

Cutting Data

for TXP90AF Milling Cutters

ANSI ISO 513	Cutting Data for TXP90AF Milling Cutters				COATED						
	Cutter	Max ap	Carbide Insert		TN7535 TN450						
					feed per tooth *(inch)						
	TXP90AF End Mill	.400	222.79.501		.004	.007	.012	.004	.007	.012	
	TXP90AF Face Mill	.400	222.79.501		.004	.008	.014	.004	.008	.014	
P	Work Material	Condition	Hardness HB	Mat. Gr.	vc *(sfm)						
	Carbon steel, Unalloyed	< 0.25% C	annealed	125	1	750	700	650	750	700	650
		≥ 0.25% C	annealed	190	2	725	650	600	725	650	600
	steel, cast	< 0.55% C	heat-treated	250	3	700	550	450	700	550	450
		≥ 0.55% C	annealed	220	4	700	600	500	700	600	500
	cutting steel		heat-treated	300	5	600	450	350	600	450	350
		Low alloy steel and cast steel	annealed	200	6	700	550	450	700	550	450
			heat-treated	275	7	600	450	350	600	450	350
		heat-treated	300	8	550	400	300	550	400	300	
	heat-treated	350	9	500	350	250	500	350	250		
	High alloy steel, cast steel & tool steel	annealed	200	10	700	550	450	700	550	450	
heat-treated		325	11	500	350	250	500	350	250		
M	Cutter	Max ap	Carbide Insert		TN7535 TN450						
					feed per tooth *(inch)						
	TXP90AF End Mill	.400	222.79.501		.004	.006	.010	.004	.006	.010	
	TXP90AF Face Mill	.400	222.79.501		.004	.008	.012	.004	.008	.012	
	Work Material	Condition	Hardness HB	Mat. Gr.	vc *(sfm)						
	Stainless	DU		12	550	450	350	550	450	350	
Duplex	S-AU		13	500	350	250	500	350	250		
Stainless	AU-PH		14	550	450	350	550	450	350		

Scallop Height (h)					
Stepover	Cutter Diameter (d)				
	1.50"	2.00"	2.50"	3.00"	4.00"
.100"	.002	.001	.001	.001	.001
.200"	.007	.005	.004	.003	.003
.300"	.015	.011	.009	.008	.006
.400"	.027	.020	.016	.013	.010
.500"	.043	.032	.025	.021	.016
.600"	.063	.046	.037	.030	.023
.700"	.087	.063	.050	.041	.031
.800"	.116	.083	.066	.054	.040
.900"	.150	.107	.084	.069	.051
1.000"	.191	.134	.104	.086	.064
1.250"	.335	.219	.167	.136	.100
1.500"		.339	.250	.201	.146
1.750"			.357	.282	.202
2.000"			.500	.382	.268
2.250"				.508	.346
2.500"					.439

Scallop Height Formula

$$h = \frac{d}{2} - \sqrt{\left(\frac{d}{2}\right)^2 - \left(\frac{s}{2}\right)^2}$$

Legend

h = Scallop height
d = Cutter diameter
s = Stepover

Axial Feed Application

