

High Accuracy Ultrasonic Thickness Gauge

ULTRASONIC THICKNESS GAUGE

- ★ Ultrasonic thickness measurement is a non destructive method of measurement and particularly suitable for components having access only from one side, where conventional gauges cannot be used.
- ★ Thus it is useful in measurement of thickness of pipes, pressure vessels etc and for applications like corrosion monitoring, bond testing, lamination detection and material characterization.
- ★ The testing is fast, reliable and with high accuracy.
- ★ The principle used is known as pulse-echo technique.
- ★ Ultrasonic waves are passed into the material which reflect back from back surface of material.
- ★ The instrument measures the transit time of wave and gives thickness by multiplying with sound velocity in the material.
- ★ Velocity input is given by initial calibration which is done with known thickness reference block.

UX 4510

TECHNICAL SPECIFICATIONS

- ★ **Material:** Metals, Plastic, Glass etc (with suitable probe).
- ★ **Range:** 1.2 mm to 300 mm* (in steel - flat)
- ★ **Probes:** Dual Crystal - (TR).
- ★ **Key pad:** Sealed, Colour Coded Key Pad.
- ★ **Resolution:** 0.1mm. (Display selectable between 0.1 & 0.01)
- ★ **Calibration:** One Step Calibration.
- ★ **Accuracy:** +/- 0.1mm upto 25mm, +/- 1% above 25mm
- ★ **Display:** LCD with backlight. Display for Thickness, Velocity, Low Battery, Memory.
- ★ **Memory:** 9960 Readings.
- ★ **Battery:** NiMH Re-chargeable Battery 3.6 V.
- ★ **Charger:** External Charger, 230 V AC supply.
- ★ **Ambient temp:** 0° to 50° C.
- ★ **Weight:** 200 gm.
- ★ **Case:** Weather resistant moulded plastic.
- ★ **Communication:** RS-232 for memory data transfer to PC



*Range depends on material & probe.

Probe	Range (mm)
5 MHz	1.2-200 *
2.5 MHz	3-300
High temperature	3-100

* For pipes also (minimum Ø 25mm).

STANDARD KIT

Standard set comprises of:

- ★ Calibration block (steel)
- ★ Probe Ø 6.00mm, 5 Mhz
- ★ Software CD, RS-232 cable
- ★ Batteries
- ★ Charger



UX 4503/4504

TECHNICAL SPECIFICATIONS

- ★ Test Mode First / First-Second Echo
- ★ Range (mm) Steel (flat) 2.00 - 100*
- ★ Measurement Unit mm
- ★ Resolution (mm) $\pm 0.01^{**}$
- ★ Calibration Accuracy (mm) ± 0.01
- ★ Velocity Range (max.) m/s 9999
- ★ Velocity Calibration Soft Touch Key Pad
- ★ Display LCD (4503) / LED (4504)
- ★ Operating Temperature 0° - 50° C
- ★ Power Supply 7.2 V DC
- ★ Zero Adjustment Soft Touch Key Pad
- ★ Dimension (mm) 245 x 235 x 90
- ★ Weight (incl. Battery) 2.00 Kgs
- ★ Standard Accessories
 - a) Transducer Single $\text{Ø}12.5\text{mm}$, 5MHz
 - b) Probe Cable Lemo 00-BNC
 - c) Battery NiCd (D Size)

* 1 - 300mm with special probes

** $\pm 0.001\text{mm}$ for range below 10mm

Special probes offered with above for casting & materials like plastic, glass etc.

Models - 4503 / 4504 / 4510 are microprocessor based with calibration / measurement data storage facility, compatibility with PC, RS-232 output, direct read-out of thickness & velocity.

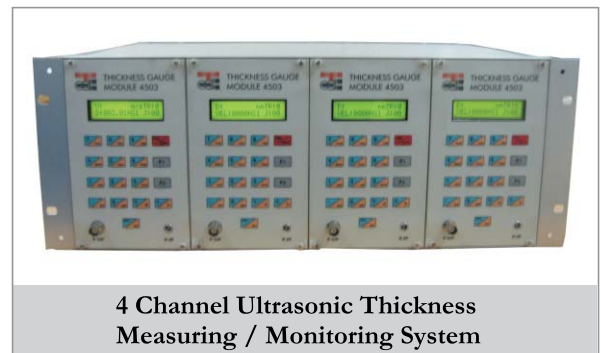
On line continuous thickness monitoring system available for plates/pipes with computer compatibility.



UX 4504



UX 4503



4 Channel Ultrasonic Thickness Measuring / Monitoring System

NOTE: Technical specifications are subject to change without prior notice, due to continuous upgradation.

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