Cygnus DIVE
MULTIPLE ECHO ULTRASONIC DIGITAL THICKNESS GAUGE

Measures metal thickness to determine wastage or corrosion accurately, quickly and without removing protective coatings.

Options and Accessories

DIVELink Software
Allows remote display of thickness measurements on a computer via two-wire serial data link.

Data Logging
Adds Data Logging features to the DIVE gauge including DIVELink software for data transfer.

HelmetView™ Display
Remote display with fixing bracket for Kirby Morgan® helmets with an accessory mounting point.

Top Side Repeater
The Cygnus Top Side Repeater is a self contained remote display unit that can relay the thickness measurement values to the surface. There is also an option to overlay the thickness measurements on a composite video signal for survey video recording purposes.

Umbilical Cables
Cygnus can provide umbilical cables to connect the Cygnus DIVE gauge to surface equipment. Custom lengths can be accommodated up to 500 meters.

Benefits of Cygnus Multiple Echo

- Measures remaining metal thickness of corroded and coated structures
- All measurements are error checked using 3 return echoes to give repeatable, reliable results
- Accepted by all major classification societies
- Greatly reduces inspection time and costs
- Echo strength indicator to aid measurement.

With multiple echo, readings are taken by measuring the time delay between any three consecutive backwall echoes. The time of T1 (coating thickness) is ignored. The times of T2 and T3 are equal to the time that it takes to travel through the metal. Only by looking at three echoes can the measurements be automatically verified (where T2 = T3).
The Deep Coat function allows the Cygnus DIVE to measure metal thickness through coatings up to 20 mm thick.

Deep Coat probe life:
Coiled cable will extend up to 1 metre in length for reaching around structures. A replaceable membrane ensures long surface preparation, the Cygnus DIVE will measure metal thickness through paint and other coatings. The Multiple Echo Technique ensures only genuine, verified thickness measurements are displayed.

Ultrasonic Probe Technique:
The Cygnus DIVE uses the trusted Multiple Echo Technique first developed by Cygnus over 25 years ago. With minimal measurement technology, the Cygnus DIVE will measure metal thickness through paint and other coatings. The Multiple Echo Technique ensures only genuine, verified thickness measurements are displayed.

Power is supplied by a replaceable, rechargeable Lithium-Ion battery pack that gives up to 10 hours continuous operation.

Simple Operation:
Like all Cygnus products, the Cygnus DIVE has been designed for easy operation. There are no gates to set up, no gain to adjust - just turn on and go. There are two buttons for quick and easy menu navigation using one hand. From here you can access all the functions of the gauge guided by intuitive, clear menus.

Rechargeable Batteries:

Ultrasonic Probe:
The ultrasonic probe is connected to the Cygnus DIVE by a coiled double jacket cable and rugged locking connector. The coiled cable will extend up to 1 metre in length for reaching around structures. A replaceable membrane ensures long probe life.

Deep Coat:
The Deep Coat function allows the Cygnus DIVE to measure metal thickness through coatings up to 20 mm thick.

**Features**

**Data Logging Option**

The Cygnus DIVE can store up to 5000 thickness measurement points in internal flash memory.

**Auto-Log**

Thickness measurements are recorded using an Auto-Log feature that saves each stable measurement - this means no 'log' button for the diver to press.

**A-Scan Graph**

Along with the thickness measurement, a copy of the A-Scan graph is also saved.

**Reporting**

Data logged measurements are easily transferred from the Cygnus DIVE to a computer using the DIVELink software supplied. From there a paper report can be produced or the thickness measurements can be exported to a spreadsheet.

**Grouping**

Measurements can be split into groups by simply starting a new group via the DIVE’s easy to use menu.

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**Top Side Repeater (TSR) - Optional**

The Top Side Repeater is a small display unit that can be used to display the thickness measurements sent from the Cygnus DIVE gauge to the surface.

**TSR Video Overlay Facility**

The Top Side Repeater can also superimpose the thickness measurements on to a composite PAL or NTSC video signal to display it on a monitor screen and/or the video recording of the survey. This provides a thickness measurement that can be linked to a position or place in the video recording. Kit includes data and video cables.

**DIVELink Software Option**

Cygnus DIVELink software provides a top side view of thickness measurements, A-Scan graphs and instrument status on a computer.

**Data Logging**

DIVELink can be used to record thickness measurements as part of a thickness survey. The operator can choose to log the thickness measurements taken by the diver, or using the A-Scan graph estimate the thickness and record this value instead - useful when gauging on heavy corrosion.

**Instrument Status and Control**

DIVELink allows an operator to see the battery status of the Cygnus DIVE. The material velocity, unit and Deep Coat settings can also be changed from the surface.

**Optional HelmetView™**

Often divers face taking thickness measurement surveys in black or limited visibility water so Cygnus developed HelmetView™.

A small remote display is mounted just in front of the lens on the diver’s helmet using the accessory screw, a short cable then plugs in to the Cygnus DIVE’s top side data connector.

Thickness measurement values are then clearly visible to the diver - even if they can’t see any further.

Thickness measurements are clearly displayed on an OLED display and its brightness can be adjusted from the menu on the Cygnus DIVE gauge.
The latest innovation from the pioneers of the digital multiple echo ultrasonic thickness gauge, the Cygnus DIVE is designed for the professional diver and is accurate, reliable and easy to use. Worn on the diver’s forearm, it gives an invaluable free-hand while performing thickness surveys.

Features

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Ultrasonic Probe

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Measurement Technology

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