



DOLPHIN G3™

Ultra-fast inspection
of tubes up to 4"

>> Boilers >> Fin Fans >> Heat Exchangers



DOLPHIN G3™



AcousticEye's breakthrough, non-invasive solution for today's hard-to-inspect tubes up to 4" inner diameter enables ultra-fast, accurate inspection of boilers, Fin Fans and other heat exchangers, regardless of tube shape or material.

Featuring patented Acoustic Pulse Reflectometry (APR) technology, Dolphin G3™ is an advanced, yet easy-to-use tool that overcomes the limitations of many conventional inspection techniques. With its simple operation, automated analysis and report generation, there is far less dependency on operator expertise.

Providing reliable inspection of even the most challenging tube sizes and configurations, AcousticEye increases inspection cycle efficiency and operational cost savings.

Any tube size up to 4" diameter, regardless of shape or material

- » Boilers, Fin Fans, other heat exchangers
- » U-bends, twisted, spiral wound and flexible tubes
- » Ferrous and non-ferrous metals, graphite and plastics

Ultra-fast, non-invasive inspection

- » Less than 10 seconds per tube
- » Fast enough for 100% inspection if/when needed
- » Ideal for emergency situations
- » No need for inventory of consumable probes or standards

Less expertise required

- » Testing is easily performed by any operator with minimal training
- » Computer-based data interpretation and report generation



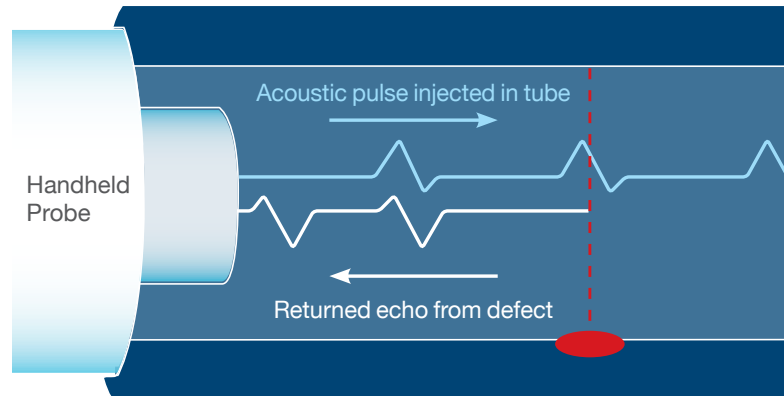
Fast, accurate inspection of heat exchanger tubes



Large diameter tube inspection in industrial boilers

Acoustic Pulse Reflectometry

- » Probe injects an acoustic pulse down the tube
- » Returned echoes generated by defects are recorded and analyzed
- » A set of proprietary, patented algorithms identifies and reports exact location, type and size of inner diameter defects



User-Friendly Operation

Dolphin G3™ guides the technician through all the steps necessary to carry out a job - tube sheet mapping, parameter input, measurements, verification and report generation. An intuitive graphic user interface, including helpful right-click functions, makes scrolling, zooming and navigation easy every step of the way.

► Mapping

The system creates a computerized model of the heat exchanger tube sheet based on a photo, CAD file or scanned schematic diagram. Automatic numbering and mapping is used to establish test plans and track inspection progress.

► Logging

All measurements are logged in their raw form. Different thresholds and algorithms can be applied to regenerate reports with varying levels of sensitivity.

► One-click calibration

The system utilizes only a single calibration tube (supplied), eliminating inventory requirements and typical calibration challenges.

► Visual aids for defect detection

Programmable thresholds for different flaw types and sizes can be overlaid on the measured signals to assist in visual evaluation of defects.

► Computer-based interpretation

Delivering objective, consistent and actionable results, the system automatically performs computer-based data interpretation, reducing the reliance on experts.

► Report generation

Dolphin G3™ presents an easy-to-read online report (with drill down options) to the technician for verification, as well as a final summary report including tabular reporting and screenshots of the detected flaws in PDF or HTML format.



Inspection of any tube shape or material

Dolphin G3™

Specifications

Tube Size	½” up to 4” (12.7mm – 101.6mm) inner diameter	
Tube Configuration	Any configuration including U-bends, finned tubes, twisted tubes, spiral wound and flexible tubes.	
Tube Material	Any material including ferrous and non-ferrous metals, graphite and plastics.	
Maximum Length	Up to 80’ typical	
Detectable Defects	0.5”-2.5” (12.7mm – 63.5mm) Tubes	3”-4” (76.2mm – 101.6mm) Tubes
	<ul style="list-style-type: none"> • Holes - minimum diameter 0.039” (1mm) System can detect even smaller holes in many cases • Blockages- minimum of 5% of cross section • Erosion- minimum 5% of wall thickness • Pitting-- minimum 20% of wall thickness 	<ul style="list-style-type: none"> • Holes- minimum diameter 0.118” (3mm) System can detect even smaller holes in many cases • Blockages- minimum of 5% of cross section • Erosion- minimum 5% of wall thickness • Pitting-- minimum 50% of wall thickness
Inspection Speed	Under 10 seconds per tube depending on tube size, length and configuration.	
Hardware	<ul style="list-style-type: none"> • Compact handheld device: Non-invasive probe assembly including a transducer, microphone, controls, LCD screen and adaptors to fit tubes of any internal diameter up to 4”. Customized extensions (optional) for easy access to tube openings in challenging situations. • Main measurement and control unit (MCU): External computer connected to handheld device. Utilized for inspection setup, probe status monitoring, test data recording and analysis via AcousticEye software. 	
Software	Patented Acoustic Pulse Reflectometry (APR) technology featuring specialized, proprietary algorithms for NDT inspection.	
Reporting	Customizable, graphical on-line reports. Available output in PDF or HTML format.	
Physical Characteristics	Compact, rugged and lightweight design. Total box weight: 39.7 lbs (18Kg) Box dimensions: 22” L x 17.9” W x 10.4” H (56 x 45.5 x 26.5 cm)	
Power Input	Dual voltage system (110V/220V)	
Operating Temperature Range	14° to 122° F (-10° to +50° C)	
Certifications	CE Declaration of Conformity; Safety Certificate IEC 61010; EMC Test Certificate; Company Quality System certified to ISO 9001:2008	

Specifications subject to change without notice.

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