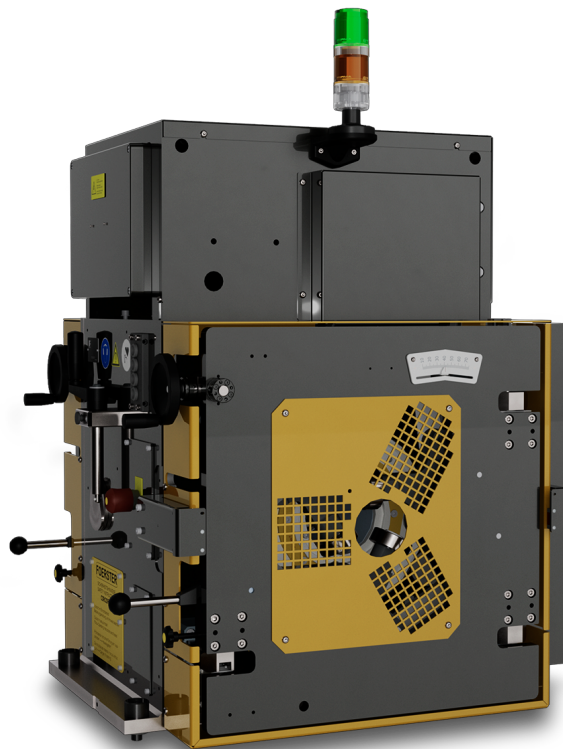




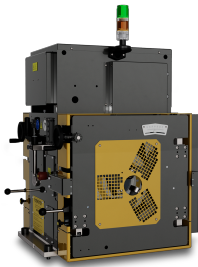
# CIRCOFLUX DA SENSOR SYSTEM RO 75

High-precision flux leakage testing for small diameter ranges



# CIRCOFLUX DA SENSOR SYSTEM RO 75

High-precision flux leakage testing for small diameter ranges



**Maximum precision for small bar diameters.** Within the CIRCOFLUX DA product family, the Ro 75 sensor system is specifically designed for high-precision surface inspection of small diameter ranges. It is particularly suited for applications in rolling mills and for quality assurance of hot-rolled ferromagnetic 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 reliable 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 replaced with reproducible results.

With an inspection range from 10 mm to 75 mm, the Ro 75 sensor system is ideally suited for smaller material diameters. The high rotational speed supports stable and uniform surface inspection even at high feed speeds.

For small diameters, an optional internal roller guide can be used to reduce vibration of the test material and ensure precise material guidance within the sensor system.

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.

## YOUR ADVANTAGES AT A GLANCE

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

**Application-specific use:** Optimized for diameter ranges from 10 mm to 75 mm

**High rotational speed:** Maximum rotational speed up to 1700 rpm

**High throughput:** Feed speeds up to 3,5 m/s

**Flexible material guidance:** Optional internal roller guide for small diameters (protective nozzles available as an alternative)

**Low wear design:** Maintenance-free inductive signal transmission reduces wear parts

**Robust configuration:** Optional extraction tray available for harsh operating environments

**Seamless integration:** Easy integration into existing production systems

**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.

## TECHNICAL INFORMATION

|                                                                         |                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DIAMETER RANGE:</b>                                                  | 10 – 75 mm Ø                                                                                                                                                                                                                                                                       |
| <b>MAXIMUM NOISE LEVEL:</b>                                             | 70 dB (A)                                                                                                                                                                                                                                                                          |
| <b>DRIVE MOTOR POWER:</b>                                               | 4,1 kW                                                                                                                                                                                                                                                                             |
| <b>VARIABLE ROTATIONAL SPEED:</b>                                       | 0 – 1700 U/min                                                                                                                                                                                                                                                                     |
| <b>SLOW-DOWN TIME WITH BREAKING (DEPENT ON ROTATIONAL SPEED):</b>       | approx. 60 seconds at maximum rotational speed                                                                                                                                                                                                                                     |
| <b>SCANNING TRACK WIDTH:</b>                                            | 120 mm                                                                                                                                                                                                                                                                             |
| <b>MAX. TRANSPORTATION SPEED (DEPENDENT ON TEST MATERIAL DIAMETER):</b> | 3.5 m/s                                                                                                                                                                                                                                                                            |
| <b>SET-UP TIME WITH ROLLER GUIDE:</b>                                   | approx. 3 minutes                                                                                                                                                                                                                                                                  |
| <b>ADDITIONAL SET-UP TIME FOR INNER ROLLER GUIDE:</b>                   | approx. 5 minutes                                                                                                                                                                                                                                                                  |
| <b>WEIGHT WITHOUT ROLLER GUIDE:</b>                                     | approx. 500 kg                                                                                                                                                                                                                                                                     |
| <b>NUMBER OF TEST HEADS:</b>                                            | 2                                                                                                                                                                                                                                                                                  |
| <b>MAX. NUMBER OF TESTING CHANNELS</b>                                  | 2 × 30                                                                                                                                                                                                                                                                             |
| <b>SIGNAL TRANSMISSION:</b>                                             | inductive transmitter                                                                                                                                                                                                                                                              |
| <b>FREQUENCY OF MAGNETIZING CURRENT:</b>                                | 7,5 kHz                                                                                                                                                                                                                                                                            |
| <b>TRANSMISSION OF THE MAGNETIZING CURRENT:</b>                         | inductive transmitter                                                                                                                                                                                                                                                              |
| <b>POWER CONSUMPTION:</b>                                               | 4,2 kVA (230 V) and 7,5 kVA (400 V)                                                                                                                                                                                                                                                |
| <b>CONNECTION TO ELECTRICITY NETWORK:</b>                               | TN system                                                                                                                                                                                                                                                                          |
| <b>SPECIFICATION OF TEST MATERIAL:</b>                                  | 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. |
| <b>SPECIFICATION OF TEST MATERIAL – AMBIENT TEMPERATURE:</b>            | 5 °C bis 45 °C                                                                                                                                                                                                                                                                     |
| <b>SPECIFICATION OF TEST MATERIAL – MAXIMUM RELATIVE HUMIDITY:</b>      | 85 %                                                                                                                                                                                                                                                                               |
| <b>SPECIFICATION OF TEST MATERIAL – TEMPERATURE OF TEST MATERIAL:</b>   | 5 °C to 80 °C                                                                                                                                                                                                                                                                      |



**foerstergroup.com**



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

**Headquarters**

**Institut Dr. Foerster GmbH & Co. KG**

In Laisen 70  
72766 Reutlingen  
Germany

+49 7121 140 0  
[info@foerstergroup.com](mailto:info@foerstergroup.com)

© Copyright 2026 – Copyright notice: All contents of this work, in particular texts, photographs and graphics, are protected by copyright. Unless explicitly stated otherwise, the copyright lies with Institut Dr. Foerster GmbH & Co. KG. Please contact us if you wish to use any part of this work.

Generated: 2026-09-04 21:12:38