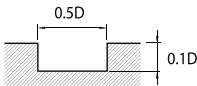
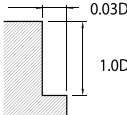
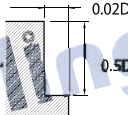


2EPE/2ELE					Cutting Conditions							
Slotting												
Material	Copper Alloys C1100				Alloy Steels / Pre-hardened Steels NAK80/KP4M				Hardened Steels STAVAX/SKD11			
Hardness					40~ 45HRC				45 ~ 55HRC			
Outside Dia	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth	RPM	FEED	Ap Axial Depth	Ae Radial Depth
Ø 0.5	50,000	1110	0.05	0.50	45,000	888	0.40	0.25	40,500	622	0.40	0.25
Ø 0.6	50,000	1410	0.06	0.60	45,000	1128	0.48	0.30	40,500	790	0.48	0.30
Ø 0.8	50,000	1800	0.08	0.80	40,000	1440	0.64	0.40	30,000	1008	0.64	0.40
Ø 0.9	49,000	1965	0.09	0.90	39,000	1572	0.72	0.45	27,800	1100	0.72	0.45
Ø 1	48,000	2250	0.10	1.00	38,000	1800	0.80	0.50	25,500	1260	0.80	0.50
Ø 2	33,300	2550	0.20	2.00	26,000	2040	1.60	1.00	17,500	1428	1.60	1.00
Ø 3	21,800	2550	0.30	3.00	17,300	2040	2.40	1.50	11,500	1428	2.40	1.50
Ø 4	16,700	2640	0.40	4.00	13,200	2112	3.20	2.00	8,800	1478	3.20	2.00
Ø 5	15,700	3000	0.50	5.00	12,500	2400	4.00	2.50	8,300	1680	4.00	2.50
Ø 6	13,000	2850	0.60	6.00	10,350	2280	4.80	3.00	6,900	1596	4.80	3.00
Ø 8	9,880	2790	0.80	8.00	7,800	2232	6.40	4.00	5,200	1562	6.40	4.00
Ø 10	7,800	2550	1.00	10.00	6,150	2040	8.00	5.00	4,100	1428	8.00	5.00
Ø 12	6,650	2550	1.20	12.00	5,250	2040	9.60	6.00	3,500	1428	9.60	6.00
Ø 16	5,540	2340	1.60	16.00	4,340	1872	12.80	8.00	2,600	1310	12.80	8.00
Ø 18	5,540	2340	1.80	18.00	4,340	1872	14.40	9.00	2,600	1310	14.40	9.00
Ø 20	4,640	2160	2.00	20.00	4,340	1728	16.00	10.00	2,100	1210	16.00	10.00
Depth of cut		 										

2EPE/2ELE					Cutting Conditions							
Side Cutting												
Material	Copper Alloys C1100				Alloy Steels / Pre-hardened Steels NAK80/KP4M				Hardened Steels STAVAX/SKD11			
Hardness					40~ 45HRC				45 ~ 55HRC			
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
Ø 1	48,000	1050	1.0	0.03	38,000	735	0.50	0.02	25,500	515	0.50	0.02
Ø 2	33,300	1200	2.0	0.06	26,000	840	1.00	0.04	17,500	588	1.00	0.04
Ø 3	21,800	1200	3.0	0.09	17,300	840	1.50	0.06	11,500	588	1.50	0.06
Ø 4	18,700	1250	4.0	0.12	13,200	875	2.00	0.08	8,800	613	2.00	0.08
Ø 5	15,700	1450	5.0	0.15	12,500	1015	2.50	0.10	8,300	711	2.50	0.10
Ø 6	13,000	1350	6.0	0.18	10,350	945	3.00	0.12	6,900	662	3.00	0.12
Ø 8	9,880	1320	8.0	0.24	7,800	924	4.00	0.16	5,200	647	4.00	0.16
Ø 10	7,800	1200	10.0	0.30	6,150	840	5.00	0.20	4,100	588	5.00	0.20
Ø 12	6,650	1200	12.0	0.36	5,250	840	6.00	0.24	3,500	588	6.00	0.24
Ø 16	5,540	1000	16.0	0.48	4,340	700	8.00	0.32	2,600	490	8.00	0.32
Ø 18	5,540	1000	18.0	0.54	4,340	700	9.00	0.36	2,600	490	9.00	0.36
Ø 20	4,640	950	20.0	0.60	4,340	760	10.00	0.40	2,100	532	10.00	0.40
Depth of cut		 ~ 40HRC  40HRC ~										

- Use a rigid precise machine and holder.
- Ap(mm): Axial Depth of cut
- Ae(mm): Radial Depth of cut
- The edge of the flute precisely grinded, if you want measure the tool and to avoid damaging on the flutes, use non-contact measuring method
- When milling workpiece HRC over 50 hardened steel, reduce 20% of the RPM and feed compared to the same diameter.
- Use this table for your reference. Adjust the parameter 3 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.
- The Above condition are only reference. In actual machining conditions adjust these parameters according to the milling shape, machine ability and the operation environment.