CYGNUS INSTRUMENTS

RELIABLE ULTRASONIC MEASUREMENT





CYGNUS 1 Ex

INTRINSICALLY SAFE ULTRASONIC THICKNESS GAUGE

MADE IN BRITAIN

An Intrinsically Safe Ex gauge, designed for taking reliable thickness measurements in all hazardous gas Zones (0, 1 & 2), coal mines and combustible dust Zones (21, 22). No need for hot work permits. 3 measuring modes enable through-coat measurements for various materials and heavily corroded metals. Available with advanced data logging and manual measurement mode.

IDEAL FOR USE IN

- FUEL DEPOTS
- ROAD & VESSEL TANKERS
- MINES
- CHEMICAL PLANTS
- OIL AND GAS

...refineries, pipelines and hazardous storage tanks.



CYGNUS 1 Ex KEY FEATURES



- **Certified to ATEX, IECEx, UKEX for use in all hazardous gas Zones (0, 1, 2), coal mines and combustible dust Zones (21, 22)**
- **High temperature measurement capability**
- **Intrinsic Safety protection - No need for hot work permits**
- 3 measuring modes for levels of corrosion, various materials and through-coat measurements
- Deep Coat function ignores thick coatings
- Manual Measurement Mode allows gates and gain to be configured to suit your application
- Live A-Scans aid visual measurement verification
- Live B-scans give a quick, cross-sectional representation
- 4 function keys for easy controls and dynamic views
- User Access feature protects specific access level records
- Measurement setup can be saved/restored for quick start
- Measurement Freeze function and Ref/Min/Max thickness limits
- Available as SC, TC, PLUS and PRO variants with options of upgradeable features

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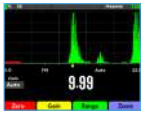
LARGE 3.5" OUTDOOR READABLE DISPLAY



CYGLINK SOFTWARE



B-SCAN WITH AUTO START/ PAUSE/CONTINUE



LIVE A-SCAN FOR FURTHER VERIFICATION

CERTIFIED INTRINSICALLY SAFE TO:

ATEX, IECEx and UKEX
I M1 Ex ia Ma (Tamb = 0°C to +50°C)
II 1G Ex ia IIC T4 Ga (Tamb = 0°C to +50°C)
II 2D Ex ib IIIB T100C Db Tamb = 0°C to +50°C

Certificate Numbers;
ATEX: ExVeritas 21ATEX0860X
UKEX: ExVeritas 21UKEX0861X
IECEx: IECEx EXV 21.0035X

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 painted 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



Cygnus High Temperature Ex Probe

ATEX-certified high temperature probe for measuring hot surfaces up to 300°C (570°F) continuous. **No cooling period required** - reducing inspection time and facilitating more effective measurement.

Comprehensive Data Logging

- Datalogging: Basic (Linear lists) or Advanced (2D/3D Grids, Templates)



- Allows a maximum of 10,000 measurement points per record
- 16 grid patterns available
- Add radial points to any measurement (linear/grid) to further investigate immediately an area of interest or heavy corrosion
- 8 User-defined text comments to attach to any measurement point
- Auto-log feature
- Saves measurements and A-scans as records on internal memory

Cyglink Computer Software

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 1 Ex SPECIFICATION

Feature	Description
Measuring Mode	Single Echo with Twin Crystal Probes Echo-Echo with Twin Crystal Probes Multiple Echo with Singly Crystal Probes
Materials	Sound velocity from 1000 m/s to 9000 m/s [0.0390 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, twin crystal and high temperature probes
Measurement Range in Steel	0.8mm to 250mm (0.031 in. – 10 in.) depending on selected probe and configuration, material and temperature
Connector	Single Dual Coaxial Connector
Power Supply	Rechargeable, removable Lithium-Ion battery pack
Power Rating	2W
Probe Sockets	Single Dual Coaxial Connector
Battery Life	6-8 hours continuous measurement
Display	3.5" VGA, sunlight readable colour display
Size	270mm tall, 135mm wide, 80mm deep
Weight	1 kg with battery
Operating Temp.	-0°C to +50°C (32°F to 122°F)
Storage Temp.	-10°C to +65°C (50°F to 149°F)
Data Logging	10,000 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. Bluetooth connection to transfer data to a Windows® computer with CygLink
Certification	**ATEX, IECEx and UKEX** I M1 Ex ia Ma II 1G Ex ia IIC T4 Ga II 2D Ex ib IIIB T100C Db Tamb = 0°C to +50°C Certificate Numbers; ATEX: ExVeritas 21ATEX0860X UKEX: ExVeritas 21UKEX0861X IECEx: IECEx EXV 21.0035X
Environmental Protection	IP67 Pollution degree 3
Standards	Designed for BS EN ISO 16831
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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