



Marshall

SMARTER

**Compact CNC lathe with preloaded cloud based
SmartFAC-Universal machine monitoring technology**



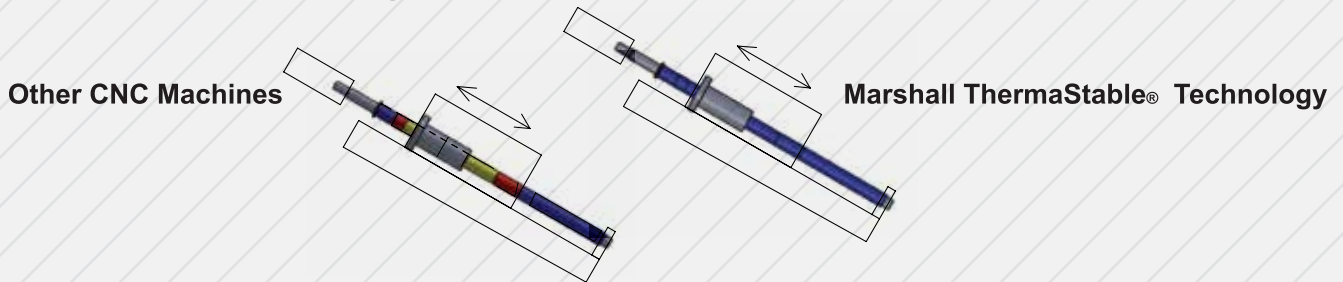
SMARTER

Basic Features

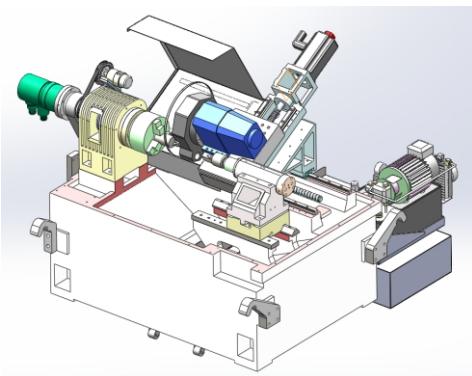
#1 THERMASTABLE TECHNOLOGY

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 & 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 ensures no variation in size after machine is re-started after stoppage.



#2 MONOBLOCK STRUCTURE WITH VIBRATION DAMPING



The single piece structure (Bed + Base) 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.

#3 SmartPAD 4.0

Custom designed 4 buttons for easy input of machine 'Availability (A)' data on the machine.

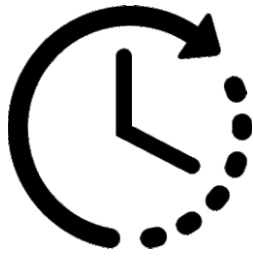
This is supplemented with TABLET OR PC based software for Supervisors & Engineers.



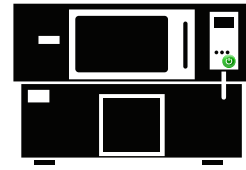
PROBLEMS



Inaccurate Manual Data



No 'Real Time' Machine Monitoring



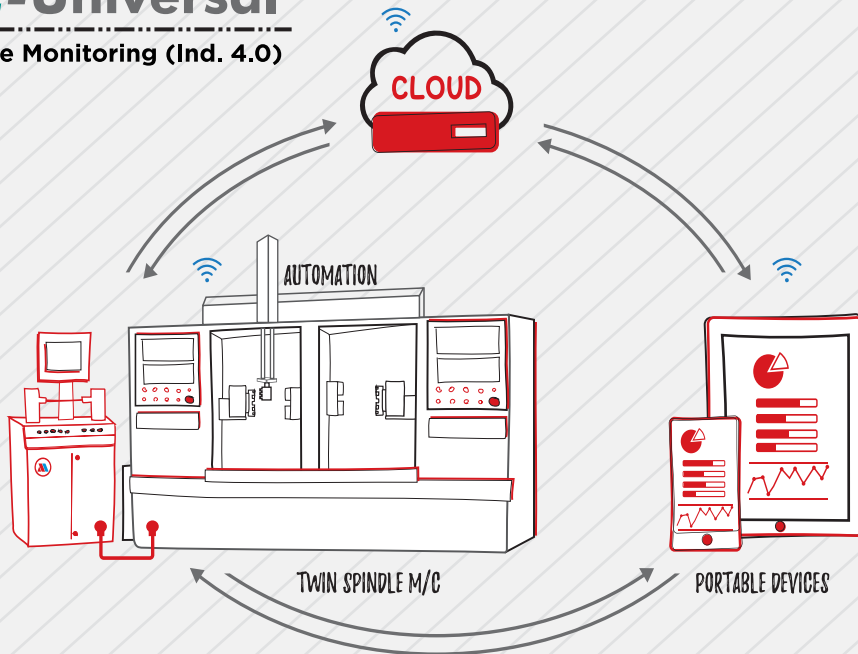
Unscheduled Stoppages & Poor Productivity



SOLUTIONS

SmartFAC-Universal

Cloud based Machine Monitoring (Ind. 4.0)



RESULTS



18%

Increase in Productivity



99%

Data Accuracy



3

Months Return on Investment



30%

Reduction in accidents & tool breakage in Night Shift

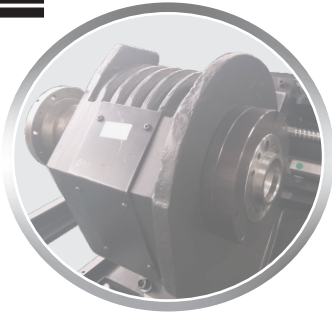
Option of *SmartPredict*

Health monitoring & predictive maintenance module

SmartPredict collects and analyses (monitors) data from various Sensors in the machine as well as Drives & Servo Motors to autonomously initiate appropriate corrective actions to ensure that the monitored elements in the machine do not suffer from malfunction or breakdown.



Vibrations



Temperature



Flow Rate



SPECIFICATIONS

| SPECIFICATIONS | SmartER |
|----------------------------------|------------------------------------|
| CAPACITY | |
| Swing Over Bed | Ø 350 mm |
| Max. Turning Diameter | Ø 250 mm |
| Max. Turning Length | 300 mm |
| MAIN SPINDLE | |
| Spindle Nose | A2-5 |
| Spindle Bore | 50 mm |
| Max. Bar Capacity | 38 mm |
| SPINDLE | |
| Spindle Motor | SIEMENS 9/11 KW FANUC 7.5/11 KW |
| Spindle Range | 50-5500 RPM |
| RAPID TRAVERSE | |
| X- Z Axis | 30 m/min |
| TAILSTOCK | |
| TAPER IN QUILL | MT-4 |
| ADJUSTABLE THRUST | 600 |
| TOOL TURRET | |
| Nos. Of Stations | 8-Station |
| Tools Cross Section | 25x25 |
| POSITIONING REPEATABILITY | |
| X-Axis | ± 1 Microns |
| Z-Axis | ± 2.0 Microns |
| Weight | 3500 Kg |
| Diemensions (LxWxH) | 1700x1700x1550 mm |

BASIC MACHINE ADVANTAGES

RIGIDITY

Most rigid machine in its class.

ACCURACY

Very high accuracy & size stability because of thermastable.

PRODUCTIVITY

Max. spindle speed of 5500 rpm and rapids of 30m/min. make it the most productive machine in its class.

Preloaded *SmartFAC-Universal* and 'Best in Class' specifications result in 20-25 % extra output compared to competition.

Note: Product improvement is a continuous process at "Marshall". Design & Specifications are therefore, subject to change, without prior notice.



Marshall machines. ltd.

Head Office & Works

C-86, Phase-V, Focal Point, Ludhiana 141 010
Phone: +91 161 5012406, 5012407, 5019648

National Sales, Services & I 4.0 Center

75-B, Sector 5, IMT Manesar, Distt. Gurgaon
Phone: +91-0124-4241813-15 | Cell: +91-96502 93942

Automated Solutions Division (Unit II)

D-116A, Ph.-V, Focal Point, Ludhiana-141010
headoffice@marshallcnc.com | cncsales@marshallcnc.com
marshallcnc.com | marshallcnc.in | marshallautomation.in



Marshall Automation America. Inc.

Smart CNC Automation & Guaging Solutions

Office & Technology Center

Suite #23, 2885 North Berkeley Lake Road, NW
Duluth, GEORGIA - 30096(USA)
Phone: 404-394-6678

info@marshallautomationamerica.com
marshallautomationamerica.com