


Transducers

To complement our ultrasonic thickness gages, we offer a range of ultrasonic transducers. The performance of any ultrasonic thickness meter relies heavily on the transducer and its suitability to the material being measured. Therefore, selecting the right transducer is vital. All Cygnus' transducers are made from stainless steel and have a hard wear face or a wear membrane to protect the transducer.

Variety of Cygnus INOX Transducers

- Stainless steel SINGLE CRYSTAL transducers, used in multiple-echo mode, include replaceable membranes for long life, require no zeroing and have a high linear accuracy.
- Stainless steel TWIN CRYSTAL transducers, used in echo-echo and single-echo modes, have improved measurability on extreme back wall corrosion and pitting.

Single Crystal Transducers



| | S5A | S5C | S3C | S2C |
|-----------------------|---|--|--|---|
| | Ideal for: Small diameter pipes and boiler tubes/heat exchangers | Ideal for: Measuring wall thickness down to 1 mm (0.040 inch) | Ideal for: Measuring wall thickness down to 2mm/0.080in with corrosion through coatings | Ideal for: all round measurement of wall thickness with corrosion through coatings |
| Frequency | 5 MHz | 5 MHz | 3.5 MHz | 2.25 MHz |
| Tip Size | 6mm (0.24 in) | 13mm (0.5 in) | 13mm (0.5 in) | 13mm (0.5 in) |
| Range in Steel | 1 - 50mm (0.040 - 2in) | 1 - 50mm (0.040 - 2in) | 2 - 150mm (0.080 - 6in) | 3 - 250mm (0.120 - 10in) |
| Connectors | Lemo 00 | BNC | BNC | BNC |
| Colour | Black Face | Black Band | Orange Band | Red Band |

All probes need to be used with Ultrasonic Couplant when taking measurements (excl. underwater)

Twin Crystal Transducers



| | T2C-CSL Ideal for: Attenuative materials | T5B-CSL Ideal for: General purpose heavy front/back wall corrosion or pitting | T5A-CSW Ideal for: General purpose | T5B-CSW Ideal for: General purpose, extremely heavy front/back wall pitting or corrosion | T7A-CSWB Ideal for: Small diameter pipes e.g. boiler tube. Thin, corroded plate |
|-------------------------------------|---|--|---|---|--|
| Frequency | 2 MHz | 5 MHz | 5 MHz | 5 MHz | 7.5 MHz |
| Crystal Ø | 12mm (0.5in) | 9.5mm (0.37in) | 6.4mm (0.25in) | 9.5mm (0.37 in) | 4.5mm (0.18 in) |
| Tip Size | 17mm (0.67in) | 12.7mm (0.5in) | 9.5mm (0.37in) | 12.7mm (0.5in) | 6.5mm (0.26in) |
| Range in Steel (Single-Echo) | 2.5 - 350mm (0.1 - 13.8in) | 1.5 - 200mm (0.059 - 7.90in) | 1 - 150mm (0.039 - 5.91in) | 1.5 - 200mm (0.059 - 7.9in) | 0.8 - 50mm (0.031 - 2in) |
| (Echo-Echo) | 5 - 50mm (0.20 - 2in) | 4 - 50mm (0.16 - 2in) | 3 - 50mm (0.12 - 2in) | 4 - 50mm (0.16 - 2in) | 3 - 25mm (0.12 - 1in) |
| Connectors | Twin Lemo 00 | Twin Lemo 00 | Wired to Lemo 00 | Wired to Lemo 00 | Wired to Lemo 00 |
| Weight | 56g (1.98 oz) | 61g (2.15 oz) | 81.7g (2.89 oz) Inc. cable | 90g (3.2 oz) Inc. cable | 68g (2.39 oz) Inc. cable |
| Temperature Range | -10°C to 70°C (14°F to 158°F) | -10°C to 70°C (14°F to 158°F) | -10°C to 70°C (14°F to 158°F) | -10°C to 70°C (14°F to 158°F) | -10°C to 70°C (14°F to 158°F) |

All above probes have composite crystal and need to be used with Ultrasonic Couplant when taking measurements (excl. underwater)