

# R-Evolution

## Ultrasonic array roller probe



R-Evolution with laser guides

R-Evolution is an ultrasonic array probe housed in a light-weight glycerine-filled roller, delivering fast immersion quality C-scan inspections in the palm of your hand.

Designed to minimise operator fatigue, R-Evolution is small and light making it ideal for use on large areas and particularly overhead inspections.

### Benefits

- Fast immersion quality c-scan inspections
- Excellent resolution with high frequencies - up to 10MHz
- Improved near surface resolution enables inspection of thin components
- Ergonomic design to minimise operator fatigue
- Lightweight buggy ideal for overhead inspections and large areas
- Self-normalises on curved components ensuring the array is always perpendicular to the inspection surface
- User-friendly for ease of use in the field
- Accurate scanning with two laser guides to mark the outer extents of the array
- Cost effective solution with interchangeable probes
- Compatible with Tracer for dual-axis, large area inspections

### Applications

Typical applications for R-Evolution include:

- **Aerospace** -  
In-service C-scans, Bond Inspection, Delamination or defect detection in composites
- **Wind Energy** -  
Blade spar, leading and trailing edge bond inspection
- **Pipelines and Vessels** -  
Corrosion mapping, Bond testing on overlapping joints

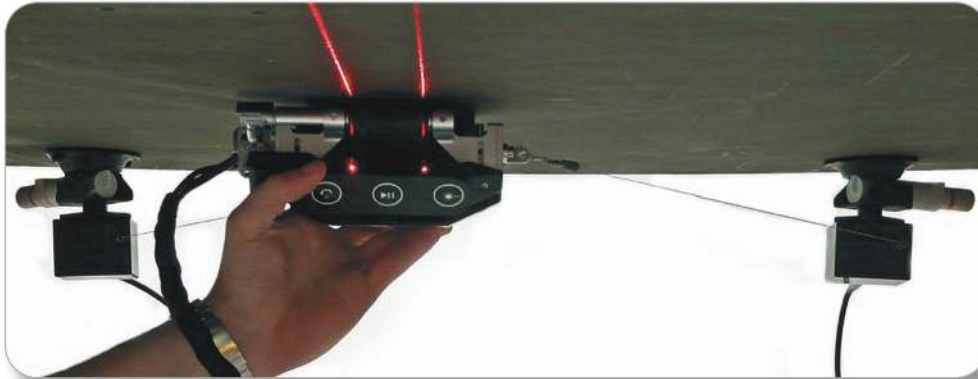
Ergonomic in design, R-Evolution contains an ultrasonic array probe, mounted in a small diameter, glycerine-filled roller. With its durable thin tyre, high frequency probes can be used to give excellent near surface resolution enabling the inspection of thin components.

R-Evolution's buggy self-normalises on curved surfaces ensuring the array is perpendicular without adjustment. Additionally, the array angle can be easily fine-tuned externally.

The buggy handle features two line lasers for guidance and buttons that can be configured with appropriate instruments to start, stop or increment scans.

## Features

- Phased array probes - Range from 2MHz up to 10MHz
- Integrated waterproof encoder
- Encoder resolution: 50 steps/mm
- Indexing and start/pause buttons - interface with compatible instruments
- Compatible with Tracer for dual-axis, large area inspections
- Lightweight and ergonomic - 1kg
- Dimensions: 175mm x 120mm x 80mm



R-Evolution coupled with the Phoenix ISL Tracer system for the inspection of large areas.

## Spares and Accessories

- AEP-REVLTN-PROBE-2-64 Wheel probe only, 2MHz
- AEP-REVLTN-PROBE-3.5-64 Wheel probe only, 3.5MHz
- AEP-REVLTN-PROBE-5-64 Wheel probe only, 5MHz
- AEP-REVLTN-PROBE-10-64 Wheel probe only, 10MHz
- AEP-REVLTN-TYRE Spare replacement tyre
- Encoder splitter cable to enable lasers to operate whilst connected to Tracer



## Kit

- Array roller probe (*specify frequency and instrument when ordering*)
- Self-normalising buggy with laser guidance handle
- Integrated encoder (*specify instrument when ordering*)
- Tool Kit and Tyre filling accessories
- Water spray bottle
- 2 x Spare tyres
- Protective carry case

## Order Information

| Product Code          | 2 MHz                    | 3.5 MHz | 5 MHz | 10 MHz | Lasers |
|-----------------------|--------------------------|---------|-------|--------|--------|
|                       | 64 elements, 0.8mm pitch |         |       |        |        |
| AE-REVLTN-2-64-HNDL   | *                        |         |       |        | *      |
| AE-REVLTN-3.5-64-HNDL |                          | *       |       |        | *      |
| AE-REVLTN-5-64-HNDL   |                          |         | *     |        | *      |
| AE-REVLTN-10-64-HNDL  |                          |         |       | *      | *      |

