	0.0°	3		●
610	16.00	16.00	15.00	108	48.00	58.13	59.00	0.20	0.0°	3		●
682	20.00	20.00	19.00	122	56.00	70.13	71.00	0.20	0.0°	3		●

## Application



## Material

Steel  
< 850 N/mm<sup>2</sup>



Steel  
850 - 1100 N/mm<sup>2</sup>



Inox normal  
[Cr-Ni/1.4301]  
[Cr-Ni-Mo/1.4571]



Cast iron  
(lamellar / spheroidal)



Steel  
< 850 N/mm<sup>2</sup>



Steel  
850 - 1100 N/mm<sup>2</sup>



Inox normal  
[Cr-Ni/1.4301]  
[Cr-Ni-Mo/1.4571]



Cast iron  
(lamellar / spheroidal)



d1 [mm]	z	v <sub>c</sub> [m/min]	f <sub>s</sub> [mm]	a <sub>p</sub> [mm]	a <sub>e</sub> [mm]	n [min <sup>-1</sup> ]	v <sub>r</sub> [mm/min]	Q [cm <sup>3</sup> /min]
3.00	3	165	0.010	4.500	1.800	17505	525	4.3
4.00	3	165	0.015	6.000	2.400	13130	590	8.5
5.00	3	165	0.015	7.500	3.000	10505	475	10.6
6.00	3	165	0.020	9.000	3.600	8755	525	17.0
8.00	3	165	0.025	12.000	4.800	6565	490	28.4
10.00	3	165	0.030	15.000	6.000	5250	475	42.5
12.00	3	165	0.040	18.000	7.200	4375	525	68.1
16.00	3	165	0.050	24.000	8.400	3285	490	99.3
20.00	3	165	0.065	30.000	10.500	2625	510	161.3
3.00	3	110	0.010	4.500	1.800	11670	350	2.8
4.00	3	110	0.015	6.000	2.400	8755	395	5.7
5.00	3	110	0.015	7.500	3.000	7005	315	7.1
6.00	3	110	0.020	9.000	3.600	5835	350	11.3
8.00	3	110	0.025	12.000	4.800	4375	330	18.9
10.00	3	110	0.030	15.000	6.000	3500	315	28.4
12.00	3	110	0.040	18.000	7.200	2920	350	45.4
16.00	3	110	0.050	24.000	8.400	2190	330	66.2
20.00	3	110	0.065	30.000	10.500	1750	340	107.5
3.00	3	80	0.005	4.500	1.800	8490	125	1.0
4.00	3	80	0.010	6.000	2.400	6365	190	2.8
5.00	3	80	0.010	7.500	3.000	5095	155	3.4
6.00	3	80	0.015	9.000	3.600	4245	190	6.2
8.00	3	80	0.020	12.000	4.800	3185	190	11.0
10.00	3	80	0.025	15.000	6.000	2545	190	17.2
12.00	3	80	0.030	18.000	7.200	2120	190	24.8
16.00	3	80	0.040	24.000	8.400	1590	190	38.5
20.00	3	80	0.045	30.000	10.500	1275	170	54.1
3.00	3	130	0.010	4.500	1.800	13795	415	3.4
4.00	3	130	0.015	6.000	2.400	10345	465	6.7
5.00	3	130	0.015	7.500	3.000	8275	370	8.4
6.00	3	130	0.020	9.000	3.600	6895	415	13.4
8.00	3	130	0.025	12.000	4.800	5175	390	22.3
10.00	3	130	0.030	15.000	6.000	4140	370	33.5
12.00	3	130	0.040	18.000	7.200	3450	415	53.6
16.00	3	130	0.050	24.000	8.400	2585	390	78.2
20.00	3	130	0.065	30.000	10.500	2070	405	127.1
3.00	3	130	0.010	2.000	3.000	13795	415	2.5
4.00	3	130	0.015	3.100	4.000	10345	465	5.8
5.00	3	130	0.015	4.400	5.000	8275	370	8.2
6.00	3	130	0.020	7.800	6.000	6895	415	19.4
8.00	3	130	0.025	10.400	8.000	5175	390	32.3
10.00	3	130	0.025	13.000	10.000	4140	310	40.3
12.00	3	130	0.035	15.600	12.000	3450	360	67.8
16.00	3	130	0.045	17.600	16.000	2585	350	98.3
20.00	3	130	0.060	22.000	20.000	2070	370	163.9
3.00	3	85	0.010	2.000	3.000	9020	270	1.6
4.00	3	85	0.015	3.100	4.000	6765	305	3.8
5.00	3	85	0.015	4.400	5.000	5410	245	5.4
6.00	3	85	0.020	7.800	6.000	4510	270	12.7
8.00	3	85	0.025	10.400	8.000	3380	255	21.1
10.00	3	85	0.025	13.000	10.000	2705	205	26.4
12.00	3	85	0.035	15.600	12.000	2255	235	44.3
16.00	3	85	0.045	17.600	16.000	1690	230	64.3
20.00	3	85	0.060	22.000	20.000	1355	245	107.1
3.00	3	65	0.005	2.000	3.000	6895	105	0.6
4.00	3	65	0.010	3.100	4.000	5175	155	1.9
5.00	3	65	0.010	4.400	5.000	4140	125	2.7
6.00	3	65	0.015	7.800	6.000	3450	155	7.3
8.00	3	65	0.020	10.400	8.000	2585	155	12.9
10.00	3	65	0.025	13.000	10.000	2070	155	20.2
12.00	3	65	0.025	15.600	12.000	1725	130	24.2
16.00	3	65	0.035	17.600	16.000	1295	135	38.2
20.00	3	65	0.040	22.000	20.000	1035	125	54.6
3.00	3	110	0.010	2.000	3.000	11670	350	2.1
4.00	3	110	0.015	3.100	4.000	8755	395	4.9
5.00	3	110	0.015	4.400	5.000	7005	315	6.9
6.00	3	110	0.020	7.800	6.000	5835	350	16.4
8.00	3	110	0.025	10.400	8.000	4375	330	27.3
10.00	3	110	0.025	13.000	10.000	3500	265	34.1
12.00	3	110	0.035	15.600	12.000	2920	305	57.4
16.00	3	110	0.045	17.600	16.000	2190	295	83.2
20.00	3	110	0.060	22.000	20.000	1750	315	138.7