Ultrasonic Thickness Gauge

Multigauge 4000 series

ROV Gauge

The Multigauge 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 Multigauge ROV 4100 which has a depth rating of 1000m and the Multigauge 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 and the RS232 output makes connection to most ROV's simple.

The gauge is equipped with IPR (Intelligent Probe Recognition), which automatically adjusts settings in the gauge for enhanced performance and AMVS (Automatic Measurement Verification System) to ensure only true measurements are displayed, even on the most heavily corroded metals.

Multigauge 4400
4000 m

Features:

- **Ignores coatings using multiple echo**
- **Depth rating to 1000m and 4000m**
- **Easy to use datalogging software**
- **Compatible with most ROV's**
- **RS232 or RS422 output**
- **Rugged and robust**
- **Intelligent Probe Recognition (IPR)**
- **Automatic Measurement Verification (AMVS)**
- **No zeroing required**
- **Coating Plus+ for very thick coatings**

simple . accurate . robust

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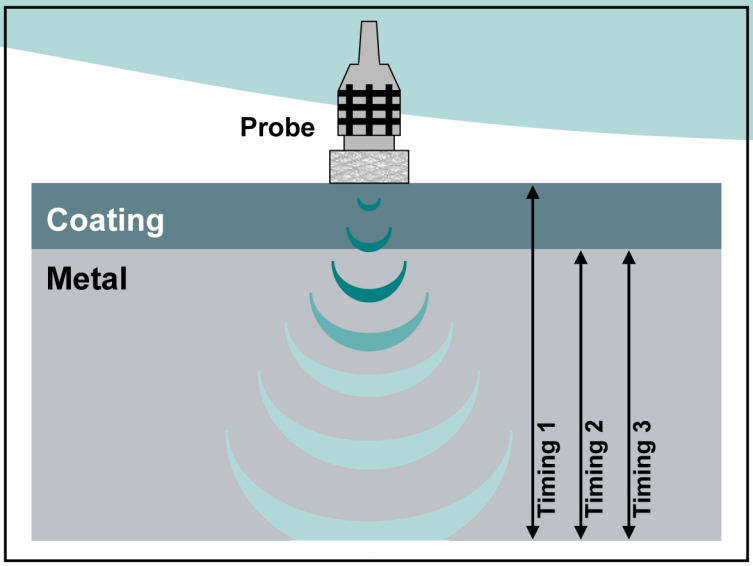
About Triple Echo

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. Triple Echo ensures all coatings are completely eliminated from the measurement.



How it works:

A transmitted ultrasound pulse travels though 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")*		
Output	*RS232 or RS422*		
Pressure Tested	*1000 metres (Multigauge 4100) & 4000m (Multigauge 4400)*		
Power	*9Vdc - 30Vdc @ 150mA*		
Gauge Dimensions	*145 mm x 72 mm (5.71" x 2.83")*		
Gauge Weight	*Multigauge 4100 ROV: 465 g (16.40 ounces)* *Multigauge 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)*		

The Tritex Multigauge 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.

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