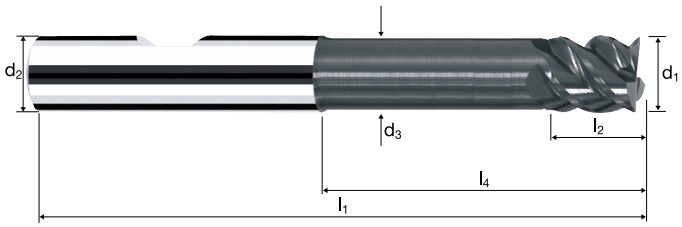
Cylindrical end mills HX

Smooth-edged, medium length version with neck

X-Generation

HM MG10	λ 55° γ -10°
45°	



Roughing

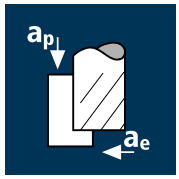
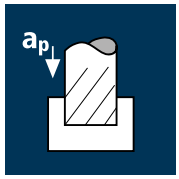
Finishing

ToolSchool

		Rm 1100-1300	Rm 1300-1500	HRC 48-56	HRC 56-60	HRC > 60		Ti Titanium	GG(G)

Example: **Order-N°.** Coating **D** Article-N°. **5351** ø-Code **300**

Ø Code	d_1 e8	d_2 h6	d_3	l_1	l_2	l_3	l_4	45°	z	POLYCHROM P5351 P5251	DURO-S D5351 D5251
300	6.00	6.00	5.50	70	7.00	32.34	33.00	0.15	4	●	●
391	8.00	8.00	7.40	80	9.00	42.29	43.00	0.15	4	●	●
450	10.00	10.00	9.20	84	11.00	42.20	43.00	0.20	4	●	●
501	12.00	12.00	11.00	97	13.00	50.13	51.00	0.20	4	●	●
610	16.00	16.00	15.00	115	17.00	65.13	66.00	0.20	4	●	●
682	20.00	20.00	19.00	130	21.00	78.13	79.00	0.20	4	●	●

Application	Material	d1 [mm]	z	v_c [m/min]	f_z [mm]	a_p [mm]	a_e [mm]	n [min⁻¹]	v_f [mm/min]	Q [cm³/min]
	Hardened tool steel 42 - 48 HRC	6.00	4	90	0.035	6.000	2.400	4775	670	9.6
		8.00	4	90	0.045	8.000	3.200	3580	645	16.5
		10.00	4	90	0.055	10.000	4.000	2865	630	25.2
		12.00	4	90	0.070	12.000	4.800	2385	670	38.5
		16.00	4	90	0.090	16.000	3.200	1790	645	33.0
		20.00	4	90	0.115	20.000	4.000	1430	660	52.7
	Hardened tool steel 48 - 52 HRC	6.00	4	70	0.030	6.000	2.400	3715	445	6.4
		8.00	4	70	0.040	8.000	3.200	2785	445	11.4
		10.00	4	70	0.050	10.000	4.000	2230	445	17.8
		12.00	4	70	0.060	12.000	4.800	1855	445	25.7
		16.00	4	70	0.080	16.000	3.200	1395	445	22.8
		20.00	4	70	0.100	20.000	4.000	1115	445	35.7
	Hardened tool steel 52 - 56 HRC	6.00	4	50	0.025	6.000	2.400	2655	265	3.8
		8.00	4	50	0.035	8.000	3.200	1990	280	7.1
		10.00	4	50	0.040	10.000	4.000	1590	255	10.2
		12.00	4	50	0.050	12.000	4.800	1325	265	15.3
		16.00	4	50	0.065	16.000	3.200	995	260	13.2
		20.00	4	50	0.080	20.000	4.000	795	255	20.4
	Hardened tool steel 56 - 60 HRC	6.00	4	25	0.020	6.000	2.400	1325	105	1.5
		8.00	4	25	0.025	8.000	3.200	995	100	2.5
		10.00	4	25	0.030	10.000	4.000	795	95	3.8
		12.00	4	25	0.035	12.000	4.800	665	95	5.3
		16.00	4	25	0.050	16.000	3.200	495	100	5.1
		20.00	4	25	0.060	20.000	4.000	400	95	7.6
	Hardened tool steel 42 - 48 HRC	6.00	4	75	0.025	2.400	6.000	3980	400	5.7
		8.00	4	75	0.040	3.200	8.000	2985	475	12.2
		10.00	4	75	0.045	4.000	10.000	2385	430	17.2
		12.00	4	75	0.055	4.800	12.000	1990	440	25.2
		16.00	4	75	0.070	3.200	16.000	1490	420	21.4
		20.00	4	75	0.090	4.000	20.000	1195	430	34.4
	Hardened tool steel 48 - 52 HRC	6.00	4	60	0.025	2.400	6.000	3185	320	4.6
		8.00	4	60	0.035	3.200	8.000	2385	335	8.6
		10.00	4	60	0.045	4.000	10.000	1910	345	13.8
		12.00	4	60	0.055	4.800	12.000	1590	350	20.2
		16.00	4	60	0.070	3.200	16.000	1195	335	17.1
		20.00	4	60	0.090	4.000	20.000	955	345	27.5
	Hardened tool steel 52 - 56 HRC	6.00	4	40	0.020	2.400	6.000	2120	170	2.4
		8.00	4	40	0.030	3.200	8.000	1590	190	4.9
		10.00	4	40	0.035	4.000	10.000	1275	180	7.1
		12.00	4	40	0.045	4.800	12.000	1060	190	11.0
		16.00	4	40	0.060	3.200	16.000	795	190	9.8
		20.00	4	40	0.070	4.000	20.000	635	180	14.3
	Hardened tool steel 56 - 60 HRC	6.00	4	20	0.015	2.400	6.000	1060	65	0.9
		8.00	4	20	0.021	3.200	8.000	795	65	1.7
		10.00	4	20	0.026	4.000	10.000	635	65	2.6
		12.00	4	20	0.031	4.800	12.000	530	65	3.8
		16.00	4	20	0.041	3.200	16.000	400	65	3.3
		20.00	4	20	0.051	4.000	20.000	320	65	5.2