



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 CylLink surface display software



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**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.

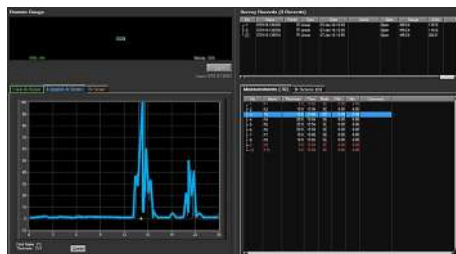
Stainless steel TWIN CRYSTAL probes – used in Echo-Echo and Single-Echo modes, these probes have improved measurability on extreme back wall corrosion and pitting.

Measurement Stability Indicator (MSI)

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

CygLink Computer Software

CygLink is a Windows® based application for topside computer use to display continuous A-Scan output and measurement data. CygLink has the facility to log both data formats into a Survey file for report presentation, which can be emailed, exported as a PDF, or printed.



CYGNUS DIVE SPECIFICATION

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



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All information provided is subject to change without prior notice.

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