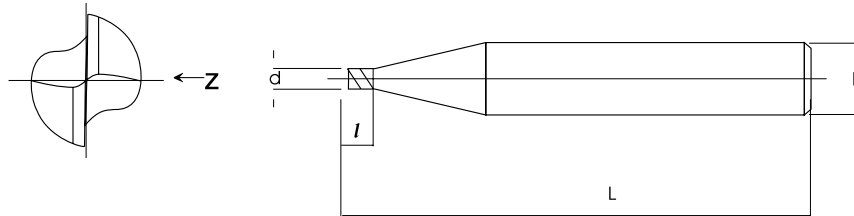


Super high lubrication & Super low friction coefficient

MINIATURE SQUARE TYPE - 2 flutes

WC=88 Co=12 HRA = 92.4 Rupture=3950N/mm² Grain Size=0.5μm

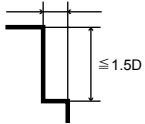
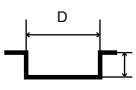
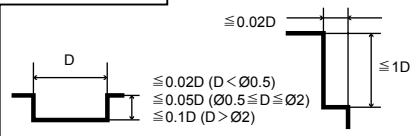


● SUMIE - RS ●



MODE	Diameter d	Flute Length l	Shank Diameter D	Flute Quantity Z	Full Length L
SUMIE 0022	0.2	0.4	4	2	50
SUMIE 0032	0.3	0.6	4	2	50
SUMIE 0042	0.4	0.8	4	2	50
SUMIE 0052	0.5	1	4	2	50
SUMIE 0062	0.6	1.2	4	2	50
SUMIE 0072	0.7	1.4	4	2	50
SUMIE 0082	0.8	1.6	4	2	50
SUMIE 0092	0.9	1.8	4	2	50
SUMIE 0102	1	3	4	2	50
SUMIE 0112	1.1	3	4	2	50
SUMIE 0122	1.2	3	4	2	50
SUMIE 0132	1.3	3	4	2	50
SUMIE 0142	1.4	3	4	2	50
SUMIE 0152	1.5	4	4	2	50
SUMIE 0162	1.6	4	4	2	50
SUMIE 0172	1.7	4	4	2	50
SUMIE 0182	1.8	4	4	2	50
SUMIE 0192	1.9	4	4	2	50
SUMIE 0202	2	6	4	2	50
SUMIE 0212	2.1	6	4	2	50
SUMIE 0222	2.2	6	4	2	50
SUMIE 0232	2.3	6	4	2	50
SUMIE 0242	2.4	6	4	2	50
SUMIE 0252	2.5	8	4	2	50
SUMIE 0262	2.6	8	4	2	50
SUMIE 0272	2.7	8	4	2	50
SUMIE 0282	2.8	8	4	2	50
SUMIE 0292	2.9	8	4	2	50
SUMIE 0302	3	8	4	2	50

SUMIE, SUPE 2 Flutes ■ Standard Cutting Conditions

Work Material	Copper			Carbon Steels, Alloy Steels(~30HRC) S50C, SCM, Cast Iron FC250 etc AISI 1049, Cast iron			Alloy Steels, Tool Steels(30~45HRC) Prehardened steels, SKD61, NAK etc AISI H13			Austenitic stainless steels SUS304, SUS316 etc AISI 304, AISI 316			Hardened steels (45~50HRC) SKD61, SKD11, NAK, STAVAX etc AISI H13		
Cutting Speed	80~150m/min			50~100m/min			50~70m/min			30~60m/min			20~40m/min		
Diameter (mm)	Speed (min ⁻¹)	Feed Rate (mm/min)		Speed (min ⁻¹)	Feed Rate (mm/min)		Speed (min ⁻¹)	Feed Rate (mm/min)		Speed (min ⁻¹)	Feed Rate (mm/min)		Speed (min ⁻¹)	Feed Rate (mm/min)	
		Side Milling	Slotting		Side Milling	Slotting		Side Milling	Slotting		Side Milling	Slotting		Side Milling	Slotting
0.2	40,000	90	30	40,000	-	120	40,000	-	100	28,000	-	60	32,000	-	25
0.3	40,000	130	40	40,000	-	160	40,000	-	120	28,000	-	70	32,000	-	35
0.4	40,000	170	55	40,000	-	200	40,000	-	160	28,000	-	90	24,000	-	35
0.5	40,000	210	70	40,000	320	250	40,000	240	190	25,000	200	120	19,000	75	60
0.6	40,000	245	85	38,000	380	300	33,000	270	210	21,000	220	130	16,000	75	60
0.7	40,000	285	95	36,000	420	330	28,000	300	240	18,000	240	140	14,000	75	60
0.8	40,000	330	110	34,000	480	380	25,000	340	270	16,000	260	150	12,000	75	60
0.9	40,000	375	125	32,000	540	430	22,000	370	290	14,000	280	160	10,600	75	60
1	40,000	420	140	30,000	600	480	20,000	400	320	12,600	300	180	9,600	75	60
1.5	32,000	800	270	20,000	600	480	14,000	400	320	8,400	300	180	6,400	75	60
2	24,000	1,000	330	15,000	600	480	10,000	400	400	6,300	300	180	4,800	75	60
2.5	19,000	1,000	330	12,000	600	480	8,200	400	320	5,100	300	180	3,800	75	60
3	16,000	1,000	330	10,000	600	480	7,000	400	320	4,200	300	180	3,200	75	60
4	12,000	1,000	330	7,500	600	480	5,200	400	320	3,100	300	180	2,400	75	60
5	9,600	1,000	330	6,000	600	480	4,200	400	320	2,500	300	180	1,900	75	60
6	8,000	1,000	330	5,000	600	480	3,500	400	320	2,100	300	180	1,600	75	60
8	6,000	1,000	330	4,000	520	410	2,800	350	280	1,600	260	150	1,200	65	50
10	4,800	1,000	330	3,200	450	360	2,200	300	240	1,300	230	130	1,000	65	50
12	4,000	1,000	330	2,700	410	320	1,900	270	210	1,100	210	120	800	65	50
16	3,000	1,000	330	2,000	240	190	1,400	210	160	840	160	100	600	60	45
20	2,400	1,000	330	1,600	200	160	1,100	170	130	680	140	80	480	50	40
25	1,900	1,000	330	1,300	160	130	900	140	110	540	120	70	380	45	35
Depth of cut (D: Dia)	$\leq 0.1D$ ($D \leq \varnothing 3$) $\leq 0.2D$ ($D > \varnothing 3$)  $\leq 0.1D$ ($D < \varnothing 2$) $\leq 0.2D$ ($D \geq \varnothing 2$)  $\leq 0.02D$ $\leq 0.05D$ ($\varnothing 0.5 \leq D \leq \varnothing 2$) $\leq 0.1D$ ($D > \varnothing 2$) 														

1. Please use Si coating tools for work materials of 50~60HRC.
2. In cutting Austenitic stainless steels, the use of non-water-soluble cutting fluid is especially effective.
3. If the rigidity of the machine or the work material installation is very low, or chattering is generated, please reduce the revolution and the feed rate proportionately.
4. When drilling, please set the feed rate at 1/3 or below of the above value.

SUMIE, SUPE 2 Flutes ■ High-Speed Milling Conditions

[illegible]