

SPINDLE SERVICE AND SPINDLE REPAIR WITH HIGHEST PRECISION

Since our foundation in 1992, we have successfully repaired milling spindles, grinding spindles, turning machine spindles, drill spindles, main spindles and dressing spindles of all makes.

It doesn't matter if it is driven by a synchronous or asynchronous motor, belt, gear wheel or coupling. Our test stations featuring the latest technology are well-equipped for this job.

In order to meet the constant requirements due to further developments in the spindle technology, we are continuously in close and trustful contact with our customers, suppliers and partners. Investments in the relevant equipment as well as permanent trainings of our employees play an important role and are a matter of course for us.

Optimization and modification of the spindles to increase service life and save costs are as important to us as customer satisfaction, quality, speed, flexibility, value for money and the highest possible precision of spindle repairs.

More than 20,000 successfully completed spindle repairs have justified the trust placed in us.
Of course, we are certified according to DIN EN ISO 9001:2015.



GERMANY

SMZ GmbH
Robert-Bosch-Str. 11
71394 Kernlen

+49 7151 20534-0
info@smz-spindelservice.de
www.smz-spindelservice.de

ITALY

SMZ Italia S.r.l.
Via Brandizzo, 184
10088 Volpiano (TO)

+39 011.99.53.534
smz@smzitalia.com
www.smzitalia.com

POLAND

SMZ Polska Sp. z o. o.
ul. Rozwadowska 7
PL-61 – 334 Poznan

+48 (61) 887.0475
smz@smzpolska.pl
www.smzpolska.pl

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OUR RANGE OF SERVICES

Being the “heart” of the system, the spindle is the most important element of the machining centre as well as of the CNC, milling, grinding, turning or drilling machine.

If the spindle fails, this usually means outage of the whole machine, production freezing as a result.

This is where we come into play: to revive your production as quickly and inexpensive as possible and with best quality.

As the spindle repair is only one component of the comprehensive servicing and maintenance work, here is a list of our ample range of services.

- Spindle service & spindle repair
- System solutions for spindles
- Optimization of spindle systems
- Sale of spindle upon request
- Spindle modifications
- Vibration analyses
- Maintenance contracts
- Consultation service
- Breakdown analyses
- Driven by synchronous and asynchronous motors
- Driven by a belt or gear wheel drive
- Drive of spindles up to 180,000-1min
- Reconditioning of von HSK [hollow shank taper] and SK [shank taper] mount
- Reconditioning of bearing seats
- Exchange of rotary encoders
- Exchange of clamping sets and clamping systems
- Maintenance trainings



SPINDLE SERVICE THIS IS HOW IT WORKS AT SMZ:

- 1 – The customer sends the spindle to SMZ.
- The spindle is entered in our system database.

- 2 Incoming control
 - Checking the actual state with testing of the draw-in force, the electrical components such as motor, rotary encoder and sensors. Checking the coolant flow, measuring radial and axial run-out.
 - If possible, short test run on our test station.
 - If necessary, the spindle will be forwarded to the dismantling department.

- 3 Dismantling of the spindle
 - incl. control of the electric components, measurement of the individual parts, failure analysis and drawing up a repair report.

- 4 – Detailed cost estimate to the customer
- After approval by the customer, we will continue with point 5

- 5 Assembly of the spindle with all individual and spare parts
 - Cleaning of individual parts
 - Dynamic balancing of the spindle shafts to keep the vibrations as low as possible in advance (balancing quality G=2.5)

- 6 Test run
 - Fully automated test run with measuring and monitoring of temperature, lubrication, rotation speed and vibrations up to 180,000 - 1min and a nominal current up to 250A for synchronous and asynchronous motors.

- 7 Final inspection
 - Final inspection of the spindle regarding quality and accuracy
 - Test protocol draw-up for customer and system database



SPINDLE REPAIR

The maintenance and repair offer applies to all standard spindle types on the world market and is carried out according to state-of-the-art technology. In intensive cooperation and constant exchange of experience with partner companies, customers and suppliers, we are continuously expanding our knowledge of a large variety of spindle types.

We use the experience and knowledge we have gained in more than 30 years of spindle repairs to your advantage. Quick and cost-optimized repairs are enabled through proven process operations and experienced spindle mechanics.

On all work carried out by us you will, of course, receive a 6-month guarantee.