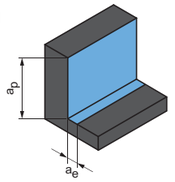
Cutting data recommendations for shoulder milling cutters

Feed and cutting speed

Finishing



OptiMill-Hardened-Finish | SCM104

MMG*			Workpiece material	Strength/hardness [N/mm²] [HRC]	Cooling			a_p [mm] in % of D	a_e [mm] in % of D	v_c [m/min]	f_z [mm] Diameter of milling cutter [mm]									
					Dry	Air/MQL	Coolant				4.00	5.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00
H	H1	H1.1	Hardened steel / cast steel	< 44	✓	✓		100	1.5	**110 - 130**	0.021	0.026	0.034	0.043	0.055	0.064	0.077	0.089	0.100	0.111
		H1.2	Hardened steel / cast steel	< 55	✓	✓		100	1.2	**90 - 115**	0.018	0.021	0.028	0.035	0.046	0.053	0.063	0.074	0.082	0.092
	H2	H2.1	Hardened steel / cast steel	< 60		✓		100	0.8	**80 - 100**	0.015	0.018	0.024	0.030	0.039	0.045	0.054	0.063	0.071	0.079
		H2.2	Hardened steel / cast steel	< 65		✓		100	0.6	**70 - 90**	0.013	0.015	0.020	0.025	0.033	0.038	0.045	0.053	0.059	0.066
		H2.3	Hardened steel / cast steel	< 68		✓		100	0.4	**60 - 85**	0.010	0.012	0.016	0.020	0.026	0.030	0.036	0.042	0.047	0.052
	H3	H3.1	Wear-resistant cast/chill casting, GJN		✓	✓		100	0.8	**80 - 100**	0.015	0.018	0.024	0.030	0.039	0.045	0.054	0.063	0.071	0.079

* MAPAL machining groups
** If the alloy parts Cr, Mo, Ni, V, W in total > 8%, then select the next highest MAPAL machining group.

The specified machining values are guide values.
The optimum data for the respective machining task should be determined during the test or machining.