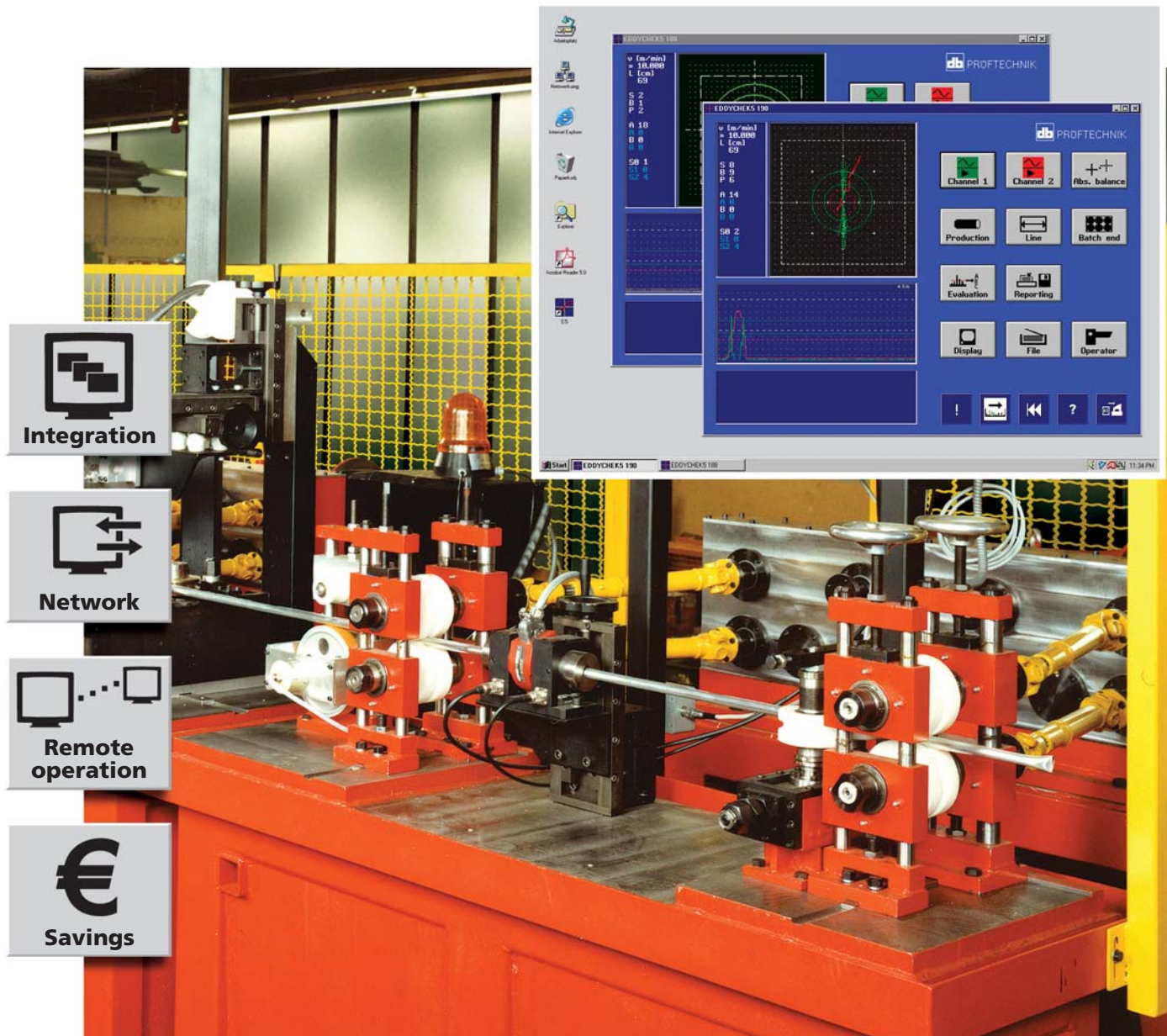



EDDYCHEK® 5 compact

Integration of eddy current testing
in process monitoring systems




Integration


Network


Remote operation


Savings

Networked testing at an attractive price

Remote operation

- ▶ Data transmission and operation up to 1 km from EDDYCHEK® 5 compact unit
- ▶ Operation of unit at the location of your choice
- ▶ Real-time signal display on PC screen
- ▶ Networking via standard LAN (Ethernet, TCP/IP) or fiber optic transmission

Integration in central process monitoring system

- ▶ Display of eddy current testing on screen alongside other process monitoring systems
- ▶ Central archiving of test results
- ▶ Setting of test parameters in advance for specific testing conditions
- ▶ Saves on costs and space

Overview of several production lines

- ▶ Testing in several production lines can be operated from a single PC
- ▶ Centralized visualization of quality trends during production

Cost advantage

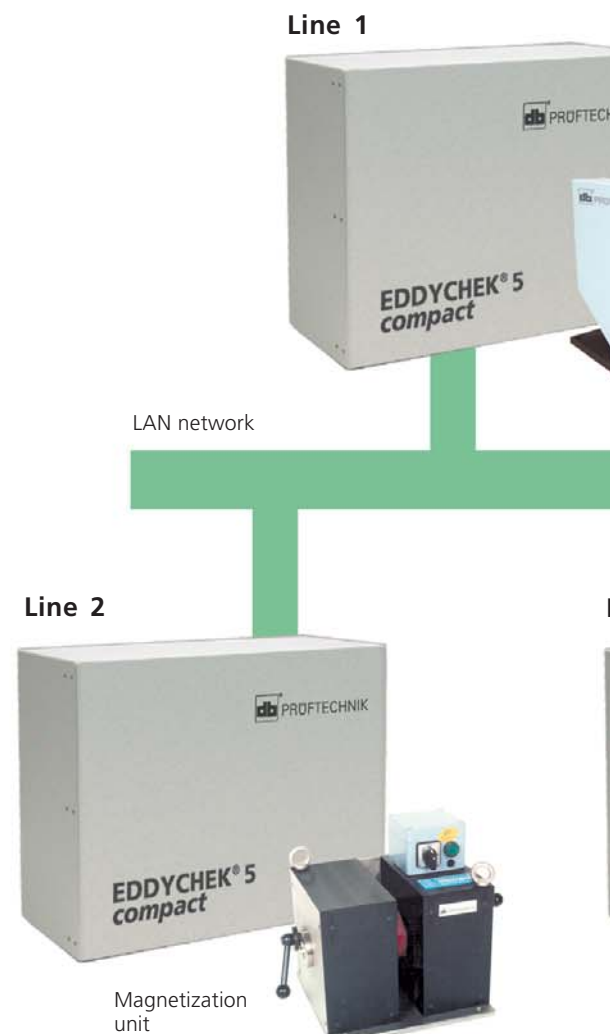
- ▶ Purchase limited to eddy current testing electronics and software
- ▶ Makes use of existing computer infrastructure

Wide range of applications

- ▶ Particularly well suited to monitoring several production lines with long transmission distances and central process integration
- ▶ Ideal for applications such as rolling mills, level winders, cold forming processes and spring-making machines
- ▶ Suitable for all standard applications

Same testing features with greater flexibility

EDDYCHEK® 5 compact was designed for customers who wish to operate their eddy current testing system on a Windows PC. The EDDYCHEK® 5 compact electronics provide exactly the same testing capabilities as the standard version. Neatly contained in a small enclosure, it may be mounted out of the way. The eddy current testing is operated from a remote PC or central operator panel where it is integrated in the process control system. This lets you operate several EDDYCHEK® 5 compact units on a single screen together with other process control systems.



Windows convenience
 Click on the EDDYCHEK® 5 icon on your Windows screen to open the user interface software. The signal display appears in real-time and the eddy current testing parameters can be adjusted in menus available in a large number of languages.

Testing status: number of parts, batches and shifts
 Real-time display of signals



Rotating system



Transmission distance up to 1000 m

Central operation

Now you can operate your eddy current testing system from a central monitor alongside your other process monitoring systems. With all of your monitoring systems at your finger tips, you will have a good overview of your entire production. In addition, eddy current testing can be easily integrated into existing control systems, making excellent use of existing resources.

Line 3



Encircling coil

Documentation and archiving of data



To let you verify that your product has been comprehensively tested, EDDYCHEK® 5 compact provides you with several different types of report.

The production data are automatically stored in a standard format and can be retrieved later to be processed according to your company specifications.

- ▶ Defect location report: Displays the defect positions on each specimen or section and a statistical evaluation of the batch according to 3 configurable quality classes.
- ▶ Defect statistics: Provides an overview of the product quality of a shift or production order.
- ▶ Color printout of signals and parameter settings.

Technical data

Applications

Field of application

- Manufacture of tubing, pipe, bar, wire, strip, sheathed cabling, extruded sections (roll-forming, tube and pipe mills, drawing machines, hot rod production)
- Quality assurance (e.g. testing of individual lengths and verification when changing test coils)
- Any metal section (ferrous or nonferrous)

Production lines and speeds

- Continuous production with cut-off (welding lines)
- Continuous production without cut-off (drawing lines)
- Offline testing of cut lengths
- Cold forming applications using stop-and-go testing
- 0.1 – 12,000 m/min (0.002–200 m/s; 0.3 – 40,000 fpm) depending on type of production and test coil
- Max. offline speed: 20 m/s (3900 fpm), max. 2 lengths/s

Signal resolution

- 10 mm (0.4") at speeds < 1200 m/min (20 m/s; 3900 fpm)
- 100 mm (4") at speeds ≥ 1200 m/min (20 m/s; 3900 fpm)

Testing procedure

- Multichannel, multifrequency testing (differential syst.)
- 1 or 2 channels: combinations of rotational, differential, absolute, FERROCHEK channels; optional signal vector evaluation

Parameters

Frequency and filtering

- Test frequencies : 2.0 – 1000 kHz
- Each channel has its own oscillator
- Speed-coupled, automatically adjustable highpass filter (optional)

Phase rotation 0 – 359° in steps of 1°

- Gain**
- 0–48 dB in 0.2 dB steps for absolute channel
 - 40–100 dB in 0.2 dB steps for diff./rotational channels

Coil monitoring

Excitation and detection windings are monitored for breaks and short circuits

End signal suppression

Control of end signals at start/finish of cut lengths

Data processing

Signal processing and defect evaluation

- Signal evaluation with masks and 3 alarm thresholds
 - Circular mask
 - Mirrored sector masks, 2 pair/channel (optional)
 - Mirrored sector masks with remainder (optional)
- For absolute channel and FERROCHEK: circular mask only
- Test length classification in up to 3 sorting categories according to flaw density and flaw category in combination with acceptable length

Test results

- Compilation on 3 levels: test piece (or section for continuous applications), batch, shift
- Max. number of test pieces per batch: 9999
- Max. total number of batches per shift: 100

Power supply

- 80–250 V; 50/60 Hz
- EDDYCHECK® 5 electronics power consump.: ≤ 150 VA

Software

User interface

- Menu-guided user interface
- Keyboard input, mouse operation, touchscreen
- Archiving
- Sample test mode: testing of individual lengths for quality control checks and parameter verification
- Software in English, German, Italian, Spanish, French, Polish
- Online help for each menu, available in local language
- Password-protected supervisor level for adjusting basic test parameters and locking parameter access
- Operation of several EDDYCHECK® 5 compact from one PC

Data transfer

- Standard LAN: Ethernet (TCP/IP), 80 m (262 ft)
- Fiber optic transmission (optional), 1000 m (3280 ft)

PC requirements

Windows NT 4.0/2000/XP, >500 MHz processor

Hardware

Housing

- Environmental protection IP 54: protected against dust and water spray
- Shielded housing and internal power supply filter to prevent interference according to VDE843 CE EN 50081-2 and IEC 801.1 – 4 EN 50082-2
- Dimensions (HxWxD): 355 x 440 x 266.2 mm (14" x 17.3" x 10.5"), 8 height units
- Weight: approx. 12 kg (26.4 lb)

Operating conditions

- Temperature range: 0...50 °C (32...122 °F)

Input and output terminals

- 4 inputs and 4 outputs (additional 4 inputs and 4 outputs optional), configurable as potential-free or 24 V
- Max. of 6 delayed or undelayed outputs; max. 3 sorting outputs; 1 system error output
- 1 line encoder input, 2 track
- Network: Ethernet (TCP/IP)

Recorder and printer

- Analog output for software-controlled thermal recorder showing signal amplitude for 1 or 2 testing channels
- Optional: XY output for channels 1 and 2

Distributor:

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