



CYGNUS 1 Ex

INTRINSICALLY SAFE

ULTRASONIC THICKNESS GAUGE



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



GO TO
PRODUCT
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- Certified to ATEX, IECEx, UKEX for use in all hazardous gas Zones (0, 1, 2), coal mines and combustible dust Zones (21, 22)
- Intrinsic Safety protection - No need for hot work permits
- High temperature measurement capability
- 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



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
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



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)

LEV	POS	North	East	South	West
LEV1	POS12	11.87	11.91	11.78	12.45
LEV2	POS13	11.92	11.71	11.45	12.74
LEV3	POS14	11.24	12.27	11.29	11.29
LEV4	POS15	12.83	14.24	12.65	13.15
LEV5	POS16	10.04			

- 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.

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 15317-2013
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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