



Professional reconditioning of Machine Tool spindles

SKF Spindle Service



Machining Centres
Milling
Grinding
Turning

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.



Designs

- Belt
- Motor integrated
- Direct
- Block and cartridge

Technologies

- Oil & grease lubricated
- HSK and ISO clamping
- Ball and 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



SKF



Balancing



Dismounting



Vibration check

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



Run-in



Measuring



Mounting

For professional reconditioning

State of the art set-up



Facility

- Controlled atmosphere
- Adapted measuring
- Precision machining



Vibration control

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



Knowledge sharing

- World wide access to central dB



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
- Alignment 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



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 & advisement
- Field support, condition control, defect tracing, balancing



Spindle Hotel

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



Upgrading

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



Enhancing your competitiveness

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

<http://www.spindleservice.skf.com>

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



Your local partner

SKF Spindel Service, Austria

SKF Österreich AG
Steyr
Tel: +43 7252 797-731
Fax: +43 7252 797-732
E-mail: spindleservice.at@skf.com

SKF Spindle Service, Brazil

SKF do Brasil Ltda
Cajamar, Sao Paulo
Tel: +55 11 4448 8612
Fax: +55 11 4448 8692
E-mail: spindleservice.br@skf.com

SKF Spindle Service, China

SKF Precision Machinery (Shanghai) Co., Ltd.
Shanghai
Tel: +86 21 58543720
Fax: +86 21 58543727
E-mail: spindleservice.cn@skf.com

SKF Spindle Service, France

SKF Equipements - HPR
Ozoir la Ferrière, Paris
Tel: +33 (0)1 64401425
Fax: +33 (0)1 64400675
E-mail: spindleservice.fr@skf.com

SKF Spindel Service, Germany

SKF GmbH
Schweinfurt
Tel: +49 (0)9721 56 2270
Fax: +49 (0)9721 56 2013
E-mail: spindleservice.de@skf.com

SKF Spindle Service, India

SKF Bearings India Ltd
Chinchwad, Pune
Tel: +91 20 5611 2477 / 2277
Fax: +91 20 2745 1266
E-mail: spindleservice.in@skf.com

SKF Spindle Service, Italy

GAMFIOR SpA
Torino
Tel: +39 011 222111
Fax: +39 011 2620906
E-mail: spserv@gamfior.com

SKF Spindle Service, Japan

SKF Japan Ltd
Chino, Nagano
Tel: +81 266 795959
Fax: +81 266 795877
E-mail: spindleservice.jp@skf.com

SKF Spindle Service, Malaysia

SKF Bearing Industries (M) Sdn Bhd
Nilai
Tel: +606 7992200
Fax: +606 7992705
E-mail: spindleservice.my@skf.com

SKF Spindle Service, Mexico

SKF de México, S. A. de C. V.
Puebla, México
Tel: +52 222 2294900 ext. 7006
Fax: +52 222 2294971
E-mail: spindleservice.mx@skf.com

SKF Spindle Service, Russia

SKF Moscow
Moscow
Tel/Fax: +7 095 3177701
E-mail: oleg.shemyakov@skf.com

SKF Spindel Service, Sweden

SKF Sverige AB
Göteborg
Tel: +46 31 3371646
Fax: +46 31 3371113
E-mail: spindleservice.se@skf.com

SKF Spindle Service, UK

SKF UK Ltd - MTSR
Luton
Tel: +44 (0)1582 494674
Fax: +44 (0)1582 494808
E-mail: spindleservice.uk@skf.com

SKF Spindle Service, USA

SKF Spindle Service
Grafton, Wisconsin
Armada, Michigan
Tel: +1 262 3772434
Fax: +1 262 3779438
E-mail: spindleservice.us@skf.com

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See also

SKF Spindle Manufacturing Network

<http://www.machinetool.skf.com>

