KERN Micro

High performance machining center

The platform for the highest demands

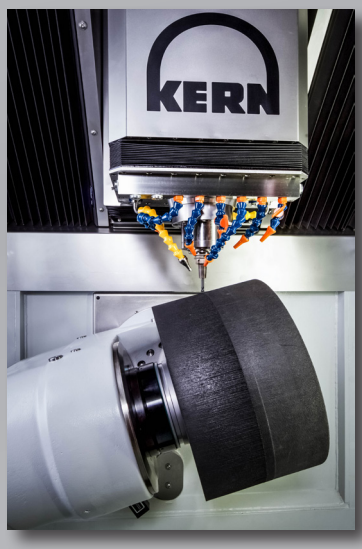
The KERN Micro is no standard milling machine. It's ultra-compact, perfectly automated, precise in the micro range and as flexible in terms of equipment and applications as you need it to be.

The KERN Micro platform lets you configure the ideal machine for your specific range of applications, which can then be seamlessly integrated into your production environment. The machine reliably delivers the famed KERN precision and repeatability thanks to its sophisticated design, unique KERN temperature management system and high-quality components. The KERN Micro is right at home in industrial environments — it is rugged, robust and durable, regardless of the application.

Variants of the KERN Micro that are optimized for machining graphite or zirconium metal are also available.

Features and benefits at a glance:

- **Compact and powerful**
  The KERN Micro's one-box design means all individual units are integrated into the machine. Its large tool and workpiece capacity allows unmanned multi-shift operation without external attachments — and with a footprint of only four square meters.
- **Optimized for your application**
  Thanks to its comprehensive equipment levels and options, the KERN Micro can be perfectly adapted to suit your requirements and applications. We drew on the vast combined experience of our in-house parts manufacturing operation and our customers when developing this machine. Even after delivery, we support you with process creation and production optimization.
- **Maximum productivity and precision**
  The proverbial KERN precision not only includes ultra-precise machining in the micrometer range, but also optimum repeatability with maximum productivity from the first part. A significantly lower rejection rate saves costs and is an important step on the way to optimized production.
- **Flexible and competitive**
  The KERN Micro is based on an agile technology platform that is continually evolving. You can benefit from these levels of evolution in the future through retrofits and updates, enabling you to keep your KERN Micro up to date in the long term and thus securing your competitiveness.



- **Large workpieces**
  The clever arrangement of the 4th and 5th axes enables large swivel ranges and optimal utilization of the working space. This makes it possible to process large workpieces up to 200 mm in height and 350 mm in diameter.

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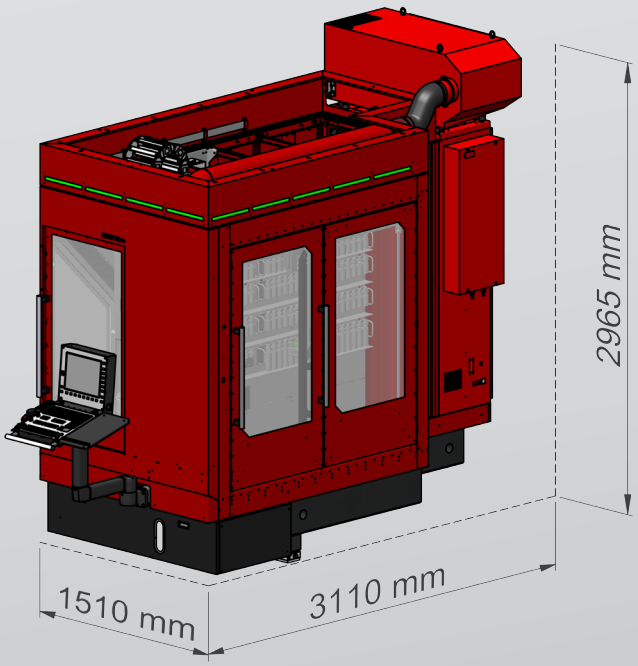
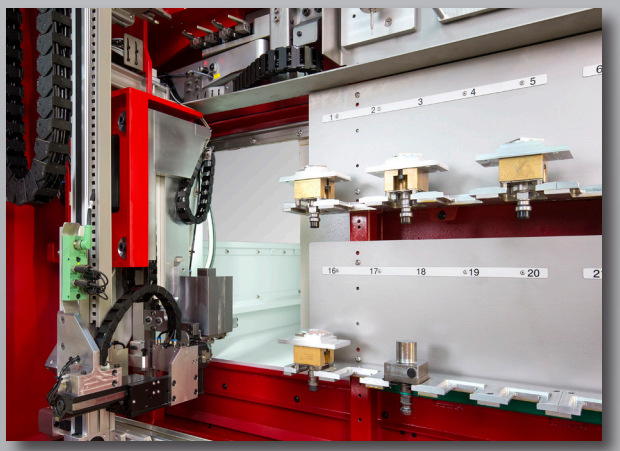
Technical specifications **KERN** Micro



Outstanding ergonomics and usability



Integrated tool and workpiece changer

Linear axes
Traverse paths X/Y/Z: 350/220/250 mm
Max. clamping surface: Ø 350 mm
Max. workpiece weight: 50 kg
Traverse speed: 30 m/min
Acceleration: 10 m/s2

Rotary and swivel axes
Rotary axis: 360° continuous / 200 rpm
Swivel axis: 220° (opt. 280°) / 600°/s
Clamping swivel axis: 300 Nm

Spindle options
HSK 25: 35,000 rpm, 6 kW (S1)
HSK 25: 50,000 rpm, 6 kW (S1)
HSK 40: 42,000 rpm, 15 kW (S1)

Workpiece size
Height up to 200 mm
Diameter up to 350 mm

Tool changer
HSK 25: 20, 101 or 209 capacity
HSK 40: 18, 90 or 186 capacity
Max. tool diameter: 70 mm
Max. tool length: 150 mm
Chip-to-chip time: 4.5 s
Optional: Expansion with combined tool and workpiece changer

Technical concept
Central cooling management with 0.2-K accuracy
One-box machine
5-axis simultaneous machining
Heidenhain TNC 640 controller

Dimensions and weight
Weight: 6,100 kg
Min. space requirement W/D/H: 1.51 x 3.11 x 2.97 m

Technical changes reserved.