BORING MILL ALL-ROUNDER FOR SOLUTION PROVIDERS

To handle large and heavy parts, machine tool manufacturer HURCO has expanded its portfolio of large and special CNC machines with the HBMX 55 i horizontal boring mill. After its market launch in the USA, the machine is now also available in Europe. The first to place an order was Neudert GmbH, a special-purpose machine builder and contract manufacturer based in Lower Franconia, Germany—enhancing its already broad service portfolio with this highly versatile machine.



"No fear of batch size one—that's our signature," says Lothar Neudert.
Alfred Neudert GmbH produces individual parts, assemblies, or complete machines according to customer specifications. But Lothar and his son Oliver, who run the family business together, see themselves as solution partners capable of tackling even the most complex challenges for their customers.
Their second core business is building custom machines based on client specifications—from conceptualization to development, manufacturing, and servicing, including repairs and modernization.
A third and relatively new pillar is the in-house development and production of complete systems. These machines are designed, tested, and made market-ready in-house for select sectors such as the packaging industry. The first prototype has just been delivered: a modular four-side sealed flat pouch machine for packaging soups, pharmaceuticals, or powders.

The path to becoming a system supplier



A state-of-the-art machine park is the backbone of this versatile offering. With 60 machines, Neudert ensures seamless job execution. The Geroldshausen-Moos facility includes:

- 9 CNC milling machines
- 2 CNC turning machines
- 1 CNC boring mill
- 2 manual lathes
- 1 manual milling machine
- 1 drawing machine
- 1 honing machine
- and 30 other machines of various kinds

More than half of these are from HURCO. After carefully weighing requirements, cost, and performance, Neudert chose HURCO as a system supplier.



Lothar Neudert is especially proud of the newest addition—the HBMX 55 i CNC boring mill. He calls its acquisition a milestone that makes Neudert a truly universal machine builder.

"We've always wanted a 4-axis simultaneous CNC boring mill from HURCO. As soon as the first prototypes were operational in the USA, we flew across the Atlantic to see the machine ourselves," the senior director recalls.

The machine's main tasks are horizontal milling and deep-hole drilling, both of which are now faster, simpler, and more precise. "The HBMX 55 i stands for speed, flexibility, and significantly improved product quality." That's the conclusion Lothar Neudert draws after just a short time using the machine.

Built for power and precision

The new HBMX series from HURCO features two-speed gearboxes and hardened box ways. Compared to similar machines in its class, the HBMX 55 i can handle heavier parts and offers larger travel paths. It is more rigid and stable than comparable boring mills. The large-diameter quill allows for shorter tools, increasing stability.

Standard features include:

- A true 4th axis (NC)
- Direct position feedback systems for high thermal stability and precision
- A 60-station tool changer (expandable to 90 stations)

Intuitive conversational control



One of the main reasons the Franconian company continues to choose HURCO machines is the user-friendly control system. “Even the best machine only becomes cost-efficient with the right control,” says Oliver Neudert.

Thanks to the WinMax conversational control, his team is typically up and running within 2 to 3 days on a 3-axis machine and 4 to 5 days on a 4- or 5-axis machine.

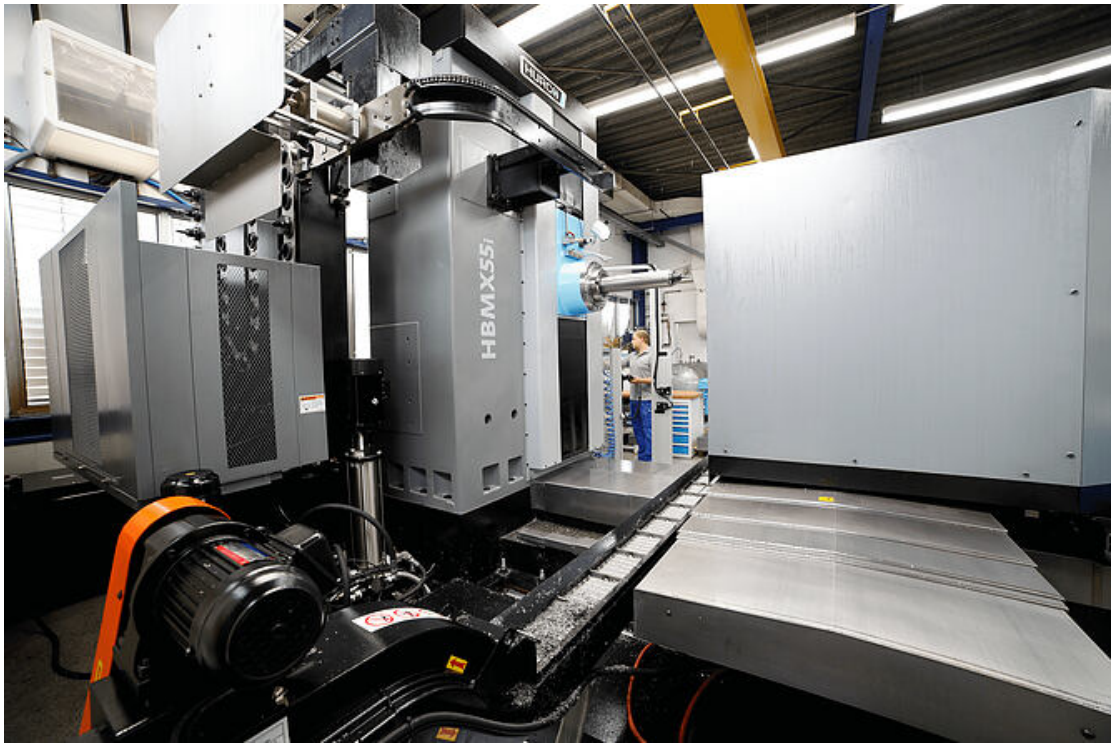
For medium-sized companies, this has a direct impact on workforce planning.

“Skilled employees are hard to find, and training takes time and resources. That’s why WinMax is a major benefit. Training time is incredibly short, and once trained, anyone can operate any HURCO machine—without retraining.”

Oliver also appreciates the continuity of the Max 5 control:

“All functions from the previous version are still there. Anyone familiar with HURCO will feel right at home. The interface is ergonomic, and the dual 19-inch monitors offer a complete overview at a glance.”

Flexible Programming for Complex Parts



All 4- and 5-axis machining at Neudert is done using the HURCO control system.

“With traditional CAM systems, 5-axis machining requires extensive training that’s easily forgotten if not used regularly.” The WinMax system avoids that with the Dialog NC Jump feature, allowing staff to switch seamlessly between conversational and G-code programming—ideal for flexible, real-world applications. Neudert also uses 3D solid models as the standard data exchange format with customers.

Engineer Oliver Neudert also values software features like UltiMotion. It can reduce cycle times by 30% or more by calculating the optimal toolpath and feed rate—for both conversational and G-code programs.
With a look-ahead buffer of over 10,000 blocks and a processing time of just 0.44 milliseconds, the machine ensures smoother motion, improved surface finish, and reduced wear on mechanical components. This leads to longer machine and tool life without sacrificing part accuracy.

By integrating the HBMX 55 i, Neudert has further expanded its service capabilities.

“The boring mill has already become indispensable,” says Lothar Neudert. “It’s running nearly at full capacity in two-shift operation.”

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