

HSS



Being the best through innovation



TANK-POWER

- Next Generation of Powdered Metal End Mills
Higher Edge Strength & Feed Rates



CBN
END MILL

i-Xmill
END MILL

X5070
END MILLS

4G MILLS
END MILLS

X-SPEED
ROUGHER
END MILLS

X-POWER
END MILLS

JET-POWER
END MILLS

V7 Mill STEEL
END MILLS

V7 Mill INOX
END MILLS

ALU-POWER
END MILLS

D-POWER
END MILLS

STANDARD
CARBIDE
END MILLS

TANK-POWER
END MILLS

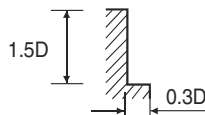
STANDARD
COBALT
& HSS
END MILLS

TECHNICAL
DATA

PREMIUM HSS-PM, 3&4 FLUTE 60° HELIX - SIDE CUTTING

E9988 SERIES

MATERIAL	STRUCTURAL STEELS, CARBON STEELS, CAST IRONS		CARBON STEELS, ALLOY STEELS, TOOL STEELS		ALLOY STEELS, TOOL STEELS AUSTENITIC STAINLESS STEELS	
HARDNESS	~HRc20		HRc20 ~ HRc30		HRc30 ~ HRc40	
STRENGTH	500 ~ 800N/mm ²		800 ~ 1000N/mm ²		1000 ~ 1300N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
1/4	3850	7.9	2500	5.3	1900	3.5
5/16	3050	7.9	2100	6.3	1700	3.5
3/8	2700	8.5	1700	6.3	1450	3.8
1/2	1850	9.7	1200	6.3	960	4.1
5/8	1300	11.0	845	8.5	690	5.4
3/4	895	14.6	580	11.9	475	7.9
7/8	720	16.6	475	14.0	380	8.8
1	630	19.0	415	16.0	335	10.0



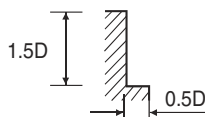
※ The Feed, in long & extra long types, should be reduced by around 50%.

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

PREMIUM HSS-PM, MULTI FLUTE ROUGHING - SIDE CUTTING

E9990, E9991, E9A86, E9A87, E9921 SERIES

MATERIAL	STRUCTURAL STEELS, CARBON STEELS		STRUCTURAL STEELS, CARBON STEELS, CAST IRONS		CARBON STEELS, ALLOY STEELS, TOOL STEELS		PREHARDENED STEELS, ALLOY STEELS, TOOL STEELS		STAINLESS STEELS	
HARDNESS	~HRc20		HRc20 ~ HRc30		HRc30 ~ HRc35		HRc35 ~ HRc40			
STRENGTH	~800N/mm ²		800 ~ 1000N/mm ²		1000 ~ 1100N/mm ²		1100 ~ 1300N/mm ²			
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1/4	2650	7.8	2050	6.3	1450	4.4	1200	3.4	1900	5.6
3/8	1900	13.1	1500	10.1	1050	6.4	885	5.2	1270	8.6
1/2	1450	14.2	1100	11.4	805	7.9	665	6.1	950	9.3
5/8	1150	14.2	905	11.4	630	7.9	525	6.1	760	9.7
3/4	960	14.4	780	11.4	540	7.9	445	6.1	630	9.5
7/8	845	14.5	615	11.4	445	7.8	375	6.1	540	9.3
1	740	14.0	560	10.6	395	7.4	315	6.0	470	9.0



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

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