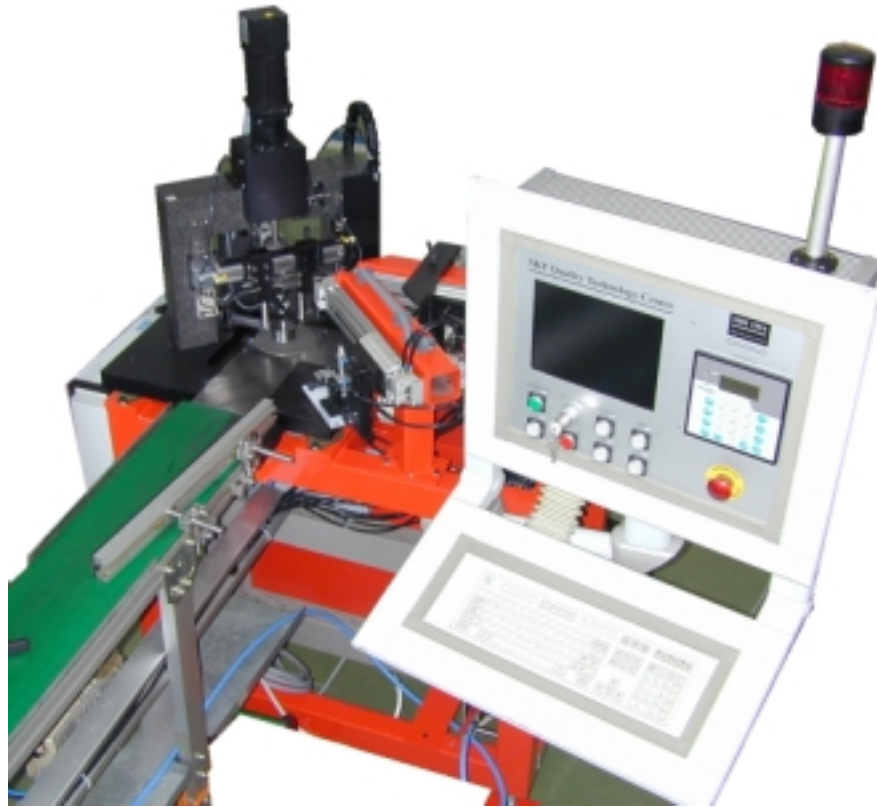


MDI 130A

Ring Measuring Machine



General Description

The MDI is a replacement of current machines, to fulfil future tolerance demands and capability according to the SKF QT5 or Ford MSA. In addition also, to check outer ring, inner ring and bore diameter in order to satisfy customer requirements asking for a more flexible machine.

This machine for ring measurement offers all customers an equipment, which is easy to use, highly flexible, easy adjustable, designed as a construction kit for other ranges, no type dependent tools, minimum resetting time.

The machine is able to operate either as in-line machine, as reference machine without

handling system or as a postprocessor in a closed loop application. The device is controlled by the SKF GME II measuring and control electronics

The measurements are accomplished with a two point dynamic measurement system as designed below. Rings exceeding the tolerance range are rejected with the optional rejection chute.

Automatic calibration of the machine is supported by using master parts - normal rings from the production - which are handled and measured automatically at intervals programmed by the operator.

SKF Österreich AG

Quality Technology Centre

SKF Österreich AG
Quality Technology Centre
Seitenstettner Str. 15
A - 4400 Steyr, Austria
Homepage

Phone +43 (72 52) 797-571
Fax +43 (72 52) 797-574
e-mail qtc@skf.at
Hotline +43 664 43 36 135
qtc.skf.com

Machine Description

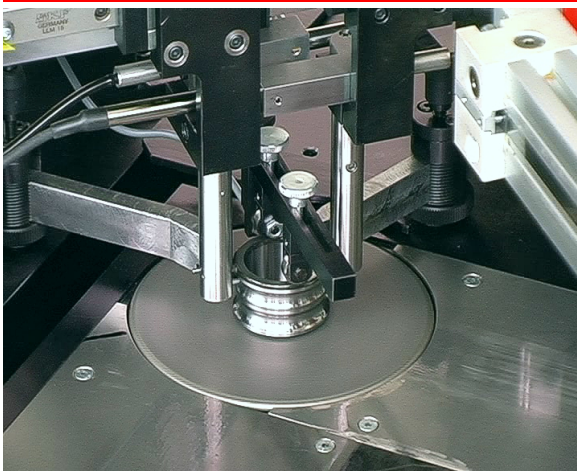
The granite base and top, where the sensors are mounted with quick fixtures, guarantees a maximum of temperature stability, vibration insensitivity and accuracy. The sensors move up and down, driven by an AC motor via a ball bearing spindle. A spindle, included in the table, turns the ring 360° clockwise for the dynamic measurement procedure.

The loading/unloading system is mounted onto a vibration damped welded base frame.

Powerful and user-friendly

The whole machine control is realised with a suspension system in front of the machine which contains a keyboard, normal monitor or optional TFT monitor and the push buttons and switches for the machine.

Measuring Principle



First raceway



Second raceway

Function Description

The ring comes, horizontal laying, on a conveyor belt. It will be pushed with a shuttle cylinder from the loading position onto a table.

Then the bearing rings will be fixed in a Microcentric (shoe system). The sensors will be moved by a motor and ball bearing spindle vertical to the first measurement position. The table turns the ring 360° - then the complete system will be moved to a possible second measurement position. In this way it is possible to measure OD or ID raceways dynamically with two sensors.

All positions are free programmable via the control panel.

The sensors moves back to the start position and a similar unloading system - shuttle cylinder - transport the ring directly onto a

conveyor system and later on as an option with a turning cylinder into a rejection chute. An automatic master part unit is placed on the front side for automatic calibration of the sensor system.

The data acquisition is made with normal inductive transducers (LVDT's), which are mounted directly at a SKF monorail system on top of the machine.

The machine is protected by a safety cover according to the CE - standard with security switches at every door for access to the working area.

A SKF GME II system is used for all control functions, including the analysing and evaluating of the signals and to control the positioning.

Mechanics	
Working Range	outer ø: up to 130 mm, inner ø: depends of the parts; e.g. for outer ring raceway min. inner diameter is 41 mm height: up to 55 mm
Measuring Sensor	Inductive transducers
Output	approx. 515 parts/hour (one measuring position)
Resetting Time	< 5 min.
Tools	Standard: No type dependent tools! All tools and adjustable devices have adjustable quick fixtures.
Colour	Blood orange RAL 2002, safety guards yellow RAL 1002
Electronics	
Machine Control and Measuring Electronic	SKF GME II + electronic cabinet and suspension system with monitor, keyboard, security push buttons
Valve Control Voltage	24 V=
Dimensions and Power Requirements	
Dimensions	H x W x D: 1640 mm x 700 mm x 1040 mm
Weight	appr. 2400 kg (5291 lbs)
Air Supply	min. 5.5 bar (80 psi)
Power Supply	3 x 400 V/50 Hz/1.6 kVA or 3 x 480 V/60 Hz/3 kVA

For more information on your specific application, please contact our engineers at QTC.

QTC, the "Quality Technology Centre" in Steyr, develops, manufactures and markets systems, which are used to ensure the quality in these special fields:

- Roundness and Form Analysis
- Noise and Vibration Control
- Optical Inspection
- Nondestructive Material Testing
- Dimensional Measurement
- Washing
- Laser Marking
- Grease Testing
- Demagnetization
- Cleanliness
- Assembly
- Packaging

QTC supplies the latest technology and highly innovative equipment to customers worldwide and is also the Competence Centre for measuring and quality-related equipment for the SKF Group on a global scale.

QTC, Quality Technology Centre, is located in Steyr - Austria. You are always welcome to visit us.

The best way to reach us is a flight to Linz via Vienna, Frankfurt or Zurich.

We will, of course, arrange the pick up at the airport.

