














Speed & Feed Recommendations



Series Z1MPCR, Z1MPLC Metric	Hardness BRINELL			Vc (m/min)	Diameter (D ₁) (mm)										
		Ae x D ₁	Ap x D ₁		3	6	8	10	12	16	20	25			
P	CARBON STEELS 1018, 1040, 1080, 1090, 10L50, 1140, 1212, 12L15, 1525, 1536	≤ 275		≤ 0.5	≤ 1.5	169	RPM	17934	8967	6725	5380	4484	3363	2690	2152
						(135-203)	Fz	0.010	0.024	0.041	0.051	0.060	0.079	0.085	0.088
						Feed (mm/min)	689	861	1091	1090	1076	1067	918	753	
			1	≤ 1	134	RPM	14218	7109	5332	4265	3555	2666	2133	1706	
					(107-161)	Fz	0.010	0.024	0.041	0.051	0.060	0.079	0.085	0.088	
					Feed (mm/min)	546	682	865	864	853	846	728	597		
P	ALLOY STEELS 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100	≤ 375		≤ 0.5	≤ 1.5	96	RPM	10179	5089	3817	3054	2545	1909	1527	1221
						(77-115)	Fz	0.008	0.019	0.030	0.037	0.046	0.061	0.067	0.068
						Feed (mm/min)	332	391	456	456	464	469	407	330	
			1	≤ 1	76	RPM	8078	4039	3029	2424	2020	1515	1212	969	
					(61-91)	Fz	0.008	0.019	0.030	0.037	0.046	0.061	0.067	0.068	
					Feed (mm/min)	264	310	362	362	368	372	323	262		
P	TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2	≤ 375		≤ 0.5	≤ 1.5	56	RPM	5978	2989	2242	1793	1495	1121	897	717
						(45-68)	Fz	0.005	0.012	0.021	0.027	0.031	0.041	0.045	0.045
						Feed (mm/min)	115	143	191	191	186	184	163	129	
			1	≤ 1	44	RPM	4686	2343	1757	1406	1171	879	703	562	
					(35-53)	Fz	0.005	0.012	0.021	0.027	0.031	0.041	0.045	0.045	
					Feed (mm/min)	90	112	150	150	146	144	127	101		
K	CAST IRONS (LOW & MEDIUM ALLOY) Gray, Malleable, Ductile	≤ 220		≤ 0.5	≤ 1.5	108	RPM	11471	5736	4302	3441	2868	2151	1721	1377
						(87-130)	Fz	0.010	0.024	0.038	0.048	0.058	0.077	0.083	0.085
						Feed (mm/min)	462	551	661	661	661	661	569	468	
			1	≤ 1	136	RPM	14380	7190	5392	4314	3595	2696	2157	1726	
					(109-163)	Fz	0.010	0.024	0.038	0.048	0.058	0.077	0.083	0.085	
					Feed (mm/min)	580	690	828	828	828	828	713	587		
K	CAST IRONS (HIGH ALLOY) Gray, Malleable, Ductile	> 220 ≤ 260		≤ 0.5	≤ 1.5	104	RPM	10987	5493	4120	3296	2747	2060	1648	1318
						(83-124)	Fz	0.007	0.017	0.030	0.037	0.043	0.059	0.064	0.063
						Feed (mm/min)	316	369	492	492	475	485	422	330	
			1	≤ 1	82	RPM	8725	4362	3272	2617	2181	1636	1309	1047	
					(66-99)	Fz	0.007	0.017	0.030	0.037	0.043	0.059	0.064	0.063	
					Feed (mm/min)	251	293	391	391	377	385	385	262		
M	STAINLESS STEELS (FREE MACHINING) 303, 416, 420F, 430F 440F	≤ 275		≤ 0.5	≤ 1.5	149	RPM	15834	7917	5938	4750	3958	2969	2375	1900
						(119-179)	Fz	0.007	0.017	0.030	0.037	0.043	0.059	0.064	0.063
						Feed (mm/min)	456	532	709	709	684	699	608	475	
			1	≤ 1	119	RPM	12602	6301	4726	3781	3151	2363	1890	1512	
					(95-143)	Fz	0.007	0.017	0.030	0.037	0.043	0.059	0.064	0.063	
					Feed (mm/min)	363	423	565	565	544	557	484	378		

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