



PORTAGAUGE® 6

Multiple echo ultrasonic
thickness gauge

Made in the UK.

INTRODUCING THE PORTAGAUGE® 6

The **Portagauge® 6** is a **multiple echo ultrasonic thickness gauge** that is tested and calibrated according to BS EN 15317:2013 standards on a calibrated carbon steel block that is manufactured to EN ISO 2400:2012 and ISO 7963:2006 standards.

It is a **highly accurate** and **reliable** thickness gauge for measuring the thicknesses of metals, plastics and pipework corrosion, and ignores any paint coating up to 20mm in thickness.

Type: Handheld Ultrasonic Multiple Echo Thickness Gauge

Function: Designed for testing the thickness of metals and plastics and pipework corrosion.

Standards and Regulation Compliance:
Meets BSEN 15317-2013, NFPA 25 9.2.7, IACS PR No. 19 and No.77, DNVGL-CG-028



APPLICATION

The adaptable **Portagauge® 6** can be used in many industries such as:



Marine

Hull thickness inspections



Industrial

Inspecting components/equipment



Fire

Sprinkler systems

HIGHLIGHTED FEATURES



Accurate

- Ignores paint coating up to 20mm
- True metal thickness only
- Unbeaten accuracy of 0.1mm and resolution 0.01mm
- Includes A-scan and oscilloscope functionality

Versatile

- Different frequency sensors
- 2.5 MHz and 5 MHz
- Flexibility to cover all applications, both onshore & offshore

Easy to Use

- Built in material database, with a choice of 12 different materials pre-loaded
- LCD Backlight for working in poor visibility

Why should I test for corrosion?



Corrosion is a natural process and poses significant risk. Carrying out regular inspections will help identify areas of concern before causing serious damage.

Many infrastructures have some form of protective coatings and removing these coatings exposes them to further corrosion.

The **Portagauge® 6** ultrasonic thickness gauge measures through protective coatings, providing accurate and reliable thickness measurements. This helps you to **determine the level of corrosion or erosion without the risk of causing further corrosion damage.**

UPDATED FEATURES

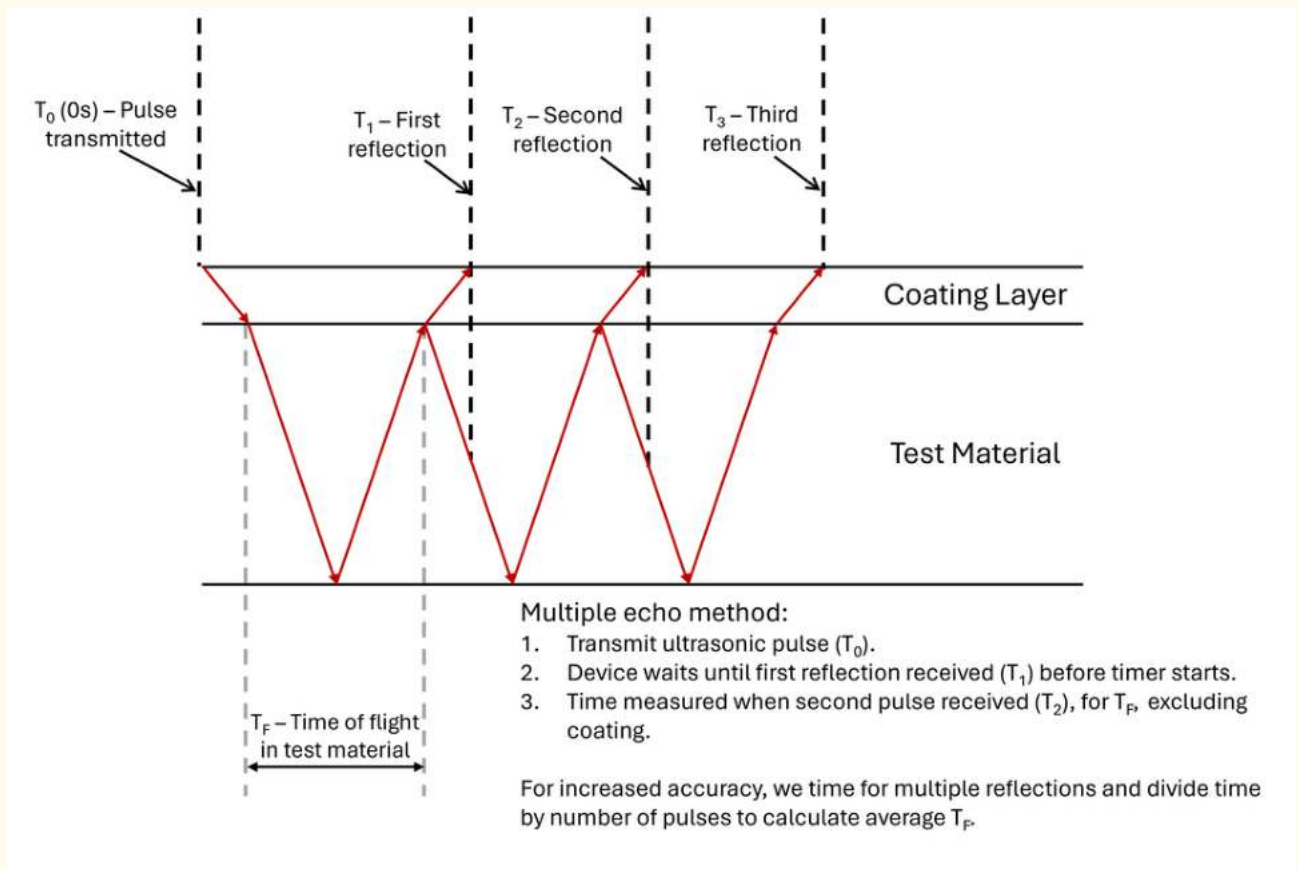
Datalogging – Save readings directly onto the ultrasonic thickness gauge with a press of a button. With 4MB of internal storage on the **Portagauge® 6** thickness gauge, you can store up to 200,000 measurements before the internal storage is full. Easy export/download to PC via USB.

USB Power Connection – when plugged into a power source via the USB port, the **Portagauge® 6** will run on USB power, preserving battery life, and allowing continuous use if connected to mains power.

Minimum thickness alarm – set an accepted minimum thickness of the material being tested, and the Portagauge® 6 will sound an alarm during testing whenever the measured thickness is lower than the inputted minimum level.



WHY THE PORTAGAUGE® 6?



1. Multi-echo capability

- Accessibility: Easily measure material thickness through paint layers/coatings **without removing them**.
- Accuracy: Reliably measure through up to 20 mm of coating accurately.

2. Built-In Database

- Includes 14 of the most common materials for easy switching.
- Capable of measuring a wide range of materials, including most metals and plastics.
- Allows custom sound speed entry for materials not in the database by selecting “Other”.

3. A-scan functionality and oscilloscope trace for near-real-time ultrasonic signal observation.

HOW DO I IDENTIFY THE EXTENT OF CORROSION USING THE PORTAGAUGE® 6?

The wall thickness measurement that is displayed on the **Portagauge® 6** represents the remaining wall thickness of the material that is in good condition.

This is measured by the reflected sound waves coming from the portion of the good material left in the structure. By comparing the wall thickness measurement from the **Portagauge® 6** to the actual wall thickness of the material when it was in brand new condition allows the operator to determine the severity of the corrosion.



SENSOR OPTIONS

We offer a wide range of dual-element sensor options, with different frequencies and sizes, and the option for high-temperature probes, so no matter the environment or the application, we will have an ideal sensor for your needs.



- Our standard 2.5 MHz Dual-Element Sensor (Model No. DE2.5-14) is our most robust and widely used sensor option for metal thickness measurements. It has a 14mm diameter sensor face and has a measuring range of 1.5mm – 100.0mm.
- Our 5.0 MHz Dual-Element Sensor (Model No. DE5.0-6) is mostly used for measuring wall thicknesses on your smallest pipes. It has a 6mm diameter sensor face and capable of measuring reliably on pipes no smaller than 15.0mm (1/2") in diameter. It has a measuring range of 1.5mm – 50.0mm.
- Our 5.0 MHz Dual-Element Sensor (Model No. DE5.0-10) is our second most popular sensor option, commonly used for measuring wall thicknesses of small pipes. It has a 10mm diameter sensor face and capable of measuring reliably on pipes no smaller than 25.0mm (1") in diameter. It has a measuring range of 1.5mm – 100.0mm.

WHATS IN THE BOX?

- Portagauge® 6 Main Unit
- Standard 2.5 MHz (Model No. DE2.5-14) Dual-Element Ultrasonic Thickness Gauge Sensor
- 5mm Metal Test Block
- Ultrasonic Couplant
- User Manual
- Calibration Certificate
- Robust Carrying Case

BENEFIT FROM WARRANTY AND SUPPORT

- Main Unit: 3 years
- Sensors: 1 year
- Lifetime customer support



STAY COMPLIANT WITH REGULATIONS

FIRE

NFPA 25 – Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems

9.2.7 Tests During Interior Inspection. Where a drained interior inspection of a steel tank is required by 9.2.6.4, the following tests shall be conducted:

(3) Non-destructive ultrasonic readings shall be taken to evaluate the wall thickness where there is evidence of pitting or corrosion

(5) Tank bottoms shall be tested for metal loss and/or rust on the underside by use of **ultrasonic testing** where there is evidence of pitting or corrosion

NFPA 13 – Standard for the Installation of Sprinkler System

References made to NFPA 25 for regular inspection, testing and maintenance

MARINE

IACS

Specific requirements from IACS Procedural Requirements PR No. 19 and No.77

DNVGL

DNVGL-CG-028 – Section 3 – Basic Requirements

5) Only **multiple echo instruments** may be used for TM onboard all ships



TECHNICAL DATA

MAIN UNIT DIMENSIONS	168mm (L) x 82mm (W) x 31mm (D)
WEIGHT	360g (with batteries)
MEASURING RANGE	1.50mm – 100.00mm
MATERIAL TYPES	Most metals and plastics, built-in database contains the following: Carbon Steel, Stainless Steel 304, Stainless Steel 316, Cast Iron, Ductile Iron, Copper, PVC, Lead, Nylon, Polyethylene (PE), Aluminium, Asbestos, Fibre Glass, Glass
ACCURACY	+/- 0.1mm
RESOLUTION	+/- 0.01mm
MEASUREMENT UNITS	Units: Metric (mm) and Imperial (inches) Mode: Multiple Echo (ignores paint coating up to 20mm thick)
FREQUENCY	2.5 MHz, 5.0 MHz
DISPLAY	Full 128 x 68 pixel graphics with backlight for working in poor visibility conditions
ADDITIONAL FEATURES	Custom material sound velocity input enables users to test custom materials A-scan functionality to observe material condition and verify correct backwall echo Oscilloscope trace to assist in performing a good measurement Minimum thickness alarm, audible alert when thickness measurements drop below user-set minimum value
DATALOGGING	4 MB internal storage for datalogging, capable of recording up to 200,000 thickness measurements. Logs include date, a user-set identifier and thickness measurement and can be downloaded to a PC via the micro-USB port.
POWER SUPPLY	9V PP3 battery, up to 12 hours continuous use with auto shutdown after 30 seconds of inactivity 24/7 power option via micro-USB port
IP RATING	IP 65 enclosure
SENSOR TYPE	Dual element with 0.9m LEMO-00 cable
SENSOR OPTIONS	2.5 MHz: 14mm diameter sensor, most robust and reliable for thickness measurements 5.0 MHz: 10mm diameter sensor, for measuring pipes no smaller than 25mm (1") diameter 5.0 MHz: 6mm diameter sensor, for measuring pipes no smaller than 15mm (1/2") diameter
CERTIFICATIONS	CE Meets marine classification society requirements for marine thickness gauging inspection equipment Coltraco is ISO 9001:2015 and ISO 14001 approved
WARRANTY	Main Unit: 3 years, Sensors: 1 year Lifetime customer support
PACKAGE CONTENTS	1 x Portagauge® 6 Main Unit 1 x 2.5MHz, 14mm diameter Dual Element Sensor 1 x 5mm Metal Test Block 1 x Ultrasonic Couplant 1 x Robust Carrying Case 1 x User Manual 1 x Calibration Certificate

OUR THROUGH-LIFE COMMITMENT TO YOU

We look after our customers throughout the lifetime of your equipment.

Every main unit is supplied with **3 years warranty** and **1 year warranty on its sensors and accessories**.

We are proud to offer free lifetime technical support and online training is available on request with a range of solutions designed to meet your calibration requirements:



Onshore Calibration

This can be done in our UK laboratory or in one of our 11 ODA Service Centres present globally

We also support 1-1 exchanges with a pre-calibrated unit to reduce processing time

We also offer a unit collection service for customers who are not used to sending equipment out of their respective countries.

Remote Calibration

This can be done remotely onboard the vessel by a competent crew member to reduce the hassle of offloading the instrument while the vessel is at sea

ABOUT COLTRACO ULTRASONICS

Coltraco is ISO 9001:2015 and ISO 14001 approved

"To see the sounds that others cannot hear"

"To measure the hitherto unmeasurable"

Our organisation comprises:

- Our **Company**
- Our **Laboratory**, co-located with the Centre for Advanced Instrumentation at Durham University
- Our **Research Organisations**, the Durham Institute of Research, Development & Invention (DIRDI)
- Our **Centre for Underwater Acoustic Analysis** (CUAA)

Engaged in Research, Design, Development, Manufacture, Integration & Sustainment of high-exporting advanced technology systems, products and services.

We monitor and measure an array of specialised environments to deliver the Safesite™ on land and the Safeship™ at sea.

BY BEING SCIENCE-LED:



We identify and nurture brilliant minds, creating a unique research environment at Durham University, which is a globally outstanding centre of teaching and research excellence.



In our research at DIRDI, we undertake fundamental research into the physical laws of the universe, alongside applied research in Physics, Mathematics, Engineering and Computer Science in acoustics, electromagnetism and information engineering.



It is this research and manufacturing excellence, and our enduring commitment to the sustainment of our technologies in the field, that makes Coltraco Ultrasonics the partner of choice for customers and distributors in 120 countries.



We deliver genuine value for our customers through our scientific and institutional values, and the global quality of our commercial and technical services.

Safeship™

Today our instruments are aboard 17% of the world's 60,000 ships, preventing ships' catastrophic failure, by monitoring watertight integrity on the one hand, and the safe contents of fire extinguishing gases such as CO₂, on the other. These are the basic principles by which we became a Safeship™ company in the maritime sector.

Safesite™

Our instruments serve over 20 market sectors, to ensure that safety critical systems, such as gaseous fire suppression systems, sprinkler systems and process control equipment, in high value assets always work effectively, and in the Built Environment, the ability to concurrently identify airtightness and energy loss. This is how we are a Safesite™ company, on land.

Contact and support

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British manufacturer of ultrasonic technologies, exporting to 120 countries and twice winners of The Queen's Award 2019 and 2022.

