

2HPR						Cutting Condition							
Material		Hardened Steels STAVAX / SKD11				Heat-treated Steels / Hardened Steels SKD11 / SKD61				Heat-treated Steels / Hardened Steels YXR7 / SKH51			
Hardness		45 ~ 55HRC				55 ~ 62HRC				62 ~ 70HRC			
Outside Dia.	Corner Radius	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 0.5	R 0.1	33,000	80	0.015	0.020	25,000	45	0.007	0.010	20,000	30	0.007	0.010
Ø 0.6	R 0.2	30,000	90	0.020	0.100	25,000	60	0.010	0.075	20,000	35	0.010	0.075
Ø 0.8	R 0.2	25,000	100	0.040	0.150	19,000	65	0.020	0.120	16,000	40	0.020	0.120
Ø 1	R 0.3	20,500	583	0.100	0.300	18,000	281	0.050	0.200	12,500	175	0.050	0.200
Ø 1.5	R 0.1	16,500	623	0.120	0.350	13,000	283	0.070	0.300	10,500	177	0.070	0.300
Ø 2	R 0.1	14,500	696	0.150	0.400	11,000	285	0.100	0.350	9,500	179	0.100	0.300
Ø 2.5	R 0.1	11,500	696	0.200	0.600	8,800	287	0.120	0.400	7,400	180	0.100	0.350
"	R 0.5	11,500	696	0.210	0.600	8,800	289	0.120	0.450	7,400	182	0.100	0.400
Ø 3	R 0.1	9,500	705	0.200	0.500	7,500	290	0.150	0.550	6,400	184	0.120	0.450
"	R 0.5	9,500	705	0.220	0.500	7,500	292	0.150	0.550	6,400	186	0.120	0.450
"	R 1	9,500	705	0.250	0.700	7,500	294	0.200	0.650	6,400	187	0.160	0.550
Ø 4	R 0.1	7,200	724	0.250	0.950	5,600	296	0.150	0.750	4,750	189	0.150	0.650
"	R 0.5	7,200	724	0.250	0.950	5,600	298	0.150	0.750	4,750	191	0.150	0.650
"	R 1	7,200	724	0.300	1.200	5,600	300	0.200	1.000	4,750	193	0.200	0.900
Ø 5	R 0.1	6,400	771	0.200	0.900	5,100	302	0.150	0.700	4,450	194	0.150	0.850
"	R 0.5	6,400	771	0.200	0.900	5,100	303	0.150	0.700	4,450	196	0.150	0.850
"	R 1	6,400	771	0.250	1.100	5,100	305	0.200	0.900	4,450	198	0.200	1.000
Ø 6	R 0.5	5,300	752	0.300	1.300	4,200	307	0.200	0.800	3,700	200	0.200	0.800
"	R 1	5,300	752	0.300	1.300	4,200	309	0.200	0.800	3,700	201	0.200	0.800
"	R 1.5	5,300	752	0.300	1.400	4,200	311	0.250	1.200	3,700	203	0.250	1.200
"	R 2.5	5,300	752	0.300	1.400	4,200	313	0.250	1.200	3,700	205	0.250	1.200
Ø 8	R 0.5	4,000	686	0.300	1.700	3,200	316	0.250	1.350	2,800	207	0.250	1.350
"	R 1	4,000	686	0.300	1.700	3,200	316	0.250	1.350	2,800	208	0.250	1.350
"	R 1.5	4,000	686	0.300	1.700	3,200	318	0.250	1.350	2,800	210	0.250	1.350
"	R 2	4,000	686	0.400	2.000	3,200	320	0.250	1.500	2,800	212	0.300	1.400
"	R 2.5	4,000	686	0.400	2.000	3,200	322	0.250	1.500	2,800	214	0.300	1.400
"	R 3	4,000	686	0.400	2.000	3,200	324	0.250	1.500	2,800	215	0.300	1.400
Ø 10	R 0.5	3,200	639	0.500	2.100	2,550	326	0.300	1.700	2,200	217	0.300	1.500
"	R 1	3,200	639	0.500	2.100	2,550	327	0.300	1.700	2,200	219	0.300	1.500
"	R 1.5	3,200	639	0.600	2.400	2,550	329	0.300	1.800	2,200	221	0.300	1.600
"	R 2	3,200	639	0.600	2.400	2,550	331	0.300	1.800	2,200	222	0.300	1.600
"	R 2.5	3,200	639	0.600	2.400	2,550	333	0.300	1.800	2,200	224	0.300	1.600
Ø 12	R 0.5	2,650	639	0.800	2.500	2,100	335	0.400	2.000	1,860	226	0.350	1.800
"	R 1	2,650	639	0.800	2.500	2,100	337	0.400	2.000	1,860	228	0.350	1.800
"	R 1.5	2,650	639	0.800	2.500	2,100	339	0.400	2.000	1,860	229	0.350	1.800
"	R 2	2,650	639	1.000	2.600	2,100	340	0.500	2.100	1,860	231	0.400	2.000
"	R 2.5	2,650	639	1.000	2.600	2,100	342	0.500	2.100	1,860	233	0.400	2.000
"	R 3	2,650	639	1.000	2.600	2,100	344	0.500	2.100	1,860	235	0.400	2.000
Depth of Cut		Slotting • Ap : Axial Depth • D : Outside Diameter Side Milling • Ap : Axial Depth • Ae : Radial Depth Inclined Cutting											

- Above the table is a reference for groove milling and adjust parameters depending on material shape, milling purpose and CNC machine.
- For curved milling, set up the pitch value lower than corner radius value.
- For curved milling, raise up the feed by 30% in stable condition.
- Use the table for your reference. Adjust the parameters depending on your machining geometry, machining purpose and CNC.
- If the table over the maximum RPM and feed of your machine or found red heat on the material, adjust RPM and feed in the same proportion.
- Air blow or mist coolants are recommended and note for chip emission, heat or ignition.