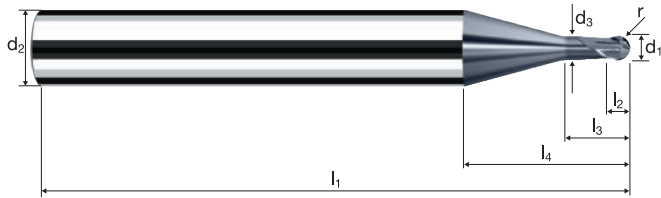
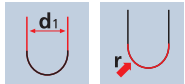


Ball nose end mills MicroHX

Shank \varnothing 6mm, cylindrical neck, 2xd



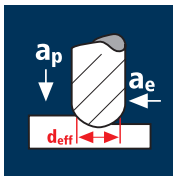
HM	λ 30°
XA	γ -10°



		Rm 1100-1300	Rm 1300-1500	HRC 48-56	HRC 56-60	HRC > 60	Inox Stainless	Ti Titanium	HSS
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Ø Code	Coating		Article-N°		ø-Code						DURO-AI
	Example: Order-N°.										
											Y6461
d ₁	d ₂ h4	d ₃	l ₁	l ₂	l ₃	l ₄	r ±0.005	α	z		
040	0.40	6.00	0.35	57	0.24	0.80	16.76	0.200	14.1°	2	●
050	0.50	6.00	0.45	57	0.30	1.00	11.51	0.250	13.9°	2	●
060	0.60	6.00	0.55	57	0.36	1.20	11.53	0.300	13.7°	2	●
080	0.80	6.00	0.75	57	0.48	1.60	11.55	0.400	13.3°	2	●
100	1.00	6.00	0.95	57	0.60	2.00	11.58	0.500	12.9°	2	●
120	1.50	6.00	1.40	57	0.90	3.00	11.53	0.750	11.7°	2	●
140	2.00	6.00	1.90	57	1.20	4.00	11.60	1.000	10.6°	2	●

Application



Material

Hardened tool steel
52 - 56 HRC



d1 [mm]	z	v _c [m/min]	f _t [mm]	a _s [mm]	a _e [mm]	d _{eff} [mm]	n [min ⁻¹]	v _t [mm/min]	Q [mm ³ /min]
0.40	2	29	0.010	0.032	0.080	0.22	41960	840	2.1
0.50	2	36	0.013	0.040	0.100	0.27	42440	1105	4.4
0.60	2	44	0.016	0.048	0.120	0.33	42440	1360	7.8
0.80	2	58	0.021	0.065	0.160	0.44	41960	1760	18.3
1.00	2	73	0.026	0.081	0.200	0.55	42250	2195	35.6
1.50	2	100	0.039	0.121	0.300	0.82	38820	3030	109.9
2.00	2	100	0.052	0.162	0.400	1.09	29205	3035	196.8

Hardened tool steel
56 - 60 HRC



0.40	2	29	0.009	0.032	0.080	0.22	41960	755	1.9
0.50	2	36	0.012	0.040	0.100	0.27	42440	995	4.0
0.60	2	44	0.014	0.048	0.120	0.33	42440	1220	7.0
0.80	2	58	0.019	0.065	0.160	0.44	41960	1585	16.5
1.00	2	60	0.023	0.081	0.200	0.55	34725	1625	26.3
1.50	2	60	0.035	0.121	0.300	0.82	23290	1635	59.4
2.00	2	60	0.047	0.162	0.400	1.09	17520	1640	106.3

Hardened tool steel
> 60 HRC



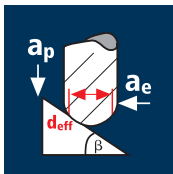
0.40	2	26	0.007	0.026	0.080	0.20	41380	595	1.2
0.50	2	32	0.009	0.032	0.100	0.24	42440	795	2.5
0.60	2	38	0.012	0.038	0.120	0.29	41710	960	4.4
0.80	2	50	0.015	0.052	0.160	0.39	40810	1235	10.3
1.00	2	50	0.019	0.065	0.200	0.49	32480	1215	15.8
1.50	2	50	0.028	0.097	0.300	0.74	21505	1210	35.1
2.00	2	50	0.037	0.130	0.400	0.98	16240	1215	63.0

High speed steel,
hardened
64 - 70 HRC



0.40	2	24	0.006	0.020	0.080	0.18	42440	490	0.8
0.50	2	29	0.007	0.026	0.100	0.22	41960	630	1.6
0.60	2	34	0.009	0.031	0.120	0.26	41625	770	2.8
0.80	2	40	0.012	0.042	0.160	0.36	35370	855	5.7
1.00	2	40	0.015	0.052	0.200	0.44	28935	865	9.0
1.50	2	40	0.022	0.077	0.300	0.66	19290	865	20.1
2.00	2	40	0.030	0.104	0.400	0.89	14305	855	35.5

Application



Material

Hardened tool steel
52 - 56 HRC



d1 [mm]	z	v _c [m/min]	f _t [mm]	a _s [mm]	a _e [mm]	d _{eff} [mm]	n [min ⁻¹]	v _t [mm/min]	β [°]
0.40	2	49	0.012	0.016	0.016	0.37	42155	1010	45°
0.50	2	62	0.018	0.022	0.022	0.47	41990	1510	45°
0.60	2	74	0.018	0.026	0.026	0.56	42060	1515	45°
0.80	2	99	0.020	0.034	0.034	0.75	42015	1680	45°
1.00	2	123	0.026	0.042	0.042	0.93	42100	2190	45°
1.50	2	185	0.030	0.064	0.064	1.40	42060	2525	45°
2.00	2	200	0.034	0.084	0.084	1.86	34225	2325	45°

Hardened tool steel
56 - 60 HRC



0.40	2	49	0.012	0.016	0.016	0.37	42155	1010	45°
0.50	2	62	0.016	0.022	0.022	0.47	41990	1345	45°
0.60	2	74	0.016	0.026	0.026	0.56	42060	1345	45°
0.80	2	99	0.018	0.034	0.034	0.75	42015	1515	45°
1.00	2	123	0.022	0.042	0.042	0.93	42100	1850	45°
1.50	2	150	0.028	0.064	0.064	1.40	34105	1910	45°
2.00	2	150	0.030	0.084	0.084	1.86	25670	1540	45°

Hardened tool steel
> 60 HRC



0.40	2	48	0.010	0.010	0.010	0.36	42440	850	45°
0.50	2	61	0.015	0.020	0.020	0.46	42210	1265	45°
0.60	2	73	0.015	0.020	0.020	0.55	42250	1265	45°
0.80	2	98	0.015	0.030	0.030	0.74	42155	1265	45°
1.00	2	120	0.020	0.040	0.040	0.93	41070	1645	45°
1.50	2	120	0.020	0.060	0.060	1.39	27480	1100	45°
2.00	2	120	0.025	0.080	0.080	1.86	20535	1025	45°

High speed steel,
hardened
64 - 70 HRC



0.40	2	48	0.010	0.010	0.010	0.36	42440	850	45°
0.50	2	61	0.010	0.020	0.020	0.46	42210	845	45°
0.60	2	73	0.010	0.020	0.020	0.55	42250	845	45°
0.80	2	85	0.010	0.020	0.030	0.71	38110	760	45°
1.00	2	85	0.015	0.030	0.040	0.91	29730	890	45°
1.50	2	85	0.015	0.040	0.050	1.35	20040	600	45°
2.00	2	85	0.015	0.050	0.060	1.79	15115	455	45°