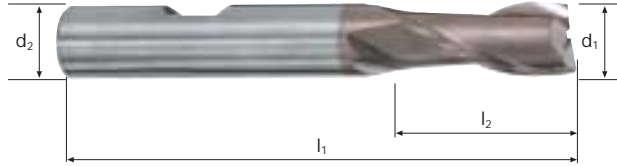


Cylindrical end mills

Smooth-edged, normal version



HM
MG10 λ 30°
 γ 12°



Roughing



Finishing



Rm < 850	Rm 850-1100	Rm 1100-1300					Inox Stainless		GG(G) Copper
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Example: Order-N°.		Coating U	Article-N°. 5300	α -Code .140						UNICUT-4X	
\emptyset Code	d1 e8	d2 h6	l1	l2	45°	α	z				
.138*	2.0	2.0	42	6	0.10	0.0°	2	●			
.140	2.0	6.0	54	6	0.10	7.0°	2	●			
.158*	2.5	2.5	42	7	0.10	0.0°	2	●			
.160	2.5	6.0	54	6	0.10	6.5°	2	●			
.178*	3.0	3.0	45	7	0.10	0.0°	2	●			
.180	3.0	6.0	57	7	0.10	5.5°	2	●			
.200	3.5	6.0	57	7	0.10	5.0°	2	●			
.218*	4.0	4.0	50	8	0.10	0.0°	2	●			
.220	4.0	6.0	57	8	0.10	4.0°	2	●			
.240	4.5	6.0	57	8	0.15	3.5°	2	●			
.258*	5.0	5.0	50	10	0.15	0.0°	2	●			
.260	5.0	6.0	57	10	0.15	2.0°	2	●			
.280	5.5	6.0	57	10	0.15	1.5°	2	●			
.300	6.0	6.0	57	10	0.15	0.0°	2	●			
.331	7.0	8.0	63	13	0.15	2.0°	2	●			
.391	8.0	8.0	63	16	0.15	0.0°	2	●			
.420	9.0	10.0	72	16	0.20	1.5°	2	●			
.450	10.0	10.0	72	19	0.20	0.0°	2	●			
.501	12.0	12.0	83	22	0.20	0.0°	2	●			
.610	16.0	16.0	92	26	0.20	0.0°	2	●			
.682	20.0	20.0	104	32	0.20	0.0°	2	●			
* without clamping flat only											

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 [cm ³ /min]
	Steel < 850 N/mm ² 	3	2	120	0.010	3	1.4	12735	255	1.0
		4	2	120	0.015	4	1.8	9550	285	2.0
		5	2	120	0.020	5	2.3	7640	305	3.5
		6	2	120	0.025	6	2.7	6365	320	5.0
		8	2	120	0.030	8	3.6	4775	285	8.0
		10	2	120	0.040	10	4.5	3820	305	13.5
		12	2	120	0.050	12	5.4	3185	320	20.5
		16	2	120	0.065	16	7.2	2385	310	35.5
		20	2	120	0.080	20	9.0	1910	305	55.0
		Steel 850 - 1100 N/mm ² 	3	2	80	0.010	3	1.4	8490	170
4	2		80	0.015	4	1.8	6365	190	1.5	
5	2		80	0.020	5	2.3	5095	205	2.5	
6	2		80	0.020	6	2.7	4245	170	3.0	
8	2		80	0.030	8	3.6	3185	190	5.5	
10	2		80	0.035	10	4.5	2545	180	8.0	
12	2		80	0.045	12	5.4	2120	190	12.5	
16	2		80	0.060	16	7.2	1590	190	22.0	
20	2		80	0.070	20	9.0	1275	180	32.5	
Stainless steel [Cr-Ni/1.4301] 	3		2	60	0.010	3	1.4	6365	125	0.5
	4	2	60	0.015	4	1.8	4775	145	1.0	
	5	2	60	0.020	5	2.3	3820	155	1.5	
	6	2	60	0.020	6	2.7	3185	125	2.0	
	8	2	60	0.030	8	3.6	2385	145	4.0	
	10	2	60	0.035	10	4.5	1910	135	6.0	
	12	2	60	0.045	12	5.4	1590	145	9.5	
	16	2	60	0.060	16	7.2	1195	145	16.5	
	20	2	60	0.070	20	9.0	955	135	24.5	
	Cast iron (lamellar / spheroidal) 	3	2	160	0.015	3	1.4	16975	510	2.0
4		2	160	0.020	4	1.8	12735	510	3.5	
5		2	160	0.020	5	2.3	10185	405	4.5	
6		2	160	0.025	6	2.7	8490	425	7.0	
8		2	160	0.035	8	3.6	6365	445	13.0	
10		2	160	0.045	10	4.5	5095	460	20.5	
12		2	160	0.055	12	5.4	4245	465	30.0	
16		2	160	0.070	16	7.2	3185	445	51.5	
20		2	160	0.090	20	9.0	2545	460	83.0	

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 [cm ³ /min]
	Steel < 850 N/mm ² 	3	2	100	0.010	1.5	3	10610	210	1.0
		4	2	100	0.010	2.0	4	7960	160	1.5
		5	2	100	0.015	2.5	5	6365	190	2.5
		6	2	100	0.015	3.0	6	5305	160	3.0
		8	2	100	0.020	4.0	8	3980	160	5.0
		10	2	100	0.030	5.0	10	3185	190	9.5
		12	2	100	0.035	6.0	12	2655	185	13.5
		16	2	100	0.045	8.0	16	1990	180	23.0
		20	2	100	0.055	10.0	20	1590	175	35.0
		Steel 850 - 1100 N/mm ² 	3	2	70	0.010	1.5	3	7425	150
4	2		70	0.010	2.0	4	5570	110	1.0	
5	2		70	0.015	2.5	5	4455	135	1.5	
6	2		70	0.015	3.0	6	3715	110	2.0	
8	2		70	0.020	4.0	8	2785	110	3.5	
10	2		70	0.025	5.0	10	2230	110	5.5	
12	2		70	0.030	6.0	12	1855	110	8.0	
16	2		70	0.040	8.0	16	1395	110	14.0	
20	2		70	0.050	10.0	20	1115	110	22.0	
Stainless steel [Cr-Ni/1.4301] 	3		2	40	0.010	1.5	3	4245	85	0.5
	4	2	40	0.010	2.0	4	3185	65	0.5	
	5	2	40	0.015	2.5	5	2545	75	1.0	
	6	2	40	0.015	3.0	6	2120	65	1.0	
	8	2	40	0.020	4.0	8	1590	65	2.0	
	10	2	40	0.025	5.0	10	1275	65	3.5	
	12	2	40	0.030	6.0	12	1060	65	4.5	
	16	2	40	0.040	8.0	16	795	65	8.5	
	20	2	40	0.050	10.0	20	635	65	13.0	
	Cast iron (lamellar / spheroidal) 	3	2	120	0.010	1.5	3	12735	255	1.0
4		2	120	0.010	2.0	4	9550	190	1.5	
5		2	120	0.015	2.5	5	7640	230	3.0	
6		2	120	0.020	3.0	6	6365	255	4.5	
8		2	120	0.025	4.0	8	4775	240	7.5	
10		2	120	0.030	5.0	10	3820	230	11.5	
12		2	120	0.035	6.0	12	3185	225	16.0	
16		2	120	0.050	8.0	16	2385	240	30.5	
20		2	120	0.060	10.0	20	1910	230	46.0	