



# CYGNUS DIVE

## ULTRASONIC THICKNESS GAUGE



The Cygnus DIVE is a robust, wrist-mountable ultrasonic underwater thickness gauge - providing an invaluable free hand while performing Ultrasonic Thickness Measurement (UTM) underwater. The large, bright display with Live A-scan is easily viewable by both the diver and his camera - even in the poorest visibility. With only two buttons to press, the gauge is very easy to navigate through an intuitive, user-friendly menu.

IDEAL FOR  
USE IN



HULL UTM  
INSPECTION



CIVIL  
ENGINEERING



MARINE  
STRUCTURES



OFFSHORE  
PLATFORMS

...underwater structures, e.g. bridges, tanks, canal locks, subsea pipelines and equipment, UWILD or IWS class surveys.



## CYGNUS DIVE KEY FEATURES



- **Multiple-Echo mode for accurate, through-coat measurements as specified by Classification Societies**
- **Single-Echo and Echo-Echo modes for heavily corroded metals with a thin or no coating**
- Deep-Coat function to ignore coatings up to 20mm thick
- A-scan display to assist with measurement verification
- Optional Data Logging feature with AutoLog - storing up to 5000 measurements including A-scan data without pressing any button
- MSI™ (Measurement Stability Indicator) verifies stable, reliable readings
- Rechargeable lithium-ion battery giving up to 10 hours continuous measurement
- Optional remote display HelmetView™, Topside Repeater and CygLink surface display software



**LARGE COLOUR DISPLAY**  
WITH A-SCAN



**DEPTH RATED TO 300M / 985 FT**



**HELMETVIEW™ OPTION**



**TOPSIDE REPEATER OPTION**

## OPTIONS AND ACCESSORIES

### Topside Repeater (TSR) Remote Display Unit

The Cygnus Topside Repeater is a remote display unit connected to the DIVE gauge with an umbilical cable. It displays the thickness measurements at the surface in real-time during the survey.

### Topside Repeater with Video Overlay

The Topside Repeater can also overlay the real-time thickness measurements on to a composite video signal, displaying it on the survey monitor screen. It will also then be recorded (if there is a video of the survey), showing exact locations and the thickness measurement for future reference.

### HelmetView™ Display

This is a remote display with a fixing bracket for Kirby Morgan® Helmets that have an accessory mounting point. This is depth rated to 300m/984ft, and designed for use in situations with extremely poor visibility and ease of viewing by the diver.

### Three Versatile Measuring Modes

Multiple-Echo mode uses three error checked back wall echoes to provide the most reliable and accurate remaining thickness measurements, with no need to remove coatings (up to 20mm/0.8 in thick).

Single-Echo mode is ideal for measuring uncoated metals with heavy front and/or back-wall corrosion. Also effective on a range of cast metals, plastics and composites.

Echo-Echo mode works best for measuring heavily corroded metals through thin coatings of up to 1mm/0.04in thick, ideal for measuring painted metals with heavy back wall corrosion.

### Variety of Cygnus INOX Probes

Stainless steel SINGLE CRYSTAL probes – used in Multiple-Echo mode, these probes include replaceable membranes for long life, require no zeroing and have a high linear accuracy.

Stainless steel TWIN CRYSTAL probes – used in Echo-Echo and Single-Echo modes, these probes have improved measurability on extreme back wall corrosion and pitting.

### Measurement Stability Indicator (MSI™)

Exclusive to Cygnus, MSI™ ensures stable and therefore reliable measurements are displayed in Echo-Echo and Single-Echo modes.

### Cymlink Computer Software

Cymlink is a Windows® based application used to transfer and manage data logger records, A-scans, B-scans, templates, measurement comments and material velocity tables. The program can generate PDF reports and export to Excel. It also displays A-scans and B-scans, allowing for after-the-event analysis of logged measurements. Designed for Windows 7® and above.



GO TO  
PRODUCT  
PAGE

## CYGNUS DIVE SPECIFICATION

Feature	Description
<b>Display</b>	2.8" quarter VGA colour LCD (320 x 240 pixels). Large clear thickness measurement (15mm high numbers), viewable from all angles. A-scan display with automatic X axis. Battery level, signal strength, probe type, velocity. Measurement mode and units indication
<b>Battery</b>	Single 3.6V Li-ion 8.2 W battery. 10 hours continuous measurement Low battery warning 'alert' message
<b>Measuring Modes</b>	Multiple-Echo using 3 echoes to ignore coatings up to 20mm thick. Echo-Echo using 2 echoes to ignore coatings up 1mm thick. Single-Echo using 1 echo
<b>Deep Coat</b>	In Multiple-Echo mode, allows measurement to be made through thicker coatings of suitable materials of up to 20mm thick
<b>Accuracy</b>	±0.1 mm or 0.1% of thickness measurement, whichever is greatest, when calibrated in accordance with Cygnus Instruments calibration procedure
<b>Probe Options</b>	Single crystal probes and Twin crystal probes
<b>Probe Cables</b>	Double outer jacket in tough PU. Coloured yellow for easy locations underwater. Coiled for ease of use. Fischer S105 series connectors.
<b>Measurement Range in Steel</b>	1 - 250 mm (0.039 - 10 in.) depending on selected probe and configuration, material and temperature
<b>Measurement Resolution</b>	Multiple-Echo with single crystal probes - 0.1 or 0.05 mm Single-Echo and Echo-Echo with twin crystal probes - 0.1 or 0.01 mm
<b>Measurement Units</b>	mm or inches
<b>Probe Zero</b>	Fully automatic probe zeroing for all probes types
<b>V-Path Correction</b>	Automatic V-Path correction for all twin crystal probes
<b>Velocity Range</b>	2000 to 9000 m/s in 1 m/s steps
<b>Pulser</b>	Twin channel 70 V spike pulser
<b>Receiver/Amplifier</b>	10 MHz bandwidth, 120 dB range, automatic TCG. 60 MHz measurement time-base
<b>Data Logging (optional)</b>	One-handed automatic logging of stable measurements. Capacity for up to 5000 points including 640 point A-scan data
<b>Data Output</b>	RS-485 single pair, half duplex for surface connection
<b>Standards</b>	Designed for EN 15317
<b>Compliance</b>	CE, UKCA, RoHS
<b>Warranty</b>	3 years on gauge and 6 months on probe



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