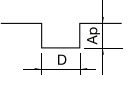
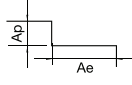
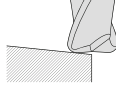


4WRR		Cutting Conditions							
Material		Alloy Steels / Pre-hardened Steels NAK80 / KP4M				Hardened Steels STAVAX / SKD11			
Hardness		40 ~ 45HRc				45 ~ 55HRc			
Outside Dia	Effective Length	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth
Ø 1	4	13,455	1,265	0.038	0.264	11,730	1,046	0.03	0.238
"	10	8,625	495	0.011	0.123	7,475	495	0.009	0.098
Ø 1.2	4	12,880	1,380	0.031	0.44	11,730	1,070	0.023	0.293
"	10	8,855	782	0.017	0.176	7,130	587	0.009	0.147
Ø 1.5	6	11,385	1,265	0.04	0.475	10,350	1,150	0.037	0.435
"	12	9,280	817	0.028	0.317	6,790	759	0.025	0.29
Ø 2	6	12,650	1,265	0.063	0.713	11,730	1,173	0.059	0.633
"	12	9,970	1,012	0.045	0.396	8,280	943	0.043	0.396
Ø 2.5	10	10,580	1,380	0.065	0.528	9,775	1,150	0.065	0.528
"	20	8,160	1,150	0.047	0.264	7,845	655	0.03	0.22
Ø 3	10	11,040	2,070	0.094	0.684	10,235	2,070	0.059	0.684
"	20	7,340	1,495	0.057	0.567	6,230	1,495	0.035	0.567
Ø 4	13	9,085	1,576	0.105	1.15	7,590	1,530	0.082	1.15
"	20	7,130	1,380	0.069	0.92	5,980	1,288	0.054	0.92
"	30	6,325	1,104	0.043	0.745	5,290	1,058	0.033	0.745
Ø 6	20	5,635	1,691	0.176	2.305	3,335	978	0.176	1.281
"	40	2,875	782	0.098	1.32	1,610	460	0.098	0.733
Ø 8	22	4,600	1,840	0.212	2.921	2,760	782	0.212	1.518
Ø 10	24	3,680	2,013	0.253	3.14	2,185	621	0.242	1.645
Ø 12	26	2,875	2,070	0.276	3.105	1,725	495	0.265	1.714
Depth of cut		Slotting • Ap : Axial Depth • D : Outside Diameter  Side Milling • Ap : Axial Depth • Ae : Radial Depth  Inclined Cutting 							

- When milling workpiece HRC over 62, reduce 20% of the RPM and feed with the same diameter.
- If the effective length is long, reduce the RPM and feed maximum 30%.
- Consider the corner radius value when you set up the Ae value.
- 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 up to 30% in stable milling condition.