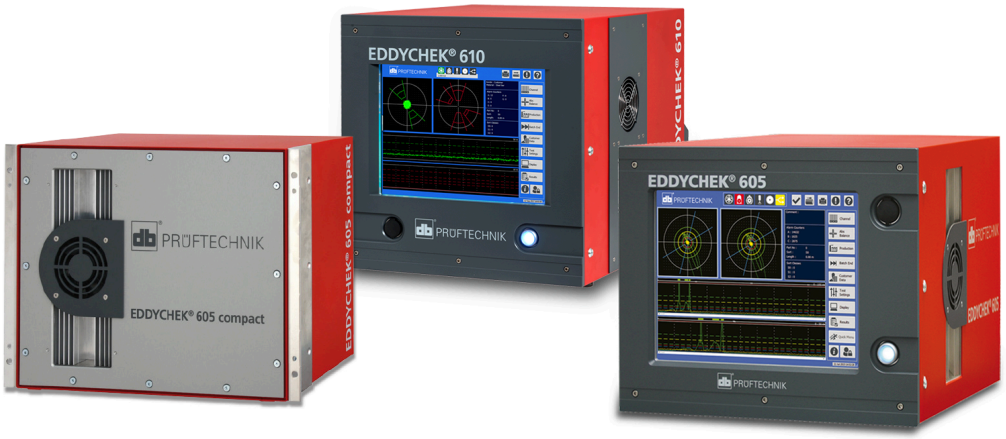
FOERSTER

EDDYCHEK PRODUCT FAMILY

Advanced eddy current testing for modern production environments



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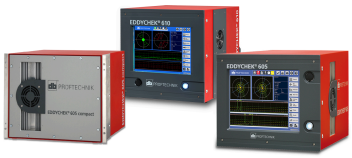


Detect defects early, stabilize processes, and secure long-term product integrity. The EDDYCHEK 6 Series delivers advanced digital eddy current testing for fast, reliable detection of surface and near-surface defects across a wide range of semi-finished products. With fully digital signal processing and patented demodulation technology, all systems provide high-resolution results at elevated production speeds, while intuitive operation, easy integration and robust industrial design ensure stable performance in demanding environments.

The product family covers three performance levels: the EDDYCHEK 605 compact as a cost-efficient, space-saving solution operated via an external PC; the EDDYCHEK 605 as a versatile system for everyday production; and the EDDYCHEK 610 as the high-end option for complex, multi-sensor and high-throughput inspection tasks. Together, they create a scalable platform that improves inspection efficiency, reduces scrap and supports consistent production quality.

YOUR ADVANTAGES AT A GLANCE

Reliable defect detection: Precise identification of surface and near-surface flaws in real time.

Flexible system concept: Three models covering a wide range of inspection tasks and production environments.

High throughput capability: Stable, repeatable results even at high line speeds.

Intuitive operation: User-friendly interfaces, either integrated or PC-based depending on the model.

Industrial-grade durability: Robust, dust-protected housings designed for continuous use.

Easy integration: Modern interfaces for seamless connection to automation and quality systems.

Consistent documentation: Comprehensive data recording for transparency and traceability.

Future-ready platform: Digital technology, modular scalability, and long-term investment security.

EDDYCHEK 605

Flexible eddy current testing for everyday production

Reveal surface defects reliably to keep production quality consistent. The EDDYCHEK 605 is a compact, efficient eddy current testing system designed for production lines that demand reliable, reproducible results without unnecessary complexity. Its fully digital architecture, paired with dedicated oscillators and patented signal demodulation, enables clean, high-resolution signals ideal for detecting cracks, pores, inclusions, and other surface and near-surface defects in conductive materials.

Whether integrated inline, used in wire-drawing processes, or applied for offline verification of cut lengths, the EDDYCHEK 605 maintains consistent performance even at high throughput speeds. Up to five independent testing channels and three testing positions allow flexible setup configurations — from standard differential testing to more advanced rotational or absolute probe arrangements.

A glove-operable touchscreen and intuitive menu structure make daily operation fast and straightforward. Robust industrial hardware, extensive connectivity options, and comprehensive data handling ensure seamless integration into modern production environments. With its balanced combination of performance, reliability, and cost efficiency, the EDDYCHEK 605 is the ideal choice for mid-complexity inspection tasks.

YOUR ADVANTAGES AT A GLANCE

Versatile inspection: Ideal for standard to moderately complex testing setups with up to five channels.

Fast and intuitive: Clear touchscreen interface and simple navigation for smooth operation.

High throughput: Stable, reliable inspection at production speeds up to 250 m/s in wire applications.

Sharp signal quality: Fully digital processing with a wide frequency range and patented demodulation.

Precise fault localization: High spatial resolution reduces rework and prevents unnecessary scrap.

Industry-ready design: Dustproof IP52 housing ensures dependable operation in demanding environments.

Seamless integration: Flexible I/O configuration and network interfaces for smooth automation integration.

Complete data overview: Real-time visualization, XML export, optional SQL database connection.

Low-maintenance setup: Modular design with easily replaceable components keeps downtime minimal.

TECHNICAL INFORMATION

TESTING ARCHITECTURE	Up to 5 channels and 3 testing positions (rotational, differential, absolute, FERROCHEK)
SIGNAL PROCESSING	Fully digital; individual oscillators per channel; patented demodulation
FREQUENCY RANGE	100 Hz – 1 MHz
PRODUCTION SPEEDS	Inline up to 20 m/s; wire up to 250 m/s; offline up to 10 parts/s
DEFECT LOCALIZATION	High spatial resolution; multiple mask types and alarms
APPLICATION RANGE	Tubes, bars, wires, strips, profiles; suitable for all conductive materials
DATA MANAGEMENT	XML export, optional SQL interface; supports EDDYTREND signal analysis
CONNECTIVITY	12 inputs / 12 outputs (24 V), USB ports, encoder input, Ethernet
USER INTERFACE	15" touchscreen, intuitive graphical operation, multilingual UI
INDUSTRIAL DESIGN	IP52 housing, EMC-compliant construction; -10 °C to +40 °C operation
DIMENSIONS / WEIGHT	372.5 × 444 × 556 mm; up to 30 kg
POWER SUPPLY	100 – 240 V; max. 200 VA
STORAGE	128 GB SSD

EDDYCHEK 605 COMPACT

Compact eddy current testing for economic applications

Detect flaws early while keeping inspection costs low. The EDDYCHEK 605 compact is the most economical model in the EDDYCHEK 6 Series, engineered for applications that demand reliable eddy current inspection with minimal space requirements and a streamlined system design. Its compact IP52-rated industrial housing fits directly into a standard 19" rack and operates without an integrated PC or display. Instead, all control and visualization run on an external computer, making installation, operation, and service particularly efficient.

With up to five independent channels and three test positions, the 605 compact covers a wide range of typical inspection tasks—from classic crack detection using encircling coils to rotational systems for high-speed applications. Fully digital signal processing with a dedicated oscillator per channel and patented demodulation technology ensures clear, high-resolution test signals and reliable detection of even small surface and near-surface flaws.

Offering the same inspection performance and channel capacity as the standard EDDYCHEK 605 but with a significantly smaller footprint and external PC operation, the EDDYCHEK 605 compact is the ideal solution for integrated test benches, modernization projects, and cost-sensitive production environments.

YOUR ADVANTAGES AT A GLANCE

Cost-effective solution: Optimized for applications requiring reliable testing at an attractive price point.

Compact installation: Rack-mountable IP52 housing for easy integration into existing systems.

Flexible operation: Full control and visualization via an external PC with intuitive graphics.

High throughput: Suitable for high-speed production processes, including rotating systems.

Clear digital signals: Fully digital processing with patented demodulation and high spatial resolution.

Easy integration: Interfaces for automation systems and modern production networks.

Complete documentation: Real-time visualization, XML export, optional SQL connectivity.

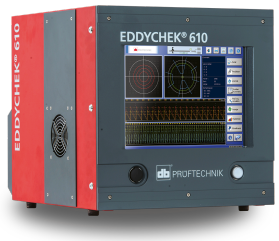
Service-friendly: Modular design with easily replaceable components.

TECHNICAL INFORMATION

TESTING ARCHITECTURE	Up to 5 channels and 3 testing positions (rotational, differential, absolute, FERROCHEK)
SIGNAL PROCESSING	Fully digital; individual oscillators per channel; patented demodulation
FREQUENCY RANGE	100 Hz – 1 MHz
PRODUCTION SPEEDS	Inline up to 20 m/s; wire up to 250 m/s; offline up to 10 parts/s
DEFECT LOCALIZATION	High spatial resolution; multiple mask types and alarms
OPERATION	No internal PC/display; user interface runs on an external PC
DATA MANAGEMENT	XML export, optional SQL database, compatible with EDDYTREND
CONNECTIVITY	12 inputs / 12 outputs (24 V), encoder input, Ethernet
INDUSTRIAL DESIGN	IP52 housing, EMC-compliant, operating range –10 °C to +40 °C
DIMENSIONS / WEIGHT	355 × 444 × 305.5 mm; up to 20 kg
POWER SUPPLY	100 – 240 V; max. 200 VA
SOFTWARE	External PC interface, graphical icons, parameter archive, real-time signal display

EDDYCHEK 610

High-end eddy current inspection for demanding testing tasks



Detect even the smallest defects with confidence at any production speed. The EDDYCHEK 610 is the high-performance model of the EDDYCHEK 6 Series, designed for applications that require maximum testing depth, extensive configuration options, and seamless integration into automated production environments. With up to ten independent channels and six test positions, it supports complex multi-sensor setups, rotational systems, and advanced testing strategies that go far beyond standard applications.

Its fully digital signal processing architecture — including dedicated oscillators and patented demodulation technology — ensures exceptional signal clarity across a wide range of materials and production speeds. A modern touchscreen interface simplifies operation, while robust industrial hardware guarantees long-term reliability.

Compared to the EDDYCHEK 605, the 610 offers twice the number of channels, more test positions, and expanded I/O options, making it the preferred choice for complex and high-capacity inspection tasks.

YOUR ADVANTAGES AT A GLANCE

Maximum testing capability: Up to ten channels for advanced and multi-stage inspection setups.

Superior signal analysis: Fully digital processing with a wide frequency spectrum and patented demodulation.

Optimized for high throughput: Reliable, repeatable results even at very high line speeds.

Intuitive operation: High-resolution touchscreen with a clear, structured interface.

Robust for industrial use: IP52 protection and durable EMC-compliant housing.

Enhanced integration options: Expanded I/Os, networking, and automation interfaces.

Transparent data handling: Real-time visualization, XML export, optional SQL connectivity, and EDDYTREND support.

Service-friendly design: Modular construction enabling fast component replacement and low downtime.

TECHNICAL INFORMATION

TESTING ARCHITECTURE	Up to 10 channels and 6 testing positions (rotational, differential, absolute, FERROCHEK)
SIGNAL PROCESSING	Fully digital; individual oscillators per channel; patented demodulation
FREQUENCY RANGE	100 Hz – 1 MHz
PRODUCTION SPEEDS	Inline up to 20 m/s; wire up to 250 m/s; offline up to 10 parts/s
DEFECT LOCALIZATION	High spatial resolution with multiple mask types and alarm levels
APPLICATION RANGE	Tubes, bars, wires, strips, profiles; suitable for all conductive materials
DATA MANAGEMENT	XML export, optional SQL interface; supports EDDYTREND signal analysis
CONNECTIVITY	16 inputs / 16 outputs (24 V), USB ports, encoder input, Ethernet
USER INTERFACE	15" touchscreen, intuitive navigation, multilingual interface
INDUSTRIAL DESIGN	IP52 housing, EMC-compliant construction; -10 °C to +40 °C operation
DIMENSIONS / WEIGHT	461.6 × 444 × 556 mm; up to 40 kg
POWER SUPPLY	100 – 240 V; up to 400 VA
STORAGE	128 GB SSD

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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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