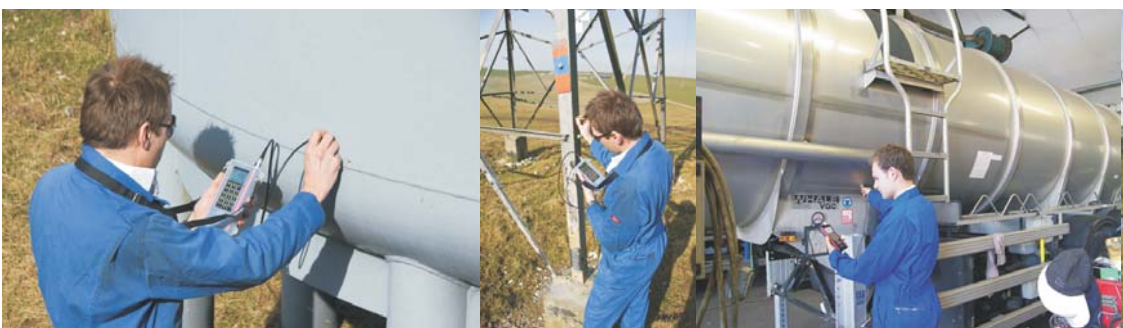# CYGNUS
INSTRUMENTS

A Simple Yet Versatile Method of Logging Thickness Measurements

Cygnus 3 Data Logger

MULTIPLE ECHO ULTRASONIC DIGITAL THICKNESS GAUGE

Measures metal thickness to determine wastage or corrosion – accurately, quickly and without removing protective coatings.
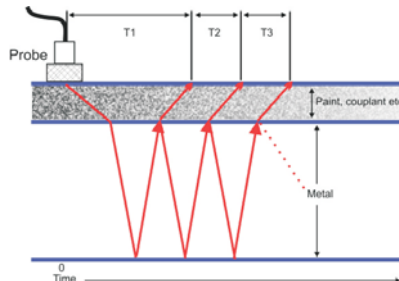
Primary Features

- Simple Linear Data Logging mode with a capacity of up to 5000 points in each record

- Grid Based Data Logging Mode uses simple XY grids for up to 5000 points

- Template Based Data Logging Mode features definable measurement points, minimum & reference thickness values and up to 40 configurable user fields to collect additional information

- Facility to add Additional Radial Measurements around any chosen point

- Alphanumeric data entry via phone style keys

- Auto-Log function automatically logs stable thickness measurements for one-handed operation

- Data stored on internal SD memory card for security

- Velocity Lookup Table can be customized by the user

- USB connection to computer without driver installation

- Supplied with:
  - Data Logger Manager Software for generating reports and transferring data between the gauge and computer
  - Microsoft Excel add-In to easily import data into blank worksheets or Excel templates

- Super-bright multi-colour LED gives visual feedback

- Housed in a rugged, IP65 rated aluminium enclosure

- Gauge senses probe type and automatically adjusts setting for optimum performance

- LCD graphic display with automatic white backlight

- Simple gauge and menu operation

- Secure, twist-to-lock probe connection (BNC)

- Deep-Coat mode for coatings up to 20 mm thick

- Protective silicone sleeve offers maximum protection

- Rugged probe cable designed for superior flexibility

Benefits of Cygnus 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 echoes can the measurements be automatically verified (where T2 = T3).

Applications

Maintenance and safety checks of metal thickness for:

• Ships
• Storage tanks
• Pipelines
• Bridges
• Street lighting columns
• LPG vessels
• Road transport tankers
• Offshore platforms
• Piers, jetties and pilings
• Processing vessels
• Cranes
…plus many more

Kit contents

Instrument, 2.25 MHz x 13 mm diameter probe, operation manual, carry case, protective silicone sleeve, adjustable neck strap, accessory pouch (containing couplant gel, spare membranes, membrane couplant, membrane locking ring key, 15 mm test block, 3 x AA Procell Batteries), software, USB cable, blue high flex probe cable and optional belt/harness clip.

Optional belt/harness clip

Specification

Materials	Sound velocities between 2000 m/s and 7000 m/s – covers virtually all common engineering materials
Measurement Range in steel	3 mm – 250 mm with 2.25 MHz probe 2 mm – 150 mm with 3.5 MHz probe 1 mm – 50 mm with 5 MHz probe
Accuracy	±0.1 mm or ±0.05 mm (selectable)
Resolution	0.1 mm or 0.05 mm (selectable)
Probes	Single crystal soft-faced compression. 6 mm – 5 MHz 13 mm – 2.25, 3.5 or 5 MHz 19 mm – 2.25 MHz (Lower frequency probes offer better penetration on heavy corrosion/coatings)
Power	3 x 'AA' alkaline batteries or rechargeable NiMH / NiCD
Battery life	18 hours' continuous operation with alkaline batteries
Display	Large liquid crystal display with white backlight - automatically turns off in bright light conditions
Size	85 mm x 170 mm x 25 mm
Weight	400 g (inc batteries)
Operating Temp	-10°C to +50°C
Data output storage	Internal storage on Flash memory Card. Data output via USB connection
Data Logger (Maximum)	Measurement points per record: 5000 Records: 100 Grid record size:100 rows x 50 columns User data fields: 40
Environmental Protection	IP65
Compliance	CE, British Standard BS EN 15317:2007 (Specification for the characterisation and verification of ultrasonic thickness measuring equipment)
Environmental	RoHS, WEEE compliant

Specifications are subject to change for product improvement

Cygnus Thickness Gauges

ROV Mountable

Hands Free

General Purpose

Underwater

Intrinsically Safe

Heavy Duty

For more products, please visit www.cygnus-instruments.com