

SPINDLE MANAGEMENT PRODUCTS

- **Electronic Retention Dynamometers**

(Pull Force Grip Measuring Gages)
Compact load cell with digital display and family of taper adapters can service a variety of machine tools. Quickly determines if loss of retention force is causing poor tool performance or surface finishes. Helps to maximize tool life, spindle life, and system rigidity.



- **Tapered Plug Gages**

Used to measure and verify contact of tool with taper surface to maintain and assure repeatability from one tool insertion to the next.



- **Test Bars**

Individually calibrated and certified test bars accurately check spindle taper and potential tool runout. Concentric to taper within .0002" TIR. Diameter within .0002" over entire length.



- **Tool Holder Gage**

The Taper Check™ can quickly detect tool holder shank wear to within .0001". Worn tool holders used in a new spindle taper will also cause premature spindle taper wear and possibly bearing failure due to frequency vibration.



Tool holders can be tested with components assembled and retention knob installed.

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ADDRESS SERVICE REQUESTED

- **In-Place Spindle Taper Grinding**
- **On-Site Spindle Repair**
- **Boring Mill Inserts**
- **Spindle Rebuilding**
- **Morse Taper Conversion Cartridges**
- **Spindle Management Products**

Keep this brochure - call us when you have spindle problems.



YOUR COMPLETE SPINDLE MANAGEMENT RESOURCE

Spindle wear leads to poor quality parts and, ultimately, to expensive machine shutdowns for spindle and bearing replacement.

Locher, Inc. offers you several economical alternatives to keep your machines up and running. We are technically advanced specialists in the repair and servicing of ultra-precision, high-speed, high-frequency, and belt-driven spindles, either in our factory or yours.



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IN-PLACE SPINDLE TAPER GRINDING

Long-term wear eventually creates a loss of as much as 50 percent or more of surface contact between the spindle and the taper. To restore this contact area, in-place grinding is a cost-effective alternative to spindle unit disassembly. Locher's experienced technicians and specialized equipment will restore taper contact to 90-100 percent of the surface area, which eliminates excessive taper runout and improves repeatability.

In-place grinding typically takes just one day per spindle, and the cost is affordable. Spindle bearings in good condition do not have to be removed. Machine alignments are not affected by in-place grinding, and tolerances are held within new spindle specifications.

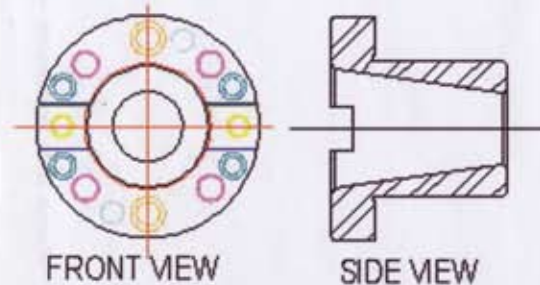


ON-SITE SPINDLE REPAIR

In some cases, spindle malfunctions not caused by normal wear can be corrected by on-site rebuilds or cartridge replacement. This often involves a "time vs. cost" judgement, and our technicians can analyze and explain the options available so that informed management decisions can be made.

BORING MILL INSERTS

To avoid the long time and high costs of spindle sleeve or spindle bar replacement in large horizontal boring machines, Locher, Inc. has designed a *repairable* and *replaceable* tapered insert that installs into the spindle bar. This in-plant process takes about five days, with test cuts being performed on the fifth day. The advantage of this technique is that if the tapered area of the spindle bar is damaged in any subsequent machine crash, a new insert can be quickly installed by the machine owner with minimum downtime.



SPINDLE REBUILDING

When your spindle is received at our shop, we will do a complete teardown and evaluation, then quote your repair before beginning any work. Your spindle is assembled using class 1 laminar flow benches in a controlled, "clean room" environment. All rotating components are accurately balanced to stringent tolerances on Schenck Trebel ultra-precision balancing machines. Each spindle undergoes vibration analysis, is run in 100 percent, and tested to meet or exceed OEM specifications.

MORSE TAPER CONVERSION CARTRIDGES

Locher, Inc. has designed removable cartridges that convert old Morse taper spindle bars into standard #40, #45, and #50 CAT taper. An internal, hydraulically actuated collet/belleville spring drawbar system is used with an operator's clamp/unclamp control. This affordable machine update gives you more tooling choices, quicker tool changes, and reduced inventory through the elimination of Morse tool holders.

For prompt, top-quality spindle and machine services and products, call Locher, Inc. at

800-956-2437

or E-mail us at

info@spindles.org

or visit our Web site at

www.spindles.org



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