

3&4WHROU					Cutting Conditions											
Slotting																
Material	Mild Steel/Free Cutting Steel HP/SM				Structural Steels/Carbon Steels/Gray Cast Iron SS/SC/FC				Tool Steels/Mould Steels SCM/HPM				Alloy Steels / Pre-hardened Steels/Stainless Steels NAK80/KP4M/SUS304/SUS316			
Hardness	~ 200HB				~30HRC				30 ~ 40HRC				40~ 45HRC			
Outside Dia	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth
Ø 4	4,600	264	3.2	4	4,400	224	3.2	4	3,200	179	3.2	4	2,800	117	2.4	4
Ø 5	4,600	302	4	5	4,000	257	4	5	2,900	206	4	5	2,500	134	3	5
Ø 6	4,100	352	4.8	6	3,500	299	4.8	6	2,700	239	4.8	6	2,200	155	3.6	6
Ø 8	3,100	422	6.4	8	2,500	369	6.4	8	2,100	287	6.4	8	1,700	186	4.8	8
Ø 10	2,500	475	8	10	2,100	403	8	10	1,600	323	8	10	1,300	210	6	10
Ø 12	2,100	415	9.6	12	1,700	353	9.6	12	1,400	282	9.6	12	1,100	183	7.2	12
Ø 16	1,600	381	12.8	16	1,300	324	12.8	16	1,000	259	12.8	16	800	169	9.6	16
Ø 20	1,300	352	16	20	1,000	299	16	20	800	239	16	20	650	155	12	20
Depth of cut	1.0D ~ 38HRC 0.8D 1.0D 38HRC ~ 0.6D															

Side Cutting																
Material	Mild Steel/Free Cutting Steel HP/SM				Structural Steels/Carbon Steels/Gray Cast Iron SS/SC/FC				Tool Steels/Mould Steels SCM/HPM				Alloy Steels / Pre-hardened Steels/Stainless Steels NAK80/KP4M/SUS304/SUS316			
Hardness	~ 200HB				~30HRC				30 ~ 40HRC				40~ 45HRC			
Outside Dia	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth
Ø 4	5,800	539	6.0	2.0	4,800	458	6.0	2.0	4,800	458	6.0	2.0	3,200	351	4	1.6
Ø 5	5,800	318	7.5	2.5	4,800	525	7.5	2.5	4,800	525	7.5	2.5	2,800	402	5	2.0
Ø 6	4,800	719	9.0	3.0	4,200	611	9.0	3.0	4,200	611	9.0	3.0	2,400	467	6	2.4
Ø 8	3,700	863	12.0	4.0	3,100	733	12.0	4.0	3,100	733	12.0	4.0	1,800	561	8	3.2
Ø 10	3,000	970	15.0	5.0	2,500	825	15.0	5.0	2,500	825	15.0	5.0	1,500	631	10	4.0
Ø 12	2,400	848	18.0	6.0	2,100	721	18.0	6.0	2,100	721	18.0	6.0	1,300	551	12	4.8
Ø 16	1,850	780	24.0	8.0	1,600	663	24.0	8.0	1,600	663	24.0	8.0	1,000	507	16	6.4
Ø 20	1,500	719	30.0	10.0	1,300	611	30.0	10.0	1,300	611	30.0	10.0	750	467	20	8.0
Depth of cut																

- If the effective length is long, reduce the RPM and feed maximum 30%.
- Use laser tool measurement instead of hydraulic measurement when measuring tool length as possible.
- When entering the tool to the workpiece, enter the tool from outside to the workpiece.
- In the case of workpiece and machine do not have enough rigidity and make vibration, reduce the RPM and feed in same proportion.
- Depending on the workpiece and shape, use adequate coolant.
- For stainless and heat resistant alloy, water-soluble oil is the most effective.
- Use this table for your reference. Adjust the parameters depending on your machining geometry, machining purpose and CNC.