CYGNUS INSTRUMENTS

RELIABLE ULTRASONIC MEASUREMENT





CYGNUS UNDERWATER

ULTRASONIC THICKNESS GAUGE

MADE IN BRITAIN

Specifically designed for divers undertaking ultrasonic thickness measurement (UTM) of underwater structures, the Cygnus Underwater has been built to withstand harsh subsea environments while providing quick and accurate metal thickness measurements through coatings or heavy corrosion. This diver-held gauge is simple to operate using 3 function keys, an intuitive menu and a large LCD display – highly visible, even in low-visibility waters.

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 UNDERWATER KEY FEATURES



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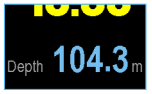
- **3 measuring modes for levels of corrosion, various materials and through-coat measurements**
- **Depth sensor - live depth display providing the diver with an accurate depth indicator**
- **Live A-Scans aid visual measurement verification**
- Extremely Simple-to-Use with 3 function keys and up to 4 screens
- Comprehensive data-logging: linear and grid
- Deep Coat function ignores thick coatings
- RTC (Real Time Clock) for tagging date/time on measurement points
- Auto-set Gain to optimise the probe's gain settings for optimal performance
- Multiple Echo Mode to verify accurate through-coat measurements as specified by Class Societies
- Measurement Stability Indicator (MSI) verifies stable and therefore reliable measurements
- Available in STANDARD, PLUS and PRO variants, with the option to upgrade to the PLUS or PRO variant at a later date



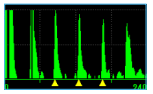
LARGE COLOUR LCD DISPLAY



CYGLINK SOFTWARE



DEPTH SCREEN VIEW



LIVE A-SCAN FOR FURTHER VERIFICATION

Three Selectable 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 many 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 coated metals with heavy back wall corrosion.

Exclusive to Cygnus, Measurement Stability Indicator (MSI) ensures stable and therefore reliable measurements are displayed in Echo-Echo and Single-Echo modes.

SELECTABLE OPTIONS

Comprehensive Data Logging

- Record types: Linear and Grid 2D



- Log measurements by pressing the middle key or using Auto-Log feature
- Allows a maximum of 5,000 measurement points per record
- 16 grid patterns available
- Saves measurements with A-scans and depth as records on internal memory



Topside Repeating via CygLink

CygLink is a Windows® based application for 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 UNDERWATER **SPECIFICATION**

Feature	Description
Measuring Mode	Multiple Echo with Single Crystal Probes Single Echo with Twin Crystal Probes Echo-Echo with Twin Crystal Probes
Materials	Sound velocity from 2000 m/s to 9000 m/s [0.0787 in/us to 0.3543 in/us]
Accuracy	±0.1 mm (±0.004") or 0.1% of thickness measurement whichever is the greatest
Resolution	0.1mm, 0.05mm or 0.01mm depending on probe type
Probe Options	Single crystal and twin crystal probes
Measurement Range in Steel	1mm to 250mm (0.040 in. – 10 in.) depending on selected probe and configuration, material and temperature
Connector	SubConn MC
Power Supply	Ni-MH Battery Pack 1.8 Ah (min)
Power Rating	1.5W
Probe Sockets	Lemo
Battery Life	8 hours minimum continuous measurement
Display	2.4" VGA, sunlight readable colour display
Size	80mm x 305mm x 65mm (W x L x D)
Weight	1 kg with battery
Operating Temp.	-10°C to +50°C (14°F to 122°F)
Storage Temp.	-20°C to +60°C (-4°F to 140°F)
Data Logging	5,000 measurements and A-scans per record
Computer Software	CygLink allows remote logging and viewing of A-scan graphs. Survey and report generation to PDF file. Graphic analysis of data and statistical calculations. Data output via RS-485 serial connection to transfer data to a Windows® computer with CygLink
Depth Sensor	Range 0 to 300m (30Bar)
Environmental Rating	Depth rated for 300m continuous immersion in sea water MIL STD 810G Method 501.6 (High Temp +55°C) MIL STD 810G Method 502.6 (Low temp -20°C)
Shock & Impact	MIL STD 810G Method 514.7 (Vibration) MIL STD 810G Method 516.7 (Shock 20g) MIL STD 810G Method 516.7 (Transit Drop 1.22m)
Standards	Designed for BS EN ISO 16831 RoHS Compliant
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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