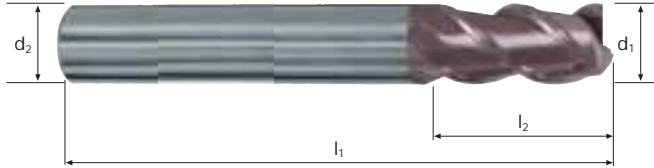
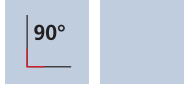


Cylindrical end mills

Smooth-edged, normal version



HM
MG10 λ 45°
 γ 15°



Roughing

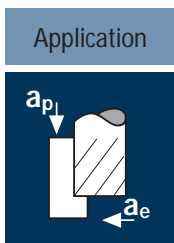


Finishing



Rm < 850	Rm 850-1100	Rm 1100-1300					Inox Stainless		GG(G) Copper
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Example: Order-N°.		Coating U	Article-N°. 15230	α -Code .140						UNICUT-4X
\emptyset Code	d1 e8	d2 h6	l1	l2	α	Z				
.140	2.0	6	54	6	7.0°	3	●		●	
.160	2.5	6	54	6	6.5°	3	●		●	
.180	3.0	6	57	7	5.5°	3	●		●	
.200	3.5	6	57	7	5.0°	3	●		●	
.220	4.0	6	57	8	4.0°	3	●		●	
.240	4.5	6	57	8	3.5°	3	●		●	
.260	5.0	6	57	10	2.0°	3	●		●	
.280	5.5	6	57	10	1.5°	3	●		●	
.300	6.0	6	57	10	0.0°	3	●		●	
.391	8.0	8	63	16	0.0°	3	●		●	
.450	10.0	10	72	19	0.0°	3	●		●	
.501	12.0	12	83	22	0.0°	3	●		●	



Material

Steel
< 850 N/mm²

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]
2.0	3	120	0.005	3.0	0.2	19100	285	0.2
2.5	3	120	0.010	3.8	0.3	15280	460	0.4
3.0	3	120	0.010	4.5	0.3	12735	380	0.5
4.0	3	120	0.015	6.0	0.4	9550	430	1.0
5.0	3	120	0.015	7.5	0.5	7640	345	1.3
6.0	3	120	0.020	9.0	0.6	6365	380	2.1
8.0	3	120	0.025	12.0	0.8	4775	360	3.5
10.0	3	120	0.035	15.0	1.0	3820	400	6.0
12.0	3	120	0.040	18.0	1.2	3185	380	8.2

Steel
850 - 1100 N/mm²

2.0	3	80	0.005	3.0	0.2	12735	190	0.1
2.5	3	80	0.010	3.8	0.3	10185	305	0.3
3.0	3	80	0.010	4.5	0.3	8490	255	0.3
4.0	3	80	0.015	6.0	0.4	6365	285	0.7
5.0	3	80	0.015	7.5	0.5	5095	230	0.9
6.0	3	80	0.020	9.0	0.6	4245	255	1.4
8.0	3	80	0.025	12.0	0.8	3185	240	2.3
10.0	3	80	0.035	15.0	1.0	2545	265	4.0
12.0	3	80	0.040	18.0	1.2	2120	255	5.5

Stainless steel
[Cr-Ni/1.4301]

2.0	3	60	0.005	3.0	0.2	9550	145	0.1
2.5	3	60	0.010	3.8	0.3	7640	230	0.2
3.0	3	60	0.010	4.5	0.3	6365	190	0.3
4.0	3	60	0.015	6.0	0.4	4775	215	0.5
5.0	3	60	0.015	7.5	0.5	3820	170	0.6
6.0	3	60	0.020	9.0	0.6	3185	190	1.0
8.0	3	60	0.025	12.0	0.8	2385	180	1.7
10.0	3	60	0.035	15.0	1.0	1910	200	3.0
12.0	3	60	0.040	18.0	1.2	1590	190	4.1

Cast iron
(lamellar / spheroidal)

2.0	3	160	0.005	3.0	0.2	25465	380	0.2
2.5	3	160	0.010	3.8	0.3	20370	610	0.6
3.0	3	160	0.010	4.5	0.3	16975	510	0.7
4.0	3	160	0.015	6.0	0.4	12735	575	1.4
5.0	3	160	0.015	7.5	0.5	10185	460	1.7
6.0	3	160	0.020	9.0	0.6	8490	510	2.8
8.0	3	160	0.025	12.0	0.8	6365	475	4.6
10.0	3	160	0.035	15.0	1.0	5095	535	8.0
12.0	3	160	0.040	18.0	1.2	4245	510	11.0



Material

Steel
< 850 N/mm²

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]
2.0	3	100	0.005	1.0	2.0	15915	240	0.5
2.5	3	100	0.005	1.3	2.5	12735	190	0.5
3.0	3	100	0.010	1.5	3.0	10610	320	1.5
4.0	3	100	0.010	2.0	4.0	7960	240	2.0
5.0	3	100	0.015	2.5	5.0	6365	285	3.5
6.0	3	100	0.015	3.0	6.0	5305	240	4.5
8.0	3	100	0.020	4.0	8.0	3980	240	7.5
10.0	3	100	0.030	5.0	10.0	3185	285	14.5
12.0	3	100	0.035	6.0	12.0	2655	280	20.0

Steel
850 - 1100 N/mm²

2.0	3	70	0.005	1.0	2.0	11140	165	0.5
2.5	3	70	0.005	1.3	2.5	8915	135	0.5
3.0	3	70	0.010	1.5	3.0	7425	225	1.0
4.0	3	70	0.010	2.0	4.0	5570	165	1.5
5.0	3	70	0.015	2.5	5.0	4455	200	2.5
6.0	3	70	0.015	3.0	6.0	3715	165	3.0
8.0	3	70	0.020	4.0	8.0	2785	165	5.5
10.0	3	70	0.025	5.0	10.0	2230	165	8.5
12.0	3	70	0.030	6.0	12.0	1855	165	12.0

Stainless steel
[Cr-Ni/1.4301]

2.0	3	40	0.005	1.0	2.0	6365	95	0.2
2.5	3	40	0.005	1.3	2.5	5095	75	0.2
3.0	3	40	0.010	1.5	3.0	4245	125	0.5
4.0	3	40	0.010	2.0	4.0	3185	95	1.0
5.0	3	40	0.015	2.5	5.0	2545	115	1.5
6.0	3	40	0.015	3.0	6.0	2120	95	1.5
8.0	3	40	0.020	4.0	8.0	1590	95	3.0
10.0	3	40	0.025	5.0	10.0	1275	95	5.0
12.0	3	40	0.030	6.0	12.0	1060	95	7.0

Cast iron
(lamellar / spheroidal)

2.0	3	120	0.005	1.0	2.0	19100	285	0.5
2.5	3	120	0.010	1.3	2.5	15280	460	1.5
3.0	3	120	0.010	1.5	3.0	12735	380	1.5
4.0	3	120	0.010	2.0	4.0	9550	285	2.5
5.0	3	120	0.015	2.5	5.0	7640	345	4.5
6.0	3	120	0.020	3.0	6.0	6365	380	7.0
8.0	3	120	0.025	4.0	8.0	4775	360	11.5
10.0	3	120	0.030	5.0	10.0	3820	345	17.5
12.0	3	120	0.035	6.0	12.0	3185	335	24.0