

ebaboard 0750

milling-parameters



n = revolutions
z = number of teeth
d = cutter diameter
vf = feed rate

$$n = \frac{vc \cdot 1000}{d \cdot \pi} \quad [1/\text{min}]$$

$$vf = n \cdot fz \cdot z \quad [\text{mm}/\text{min}]$$

$$fz = \frac{vf}{z \cdot n} \quad [\text{mm}]$$

$$vc = \frac{n \cdot \pi \cdot d}{1000} \quad [\text{m}/\text{min}]$$

The specified tools and cutting parameters are for reference only. They may vary depending on the machine tool and part size

Strategy	Definition milling cutter	Definition milling cutter	picture	[m/min] vc cutting speed	[mm] fz feed per tooth	[mm] n revolutions	[mm/min] vf feed rate	
flat roughing	milling cutters with ground and polished indexable inserts	Ingersoll HiPos Alu Ø25 / 2 teeth turning plate XEVT 1AX2K025043X7R00		1500	0.25	19100	9550	low dust formation milling with internal or external air supply
remaining material roughing	torus cutters with polished or coated cutting edges for aluminium	Ceratizit torus-cutter Ø10 / 2 Zähne R2 Alu 50902104		300 - 500	0.15	12750	3820	low dust formation milling with internal or external air supply
3D contour finishing	ball-end mills with polished or coated cutting edges for aluminium	Aura ball-end mill Ø 8 / 2 Zähne CKZ-080-400-026-090-000-08		450	0.14	17900	5020	low dust formation milling with internal or external air supply
roughing residual material	ball-end mills with polished or coated cutting edges for aluminium	Aura ball-end mill Ø 4 / 2 Zähne CKZ-040-200-025-075-000-06		200 - 350	0.1	27800	3350	no dust formation milling with internal or external air supply
engraved lettering	ball-end mills with polished or coated cutting edges for aluminium	Aura ball-end mill Ø 2 / 2 Zähne CKZ-020-100-010-060-000-06		100 - 300	0.05	22280	2230	no dust formation milling with internal or external air supply
edge and pocket milling	end mills with polished or coated cutting edges for aluminium	Ceratizit end mill Ø10 / 3 Zähne 54610102		320	0.2	10190	6110	no dust formation milling with internal or external air supply