



切削参数参考表

Recommended Milling Conditions

加工材料 Work Material	不锈钢 Stainless Steels SUS304			钛合金 Titanium Alloy Ti-6Al-4V			超耐热合金 Heat Resistance Alloy Inconel®718			高硬度钢 Hardened Steels SKD61 (~52HRC)								
	外径 Dia.	主轴转速 Spindle Speed	进给速度 Feed		主轴转速 Spindle Speed	进给速度 Feed		主轴转速 Spindle Speed	进给速度 Feed		主轴转速 Spindle Speed	进给速度 Feed						
			mm/min			mm/min			mm/min			mm/min						
		min ⁻¹	侧面 Side Milling	沟槽 Slotting	min ⁻¹	侧面 Side Milling	沟槽 Slotting	min ⁻¹	侧面 Side Milling	沟槽 Slotting	min ⁻¹	侧面 Side Milling	沟槽 Slotting					
0.1	50,000	30	15	48,000	30	15	25,000	10	10	50,000	-	15						
0.2	50,000	50	25	48,000	50	25	25,000	15	10	47,700	-	20						
0.3	50,000	90	35	48,000	90	35	25,000	30	15	31,800	-	20						
0.4	47,700	130	50	45,000	130	50	23,000	40	20	23,900	50	25						
0.5	38,200	130	50	37,000	130	50	19,000	40	20	19,100	60	30						
0.6	34,000	130	50	33,000	130	50	17,000	40	20	16,000	60	30						
0.7	30,000	130	50	29,000	130	50	15,000	40	20	13,700	60	30						
0.8	26,000	140	50	25,000	140	50	13,000	45	20	12,000	60	30						
0.9	22,000	140	55	21,000	140	55	11,000	45	25	10,700	60	30						
1	19,100	150	55	18,000	150	55	9,500	50	25	9,500	75	40						
1.1	17,500	150	55	16,000	150	55	8,500	50	25	8,700	75	40						
1.2	16,000	150	55	15,000	150	55	8,000	50	25	8,000	75	40						
1.3	14,500	150	55	13,500	150	55	7,200	50	25	7,400	75	40						
1.4	13,000	150	55	12,500	150	55	6,500	50	25	6,900	75	40						
1.5	12,700	150	55	12,000	150	55	6,200	50	25	6,400	75	40						
1.6	11,900	150	55	11,500	150	55	6,000	50	25	6,000	75	40						
1.7	11,300	160	55	10,900	160	55	5,500	50	25	5,700	75	40						
1.8	10,700	160	55	10,300	160	55	5,200	50	25	5,300	75	40						
1.9	10,100	170	60	9,700	170	60	5,000	55	30	5,000	75	40						
2	9,500	170	60	9,100	170	60	4,800	55	30	4,800	75	40						
2.5	7,600	180	65	7,200	180	65	3,800	60	30	3,800	75	40						
3	6,400	190	70	6,000	190	70	3,200	65	35	3,200	80	40						
4	4,800	190	70	4,400	190	70	2,400	65	35	2,400	95	50						
5	3,800	230	75	3,400	230	75	1,900	75	40	1,900	95	50						
6	3,200	260	85	2,800	260	85	1,600	80	40	1,600	100	50						
切深量 Depth of Cut	侧面 Side Milling ae $\phi 0.1 \sim 0.9 = 0.05D$ $\phi 1 \sim 2.5 = 0.1D$ $\phi 3 \sim 6 = 0.2D$			沟槽 Slotting ap $\phi 0.1 \sim 0.4 = 0.05D$ $\phi 0.5 \sim 1.4 = 0.2D$ $\phi 1.5 \sim 3 = 0.7D$ $\phi 4 \sim 6 = 1D$			侧面 Side Milling ae $\phi 0.1 \sim 0.9 = 0.01D$ $\phi 1 \sim 2.5 = 0.02D$ $\phi 3 \sim 6 = 0.04D$			沟槽 Slotting ap $\phi 0.1 \sim 0.4 = 0.01D$ $\phi 0.5 \sim 1.4 = 0.1D$ $\phi 1.5 \sim 3 = 0.3D$ $\phi 4 \sim 6 = 0.5D$			侧面 Side Milling ae $\phi 0.1 \sim 0.4 = 0.05D$ $\phi 0.5 \sim 6 = 0.2D$			沟槽 Slotting ap $\phi 0.1 \sim 0.4 = 0.05D$ $\phi 0.5 \sim 6 = 0.2D$		
	(D: 外径 Dia.)																	
备注 Notes	<p>※ 1 请根据机床刚性和“一”工件的夹持状态等调整切削参数。 ※ 2 请使用发烟性低的油冷却方式。 ※ 3 请使用刚性较大的铣刀刀柄和机床。 ※ 4 使用油冷冷却方式进行加工时，根据排屑和发烟的状况调整切削参数。</p> <p>※ 1 Adjust milling condition conforming to machine rigidity and clamping condition. ※ 2 Use cutting fluid with smoke retardant. ※ 3 Use rigid and precise machine and chuck holder. ※ 4 Adjust milling condition with caution for chip evacuation and smoke generation when milling with water-insoluble fluid.</p>																	

P 调质钢
Prehardened Steel

H ~52高硬度钢
HRC Hardened Steel

M 不锈钢
Stainless Steel

S 钛合金
耐热合金
Titanium Alloy
Heat Resistant Alloy