

EMCO



MAXXTURN 95

Universal CNC turning center for machining shafts and chuck parts



COMPLETE SOLUTIONS – DIVERSE POSSIBILITIES

Maxxturn 95 is suitable for part lengths of up to 1300 mm and a turning diameter of 500 mm and can handle turning and milling operations involving heavy machining as perfectly as machining of precision parts with highest surface quality. A highly accurate C-axis, a rigid Y-axis with large movement path and high rapid traverses complete the performance package.



Wheel
(Aluminium)

1 CONTROL UNIT

- / Ergonomic, swivel-type control panel
- / Sinumerik 840D sl with 15" color monitor
- / Comprehensive machining cycles
- / 3D simulation
- / USB interface, 230V power socket

2 WORK AREA

- / Plenty of open space
- / Perfect chip flow
- / Easily accessible

3 MAIN SPINDLE

- / 2 versions available High-torque belt drive
Dynamic and rigid direct drive
- / Max. speed range 2500 / 3500 rpm
- / Spindle nose A2-8 (DIN 55026)
- / Partly hollow draw-tube \varnothing 95 x 670 mm
- / Through hole \varnothing 95 mm optional

4 TOOL TURRET

- / 12-position VDI 40
- / 12 additional position on the outside with cooling connection (block-tool)
- / Synchronized tapping and polygonal turning as standard



5 Y-AXIS

- / Travel +80 / -60 mm
- / 90° implemented in the machine construction
- / Large distance between guides
- / Stable and compact construction

6 CHIP CONVEYOR

- / Hinged type chip conveyor with ejection height of 1150 mm (45.3")
- / 350-liter coolant volume
- / Included in the basic version

7 MACHINE COVER

- / All-round protection against chips
- / 100% coolant retention
- / Large safety glass window in door
- / Clear view into the work area

8 COMPACT MACHINE BUILD

- / Requires minimal floor space

9 OIL MIST SEPARATOR (OPTION)

Machine with optional equipment

DESIGN

Designed on the basis of FEM analyses, the MAXXTURN 95 meets the high demands of modern machining in an ideal manner. The machine's core element is the one-piece machine bed. It is designed as a closed welded steel construction and filled with HYDROPOL®. Additional reinforcements ensure maximum stability in the more highly stressed areas. This guarantees maximum stiffness, precision and optimum vibration damping. The MAXXTURN 95 stands for high durability teamed with high processing accuracy. It is the basis for production with a high added value.

1 TOOL TURRET

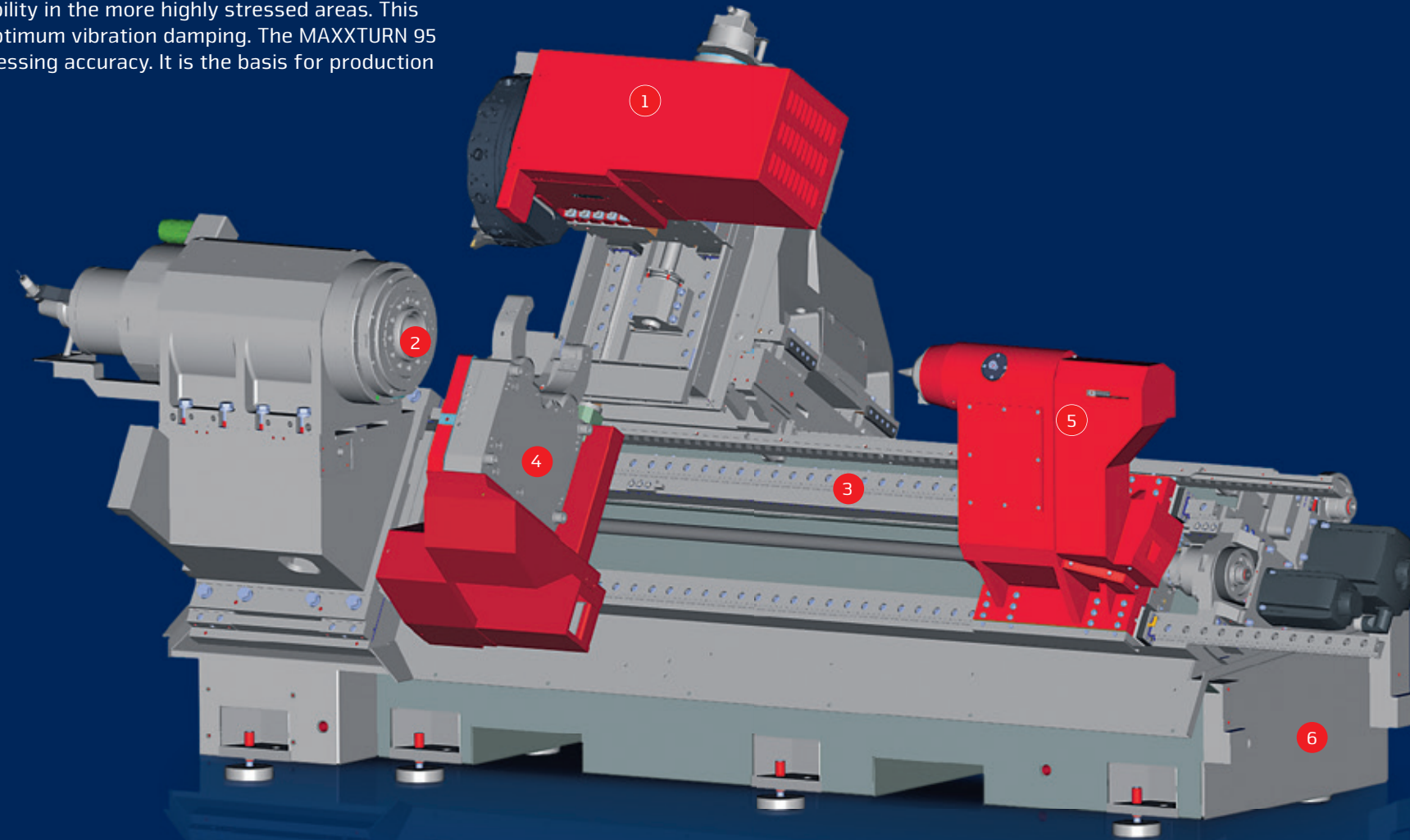
- / VDI quick-change system
- / 12 driven tool stations
- / Additional Block-Tool mounting surfaces to hold long boring bars
- / Adjustable swivelling speed

2 MAIN SPINDLE

- / High drive performance 42 / 33 kW
- / Large holding torque for milling
- / Closed-circuit cooling system
- / A2-8 spindle nose
- / Partly hollow draw-tube $\varnothing 95 \times 670$ mm
- / Hollow clamping cylinder $\varnothing 95$ mm (optional)

3 ROLLER GUIDES

- / In all linear axes
- / Preloaded
- / No backlash in any direction of force
- / High rapid-motion speeds
- / No wear
- / Minimal lubrication required



4 STEADY REST

- / Clamping range $\varnothing 30 - 245$ mm
- / Self-centering
- / Centrally lubricated with pressurized sealing air
- / Tag-along positioning or NC controlled

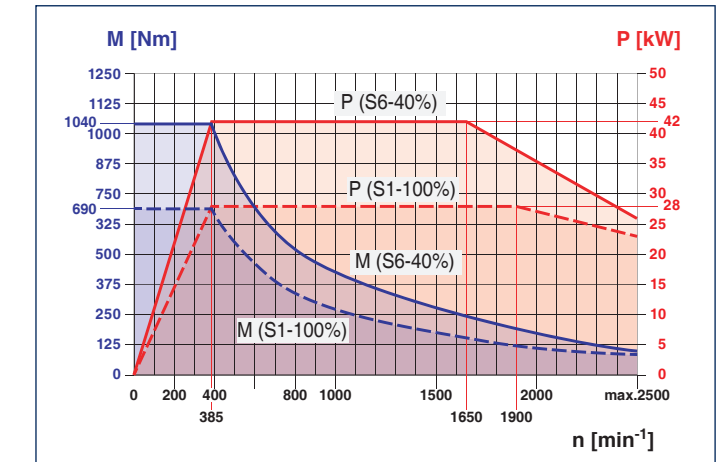
5 TAILSTOCK

- / 1050 mm travel range (915 mm with steady-rest)
- / $\varnothing 100$ mm quill diameter
- / 120 mm quill stroke
- / MT4 inside taper
- / Tag-along positioning or NC controlled

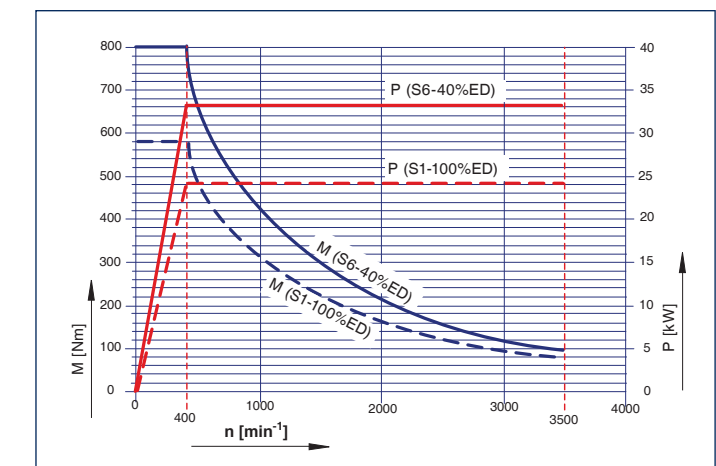
6 MACHINE BASE

- / Monoblock construction
- / Welded steel design filled with HYDROPOL®

Power and Torque

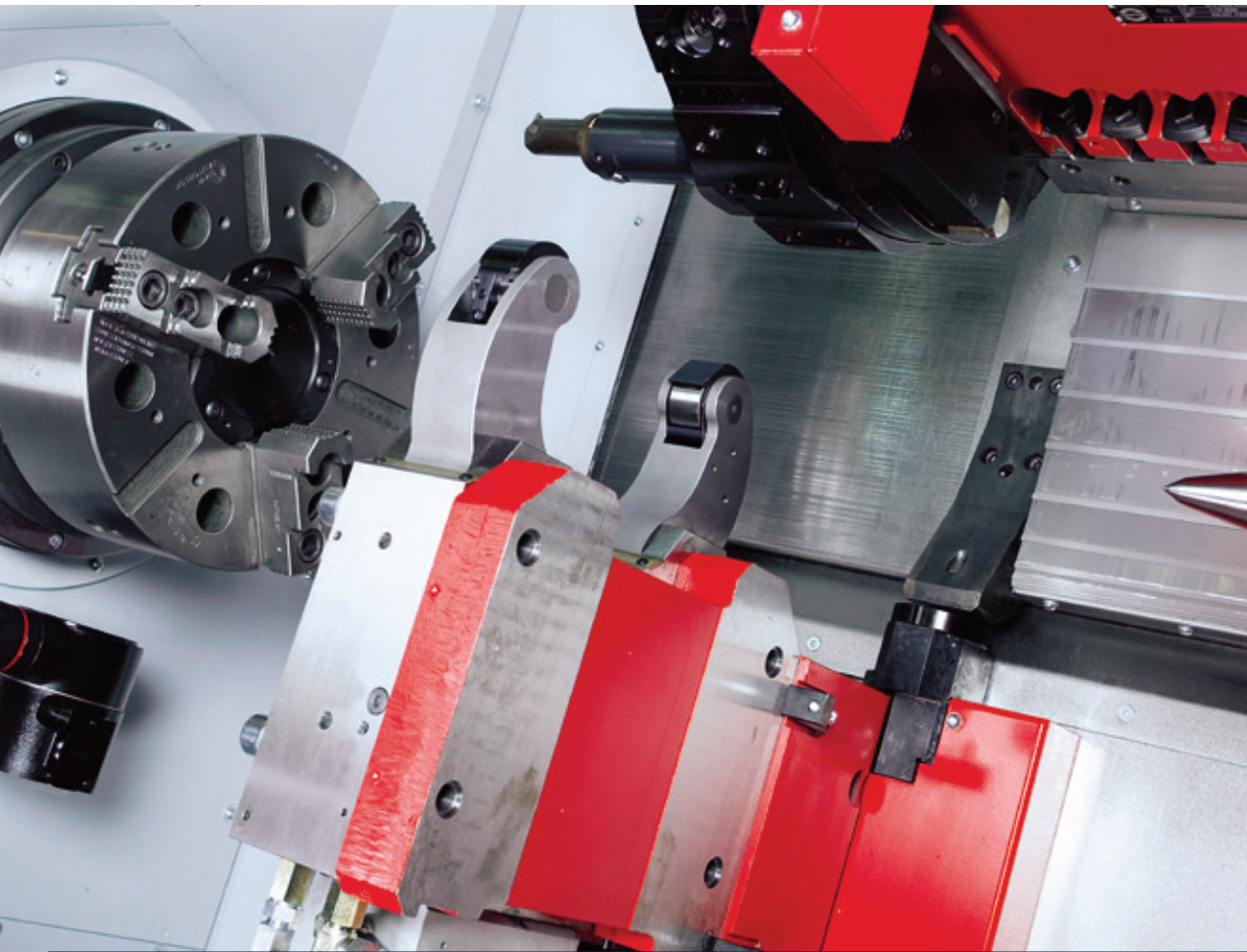


Performance and torque curve for main spindle with belt-drive



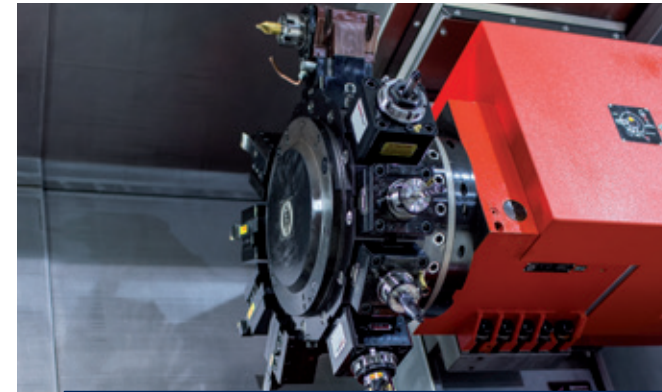
Performance and torque curve for main spindle with direct drive

TECHNICAL HIGHLIGHTS



STEADY-REST

The hydraulic operated self-centering steady-rest has a clamping range of \varnothing 30 – 245 mm. It is mounted on a slide, which can be positioned via the Z-axis-slide or optionally via an additional servo drive using a ball screw. At the determined position the slide is hydraulically clamped. The steady-rest includes chip protection and central oil lubrication.



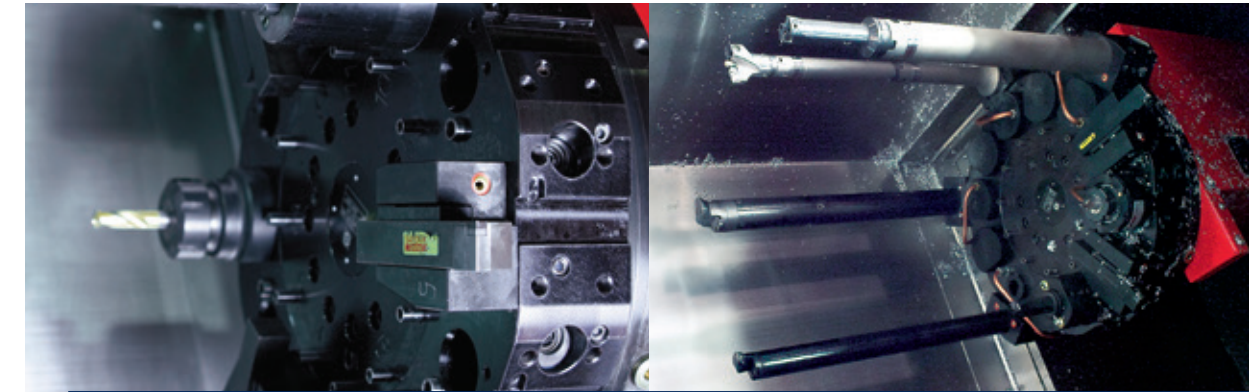
BMT TURRET

For cost-effective production of complex turning/milling work pieces, in which milling is predominant, the optional BMT 55P turret with water-cooled direct drive is available. With a maximum of 12000 rpm, 30 Nm and 10 kW, this turret offers optimum conditions, stability for complete machining and maximum productivity.



TAILSTOCK

The tailstock is mounted on linear roller-type slides and can be positioned via the z-axis-slide. Optionally an additional servo drive using a ball screw can be offered. At the determined position the slide is hydraulically clamped. So that a quill with integrated bearings and MT4 cone can support the workpiece. Therefore the quill can move up to 120 mm.



TOOL TURRET

12 + 12 station hybrid tool turret - VDI40 + block-tool, axial turret with single-motor technology. A servo motor powers the driven tools and the swivel movement. No tool rise, continuous switching with directional logic. Each station can take up driven tool holders with DIN 5480 coupling. 12 additional block-tool interfaces allow the use of large and heavy boring bars up to a diameter of 50 mm.

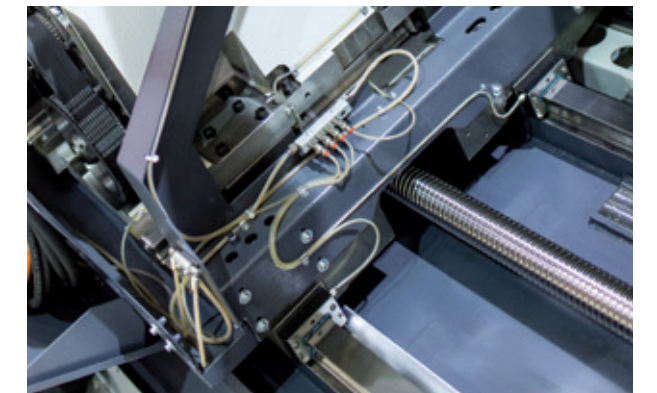


MAIN SPINDLE

Two versions are available. One using a conventional beld-drive for high torque (up to 1040 Nm) and heavy machining and another one using the approved water-cooled motor spindle for higher spindle speeds. This one also offers optimal conditions for complex milling operations.

HIGHLIGHTS

- / Extremely robust construction
- / Top machining precision
- / High rapid motion speed
- / Stable Y-axis with large travel
- / Optional: NC steady rest or tailstock
- / State-of-the-art control technology
- / Driven tools with C-axis
- / Simple, conversational programming
- / Made in the Heart of Europe



Y-AXIS

The Y-axis forms a highlight in the MAXXTURN series. She is integrated in the machine structure so that maximum stability based on short overhangs and wide distanced roller guides is guaranteed. Thus, complex machining tasks can be done and workpieces can be completely finished in a single setup.

NETWORKS ARE CREATED INDIVIDUALLY. OUR SOLUTIONS AS WELL.



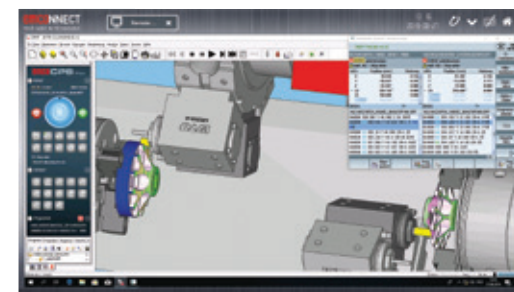
Staying in touch is important not only among human beings. Persons, machines and the whole production environment must also be connected perfectly and safely in order to ensure efficient procedures during the production process. With EMCONNECT, the machine is optimally equipped for this purpose. The optional EMCONNECT Digital Services offer innovative online services for optimized machine operation. The user has always the control of the machine status. The automatic notification in case of malfunctions or standstill of the machine as well as the extended capabilities for remote maintenance, minimise downtimes.



Integration into control

EMCONNECT offers several possibilities of operation according to different situations. For quick access, apps may be used simultaneously in the side panel of controlling.

In this way, you can always look at your familiar numerical control, the well-known centrepiece of the machine.



An innovative concept

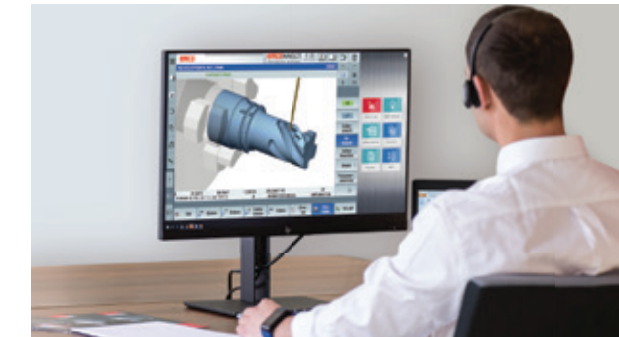
These powerful apps may be used independently from the control, while in the background the machine is busy in the production process. With only one click, you can change at any moment between numerical control and EMCONNECT.

This is possible with the help of an innovative and ergonomic control panel, equipped with a modern 22" multi-touch display, an industrial PC with associated keyboard and HMI hotkeys.



The control panel as central platform

With EMCONNECT, the control panel of the machine becomes the central platform for the access to all the operative functions. The user gets every type of support from the apps, which directly provide all the necessary applications, data and documents. In this way, EMCONNECT makes an important contribution to a highly efficient processing at the machine.



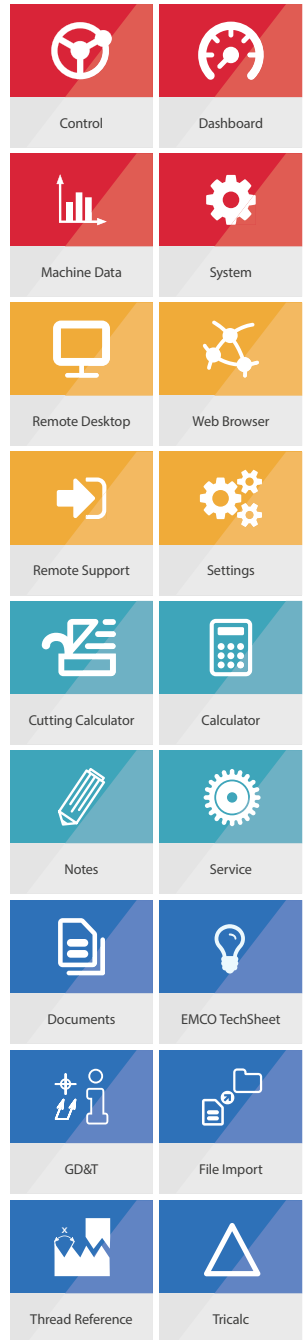
Comprehensive connectivity options

With the remote support, the web browser and the remote desktop, there are numerous connectivity options, even beyond the direct production environment. With the help of the integrated remote support, it is easily possible to carry out the remote diagnosis and remote maintenance. The optionally available OPC UA interface enables data exchange with the IT system environment and interaction with other machines for automation at shop floor level.

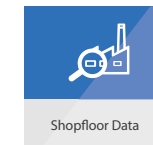
EMCONNECT HIGHLIGHTS AND FUNCTIONS

- / Fully connected**
Connection to all applications via remote control of the office computer and the web browser
- / Structured**
Clear monitoring of the machine state and the production data
- / Customized**
Open platform for modular integration of customer-specific applications
- / Compatible**
Interface for seamless integration into the operating environment
- / User-friendly**
Intuitive and production-optimized touch operation
- / Future-proof**
Continuous extensions as well as easy updates and upgrades

Standard-Apps



Optional



THE EMCO GANTRY LOADER. INDIVIDUAL PROCESS OPTIMIZATION.

- 1 GANTRY LOADER
- 2 PALLET MAGAZINE (with 20 stations)
- 3 GRIPPER SYSTEM



ADVANTAGES

- / Fully automatic loading and unloading of the workpieces
- / Multi-channel Sinumerik control incl. user cycles
- / Seamless interplay between the machine tool and the loading device
- / Varied possibilities of customer-specific adaptation
- / Possibility of integration of measuring station, signing station, cleaning station, etc.
- / Short spare time due to a loading hatch

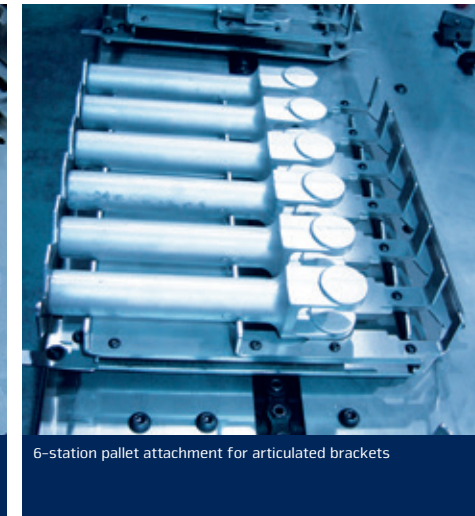
AUTOMATIC RETURN ON INVESTMENT

Workpiece magazine

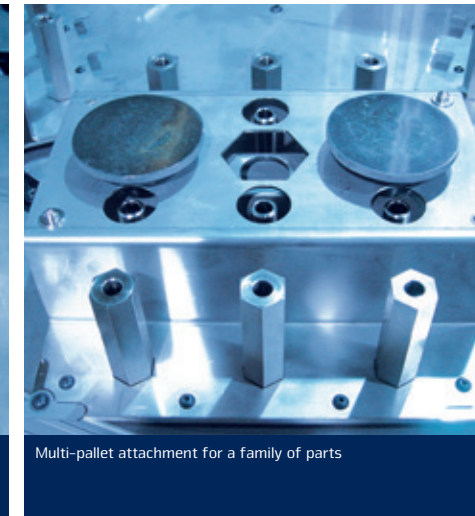
Blank-specific pallet attachments enable oriented loading of blanks into the machine and increase the parts stock for unmanned production. Changeover times are reduced or eliminated thanks to the perfect adjustment to the customer's parts.



4-station pallet attachment for tees



6-station pallet attachment for articulated brackets



Multi-pallet attachment for a family of parts



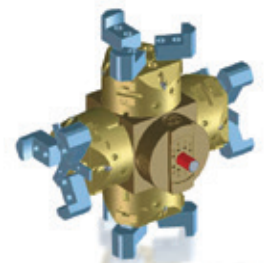
4-station pallet attachment for valve caps



20-station pallet magazine with customer-specific pallets



2 x 3-jaw double gripper head



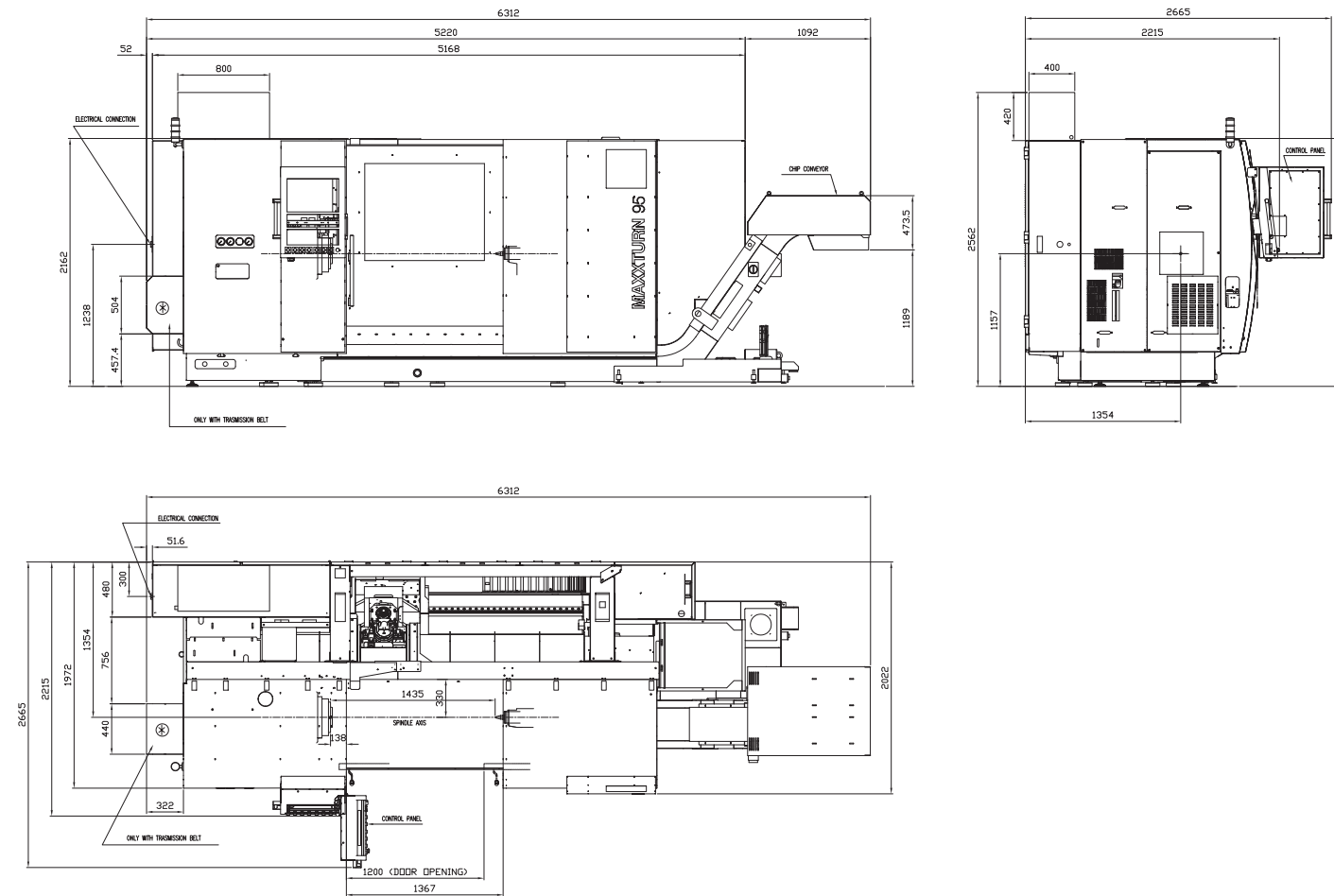
4 x 3-jaw gripper head



Shaft gripper head

MACHINE LAYOUT

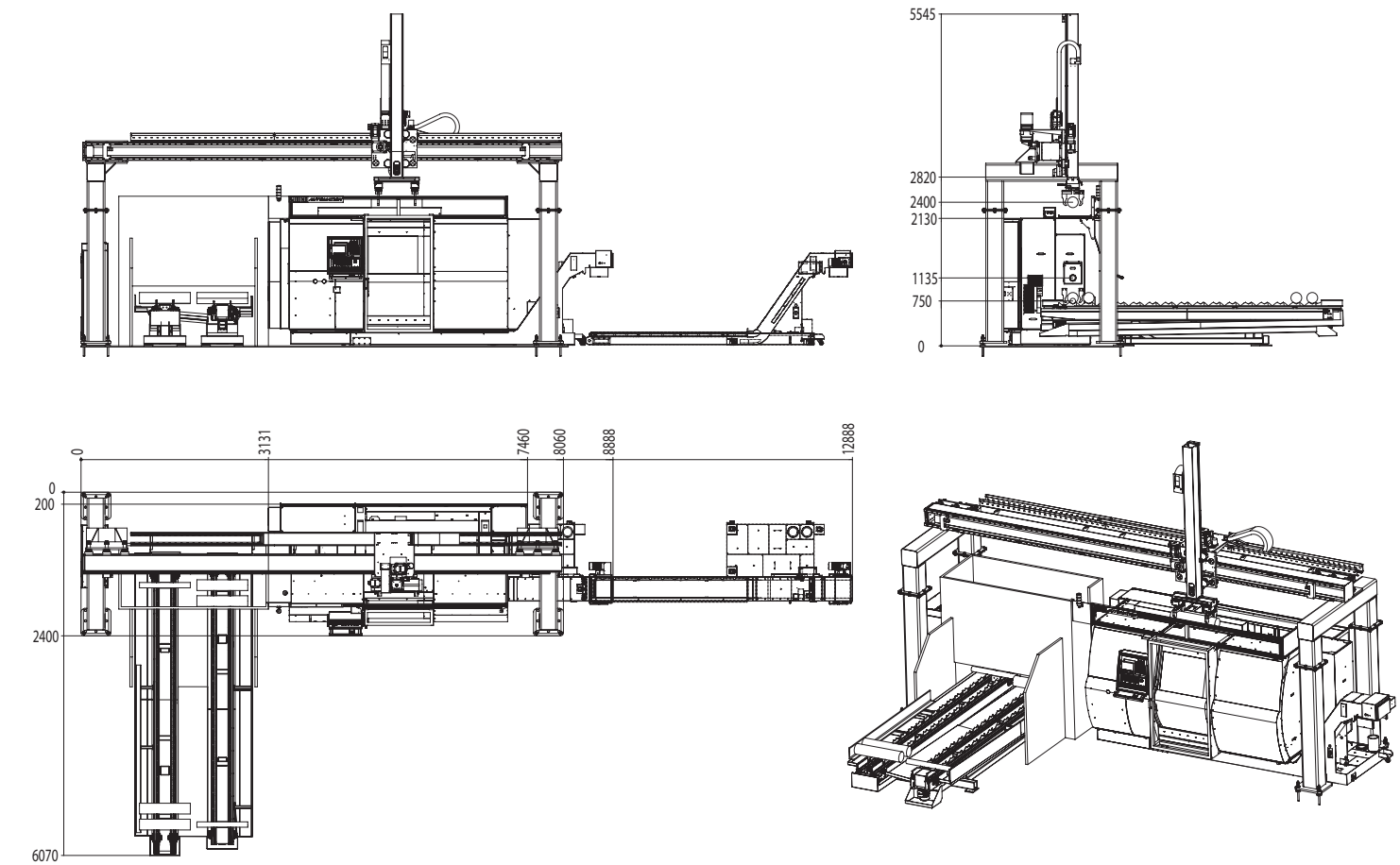
Maxxturn 95



Details in millimeters

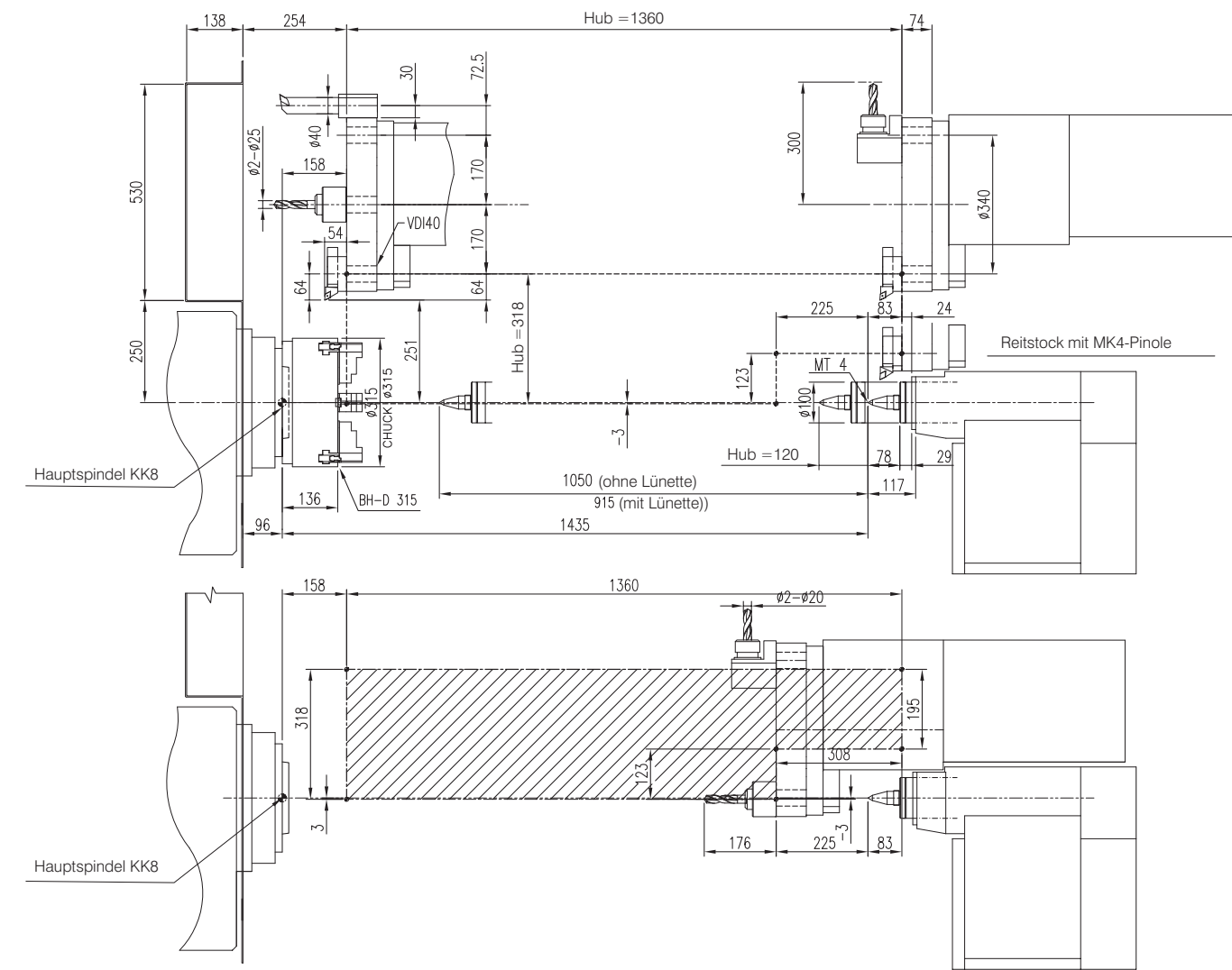
MACHINE LAYOUT

Maxxturn 95
with gantry loader



Details in millimeters

WORK AREA



Details in millimeters

TECHNICAL DATA

Work area

Swing over bed	Ø 700 mm
Swing over cross silde	Ø 500 mm
Distance between centers	1430 mm
Max. turning diameter	Ø 500 mm
Max. part length	1300 mm
Draw tube bore	95 mm

Travel

Travel in X	318 mm
Travel in Z	1360 mm
Travel in Y	-60 / +80 mm

Main spindle

Spindle nose DIN 55026	A2-8
Speed range for belt drive	0 – 2500 rpm
Max. drive performance	42 kW
Max. torque on the spindle	1040 Nm
Speed range for direct drive	0 – 3500 rpm
Max. drive performance	33 kW
Max. torque on the spindle	800 Nm

C-axis with direct drive

Round axis resolution	0,001°
Rapid motion speed	1000 rpm

Tailstock with quill

Tailstock travel	1050 mm
Max. application force	12500 N
Max. traverse speed	4 m/min
Tool holding shaft (with integrated bearings)	MK 4

Tool turret

A number of tool positions	12 + 12
Tool holding shaft in accordance with VDI (DIN 69880)	40 mm
Tool cross-section for square tools	25 x 25 mm
Tool cross-section for square tools	40 mm
Shank diameter for boring bars	0,4 sec

Driven tools

Number of tool positions	12
Max. speed	0 – 4000 rpm
Max. torque	45 Nm
Max. drive performance	8 kW

Tool turret with BMT-interface and direct drive system

Number of tool positions	12
Precision tool holder interface	BMT-55P
Tool cross-section for square tools	20 x 20 (25 x 25) mm
Shank diameter for boring bars	40 mm
Turret indexing time	0,5 sec
Max. speed for driven tools	0 – 12000 rpm
Max. torque for driven tools	30 Nm
Max. drive performance for driven tools	10 kW

Feed drive

Rapid motion speed X / Z / Y	24 / 30 / 12 m/min
Feed force in the X axis	9000 N
Feed force in the Z axis	13000 N
Feed force in the Y axis	9000 N
Acceleration time from 0 to rapid motion	0,2 sec

Coolant system

Tank volume	350 liters
Pump performance	1,15 kW

Electrical and air connection

Connection value	46 kVA
Air pressure required	6 bar

Dimensions

Height of centers above floor	1130 mm
Machine height	2162 mm
Required space for machine W x D	6300 x 2240 mm
Total weight approx.	ca. 10500 kg

GANTRY LOADER

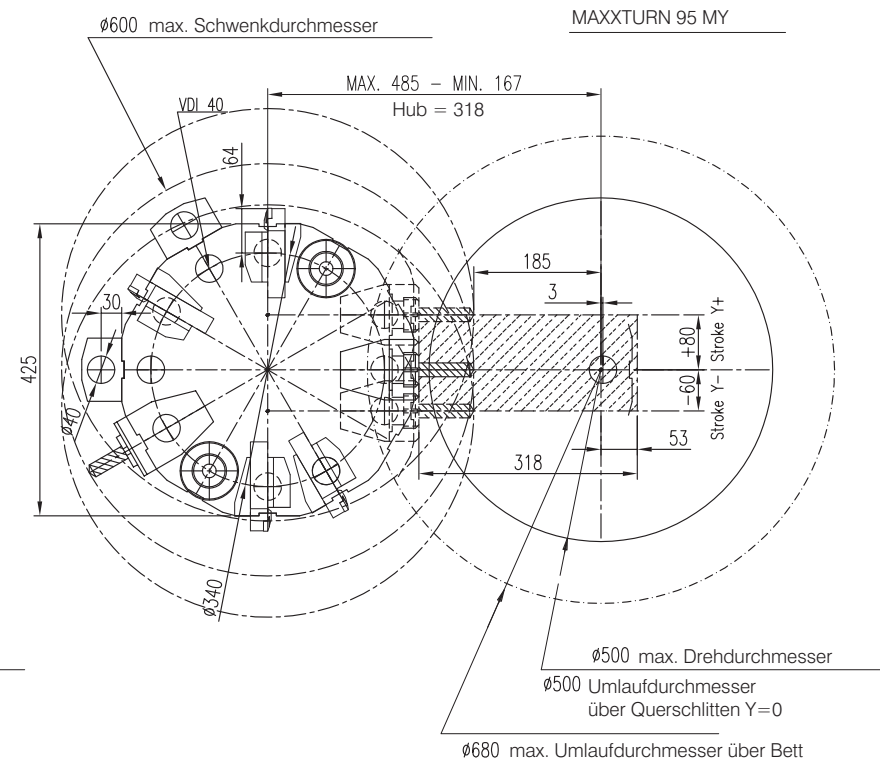
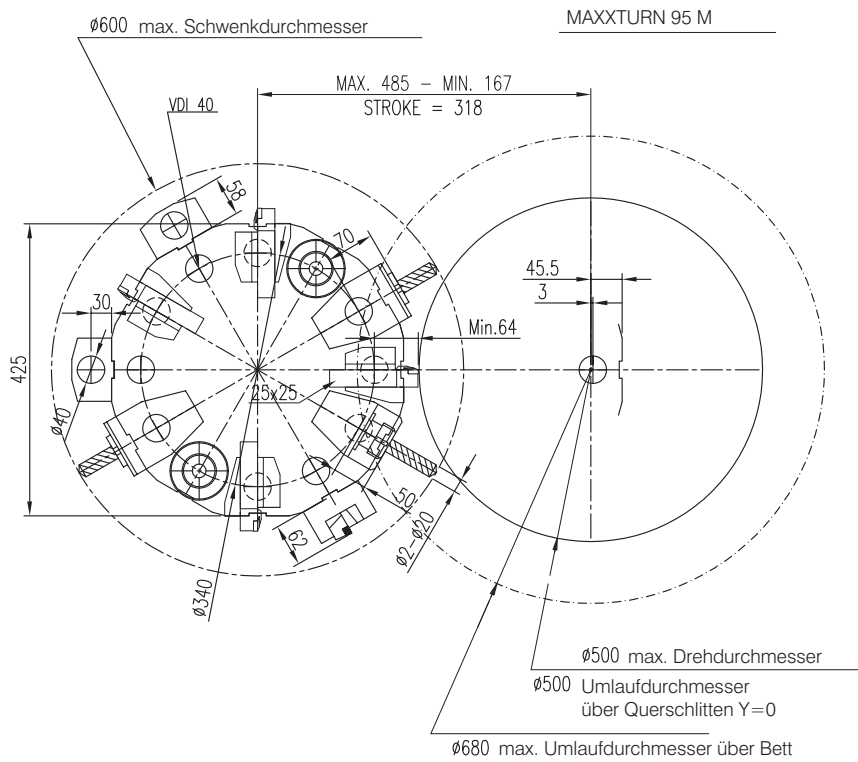
Technical Data

Traverse speed horizontal	80 m/min
Traverse speed vertical	40 m/min

Application example: Maxxturn 95

Workpiece dimensions for	flanged / shaft parts
Max. diameter	250 / 180 mm
Max. length	100 / 800 mm
Max. weight	25 / 150 kg

WORK AREA



beyond standard /

EMCO GmbH / Salzburger Str. 80 / 5400 Hallein-Taxach / Austria / T +43 6245891-0 / F +43 624586965 / info@emco.at

www.emco-world.com