

# EloWheel

by Rohmann LP

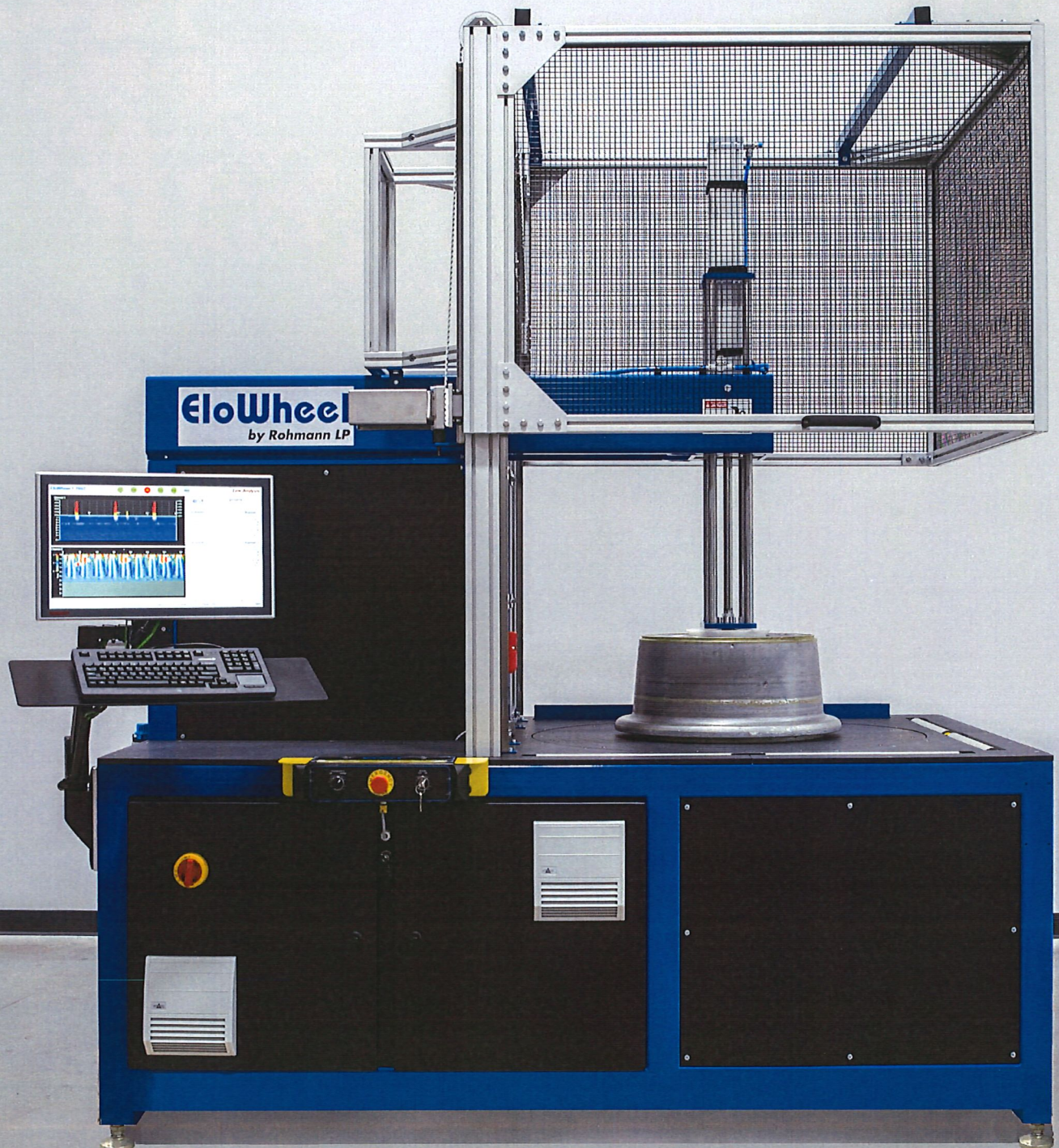


Rohmann LP

Eddy Current Instruments & Systems

## Aircraft Wheel Inspection System

- Automated Inspection of Aircraft Wheels up to 1,000 mm diameter
- High Frequency Flaw Detections on Wall & Bead Seat
- Low Frequency Option for Flaws below the Surface





### General

The new EloWheel 1000 allows the inspection of wheels up to 1000mm diameter and a maximum weight of 250kg enabling the inspection of even the heaviest wheels without limitations.

The user-friendly GUI of the system, in combination with the EloWheel's visualization and evaluation software, offers the utmost flexibility for initial setup and in-service wheel inspections. The EloWheel Software acquires, visualizes, and stores eddy current signals, and allows the operator to easily view and analyze the captured data. A search function facilitates the ability to look up and compare both previous and real-time data of the same wheel.

Wheels can be inspected with speeds between 30-120 RPM with cycle times typically below 60 seconds per wheel. The EloWheel 1000 fulfills the toughest production requirements and stringent inspection standards. The high-end control electronics provide a highly reliable and accurate mechanical handling system. The EloWheel 1000 comes standard with a single coil high frequency probe for surface crack detection and the option for a dual coil probe which also includes low frequency for back wall detection. The scan data will automatically be integrated into an inspection report, in which, the operator can add notes as needed, providing an extensive record for each inspected wheel.

### Scope of the Inspection

#### Surface Inspection

- Sliding differential probe featuring approximately 8mm (0.31") active area
- Area of inspection complete tube wall down to the end of the bead seat radius
- Typical reference defect depth 0.76mm (0.03") x length 1.52mm (0.060") x width 0.1mm (0.004"); Circumferential EDMs.

#### Dual Frequency Inspection for Hidden Cracks

- In addition to the standard high frequency coil, the optional dual frequency probe adds a low frequency coil for back wall detection
- Area of inspection from the top of back wall down to the beginning of the bead seat radius
- Reference defect approx. 25% damage to the wall thickness from the inside - Depending on the structure

#### Wheel Dimensions

- Turntable features a diameter of 1000mm (39")
- Overall height: 45mm - approx. 500mm (1.77" - 19.68")
- Diameter: 150mm - 600mm/ 250mm - 1000mm (9.8" - 39")
- Weight: < 250 kg

#### Duration of the Inspection

- For the automatic inspection procedure: typically below 60 sec., depending on wheel size

#### System Components

- Test stand with turn table and pneumatic wheel centering device
- Standard HF probe
- Optional combined HF/LF probe
- ELOTEST IS500-RPT eddy current test instrument
- System PC featuring Windows 10 operating system
- Color Laser Jet Printer for the test logs
- Manually operated safety cage

#### General Technical Data

- Ambient temperature: 0 - 40°C (32° - 104° F)
- Operating Relative Humidity: 20 - 85%
- Dimensions: resp. 1410mm W x 2225mm D x 2660mm H
- Electrical: 110VAC/60Hz or 230VAC/50Hz / 2 KVA
- Compressed Air: min. 6 bar, 1/4", cleaned, dry

