# **Cygnus 2 Hands Free** Multiple-Echo Ultrasonic Thickness Gauge

Measures metal thickness to determine wastage or corrosion accurately, quickly and without removing protective coatings







"Simplicity through technology"

## **NEW CYGNUS 2 HANDS FREE MULTIPLE-ECHO THICKNESS GAUGE**

The NEW Cygnus 2, with its end-mounted OLED multi-functional display makes it ideal for hands free operation. Ideally suited for climbing and rope access applications.

The twin shot injection moulded enclosure has a soft but durable TPE outer skin which is both comfortable and extremely durable while the inner shell is strong, keeping the electronics totally sealed from the outside world.

Perfect for use on flat surfaces or pipes. Our multiple echo single crystal probe technology means you can measure through thick coatings and only the remaining metal thickness is displayed.

Simple to use - just turn on and go!





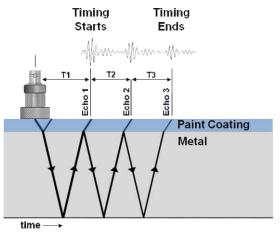
### **KEY FEATURES**

- Multiple-Echo for reliable, accurate through coating measurments
- OLED multi-functional display with improved readability in all lighting conditions
- Extremely rugged enclosure shock and impact to MIL STD 810G
- Environment sealing to IP67 MIL STD810G
- Cygnus echo-strength bars assist thickness measurements
- TPE over moulded enclosure
- · Buttons designed for minimum of 100,000 depressions
- Fully sealed battery compartment (contains any leaking battery fluids).

#### **MULTIPLE-ECHO MEASURING MODE**

- Measures remaining metal thickness of corroded and coated structures
- All measurements are error checked using 3 return echoes to give repeatable, reliable results
- · Accepted by all major classification societies
- · Echo strength indicator to aid measurement.

With multiple-echo, readings are taken by measuring the time delay between any three consecutive back-wall echos. The time of T1 (coating thickness) is ignored. The times of T2 and T3 are equal to the time that it takes to travel through the metal. Only by looking at three echoes can the measurements be automatically verified (where T2 = T3).



#### **SPECIFICATION**

Materials	Sound velocities between 2000 m/s - 9000 m/s (0.079 in/ms - 0.35 in/ms) - covers virtually all common engineering materials
Accuracy	0.1 mm (0.005") when calibrated in accordance with Cygnus Instruments Calibration Procedures
Resolution	0.1 mm or 0.05 mm (0.005" or 0.002")
Probes	Single crystal probes: 6 mm (¼") - 5.0 MHz (S5A) 13 mm (½") - 2.25 MHz (S2C (standard)), 3.5 MHz (S3C) or 5.0 MHz (S5C) 19 mm (¾") - 2.25 MHz (S2D)
Measurement Range in Steel	Single crystal probes: 3 mm - 250 mm (0.120" - 10.00") with 2.25 MHz probe (S2C/D) 2 mm - 150 mm (0.080" - 6.000") with 3.5 MHz probe (S3C) 1 mm - 50 mm (0.040" - 2.000") with 5.0 MHz probe (S5C/A)
Connector	1 x Lemo 1
Power	3 x AA batteries
Battery Life	10 hours minimum
Electronics	Dual channel pulser
Display	End-mounted OLED (rotatable)
Size	132 mm x 82 mm x 34 mm (5.20" x 3.23" x 1.34")
Weight	300 grams (10.58 oz) inc. batteries
Operating Temp.	-10°C to 50°C (14°F to 122°F)
Environmental Rating	IP67 MIL STD 810G Method 501.6 (high temp +55°C) MIL STD 810G Method 502.6 (low temp -20°C) MIL STD 810G Method 507.6 (humidity 95%) MIL STD 810G Method 512.6 (immersion - 1 metre for 30 mins)
Shock and Impact	MIL STD 810G Method 514.7 (vibration - 1 hour each axis) MIL STD 810G Method 516.7 (shock 20g - 11ms half sine shock pulse, 40g 11ms in each axis) MIL STD 810G Method 516.7 (26 drops - transit drop 1.22 m)
Compliance	CE, British Standard BS EN 15317:2013 (specification for the characterisation and verification of ultrasonic thickness measuring equipment)
Environmental	RoHS, WEEE compliant
Warranty	3 years on gauge and 6 months on probe

\*Specifications are subject to change

#### **CYGNUS PROBES AND CABLES**

#### **Cygnus Stainless Steel INOX Probes**

The INOX probes have an updated ergonomic design and an easier to read frequency, identification and serial numbering. All frequencies of INOX probes have a black face and a colour coding system to identify probe frequencies.

#### **Cygnus Cables**

Using standard industry connectors the probe lead uses a custom made over moulded cable that offers superior flexibility and resistance to oils and ultraviolet light. The cable will not stiffen after exposure to ultraviolet light.

#### **STANDARD KIT CONTENTS**

Cygnus ultrasonic thickness gauge; padded carry case; operating manual; adjustable neck strap and loops; wrist strap; accessory pouch; spare membranes; surface and membrane couplant; test block; 3 x AA batteries; optional Krusell® belt clip and attachments accessory.

#### **Cygnus Regional Offices**

#### **Cygnus Headquarters**

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

Tel: +44 (0) 1305 265 533 Fax: +44 (0) 1305 269 960 Email: sales@cygnus-instruments.com Website: www.cygnus-instruments.com

#### Cygnus USA

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Cygnus Instruments Inc. PO Box 6417 Annapolis MD 21401 USA

Tel: +1 (410) 267 9771 Fax: +1 (410) 268 2013 Email: sales@cygnusinstruments.com Website: www.cygnus-instruments.com/us

#### **Cygnus Singapore**

Cygnus Instruments (S) Pte Ltd 63 Jalan Pemimpin #05-01 Pemimpin Industrial Building 577219 Singapore

Tel: +65 6252 5909 Fax: +65 6251 1318 Email: sales@cygnus-instruments.sg Website: www.cygnus-instruments.com/sg







