



Fortius

INDIA'S STRONGEST
COMPACT CNC TURNING CENTRE



Higher:

SPEED + ACCURACY + RIGIDITY = INCREASE IN PROFITS!

COMPARISON OF SPECIFICATIONS WITH COMPETITORS

Specifications	Fortius	ACE- Super Jobber 500 LM	LMW- LX 20T L5	Fortius ADVANTAGES
Spindle Nose	A2-6	A2-6	A2-6	Higher Productivity, Chip Breaking & Surface Finish
Max. Spindle RPM	4000	3500	3500	
Bar capacity	52	52	52	
Max. Turning dia	300	290	320	
Max. Turning length	500	500	500	Much higher productivity
Rapids X/Z (m/min.)	30/30	20/20	30/30	
Spindle power (KW)	11/15 Kw (option)	7.5/11 Kw	7.5/11 Kw	Much higher rigidity allowing 10 mm diametric cut in single pass
LM Guideways	ROLLER TYPE Extra Heavy Duty	Ball Type	Ball Type	
Structure Design	Single Piece 'Monoblock' Casting	Three Piece. Bolted Together	Three Piece. Bolted Together	Much better rigidity & vibration damping leading to longer tool life and better surface finish
LxWxH (mm)	2100x1600x1700	2350 x 1750 x 1750	2255 x1925	Most compact footprint

COMPARISON OF FEATURES



1. STRUCTURE

FORTIUS

The single piece structure (Bed + Base + Tailstock Guideways) has 30 degrees slant angle and is made of high grade cast iron for highest rigidity. It is filled with a special epoxy 'Harcrete' for vibration damping to enable heavy cuts with best surface finish & tool life.

COMPETITOR

3 Piece Structure (Bed, Base & Tailstock Guideways) Bolted Together

FORTIUS ADVANTAGES



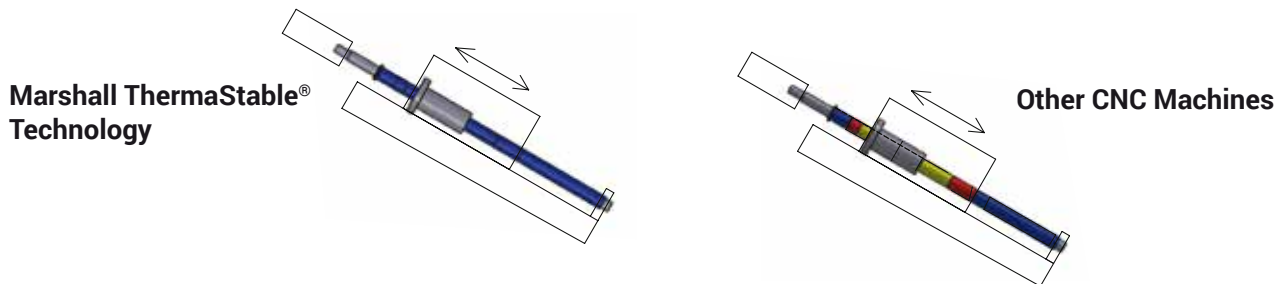
1. Much better rigidity & vibration damping
2. Can take much heavier cuts to reduce cycle time
3. Longer machine life
4. Better alignments leading to higher accuracy.



2. THERMASTABLE® TECHNOLOGY

One of the major problems in almost all CNC Lathes in the market is variation in size when machine is re-started after stoppage (e.g. Lunch Break). The shift in size before and after stoppage can be between 10-20 microns. This is because the movement of the preloaded nut on the ball screw cause temperature rise which leads to expansion of the ballscrew (Thermal growth). If operator is not experienced and alert, it can result in many jobs being rejected.

Marshall's "ThermaStable®" technology (introduced for the 1st time in India) results in Zero Thermal Growth of Ballscrew. This is ensure no variation in size after machine is re-started after stoppage.



THIS TECHNOLOGY IS NOT AVAILABLE WITH COMPETITORS

3. TAILSTOCK GUIDEWAYS

Tailstock guideways of most CNC turning centres are of unhardened materials (cast iron or steel). These are easily damaged by denting & wear and lose accuracy. Operators have to struggle to produce jobs within tolerances. For the first time in India, Marshall introduces INDUCTION HARDENED & GROUND Alloy Steel tailstock guideways for very long life & highest accuracy.



FORTIUS



COMPETITOR'S MACHINES

COMPARISON OF PERFORMANCE



FORGING



FINISHED

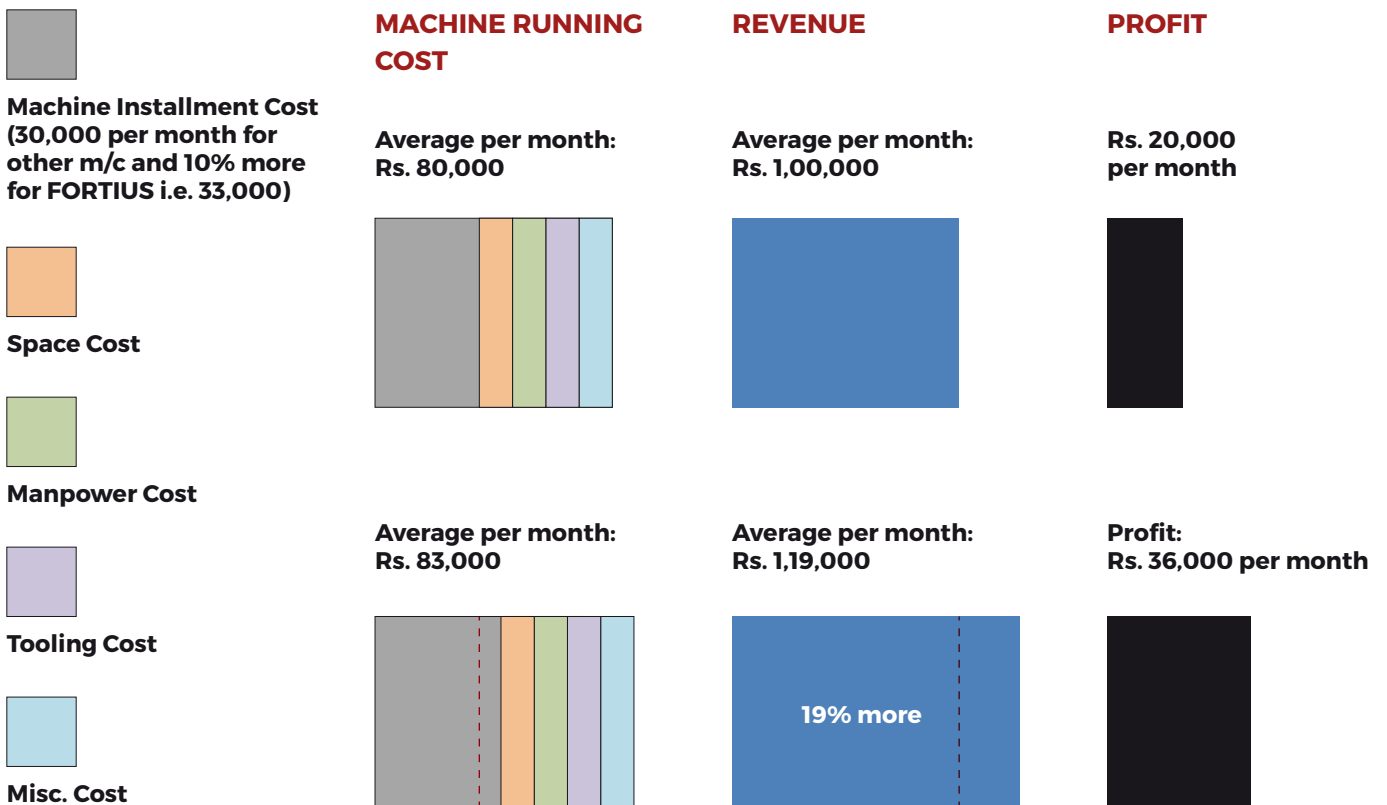
CASE STUDY:

JOB: TURNING OF FORGED SPINDLE

FORTIUS MACHINING TIME	187 SEC.
COMPETITOR'S MACHINING TIME	223 SEC.
EXTRA PRODUCTIVITY	223/187 = 1.19 = 19% EXTRA

EXTRA PRODUCTIVITY = EXTRA PROFITS!

19% extra productivity = 19% extra jobs in same time = 19% extra REVENUE!



Profit per FORTIUS is 1.8 times, i.e. 80% more than other India Single Spindle Machines



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