

Press Release, September 2023

## **Convince yourself of the advantages of the modular design and the high-precision and dynamic machining: MAXXTURN 65 G2 with robot automation and the EMCONNECT process assistant at the EMCO exhibition stand H 13/B70 at EMO**

*The MAXXTURN 65 G2 has been completely redesigned. With its clever modular design, the machine offers a wide range of options for specific customer requirements. The high drive power of the main and counter spindles, combined with optimum torque characteristics, ensures economic efficiency in the machining of steel as well as in the high-speed machining of aluminium. 12 driven tools and a Y-axis ensure perfect results in complex milling and drilling operations. With numerous automation solutions and the EMCONNECT digital process assistant, the MAXXTURN 65 G2 is state-of-the-art and enables low-manpower production in operation.*

### **Machine structure**

The core of the machine is the 40° inclined bed. Designed as an extremely rigid and compact welded steel construction, it is the basis for a robust and precise lathe. Reinforcements provide additional rigidity in zones exposed to higher stress. As a further development of the MAXXTURN 65 G1, the machine impresses with its modern and innovative design. The optimised integration of the chip conveyor ensures compact dimensions. Instead of belt drives, spindle motors are used on the main and counter spindles, which ensures a particularly wide speed range of up to 5000 rpm and extremely good concentricity properties. Three main spindle sizes are available depending on customer requirements: Standard Ø 65mm / BigBore Ø 76mm / SuperBigBore Ø 95mm. A symmetrically designed headstock, together with temperature sensors at the bearing points and liquid cooling, ensure high thermal stability.

The C-axes are part of the basic machine equipment and allows the positioning of the spindles within a resolution of 0.001°. Due to the directly flanged encoder, the C-axis is ideally suited for contour-precise milling; a hydraulic holding brake (option) can be additionally activated. The Y-axis is also integrated in the basic machine structure and set at 90° to the X-axis. Extremely short projection lengths form the basis for solid turning and

drilling operations as well as contour-free milling operations. Absolute measuring systems are installed in all linear axes - position dispersion as per VDI3441 in X/Y/Z: 0.0035/0.0035/0.004 µm as standard / 0.002/0.002/0.002 µm as an option, with glass scales and laser measurement.

## Machine configurations

The MAXXTRURN 65 G2 has numerous modular options and is available in different versions:

- MT65 G2 M: incl. tool drive, C-axis and tailstock
- MT65 G2 MY: incl. tool drive, C-axis, Y-axis and tailstock
- MT65-G2 SM: incl. counter spindle, tool drive and C-axis
- MT65-G2 SMY: incl. counter spindle, tool drive, C-axis and Y-axis

On the MT65**M**-G2 with tailstock, the tailstock is mounted on the roller guide track and can be moved automatically over a length of 500 mm. A drag steady rest with Ø 8-101 mm is optionally available. This ensures even more flexible use of the machine, e.g. for shaft machining. On the MT65**S**-G2 with counter spindle, the counter spindle head is seated on its own roller guide track and can be moved automatically over a length of 580 mm. The spindle is driven by an integrated spindle motor (ISM) with liquid cooling. A stroke-monitored parts ejector, flooded with coolant, ensures safe removal of the finished parts. In addition, a 12-station VDI30 turret (optionally VDI 40) with single-motor technology is available. A servo motor powers the driven tools or the swivel movement - no lift-off and indexing with directional logic are the result. Each station can accommodate driven toolholders; alternatively, a 12-station BMT55 turret with direct drive, with up to 12000 rpm, or even a 16-station BMT45 turret can be integrated.

## Control

The SINUMERIK ONE is available to the user as a control system. The control panel on the MAXXTURN 65 G2 is height-adjustable on the right and can be swivelled, which ensures the best ergonomics. 22" multi-touch screens improve the view of individual control functions.

The optional digital process assistant EMCONNECT stands for connectivity and networking of the production environment and helps with the comprehensive integration of customer- and system-specific applications around the machine control and the production process. The user and his requirements are the focus of the operating procedures, work processes are to be made more efficient and the usual high reliability of the machines is to be

maintained in all operating modes. EMCONNECT can be easily and quickly updated and configured, and the selection of available apps is constantly being expanded. For example, the Shopfloor Management app serves as an option for machine and production data acquisition, enabling comprehensive monitoring of all machines and organisation of processes in the production area. Apps for minimising downtimes are also available with EMCONNECT.

## Automation

The EMCO SL1200, IRCO ILS-MUK 7012 or 10012, FMB TURBO 5-65 or 8-75 and TOP AUTOMAZIONI X-FILES bar feeders are available for efficient production. The EMCO gantry loader ensures fully automatic loading and unloading of the workpieces and seamless interaction between the machine tool and the loading device. If required, flexible ROBOT automation can also be offered.

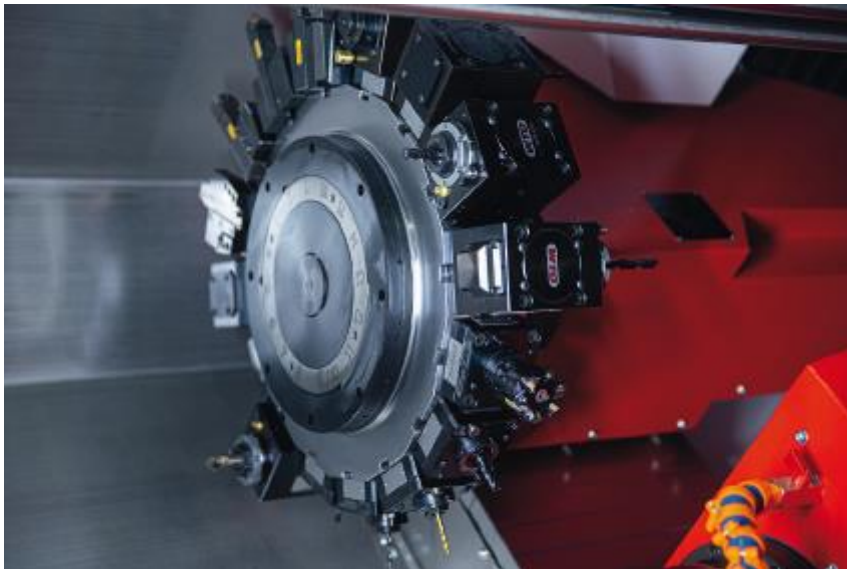
## Technical data

<b>MAXXTURN 65 G2</b>	
<b>Max. bar capacity [mm]</b>	∅ 65 (76,2 / 95)
<b>Max. chuck size [mm]</b>	
Main spindle	250 (325)
Counter spindle	210
<b>Max. speed [rpm]</b>	
Main spindle ∅ 65 (76 / 95)	5000 (4000 / 3500)
Counter spindle	6000
Driven tools VDI 30/40	5000 / 4500
Driven tools BMT 45/55	12000 / 12000
<b>Max. drive power [kW]</b>	
Main spindle ∅ 65 (76 / 95)	29 (29 / 37)
Counter spindle	22
Driven tools VDI 30/40	6,7 / 6,7
Driven tools BMT 45/55	11,7 / 11,7
<b>Max. travel X/Y/Z [mm]</b>	260 / 80 (+/- 40) / 610
<b>Rapid traverse speed X/Y/Z [m/min]</b>	30 / 15 / 30
<b>Number of tool holders</b>	12 (16)
<b>Number of driven stations</b>	12 (16)

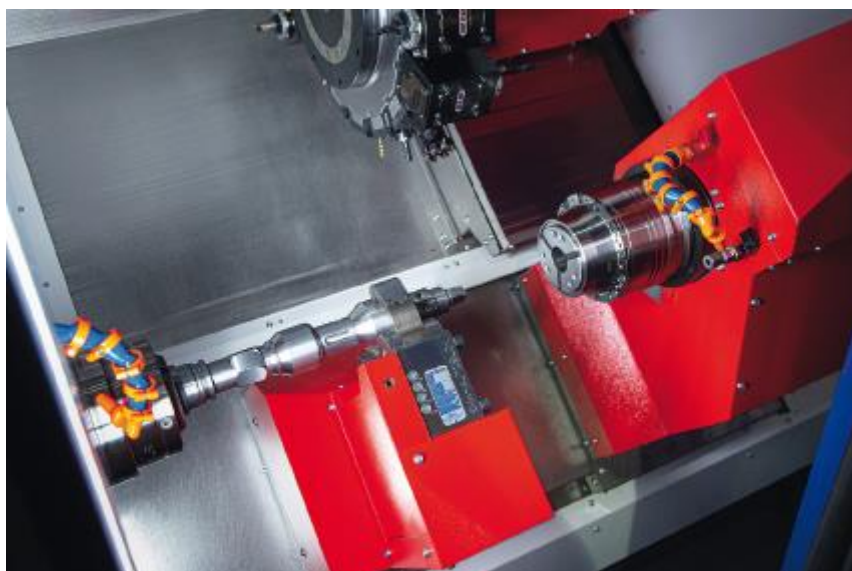
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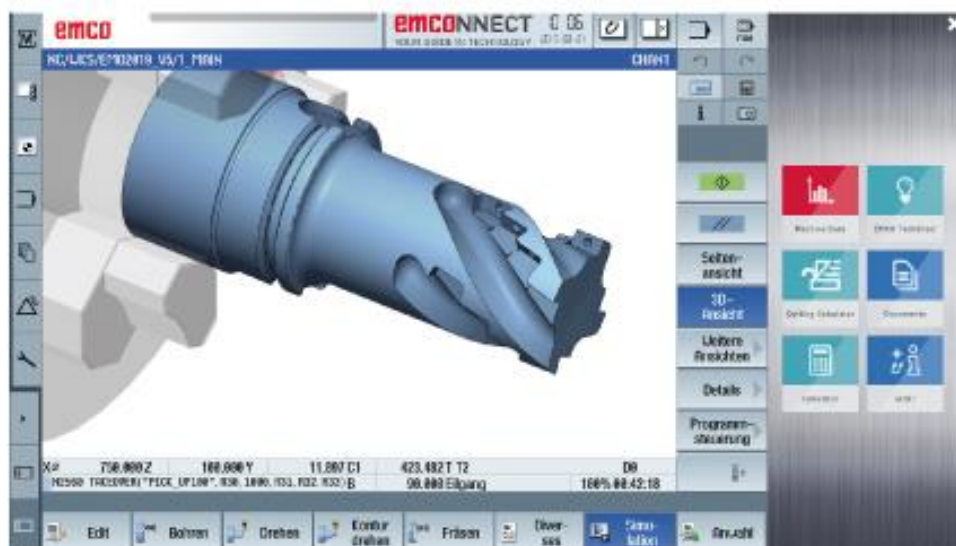
General view of the MAXXTURN 65 G2



BMT turret with direct drive



Steady rest for shaft machining



Control with the digital process assistant EMCONNECT

**About EMCO**

EMCO, a mechanical engineering company based in Salzburg, ranks among Europe's leading machine tool manufacturers. EMCO currently employs about 800 people at a total of 5 production sites in Austria, Germany and Italy. The international, family-run company owes its success to more than 75 years of expertise and experience in the area of machine tool engineering. Today, EMCO stands for top-of-the-line, customised, automated complete solutions for both turning and milling.

To learn more > [www.emco-world.com](http://www.emco-world.com).

**Further information and image requests:**

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