



Brand of the CHIRON Group

# High Performance Motorized Spindles

**Predictive maintenance | Interconnection | Sensorization | M2M communication**

## **HSTec offers customized solutions for CNC machine tools and drive technology**

High-precision grinding spindles with speed up to 90000 rpm  
High-power milling spindles up to 100 kW  
Turning and drilling spindles  
Motorized spindles for dressing applications  
Motorized spindles for robotic automation  
Customized motors for various demanding applications  
Two-axis milling heads  
Linear drive units

## **SMART solutions integrated in spindle housing**

Data logger - Data acquisition and monitoring system  
Active balancing system  
Compensation of the spindle axial thermal expansion  
High-resolution speed and position sensor, incremental or absolute encoders  
Automatic tool clamping system

## **Advanced features:**

Compatibility with all control devices and CNC machine programs  
Mounting dimensions, drive specifications according to customer request  
Tool interface: HSK, SK, Capto, BT, EX  
Cryogenic machining using CO<sub>2</sub>

## **Application and utilization of SMART spindle features**

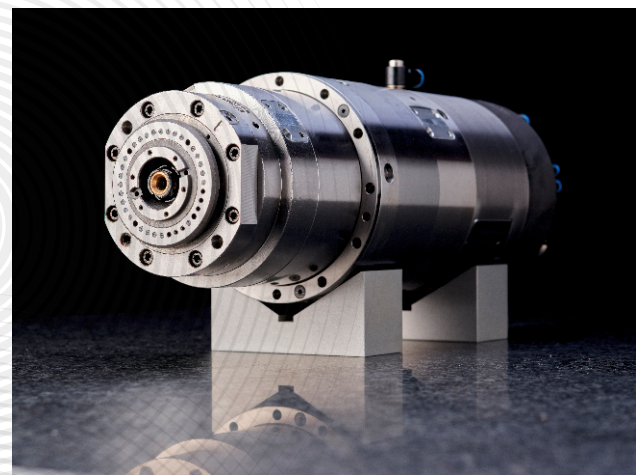
Predictive maintenance using real-time monitoring of bearing temperatures, shaft speed and vibration

Remote monitoring and troubleshooting

Measurement and correction of incurred shaft imbalance during spindle operation

## **Over 30 years of expertise in motorized spindle**

- More than 500 spindle types developed
- Customized solutions for every application



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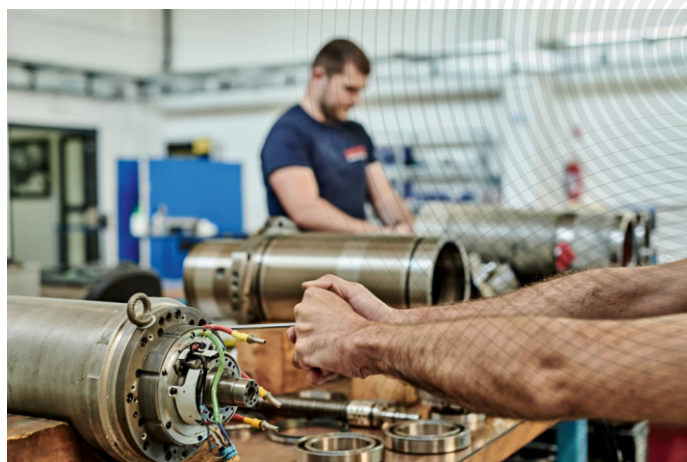
## Spindle service and repairs

**Consulting | Diagnostics | Repairs | Redesign | Optimization**

With decades of experience, a highly skilled team, and cutting-edge equipment, we've established ourselves as the regional leader in spindle service and repair.

At HSTec, we provide comprehensive support for spindles from all manufacturers, including:

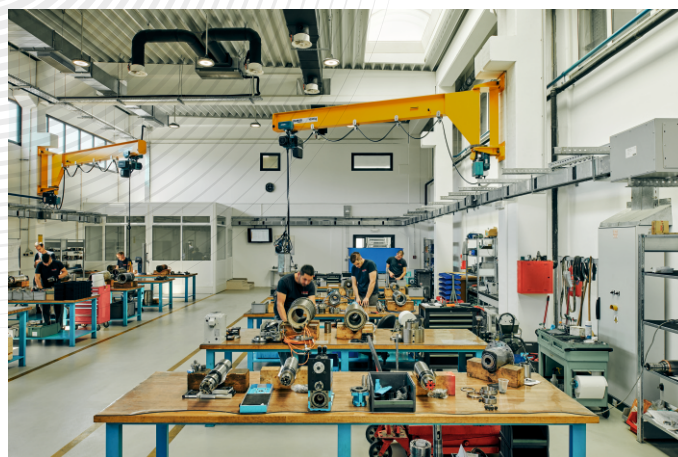
- Customer consulting and diagnostics
- Professional repairs and refurbishments
- Redesign and performance optimization



The department is equipped with a modern flexible laser for deposit and contour welding, different types of test and diagnostic devices for spindle vibration analysis, for high-voltage stator winding insulation testing and for determining the accuracy of various sensor types.

Each spindle, received for repair or service, undergoes through testing and diagnostics of all functionalities, in order to make the spindle condition report. Further steps are taken to repair and possibly optimize the spindle, with the aim of extending its service life.

Only original spare parts are used, or by appointment, replacement parts that meet the specifications of the original parts. All the proposed solutions are made according to the customer's needs and the requirements of the machine that uses the spindle.



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