

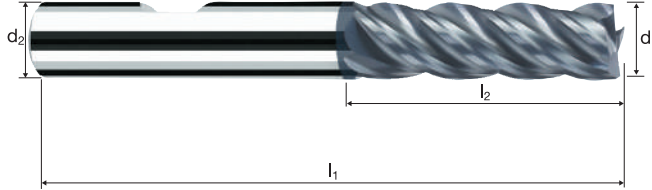
# Cylindrical end mills

Smooth-edged, medium length version



HM  
MG10

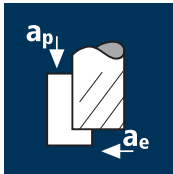
$\lambda$  40°  
 $\gamma$  6°



Rm < 850	Rm 850-1100	Rm 1100-1300					Inox Stainless	Ti Titanium	GG(G) Tool Steel Nickel-Alloys
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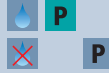
Example: Order-N°.		Coating <b>P</b>	Article-N°. <b>45322</b>	ø-Code <b>140</b>						POLYCHROM	
										<b>P45322</b>	
										<b>P45222</b>	
Ø Code	d <sub>1</sub> e8	d <sub>2</sub> h6	l <sub>1</sub>	l <sub>2</sub>	l <sub>4</sub>	45°	α	z			
140	2.00	6.00	63	12.00	21.42	0.10	6.0°	4	●		
160	2.50	6.00	63	12.00	20.49	0.10	5.0°	4	●		
180	3.00	6.00	63	13.00	20.56	0.10	4.5°	4	●		
220	4.00	6.00	63	13.00	18.89	0.10	3.5°	4	●		
260	5.00	6.00	63	16.00	20.02	0.15	1.5°	4	●		
300	6.00	6.00	63	21.00	-	0.15	0.0°	4	●		
391	8.00	8.00	72	31.00	-	0.15	0.0°	4	●		
450	10.00	10.00	84	37.00	-	0.20	0.0°	4	●		
501	12.00	12.00	97	44.00	-	0.20	0.0°	4	●		
570	14.00	14.00	102	48.00	-	0.20	0.0°	4	●		
610	16.00	16.00	108	53.00	-	0.20	0.0°	4	●		
682	20.00	20.00	122	62.00	-	0.20	0.0°	4	●		
772	25.00	25.00	144	72.00	-	0.25	0.0°	4	●		

## 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	4	170	0.010	5.400	0.600	18040	720	2.3
4.00	4	170	0.015	7.200	0.800	13530	810	4.7
5.00	4	170	0.020	9.000	1.000	10825	865	7.8
6.00	4	170	0.025	10.800	1.200	9020	900	11.7
8.00	4	170	0.035	14.400	1.600	6765	945	21.8
10.00	4	170	0.045	18.000	2.000	5410	975	35.1
12.00	4	170	0.050	21.600	2.400	4510	900	46.8
16.00	4	170	0.065	28.800	3.200	3380	880	81.0
20.00	4	170	0.080	36.000	4.000	2705	865	124.7
3.00	4	120	0.010	5.400	0.600	12730	510	1.7
4.00	4	120	0.015	7.200	0.800	9550	575	3.3
5.00	4	120	0.020	9.000	1.000	7640	610	5.5
6.00	4	120	0.025	10.800	1.200	6365	635	8.3
8.00	4	120	0.035	14.400	1.600	4775	670	15.4
10.00	4	120	0.045	18.000	2.000	3820	690	24.8
12.00	4	120	0.050	21.600	2.400	3185	635	33.0
16.00	4	120	0.065	28.800	3.200	2385	620	57.2
20.00	4	120	0.080	36.000	4.000	1910	610	88.0
3.00	4	80	0.008	5.400	0.600	8490	270	0.9
4.00	4	80	0.010	7.200	0.800	6365	255	1.5
5.00	4	80	0.015	9.000	1.000	5095	305	2.8
6.00	4	80	0.020	10.800	1.200	4245	340	4.4
8.00	4	80	0.025	14.400	1.600	3185	320	7.3
10.00	4	80	0.030	18.000	2.000	2545	305	11.0
12.00	4	80	0.035	21.600	2.400	2120	295	15.4
16.00	4	80	0.045	28.800	3.200	1590	285	26.4
20.00	4	80	0.055	36.000	4.000	1275	280	40.3
3.00	4	135	0.012	5.400	0.600	14325	690	2.2
4.00	4	135	0.015	7.200	0.800	10745	645	3.7
5.00	4	135	0.020	9.000	1.000	8595	690	6.2
6.00	4	135	0.030	10.800	1.200	7160	860	11.1
8.00	4	135	0.040	14.400	1.600	5370	860	19.8
10.00	4	135	0.050	18.000	2.000	4295	860	30.9
12.00	4	135	0.055	21.600	2.400	3580	790	40.8
16.00	4	135	0.070	28.800	3.200	2685	750	69.3
20.00	4	135	0.090	36.000	4.000	2150	775	111.4
3.00	4	135	0.008	1.800	3.000	14325	460	2.5
4.00	4	135	0.010	2.800	4.000	10745	430	4.8
5.00	4	135	0.015	4.000	5.000	8595	515	10.3
6.00	4	135	0.020	6.000	6.000	7160	575	20.6
8.00	4	135	0.025	8.000	8.000	5370	535	34.4
10.00	4	135	0.035	10.000	10.000	4295	600	60.2
12.00	4	135	0.040	12.000	12.000	3580	575	82.5
16.00	4	135	0.050	8.000	16.000	2685	535	68.8
20.00	4	135	0.060	10.000	20.000	2150	515	103.1
3.00	4	95	0.008	1.800	3.000	10080	325	1.7
4.00	4	95	0.010	2.800	4.000	7560	300	3.4
5.00	4	95	0.015	4.000	5.000	6050	365	7.3
6.00	4	95	0.020	6.000	6.000	5040	405	14.5
8.00	4	95	0.025	8.000	8.000	3780	380	24.2
10.00	4	95	0.035	10.000	10.000	3025	425	42.3
12.00	4	95	0.040	12.000	12.000	2520	405	58.1
16.00	4	95	0.050	8.000	16.000	1890	380	48.4
20.00	4	95	0.060	10.000	20.000	1510	365	72.6
3.00	4	65	0.006	1.800	3.000	6895	165	0.9
4.00	4	65	0.008	2.800	4.000	5175	165	1.9
5.00	4	65	0.012	4.000	5.000	4140	200	4.0
6.00	4	65	0.016	4.200	6.000	3450	220	5.6
8.00	4	65	0.018	8.000	8.000	2585	185	11.9
10.00	4	65	0.022	10.000	10.000	2070	180	18.2
12.00	4	65	0.025	12.000	12.000	1725	170	24.8
16.00	4	65	0.035	8.000	16.000	1295	180	23.2
20.00	4	65	0.040	10.000	20.000	1035	165	33.1
3.00	4	115	0.010	1.800	3.000	12200	490	2.6
4.00	4	115	0.010	2.800	4.000	9150	365	4.1
5.00	4	115	0.015	4.000	5.000	7320	440	8.8
6.00	4	115	0.025	6.000	6.000	6100	610	22.0
8.00	4	115	0.030	8.000	8.000	4575	550	35.1
10.00	4	115	0.040	10.000	10.000	3660	585	58.6
12.00	4	115	0.040	12.000	12.000	3050	490	70.3
16.00	4	115	0.055	8.000	16.000	2290	505	64.4
20.00	4	115	0.070	10.000	20.000	1830	510	102.5