

## “Case Study for ATC Tool Pocket on MCV-400SS”

Customer name : M/s. , Bangalore.

Case Study No. : TSG-CS-020/TR-007. (Conducted at customer end.)

Machine Details : MCV - 400SS, Fanuc System.

Main Features : Spindle-BT-40 taper, 6000 rpm, LM Guide ways for all 3 Axes,  
Traverse (X, Y & Z) - 600 / 450 / 500 mm, Spindle Power 5.5/7.5 kw.

Component Name : Tool Pocket.

Component Material : Aluminum- Gr: ADC12, Hardness – 110 BHN.

### Output



### Example of Cutting operations & its Cycle time: (Few opn.only).

Actual cutting parameters and cycle time depends on Component material, Tools, Tool holders and Fixture concept.

Sl. No.	Operation	Tool	Spindle speed (rpm)	Feed (mm/min)	Depth of Cut (mm)	Cutting time in min.
1	Face milling	Ø 63 FM Cutter (Rough & Finish)	3000	2700	2/40	2.9
2	Profile milling	Ø 16 End Mill	5968	1860	3/100	1.6
3	Drilling	Ø 3.2 Drill	5000	325	-	1.4
4	Chamfering	Ø 16 X 90 Chamfer	2500	1500	1.25	1.9
5	Slotting-Rough	Ø 10 End Mill-Rough	8000	5000	1.0	3.8
6	Slotting-Finish	Ø 10 End Mill- Finish	8000	3500	R 0.1/Depth 40	2.9

### Achievements:

1. Time taken on machine for one part machining is 14.5 min. @ 14.9 mins (Cam Time).
2. Customer satisfied with Cycle time, Surface finish, Accuracy & Machine performance.
3. The cycle time of above mentioned operations were approximately matches the time calculated by software.
4. Dowel hole CD observed within 0.025 mm.

The objective of the case study is to show the Machine performance, Capability, Quality & Surface finish.

