



# CYGNUS SURFACE RANGE

ULTRASONIC THICKNESS GAUGES



IDEAL FOR  
USE IN



OIL AND  
GAS



MARINE  
STRUCTURES



STORAGE  
TANKS

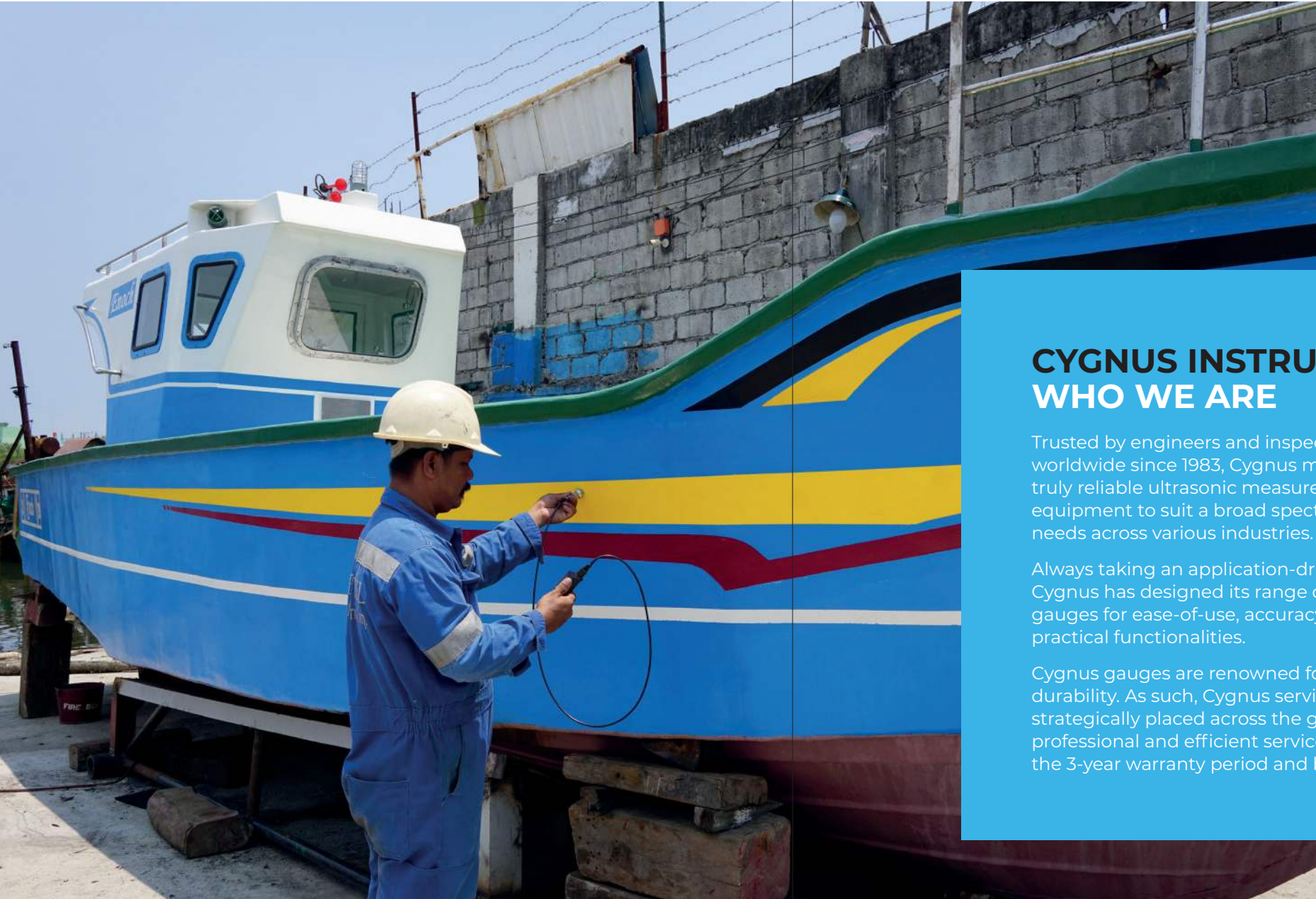


CIVIL  
ENGINEERING



SHIP  
SURVEYS





## CYGNUS INSTRUMENTS WHO WE ARE

Trusted by engineers and inspectors worldwide since 1983, Cygnus manufactures truly reliable ultrasonic measurement equipment to suit a broad spectrum of user needs across various industries.

Always taking an application-driven approach, Cygnus has designed its range of surface gauges for ease-of-use, accuracy and with practical functionalities.

Cygnus gauges are renowned for their durability. As such, Cygnus service centres are strategically placed across the globe to provide professional and efficient service throughout the 3-year warranty period and beyond.

# THE CYGNUS SURFACE RANGE

Cygnus Surface Range consists of a base model for simple, accurate measurement through coatings; and three PLUS models with advanced features and additional measuring modes for extreme corrosion and extensive applications.

The Cygnus 1 Ex Ultrasonic Thickness Gauge is an intrinsically safe instrument designed for taking reliable thickness measurements in Zone 0 Explosive Atmospheres.



## ACCURACY

Cygnus-Pioneered Multiple Echo Technique uses three return echoes to give a truly accurate, error-checked metal thickness measurement - ignoring coatings up to 20mm (0.8"). Accepted by all major Classification Societies.

Cygnus' Measurement Stability Indicator (MSI) helps verify stable and reliable measurements in Single-Echo and Echo-Echo modes.

## SIMPLE TO USE

With intuitive menus on a large front or bright end display, Cygnus gauges are easy to navigate and can be worn on wrist, neck, or belt - enabling efficient, hands-free operations. Auto-Log and min/max Limit & Alert features further enhance the convenience.

## HIGHLY DURABLE

Rated to IP67 and the stringent US Military Standards 810G, the surface range is dust-tight, water-resistant and offers maximum impact protection against accidental drops and knocks. Supplied with a 3-year warranty.



## VERSATILE

Three measuring modes to suit levels of corrosion, various materials and applications.

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 a range of 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.

## VARIETY OF PROBES

For different material thickness and various materials - coated or uncoated.



Single Crystal probes Twin Crystal probes

## CYGNUS HIGH TEMPERATURE EX PROBE



ATEX-certified high temperature probe measuring hot surfaces up to 300°C (570°F) continuous. **No cooling period required** - reducing inspection time and facilitating more effective measurement.



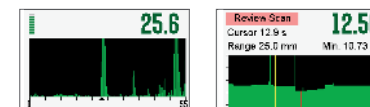
## DATA LOGGING FACILITIES

To assist with recording, reporting and further analysis on a computer using CygLink (Windows-based software).



## A-SCAN & B-SCAN

To allow users to verify measurements visually in a real-time graphical display.



A-Scan

B-Scan

The Cygnus 1 Ex Ultrasonic Thickness Gauge is 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.



## CYGNUS 1 Ex KEY FEATURES



- **Certified Intrinsically 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

### APPLICATIONS

Fuel depots, road and vessel tankers, mines, chemical plants, oil and gas, refineries, pipelines and hazardous storage tanks.



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

### SPECIFICATION

Feature	Description
<b>Measuring Mode</b>	Single Echo with Twin Crystal Probes Echo-Echo with Twin Crystal Probes Multiple Echo with Singly Crystal Probes
<b>Materials</b>	Sound velocity from 1000 m/s to 9000 m/s [0.0390 in/us to 0.3543 in/us]
<b>Accuracy</b>	±0.1 mm (±0.004") or 0.1% of thickness measurement whichever is the greatest
<b>Resolution</b>	0.1mm, 0.05mm or 0.01mm depending on probe type
<b>Probe Options</b>	Single crystal, twin crystal and high temperature probes
<b>Measurement Range in Steel</b>	0.8mm to 250mm (0.031 in. – 10 in.) depending on selected probe and configuration, material and temperature
<b>Connector</b>	Single Dual Coaxial Connector
<b>Power Supply</b>	Rechargeable, removable Lithium-Ion battery pack
<b>Power Rating</b>	2W
<b>Probe Sockets</b>	Single Dual Coaxial Connector
<b>Battery Life</b>	6-8 hours continuous measurement
<b>Display</b>	3.5" VGA, sunlight readable colour display
<b>Size</b>	270mm tall, 135mm wide, 80mm deep
<b>Weight</b>	1 kg with battery
<b>Operating Temp.</b>	-0°C to +50°C (32°F to 122°F)
<b>Storage Temp.</b>	-10°C to +65°C (50°F to 149°F)
<b>Data Logging</b>	10,000 measurements and A-scans per record
<b>Computer Software</b>	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
<b>Certification</b>	<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
<b>Environmental Protection</b>	IP67 Pollution degree 3
<b>Standards</b>	Designed for BS EN 15317:2000
<b>Warranty</b>	3 years on gauge and 6 months on probe











**HOW TO PLACE YOUR ORDER**



1 Ex

2+

4

4+

6+

No cable options\*

1

**CHOOSE YOUR GAUGE**

2

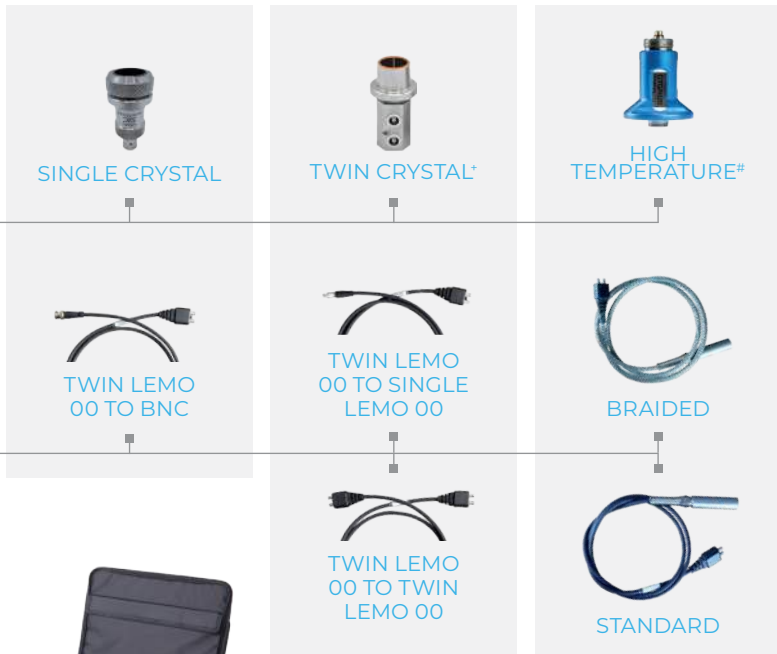
**CHOOSE YOUR PROBE**

3

**CHOOSE YOUR CABLE**

4

**YOUR KIT IS COMPLETE**



\*All Ex gauge probes supplied as assembly with cable

+ Incompatible with 4

# For use with 4+, 6+ and Ex only

More items available than pictured in the diagram above

ISS14 04/24

All information provided is subject to change without prior notice.



Sap & Kaps Petroleum Services, LLC

Abu Dhabi, UAE

Call +971 2 4474288

Email [info@skps.com](mailto:info@skps.com)

Visit [skps.com](http://skps.com)

