



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.

SI. No.	Operation	Тооі	Spindle speed (rpm)	Feed (mm/min)	Axial DOC (mm)	Radial DOC (mm)	Cutting Time (min.)
1	Slot Milling -Rough	Ø 25 Milling Cutter	600	180	0.5	35%	6.5
2	Semi Finishing	Ø 10.0 SC Flat End Mill Cutter	1800	430	0.25	80%	3.9
3	Finishing	Ø 8.0 SC Flat End Mill Cutter	1800	430	0.05	80%	4.2
4	Semi Finish Boring	Ø 29.8 Insert Type Boring Bar	500	125	-	0.8	0.7
5	Finish Boring Bar	Ø 30.0 Fine Boring bar	650	100	-	0.1	0.5

Achievements:

- 1. Time taken on machine for complete profile machining is 15.8 min. @ 16.2 min.(Cam Time)
- 2. Customer is satisfied with Machine performance, Accuracy, Surface finish & Cycle time.
- 3. Surface finish is good within permissible limits, Approx. 0.4 to 0.6 Ra.
- 4. Heavy rough machining on steel material even though M/c has been maintaining good accuracy and Surface finish.
- 5. Component Individual slot angle with respect to center bore, Slot width and symmetry maintained as per drawing.

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

