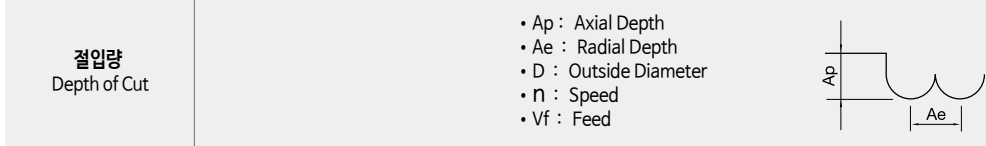


피삭재 Material		동 합금 Copper alloys C1100				합금강 / 프리하드강 Alloy Steels / Prehardened Steels NAK80/KP4M				고경도강 Hardened Steels STAVAX/SKD11			
경도 Hardness		40 ~ 45HRC								45 ~ 55HRC			
반경 Radius	유효장 Effective Length	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth
R0.05	0.2	54,000	360	0.010	0.050	43,200	306	0.009	0.045	34,560	245	0.007	0.036
R0.075	0.15	54,000	456	0.010	0.030	43,200	388	0.009	0.027	34,560	310	0.007	0.022
R0.1	0.2	54,000	516	0.012	0.008	43,200	439	0.011	0.007	34,560	351	0.009	0.006
	0.4	54,000	516	0.005	0.008	43,200	439	0.005	0.007	34,560	351	0.004	0.006
R0.1.5	0.3	54,000	864	0.020	0.013	43,200	734	0.018	0.012	34,560	588	0.014	0.009
	0.6	54,000	864	0.010	0.013	43,200	734	0.009	0.012	34,560	588	0.007	0.009
R0.2	0.4	54,000	1,044	0.028	0.016	43,200	887	0.025	0.014	34,560	710	0.020	0.012
	0.8	54,000	1,044	0.014	0.016	43,200	887	0.013	0.014	34,560	710	0.010	0.012
R0.25	0.5	56,000	1,500	0.035	0.022	44,800	1,275	0.032	0.020	35,840	1,020	0.025	0.016
R0.3	0.6	58,000	1,812	0.042	0.026	46,400	1,540	0.038	0.023	37,120	1,232	0.030	0.019
R0.35	0.7	55,000	2,028	0.049	0.031	44,000	1,724	0.044	0.028	35,200	1,379	0.035	0.022
R0.4	0.8	52,000	2,244	0.056	0.036	41,600	1,907	0.050	0.032	33,280	1,526	0.040	0.026
	2	52,000	2,244	0.033	0.036	41,600	1,907	0.015	0.032	33,280	1,526	0.012	0.026
R0.5	1	41,000	1,992	0.063	0.040	32,800	1,693	0.057	0.036	26,240	1,355	0.045	0.029
	2.5	41,000	1,992	0.022	0.040	32,800	1,693	0.020	0.036	26,240	1,355	0.016	0.029
R0.6	3	34,000	2,088	0.065	0.040	27,200	1,775	0.059	0.036	21,760	1,420	0.047	0.029
R0.75	1.5	27,000	2,196	0.087	0.068	21,600	1,867	0.078	0.061	17,280	1,493	0.063	0.049
	4	27,000	2,196	0.052	0.068	21,600	1,867	0.047	0.061	17,280	1,493	0.037	0.049
R1	2	20,000	2,136	0.112	0.089	16,000	1,816	0.101	0.080	12,800	1,452	0.081	0.064
	5	20,000	2,136	0.070	0.091	16,000	1,816	0.063	0.082	12,800	1,452	0.050	0.066
R1.25	6	16,000	2,208	0.067	0.115	12,800	1,877	0.060	0.104	10,240	1,501	0.048	0.083
R1.5	3	13,000	2,664	0.197	0.171	10,400	2,264	0.177	0.154	8,320	1,812	0.142	0.123
	8	13,000	2,664	0.100	0.171	10,400	2,264	0.090	0.154	8,320	1,812	0.072	0.123
R1.75	8	11,500	2,580	0.183	0.190	9,200	2,193	0.165	0.171	7,360	1,754	0.132	0.136
R2	4	10,000	2,496	0.266	0.208	8,000	2,122	0.239	0.187	6,400	1,697	0.192	0.150
	8	10,000	2,496	0.134	0.208	8,000	2,122	0.121	0.187	6,400	1,697	0.096	0.150
R2.5	5	8,300	2,388	0.215	0.240	6,640	2,030	0.194	0.216	5,312	1,624	0.155	0.173
	8	8,300	2,388	0.200	0.240	6,640	2,030	0.180	0.216	5,312	1,624	0.144	0.173
	10	8,300	2,388	0.190	0.240	6,640	2,030	0.171	0.216	5,312	1,624	0.137	0.173
R3	6	6,900	2,328	0.290	0.281	5,520	1,979	0.261	0.253	4,416	1,583	0.209	0.202
	10	6,900	2,328	0.250	0.281	5,520	1,979	0.225	0.253	4,416	1,583	0.180	0.202
R3.5	12	6,900	2,328	0.230	0.281	5,520	1,979	0.207	0.253	4,416	1,583	0.166	0.202
	14	6,310	2,200	0.315	0.228	5,048	1,499	0.284	0.205	4,038	1,200	0.227	0.164
R4	8	5,720	2,000	0.400	0.175	4,576	1,020	0.360	0.158	3,661	816	0.288	0.126
	14	5,720	2,188	0.400	0.175	4,576	1,020	0.360	0.158	3,661	816	0.288	0.126
R4.5	16	5,135	2,125	0.450	0.165	4,108	867	0.405	0.148	3,286	694	0.324	0.118
R5	10	4,550	2,063	0.500	0.154	3,640	714	0.450	0.139	2,912	571	0.360	0.111
	15	4,550	2,063	0.500	0.154	3,640	714	0.450	0.139	2,912	571	0.360	0.111
	18	4,550	2,063	0.500	0.154	3,640	714	0.450	0.139	2,912	571	0.360	0.111
R5.5	20	4,160	1,950	0.550	0.157	3,328	663	0.495	0.141	2,662	530	0.396	0.113
R6	18	3,770	1,925	0.600	0.159	3,016	612	0.540	0.143	2,413	490	0.432	0.114
	22	3,770	1,875	0.600	0.159	3,016	612	0.540	0.143	2,413	490	0.432	0.114
R6.5	24	3,728	1,850	0.549	0.156	2,982	666	0.494	0.140	2,386	533	0.395	0.112
R7	24	3,686	1,788	0.498	0.153	2,948	720	0.448	0.137	2,359	576	0.359	0.110
R8	30	2,985	1,750	0.413	0.147	2,388	612	0.372	0.132	1,911	490	0.298	0.106
R10	38	2,429	1,688	0.276	0.133	1,943	367	0.248	0.120	1,554	294	0.198	0.096



- 유효장 길이가 긴 경우, RPM과 FEED를 동일 비율로 낮춰 주세요.
- 절삭조건이 없는 직경 및 유효장은 비슷한 직경 및 유효장에 비례하여 UP&DOWN 하여 설정 하십시오.
- HRC52 이상 고경도강 가공시 같은 직경의 같은 비율로 20% DOWN 시켜주세요.
- 상기 절삭조건은 참고 수치이므로 실 가공시 가공 형상, 가공 목적, 적용 기계에 따라 조건 변경 요망합니다.
- 적용 기계의 회전 속도가 부족한 경우에는 회전 속도와 이송속도를 같은 비율로 줄여서 적용합니다.
- 진동이 적고 강성이 좋은 공작기계 사용 요망 합니다 (Ø1이하 사용자 진동 허용 관리 5µm 이내 일것.)
- 원활한 칩 배출을 위하여 에어브로 혹은 미스트쿨러트를 사용을 추천하며, 동 가공시 습식 쿨러트를 추천 합니다.
- If the effective length is long, reduce the RPM and feed in the same proportion.
- If the effective length or overall length of your tool are not show above the table, adjust your parameter with upper or lower diameter of parameter.
- When milling workpiece HRC over 52 hardened steel , reduce 20% of the RPM and feed compared to the same diameter.
- Use this 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, adjust RPM and feed in the same proportion.
- Use a machine with low vibration and good rigidity (Ø1 or less, the vibration tolerance management should be within 5µm).
- Air blow or oil mist is recommended for smooth chip emission, and wet coolant milling is recommended for copper material.