
# *ROV Ultrasonic Thickness Gauge*

tritex ndt

*"The gauge worked well and we got readings off the hull, I have to admit to being surprised given the corroded state of the hull."*

Ministry of Defence DE&S Salvage and Marine Operations (SANMO), United Kingdom

## Typical Applications

Shipping

Bridges

Pipelines

Dockyards

Offshore Platforms

Wind Turbines

Pilings

Dock Gates

# Multigauge 4000 ROV

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, 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, even on the most heavily corroded metals.

Performance is the most important feature of our ultrasonic thickness gauges. Tritex gives you the excellent performance that you would expect, with free annual calibration for the life of the gauge.

Robust Probe & Cable

# 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
- Various output types, including ASCII to overlay measurements onto video
- 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

*"The gauge gives quick and accurate readings, requires far less surface preparation than other makes we have used and locks on much faster. It can speed up the survey process by a factor of at least two."*

Harbour & Marine Diving Contractors Ltd - United Kingdom

simple . accurate . robust

# Probe Holder

The Multigauge ROV Probe Holder has been designed to accurately present the ROV probe onto the surface being measured, whether it is curved or flat. The ingenious design means there are no moving parts to get clogged with silt and seaweed and yet there is a 75° freedom of movement in all directions - there are no axial restrictions. It is made from titanium for strength and lightness.

The probe can be mounted slightly recessed into the holder to prevent damage to the probe if a collision with the surface occurred. Measurements are unaffected by the small water gap due to the Multiple Echo technology used by all Tritex gauges, which ignores the water gap as if it were a coating.


"We have found the Tritex easy to integrate to various ROV systems. The probe handler is very effective, and it continues to be a reliable and trouble-free sensor."

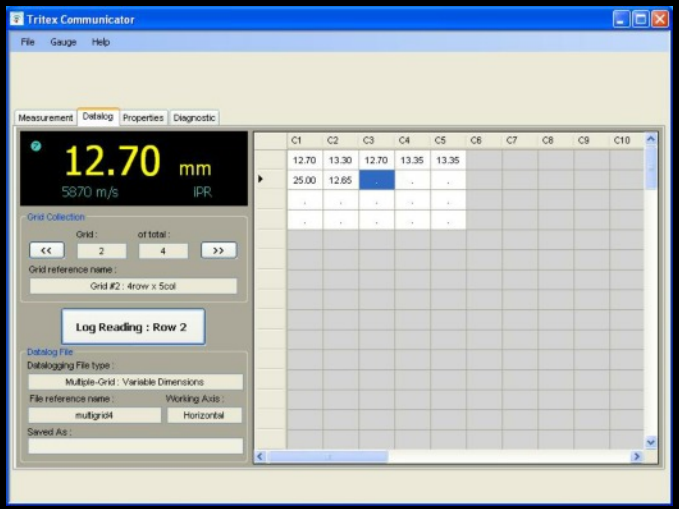
Atlantas Marine Ltd - United Kingdom

# Communicator Software

Tritex Communicator software displays live measurement results from the Multigauge 4000 onto either a laptop or PC. Templates can be preset based on a grid or string of measurements. This gives maximum versatility for a wide range of applications including measurements on pipelines, pilings or ship hulls.

As well as storing measurement data, Communicator software also has the option to store the time, date and an identifying label for each measurement. In addition, various settings within the gauge can be changed from the software to optimise performance.

The stored data is saved in a standard TXT format allowing importation into standard analysing programs.





## Features

- Displays real time measurements from the Multigauge 4000 Ultrasonic Thickness Gauge
- Easy to install and very user friendly
- Datalogging with grid or string templates, or a combination of both
- Bi-directional to allow settings in the gauge to be changed when the Multigauge 4000 is being used underwater
- Accepts RS232 or RS422 input
- Time, date and a label can be added to each measurement value
- Common output interface (.txt)
- Easy to use wizards for template programming

# Specifications

## Multigauge 4000 Gauge

**3 YEAR WARRANTY**

** Figures relate to most coating types*

| | | | |
|---|---|---|---|
| **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 (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)*<br>*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 has been manufactured to comply with British Standard BS EN 15317:2013, which covers the characterisation and verification of ultrasonic thickness measuring equipment.***

## Kit Contents

Multigauge 4000 gauge, probe with 3 metres of cable, spare membranes, membrane oil, 15mm test block, membrane key, spare 'O' rings, Molykote grease, nose cone release bar, communicator software, RS422 - USB converter, RS232 - USB Converter, Impulse connector with fly lead, ROV test cable (including Impulse connector), power supply for use with test cable, manual, calibration certificate, carry case.

**Optional:** Probe Holder supplied with spare rubber universal joints, Allen keys.

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QAS International
ISO 9001:2015

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Made in the UK

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