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Material	Strength (N/mm <sup>2</sup> )	Feed (mm/Z)	Ø 0.2x0.5			Ø 0.2x3			Ø 0.3x1			Ø 0.3x6			
			ae=1xD	ae=0.25xD	ae=0.1xD	ae=1xD	ae=0.05xD	ae=0.05xD	ae=1xD	ae=0.25xD	ae=0.1xD	ae=1xD	ae=0.03xD	ae=0.01xD	
<b>N</b>		<b>Vc (m/min)</b>	fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	
1.1	Aluminium, alloyed	<500	500	0.008	0.012	0.014	0.005	0.007	0.009	0.008	0.012	0.014	0.005	0.007	0.009
1.2	Aluminium, alloyed	<600	480	0.008	0.012	0.014	0.005	0.007	0.009	0.008	0.012	0.014	0.005	0.007	0.009
2.1-2.3	Aluminium, casted	<600	450	0.007	0.011	0.013	0.004	0.006	0.008	0.007	0.011	0.013	0.004	0.006	0.008
3.1-3.3	Cooper, alloyed	<650	220	0.006	0.01	0.012	0.003	0.005	0.007	0.006	0.01	0.012	0.003	0.005	0.007
4.1	Magnesium, alloyed	<250	500	0.008	0.012	0.014	0.005	0.007	0.009	0.008	0.012	0.014	0.005	0.007	0.009
5.1	Thermoplastic	<100	400	0.007	0.011	0.013	0.004	0.006	0.008	0.007	0.011	0.013	0.004	0.006	0.008
5.2	Duroplastic	<150	350	0.006	0.01	0.012	0.003	0.005	0.007	0.006	0.01	0.012	0.003	0.005	0.007

Material	Strength (N/mm <sup>2</sup> )	Feed (mm/Z)	Ø 0.4x1			Ø 0.4x8			Ø 0.5x1			Ø 0.5x10			
			ae=1xD	ae=0.25xD	ae=0.1xD	ae=1xD	ae=0.03xD	ae=0.01xD	ae=1xD	ae=0.25xD	ae=0.1xD	ae=1xD	ae=0.03xD	ae=0.01xD	
<b>N</b>		<b>Vc (m/min)</b>	fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	fz	
1.1	Aluminium, alloyed	<500	500	0.012	0.016	0.018	0.005	0.007	0.009	0.016	0.02	0.022	0.009	0.013	0.015
1.2	Aluminium, alloyed	<600	480	0.012	0.016	0.018	0.005	0.007	0.009	0.016	0.02	0.022	0.009	0.013	0.015
2.1-2.3	Aluminium, casted	<600	450	0.011	0.015	0.017	0.004	0.006	0.008	0.015	0.018	0.021	0.008	0.012	0.014
3.1-3.3	Cooper, alloyed	<650	220	0.01	0.014	0.016	0.003	0.005	0.007	0.014	0.016	0.02	0.007	0.011	0.013
4.1	Magnesium, alloyed	<250	500	0.012	0.016	0.018	0.005	0.007	0.009	0.016	0.02	0.022	0.009	0.013	0.015
5.1	Thermoplastic	<100	400	0.011	0.015	0.017	0.004	0.006	0.008	0.015	0.018	0.021	0.008	0.012	0.014
5.2	Duroplastic	<150	350	0.01	0.014	0.016	0.003	0.005	0.007	0.014	0.016	0.02	0.007	0.011	0.013

Material	Strength (N/mm <sup>2</sup> )	Feed (mm/Z)	Ø 0.6x3			Ø 0.6x10			
			ae=1xD	ae=0.25xD	ae=0.1xD	ae=1xD	ae=0.04xD	ae=0.015xD	
<b>N</b>		<b>Vc (m/min)</b>	fz	fz	fz	fz	fz	fz	
1.1	Aluminium, alloyed	<500	500	0.016	0.02	0.022	0.012	0.015	0.017
1.2	Aluminium, alloyed	<600	480	0.016	0.02	0.022	0.012	0.015	0.017
2.1-2.3	Aluminium, casted	<600	450	0.015	0.018	0.021	0.011	0.014	0.016
3.1-3.3	Cooper, alloyed	<650	220	0.014	0.016	0.02	0.01	0.013	0.015
4.1	Magnesium, alloyed	<250	500	0.016	0.02	0.022	0.012	0.015	0.017
5.1	Thermoplastic	<100	400	0.015	0.018	0.021	0.011	0.014	0.016
5.2	Duroplastic	<150	350	0.014	0.016	0.02	0.01	0.013	0.015

**NOTE** | Values in the table are the shortest and the longest overhang length (L3) of each dimension; please calculate fz, ap and ae depending on the given values.  
 ae/ap(max) = 0.5x corner radius!

Cooling

Tolerance d04

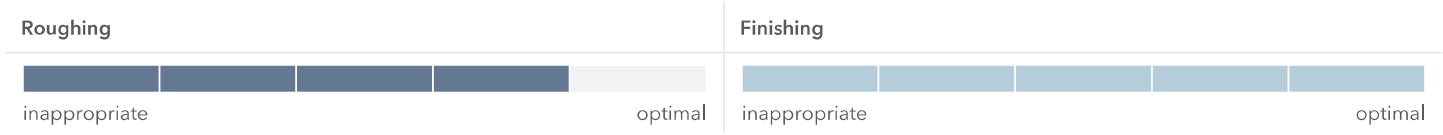
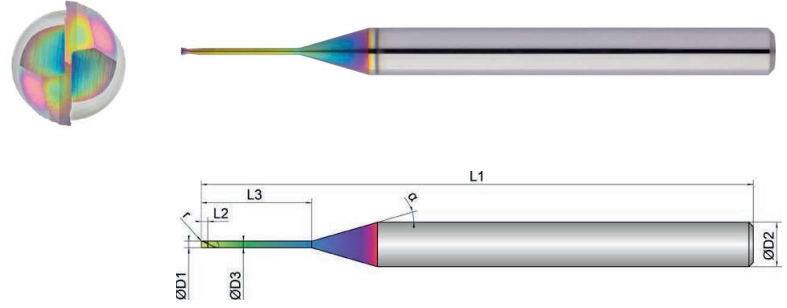
Coating AlphaSlide Rainbow

Strategy **HSC**

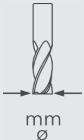
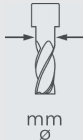

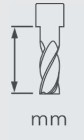
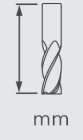





Application

Features **HA**

- Optimized face geometry for excellent surfaces and highest dimensional accuracy
  - Defined microbevel for support and stabilization
  - Polished chip space for ideal chip evacuation
- 
- Multipass milling of 3D contours
- 
- Tolerance D1: -0.001/-0.006 mm
  - Tolerance D3: 0/-0.02 mm
  - Radius tolerance r: 0/-0.003 mm (measured from 0-90°)



	D1	D3	L2	L3	L1	D2	z	r		$\alpha$
EXN1-M16-0023	 mm $\varnothing$	 mm $\varnothing$	 mm	 mm	 mm	 mm $\varnothing$	 #	 mm	 °	 °
0,2X0,5	0.2	0.18	0.2	0.5	50.0	4.0	2	0.05	30	16
0,2X1	0.2	0.18	0.2	1.0	50.0	4.0	2	0.05	30	16
0,2X2	0.2	0.18	0.2	2.0	50.0	4.0	2	0.05	30	16
0,2X3	0.2	0.18	0.2	3.0	50.0	4.0	2	0.05	30	16
0,3X1	0.3	0.28	0.3	1.0	50.0	4.0	2	0.05	30	16
0,3X2	0.3	0.28	0.3	2.0	50.0	4.0	2	0.05	30	16
0,3X3	0.3	0.28	0.3	3.0	50.0	4.0	2	0.05	30	16
0,3X4	0.3	0.28	0.3	4.0	50.0	4.0	2	0.05	30	16
0,3X6	0.3	0.28	0.3	6.0	50.0	4.0	2	0.05	30	16
0,4X1	0.4	0.38	0.4	1.0	50.0	4.0	2	0.05	30	16
0,4X2	0.4	0.38	0.4	2.0	50.0	4.0	2	0.05	30	16

EXN1-M16-0023	 mm ∅	 mm ∅	 mm	 mm	 mm	 mm ∅	 #	 mm	 °	 °
0,4X3	0.4	0.38	0.4	3.0	50.0	4.0	2	0.05	30	16
0,4X4	0.4	0.38	0.4	4.0	50.0	4.0	2	0.05	30	16
0,4X6	0.4	0.38	0.4	6.0	50.0	4.0	2	0.05	30	16
0,4X8	0.4	0.38	0.4	8.0	50.0	4.0	2	0.05	30	16
0,5X1	0.5	0.48	0.5	1.0	50.0	4.0	2	0.05	30	16
0,5X2	0.5	0.48	0.5	2.0	50.0	4.0	2	0.05	30	16
0,5X3	0.5	0.48	0.5	3.0	50.0	4.0	2	0.05	30	16
0,5X4	0.5	0.48	0.5	4.0	50.0	4.0	2	0.05	30	16
0,5X6	0.5	0.48	0.5	6.0	50.0	4.0	2	0.05	30	16
0,5X8	0.5	0.48	0.5	8.0	50.0	4.0	2	0.05	30	16
0,5X10	0.5	0.48	0.5	10.0	50.0	4.0	2	0.05	30	16
0,6X3	0.6	0.58	0.6	3.0	50.0	4.0	2	0.05	30	16
0,6X4	0.6	0.58	0.6	4.0	50.0	4.0	2	0.05	30	16
0,6X6	0.6	0.58	0.6	6.0	50.0	4.0	2	0.05	30	16
0,6X8	0.6	0.58	0.6	8.0	50.0	4.0	2	0.05	30	16
0,6X10	0.6	0.58	0.6	10.0	50.0	4.0	2	0.05	30	16



## STILL CAN'T FIND A SUITABLE MILLING CUTTER?

**No problem** - simply customize an existing tool. Using our configurator for special milling cutters, you can customize existing tools to your needs in an instant or create your own tools based on predefined types.

WE WILL RESPOND TO ALL  
REQUESTS SUBMITTED VIA THE  
CONFIGURATOR WITHIN ONE  
WORKING DAY AT THE LATEST

