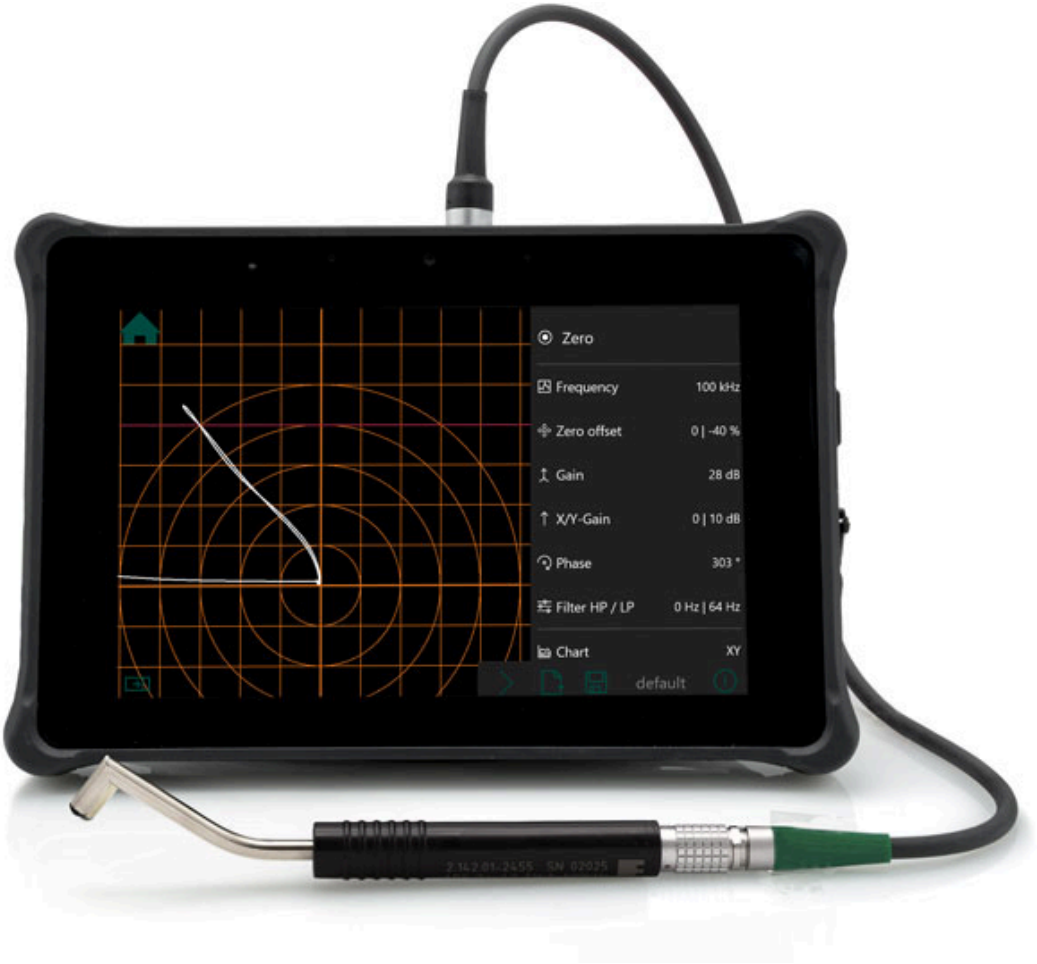
FOERSTER

DEFECTOSCOP TCM

Universal eddy current testing with rotating, HF and LF probes



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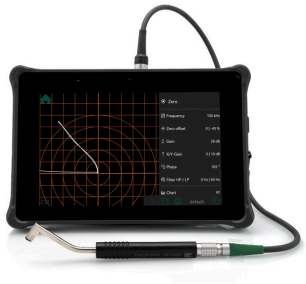

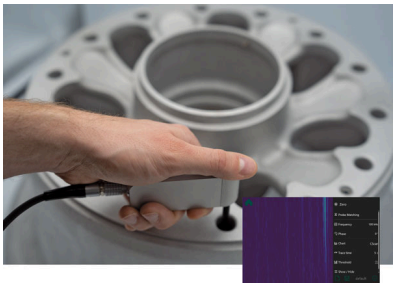

Conventional eddy current testing in impedance plane view. The DEFECTOSCOP App transforms the TCM into a powerful universal eddy current testing system for a wide variety of inspection tasks. Supporting rotating, high-frequency and low-frequency probes, it combines proven FOERSTER eddy current technology with the flexibility of a modern app-based platform.

Measurement data is displayed in the impedance plane and can be individually configured to suit the inspection task. In Expert Mode, users can customize parameters, create application-specific test programs and define favorites for even faster setup. Switching back to Operator Mode protects validated settings against unintended changes, ensuring consistent inspection results while simplifying daily operation.

For demanding inspection tasks, the DEFECTOSCOP App supports multi-frequency inspection with up to eight frequencies running in parallel. This enables inspections at different eddy current penetration depths in a single pass or optimized interference suppression through frequency mixing. Integrated Lift-Off Compensation minimizes the influence of varying probe lift-off, improving signal stability and ensuring reliable, reproducible inspection results even under changing inspection conditions.

Signals from rotating probes or rotating components can be displayed directly as high-resolution C-scans, enabling intuitive defect evaluation, precise localization and complete documentation. Freeze Mode allows captured eddy current signals to be analyzed afterwards by adjusting parameters such as gain, phase or filter settings without repeating the inspection. Raw signal data can also be recorded and exported for detailed offline analysis on a workstation.

YOUR ADVANTAGES AT A GLANCE

Universal eddy current testing: Supports rotating, high-frequency and low-frequency probes for a wide range of inspection applications.

Reliable inspection results: Integrated Lift-Off Compensation reduces the influence of varying probe lift-off for improved signal stability and reproducibility.

Multi-frequency inspection: Up to eight parallel frequencies enable testing at different penetration depths or optimized interference suppression through frequency mixing.

High-resolution C-scan visualization: Display signals from rotating probes directly as detailed C-scans for intuitive defect evaluation and localization.

Flexible probe compatibility: Supports parametric, transformer, bridge and other FOERSTER or adapted third-party probes.

Expert and Operator Mode: Role-based operation protects validated settings while enabling advanced configuration when required.

Freeze Mode: Freeze recorded signals and optimize parameters such as gain, phase and filters without repeating the inspection.

Comprehensive documentation: Record raw signal data, C-scans and inspection results for complete traceability and offline analysis.

NORMS

DIN EN ISO 15548: Standard defining performance characteristics and verification of eddy current testing instruments to ensure reliable and reproducible measurements.

TECHNICAL INFORMATION

FREQUENCY RANGE:	4 Hz – 20 MHz adjustable in 1 Hz steps
MULTI FREQUENCY:	Up to 8 frequencies in parallelMix two frequencies
MAX OUTPUT CURRENT:	400 mA (peak)
CHARTS:	x/y, t, x/y + t, C-scan
THRESHOLDS:	Lines, circle, box, sector
FREEZE MODE:	Freeze your signal and adjust parameters like gain and phase

ACCESSORIES

STANDARD TCM ARRAY PROBES
Versatile Eddy Current Array Probes for Efficient Surface Inspection

TCM POSITION ENCODER
Precise Position Tracking for Flexible Eddy Current Inspections

REFERENCE DEFECT STANDARDS - BOREHOLE
Reference defects for calibration of inspection systems using rotating probes

SIGMATEST PROBES
Flexible conductivity probes for precise testing of non-ferromagnetic metals

TCM DOCKING STATION
From mobile inspection device to full workstation setup

TCM SPARE BATTERY
Extend the operating time of your TCM and stay productive even during long inspection workflows.

TCM STANDARD PROBES
Flexible probe solutions for precise eddy current inspection with the TCM

REFERENCE CRACK STANDARD - FLAT (PLATE)
Artificial crack defect standard for setting and verifying test sensitivity

RECALIBRATION OF MOBILE PRODUCTS
Recalibration guarantees the accuracy and quality of your test and measurement values

HRO HAND ROTATING UNIT
High-resolution borehole inspection with rotating eddy current probes

TCM SHOULDER STRAP
For comfortable hands-free operation of the TCM during mobile inspection tasks

DEFECTOMETER M PROBES
Flexible Probe Solutions for Mobile Eddy Current Testing

FOERSTER

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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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