

切削参数参考表

Recommended Milling Conditions

加工材料 Work Material			高硬度钢 Hardened Steels STAVAX・SKD61 (~52HRC)				高硬度钢 Hardened Steels SKD11・ELMAX (~62HRC)				高速钢 High Speed Steels SKH・HAP (~68HRC)			
外径 Dia.	角半径 Corner Radius	颈长 Under Neck Length	切深量 Depth of Cut		进给速度 Feed	主轴转速 Spindle Speed	切深量 Depth of Cut		进给速度 Feed	主轴转速 Spindle Speed	切深量 Depth of Cut		进给速度 Feed	主轴转速 Spindle Speed
			ap mm	ae mm	mm/min	min ⁻¹	ap mm	ae mm	mm/min	min ⁻¹	ap mm	ae mm	mm/min	min ⁻¹
0.5	0.1	1.5	0.008	0.2	1,500	50,000	0.005	0.15	800	50,000	0.003	0.1	600	50,000
		2.5	0.006	0.15	1,000	40,000	0.005	0.1	500	40,000	0.003	0.05	300	40,000
1	0.1 0.2	3	0.012	0.4	2,000	40,000	0.007	0.25	1,000	40,000	0.006	0.15	800	35,000
		5	0.008	0.3	1,500	30,000	0.005	0.15	800	30,000	0.004	0.1	400	25,000
1.5	0.1 0.2	4.5	0.015	0.6	2,500	35,000	0.008	0.4	1,200	35,000	0.007	0.2	1,000	30,000
		7.5	0.012	0.4	1,800	25,000	0.006	0.3	1,000	25,000	0.005	0.15	500	20,000
2	0.1 0.3	6	0.02	0.8	3,000	30,000	0.01	0.6	1,500	30,000	0.008	0.3	1,200	25,000
		10	0.015	0.6	2,000	20,000	0.008	0.4	1,000	20,000	0.006	0.2	600	18,000
备 注 Notes			※1 切深量是指进行等高线加工时的大概标准。请根据机床刚性和加工方法进行调整。 ※2 建议以倾斜切入方式进刀。请将此时的切入角度设定在3°以内。 ※3 预加工（中精加工）时请注意精加工余量相对于加工面需保持均匀。 ※4 加工R角等负载大的部位或复杂的形状时，请特别注意参数设定和刀路轨迹等。 ※5 请以相同的比率调整主轴转速和进给速度。 ※6 建议使用油雾冷却方式。 ※1 Depth of Cut is for contour line milling as the value of reference. Please adjust it depending on machine rigidity and machining method. ※2 Ramping approach with angle 3° or smaller is recommended. ※3 Recommend leaving uniform finishing allowance on the machined surface in the pre-stage cutting (semi-finishing). ※4 When cutting high load sections or complex shapes, it requires attention to condition setting and tool path. ※5 Adjust both spindle speed and feed at the same rate. ※6 Oil mist coolant is recommended.											

长颈
Long Neck无涂层
Non-Coating圆鼻
Corner Radius圆鼻
Corner Radius

使用注意事项

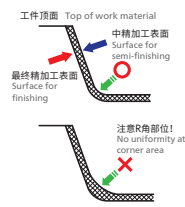
Points in Use

加工环境 Advice on Cutting Environment

- 刀具偏摆量越小越好。
Minimize the deflection of cutting edge.
- 掌握机床主轴的伸缩量以及机床的水平状态，需要时采取恰当的措施。
To understand the nature of the expansion of the main spindle and machine posture transformation, and take measures against them.

精加工量(余量) Advice on Finishing Allowance (stock amount)

- 使用小径CBN铣刀时，**精加工量(余量)均匀性非常重要**。
When using small CBN End Mill, uniform finishing allowance (stock amount) is important.
- 粗加工・中精加工使用刀具磨损过大时，中精加工和精加工的余量会变大，从而影响刀具寿命和加工精度，所以**预加工时留有均匀的加工余量非常重要**。
When tool is used on roughing and semi-finishing and it has a big abrasion, finishing allowance (stock amount) on semi-finishing and finishing is increasing and it affects tool life and cutting accuracy. Therefore, it is important to get uniform stock amount in the pre-stage cutting.



- H ~52高硬度钢
HRC Hardened Steel
- H ~60高硬度钢
HRC Hardened Steel
- H ~65高硬度钢
HRC Hardened Steel
- H ~70高硬度钢
HRC Hardened Steel