

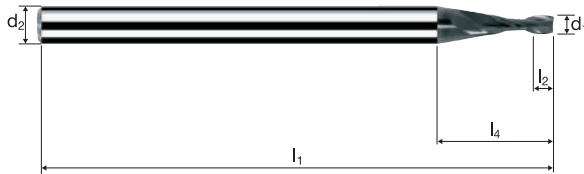
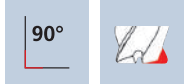
Cylindrical end mills

Shank \varnothing 3mm, 3xd



HM
MG10

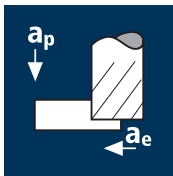
λ 30°
 γ 12°



Rm < 850	Rm 850-1100	Rm 1100-1300					Inox Stainless	Ti Titanium	Copper Aluminium
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Example: Order-N°.									MICRO	
									5710	M45710
\varnothing Code	d_1 ± 0.01	d_2 h6	l_1	l_2	l_4	α	z			
030	0.30	3.00	40	1.00	8.97	9.0°	2	●	●	
040	0.40	3.00	40	1.00	8.69	9.0°	2	●	●	
050	0.50	3.00	40	1.50	8.90	8.5°	2	●	●	
060	0.60	3.00	40	1.50	8.62	8.5°	2	●	●	
070	0.70	3.00	40	2.00	8.83	8.0°	2	●	●	
080	0.80	3.00	40	2.00	8.55	8.0°	2	●	●	
090	0.90	3.00	40	2.50	8.77	7.5°	2	●	●	
100	1.00	3.00	40	3.00	8.98	7.0°	2	●	●	
104	1.10	3.00	40	3.00	8.75	6.5°	2	●	●	
108	1.20	3.00	40	4.00	9.47	6.0°	2	●	●	
112	1.30	3.00	40	4.00	9.18	5.5°	2	●	●	
116	1.40	3.00	40	4.00	8.90	5.5°	2	●	●	
120	1.50	3.00	40	4.00	8.62	5.5°	2	●	●	
123	1.60	3.00	40	5.00	9.33	4.5°	2	●	●	
126	1.70	3.00	40	5.00	7.41	5.5°	2	●	●	
130	1.80	3.00	40	5.00	7.28	5.5°	2	●	●	
135	1.90	3.00	40	5.00	7.14	5.0°	2	●	●	
140	2.00	3.00	40	5.00	7.00	4.5°	2	●	●	

Application



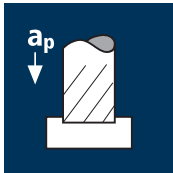
Material

Steel
< 850 N/mm²

Steel
850 - 1100 N/mm²

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

Titanium alloys
up to 300 HB
[Ti5Al2.5Sn]



Steel
< 850 N/mm²

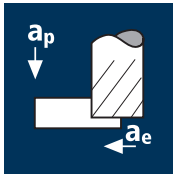
Steel
850 - 1100 N/mm²

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

Titanium alloys
up to 300 HB
[Ti5Al2.5Sn]

d1 [mm]	z	v _r [m/min]	f _s [mm]	a _p [mm]	a _e [mm]	n [min ⁻¹]	v _r [mm/min]	Q [mm ³ /min]
0.30	2	40	0.006	0.240	0.050	42440	510	6.1
0.50	2	66	0.010	0.400	0.080	42015	840	26.9
0.60	2	79	0.010	0.480	0.090	41910	840	36.2
0.80	2	106	0.014	0.640	0.120	42175	1180	90.7
1.00	2	132	0.018	0.800	0.150	42015	1515	181.5
1.20	2	158	0.022	0.960	0.180	41910	1845	318.7
1.50	2	180	0.028	1.200	0.230	38195	2140	590.4
1.80	2	180	0.032	1.440	0.270	31830	2035	792.1
2.00	2	180	0.036	1.600	0.300	28650	2065	990.1
0.30	2	40	0.006	0.240	0.050	42440	510	6.1
0.50	2	66	0.010	0.400	0.080	42015	840	26.9
0.60	2	79	0.010	0.480	0.090	41910	840	36.2
0.80	2	106	0.012	0.640	0.120	42175	1010	77.7
1.00	2	132	0.016	0.800	0.150	42015	1345	161.3
1.20	2	158	0.020	0.960	0.180	41910	1675	289.7
1.50	2	160	0.026	1.200	0.230	33955	1765	487.3
1.80	2	160	0.028	1.440	0.270	28295	1585	616.0
2.00	2	160	0.032	1.600	0.300	25465	1630	782.3
0.30	2	40	0.004	0.240	0.050	42440	340	4.1
0.50	2	66	0.008	0.400	0.080	42015	670	21.5
0.60	2	70	0.008	0.480	0.090	37135	595	25.7
0.80	2	70	0.012	0.640	0.120	27850	670	51.3
1.00	2	70	0.014	0.800	0.150	22280	625	74.9
1.20	2	70	0.018	0.960	0.180	18570	670	115.5
1.50	2	70	0.022	1.200	0.230	14855	655	180.4
1.80	2	70	0.026	1.440	0.270	12380	645	250.3
2.00	2	70	0.028	1.600	0.300	11140	625	299.5
0.30	2	40	0.004	0.240	0.050	42440	340	4.1
0.50	2	60	0.008	0.400	0.080	38195	610	19.6
0.60	2	60	0.008	0.480	0.090	31830	510	22.0
0.80	2	60	0.010	0.640	0.120	23875	475	36.7
1.00	2	60	0.012	0.800	0.150	19100	460	55.0
1.20	2	60	0.016	0.960	0.180	15915	510	88.0
1.50	2	60	0.020	1.200	0.230	12730	510	140.6
1.80	2	60	0.022	1.440	0.270	10610	465	181.5
2.00	2	60	0.026	1.600	0.300	9550	495	238.4
0.30	2	40	0.006	0.040	0.300	42440	510	6.1
0.50	2	66	0.008	0.060	0.500	42015	670	20.2
0.60	2	79	0.010	0.070	0.600	41910	840	35.2
0.80	2	106	0.014	0.100	0.800	42175	1180	94.5
1.00	2	132	0.016	0.120	1.000	42015	1345	161.3
1.20	2	158	0.020	0.140	1.200	41910	1675	281.6
1.50	2	160	0.026	0.180	1.500	33955	1765	476.7
1.80	2	160	0.030	0.220	1.800	28295	1700	672.3
2.00	2	160	0.034	0.240	2.000	25465	1730	831.2
0.30	2	40	0.006	0.040	0.300	42440	510	6.1
0.50	2	66	0.008	0.060	0.500	42015	670	20.2
0.60	2	79	0.010	0.070	0.600	41910	840	35.2
0.80	2	106	0.014	0.100	0.800	42175	1180	94.5
1.00	2	132	0.016	0.120	1.000	42015	1345	161.3
1.20	2	140	0.020	0.140	1.200	37135	1485	249.6
1.50	2	140	0.024	0.180	1.500	29710	1425	385.0
1.80	2	140	0.028	0.220	1.800	24755	1385	549.0
2.00	2	140	0.032	0.240	2.000	22280	1425	684.5
0.30	2	40	0.006	0.040	0.300	42440	510	6.1
0.50	2	60	0.008	0.060	0.500	38195	610	18.3
0.60	2	60	0.008	0.070	0.600	31830	510	21.4
0.80	2	60	0.012	0.100	0.800	23875	575	45.8
1.00	2	60	0.014	0.120	1.000	19100	535	64.2
1.20	2	60	0.018	0.140	1.200	15915	575	96.3
1.50	2	60	0.022	0.180	1.500	12730	560	151.3
1.80	2	60	0.026	0.220	1.800	10610	550	218.5
2.00	2	60	0.030	0.240	2.000	9550	575	275.0
0.30	2	40	0.004	0.040	0.300	42440	340	4.1
0.50	2	50	0.006	0.060	0.500	31830	380	11.5
0.60	2	50	0.008	0.070	0.600	26525	425	17.8
0.80	2	50	0.012	0.100	0.800	19895	475	38.2
1.00	2	50	0.012	0.120	1.000	15915	380	45.8
1.20	2	50	0.016	0.140	1.200	13265	425	71.3
1.50	2	50	0.020	0.180	1.500	10610	425	114.6
1.80	2	50	0.024	0.220	1.800	8840	425	168.1
2.00	2	50	0.028	0.240	2.000	7960	445	213.9

Application



Material

Steel
< 850 N/mm²



d1 [mm]	z	v _c [m/min]	f _s [mm]	a _p [mm]	a _e [mm]	n [min ⁻¹]	v _r [mm/min]	Q [cm ³ /min]
2.10	2	180	0.038	1.680	0.320	27285	2075	1.1
2.20	2	180	0.040	1.760	0.330	26045	2085	1.2
2.30	2	180	0.042	1.840	0.350	24910	2095	1.3
2.40	2	180	0.044	1.920	0.360	23875	2100	1.5
2.50	2	180	0.046	2.000	0.380	22920	2110	1.6
3.00	2	180	0.054	2.400	0.450	19100	2065	2.2

Steel
850 - 1100 N/mm²



2.10	2	160	0.034	1.680	0.320	24250	1650	0.9
2.20	2	160	0.036	1.760	0.330	23150	1665	1.0
2.30	2	160	0.038	1.840	0.350	22145	1685	1.1
2.40	2	160	0.040	1.920	0.360	21220	1700	1.2
2.50	2	160	0.042	2.000	0.380	20370	1710	1.3
3.00	2	160	0.048	2.400	0.450	16975	1630	1.8

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

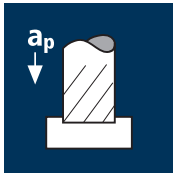


2.10	2	70	0.030	1.680	0.320	10610	635	0.3
2.20	2	70	0.032	1.760	0.330	10130	650	0.4
2.30	2	70	0.034	1.840	0.350	9690	660	0.4
2.40	2	70	0.036	1.920	0.360	9285	670	0.5
2.50	2	70	0.036	2.000	0.380	8915	640	0.5
3.00	2	70	0.044	2.400	0.450	7425	655	0.7

Titanium alloys
up to 300 HB
[Ti5Al2.5Sn]



2.10	2	60	0.026	1.680	0.320	9095	475	0.3
2.20	2	60	0.028	1.760	0.330	8680	485	0.3
2.30	2	60	0.030	1.840	0.350	8305	500	0.3
2.40	2	60	0.030	1.920	0.360	7960	475	0.3
2.50	2	60	0.032	2.000	0.380	7640	490	0.4
3.00	2	60	0.038	2.400	0.450	6365	485	0.5



Steel
< 850 N/mm²



2.10	2	160	0.036	0.250	2.100	24250	1745	0.9
2.20	2	160	0.036	0.260	2.200	23150	1665	1.0
2.30	2	160	0.038	0.280	2.300	22145	1685	1.1
2.40	2	160	0.040	0.290	2.400	21220	1700	1.2
2.50	2	160	0.042	0.300	2.500	20370	1710	1.3
3.00	2	160	0.050	0.360	3.000	16975	1700	1.8

Steel
850 - 1100 N/mm²



2.10	2	140	0.034	0.250	2.100	21220	1445	0.8
2.20	2	140	0.034	0.260	2.200	20255	1375	0.8
2.30	2	140	0.036	0.280	2.300	19375	1395	0.9
2.40	2	140	0.038	0.290	2.400	18570	1410	1.0
2.50	2	140	0.040	0.300	2.500	17825	1425	1.1
3.00	2	140	0.048	0.360	3.000	14855	1425	1.5

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



2.10	2	60	0.032	0.250	2.100	9095	580	0.3
2.20	2	60	0.032	0.260	2.200	8680	555	0.3
2.30	2	60	0.034	0.280	2.300	8305	565	0.4
2.40	2	60	0.036	0.290	2.400	7960	575	0.4
2.50	2	60	0.036	0.300	2.500	7640	550	0.4
3.00	2	60	0.044	0.360	3.000	6365	560	0.6

Titanium alloys
up to 300 HB
[Ti5Al2.5Sn]



2.10	2	50	0.028	0.250	2.100	7580	425	0.2
2.20	2	50	0.028	0.260	2.200	7235	405	0.2
2.30	2	50	0.030	0.280	2.300	6920	415	0.3
2.40	2	50	0.032	0.290	2.400	6630	425	0.3
2.50	2	50	0.034	0.300	2.500	6365	435	0.3
3.00	2	50	0.040	0.360	3.000	5305	425	0.5