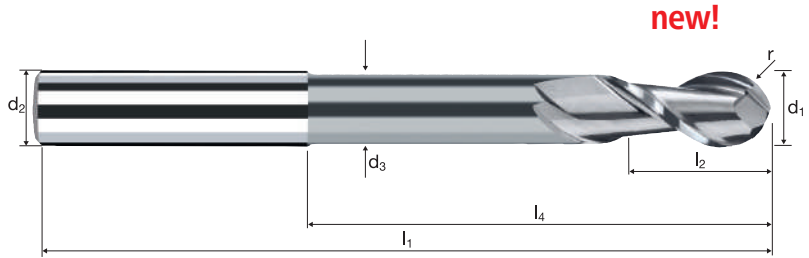
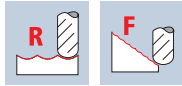
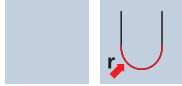


Ball nose end mills Sphero-Alu

Tolerance r ± 0.005 , 6xd



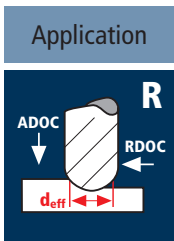
HM
MG10 λ 40°
 γ 20°



			Al Aluminum > 99%	Al Aluminum Alloy	Al Aluminum Cast		Cu Copper	Plastic Thermoplast	
--	--	--	--------------------------------	--------------------------------	-------------------------------	--	---------------------	-------------------------------	--

Order-N°	d ₁	d ₂ h4	d ₃	l ₁	l ₂	l ₃	l ₄	r ± 0.005	α	fl	
7554180	3	6	2.8	66	6	18.00	24.63	1.5	3.7°	2	●
7554220	4	6	3.7	69	8	24.00	28.95	2.0	2.2°	2	●
7554260	5	6	4.6	75	10	30.00	33.27	2.5	1.1°	2	●
7554300	6	6	5.5	80	12	42.34	43.00	3.0	0.0°	2	●
7554391	8	8	7.4	90	16	52.29	53.00	4.0	0.0°	2	●
7554450	10	10	9.2	105	20	63.20	64.00	5.0	0.0°	2	●
7554501	12	12	11.0	120	24	73.13	74.00	6.0	0.0°	2	●
7554610	16	16	15.0	135	32	85.13	86.00	8.0	0.0°	2	●

VII



Material

Wrought aluminum alloys Si < 6%

d1 [mm]	fl	Speed [m/min]	FPT [mm]	ADOC [mm]	RDOC [mm]	d _{eff} [mm]	RPM [min ⁻¹]	Feed [mm/min]	MRR [cm ³ /min]
3	2	227	0.082	0.45	0.90	2.14	33725	5530	2.25
4	2	227	0.090	0.60	1.20	2.86	25295	4555	3.30
5	2	227	0.100	0.75	1.50	3.57	20235	4045	4.55
6	2	227	0.120	0.90	1.80	4.28	16865	4050	6.55
8	2	227	0.140	1.20	2.40	5.71	12645	3540	10.20
10	2	227	0.150	1.50	3.00	7.14	10120	3035	13.65
12	2	227	0.180	1.80	3.60	8.57	8430	3035	19.65
16	2	227	0.200	2.40	4.80	11.43	6325	2530	29.15

Material

Unalloyed copper

3	2	151	0.078	0.45	0.90	2.14	22435	3500	1.40
4	2	151	0.084	0.60	1.20	2.86	16825	2825	2.05
5	2	151	0.092	0.75	1.50	3.57	13460	2475	2.80
6	2	151	0.111	0.90	1.80	4.28	11215	2490	4.05
8	2	151	0.128	1.20	2.40	5.71	8415	2155	6.20
10	2	151	0.135	1.50	3.00	7.14	6730	1815	8.15
12	2	151	0.162	1.80	3.60	8.57	5610	1820	11.80
16	2	151	0.176	2.40	4.80	11.43	4205	1480	17.05

Material

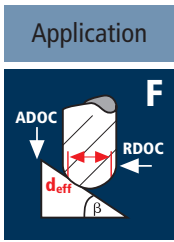
Thermoplastics

3	2	273	0.082	0.45	0.90	2.14	40560	6650	2.70
4	2	361	0.090	0.60	1.20	2.86	40225	7240	5.20
5	2	455	0.100	0.75	1.50	3.57	40560	8110	9.10
6	2	504	0.120	0.90	1.80	4.28	37440	8985	14.55
8	2	504	0.140	1.20	2.40	5.71	28080	7860	22.65
10	2	504	0.150	1.50	3.00	7.14	22465	6740	30.35
12	2	504	0.180	1.80	3.60	8.57	18720	6740	43.70
16	2	504	0.200	2.40	4.80	11.43	14040	5615	64.70

Material

Cast aluminum Si 6%-15%

3	2	181	0.082	0.45	0.90	2.14	26890	4410	1.80
4	2	181	0.090	0.60	1.20	2.86	20170	3630	2.60
5	2	181	0.100	0.75	1.50	3.57	16135	3225	3.65
6	2	181	0.120	0.90	1.80	4.28	13445	3225	5.20
8	2	181	0.140	1.20	2.40	5.71	10085	2825	8.15
10	2	181	0.150	1.50	3.00	7.14	8070	2420	10.90
12	2	181	0.180	1.80	3.60	8.57	6725	2420	15.70
16	2	181	0.200	2.40	4.80	11.43	5040	2015	23.20



Material

Wrought aluminum alloys Si < 6%

d1 [mm]	fl	Speed [m/min]	FPT [mm]	ADOC [mm]	RDOC [mm]	d _{eff} [mm]	RPM [min ⁻¹]	Feed [mm/min]	β [°]
3	2	370	0.060	0.15	0.05	2.83	41615	4995	45°
4	2	486	0.070	0.18	0.05	3.75	41255	5775	45°
5	2	486	0.075	0.20	0.05	4.64	33340	5000	45°
6	2	486	0.085	0.23	0.08	5.55	27875	4740	45°
8	2	486	0.090	0.25	0.08	7.27	21280	3830	45°
10	2	486	0.100	0.30	0.10	9.06	17075	3415	45°
12	2	486	0.105	0.35	0.10	10.85	14260	2995	45°
16	2	486	0.115	0.40	0.12	14.28	10835	2490	45°

Material

Unalloyed copper

3	2	324	0.060	0.15	0.05	2.83	36445	4375	45°
4	2	324	0.070	0.18	0.05	3.75	27500	3850	45°
5	2	324	0.075	0.20	0.05	4.64	22225	3335	45°
6	2	324	0.085	0.23	0.08	5.55	18580	3160	45°
8	2	324	0.090	0.25	0.08	7.27	14185	2555	45°
10	2	324	0.100	0.30	0.10	9.06	11385	2275	45°
12	2	324	0.105	0.35	0.10	10.85	9505	1995	45°
16	2	324	0.115	0.40	0.12	14.28	7220	1660	45°

Material

Thermoplastics

3	2	370	0.060	0.15	0.05	2.83	41615	4995	45°
4	2	490	0.070	0.18	0.05	3.75	41590	5825	45°
5	2	610	0.075	0.20	0.05	4.64	41845	6275	45°
6	2	730	0.085	0.23	0.08	5.55	41870	7120	45°
8	2	955	0.090	0.25	0.08	7.27	41815	7525	45°
10	2	1080	0.100	0.30	0.10	9.06	37945	7590	45°
12	2	1080	0.105	0.35	0.10	10.85	31685	6655	45°
16	2	1080	0.115	0.40	0.12	14.28	24075	5535	45°

Material

Cast aluminum Si 6%-15%

3	2	370	0.060	0.15	0.05	2.83	41615	4995	45°
4	2	389	0.070	0.18	0.05	3.75	33020	4625	45°
5	2	389	0.075	0.20	0.05	4.64	26685	4005	45°
6	2	389	0.085	0.23	0.08	5.55	22310	3795	45°
8	2	389	0.090	0.25	0.08	7.27	17030	3065	45°
10	2	389	0.100	0.30	0.10	9.06	13665	2735	45°
12	2	389	0.105	0.35	0.10	10.85	11410	2395	45°
16	2	389	0.115	0.40	0.12	14.28	8670	1995	45°