

# Cygnus DIVE Underwater Ultrasonic Thickness Gauge

Divers wrist-mountable thickness gauge with a large bright AMOLED display

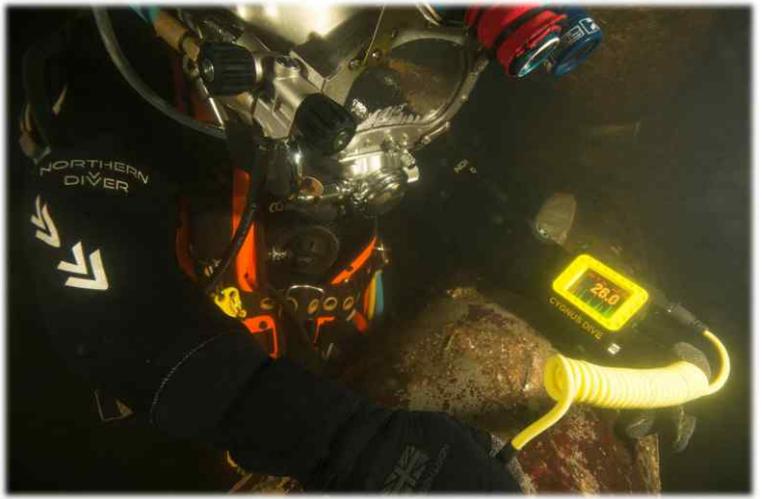


"Simplicity through technology"

## Designed for the Professional Diver

The Cygnus DIVE is a wrist-mountable, simple to operate, robust underwater ultrasonic thickness gauge which provides an invaluable free hand while performing remaining metal thickness measurements.

The large, bright colour AMOLED display is easily viewable by both the diver and his camera even in the poorest visibility and the operation of the gauge couldn't be simpler, only two buttons for easy navigation of the intuitive, clear menus.



### Key Features

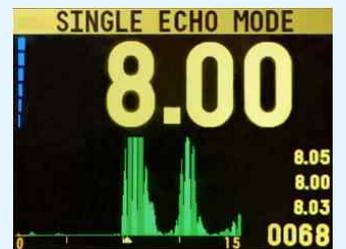
- Wrist-mountable giving the diver a free hand
- Large, bright colour AMOLED display, highly viewable by diver and camera in poor visibility
- A-Scan display to assist with measurement verification
- Auto-Log Data Logging - option, no log button to press - stores up to 5,000 measurements with A-Scans
- Multiple Echo means no need to remove protective coatings up to 20 mm (0.787") thick
- Error-checked Multiple Echo measurements to ensure genuine, verified measurements are displayed
- Deep Coat mode to measure through coatings up to 20 mm (0.787") thick
- Single Echo mode with Twin Crystal probes
- Probes are connected to the DIVE with a coiled double jacket cable which will extend up to 1 metre (3 ft)
- Pressure tested to 300 metres (1,000 ft)
- Rechargeable Lithium-Ion battery giving up to 11 hours continuous operation.



### MSI™ - Measurement Stability Indicator

Measurement Stability Indicator (MSI™) has been built into the single-echo measuring mode that uses twin crystal probes.

The gauge changes the colour of the thickness reading numbers from red to yellow to indicate a stable reading. Although measuring in single-echo mode is new to Cygnus, MSI™ ensures that Cygnus's long established philosophy of providing accurate and reliable thickness readings is carried through into the single-echo measuring mode.



### Twin Crystal and Single Crystal Probes

#### Twin Crystal Probes

Twin crystal probes measure in echo-echo and single-echo modes and is used on un-coated surfaces. This adds versatility for specific applications such as on extreme front and/or back wall corrosion, anchor chains links and plastic outfall/dredge pipes.

#### Single Crystal Probes

Single crystal probes use the Cygnus Multiple Echo technique which gives three sound pulses, this ignores coatings and provides error-checked verified readings.



## Applications

Maintenance and safety checks of metal thickness for:

- Ships hulls
- Anchor chains
- Offshore structures, jackets
- Dock gates, piers, jetties and pipings
- Semi sub structures
- Subsea pipelines
- Storage vessels, FPSO's
- ...plus many more.

## Options and Accessories

- **Data Logger:** Adds data logging capability to the gauge, measurements can be recorded in a linear or grid format.
- **CygLink Software:** A Windows® application which has two functions; used to transfer information from a data logging gauge to a computer and can be used to provide a top side view of the survey.
- **Topside Repeater Remote Display Kit:** Remote display unit connected to the DIVE gauge, displaying the thickness measurements at the surface in real-time during the survey.
- **Topside Repeater with Video Overlay:** Overlays real-time thickness measurement on to a composite video signal, displaying it on the monitor screen / video recording of the survey.
- **HelmetView™ Display:** Remote display with fixing bracket for Kirby Morgan® helmets with an accessory mounting point.



## Standard Kit Content

- Cygnus DIVE gauge
- 2 rechargeable batteries
- Fast charger
- Multiple Echo (through coating) probe (2.25 MHz 13mm (0.512"))
- User manual
- Spare membranes
- Membrane key
- Test block
- Surface and membrane couplant.



## Contact Details

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## Technical Specifications

<b>Display</b>	2.8" quarter VGA color AMOLED (320 x 240 pixels) Large clear thickness measurement (15 mm (0.591") 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 11 hours continuous measurement Low battery warning 'alert' message
<b>Measurement Modes</b>	Multiple Echo (three back-wall echoes) using Single Crystal (zero-degree) probes - automatically ignores surface coatings and measures only metal thickness Single Echo (first back-wall echo) using Twin Crystal probes
<b>Deep Coat</b>	In Multiple Echo mode, allows measurement to be made through thicker coatings of suitable materials of up to 20 mm (0.787") thick
<b>Probes</b>	Single Crystal Probes: <ul style="list-style-type: none"> <li>• 2.25 MHz 13 mm (0.512") S2C (standard)</li> <li>• 2.25 MHz 19 mm (0.748") S2D</li> <li>• 3.5 MHz 13 mm (0.512") S3C</li> <li>• 5.0 MHz 6 mm (0.236") S5C</li> </ul> Twin Crystal Probe: <ul style="list-style-type: none"> <li>• 5.0 MHz 8 mm (0.315") T5B (standard)</li> </ul>
<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 Ranges</b>	Multiple Echo (through coatings) with Single Crystal Probes: <ul style="list-style-type: none"> <li>• 2.25 MHz = 3.0 to 250 mm (0.110" to 9.995")</li> <li>• 3.5 MHz = 2.0 to 150 mm (0.065 to 6.000")</li> <li>• 5.0 MHz = 1.0 to 50 mm (0.045 to 4.000")</li> </ul> Single Echo with Twin Crystal Probe: <ul style="list-style-type: none"> <li>• 5.0 MHz = 1.5 to 50 mm (0.098" to 6.000") (in steel)</li> </ul>
<b>Measurement Resolution</b>	Multiple Echo with Single Crystal probes - 0.1 or 0.05 mm (0.005" or 0.002") Single Echo with Twin Crystal probes - 0.1 or 0.01 mm (0.005" or 0.0004")
<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 setps (78740.16 to 354330.71 in/s in 39.37 in/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</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>Computer Software</b>	CyLink allows remote logging and viewing of A-Scan graphs Survey and report generation to PDF file Graphic analysis of data and statistical calculations Designed for Windows 7 and Windows 8
<b>Warranty</b>	3 years on gauge and 6 months on probe