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REX1 Pulse/Receive (PR) Dual Linear Array™ Probe

Advanced Corrosion Critical Defect Assessment

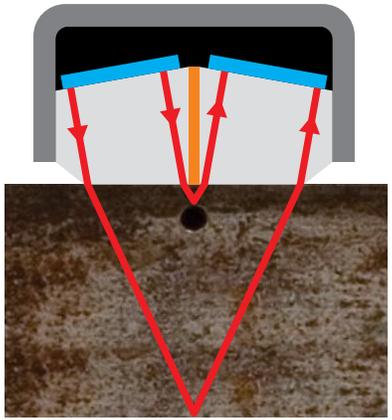
EVIDENT

Wired for Advanced Corrosion Inspections

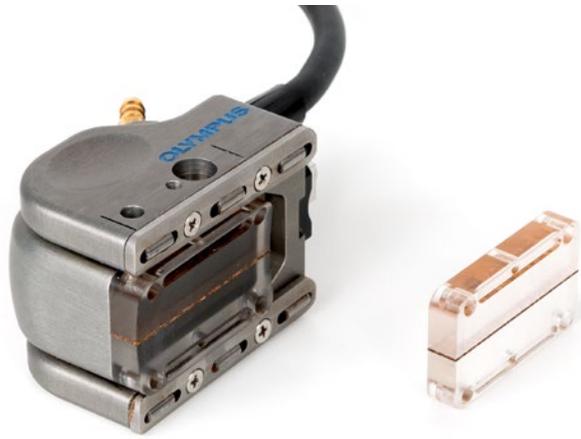
Stay ahead of ever-evolving phased array (PA) technology with our REX1 Dual Linear Array™ (DLA) pulse/receive (PR) probe. This model's wiring is optimized to enable you to fully leverage the advanced capabilities of newer phased array devices, even when you're using PA acquisition instruments without pulser/receiver modules.

Advantages and Features

- › Advanced pulse-receive (PR) wiring that supports complex focal laws
- › Total focusing method (TFM)
- › Phase coherence imaging (PCI)*
- › Optimized beam firing capabilities
- › Maximized capabilities when using OmniScan™ X3 and OmniScan X3 64 flaw detectors
- › Compatibility with instruments featuring pulser/receiver modules
- › Compatibility with WeldSight™ advanced inspection and analysis software
- › Pitch-catch technology that considerably reduces the interface echo for optimum surface resolution
- › Compared to dual UT technique, it offers an increased probability of detection, better-quality imaging, larger coverage, and an enhanced data point density
- › Removable delay line
- › Built-in irrigation
- › Adjustable ring for stabilization and wear resistance



Cross-section of a DLA probe's acoustically insulated firing and receiving linear arrays



The underside of a REX1 DLA probe, with the carbide wear plates installed, and a replacement delay line (on the right)

Typical Applications

- › Manual or automated inspection of small to medium areas for remaining wall or internal corrosion measurements
- › Corrosion monitoring and critical defect assessment; pitting, creep damage and hydrogen induced cracking (HIC)
- › Advanced total focusing method (TFM) and phase coherence imaging (PCI) inspections

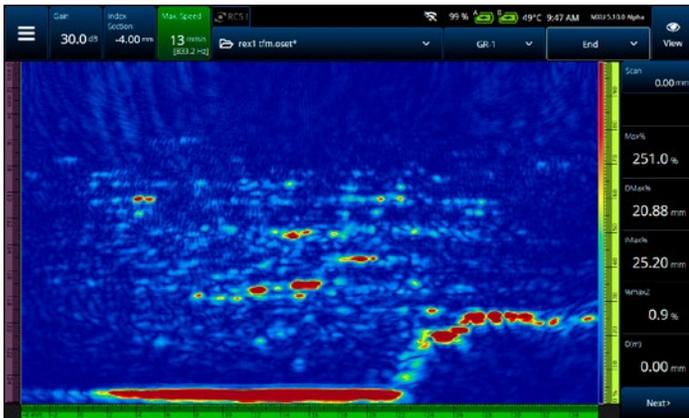
REX1 Pulse/Receive (PR) Dual Linear Array Probe vs. the Legacy REX1

The main difference between the REX1 DLA PR probe and its predecessor is the configuration of the wiring. The updated electronics greatly expand the probe's beam firing capabilities compared with the legacy REX1 model.

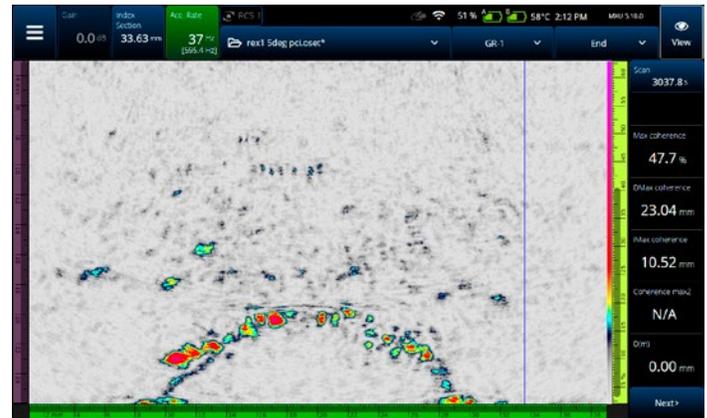
Advanced Ultrasonic Techniques Require Advanced Electronics

The electronic connections between the elements in the REX1 PR DLA model are optimized to support the complex focal law demands of OmniScan™ X3 units with TFM and OmniScan X3 64 flaw detectors with PCI and TFM. To fully exploit the imaging performance potential of TFM and PCI, it's imperative that you choose the PR version of the REX1 DLA probe.

In addition to standard PA imaging, the PR REX1 DLA probe can be used to perform efficient and high-quality TFM and PCI scans, as shown in these examples of images acquired of hydrogen-induced corrosion in steel.



Total focusing method (TFM)



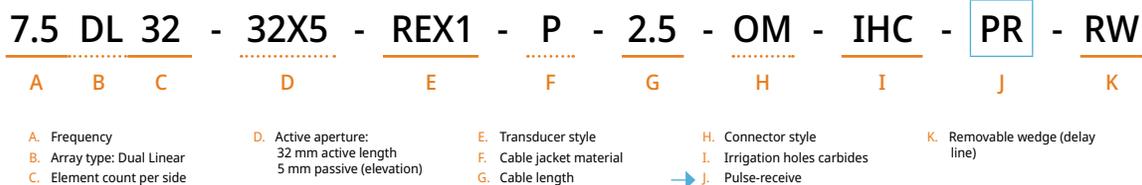
Phase coherence imaging (PCI)

For maximum compatibility, the OmniScan X3 series is preconfigured with the specifications of our DLA probes, making the inspection setup quick and easy. When creating a TFM or PCI scan plan, you can simply choose your DLA model from the probe list and proceed with focal law configuration directly on the instrument.

When Selecting Your REX1 DLA Model, Look for the PR

If you have an OmniScan X3, OmniScan X3 64, or other flaw detector with pulse/receive capabilities, unleash the full potential of these instruments by ensuring that "PR" is in the part number when you order your REX1 DLA probe.

Here's an example:



Above is a REX1 DLA PR probe part number with a definition for each segment. The PR portion, identifying all REX1 DLA PR models is called out in blue.

Probe Specifications and Dimensions

Part Number	Item Number	Frequency (MHz)	Number of Elements	Pitch (mm)	Active Aperture (mm)	Elevation (mm)	Cable Length (m)	External Dimensions mm (in.)		
								L	W	H
7.5DL32-32X5-REX1-P-2.5-OM-IHC-PR-RW	Q3301867	7.5	Dual 32	1	32	5	2.5	66 (2.57)	40 (1.58)	44 (1.73)
7.5DL32-32X5-REX1-P-5-OM-IHC-PR-RW	Q3302172	7.5	Dual 32	1	32	5	5	66 (2.57)	40 (1.58)	44 (1.73)

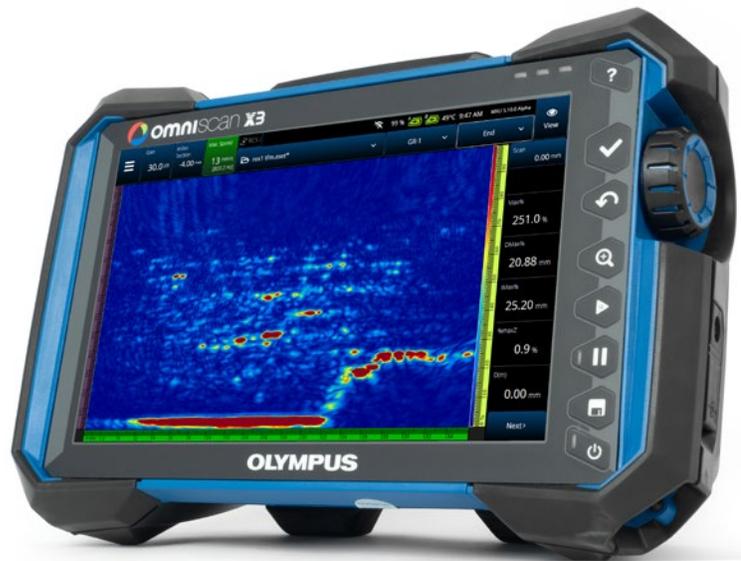
Additional Options

Contoured removable delay lines are available for our REX1 PR DLA probes to optimize results on pipes as small as 4 inches (101.6 mm) in diameter.

We also offer a high-temperature version to inspect surfaces as hot as 300°F (150°C). Contact us for more details.

OmniScan Software Features

- › Side, end, and top view imaging (B-scan, D-scan, C-scan)
- › Full high-resolution A-scan storage
- › Two configurable detection gates
- › Offline analysis on an OmniScan unit or a computer using OmniPC™ software
- › Total focusing method (TFM) imaging
- › Phase coherence imaging (PCI) on the OmniScan X3 64 only



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*GPS not available in all regions. Consult your local Evident representative for details.
**Results obtained using a 64-element probe, compared with an OmniScan X3 32:128 model.
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