



# CYGNUS 1 Ex

## INTRINSICALLY SAFE

### ULTRASONIC THICKNESS GAUGE



An Intrinsically Safe Ex gauge, designed for taking reliable thickness measurements in mines and gas hazardous areas across all Zones 0, 1 & 2. 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.



**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.

**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)

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



**Comprehensive Data Logging**

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

LEV	POS	North	East	South	West
LEV1	POS2	11.87	11.91	11.78	11.46
LEV1	POS3	11.92	11.71	11.41	11.74
LEV1	POS4	11.24	12.27	11.78	11.38
LEV1	POS5	12.83	11.24	12.45	12.13
LEV1	POS6	10.09			

Next Point: LEV1.POS6.East

- 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

**Cymlink 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.

**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.

**CYGNUS 1 Ex KEY FEATURES**

- Certified Intrinsicly Safe to ATEX, IECEx, UKEX for Zone 0
- 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



**LARGE 3.5" OUTDOOR READABLE DISPLAY**    **CYLINK SOFTWARE**    **B-SCAN WITH AUTO START/ PAUSE/CONTINUE**    **LIVE A-SCAN FOR FURTHER VERIFICATION**

## 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	<b>ATEX, IECEx and UKEX</b> I M1 Ex ia Ma (Tamb = 0°C to +50°C) II 1G Ex ia IIC T4 Ga (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 15317:2000
Warranty	3 years on gauge and 6 months on probe

ISS3 04/24

All information provided is subject to change without prior notice.



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