



WHERE NEW THINKING
TAKES SHAPE.

Part: Round Die
Business: Forging Dies
Industry: Automotive

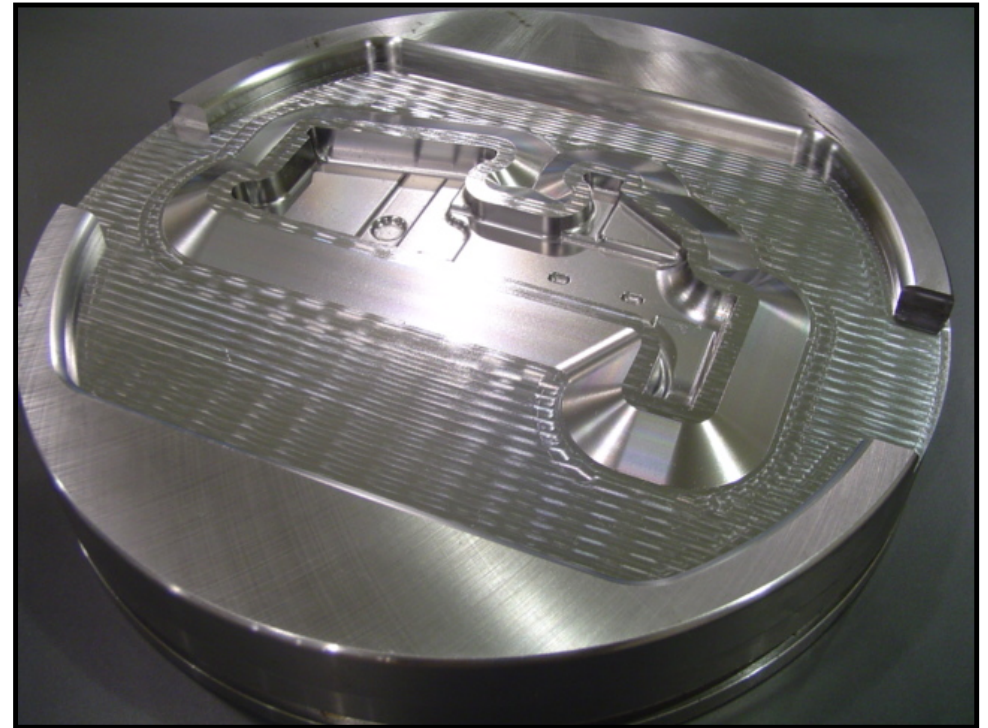
Machine: E33

Cycle Time: 5 hours 38 min. 2 sec.

Material: 2714 (42 HRc)

Key Technologies: Steel Cutting Capability
40k Spindle

Impact: Multi Purpose Machine
Roughing of $\varnothing 400\text{mm}$ ($\varnothing 15.75$ in) Part using High Performance Machining
Techniques



Ask a Makino representative for more information.

Test Cut Parameters

Tool Description	RPM	Feed Rate		Step Over		Step Down		Cycle Time(H:M:S)
		inch/min	mm/min	inch	mm	inch	mm	
12mm R1.0 Bull Nose End Mill	6000	236.22047	6000	0.15748	4	0.015748	0.4	1:07:25
6mm Ball Nose End Mill	12000	118.11024	3000	0.082677	2.1	0.019685	0.5	0:49:47
6mm Ball Nose End Mill	15000	118.11024	3000	0.009843	0.25	0.009843	0.25	0:45:21
3mm Ball Nose End Mill	15000	78.74016	2000	0.006693	0.17	0.006693	0.17	0:12:45
10mm Ball Nose End Mill	4000	62.99213	1600	0.11811	3	-	-	0:08:48
6mm Ball Nose End Mill	20000	157.48031	4000	0.005906	0.15	-	-	0:06:11
3mm Ball Nose End Mill	32000	62.99213	1600	0.003937	0.1	-	-	1:35:18
8mm R0.1 Bull Nose End Mill	5000	39.37008	1000	0.094488	2.4	-	-	0:22:53
10mm Ball Nose End Mill	3200	55.51181	1410	0.002756	0.07	0.002756	0.07	0:29:34
Total Cycle Time:								5:38:02

