

Cygnus launched a brand new Ex Certified thickness gauge

Visitors to the Cygnus stand at The Materials Testing Exhibition earlier in September 2022, were first to see the much anticipated, new Cygnus Ex-certified product in the flesh. Now, it's time to reveal what the new Cygnus I Ex Ultrasonic Thickness Gauge is all about.

This rugged, IP67-rated, intrinsically-safe instrument is specially designed to take reliable thickness measurements in Zone 0 Explosive Atmospheres, including:

- ❖ Oil and Gas
- ❖ Mines
- ❖ Chemical Plants
- ❖ Fuel Depots
- ❖ Road Tankers
- ❖ Oil and Gas Tankers
- ❖ Explosive Atmospheres
- ❖ Hazardous Storage Tanks.

WHAT IS SPECIAL ABOUT THIS LAUNCH?

Like its predecessor, the Cygnus I Ex is the only one of its kind in the world certified to ATEX, IECEx, UKEX for Zone 0 and NRTL for Class I, Division I. But the Ex takes a giant leap forward, offering impressive new selectable features including live A-Scan, comprehensive data-logging and manual measurement mode, which brings Cygnus' Intrinsically Safe offering up to speed with Cygnus' most advanced gauges.

First of all, the 3 measuring modes that one may be familiar with amongst Cygnus' surface range, designed for varying levels of corrosion, multiple materials and through-coat measurement capability, are now built into this new gauge and available to hazardous and explosive environments.

Measurement verification and recording are also far more advanced. The addition of Live A-Scan and B-Scan allows precise measurement verification with on-screen visuals via the large 3.5" outdoor-readable

display, and the comprehensive data-logging feature ensures seamless data analysis and report generation.

The entire gauge, from how it sits in one's hand, to collecting and storing measurements, is entirely geared towards the best user experience, making inspection quick and easy, despite the challenging environment. Four new function keys are purposely integrated to maximize ease and speed of control, four dynamic screen views aimed to suit user requirements, and a user access feature to prevent access to protected features.

WHY ARE INTRINSIC SAFETY AND EX CERTIFICATION SIGNIFICANT?

Carrying out inspections with testing equipment certified to a suitable protection level is vital to ensuring the safety of hazardous environments. It is important to understand which is the correct equipment, and where to use it.

For equipment that contains electronic components including batteries, the intrinsically safe protection concept ensures that under both normal uses and with applied fault conditions, no arc or spark can be generated, and no component can heat up enough to cause an explosion.

SOME INTRINSICALLY SAFE DESIGN CRITERIA:

- ❖ The output energy at the terminals is limited so a spark cannot ignite an explosive atmosphere.
- ❖ The equipment must be anti-static and not be able to hold a static electricity charge.
- ❖ Voltages must be electrically 'clamped' to safe levels.
- ❖ The use of redundant safety components.



*The new
Cygnus I Ex
Ultrasonic
Thickness Gauge.*

- ❖ If a battery or component fails, it should not produce high temperatures that could be incendiary.

In both IECEx, ATEX and North American NRTL systems, intrinsically safe equipment can be used in any Zone or Division with the correct equipment protection level.

Under the IECEx and ATEX systems, explosion-proof/flame-proof equipment cannot be used in Zone 0 areas, regardless of equipment protection level.

Most importantly, only equipment that has an Ex Certificate (ATEX/IECEx/UKEX/NRTL) can be considered for use in Zone 0/1/2 areas.

In the USA equipment that only has a MIL-STD-810G, Method 511.5, Procedure I test pass CANNOT be used in Zone 0/1/2 areas.

The Cygnus I Ex, like all Cygnus products, is manufactured in the UK and is the only Zone 0 (Ga, Ma) Certified UTG available today (for ATEX/IECEx/UKEX/NRTL).