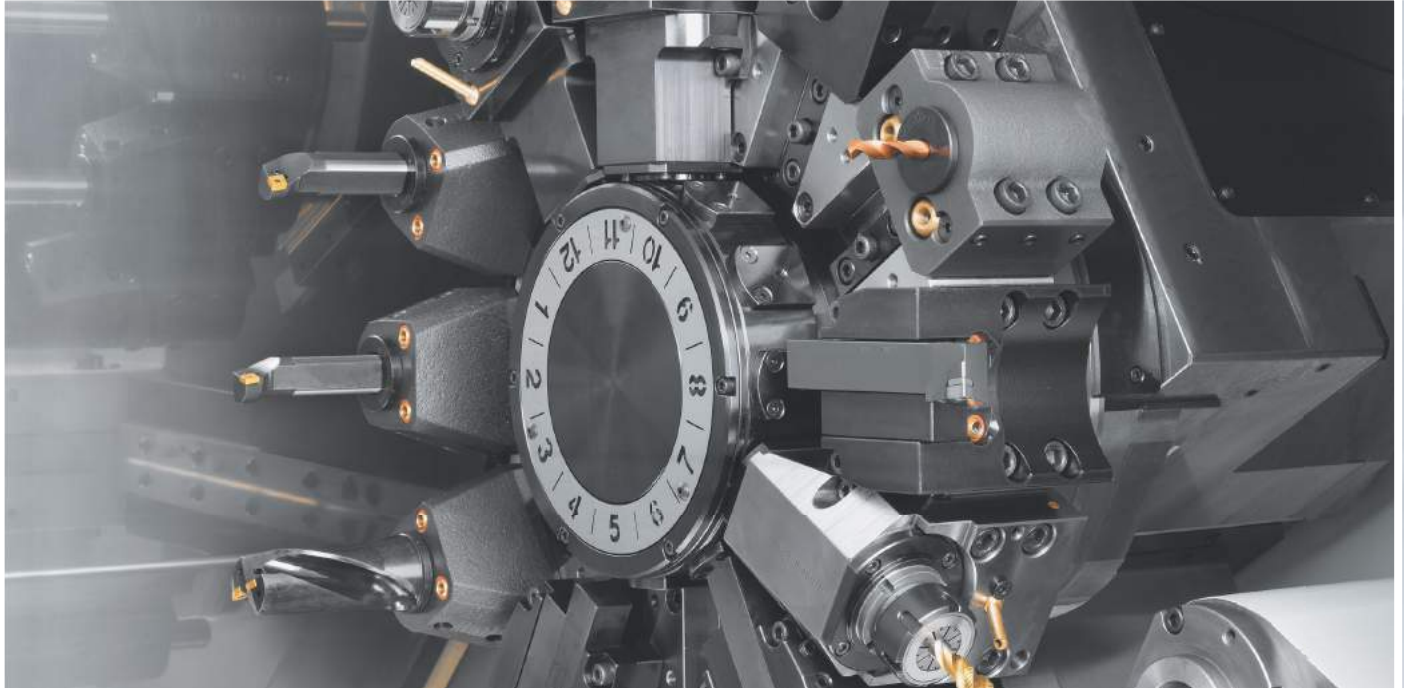


SINGLE TURRET HEAVY DUTY TURNING

FORZA

TA SERIES: Z400 Z640 Z1100 Models



Runs Faster,
Sleeps Less!

 **EUROTECH**
Winning with Technology that Runs Faster, Sleeps Less!

MODEL RANGE

2 to 5 Axes

- S - Sub-spindle
- M - Milling
- Y - Axis

4 - Different Main Spindles Chuck / Bar

- 15 - 8" / 52 mm
- 20 - 10" / 66 mm
- 25 - 10" / 66 mm (high torque)
- 30 - 12" / 81 mm

3 - Different Machining Lengths

- 400 mm
- 640 mm
- 1100 mm

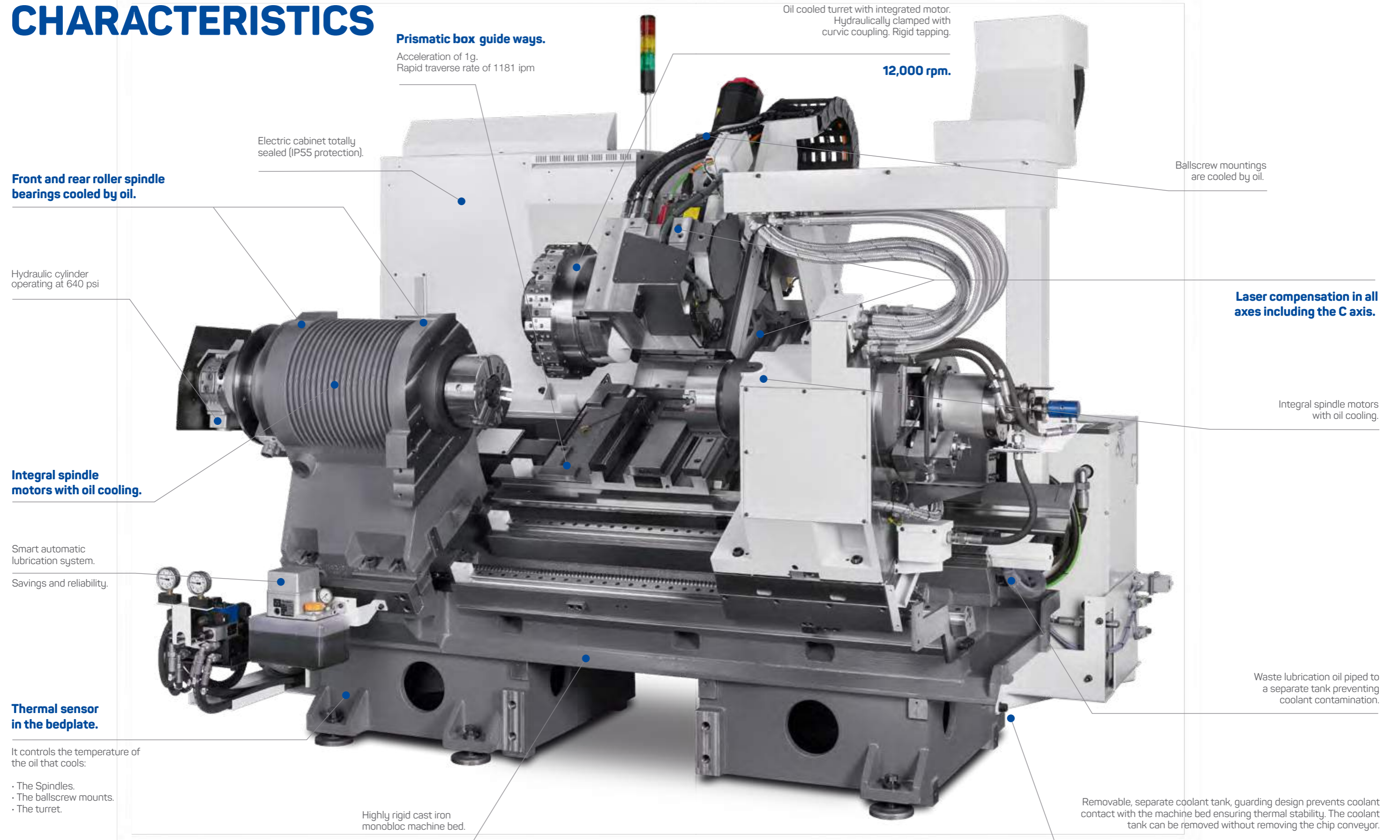
PRECISION
RELIABILITY

FORZA TA SERIES



TECHNICAL CHARACTERISTICS

FORZATA SERIES



Front and rear roller spindle bearings cooled by oil.

Hydraulic cylinder operating at 640 psi

Integral spindle motors with oil cooling.

Smart automatic lubrication system.

Savings and reliability.

Thermal sensor in the bedplate.

It controls the temperature of the oil that cools:

- The Spindles.
- The ballscrew mounts.
- The turret.

Prismatic box guide ways.

Acceleration of 1g.
Rapid traverse rate of 1181 ipm

Electric cabinet totally sealed (IP55 protection).

Highly rigid cast iron monobloc machine bed.

Oil cooled turret with integrated motor.
Hydraulically clamped with curvic coupling. Rigid tapping.

12,000 rpm.

Ballscrew mountings are cooled by oil.

Laser compensation in all axes including the C axis.

Integral spindle motors with oil cooling.

Waste lubrication oil piped to a separate tank preventing coolant contamination.

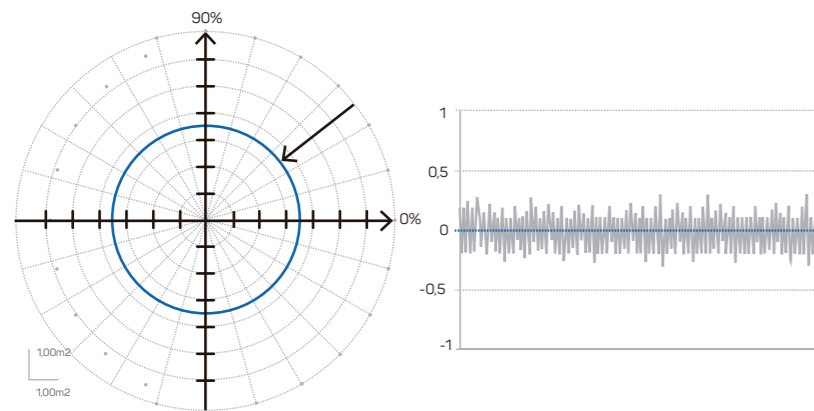
Removable, separate coolant tank, guarding design prevents coolant contact with the machine bed ensuring thermal stability. The coolant tank can be removed without removing the chip conveyor.

INTEGRATED SPINDLES

INTEGRATED SPINDLE MOTORS INCREASE ACCURACY AND REDUCE MACHINING TIMES

The spindle is driven through a motor integrated in the headstock body itself. This construction ensures an outstanding spindle robustness and vibration dampening that significantly improves surface finish and roundness.

Additionally, spindle acceleration and braking times are shortened by about 20-50% because of the reduced inertia and higher loading capacity of oil-cooled headstocks.



ROUNDNESS

- MACHINE: TA 15
- MATERIAL: ALUMINIUM
- Ø 2.36 in.
- ROUNDNESS ACHIEVED: 0,3 µm
- FILTER: 150 p/r (50%)
- MEASUREMENT RANGE: 0,10°

SURFACE FINISH

- MACHINE: TA 15
- MATERIAL: ALUMINIUM
- Ø 2.36 in.
- ROUGHNESS ACHIEVED: Rmax 0,6 µm
- FILTER: 150 p/r (50%)

* The results obtained herein may not be attainable due to environmental and measuring differences.

FORZATA SERIES

No pulleys or belts

- No belt slipping.
- Better surface finish.
- Lower noise level.

Hydraulic cylinder at 640 psi

- More compact.
- Reduced cross-section means higher speed clamping.
- Higher sensitivity for light clamping.

Built-in encoder. Compensation of mensuration errors by laser measurement and bidirectional and interpolated error correction.

Double row roller bearings can withstand substantial impacts without damage.

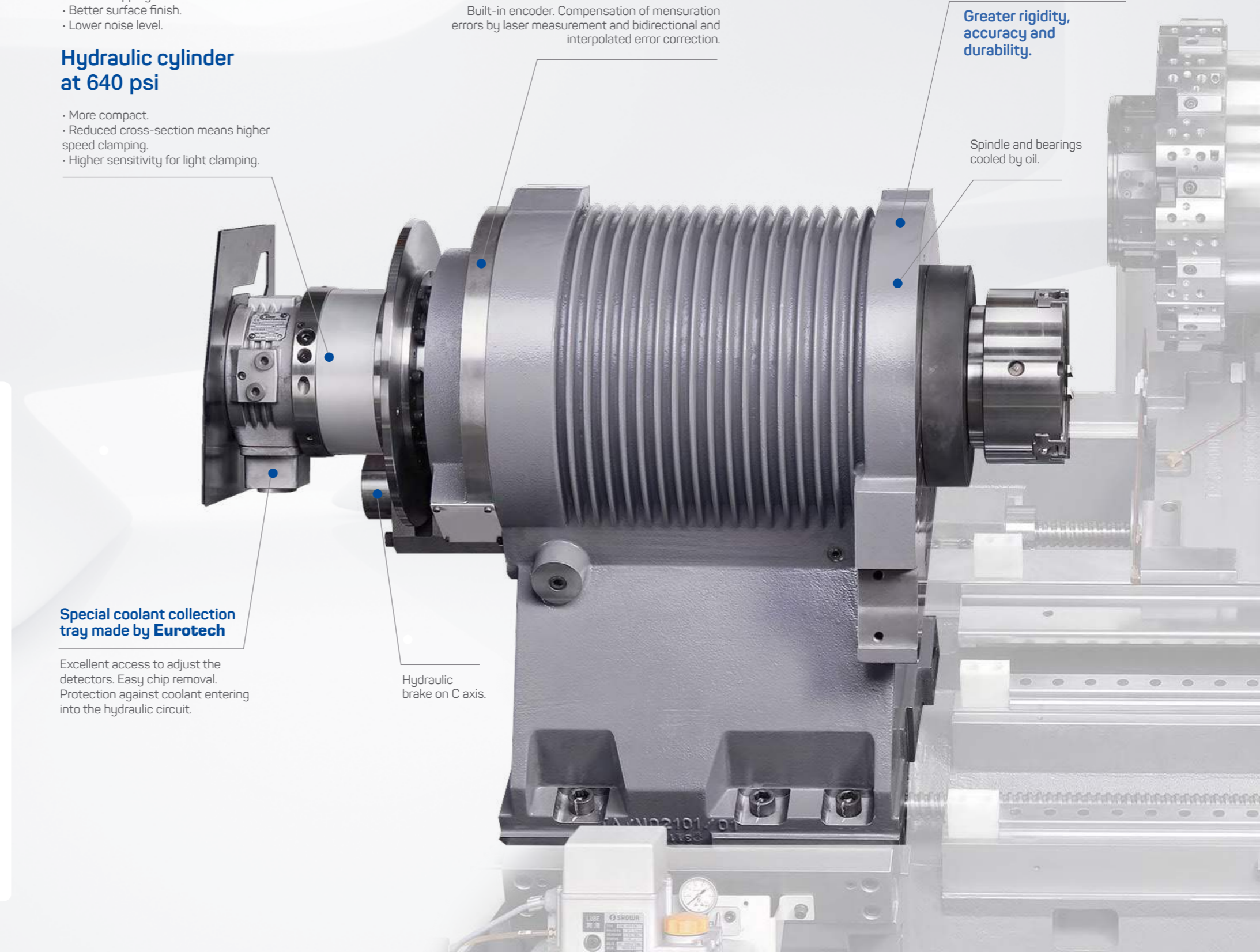
Greater rigidity, accuracy and durability.

Spindle and bearings cooled by oil.

Special coolant collection tray made by Eurotech

Excellent access to adjust the detectors. Easy chip removal. Protection against coolant entering into the hydraulic circuit.

Hydraulic brake on C axis.



CNC FANUC SERIES 30

WITH IHMI INTERFACE
AND NEW HARDWARE STEP 2



Visualize your CNC in your PC

1 Use VNC Viewer software to see the CNC screen in any computer sharing the screen with your operator and being able to get support online in a very simple and efficient way.



Visualize your PC in the lathe

2 The operator can access to a desktop screen through the CNC. With this functionality software like ERP, Excel, email, Autocad, CAD/CAM... can be used from the lathe.

15" Touch screen

Adjustable height 100 mm

2 GB Part program memory

Data Transfer
• Ethernet
• USB
• PCMCIA

Ready for Industry 4.0



FORZATA SERIES

TURRET WITH A BUILT-IN MOTOR

AND HYDRAULIC CLAMPING

12,000 rpm /
55.3 lb.ft. torque

Turret

Sturdily-built turret, incorporating a large diameter turret disk which enables the interferences between tools and chuck to be reduced.

Indexing

Bi-directional high-speed indexing is driven by a servomotor. The motor used for turret rotation is similar to motors used for axis movement, thus achieving high rotation rigidity and smoothness.

Indexing time

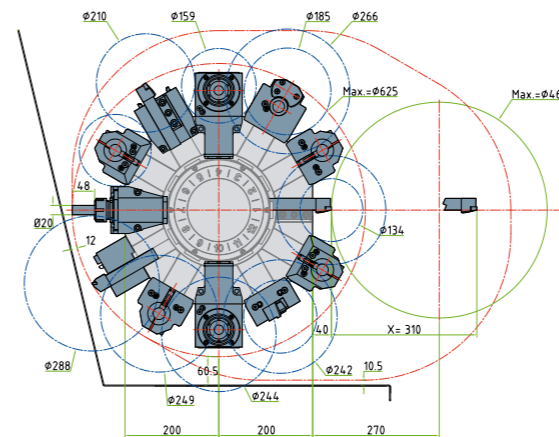
The indexing time is 0.2 seconds for adjacent turret positions and 0.5 seconds for 180 degrees.

Unclamping

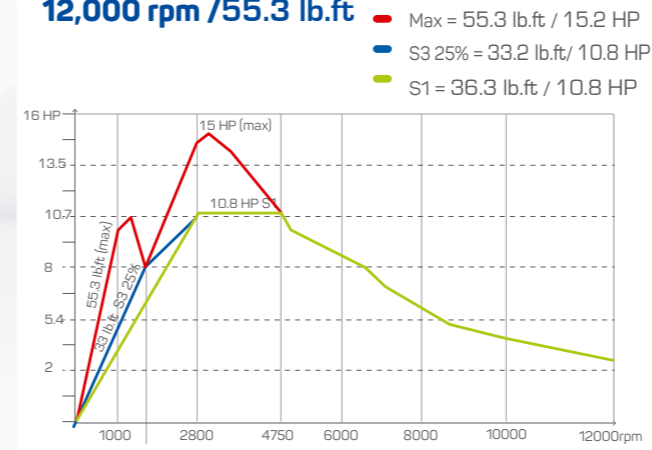
The turret is unclamped on retract and clamped on approach, thus ensuring an effective tool changing time of 0.2 s.



Interference diagram of driven tool motor. 12,000 rpm /55.3 lb.ft



Power and torque diagram of driven tool motor. 12,000 rpm /55.3 lb.ft



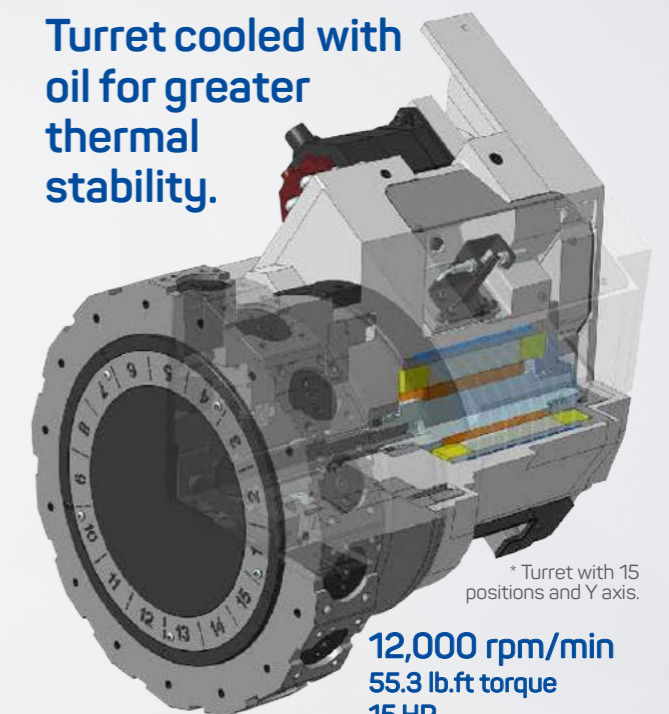
Clamping

The clamping is done by means of a hydraulic system. The locking rings are 8.6 in diameter and are a curvic coupling.

Transmission

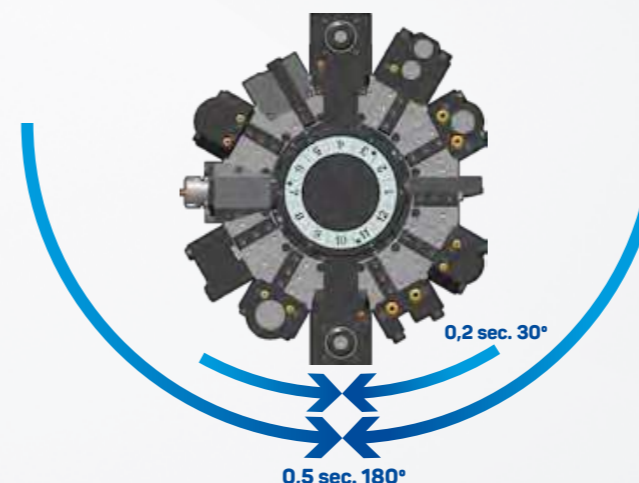
The transmission of driven tools is fitted with Gleason type conical spiral gears, hardened and ground giving high accuracy when rigid tapping.

Turret cooled with oil for greater thermal stability.



* Turret with 15 positions and Y axis.

12,000 rpm/min
55.3 lb.ft torque
15 HP



Tool Turret - The robust turret disk does not lift while indexing. The turret is unclamped on retract and clamped on approach, thus ensuring an effective tool changing time of 0.2 s. - 12 positions disc. 0.2 seconds 30°



Conversational programming

The CNC is equipped with the New Manual Guide i conversational programming system. It allows programming and simulating the programs in 3D.



Maintenance manager

The Maintenance manager will guide you to perform the recommended maintenance tasks. The dates when the maintenance was performed will be saved automatically when "Maint. complete" is pushed.



Tool life (option)

The CNC allows to define groups of sister tooling. When a tool finishes its life due to the number of times being called or its cutting time, it is automatically substituted by its sister tool.



Tool catalogue

The control has a tool catalogue from which we can select the tools we want to use in our machining process. This permits to directly get the geometry of the tool for simulation purposes.



Variable speed function (Anti vibration)

With a simple setup to define the period and amplitude of a sinusoidal curve to modify the spindle speed, very good results are obtained in reducing chatter vibration. This function is available for turning with or without tailstock.



Manuals

Check any machine manual instantly in the CNC. The files are indexed so that you can access the information you require directly from the table of contents of the manual.



Easy diagnosis

Easy detection of machine faults through the graphical interface that shows the signals that control the different devices in the machine. Status of the detectors, signals to activate the hydraulic maneuvers, motor temperature and pressure measurements are easily monitored live.



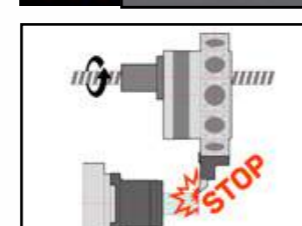
Tool monitoring (option)

This functions memorises the power consumption of each tool. Once the values are obtained it monitors the power consumption of each tool to detect tool wear or breakage. This reduces the manual handling in an unmanned process.



Execution of program with the MPG handwheel

This function allows checking the programs executing them back and forth with the MPG handwheel.



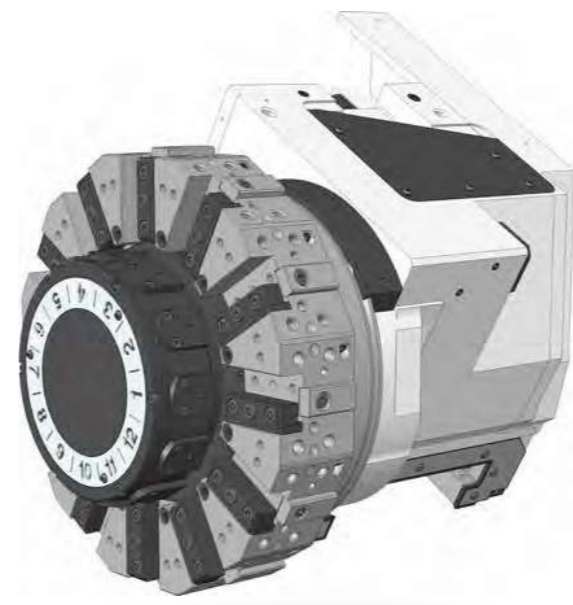
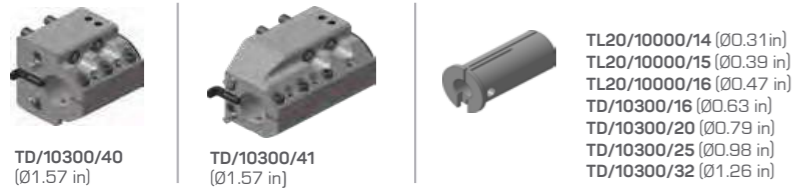
Electronic detection of collisions (airbag).

The CNC detects impacts through monitoring of the motors' forces and following errors. With an overload the axes and spindles are stopped to prevent further damages.

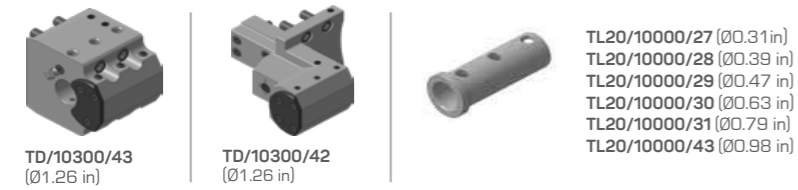
FORZA TA SERIES

TOOL HOLDERS

Boring & drilling holders Ø40



Double boring holders Ø32



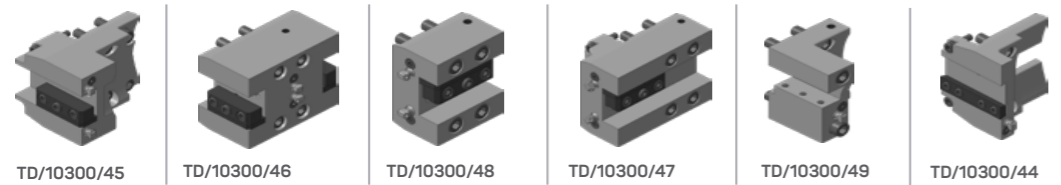
Boring holders Ø60



Boring holders Ø80

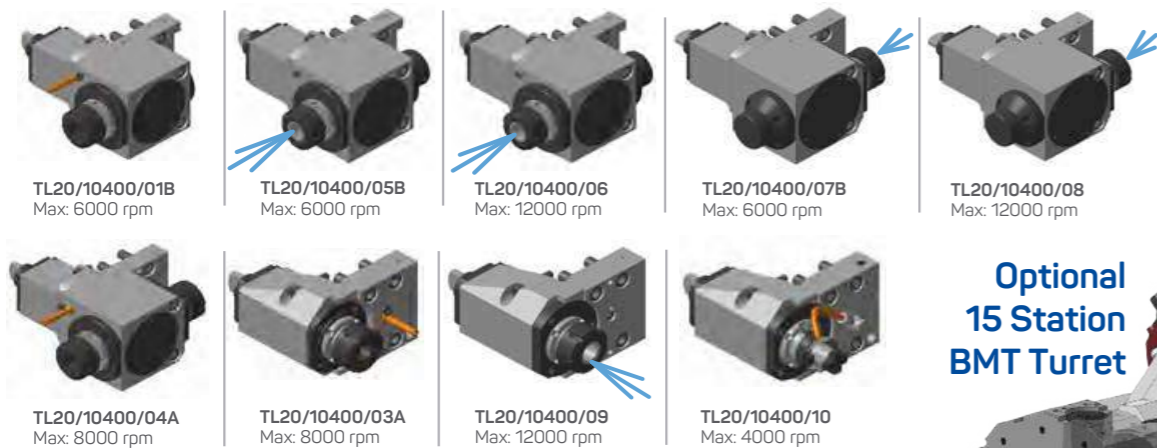


Turning holders □25

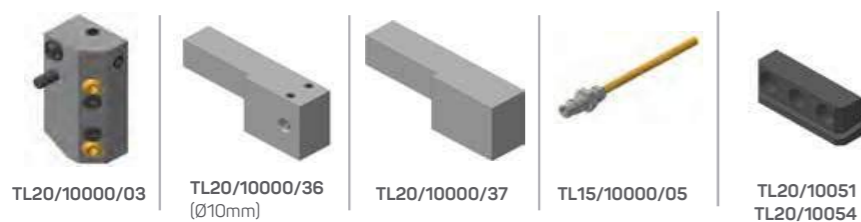


Turning holders □32

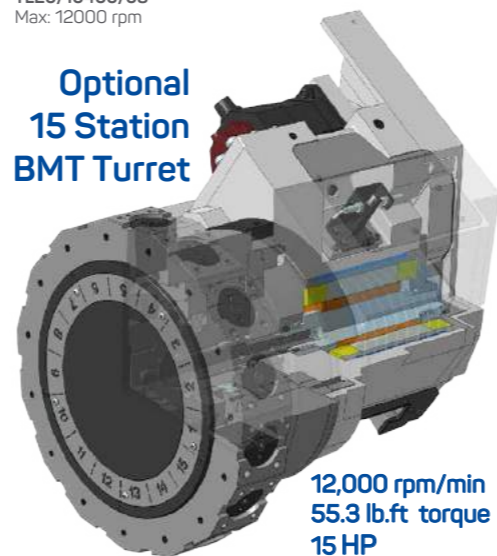
Live tool holders



Others



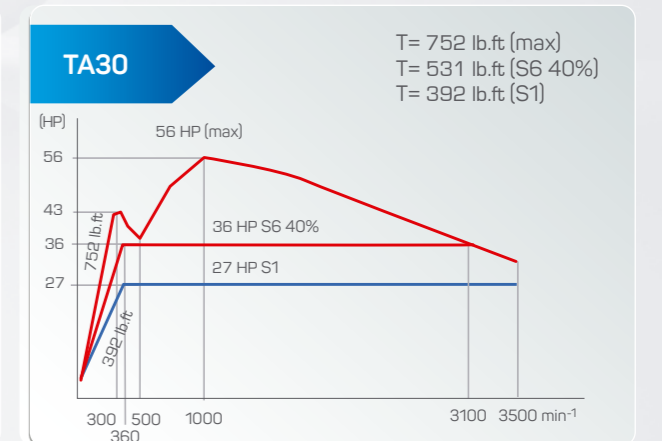
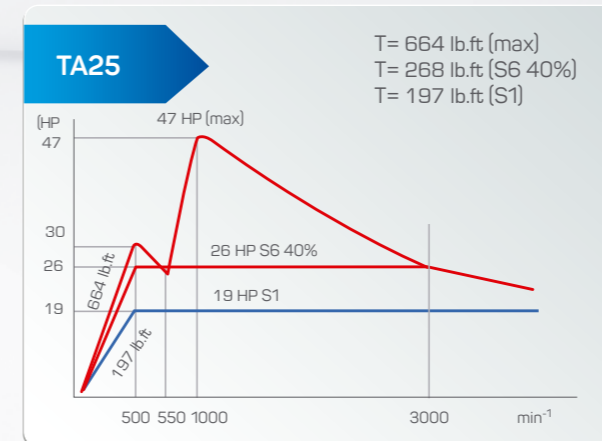
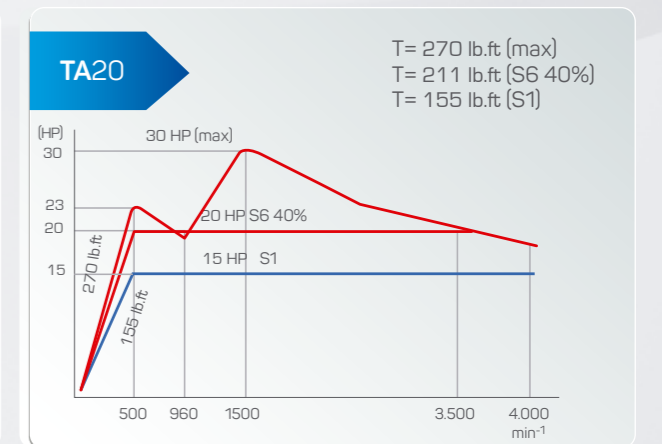
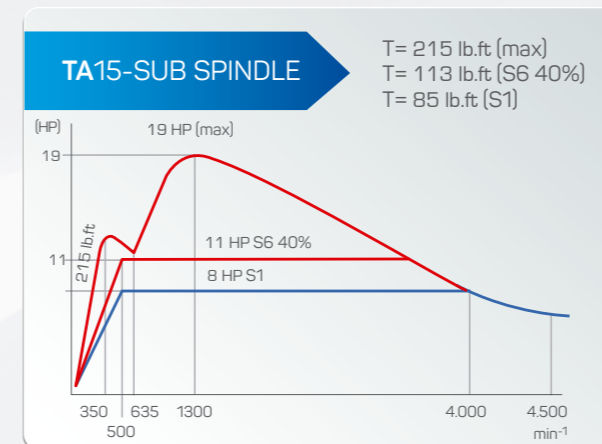
Optional 15 Station BMT Turret



FORZA TA SERIES

INTEGRATED SPINDLES

POWER AND TORQUE DIAGRAM OF SPINDLES



ROBOT GL20 II

AUTOMATE SHORT AND LONG BATCHES

A range of gripper heads with 2 x 22lb capacity to suit your needs (GL20 II)

Very easy to use



Easy to use and to program. Eurotech have developed a conversational programming system that makes it very easy to set and use the GL20 II and GL6 Gantry robots.

- 1_3-jaw servo gripper with 2 x 180° indexing.
- 2_2-jaw servo gripper with 2 x 180° indexing.
- 3_3-jaw pneumatic gripper with 2 x 90° indexing.
- 4_Pneumatic gripper for shafts with 2 x 90° indexing.
- 5_Servo gripper for shafts with 2 x 90° indexing.



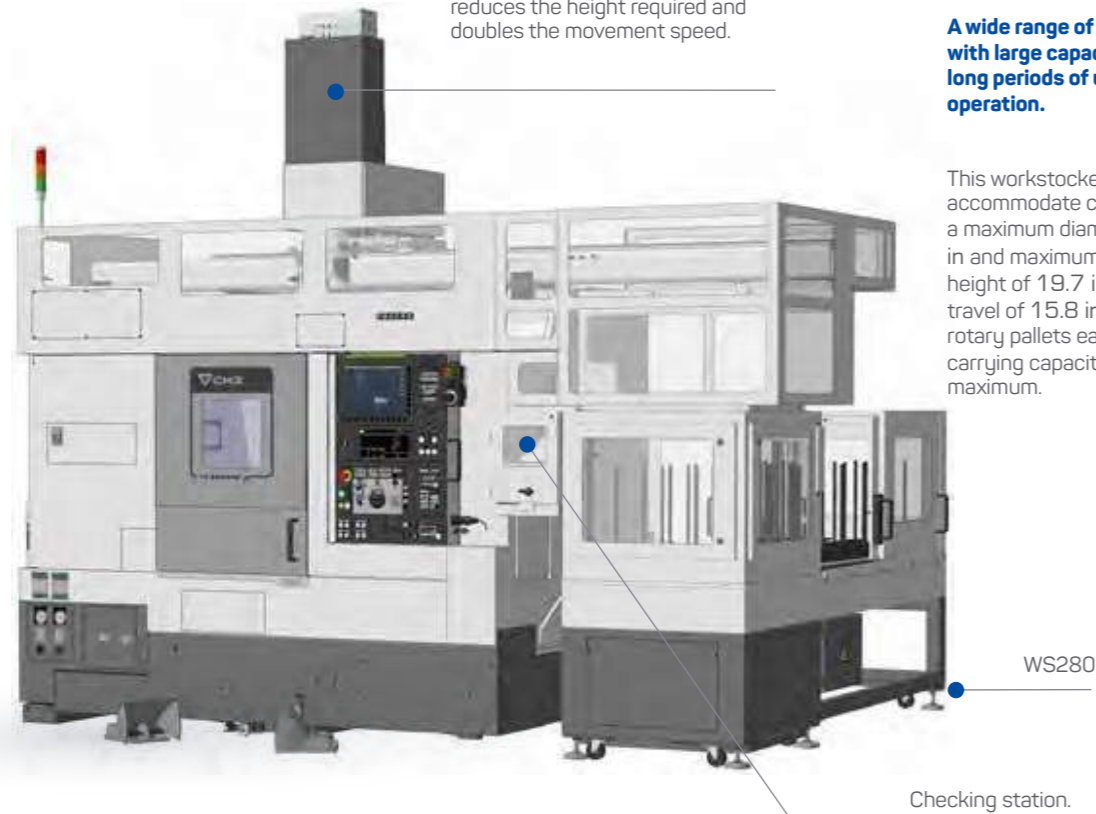
Workstocker WS-280x400x14 with 14 pallets.



The Vertical movement of the wrist reduces the height required and doubles the movement speed.

A wide range of workstockers with large capacity permits long periods of unmanned operation.

This workstocker can accommodate components to a maximum diameter of 11.2 in and maximum stacked height of 19.7 in (maximum travel of 15.8 in). The 14 rotary pallets each have a carrying capacity of 165 lb maximum.



Workstocker WS-700 for shafts:

Workstocker to stock shafts from 3.15 in to 27.6 in long and from 0.39 in to 3.15 in diameter. (Contact Eurotech for other sizes).



Z axis speed
(Longitudinal): 7086 ipm

Y axis speed
(Transverse): 4724 ipm

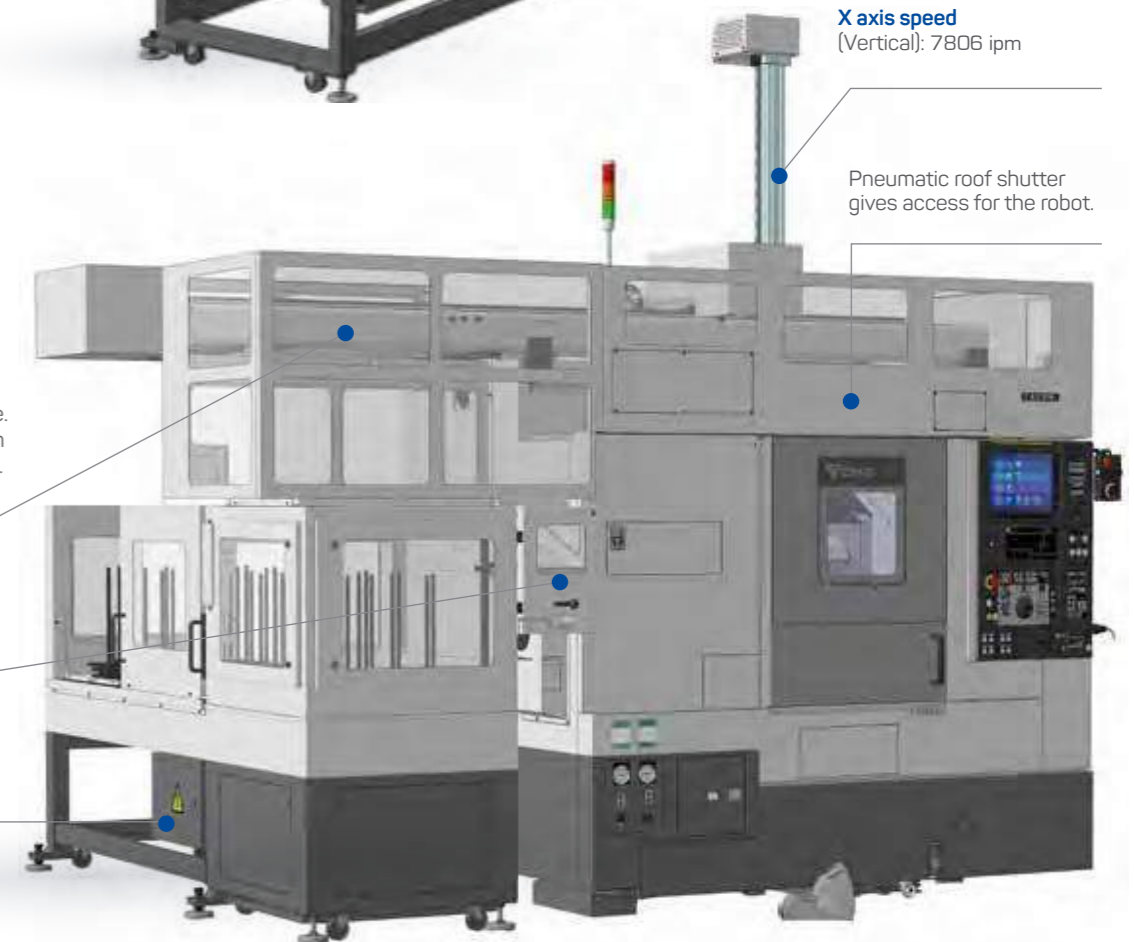
X axis speed
(Vertical): 7806 ipm

Pneumatic roof shutter gives access for the robot.

CNC controlled axes.
· Rack and pinion drive.
· Automatic lubrication controlled by the CNC.

Checking station.

WS280





Nationwide Service

Eurotech has nationwide distributors with over 100 service technicians. Eurotech's USA headquarters trains and supports our distributors and customers.

"Our relationship with the service department is bar none!"

- Les Richards, Custom Mold

"You can't go wrong with the Eurotech equipment and the customer care they provide after the purchase."

- Geoff Giner, Model Screw Products



Nationwide Engineering and Training Classes

Eurotech's highly-advanced engineers have established a value that delivers more to our customers' needs than anything else in the industry - by listening to our customers' needs. Some key benefits Eurotech engineers deliver are:

- Factory Certified Training
- Proven to Increase ROI and Cycle Time
- New & Unique Ideas for Parts Processing

Free Lifetime Training! Knowledge is the power of productivity!

For 25 years we have offered FREE lifetime training to our valued customers as well as free engineering phone support. We have found this to be an important factor in helping our customers become profitable. Thousands of CNC machinists have trained at our FREE Eurotech College.

"Class was 5 Stars. The instruction was great as was the training binder. Thank you for the awesome two days of training."

- Dan Gibbons, J.C. Gibbons Mfg. Inc.



EUROTECH
RUNS FASTER, SLEEPS LESS!

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