

CARBIDE

HSS


**COBALT & HSS
END MILLS**
E2004 SERIES

 8% COBALT (M42)
PLAIN SHANK

E1004 SERIES

 HSS (M2)
PLAIN SHANK

HSSCo8 & HSS, 4FLUTE MINIATURE REGULAR LENGTH DOUBLE

► Suitable for finishing of precision components such as watch, camera electronic apparatus molds, etc.



~Ø3/32 Ø7/64~

Unit : Inch

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
8% COBALT (M42)	HSS (M2)				
53256	53006	1/16	3/16	3/16	2-1/4
53258	53008	5/64	3/16	15/64	2-1/4
53260	53010	3/32	3/16	9/32	2-1/4
53262	53012	7/64	3/16	21/64	2-1/4
53264	53014	1/8	3/16	3/8	2-1/4
53266	53016	9/64	3/16	13/32	2-1/4
53268	53018	5/32	3/16	7/16	2-1/4
53270	53020	11/64	3/16	1/2	2-1/4
53272	53022	3/16	3/16	1/2	2-1/4

■ The TiN coated, TiCN coated or TiAlN coated is available on your request.

■ Coating Codes for Cobalt

Uncoated EDP NO. + CN(TiN), CC(TiCN), CF(TiAlN F), CE(TiAlN E), CH(Hardslick)

■ Coating Codes for HSS

Uncoated EDP NO. + HN(TiN), HC(TiCN), HF(TiAlN F), HE(TiAlN E), HH(Hardslick)

► Coated Price Shown in Price List. Call for Availability.

Mill Dia. Tolerance (inch)	
0~+.0010	* * 0~-.0020

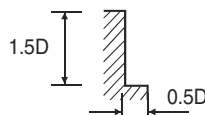
**The shank of end mills is the same diameter as the cutting portion.

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel
~HRc20	HRc20~30	HRc30~40	HRc40~45	HRc45~55	HRc55~70							
◎	◎	○				○			○			

HSSCo8 & HSS, MULTI FLUTE ROUGHING & FINISHING - SIDE CUTTING

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		ALUMINUM ALUMINUM ALLOYS	
HARDNESS	~ 500N/mm ²		~HRC20		HRC20~HRC30		HRC30~HRC40			
STRENGTH	~ 500N/mm ²		500~800N/mm ²		800~1000N/mm ²		1000~1300N/mm ²			
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1/4	1800	2.5	1300	2.0	1200	1.8	800	1.0	4500	6.3
5/16	1400	3.4	1100	2.4	900	2.2	560	1.2	3100	7.3
3/8	1100	4.7	900	3.7	800	3.5	450	2.0	2500	11.0
1/2	900	5.7	800	4.3	630	3.5	400	2.2	2000	12.6
5/8	700	5.7	560	4.3	450	3.5	280	2.2	1600	14.2
11/16	630	5.7	500	4.3	400	3.5	250	2.2	1400	15.0
7/8	500	6.9	450	5.3	350	4.3	220	2.8	1100	15.0
1	450	6.9	400	5.3	310	4.3	180	2.8	1000	14.2
1-1/4	350	6.7	280	5.1	220	4.1	140	2.8	800	15.8
1-3/8	310	6.7	250	5.1	200	4.1	120	2.8	700	15.0
2	240	5.4	190	4.0	150	3.4	110	2.6	500	11.2



※ The Feed, in long & extra long types, should be reduced by around 50%.

RPM = rev./min.
FEED = inch/min.

HSSCo8 & HSS, MINIATURE

MATERIAL	HIGH TENSILE STEELS MEDIUM STRENGTH STAINLESS STEELS MEDIUM STRENGTH TITANIUM SLOOYS		MEDIUM TENSILE STEELS UNALLOYED TITANIUM TOOL STEELS HEAT RESISTANT FERRITIC LOW ALLOYS		VILD STEEL FORGING HARD BRASS & BRONZE COPPER		ALUMINUM ALUMINUM ALLOYS PLASTIC WOODS		ALUMINUM ALUMINUM ALLOYS	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1/4	6600~8800	0.3	11000 up	0.5	11000 up	0.8	11000 up	1.2	11000 up	1.5
1/32	3300~4400	0.5	5500~5600	0.6	7700~9900	1.6	11000 up	1.6	11000 up	2.5
3/64	2200~2935	0.6	3665~4400	0.6	5135~6600	2.5	7335~8800	2.0	11000 up	2.6
1/16	1650~2260	0.6	2750~3300	1.0	3350~4950	3.3	5500~6600	2.6	11000 up	4.2
5/64	1320~1760	0.6	2200~2640	1.0	3850~3960	3.3	4400~5820	2.6	8500 up	4.2
3/32	1100~1285	0.6	1835~2200	1.0	2565~3300	3.3	3665~4400	2.6	7330up	4.2
7/64	345~1255	0.6	1570~1885	1.0	2200~2830	3.3	3140~3770	2.6	5625 up	4.3
1/8	825~1100	0.6	1375~1650	1.0	1925~2475	3.3	2750~3300	2.8	5500 up	4.5
9/64	735~980	0.6	1220~1465	1.0	1710~2200	3.4	2445~3770	2.8	4890~9780	4.5
5/32	560~880	0.8	1100~1320	1.1	1540~1980	3.6	2205~2640	2.9	4400~8800	4.5
11/64	600~800	0.9	1000~1200	1.2	1400~1800	3.7	2000~2400	3.0	4000~3000	4.6
3/16	550~735	1.0	915~1100	1.4	1285~1650	3.3	1535~2200	3.3	3685~7335	4.7

NOTES :

- (1) The cutting conditions in this table are given for reference, which should be varied depending on the machine, tooling, depth of cut, cutting fluid and other conditions.
- (2) Use a holder of strong gripping force and machine of high stiffness

RPM = rev./min.
FEED = inch/min.