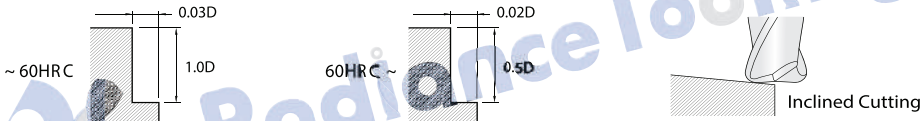


4HRR /6HRR /4HTR						Cutting Condition							
Material		Hardened Steels STAVX / SKD11				Heat-treated Steels / Hardened Steels SKD11 / SKD61				Heat-treated Steels / Hardened Steels YXR7 / SKH51			
Hardness		45 ~ 55HRC				55 ~ 62HRC				62 ~ 70HRC			
Outside Dia.	Corner Radius	RPM	FEED	Ap Axial Depth	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	365	0.015	0.013	25,000	245	0.007	0.010	20,000	140	0.007	0.010
Ø 0.6	R 0.1	30,000	380	0.020	0.098	25,000	250	0.010	0.075	20,000	150	0.010	0.075
Ø 0.7	R 0.1	28,000	390	0.030	0.104	21,000	255	0.010	0.080	18,000	150	0.010	0.080
Ø 0.8	R 0.1	25,500	400	0.040	0.120	19,000	260	0.020	0.100	16,000	155	0.020	0.100
Ø 1	R 0.1	20,500	710	0.080	0.158	16,000	392	0.040	0.120	12,500	236	0.030	0.120
"	R 0.3	20,500	710	0.100	0.104	16,000	393	0.050	0.080	12,500	238	0.050	0.060
Ø 1.5	R 0.1	18,000	759	0.120	0.125	13,000	394	0.070	0.100	10,500	239	0.050	0.080
"	R 0.5	18,000	759	0.150	0.156	13,000	396	0.100	0.120	10,500	240	0.070	0.100
Ø 2	R 0.1	14,500	858	0.150	0.156	11,000	397	0.100	0.120	9,500	242	0.100	0.100
"	R 0.5	14,500	858	0.180	0.187	11,000	399	0.100	0.140	9,500	243	0.100	0.120
Ø 2.5	R 0.1	11,500	858	0.160	0.166	8,500	400	0.100	0.130	7,500	244	0.100	0.100
"	R 0.5	11,500	858	0.190	0.198	8,500	402	0.100	0.150	7,500	246	0.100	0.120
Ø 3	R 0.1	9,500	858	0.160	0.166	7,500	403	0.120	0.130	6,400	247	0.120	0.100
"	R 0.5	9,500	858	0.180	0.187	7,500	405	0.120	0.140	6,400	248	0.120	0.120
"	R 1	9,500	858	0.200	0.208	7,500	406	0.120	0.160	6,400	250	0.120	0.130
Ø 4	R 0.1	7,200	891	0.200	0.208	5,600	407	0.120	0.160	4,750	251	0.120	0.130
"	R 0.5	7,200	891	0.250	0.260	5,600	409	0.120	0.200	4,750	252	0.150	0.160
"	R 1	7,200	891	0.250	0.260	5,600	410	0.150	0.200	4,750	254	0.150	0.160
Ø 5	R 0.1	6,400	957	0.250	0.260	5,100	412	0.120	0.200	4,450	255	0.120	0.160
"	R 0.5	6,400	957	0.280	0.291	5,100	413	0.150	0.220	4,450	257	0.150	0.180
"	R 1	6,400	957	0.300	0.312	5,100	415	0.150	0.240	4,450	258	0.150	0.190
Ø 6	R 0.1	5,300	924	0.300	0.312	4,200	416	0.200	0.240	3,700	259	0.200	0.190
"	R 0.5	5,300	924	0.300	0.312	4,200	418	0.200	0.240	3,700	261	0.200	0.190
"	R 1	5,300	924	0.400	0.416	4,200	419	0.250	0.320	3,700	262	0.250	0.260
"	R 1.5	5,300	924	0.400	0.416	4,200	421	0.250	0.320	3,700	263	0.250	0.260
Ø 8	R 0.5	4,000	858	0.300	0.312	3,200	422	0.200	0.240	2,800	265	0.200	0.190
"	R 1	4,000	858	0.300	0.312	3,200	423	0.200	0.240	2,800	266	0.200	0.190
"	R 1.5	4,000	858	0.400	0.416	3,200	425	0.250	0.320	2,800	267	0.250	0.260
"	R 2	4,000	858	0.500	0.520	3,200	426	0.300	0.400	2,800	269	0.250	0.320
Ø 10	R 0.5	3,200	792	0.400	0.416	2,550	428	0.200	0.320	2,200	270	0.200	0.260
"	R 1	3,200	792	0.450	0.468	2,550	429	0.250	0.360	2,200	271	0.250	0.290
"	R 1.5	3,200	792	0.500	0.520	2,550	431	0.300	0.400	2,200	273	0.300	0.320
"	R 2	3,200	792	0.500	0.520	2,550	432	0.300	0.400	2,200	274	0.300	0.320
"	R 2.5	3,200	792	0.500	0.520	2,550	434	0.300	0.400	2,200	275	0.300	0.320
Ø 12	R 0.5	2,650	792	0.500	0.520	2,100	435	0.350	0.400	1,860	277	0.300	0.320
"	R 1	2,650	792	0.700	0.728	2,100	436	0.350	0.560	1,860	278	0.350	0.450
"	R 1.5	2,650	792	0.800	0.832	2,100	438	0.400	0.640	1,860	279	0.350	0.510
"	R 2	2,650	792	0.800	0.832	2,100	439	0.400	0.640	1,860	281	0.350	0.510
"	R 3	2,650	792	0.800	0.832	2,100	441	0.400	0.640	1,860	282	0.350	0.510
Depth of Cut													

- Above the table is a reference for groove milling and refer to the depth of cut for side milling.
- When milling workpiece HRC below 55 (Alloy steel, tool steel), raise up 20% RPM and feed compared to the same diameter.
- In case of long effective length, reduce the RPM and feed by 30% or less.
- For curved milling, set up the lower value of the pitch than the corner radius value of tool diameter.
- 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.
- With 6 flutes milling, raise up the feed up to 50% in stable condition.