

# COMPETENCE

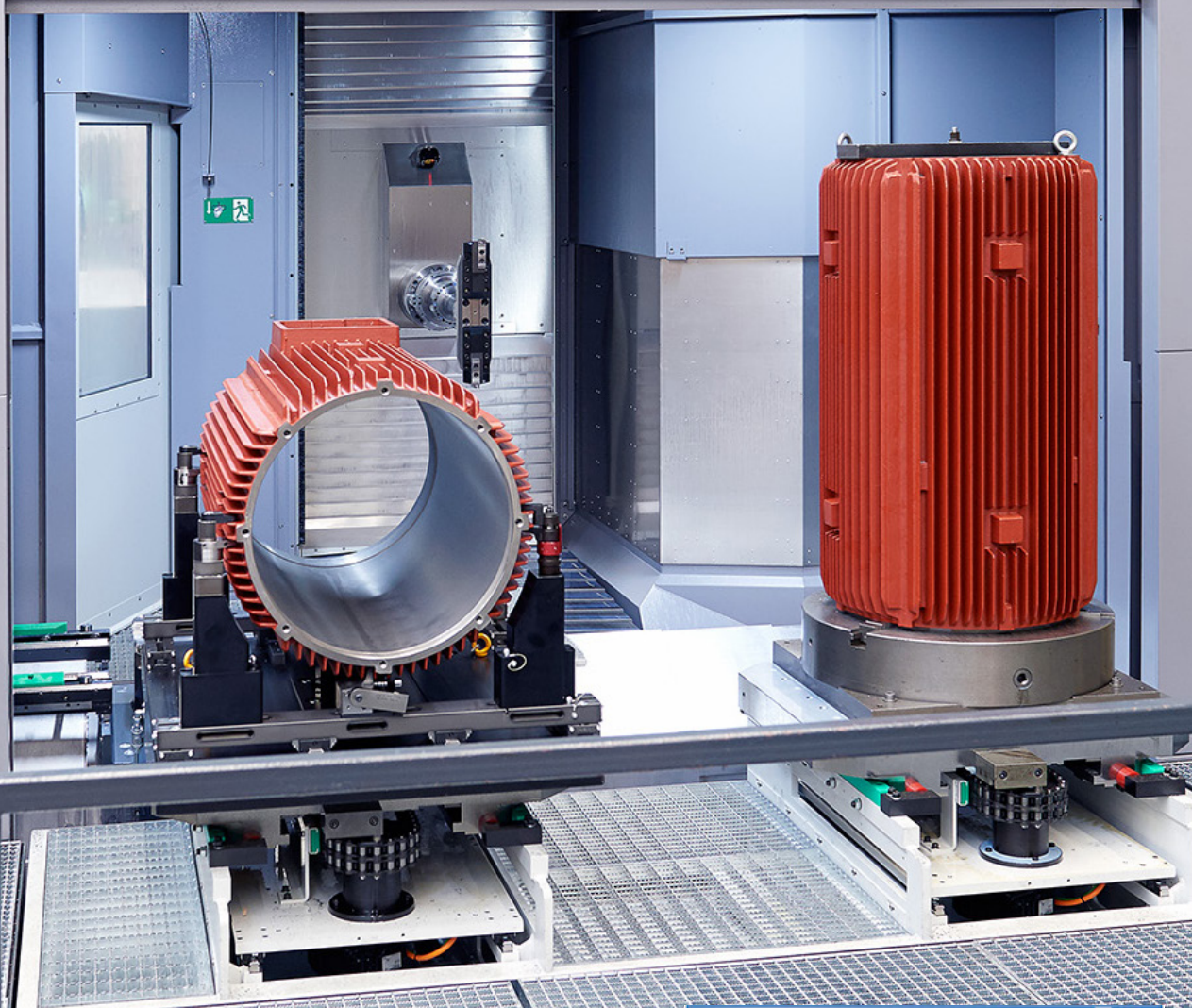


2025

TWO COMPANIES.

ONE PHILOSOPHY.

## MCX 900



M O T O R E N

# MANY ROADS LEAD TO SUCCESS – CUSTOMIZED BY BW.

Standing at a flipchart on the premises of BURKHARDT+WEBER (BW) in Reutlingen – this is exactly where the idea was born. The managing director combo Reiner and Roland Odenwald from EMOD Motoren GmbH were convinced that the machine tool manufacturer from Reutlingen would be the ideal partner for their requirements – since customized is exactly what BURKHARDT+WEBER is committed to.

EMOD was looking for a machining center capable of handling long and heavy tools – more specifically, a vertical turning center, to machine large electric motors, particularly for stator bores.

It was surprising that the joint solution proved to be different – namely by choosing a MCX machining center equipped with a pick-up station which now ensures even more flexibility and higher productivity. This concept, developed specifically for EMOD, enables complete machining operations on a single machine.

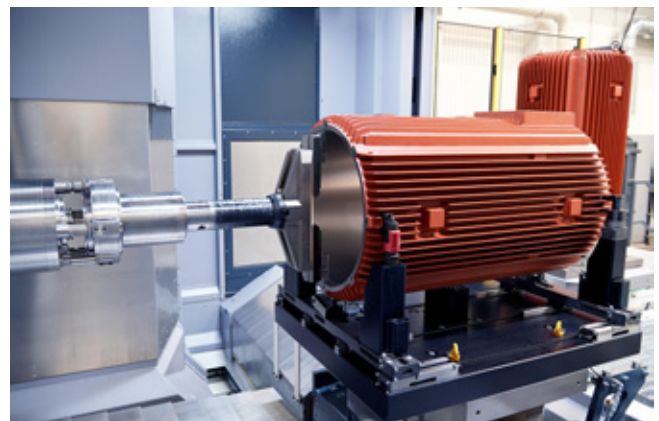
André Heinzelmann, Manager of the Technology Department at BW recollects: “Initially, our solution approach for EMOD was rather unusual, since housings of this type are already spindled on machining centers. However, this technology was not applied to the large diameter range. And yet our concept was convincing, as we automatically change the large spindle tools into the machining spindles and the workpieces can be clamped simultaneously during machining. Several tools can be stacked on the pick-up station to process different workpiece sizes fast and flexible.”

The MCX 900 is now machining electrical motor housings of various sizes from 250 to 450 mm and processes workpiece lengths of almost 1,600 mm with immersion depths of 1,120 mm and spindle diameters of up to 750 mm. These are dimensions that have never been fully machined on a single machining center before. The MCX machining center series is designed in the traditional robust way and is equipped

with a high-torque machining unit with gearbox. This is one of the basic prerequisites for torque-intensive boring of the stator bore with a cutting depth (ap = axial depth of cut) of up to 6 mm.

With currently around 450 employees at two locations, EMOD offers its customers solution concepts that are completely tailored to their specific practical requirements.

The MCX 900 supplied by BURKHARDT+WEBER now allows EMOD to significantly reduce the lead time starting from the initial inquiry to customer-specific design, mechanical production and final assembly with subsequent performance testing – a considerable advantage in today’s highly competitive supplier market.



## Highlight – 3rd Pallet Station

In response to the question about the major benefit, Managing Director Reiner Odenwald replies: “It’s the 3rd pallet changing station”. This additional pallet enables a greater variety and parallel handling of the workpieces, providing more flexibility in the production process and less effort for the production planners. This minimizes unproductive set-up and non-productive downtimes and enables efficient working processes.



This concept has significantly raised the output volume and increased the ratio of unmanned production hours. As a result, the ROI is achieved much faster and the profitability of the machine can be quantified in monetary terms.

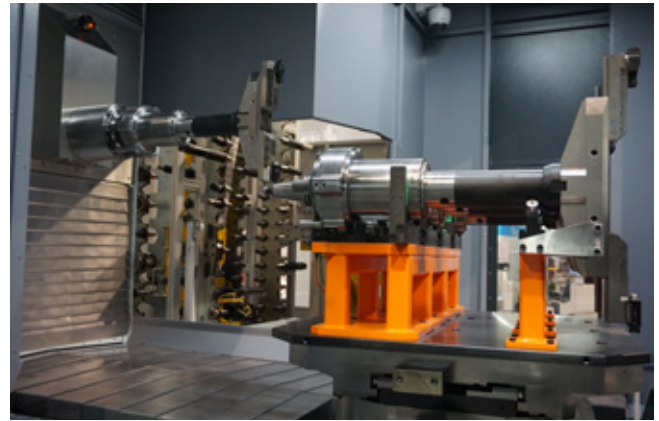


When machining special sizes, the 3rd pallet changing station is quickly and easily converted to an automatic pick-up station. The oversized boring bars with weights of up to 60 kg in combination with tilting torques of 120 Nm can then be directly inserted. The adapters, holders and quills were specifically designed in close cooperation with the manufacturer of the boring bars. In addition, vibration-absorbing materials are used to reduce vibrations to a minimum and which has a considerable effect on a better surface quality of the stator bore as well as higher dimensional accuracy due to less tool displacement.

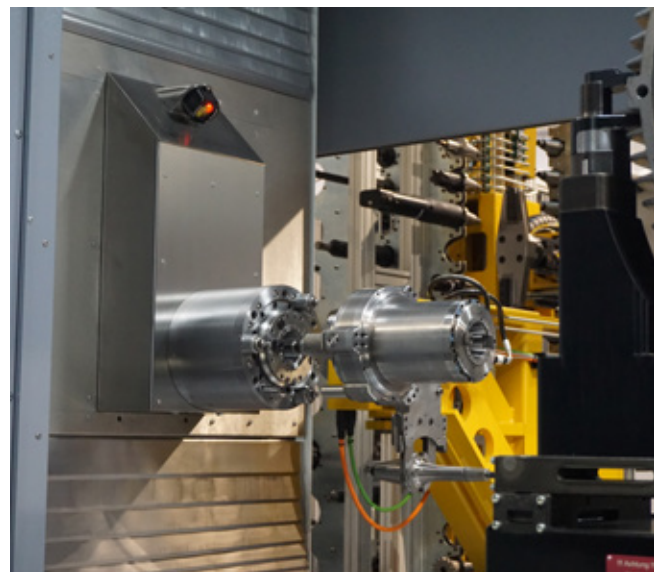
### **Tool extension**

A further convincing feature for EMOD, is the automatic tool extension, specifically developed by BW for deeper drilling and machining steps when it comes to very large workpieces. This eliminates the need for many expensive intermediate adapters to extend the tools, as all tools up to 40 kg can be inserted into the automatic extension. The standard built-in vibration absorber effectively suppresses milling vibrations and thus achieves an ideal surface finish. The tool extension with integrated tool clamping is

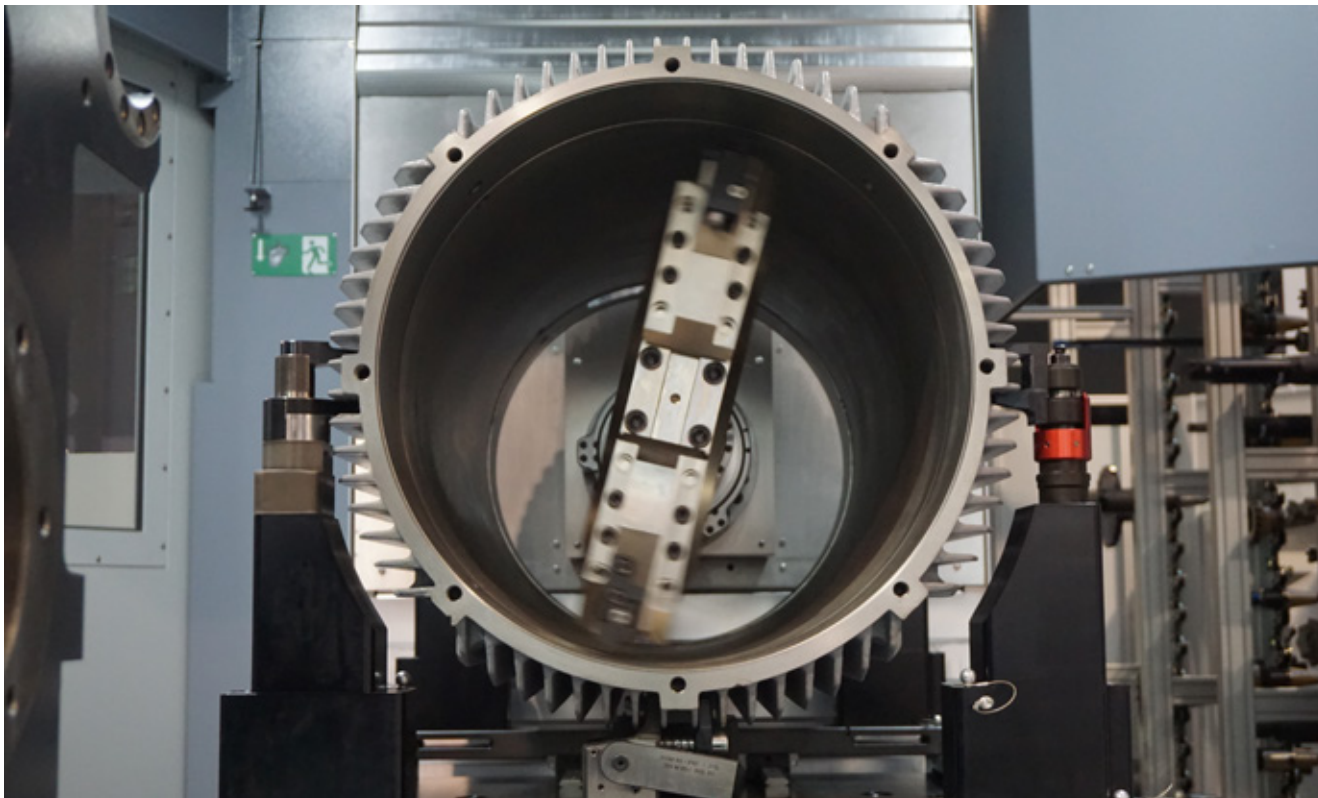
automatically activated from the tool magazine and clamped on the spindle side with 1,8 kN via a triple hydro docking system.



This project also confirms BW's role as a holistic technology partner with great expertise in turnkey solutions. "It's important to us, to understand our customers' needs and to ensure they effectively reach their goals. A customized machine built as part of our modular system is the result of our collaboration with EMOD," says Michael Wiedmaier, Head of Competence Center Sales, who has a strong customer relationship with the manufacturer of electric motors from Fulda.



## 2006 – THROWBACK.



Michael Wiedmaier, Head of Competence Center Sales, recalls that he sold his first BW machine, also an MCX 900, to EMOD. To this day, it is still in operation at the Fulda plant and has since been overhauled by our BW-service and is well prepared for the years to come. All the more he is delighted that BW was also chosen to supply this MCX 900 and, just as in 2006, has proven to be extremely reliable and accurate.



EMOD Motoren GmbH with its headquarters in Bad Salzschlirf and a plant in Fulda offers their customers individual and innovative solution concepts for modern machine engineering such as:

- + Waste water and sewage pumps.
- + Elevators and escalators.
- + Wood processing machines.
- + Industrial furnaces.
- + Plastic injection molding machines.
- + Food processing machines.
- + As well as ventilation and air-conditioning technology.

Publisher

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Images: BURKHARDT+WEBER, EMOD

