



CYGNUS 1 INTRINSICALLY SAFE

ULTRASONIC THICKNESS GAUGE



The Cygnus 1 Intrinsically Safe is a simple and tough ultrasonic thickness gauge for safely measuring remaining metal thickness in hazardous/potentially explosive atmospheres. The gauge employs the Multiple-Echo technique to give accurate, self-verified measurements without removing protective coatings.

IDEAL FOR
USE IN



CHEMICAL
PLANTS



OIL AND
GAS



STORAGE
TANKS



LPG
VESSELS



ROAD
TANKERS

...oil and gas production infrastructure and pipelines, dry dust environments, mines, grain processing plants and fuel depots.



BENEFITS OF MULTIPLE-ECHO

- Measures remaining metal thickness on corroded and coated structures
- All measurements are error checked using 3 return echoes to give repeatable, reliable results
- Accepted by all major classification societies
- Greatly reduces inspection time and costs
- Echo strength indicator to aid measurement

CYGNUS 1 INTRINSICALLY SAFE KEY FEATURES



- For use in Zone 0, Zone 1 hazardous areas
- No plant shutdown or hot work permit necessary
- Approved for use in mines
- Echo strength indicator to aid measurement
- Stable calibration, linear accuracy, no zero adjustment
- Self-verification of the measurements to ensure maximum accuracy
- Two rechargeable battery packs with charger
- Displays sound velocity settings
- Right angle probe for use in areas of restricted access
- Probe frequency selectable
- Metric / imperial switchable
- Low battery warning



**BRIGHT LED
DISPLAY WITH
POLARISED
FILTER**



**MULTIPLE
PROBE
OPTIONS
AVAILABLE**



**HEAVY-DUTY
SEALED
UNIT IP65
RATED**



**RUGGED,
DURABLE,
SHOCK-PROOF
CONSTRUCTION**



CERTIFIED INTRINSICALLY SAFE TO:

ATEX

II 1 G Ex ia IIC T6 Ga
(Tamb = -20°C to 40°C)
I M 1 Ex ia I Ma
(Tamb = 0°C to 45°C)
Certificate No. BAS00ATEX1108

UKEX

II 1 G Ex ia IIC T6 Ga
(Tamb = -20°C to 40°C)
I M 1 Ex ia I Ma
(Tamb = 0°C to 45°C)
Certificate No. BAS21UKEX0661

IECEx

Ex ia IIC T6 Ga
(Tamb = -20°C to 40°C)
Ex ia I Ma
(Tamb = 0°C to 45°C)
Certificate No. IECEx BAS 19.0021

CSA

Class 1 Group A, B, C, D Division 1



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CYGNUS 1 INTRINSICALLY SAFE SPECIFICATION

Feature	Description		
Measuring Mode	Multiple-Echo using 3 echoes to ignore coatings		
Materials	Velocities from 2000 - 7000 m/s (0.059 and 0.31 in/us) - covers virtually all common engineering materials		
Accuracy	±0.1mm (±0.004") or 0.1% of thickness measurement, whichever is greatest, when calibrated in accordance with Cygnus Instruments calibration procedure		
Resolution	0.1mm (0.004") or 0.05mm (0.002") (selectable)		
Probe Options	Single crystal probes		
Measurement Range in Steel	1 - 250mm (0.040 in. - 10 in.) depending on selected probe and configuration, material and temperature		
Power	NiMH rechargeable battery pack		
Battery Life	12 hours' continuous operation		
Display	Bright LED display		
Size	235 x 75mm (9.252" x 3.000") (H x W)		
Weight	910g (32 oz) with remote probe (inc. batteries)		
Operating Temp.	-10°C to +50°C (14°F to 122°F)		
Certification	<table border="0"> <tr> <td style="vertical-align: top;"> <p>ATEX II 1 G Ex ia IIC T6 Ga (Tamb = -20°C to 40°C) I M 1 Ex ia I Ma (Tamb = 0°C to 45°C) Certificate No. BAS00ATEX1108</p> <p>UKEX II 1 G Ex ia IIC T6 Ga (Tamb = -20°C to 40°C) I M 1 Ex ia I Ma (Tamb = 0°C to 45°C) Certificate No. BAS21UKEX0661</p> </td> <td style="vertical-align: top; padding-left: 20px;"> <p>IECEX Ex ia IIC T6 Ga (Tamb = -20°C to 40°C) Ex ia I Ma (Tamb = 0°C to 45°C) Certificate No. IECEX BAS 19.0021</p> <p>CSA Class 1 Group A, B, C, D Division 1</p> </td> </tr> </table>	<p>ATEX II 1 G Ex ia IIC T6 Ga (Tamb = -20°C to 40°C) I M 1 Ex ia I Ma (Tamb = 0°C to 45°C) Certificate No. BAS00ATEX1108</p> <p>UKEX II 1 G Ex ia IIC T6 Ga (Tamb = -20°C to 40°C) I M 1 Ex ia I Ma (Tamb = 0°C to 45°C) Certificate No. BAS21UKEX0661</p>	<p>IECEX Ex ia IIC T6 Ga (Tamb = -20°C to 40°C) Ex ia I Ma (Tamb = 0°C to 45°C) Certificate No. IECEX BAS 19.0021</p> <p>CSA Class 1 Group A, B, C, D Division 1</p>
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Environmental Protection	IP65		
Standards	Designed for EN 15317		
Warranty	3 years on gauge and 6 months on probe		



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