Professional reconditioning of Machine Tool spindles





Any kind of spindle

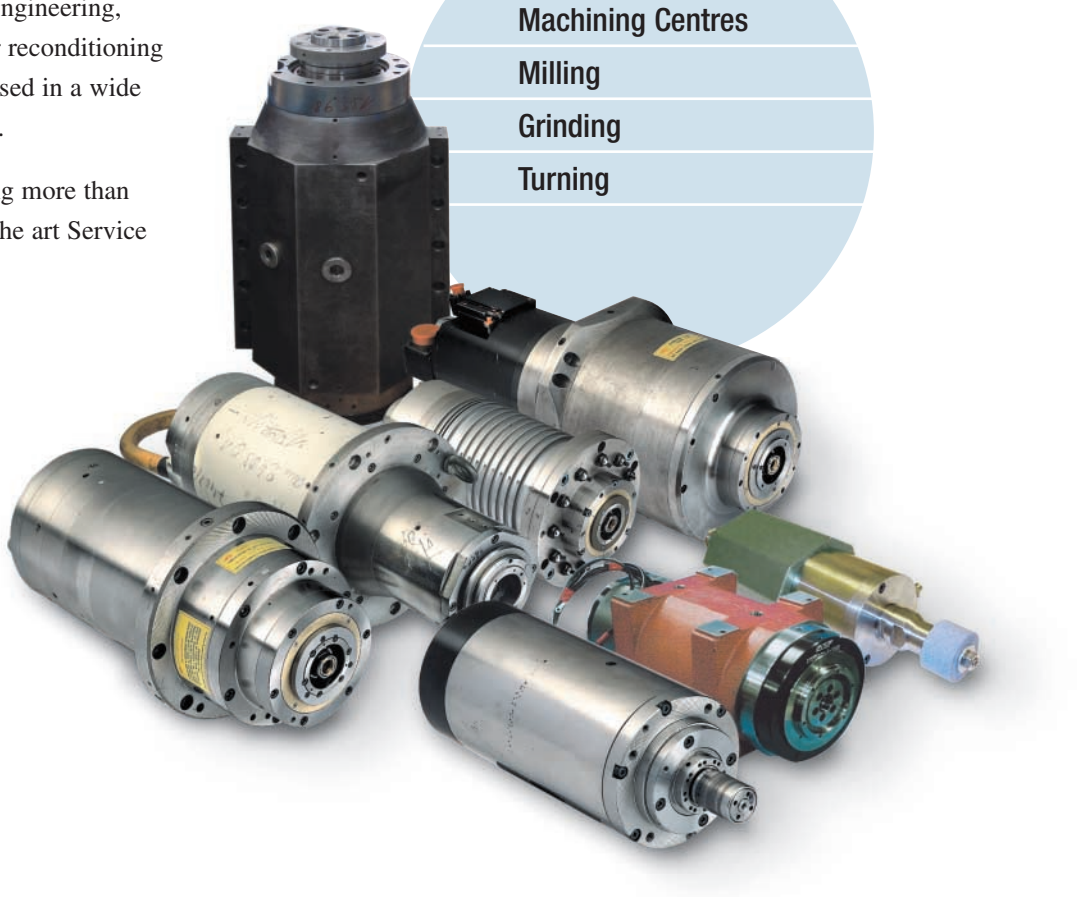
As world leader of rolling bearings, SKF is operating more than 5000 Machine Tools worldwide.

Thanks to its deep knowledge of high precision bearing technology and of spindle engineering, SKF has the necessary expertise for reconditioning machine tool spindles of all kinds used in a wide range of applications and industries.

SKF is reconditioning and upgrading more than 6000 spindles yearly in its state of the art Service centres.

Applications

- Machining Centres
- Milling
- Grinding
- Turning



Designs

- Belt
- Motor integrated
- Direct
- Block & cartridge

Technologies

- Oil & grease lubricated
- HSK & ISO clamping
- Ball & roller bearing

Your one stop source

Differentiated service response

What you need, when you need it.



First in first out
Service in sequence order with committed deliveries



Scheduled
Appointment with prioritised service attention



Emergency
Immediate and full attention with maximum priority



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Total condition review



Balancing



Mounting

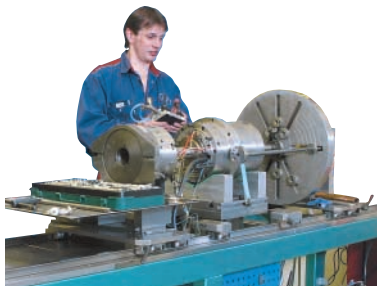


Measuring



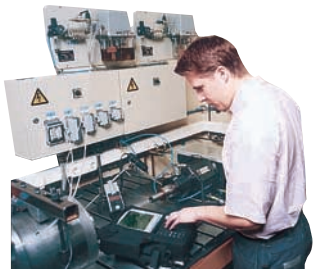
Run-in

General visual inspection	1	12	Stator & rotor inspection
Incoming function test (opt.)	2	13	Bearing journal control
Motor and electrical check	3	14	Tool nose and shaft control
Drive component inspection	4	15	Repairability review
Spindle disassembly	5	16	Shaft balancing
Clamping system inspection	6	17	Encoder adjustment
Bearing inspection	7	18	Spindle run-out control
Coolant permeability check	8	19	Spindle clearance control
Lubricant inspection	9	20	Spindle run-in
Sealing inspection	10	21	Vibration control
Sensor control	11	22	dB filing & feed-back forms



Dismounting





Vibration check

For professional reconditioning

State of the art set-up







Facility

- Controlled atmosphere
- Adapted measuring
- Precision machining

Vibration control

- Damage identification
- Craftsmanship verification
- Low imbalance
- M/T installation reference

Knowledge sharing

- World wide access to central dB

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Spindle condition vs production performance

Professional reconditioning prolongs life time

Production consequences

- Poor component Quality
- Unplanned stops & down time
- Tool life variation
- Administration cost
- Resource consumption

Spindle symptoms

- High temperature
- Noise, vibration & chatter
- Excessive run-out
- Seized or friction errors
- Random malfunction

Spindle defects

- Bearing damages
- Improper journal
- Taper/Quill wear
- Clamping malfunction
- Imbalance
- Stator error
- Alignement error

Root causes

- Crashes
- Overloads
- Lubrication failures
- Coolant & dirt penetration
- Normal fatigue wear
- Auto tool change errors
- Improper reconditioning

Spindle performance

Bearing integrity
Mounting procedures
Bearing journal conditions
Operating temperature
Locking pressure
Preload level
Lubrication permeability
Dirt & contamination

Quality recondition factors

Cleanliness & order
Precision measuring and tools
Controlled temperature
Dynamic balancing
Run-in capability
Vibration control
Bearing and journal control
Spindle repair experience

With the same top quality worldwide

Assured quality

Traceability

- ID marking
- Computerised filing
- Vibration finger print
- Statistics & reporting

Technical standards





Quality assurance



Repair procedure

SKF

Customer value

Expect the maximum and you'll get it

Benefits	SKF features
Minimum production losses	Short & adapted service responses
Few production stops	Maximum spindle endurance
Assured performance	Vibration & mechanical testing
Single supplier	All brands & all defects
Convenient communication	Local service centres
Customised solution	Flexible behaviour
Know-how source	Counselling & project resource
Preventive maintenance input	Failure feed-back & statistics
Maintenance resource release	Fire fighting resource

Outstanding abilities

Expertise

- Consultation & advicement
- Field support
  - Condition control
  - Defect tracing
  - Balancing



Upgrading

- Sealed & hybrid high precision bearings
- Lubrication & sealing systems
- Design improvement
- Recording system



Spindle Hotel

- Supervised storage
- Guaranteed readiness
- Instant shipment
- Adapted containers



Enhancing your competitivity

Partnership frames

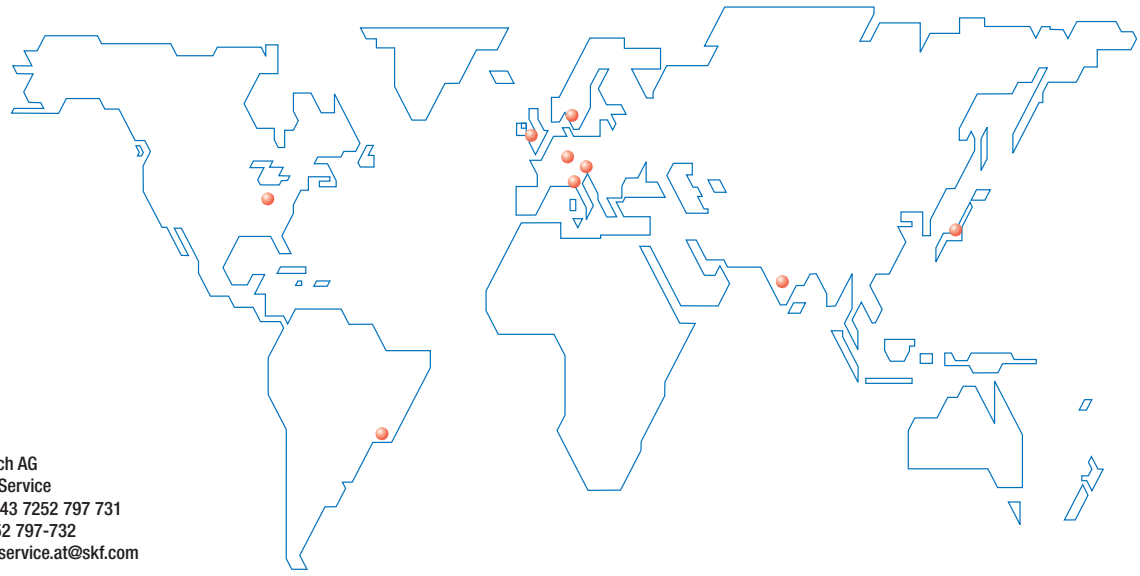
Our priority, your advantage

- Predefined lead-time & pricing
- Customised reporting & statistics
- Simplified administration
- Dedicated service technician
- Dedicated spare-parts inventory
- Customised acceptance levels
- Adapted packaging & shipment
- Condition inspection contract



SKF

SKF Spindle Service Network



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SKF is continuously expanding its Spindle Service network. Please ask your SKF contact for latest information.

Your local partner

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