



CYGNUS 1 EX

INTRINSICALLY SAFE

ULTRASONIC THICKNESS GAUGE



The Cygnus 1 Ex Ultrasonic Thickness Gauge is a rugged, handheld, intrinsically safe instrument designed for taking reliable thickness measurements in Zone 0 Explosive Atmospheres. It features a large colour LCD display and 3 measuring modes for through-coat measurements and various materials - including heavily corroded metals. Although designed for ease of use, the gauge boasts advanced datalogging 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
PAGE

- **Certified Intrinsically Safe to ATEX, IECEx, UKEX for Zone 0 and NRTL for Class 1, Division 1**
- 3 measuring modes for levels of corrosion, various materials and through-coat measurements
- 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
- Deep Coat function ignores thick coatings
- User Access feature protects records with correct user access levels
- Measurement setup can be saved and restored for a quick start
- Measurement Freeze function and Ref/Min/Max thickness limits
- A solid-state electronic instrument with a rugged IP67 rated enclosure
- Basic, Professional and Advanced models 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 (Tamb = 0°C to +50°C)
- II TG Ex ia IIC T4 Ga (Tamb = 0°C to +50°C)

Certificate Numbers;

- ATEX: ExVeritas 21ATEX0860X
- UKEX: ExVeritas 21UKEX0861X
- IECEx: IECEx EXV 21.0035X



NRTL

- I.S. Class I Zone 0 AEx ia IIC Ga T4
- I.S. Class I Division 1 Groups ABCD T4 (Tamb = 0°C to +50°C)

NRTL / MET US Certification, Listing Number E115506

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

Comprehensive Data Logging

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

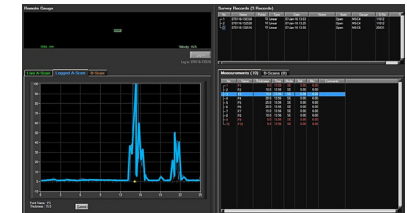
LEV	POS	North	East	South	West
LEV1	POS2	11.87	11.91	11.78	13.65
LEV2	POS3	11.92	11.71	13.45	13.74
LEV3	POS4	11.26	12.27	11.78	13.28
LEV4	POS5	12.83	14.24	12.45	12.13
LEV5	POS6	10.09	-	-	-

Gain: 40dB Logged: 21 Comp: 1% min: 10.09

Next Point: LEV1.POS6.East

Buttons: Re-Take, Comment, Navigate, Finish

- 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 used to transfer and manage data logger records, A-scans, B-scans, templates, measurement comments and material velocity tables. The program can generate PDF reports and export to Excel. It also displays A-scans and B-scans, allowing for after-the-event analysis of logged measurements. Designed for Windows 7® and above.

CYGNUS 1 EX INTRINSICALLY SAFE 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 and twin crystal 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	<table border="0"> <tr> <td style="vertical-align: top;"> <p>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</p> </td> <td style="vertical-align: top;"> <p>NRTL I.S. Class I Zone 0 AEx ia IIC Ga T4 I.S. Class I Division 1 Groups ABCD T4 (Tamb = 0°C to +50°C) NRTL / MET US Certification, Listing Number E115506</p> </td> </tr> </table>	<p>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</p>	<p>NRTL I.S. Class I Zone 0 AEx ia IIC Ga T4 I.S. Class I Division 1 Groups ABCD T4 (Tamb = 0°C to +50°C) NRTL / MET US Certification, Listing Number E115506</p>
<p>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</p>	<p>NRTL I.S. Class I Zone 0 AEx ia IIC Ga T4 I.S. Class I Division 1 Groups ABCD T4 (Tamb = 0°C to +50°C) NRTL / MET US Certification, Listing Number E115506</p>		
Environmental Protection	IP67 Pollution degree 3		
Standards	Designed for BS EN 15317:2000		
Warranty	3 years on gauge and 6 months on probe		

ISSI 08/22

All information provided is subject to change without prior notice.



Cygnus Instruments Ltd.
Cygnus House
30 Prince of Wales Road
Dorchester
Dorset DT1 1PW
United Kingdom



Cygnus Headquarters

Call +44 (0) 1305 265 533
Email sales@cygnus-instruments.com

Cygnus UAE

Call +971 50 3459305
Email ribu@cygnus-instruments.com

Cygnus USA

Call +1 (410) 267 9771
Email sales@cygnusinstruments.com

Cygnus Singapore

Call +65 6252 5909
Email sales@cygnus-instruments.sg

Visit cygnus-instruments.com