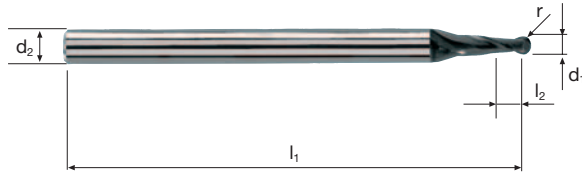


Ball nose end mills

Shank \varnothing 3mm, 3xd



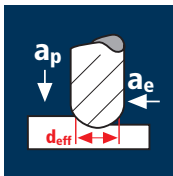
HM	λ 30° γ 10°



Rm < 850	Rm 850-1100	Rm 1100-1300					Inox Stainless	Ti Titanium	Copper Aluminium
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Example: Order-N°.										MICRO	
										5785	M45785
\varnothing Code	d_1 ± 0.01	d_2 h_6	l_1	l_2	r ± 0.01	α	z				
.030	0.3	3	40	1.0	0.15	9.0°	2	●	●	●	●
.040	0.4	3	40	1.0	0.20	8.9°	2	●	●	●	●
.050	0.5	3	40	1.5	0.25	8.4°	2	●	●	●	●
.060	0.6	3	40	1.5	0.30	8.3°	2	●	●	●	●
.070	0.7	3	40	2.0	0.35	7.8°	2	●	●	●	●
.080	0.8	3	40	2.0	0.40	7.7°	2	●	●	●	●
.090	0.9	3	40	2.5	0.45	7.2°	2	●	●	●	●
.100	1.0	3	40	3.0	0.50	6.7°	2	●	●	●	●
.108	1.2	3	40	4.0	0.60	5.7°	2	●	●	●	●
.120	1.5	3	40	4.0	0.75	5.3°	2	●	●	●	●
.130	1.8	3	40	5.0	0.90	5.2°	2	●	●	●	●
.140	2.0	3	40	5.0	1.00	4.6°	2	●	●	●	●
.160	2.5	3	40	7.0	1.25	2.0°	2	●	●	●	●
.180	3.0	4	44	10.0	1.50	2.6°	2	●	●	●	●

Application



Material

Steel
< 850 N/mm²

Steel
850 - 1100 N/mm²

Unalloyed copper

Wrought aluminium alloys Si < 6%

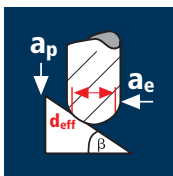
d1 [mm]	z	v _c [m/min]	f _z [mm]	a _p [mm]	a _e [mm]	d _{eff} [mm]	n [min ⁻¹]	v _f [mm/min]	Q [mm ³ /min]
0.5	2	120	0.014	0.03	0.10	0.24	60000	1680	5.0
0.6	2	120	0.018	0.04	0.12	0.30	60000	2160	10.5
0.8	2	120	0.022	0.05	0.16	0.39	60000	2640	21.0
1.0	2	120	0.028	0.06	0.20	0.47	60000	3360	40.5
1.2	2	120	0.034	0.07	0.24	0.56	60000	4080	68.5
1.5	2	120	0.042	0.09	0.30	0.71	53800	4520	122.0
2.0	2	120	0.058	0.12	0.40	0.95	40210	4665	224.0
2.5	2	120	0.072	0.15	0.50	1.19	32100	4620	346.5
3.0	2	120	0.086	0.18	0.60	1.42	26900	4625	499.5

0.5	2	80	0.012	0.03	0.10	0.24	60000	1440	4.5
0.6	2	80	0.016	0.04	0.12	0.30	60000	1920	9.0
0.8	2	80	0.020	0.05	0.16	0.39	60000	2400	19.0
1.0	2	80	0.026	0.06	0.20	0.47	54180	2815	34.0
1.2	2	80	0.030	0.07	0.24	0.56	45475	2730	46.0
1.5	2	80	0.038	0.09	0.30	0.71	35865	2725	73.5
2.0	2	80	0.052	0.12	0.40	0.95	26805	2790	134.0
2.5	2	80	0.064	0.15	0.50	1.19	21400	2740	205.5
3.0	2	80	0.078	0.18	0.60	1.42	17935	2800	302.5

0.5	2	230	0.016	0.03	0.10	0.24	60000	1920	6.0
0.6	2	230	0.020	0.04	0.12	0.30	60000	2400	11.5
0.8	2	230	0.024	0.05	0.16	0.39	60000	2880	23.0
1.0	2	230	0.030	0.06	0.20	0.47	60000	3600	43.0
1.2	2	230	0.038	0.07	0.24	0.56	60000	4560	76.5
1.5	2	230	0.046	0.09	0.30	0.71	60000	5520	149.0
2.0	2	230	0.064	0.12	0.40	0.95	60000	7680	368.5
2.5	2	230	0.080	0.15	0.50	1.19	60000	9600	720.0
3.0	2	230	0.094	0.18	0.60	1.42	51560	9695	1047.0

0.5	2	480	0.016	0.03	0.10	0.24	60000	1920	6.0
0.6	2	480	0.020	0.04	0.12	0.30	60000	2400	11.5
0.8	2	480	0.024	0.05	0.16	0.39	60000	2880	23.0
1.0	2	480	0.030	0.06	0.20	0.47	60000	3600	43.0
1.2	2	480	0.038	0.07	0.24	0.56	60000	4560	76.5
1.5	2	480	0.046	0.09	0.30	0.71	60000	5520	149.0
2.0	2	480	0.064	0.12	0.40	0.95	60000	7680	368.5
2.5	2	480	0.080	0.15	0.50	1.19	60000	9600	720.0
3.0	2	480	0.094	0.18	0.60	1.42	60000	11280	1218.0

Application



Material

Steel
< 850 N/mm²

Steel
850 - 1100 N/mm²

Unalloyed copper

Wrought aluminium alloys Si < 6%

d1 [mm]	z	v _c [m/min]	f _z [mm]	a _p [mm]	a _e [mm]	d _{eff} [mm]	n [min ⁻¹]	v _f [mm/min]	β [°]
0.5	2	220	0.016	0.020	0.020	0.46	60000	1920	45°
0.6	2	220	0.018	0.024	0.024	0.56	60000	2160	45°
0.8	2	220	0.022	0.032	0.032	0.74	60000	2400	45°
1.0	2	220	0.022	0.040	0.040	0.93	60000	2640	45°
1.2	2	220	0.024	0.048	0.048	1.11	60000	2880	45°
1.5	2	220	0.028	0.060	0.060	1.39	50380	2820	45°
2.0	2	220	0.030	0.080	0.080	1.86	37650	2260	45°
2.5	2	220	0.032	0.100	0.100	2.32	30185	1930	45°
3.0	2	220	0.036	0.120	0.120	2.78	25190	1815	45°

0.5	2	150	0.014	0.020	0.020	0.46	60000	1680	45°
0.6	2	150	0.016	0.024	0.024	0.56	60000	1920	45°
0.8	2	150	0.018	0.032	0.032	0.74	60000	2160	45°
1.0	2	150	0.020	0.040	0.040	0.93	51340	2055	45°
1.2	2	150	0.022	0.048	0.048	1.11	43015	1895	45°
1.5	2	150	0.026	0.060	0.060	1.39	34350	1785	45°
2.0	2	150	0.028	0.080	0.080	1.86	25670	1440	45°
2.5	2	150	0.028	0.100	0.100	2.32	20580	1150	45°
3.0	2	150	0.032	0.120	0.120	2.78	17175	1100	45°

0.5	2	400	0.018	0.020	0.020	0.46	60000	2160	45°
0.6	2	400	0.020	0.024	0.024	0.56	60000	2400	45°
0.8	2	400	0.022	0.032	0.032	0.74	60000	2640	45°
1.0	2	400	0.024	0.040	0.040	0.93	60000	2880	45°
1.2	2	400	0.026	0.048	0.048	1.11	60000	3120	45°
1.5	2	400	0.030	0.060	0.060	1.39	60000	3600	45°
2.0	2	400	0.034	0.080	0.080	1.86	60000	4080	45°
2.5	2	400	0.036	0.100	0.100	2.32	54885	3950	45°
3.0	2	400	0.040	0.120	0.120	2.78	45800	3665	45°

0.5	2	650	0.018	0.020	0.020	0.46	60000	2160	45°
0.6	2	650	0.020	0.024	0.024	0.56	60000	2400	45°
0.8	2	650	0.022	0.032	0.032	0.74	60000	2640	45°
1.0	2	650	0.024	0.040	0.040	0.93	60000	2880	45°
1.2	2	650	0.026	0.048	0.048	1.11	60000	3120	45°
1.5	2	650	0.030	0.060	0.060	1.39	60000	3600	45°
2.0	2	650	0.034	0.080	0.080	1.86	60000	4080	45°
2.5	2	650	0.036	0.100	0.100	2.32	60000	4320	45°
3.0	2	650	0.040	0.120	0.120	2.78	60000	4800	45°