

# Corner radius end mills E-Cut Alu

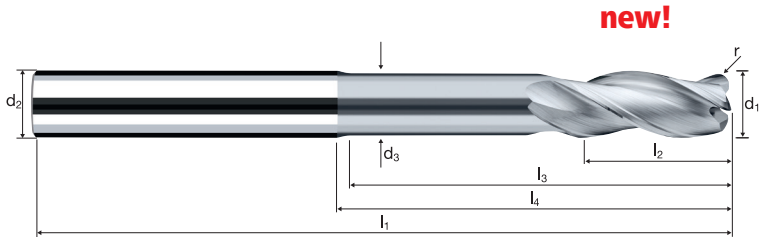
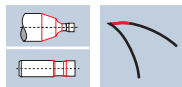
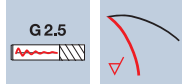
Smooth-edged, long version, neck

Base-X  
**B**

$$l_2 = 2.2 \times d_1$$

$$l_3 = 5.6 \times d_1$$

**HM  
MG10**     $\lambda$  **34°**  
                   $\gamma$  **24°**



Roughing

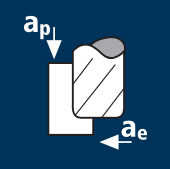




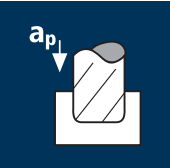




Finishing



**ReTool®**

Material compatibility: Al Aluminium > 99%, Al Aluminium Alloy, Al Aluminium Cast, Cu Copper, Plastic Thermoplast

Example: Order-N°.		Coating		Article-N°.		ø-Code						8687		
				<b>8587</b>		<b>178</b>						<b>8587</b>		
Ø Code	d <sub>1</sub> e8	d <sub>2</sub> h5	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	r 0/+0.03	α	z				
178	3.00	6.00	2.80	60	6.60	16.80	20.13	0.200	4.5°	3	●			
218	4.00	6.00	3.70	65	9.00	22.50	25.04	0.200	2.5°	3	●			
258	5.00	6.00	4.60	68	11.00	28.00	29.72	0.200	1.2°	3	●			
180	3.00	6.00	2.80	60	6.60	16.80	20.13	0.500	4.5°	3	●			
220	4.00	6.00	3.70	65	9.00	22.50	25.04	0.500	2.5°	3	●			
260	5.00	6.00	4.60	68	11.00	28.00	29.72	0.500	1.2°	3	●			
300	6.00	6.00	5.50	73	13.50	34.00	35.85	0.500	0.0°	3	●			
388	8.00	8.00	7.40	84	18.00	45.00	47.37	0.500	0.0°	3	●			
448	10.00	10.00	9.20	100	22.00	56.00	59.01	0.500	0.0°	3	●			
302	6.00	6.00	5.50	73	13.50	34.00	35.85	1.000	0.0°	3	●			
391	8.00	8.00	7.40	84	18.00	45.00	47.37	1.000	0.0°	3	●			
450	10.00	10.00	9.20	100	22.00	56.00	59.01	1.000	0.0°	3	●			
501	12.00	12.00	11.00	117	27.00	67.50	71.21	1.000	0.0°	3	●			
608	16.00	16.00	15.00	144	36.00	90.00	94.27	1.000	0.0°	3	●			
455	10.00	10.00	9.20	100	22.00	56.00	59.01	2.000	0.0°	3	●			
505	12.00	12.00	11.00	117	27.00	67.50	71.21	2.000	0.0°	3	●			
611	16.00	16.00	15.00	144	36.00	90.00	94.27	2.000	0.0°	3	●			
683	20.00	20.00	19.00	169	44.00	112.00	116.77	2.000	0.0°	3	●			

Application	Material	$d_1$ [mm]	$z$	$v_c$ [m/min]	$f_z$ [mm]	$a_p$ [mm]	$a_e$ [mm]	$n$ [min <sup>-1</sup> ]	$v_f$ [mm/min]	$Q$ [cm <sup>3</sup> /min]
	<b>Wrought aluminium</b> <b>Construction aluminium</b> 	3.00	3	380	0.038	4.500	1.200	40320	4572	24.7
		4.00	3	380	0.050	6.000	1.600	30240	4572	43.9
		5.00	3	380	0.063	7.500	2.000	24190	4572	68.6
		6.00	3	380	0.076	9.000	2.400	20160	4572	98.8
		8.00	3	380	0.101	12.000	3.200	15120	4572	175.6
		10.00	3	380	0.126	15.000	4.000	12095	4572	274.3
		12.00	3	380	0.151	18.000	4.800	10080	4572	395.0
		16.00	3	380	0.161	24.000	6.400	7560	3658	561.8
		20.00	3	380	0.189	30.000	8.000	6050	3430	823.3
		<b>Unalloyed copper</b> 	3.00	3	285	0.029	4.500	1.200	30240	2586
4.00	3		285	0.038	6.000	1.600	22680	2586	24.8	
5.00	3		285	0.048	7.500	2.000	18145	2586	38.8	
6.00	3		285	0.057	9.000	2.400	15120	2586	55.8	
8.00	3		285	0.076	12.000	3.200	11340	2586	99.3	
10.00	3		285	0.095	15.000	4.000	9070	2585	155.1	
12.00	3		285	0.114	18.000	4.800	7560	2586	223.4	
16.00	3		285	0.122	24.000	6.400	5670	2068	317.7	
20.00	3		285	0.143	30.000	8.000	4535	1939	465.3	
<b>Thermoplastics</b> 	3.00		3	380	0.045	4.500	1.200	40320	5480	29.6
	4.00	3	380	0.060	6.000	1.600	30240	5480	52.6	
	5.00	3	380	0.076	7.500	2.000	24190	5479	82.2	
	6.00	3	380	0.091	9.000	2.400	20160	5480	118.4	
	8.00	3	380	0.121	12.000	3.200	15120	5480	210.4	
	10.00	3	380	0.151	15.000	4.000	12095	5479	328.7	
	12.00	3	380	0.181	18.000	4.800	10080	5480	473.4	
	16.00	3	380	0.193	24.000	6.400	7560	4384	673.3	
	20.00	3	380	0.227	30.000	8.000	6050	4111	986.6	
	<b>Cast aluminium</b> 	3.00	3	305	0.041	4.500	1.200	32360	3961	21.4
4.00		3	305	0.054	6.000	1.600	24270	3961	38.0	
5.00		3	305	0.068	7.500	2.000	19415	3961	59.4	
6.00		3	305	0.082	9.000	2.400	16180	3961	85.6	
8.00		3	305	0.109	12.000	3.200	12135	3961	152.1	
10.00		3	305	0.136	15.000	4.000	9710	3962	237.7	
12.00		3	305	0.163	18.000	4.800	8090	3961	342.2	
16.00		3	305	0.174	24.000	6.400	6070	3170	486.9	
20.00		3	305	0.204	30.000	8.000	4855	2971	713.1	
		<b>Wrought aluminium</b> <b>Construction aluminium</b> 	3.00	3	304	0.022	3.000	3.000	32255	2103
	4.00		3	304	0.029	4.000	4.000	24190	2103	33.6
	5.00		3	304	0.036	5.000	5.000	19355	2103	52.6
	6.00		3	304	0.043	6.000	6.000	16130	2104	75.7
	8.00		3	304	0.058	8.000	8.000	12095	2103	134.6
	10.00		3	304	0.072	10.000	10.000	9675	2103	210.3
	12.00		3	304	0.087	12.000	12.000	8065	2104	302.9
	16.00		3	304	0.093	16.000	16.000	6050	1683	430.9
	20.00		3	304	0.109	20.000	20.000	4840	1578	631.2
	<b>Unalloyed copper</b> 		3.00	3	228	0.016	3.000	3.000	24190	1189
4.00		3	228	0.022	4.000	4.000	18145	1189	19.0	
5.00		3	228	0.027	5.000	5.000	14515	1189	29.7	
6.00		3	228	0.033	6.000	6.000	12095	1189	42.8	
8.00		3	228	0.044	8.000	8.000	9070	1189	76.1	
10.00		3	228	0.055	10.000	10.000	7255	1189	118.9	
12.00		3	228	0.066	12.000	12.000	6050	1190	171.3	
16.00		3	228	0.070	16.000	16.000	4535	951	243.5	
20.00		3	228	0.082	20.000	20.000	3630	892	356.9	
<b>Thermoplastics</b> 		3.00	3	304	0.026	3.000	3.000	32255	2521	22.7
	4.00	3	304	0.035	4.000	4.000	24190	2520	40.3	
	5.00	3	304	0.043	5.000	5.000	19355	2521	63.0	
	6.00	3	304	0.052	6.000	6.000	16130	2521	90.8	
	8.00	3	304	0.069	8.000	8.000	12095	2520	161.3	
	10.00	3	304	0.087	10.000	10.000	9675	2520	252.0	
	12.00	3	304	0.104	12.000	12.000	8065	2521	363.0	
	16.00	3	304	0.111	16.000	16.000	6050	2017	516.4	
	20.00	3	304	0.130	20.000	20.000	4840	1891	756.4	
	<b>Cast aluminium</b> 	3.00	3	244	0.023	3.000	3.000	25890	1822	16.4
4.00		3	244	0.031	4.000	4.000	19415	1822	29.2	
5.00		3	244	0.039	5.000	5.000	15535	1822	45.6	
6.00		3	244	0.047	6.000	6.000	12945	1822	65.6	
8.00		3	244	0.063	8.000	8.000	9710	1822	116.6	
10.00		3	244	0.078	10.000	10.000	7765	1822	182.2	
12.00		3	244	0.094	12.000	12.000	6470	1821	262.3	
16.00		3	244	0.100	16.000	16.000	4855	1458	373.2	
20.00		3	244	0.117	20.000	20.000	3885	1367	546.8	

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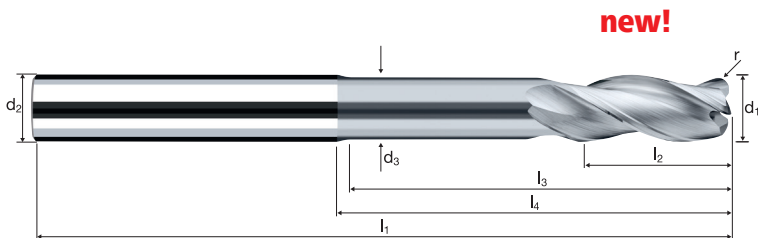
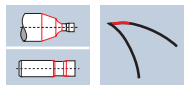
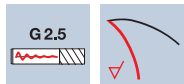
Smooth-edged, long version, neck

Base-X  
**B**

$$l_2 = 2.2 \times d_1$$

$$l_3 = 5.6 \times d_1$$

**HM**  
**MG10**     $\lambda$  **34°**  
                   $\gamma$  **24°**



Roughing

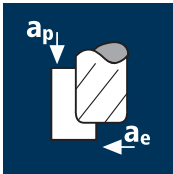



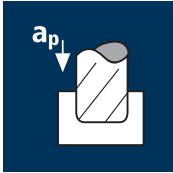



Finishing



**ReTool®**

		Al Aluminium > 99%	Al Aluminium Alloy	Al Aluminium Cast		Cu Copper	Plastic Thermoplast	
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Ø Code	d <sub>1</sub> e8	d <sub>2</sub> h5	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	r 0/+0.03	α	z	Example: Order-N°.	
											Coating	Article-N°.
507	12.00	12.00	11.00	117	27.00	67.50	71.21	3.000	0.0°	3	8587	507
613	16.00	16.00	15.00	144	36.00	90.00	94.27	3.000	0.0°	3	8587	
685	20.00	20.00	19.00	169	44.00	112.00	116.77	3.000	0.0°	3	8587	

Application	Material	$d_1$ [mm]	$z$	$v_c$ [m/min]	$f_z$ [mm]	$a_p$ [mm]	$a_e$ [mm]	$n$ [min <sup>-1</sup> ]	$v_f$ [mm/min]	$Q$ [cm <sup>3</sup> /min]	
	Wrought aluminium Construction aluminium	12.00	3	380	0.151	18.000	4.800	10080	4572	395.0	
		16.00	3	380	0.161	24.000	6.400	7560	3658	561.8	
		20.00	3	380	0.189	30.000	8.000	6050	3430	823.3	
		Unalloyed copper	12.00	3	285	0.114	18.000	4.800	7560	2586	223.4
			16.00	3	285	0.122	24.000	6.400	5670	2068	317.7
			20.00	3	285	0.143	30.000	8.000	4535	1939	465.3
		Thermoplastics	12.00	3	380	0.181	18.000	4.800	10080	5480	473.4
			16.00	3	380	0.193	24.000	6.400	7560	4384	673.3
			20.00	3	380	0.227	30.000	8.000	6050	4111	986.6
		Cast aluminium	12.00	3	305	0.163	18.000	4.800	8090	3961	342.2
			16.00	3	305	0.174	24.000	6.400	6070	3170	486.9
			20.00	3	305	0.204	30.000	8.000	4855	2971	713.1
	Wrought aluminium Construction aluminium	12.00	3	304	0.087	12.000	12.000	8065	2104	302.9	
		16.00	3	304	0.093	16.000	16.000	6050	1683	430.9	
		20.00	3	304	0.109	20.000	20.000	4840	1578	631.2	
		Unalloyed copper	12.00	3	228	0.066	12.000	12.000	6050	1190	171.3
			16.00	3	228	0.070	16.000	16.000	4535	951	243.5
			20.00	3	228	0.082	20.000	20.000	3630	892	356.9
		Thermoplastics	12.00	3	304	0.104	12.000	12.000	8065	2521	363.0
			16.00	3	304	0.111	16.000	16.000	6050	2017	516.4
			20.00	3	304	0.130	20.000	20.000	4840	1891	756.4
		Cast aluminium	12.00	3	244	0.094	12.000	12.000	6470	1821	262.3
			16.00	3	244	0.100	16.000	16.000	4855	1458	373.2
			20.00	3	244	0.117	20.000	20.000	3885	1367	546.8
