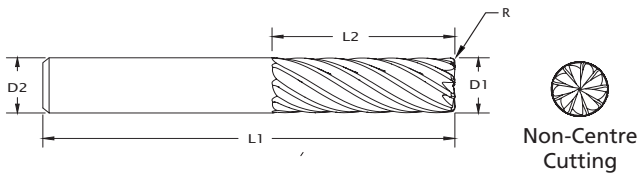
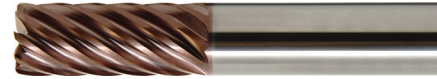


TuffCut® XT9 Series 380





Tool Number	EDP	Diameter		Shank	OAL	Flute Length		Corner Radius
		D1	D2 (h6)	D2 (h6)	L1	L2	R	
		mm	mm	mm	mm	mm	mm	
380M0800-0.5RAX	38042	8.0	8.0	8.0	63.0	22.0	0.50	
380M0800-1.0RAX	38044	8.0	8.0	8.0	63.0	22.0	1.00	
380M1000-0.5RAX	38046	10.0	10.0	10.0	72.0	27.0	0.50	
380M1000-1.0RAX	38048	10.0	10.0	10.0	72.0	27.0	1.00	
380M1200-0.5RAX	38026	12.0	12.0	12.0	84.0	32.0	0.50	
380M1200-1.0RAX	38028	12.0	12.0	12.0	84.0	32.0	1.00	
380M1600-0.5RAX	38030	16.0	16.0	16.0	92.0	42.0	0.50	
380M1600-1.0RAX	38032	16.0	16.0	16.0	92.0	42.0	1.00	
380M2000-0.5RAX	38034	20.0	20.0	20.0	104.0	52.0	0.50	
380M2000-1.0RAX	38036	20.0	20.0	20.0	104.0	52.0	1.00	

ALtima® Xtreme Coating Properties	
Microhardness (HV)	3800
Max. Service Temp.	1100° C / 2012° F
Friction Coefficient	0.3 - 0.5
Designation	AX
Colour	Copper



TuffCut® XT9 Series 380 Recommended Cutting Data

Workpiece Material Group	ISO	Hardness	Coolant			Profiling (ae)		End Mill Diameter (mm)				
			● Preferred ○ Possible x Not Possible					8	10	12	16	20
						5%	10%	← Multiply fz by this Factor based on ae. When finishing, use the standard fz per chart below. Only add chip thinning when roughing or semi-finishing.				
						2.30	1.67					
			Max.	Air	MMS	vc - m/min		fz - mm/tooth				
Low Carbon Steels 1018, 1020	P	up to 28 Rc	●	●	●	450	350	.0800	.1000	.1100	.1500	.2540
Medium Carbon Steels 1140, 1145	P	28 to 38 Rc	●	●	●	345	275	.0800	.1000	.1100	.1500	.2540
Alloy Steels 4140, 4145	P	28 to 44 Rc	●	●	●	315	255	.0800	.1000	.1100	.1500	.2540
Die / Tool Steels A2, D2, H13, P20	P	28 to 44 Rc	●	●	●	275	220	.0800	.1000	.1100	.1500	.2540
Stainless Steel - Easy to Machine 430F, 301, 303, 410, 416 Annealed, 420F, 430	M	up to 28 Rc	●	x	○	205	165	.030-.040	.038-.050	.050-.078	.050-.083	.060-.099
Stainless Steel - Austenitic 301, 302, 303 High Tensile, 304, 304L, 305, 420, 15-5PH, 17-4PH, 17-7PH	M	up to 28 Rc	●	x	○	160	130	.030-.040	.038-.050	.050-.078	.050-.083	.060-.099
Stainless Steel - Difficult to Machine 302B, 304B, 309, 310, 316, 316B, 316L, 316Ti, 317, 317L, 321	M	up to 28 Rc	●	x	○	125	100	.030-.040	.038-.050	.050-.078	.050-.083	.060-.099
Stainless Steel - Difficult to Machine 17-4 PH, PH13-8Mo, Nitronics	M	over 28 Rc	●	x	○	160	130	.030-.040	.038-.050	.050-.078	.050-.083	.060-.099
Cobalt Chrome Alloys	M		●	x	○	125	100	.0400	.0500	.0780	.0830	.0990
Duplex (22%)	M		●	x	○	75	60	.0400	.0500	.0780	.0830	.0990
Super Duplex (25%)	M		●	x	○	75	60	.0400	.0500	.0780	.0830	.0990
High Temp Alloys	S	up to 42 Rc	●	x	x	55	45	.030-.040	.038-.050	.025-.040	.025-.043	.030-.050
Inconel	S		●	x	x	55	45	.020-.030	.025-.040	.025-.040	.025-.043	.030-.050
Titanium Alloys 6Al-4V, 5Al-2.5 Sn, 6Al-2 Sn-4Zr-6Mo, 3Al-8V-6Cr4Mo-4Zr, 10V-2Fe-3Al, 13V-11Cr-3Al	S	up to 42 Rc	●	x	x	115	105	.020-.030	.025-.040	.050-.078	.050-.083	.030-.050
Cast-Iron - Gray CG, ASTM A48, CLASS 20, 25, 30, 35, SAE J431C, GRADES G1800, G3000, G3500, GG 10, 15, 20, 25, 30, 35, 40	K	up to 240 HB	●	○	○	495	395	.0800	.1000	.1100	.1500	.2540
Cast Iron - Ductile & Malleable CGI 60-40-18, 65-45-12, D4018, D4512, D5506, 32510, 35108, M3210, M4504, M5503, 250, 300, 350, 400, 450	K	over 240 HB	●	○	○	205	165	.0650	.0800	.1100	.1500	.2540
Hardened Steels	H	40-50 Rc	●	○	○	185	150	.0500	.0600	.1016	.1168	.1524
Hardened Steels		50-55 Rc	●	○	○	155	125	.0300	.0400	.0610	.0762	.0889
Hardened Steels		>55 Rc	●	○	○	100	95	.0200	.0250	.0457	.0559	.0635

● Preferred ○ Possible x Not Possible

Spindle Maximum - Should the calculated spindle speed be more than your actual spindle maximum, use this formula:
(Calculated Feed x Spindle Maximum)/Calculated Speed.