

## 切削参数参考表

Recommended Milling Conditions

规格 Thread Size	加工规格 Thread Milling Size	外径 Dia.	螺距 Pitch	螺旋R Helical R mm	NS推荐 加工方向 Recommen- ded Process	碳素钢 Carbon Steels S50C			不锈钢 Stainless Steels SUS304			钛合金 Titanium Alloy Ti-6Al-4V			铝合金 Aluminium Alloy A5052		
						主轴转速 Spindle Speed min <sup>-1</sup>	进给速度 Feed mm/min	每刃进给量 Feed per Tooth mm/tooth	主轴转速 Spindle Speed min <sup>-1</sup>	进给速度 Feed mm/min	每刃进给量 Feed per Tooth mm/tooth	主轴转速 Spindle Speed min <sup>-1</sup>	进给速度 Feed mm/min	每刃进给量 Feed per Tooth mm/tooth	主轴转速 Spindle Speed min <sup>-1</sup>	进给速度 Feed mm/min	每刃进给量 Feed per Tooth mm/tooth
M1	M1	0.72	0.25	R0.155	逆铣 Up-cut	35,000	600	0.004	35,000	600	0.004	18,000	150	0.002	45,000	1,000	0.006
M1	M1.1	0.72	0.25	R0.205	逆铣 Up-cut	35,000	600	0.004	35,000	600	0.004	18,000	150	0.002	45,000	1,000	0.006
M1.2	M1.2	0.92	0.25	R0.155	逆铣 Up-cut	27,000	600	0.005	27,000	600	0.005	14,000	160	0.003	35,000	1,000	0.007
M1.4	M1.4	1.05	0.3	R0.195	逆铣 Up-cut	24,000	600	0.006	24,000	600	0.006	12,000	180	0.004	30,000	1,000	0.008
M1.6	M1.6	1.2	0.35	R0.22	逆铣 Up-cut	21,000	600	0.007	21,000	600	0.007	10,000	220	0.005	26,000	1,000	0.01
M1.7	M1.7	1.3	0.35	R0.22	逆铣 Up-cut	20,000	600	0.007	20,000	600	0.007	10,000	250	0.006	24,000	1,000	0.01
M1.7	M1.8	1.3	0.35	R0.27	逆铣 Up-cut	20,000	600	0.007	20,000	600	0.007	10,000	250	0.006	24,000	1,000	0.01
M2	M2	1.5	0.4	R0.28	顺铣 Down-cut	12,000	600	0.008	12,000	600	0.008	10,000	500	0.008	20,000	1,200	0.01
M2	M2.3	1.5	0.4	R0.43	顺铣 Down-cut	12,000	600	0.008	12,000	600	0.008	10,000	500	0.008	20,000	1,200	0.01
M2.5	M2.5	1.95	0.45	R0.305	顺铣 Down-cut	12,000	600	0.008	12,000	600	0.008	10,000	500	0.008	16,000	1,200	0.012
M2.5	M2.6	1.95	0.45	R0.355	顺铣 Down-cut	12,000	600	0.008	12,000	600	0.008	10,000	500	0.008	16,000	1,200	0.012
M3	M3	2.36	0.5	R0.36	顺铣 Down-cut	8,000	600	0.012	8,000	600	0.012	8,000	500	0.01	10,000	1,200	0.02
M4	M4	3.08	0.7	R0.5	顺铣 Down-cut	5,700	400	0.012	5,700	400	0.012	4,600	350	0.013	7,000	800	0.019
M5	M5	3.97	0.8	R0.555	顺铣 Down-cut	4,000	400	0.017	4,000	400	0.017	3,200	350	0.018	5,500	800	0.024
M6	M6	4.72	1	R0.68	顺铣 Down-cut	3,200	400	0.021	3,200	400	0.021	3,000	350	0.019	4,500	800	0.03

备注  
Notes

- ※1 本刀具请正转使用。
- ※2 本公司网站免费提供NC程序软件。
- ※3 本切削参数是使用水溶性切削油，分2次进行加工时的参考基准。
- ※4 必须先使用钻头加工底孔。
- ※5 请以每刃进给量为基准，根据加工环境因素调整主轴转速和进给速度，以及路径和加工方向等。
- ※6 螺旋R是最终切削时的R值，为螺纹加工提供参考，M1.4以下为5H，M1.6以上为6H（与传统的JIS2等级相当）。
- ※7 使用参数表中的螺旋R值时，必须设定底孔直径，避免颈部与底孔发生干涉。
- ※8 如加工后的螺纹呈锥形，请再进行一次零切量加工。
- ※9 请使用适合加工材料的冷却方式。
- ※1 This Product should be used in the forward rotation.
- ※2 Software for generating NC program Will be provided on NS web site.
- ※3 The above Recommended Milling Conditions is provided as a guide for cutting when the depth of cut is divided into twice with water-soluble fluid.
- ※4 Recommend making pilot hole in advance by using drill, etc.
- ※5 Depending on environment, adjustments of spindle speed based on feed per tooth, feed, number of paths and cutting direction are needed.
- ※6 Helical R, 5H for M1.4 and under and 6H for more than M1.6, is a guideline for thread milling and it is R value in the final cutting.
- ※7 When use helical R in the Recommended Milling Conditions, set pilot hole dia. for avoiding interference between the area of under neck and pilot hole.
- ※8 Add zero-cut process in case completed thread left deflection angle.
- ※9 Choose appropriate coolant for each working material.

涂层  
Coating

螺纹铣刀  
Thread Milling

P 碳素钢  
Carbon Steel

P 合金钢  
Alloy Steel

P 调质钢  
Prehardened Steel

M 不锈钢  
Stainless Steel

N 铝合金  
Aluminium Alloy

N 铜合金  
Copper

O 树脂  
Resin

螺纹铣刀  
Thread Mill