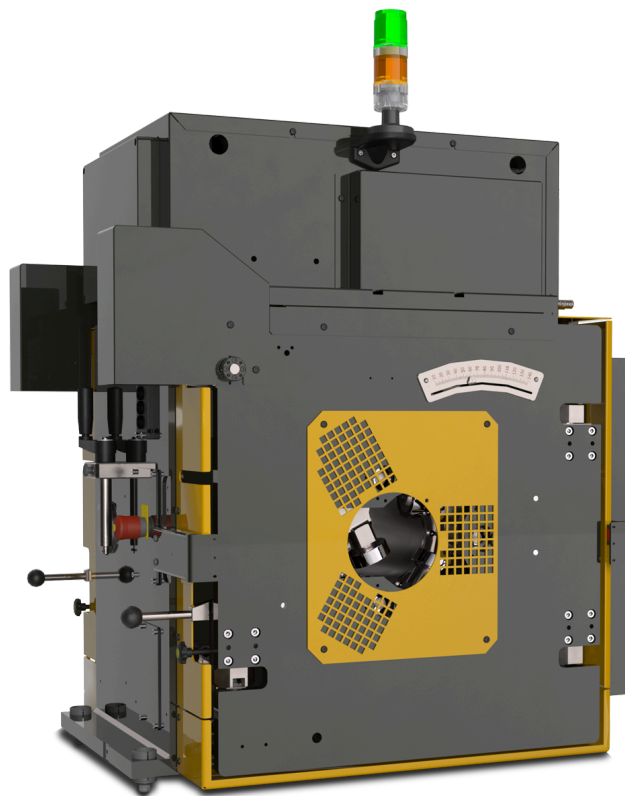




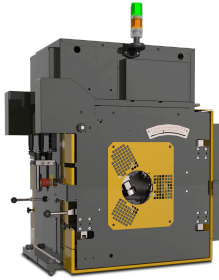
CIRCOFLUX DA SENSOR SYSTEM RO 140

High-precision flux leakage testing for diameters up to 140 mm



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High-precision flux leakage testing for diameters up to 140 mm



Optimized for precise flux leakage testing of common bar diameters. The Ro 140 sensor system is designed for diameter ranges from 10 mm to 140 mm within the CIRCOFLUX DA product family and is particularly suited for reliable surface inspection of hot-rolled ferromagnetic bars in rolling mills and in quality assurance of bars in forging quality.

The system operates using the AC magnetic flux leakage method (AC-MFL) in accordance with DIN EN ISO 9443 and enables reproducible detection of longitudinal, crack-like surface defects from depths of 0.10 mm. Subjective inspection methods such as magnetic particle testing or visual inspection can therefore be reliably replaced.

With an inspection range from 10 mm to 140 mm, the Ro 140 sensor system covers a wide spectrum of typical production applications. The optional automatic size adjustment allows fast and reliable adaptation to different material diameters.

Maintenance-free inductive signal transmission ensures high system availability while reducing wear. In combination with the FOERSTER DA platform electronics, the system provides reproducible inspection results, integrated diagnostic functions, and intuitive operation.

The Ro 140 sensor system can also be combined with the FOERSTER [BARPROOF 140](#) ultrasonic testing system, enabling reliable detection of internal defects in addition to surface inspection.

YOUR ADVANTAGES AT A GLANCE

Reliable defect detection: High-precision detection of longitudinal surface defects from depths of 0.10 mm

Standards compliance: Standards-compliant inspection of hot-rolled bars according to DIN EN ISO 9443

Wide inspection range: Inspection range from 10 mm to 140 mm for typical rolling-mill applications

High resolution: 2 × 40 inspection channels for high resolution and reproducibility

Automated changeover: Automatic size adjustment reduces changeover time and minimizes setup errors

Inline inspection: Inline-capable inspection at feed speeds up to 4 m/s

Detailed result visualization: High-resolution C-scan visualization of inspection results

Maximum usable length: Reduced untested bar ends for maximum usable inspection length

High reproducibility: Reproducible inspection results through automatic calibration routines

Unified user interface: Unified FOERSTER DA platform for easy operation and integration

Digital integration: Standardized inspection data and open interfaces for digital production environments

Future-proof technology: AI-ready for future AI-based analysis and assistance functions

NORMS

DIN EN ISO 9443: Describes the technical delivery conditions for hot-rolled steel bars and wire rod. The magnetic leakage flux method with probes is

recommended.
CIRCOFLUX DA RO 140

TECHNICAL INFORMATION

DIAMETER RANGE:	10 – 140 mm Ø
MAXIMUM NOISE LEVEL:	70 dB (A)
DRIVE MOTOR POWER:	4,1 kW
VARIABLE ROTATIONAL SPEED:	0 – 1500 U/min
SLOW-DOWN TIME WITH BREAKING (DEPENT ON ROTATIONAL SPEED):	approx. 60 seconds at maximum rotational speed
SCANNING TRACK WIDTH:	160 mm
MAX. TRANSPORTATION SPEED (DEPENDENT ON TEST MATERIAL DIAMETER):	4 m/s
SET-UP TIME WITH ROLLER GUIDE:	approx. 3 minutes (with automatic dimension adjustment approx. 1.5 minutes)
ADDITIONAL SET-UP TIME FOR INNER ROLLER GUIDE:	approx. 5 minutes
WEIGHT WITHOUT ROLLER GUIDE:	approx. 850 kg
NUMBER OF TEST HEADS:	2
MAX. NUMBER OF TESTING CHANNELS	2 × 40
SIGNAL TRANSMISSION:	inductive transmitter
FREQUENCY OF MAGNETIZING CURRENT:	7,5 kHz
TRANSMISSION OF THE MAGNETIZING CURRENT:	inductive transmitter
POWER CONSUMPTION:	4,2 kVA (230 V) and 7,5 kVA (400 V)
CONNECTION TO ELECTRICITY NETWORK:	TN system
WITH AUTOMATIC DIMENSION ADJUSTMENT ROTATING DISC:	no compressed air required, adjustment via electric cylinder and positioning unit
SPECIFICATION OF TEST MATERIAL:	Ferromagnetic bars and tubes with a round surface (bright, peeled, or hot-rolled), free of loose scale, chips, and protruding burrs. Test piece ends must be burr-free, cut square to the bar axis, and free of cross-sectional deformation. Liquids and grease are not permitted.
SPECIFICATION OF TEST MATERIAL – AMBIENT TEMPERATURE:	5 °C bis 45 °C
SPECIFICATION OF TEST MATERIAL – MAXIMUM RELATIVE HUMIDITY:	85 %
SPECIFICATION OF TEST MATERIAL – TEMPERATURE OF TEST MATERIAL:	5 °C to 80 °C



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The FOERSTER Group is represented by subsidiaries and representatives in over 60 countries worldwide. You can find a complete overview on our website.

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