

YOUR SPINDLE PARTNER

FOR GMN AND
OTHER MAKES
AND MODELS

www.gmnusa.com

GMN USA



SPINDLE REPAIR AND SERVICE

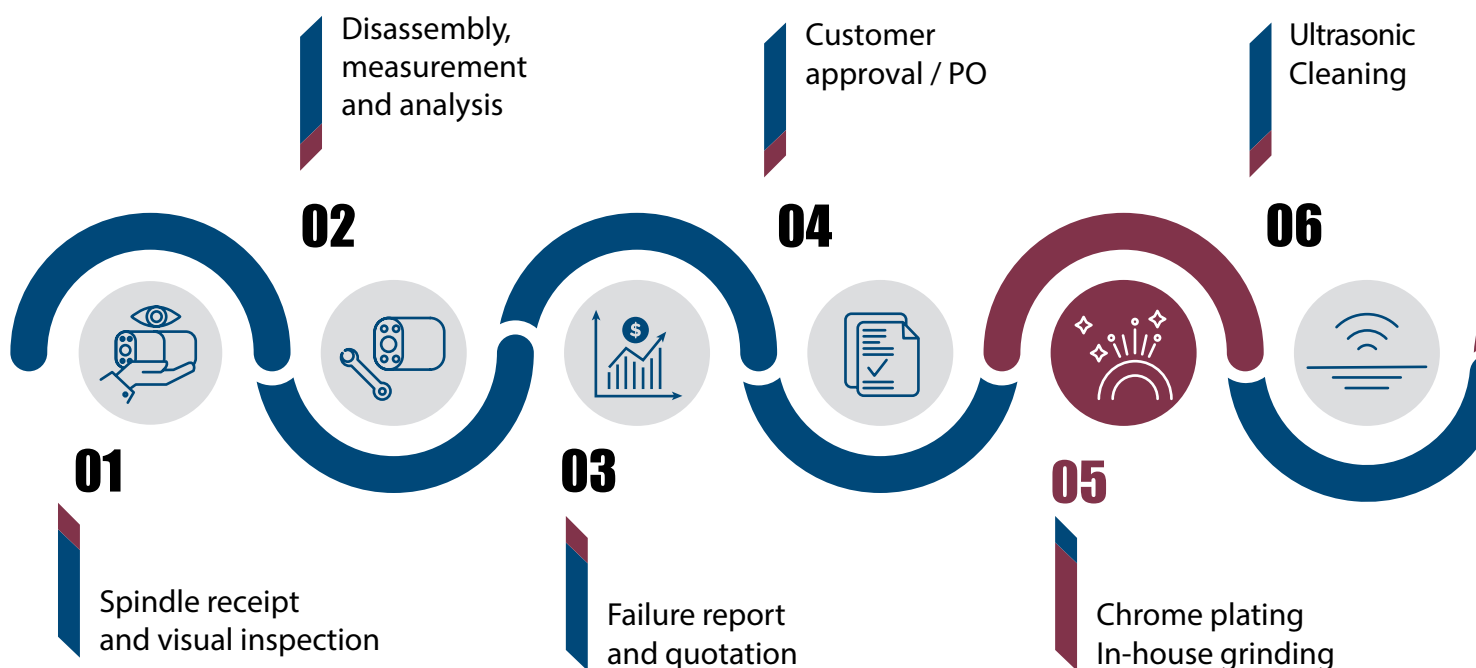
OEM QUALITY AND EXPERTISE WITH OUR INDUSTRY STANDARDIZED SPINDLE REPAIR PROCESS

Our services are not only focused on GMN spindles, but on almost all makes and models. The most extensive spindle repair process in the industry guarantees your spindle is returned according to OEM specifications.

We only use the best components that comply to GMN quality standards, which guarantees our customers the best possible accuracy, efficiency and reliability.

Expertise and competence, combined with state-of-the-art test equipment, ensure the quality of all spindle repairs. We provide a full range of design, development, manufacturing, testing and repair services.

REPAIR PROCESS

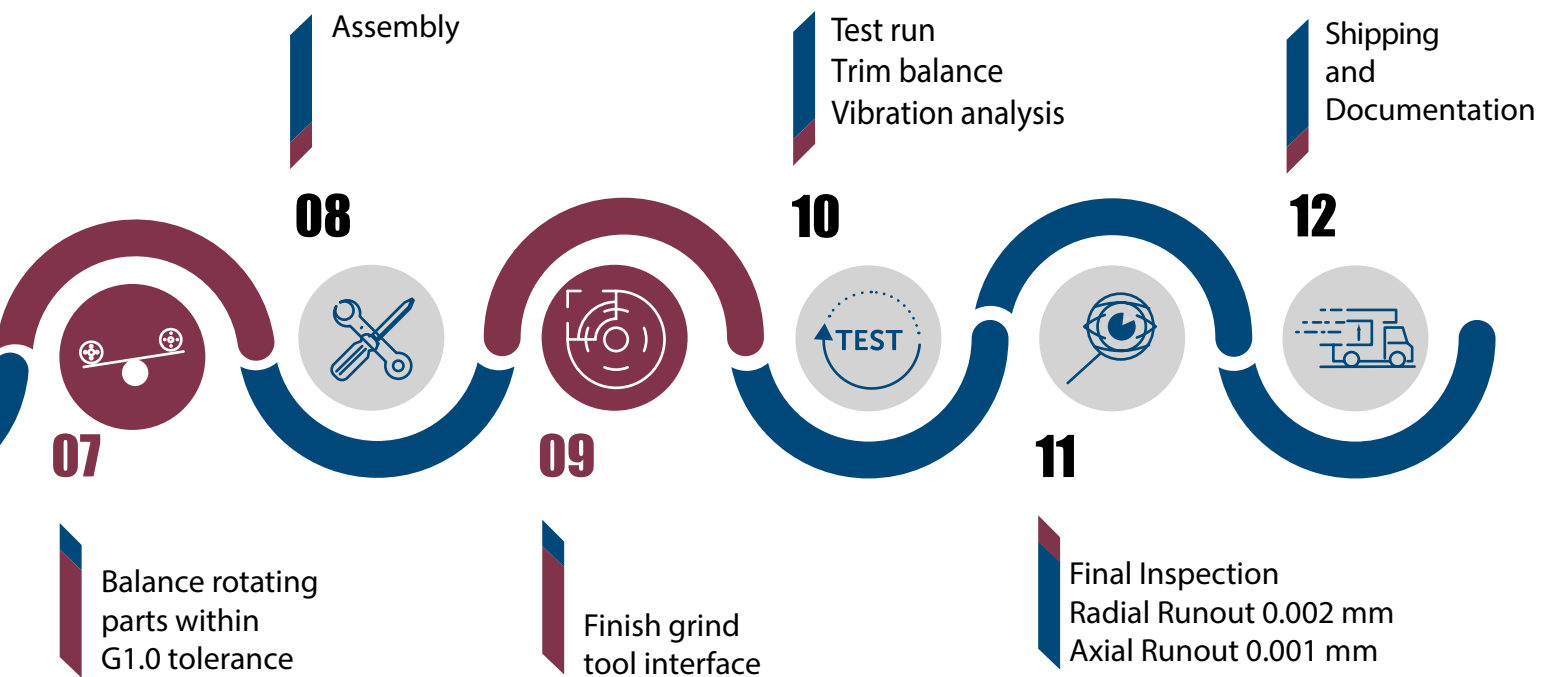


GMN USA, a subsidiary of GMN Germany, specializes in spindle technology for the North American market, offering robust products, sales, support equipment and repair services.

Our team is focused on providing the best spindle repair process available by improving your spindle's lifetime and increasing the capability of your machine tool.



LET US PUT MORE THAN 100 YEARS OF SPINDLE EXPERIENCE TO WORK FOR YOU!



● Competitive Advantage

SPINDLE PRODUCTS

We offer the best solution for your application from high-speed grinding to high-power milling!



Manual Tool Change

OD	80 - 400 mm
Speed	Max. 250,000 rpm
Power	Max. 36 kW (S1)
Torque	1000+ Nm (S1)
Motor	A-/Synchronous
Tool Type	Thread Pilot, HSK-C
Lubrication	Oil-Air / Perm. Grease
Tool Change	Manual

Application: Grinding, Milling, Drilling

Automatic Tool Change

OD	80 - 380 mm
Speed	Max. 90,000 rpm
Power	Max. 150 kW (S1)
Torque	Max. 1,005 Nm (S1)
Motor	A-/Synchronous
Tool Type	HSK, SK, BT, C, KM4X
Lubrication	Oil-Air / Perm. Grease
Tool Change	Automatic

Application: Grinding, Milling, Drilling



Custom Engineered

OD	Customer's Spec
Speed	Max. 250,000 rpm
Power	Max. 350 kW (S1)
Torque	Max. 1,750 Nm (S1)
Motor	A-/Synchronous
Tool Type	Customer's Spec
Lubrication	Oil-Air / Perm. Grease
Tool Change	Manual / Automatic

Application: Grinding, Milling, Drilling, Test Stand, Generators

SPINDLE ACCESSORIES



The functionality, effectiveness and lifetime of your spindle can be increased with the proper accessories.



QUILLS



LUBRICATORS



SPINDLE MONITORING IDEA-4S



CABLE ASSEMBLIES AND CONNECTORS



DRIVES



CHILLERS

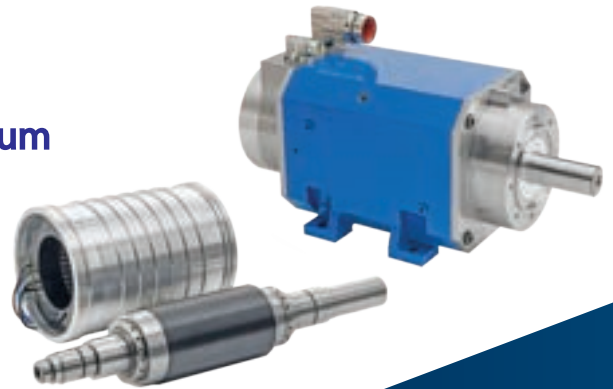
GMN HIGH PERFORMANCE ELECTRIC MOTORS AND MOTOR COMPONENTS



GMN high-speed electric motor characteristics include:

- ▣ High Power Density
- ▣ Compact / Robust / Precision Design
- ▣ High Quality Balancing

Providing superior product quality and optimum reliability.



Our electric motors impress with their maximum power density and compact design.

EFFICIENT



Maximum performance,
minimal loss

COMPACT



Same performance,
smaller footprint

FLEXIBLE



Easy integration with
existing system

SPINDLE HOTEL

Want to ensure more storage space at your company's facility? Store your spindle in our safe and climate-controlled building at a low annual cost!



WHAT ARE THE BENEFITS?



Knowing your spindle receives premium care



Opportunity to reduce downtime



Continuous maintenance and testing

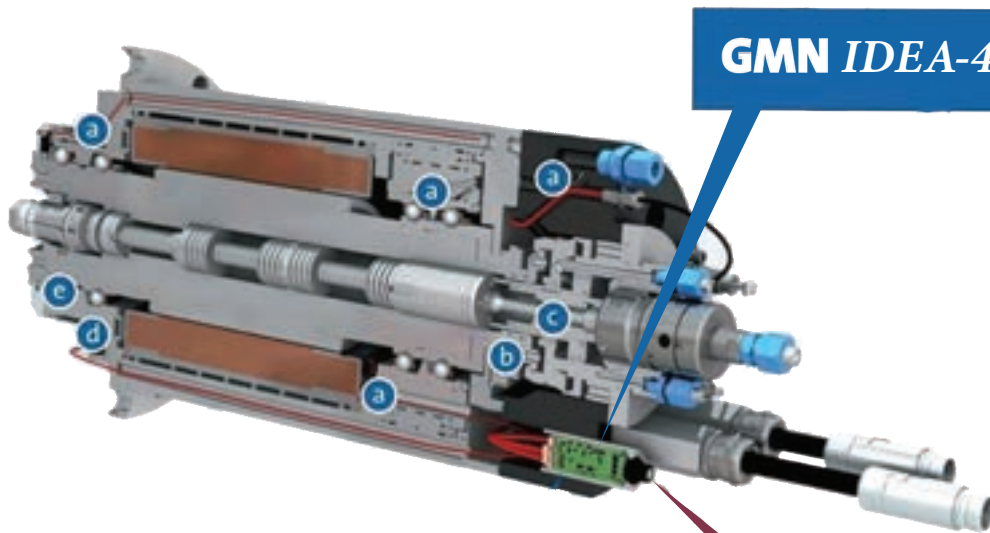


Warranty begins once spindle leaves our facility



Contact us for more information

SPINDLE MONITORING IDEA 4S



GMN *IDEA-4S*

Measurement Data:

- ✓ Acquisition
- ✓ Recording
- ✓ Evaluation & Monitoring
- ✓ Transmission

Sensors

- a. Temperature
Bearing
Motor
Cooling
- b. Speed Rotation angle
- c. Tool Clamping
- d. Oscillation
- e. Axial displacement

 **IO-Link**

Optional Features:

- + EIA - 485
- + Optical Fiber

AVAILABLE IN THREE DIFFERENT VARIANTS:

IDEA - 4S BASIC

IDEA - 4S STANDARD

IDEA - 4S ADVANCED



FIELD SERVICES

Get service right at your shop!

GMN USA offers on-site services including:

- Vibration analysis
- Trim balancing
- Initial commissioning of a spindle
- Sensor adjustments
- Assistance with the removal of a stuck tool



GMN USA is committed to providing you with a spindle that operates at its best, minimizing downtime for your production. Upholding this standard will guarantee the longest possible lifespan for your spindle.



IN-HOUSE GRINDING

All components are reconditioned to industry standards!

Some tool interfaces that we grind include:

- ▣ HSK
- ▣ SK
- ▣ BBT
- ▣ CAT

Tolerances of .002 mm concentricity are held

Operations:

- ▣ ID/OD Grinding
- ▣ Rotary Surface Grinding
- ▣ Center Grinding



CUSTOM BALANCING

Prior to assembly, all spindle components are pre-balanced

We balance shafts up to 1000 pounds

Trim balancing is done on every spindle at the service speed, up to 250,000 RPM

Balanced to an ultra-high precision of G1 tolerances



CUSTOM MACHINING

Design and fabricate necessary tools for a proper spindle rebuild

Re-engineering parts for other makes and models

Adjustment of parts for proper spindle functionality

Holds tolerances of .001 mm



Examples of Balanced Components:

- ▣ Turbines
- ▣ High-Speed Motors
- ▣ Fans
- ▣ Rotors
- ▣ Servos

And More!

GMN USA's high performance electric motors, spindle products, and repair services can be utilized in numerous industries by providing customization to integrate a wide range of customer requirements.



Some Industries Include:

Medical : Vacuum sealing, etc.

Food & Beverage : High speed filling, air knife compressors, capping/canning, etc.

Testing / Life Science : Custom test stands, laboratory automation, dispensing systems

Machinery & Plant Engineering : Axle drives, main drives, central drives

Manufacturing : Metal, woodworking, milling, grinding, drilling and sawing

Electric Mobility : Traction and travel drives, belt drives, auxillary and application drives for work machines

Process Engineering : Pumps, compressors, expansion drives, turbines, residual heat utilization systems and generators

