

### High Accuracy Ultrasonic Thickness Gauges

# ULTRASONIC THICKNESS GAUGES

- \* Ultrasonic Thickness measurement is a non destructive method of measurement and particularly suitable for components having access only from one side, where conventional gauges can not 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, 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.



### STANDARD ACCESSORIES

#### Standard set comprises of:

Batteries, Charger, Leather cover, Calibration block (steel), probe Ø 6.00mm, 4 MHz

**√** 

#### UX 4503/4504

# ${ m T}_{ m ECHNICAL\,SPECIFICATIONS}$

★ Test Mode First / First-Second Echo

★ Range (mm) Steel (flat) 2.00 - 100\*
 ★ Measurement Unit mm
 ★ Resolution (mm) ± 0.01\*\*
 ★ Calibration Accuracy (mm) ± 0.01
 ★ Velocity Range (max.) m/s 9999

Velocity Calibration
 Display
 Soft Touch Key Pad
 LCD (4503) / LED (4504)

Operating Temperature 0° - 50° C
Power Supply 7.2 V DC
Zero Adjustment Soft Touch

Zero Adjustment Soft Touch Key Pad Dimension (mm) 245 x 235 x 90 Weight (incl. Battery) 2.00 Kgs

Standard Accessories a) Transducer Single Ø12.5mm, 5MHz

b) Probe Cable Lemo 00-BNC

c) Battery NiCd (D Size)

\* 1 - 300mm with special probes

\*\*  $\pm 0.001$ mm for range below 10mm

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

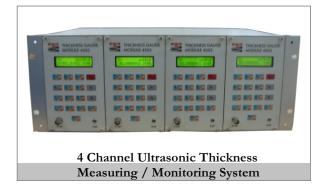
Models - 4503 / 4504 / 4510 are microprocessor based with calibration / measurement data storage facility, compatibility with PC, RS-232 output, direct read-out of thickness & velocity.

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

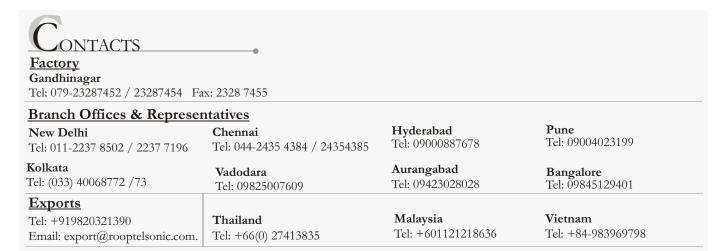


UX 4504





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



#### ROOP TELSONIC ULTRASONIX LIMITED

