

Ultrasonic Thickness Gauge

Multigaugage 4000 series ROV Gauge

The Multigaugage ROV 4100 and 4400 Underwater Gauges are simple, robust ultrasonic thickness gauges designed to be mounted onto all types of work class ROV's. There are two models in the range, the Multigaugage ROV 4100 which has a depth rating of 1000m and the Multigaugage ROV 4400 which has a depth rating of 4000m. Both gauges have been designed and built to survive extremely harsh conditions that exist in the offshore and underwater industries worldwide. The gauges use multiple echo which means measurements can be easily taken without the need to remove coatings, up to 6mm thick, and the selectable RS232 or RS422 output makes connection to most ROV's simple. The gauge is equipped with **Intelligent Probe Recognition (IPR)**, which automatically adjusts settings in the gauge for enhanced performance and **Automatic Measurement Verification System (AMVS)** to ensure only true measurements are displayed,



Multigaugage 4400
4000 m

Features:

- Ignores coatings up to 6mm thick using multiple echo.
Coating Plus+ ignores coatings up to 20mm
- Depth rating to 1000m and 4000m
- Easy to use datalogging software
- Compatible with most ROV's
- RS232 or RS422 output
- Optional probe holder for correct presentation of the probe
- Rugged and robust
- Intelligent Probe Recognition (IPR)
- Automatic Measurement Verification (AMVS)
- No zeroing required
- Free calibration for the life of the gauge

simple . accurate . robust

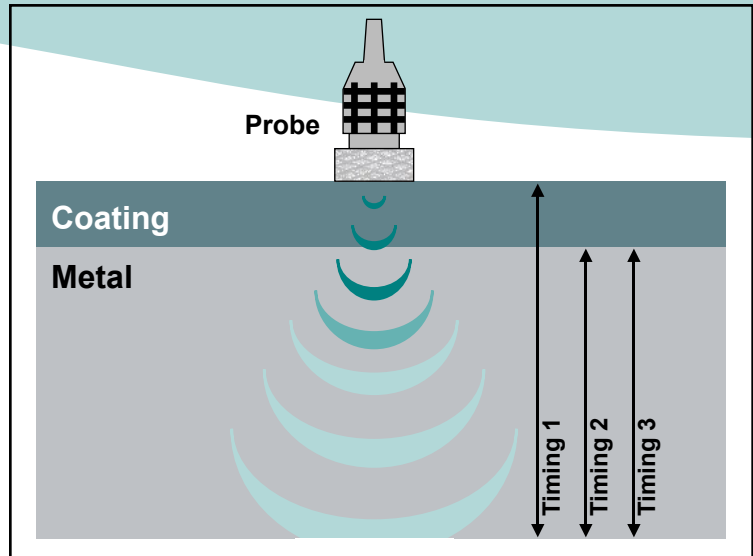


About Multiple Echo

All Ultrasonic Thickness Gauges should be calibrated to the velocity of sound of the material being measured. Coatings have a different velocity of sound than metal and it is important they are not included in the measurement. Multiple Echo ensures all coatings, up to 6mm thick, are completely eliminated from the measurement.

How it works:

A transmitted ultrasound pulse travels through both the coating and the metal and reflects from the back wall. The returned echo then reverberates within the metal, with only a small portion of the echo travelling back through the coating each time. The timing between the small echoes gives us the timing of the echoes within the metal, which relate to the metal thickness. The returned echoes need not be consecutive as the gauge will interpret them automatically and calculate the thickness. A minimum of three echoes are checked each time. This is referred to as the **Automatic Measurement Verification System (AMVS)**.



Specification

Sound Velocity Range	From 1000 m/s to 8000 m/s (0.0394 in/μs to 0.3150 in/μs)		
Single Crystal Soft Faced Probe Options	2.25 MHz	3.5 MHz	5 MHz
Probe Measurement Range	3 - 250 mm (0.120" to 10")	2 - 150 mm (0.080" to 6")	1 - 50 mm (0.040" to 2")
Probe Sizes	13 mm (0.5") & 19 mm (0.75")	13 mm (0.5")	13 mm (0.5")
Resolution	0.1 mm (0.005") or 0.05 mm (0.002")		
Accuracy	± 0.1 mm (0.005") or ± 0.05 mm (0.002")		
Coatings Range	Up to 6mm (Standard Mode)*; up to 20mm (Coating Plus+)*		
Output	RS232 or RS422 User Selectable		
Pressure Tested	1000 metres (Multigauche 4100) & 4000m (Multigauche 4400)		
Power	9Vdc - 30Vdc @ 150mA		
Gauge Dimensions	145 mm x 72 mm (5.71" x 2.83")		
Gauge Weight	Multigauche 4100 ROV: 465 g (16.40 ounces) Multigauche 4400 ROV: 2500g (151.68 ounces)		
Environmental	RoHS and WEEE compliant		
Operating Temperature	-10°C to +50°C (14°F to 122°F)		
Storage Temperature	-10°C to +60°C (14°F to 140°F)		

* Figures relate to most coating types

The Tritex Multigauche 4000 series has been manufactured to comply with British Standard BS EN 15317:2007, which covers the characterisation and verification of ultrasonic thickness measuring equipment.



Kit Contents:

Multigauche 4000 gauge, probe, spare membranes, membrane oil, 15mm test block, membrane key, spare 'O' rings, Molykote grease, nose cone release bar, manual, calibration certificate, carry case, communicator software, RS422 - RS232 converter, Impulse connector with fly lead, ROV test cable, power supply for use with test cable.

3 YEAR WARRANTY

Contact

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