



CYGNUS 4+

GENERAL PURPOSE

ULTRASONIC THICKNESS GAUGE



The Cygnus 4+ General Purpose thickness gauge is a light, tough multi-mode thickness gauge. It features a sunlight readable display with Live A-scan, intuitive menu and sequential data logging for easy reporting and analysis. Used with Cygnus High Temperature Probe, the Cygnus 4+ can measure remaining wall thickness of high-temperature, in-service assets without shutdown or isolation.

IDEAL FOR
USE IN



OIL AND
GAS



HIGH
TEMPERATURE



STORAGE
TANKS



PIPES/
TUBES



SHIP
SURVEYS

...plant maintenance, civil engineering, ship inspections, oil and gas facilities. High-temperature, in-service thickness surveys across refining, oil and gas, energy and process sectors.

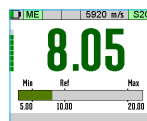


CYGNUS 4+ GENERAL PURPOSE KEY FEATURES

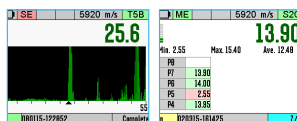
- **Multiple-Echo mode for accurate, through-coat measurements as specified by Classification Societies**
- **Echo-Echo and Single-Echo modes for heavily corroded metals with a thin or no coating**
- Deep Coat function ignores coatings up to 20mm thick
- Manual and automatic gain control
- Min/max measurement limit functions with visual and vibrate alert
- Large front sunlight readable LCD display with Live A-scan
- Water and dust tight IP67 housing
- Shock and impact proof to US MIL STD 810G
- Safe operation in explosive atmospheres: Class 1, Division 2, Group D locations only, as defined in NFPA 70, Article 500
- One and two point calibration



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**MIN/MAX
LIMIT AND
ALERT
FUNCTIONS**



**LIVE A-SCAN
FOR FURTHER
VERIFICATION**



**DATA
LOGGING
WITH
AUTO-LOG**



**USE WITH
SINGLE & TWIN
CRYSTAL
PROBES**

BASIC DATA LOGGING

- Linear based data logging
- Eight user-defined comments to attach to any measurement point
- Auto-log feature
- Saves measurements and A-scans
- Records stored on SD card
- CygLink software used to transfer and manage data

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.

Cygnus High Temp Probe T5B-MAUH (Twin Crystal)

For use on hot surfaces up to 300°C. Measures remaining wall thickness from 1.5mm to 250mm - depending on temperature and material. **No cooling period required** - reducing inspection time and facilitating more effective measurement.

Option to use a standard cable or a more robust, braided cable.



Standard Cable



Braided Cable

Measurement Stability Indicator (MSI™)

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

Cymlink Computer Software

Cymlink is a Windows® based application used to transfer and manage data logger records, A-scans, measurement comments and material velocity tables. The program can generate PDF reports and export to Excel. It also displays A-scans, allowing for after-the-event analysis of logged measurements.



CYGNUS 4+ GENERAL PURPOSE SPECIFICATION

Feature	Description
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
Materials	Velocities from 1,000 - 9,000 m/s (0.0390 - 0.3543 in/us)
Accuracy	±0.05 mm (±0.002") - in Multiple-Echo measurement mode, when calibrated and measuring the same material as calibrated on. ±0.1 mm (±0.004") or 0.1% of thickness measurement whichever is the greatest - in Single-Echo & Echo-Echo measurement modes, when calibrated and measuring the same material as calibrated on.
Resolution	Multiple-Echo mode - 0.1 mm (0.005") or 0.05 mm (0.002") Single-Echo and Echo-Echo modes - 0.1 mm (0.005") or 0.01 mm (0.001")
Probe Options	Single Crystal probes, Twin Crystal probes and High Temp probe
Measurement Range in Steel	0.8 – 250mm (0.031 in. – 10 in.) depending on selected probe and configuration, material and temperature
Connector	2 x Lemo 00
Power	3 x AA / R6 batteries
Battery Life	10 hours continuous measurement
Electronics	Dual channel pulser
Display	2.4" QVGA LCD, 47 mm (W) x 37 mm (H)
Size	84mm x 130mm x 35mm (W x H x D) (3.3" x 5.1" x 1.4")
Weight	300g (10.5 oz.) (inc. batteries)
Operating Temp.	-10°C to 50°C (14°F - 122°F)
Data Logging	5000 measurements and A-scans per record. Max number records: 100 (soft limit)
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
Environmental Rating	IP67 Safe operation in Explosive Atmospheres: Class I, Division 2, Group D Locations only, as defined in the National Fire Protection Association Code (NFPA 70), Article 500. Tested using MIL-STD-810G, Method 511.5, Procedure I MIL STD 810G Method 501.6 (high temp +55°C (131°F)) MIL STD 810G Method 502.6 (low temp -20°C (-4°F)) MIL STD 810G Method 507.6 (humidity 95%) MIL STD 810G Method 512.6 (immersion 1 metre for 30 mins)
Shock and Impact	MIL STD 810G Method 514.7 (vibration) MIL STD 810G Method 516.7 (shock 20g) MIL STD 810G Method 516.7 (transit drop 1.22 m)
Standards	Designed for EN 15317
Compliance	CE, UKCA, RoHS
Warranty	3 years on gauge and 6 months on probe

*except high temperature measurements

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