

# Ultrasonic testing systems | 100 MHz | PHAsisNEO

**PHAsisNEO, for fast, simple use in production – reliable testing without profound ultrasonic knowledge.**

PHAsisNEO picture

Ultrasonic inspection device for the fast and precise inspection of welded joints in production, especially spot welds and short weld seams

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## Advantages

- **Key Visualization:** C/D scans illuminate the weld, providing clarity and precise detail.
- **High Resolution:** More than 700 measuring points ensure superior resolution for pinpoint welding lens diameter accuracy.
- **Easy assessment:** Automatic image-based suggestions for reliable inspection without the need for ultrasound expertise.
- **Inspection speed:** Accelerated inspection thanks to simultaneous scanning of large areas.
- **Versatile Probes:** Universal probes eliminate the need to change equipment for different sample types.

## Benefits

- **Imaged display:** direct visualization of weld beads via C/D scans for simplified quality assessment.

- High resolution: more than 700 measuring points for precise determination of the welding lens diameter.
- Automatic assessment: assessment suggestions based on predefined parameters, facilitating inspections without ultrasonic expertise.
- Fast inspection: Reduced inspection times thanks to simultaneous scanning of a large area.
- Probe universality: No need to change probes for different samples, simplifying the inspection process.

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### PHAsisNEO

<b>Dimensions</b>	350 x 280 x 90 mm
<b>Weight</b>	4.950 kg
<b>Display</b>	13" Touchscreen, replaceable
<b>PC Board</b>	Intel Pentium QuadCore @ 2,5 GHz, 8 GB RAM, 512 GB SSD

## PHAsisNEO

<b>Interfaces</b>	2x USB 2.0, 1x USB 3.0, HDMI
<b>Protection class</b>	IP 64, restricted
<b>Battery</b>	2x Lithium-Ion, min. runtime > 7 Std
<b>Phased Array test channels</b>	128, 16 thereof parallel
<b>Digitization rate</b>	100 MHz
<b>Communication</b>	LAN 1GBit/s, WLAN, Bluetooth 4.2
<b>Max. IFF</b>	20 KHz
<b>Max. pulse amplitude</b>	+/- 100 V (neg. square pulse)
<b>Band width (-3dB)</b>	0.5 - 25 MHz
<b>Pulse width</b>	? 5 ns
<b>Focal Laws</b>	> 700 (virtual probes)
<b>Power supply</b>	100 - 240 VAC 50 Hz - 60 Hz
<b>Operation temperature</b>	0°C - 40°C
<b>Relative Humidity</b>	80%, non-condensing
<b>Cooling passive</b>	(no fan)
<b>Housing</b>	IP 64 (restricted), shock protection, passive cooling, swiveling handle

## Standard Probe

<b>Type</b>	Phased Array 2D Matrix	
<b>Number of elements</b>	11 x 11 arranged in square	
<b>Cable</b>	Long-Life 2.5 m; 5 m for robot applications	
<b>Nominal frequency</b>	12 MHz	20 MHz
<b>Inspection area</b>	9 x 9 mm	11.7 x 11.7 mm
<b>Physical resolution more precise than</b>	0.35 mm	0.45 mm

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# Software

## Administration and communication:

- Access rights and user management
- Test equipment monitoring and management of inspection devices
- Management of plate pairing and materials
- Various interfaces such as test plan import, result export or communication interface for automated testing

## Inspection:

- "Inspection according to test plan" mode: secures testing with 100% fulfillment and enables safe testing with minimal training
- Improved setup of inspection plans and easy to go inspection according to proven standards of conventional ultrasonic inspection
- "Free testing" mode: fast testing without a test plan with instantly selectable standard or individual parameter setsManagement of plate pairing and materials
- Inspection mode for highly sound-attenuating materials or very rough surfaces
- Multiple modes for detection of cladding
- Access to all setting parameters at any time for the implementation of individual evaluations

## Data management:

- Creation and administration of test plans and free testing
- Transfer of the results of the free testing into new test plans

- Management of plate pairings, evaluation and ultrasonic parameters
- Inspection plans on all devices by means of synchronization
- Individual color display of spot welds (D-Scan)
- Test reports can be exported as Word, Excel or PDF documents.  
Two different types of reports available: detailed and compressed
- Predefined, universal ready to go setups as well as the creation of individual advanced setups

## **Applications**