

## Cygnus Instruments

### Cygnus Underwater Ultrasonic Thickness Gauge



#### KEY FEATURES

- RINA Type-Approved (Certificate No. 2009DGPO787)
- Auto Probe Recognition (APR)
- Deep Coat mode for measuring through coatings up to 20 mm (0.787 inch) thick (upon request)
- Easy calibration using one single button
- Rugged, durable, shock-proof construction
- Stable calibration - linear accuracy - no zero adjustment
- Large bright LED display for poor visibility
- Pressure rated to 300 m (1,000 ft) depth
- Heavy duty sealed unit with double 'O' ring protection
- Self verification of measurements to ensure accuracy
- Echo strength indicator to aid measurement
- All probes are protected by a membrane to prevent damage
- Various probe options
- Two rechargeable battery packs with charger
- Fixed head probe option for single handed use.

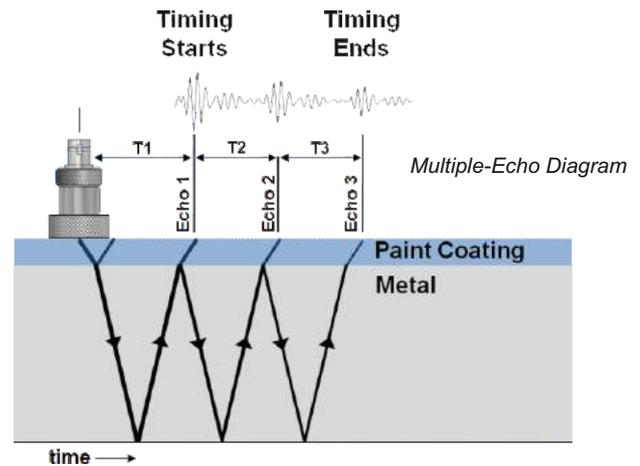


RINA

—Type Approved—

#### BENEFITS OF MULTIPLE-ECHO

- Measures remaining metal thickness on 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 echos. 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 echos can the measurements be automatically verified (where  $T2 = T3$ ).

#### SURFACE / TOPSIDE OPTIONS

**Upgrade Kit A:** This topside display option is a hand held surface repeater. It has a large LCD display in an IP65 sealed housing.

**Upgrade Kit B:** This uses CygLink (Windows based software) installed on a computer. This displays real-time readings which can then be logged.

Unbiblical cable length is specified by the customer up to a maximum of 1,000 m (3,280 ft).



Upgrade Kit A



Upgrade Kit B

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#### APPLICATIONS

Maintenance and safety checks of metal thickness for:

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

...plus many more.

#### KIT CONTENTS

Cygnus Underwater ultrasonic thickness gauge; heavy duty remote 2.25 MHz 13 mm (0.5 inch) diameter probe; nose cone tommy bar; probe locking ring key; 2 rechargeable batteries and battery charger; spare membranes and O-rings; steel test block; lanyard; operation manual; pressure test and calibration certificates; Molykote grease and carry case.

#### SPECIFICATION

Gauge	Cygnus Underwater
<b>Materials</b>	Sound velocities between 2000 m/s and 7000 m/s (0.059 and 0.31 in/microsec) - covers virtually all common engineering materials
<b>Measurement Range in Steel</b>	3 - 250 mm (0.110 - 9.995 inch) with 2.25 MHz probe 2 - 150 mm (0.065 - 6.000 inch) with 3.5 MHz probe 1 - 50 mm (0.045 - 4.000 inch) with 5 MHz probe
<b>Accuracy</b>	0.1 mm (0.005 inch) when calibrated in accordance in accordance with Cygnus Instruments calibration procedure
<b>Resolution</b>	0.1 or 0.05 mm selectable (0.005 or 0.002 inch)
<b>Probes</b>	Remote single crystal soft-faced compression: <ul style="list-style-type: none"> <li>• 6 mm (0.25 inch) 5 MHz</li> <li>• 13 mm (0.5 inch) - 2.25, 3.5 or 5 MHz</li> <li>• 19 mm (0.75 inch) - 2.25 MHz</li> </ul> (lower frequency probes offer better penetration on heavy corrosion / coatings)
<b>Power</b>	NiMH rechargeable battery pack
<b>Battery Life</b>	10 hours continuous operation
<b>Display</b>	Large, bright LED display
<b>Size</b>	235 x 75 mm (9.25 x 3 inch)
<b>Weight</b>	950 g (2.1 lbs) - with remote probe 860 g (30.3 oz) - with fixed head probe
<b>Operating Temp.</b>	-10°C to 50°C (14°F to 122°F)
<b>Environmental Protection</b>	IPX8 continuous 300 m (984 ft) rating
<b>Standards</b>	Designed for EN 15317
<b>Environmental</b>	RoHS, WEEE compliant
<b>Warranty</b>	3 years on gauge and 6 months on probes

