

Damian Thomas (170 777 3)

List of tools.

Tool 1 - 5mm Twist Drill

Tool 2 - 4mm Twist Drill

Tool 3 - 10mm End Mill (Slot Drill)

	T				
N10	G21	G90	G54	G40	G80
N20	M06	T1			
N30	G43	H01			
N40	M03	S2	597.41		
N50	M08				
N60	G00	Z20			
N70	G81	G98	x48.50	Y23.0	Z-10.0 R4.0 F20
N80	G70	I8	JO	L4	F20
N90	G80	G99			
N100	M06	T2			
N110	G43	H02	M08		
N120	M03	S3246.8			
N130	G81	x20.0	Y10.0	Z-10.0	R4.0
N140	G99				
N150			Y20.0		
N160	G81			Z-10.0	R4.0
N170	G99				
N180			Y30.0		
N190	G81			Z-10.0	R4.0
N200	G80				
N210	M06	VT3			
N220	G41	G43	H03		
N230	M03	S1298.7			
N240	G00	x0.0	Y0.0	D01-?	
N250	G01	Z-30	F20		
N260		M98			P2000
N270	G01	Z-6.0			
N280		M98			P2000
N290	G01	Z-9.0			
N300		M98			P2000
N310	G00		Z20		
N320	M05	M09			
N330	G28	G40	G80		

SUB PROG 2000

M10 G01 x0.0 y24.0
 N20 (x18.0 y42.0
 N30 x79.0
 N40 G03 x85.0 y36.0
 N50 G01 y10.0
 N60 G02 x75.0 y0.0 R10.0
 N70 G01 x0.0
 N80 M99

Tool 1

HSS Alum. Alloy - 120

$$SS = \frac{1000 \times 120}{\pi \times 5} = 7639.44 \text{ Rev/mm}$$

$$FR = 0.17 \times 2 \text{ (Number of teeth)} \\ = 0.34$$

$$\text{Feed Rate (mm/min)} = 7639.44 \times 0.34 \\ = 2597.41 \text{ mm/min}$$

Tool 2

$$\text{Spindle Speed} = \frac{1000 \times 120}{\pi \times 4} = 9549.3$$

$$\text{Feed Rate (mm/min)} = 9549.3 \times 0.34 \\ = 3246.8$$

Tool 3

$$\text{Spindle Speed} = \frac{1000 \times 120}{\pi \times 10} = 3819.7$$

$$\text{Feed rate (mm/min)} = 3819.7 \times 0.34 \\ = 1298.7$$