

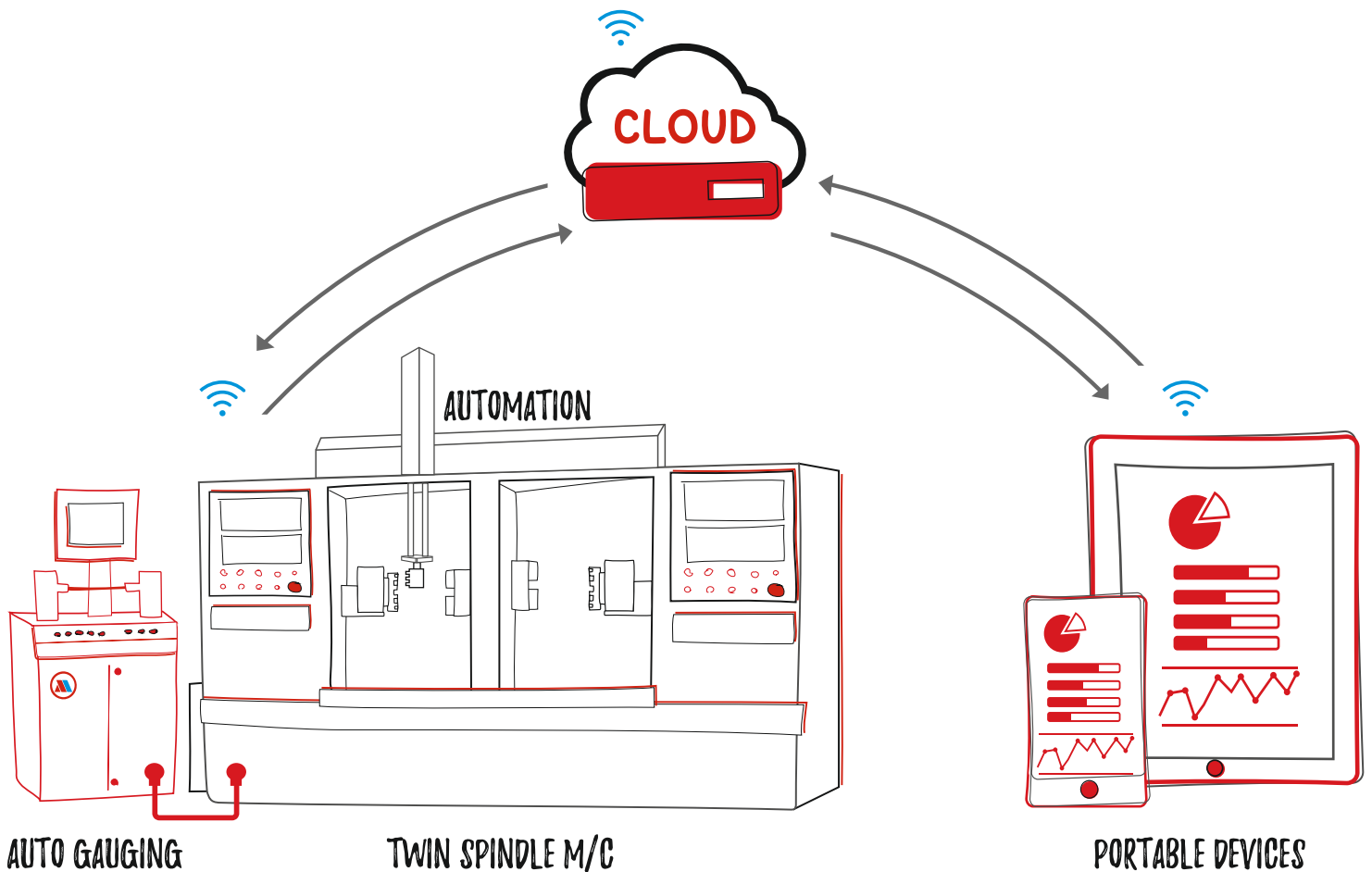
Survival of the **SMARTTEST!**

**SMART
MANUFACTURING**

SUPER-OPTIMIZED MACHINES

INDUSTRY 4.0/IIoT

SMART AUTOMATION



AUTO GAUGING

TWIN SPINDLE M/C

PORTABLE DEVICES

#1 SUPER-OPTIMIZED MACHINES

uno + SmartLoad



The #1 Single Spindle Chucker

- 60° Degree Slant Bed
- Monoblock Casting
- 6000 RPM & 36m/min. Rapids
- Upto 8 tools per spindle with
- **SmartFlow** (Patented) Coolant System

FIVE advantages of uno with SmartLoad

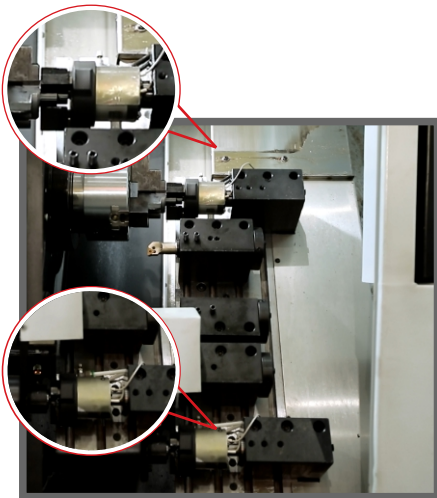
RELIABLE	Min. No. of moving parts.
COMPACT	Smallest footprint.
FAST	Faster load/unload time.
SAFE	No risk to humans.
ECONOMICAL	Approx. 50% the cost of gantry or robot based automation.

Patented **SmartLoad** based on "TWIN GRIP TWIN RELEASE"

TWIN GRIP

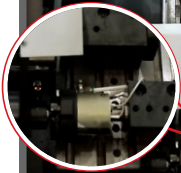
Gripper 2

Grips Machined job in chuck



Gripper 1

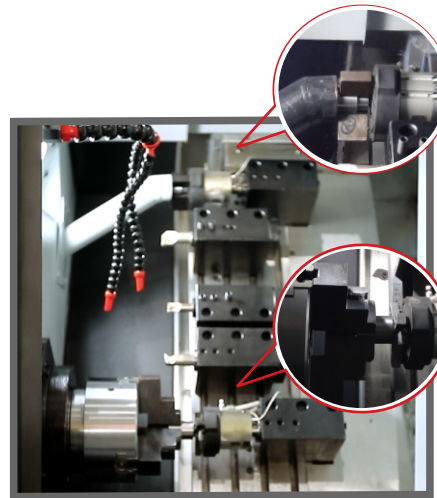
Grips fresh job from infeed



TWIN RELEASE

Gripper 2

Releases machined job in chute.



Gripper 1

Releases job after chuck clamps.

TWINTURN UBER

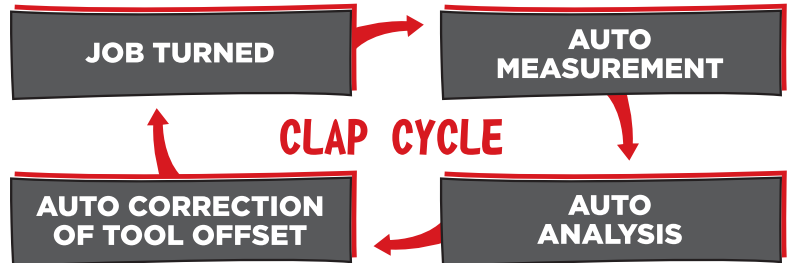
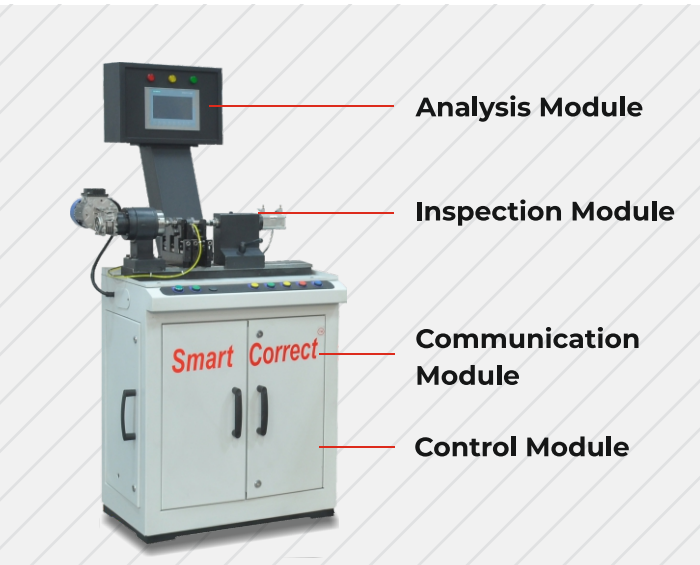
THE MACHINE FOR SUPER-OPTIMIZED TURNING

- 60 Degree Slant Bed
- Monoblock Casting
- 5500 RPM & 30m/min. Rapids
- Upto 8 tools per spindle with
- SmartFlow (Patented) Coolant System



SmartFAC : Industry 4.0 Technologies for Smart Factories

SmartCorrect[®] (Auto-Correction of tool offsets to ensure Zero Defect Production)

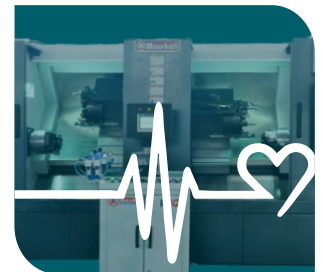


SmartChek[®]

Patent Applied technology for Automated **15 second** daily health check of machine

BENEFITS

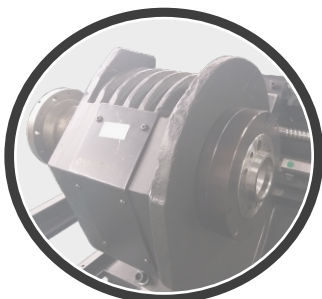
- Predictive Maintenance ensures much longer life.
- Immediate remote detection of Accidents & corrective action initiation & automatic transmission of required information to concerned person.
- No Risk of sudden breakdown of machine causing disruption of entire line.



SmartSens (Technology for Electrical & Electronic Health Care of Machine)

SmartSens 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.

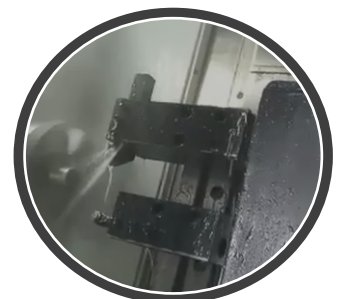
 **Vibrations**



 **Temperature**

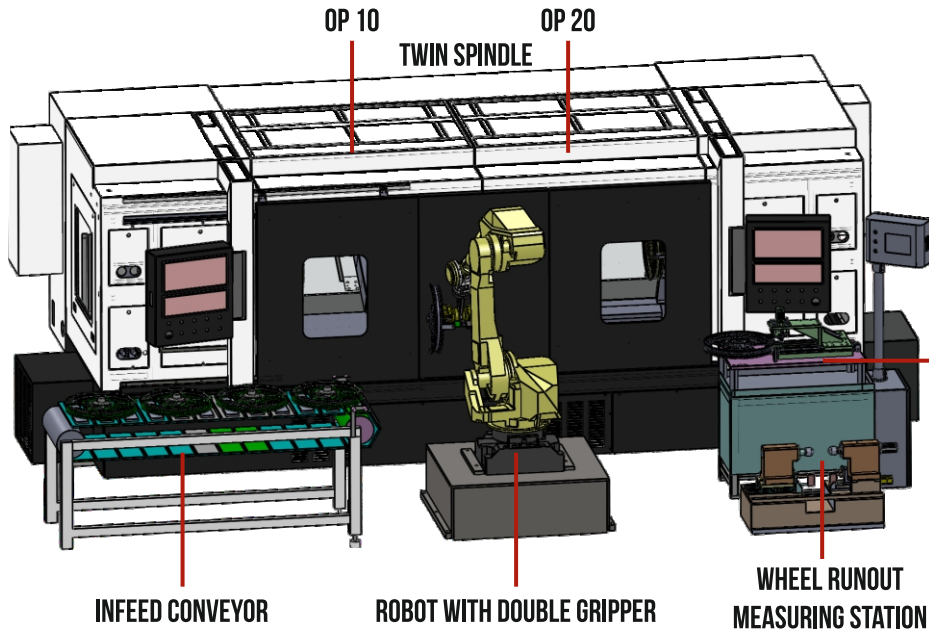


 **Flow Rate**



#3 SMART AUTOMATION

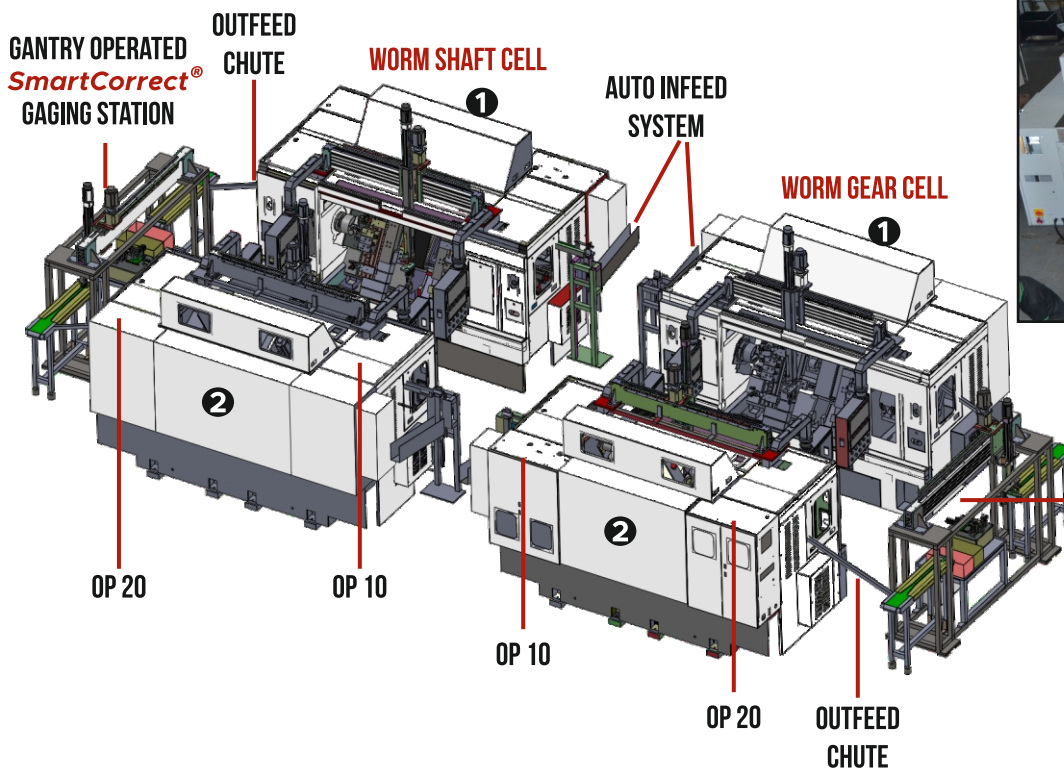
CELL HIGHLIGHTS



Alloy Wheel Turning Cell

SmartCorrect®
GAGING STATION FOR MEASUREMENT AND AUTO CORRECTION OF BEARING AND BRAKE DRUM SIZE

CELL HIGHLIGHTS (4 NOS TWINTURN UBER)



Worm Shaft & Worm Gear Turning Cell

GANTRY OPERATED **SmartCorrect®** GAGING STATION



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