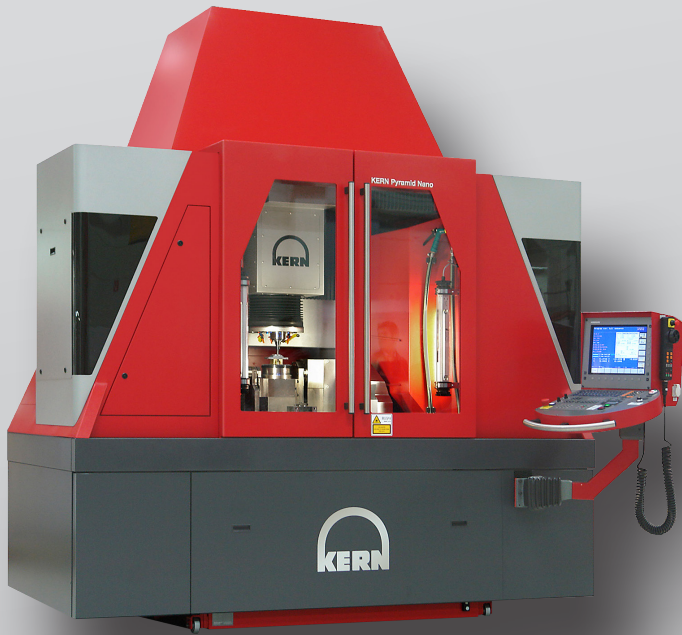


# KERN Pyramid Nano

Perfection in every dimension



The KERN Pyramid Nano is designed for applications requiring high precision and surface quality - even on large workpieces which at the same time require short machining times.

With its integrated workpiece changer, the KERN Pyramid Nano is capable of unmanned operation - even during 5-axis simultaneous processing.

The core of the machine consists of hydrostatically supported and driven axes that are virtually wear-free and thus promise life-long precision. In addition, hydrostatics allows high acceleration coupled with excellent vibration damping, which brings productivity and precision into perfect harmony. In conjunction with KERN's proprietary thermal management system, you have a perfectly optimized machine at all times.

This uncompromising focus makes the KERN Pyramid Nano one of the most accurate CNC machining centers in the world. Which is why it is used for the most demanding applications both in industry and the research and development field.

The optional jig grinding package allows efficient milling and grinding in a single clamping and makes the KERN Pyramid Nano a supremely productive milling and grinding system.

## Features and benefits at a glance:

- **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. The design concept of the KERN Pyramid Nano aims to push the limits of feasibility and ensure maximum precision on the workpiece during series production.

- **Life-long precision**

By combining an intelligent machine structure and gantry design with premium components and hydrostatic drives and bearings, KERN has ensured that the machine will retain optimum accuracy throughout its lifetime. Maximum precision, an absence of wear and series stability over prolonged periods are thus the fundamental qualities of the KERN Pyramid Nano.

- **Optimized for every application**

The KERN Pyramid Nano can be perfectly adapted to your requirements and applications thanks to a comprehensive range of equipment levels, modules and accessories. The fully integrated jig grinding package enables the KERN Pyramid Nano to be used for a wide range of diverse applications. Even after delivery, we are ready to support you with process creation and production optimization.

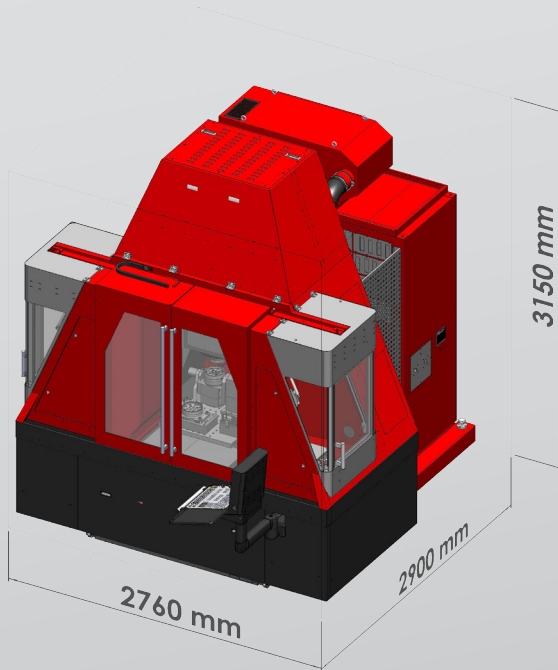
- **Automation and productivity**

In addition to an internal tool changing system, the KERN Pyramid Nano also includes an integrated workpiece robot with workpiece magazine, making it optimally designed for unmanned operation. External workpiece loading systems can be integrated seamlessly into the machine and optimized for your specific application.



Automated dressing in optional jig grinding package

# Technical specifications KERN Pyramid Nano



## Axes

Traverse paths X/Y/Z: 500/500/400 mm  
Max. clamping surface: 600 x 600 mm  
Max. workpiece weight: 250 kg  
Traverse speed: 25 m/min  
Acceleration: 10 m/s<sup>2</sup>

## Rotary and swivel axes

Rotary axis: 360° continuous  
Swivel axis: -20° to +110°  
Holding torque: 200 Nm

## Spindle options

HSK 25: 50,000 rpm, 6.4 kW (S1)  
HSK 40: 42,000 rpm, 11 kW (S1)

## Workpiece size

480 x 480 mm

## Workpiece changer

Fully automatic workpiece changing system  
with 20 to 200 positions

## Tool changer

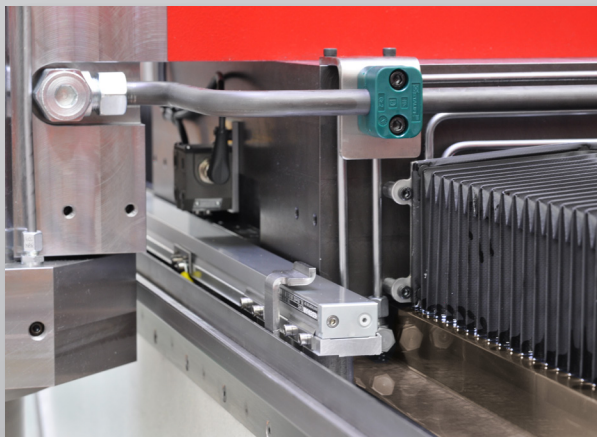
HSK 25: 32, 64 or 96 capacity  
HSK 40: 25, 50 or 75 capacity  
Max. tool diameter: 60 mm  
Max. tool length: 160 mm  
Chip-to-chip time: 5 s

## Technical concept

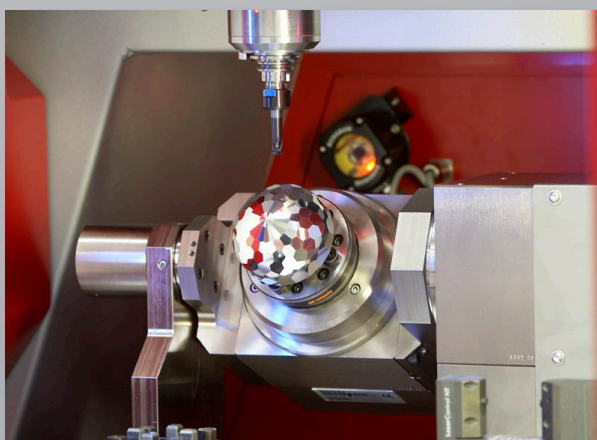
Central cooling management with 5 separate circuits  
Hydrostatically supported and driven axes  
Gantry design  
5-axis simultaneous machining  
Heidenhain TNC 640 controller

## Dimensions and weight

Weight: 8,100 kg  
Space requirement min. W/D/H: 2.85 x 3.58 x 3.14 m



Smooth running by hydrostatic guides



Surfaces in perfection



Technical changes reserved