



UX-2

Underwater Thickness Gauge

HIGHLIGHTS:

- ▶ 1000 ft. (300m) depth rating.
- ▶ Probe types: Single Membrane & Dual Element.
- ▶ Automatic: Probe recognition & Zero.
- ▶ Measurement modes: Pulse-Echo, Pulse Echo w/Coating, Echo-Echo, Triple-Echo (TCG).
- ▶ Data Storage: Alpha numeric & Sequential w/ID.
- ▶ Windows PC software included.
- ▶ Captures an A-Scan waveform snapshot with every measurement; viewable using our Windows PC interface software.

DAKOTA UX-2 UNDERWATER THICKNESS GAUGE

The Dakota UX2 Underwater Thickness Gauge is an underwater material and coating thickness gauge ideal for offshore inspections.

SPECIFICATIONS

PHYSICAL

Size:

Length (9.0 in/229mm).
Diameter (2.375 in/60.33mm).

Weight:

1.5lbs (0.680kg) with 3 AA batteries.

Keyboard:

Single button, magnetically coupled switch.

Operating Temperature:

-20 to 140°F (-29C to 60°C).

Underwater Case:

High strength transparent plastic housing. Depth rating of 1000 feet (300 meters).

Data Output:

Bi-directional RS232 serial port, with USB converter. Windows® PC interface software.

Display:

1/2 in (12.7mm) 4.5 digit LCD display.
3/8 in (9.5mm) 6 alpha LCD display.
Both displays backlit (on/off/auto).

LED Lighting: 8 blue leds (on/off).

ULTRASONIC SPECIFICATIONS

Measurement Modes:**Dual Element Probes**

Pulse-Echo (P-E): Coating Off.

Pulse-Echo Coating (PECT): Coating On.

Echo-Echo (E-E): Thru-Paint.

Single Element Probes

Triple-Echo (TCg): Thru-Paint.

Pulser: Dual square wave pulsers.

Receiver: Dual receivers - manual or AGC gain control with 100dB range.

Manual gain: Limited to 5 gain settings (vlow, low, med, high, vhigh (42 to 50dB)).

AGC: Automatic gain setting.

Timing: Precision 25MHz TCXO with single shot 100MHz 8 bit ultra low power digitizer.

COMPUTER INTERFACE

RS232 serial interface. PC software & USB converter cable included.

MEASURING

Pulse-Echo Mode (P-E) - (Pit & Flaw Detection) measures from 0.025 to 19.999 inches (0.63 to 508mm).

Pulse-Echo Coating Mode (PECT) - (Material, Coating, Pit & Flaw Detection): Material: 0.025 to 19.999 inches (0.63 to 508mm). Coating: 0.001 to 0.100 inches (0.01 to 2.54mm).

Echo-Echo Mode (E-E) - (Thru Paint & Coatings) measures from 0.100 to 4.0 inches (2.54 to 102mm). Will vary based on coating.

Triple-Echo (TCg) - 0.040 to 6.00 (1 to 152mm) inches in steel. Range will vary based on coating thickness, material type, and probe.

Resolution:

+/- 0.001 inches (0.01mm).

Units: English & Metric

Velocity Range:

0.0492 to 0.5510 in/us
1250 to 13995 meters/sec

8 fixed and 1 programmable Material Velocities (in/us):

1. Aluminum 2024 .251
2. Steel 4340 .233
3. Stainless Steel 302 .223
4. Iron .232
5. Cast Iron .180
6. PVC .094
7. Polystyrene .092
8. Polyurethane .070
9. Custom User

POWER SOURCE

Three 1.5V alkaline or 1.2V NiCad AA cells.

Typically operates for 50 hours on alkaline and 20 hours on NiCad (backlight off). 15 hours on alkaline and 8 hours on Nicad (backlight on).

Auto power off if idle 5 min.

Battery status displayed on power up.

DISPLAY

Segmented Displays:

4.5 Digit LCD - Primary measurement display.

6 Character LCD - Displays menu options.

Repeatability Bar graph - Bar graph indicates stability of reading.

DATA STORAGE

File Formats:

Grid (alpha numeric).

Sequential (auto identifier).

Programming: Storage capacity of 1 file template. Size and dimension specified by the user.

Storage capacity: 5,000 readings, settings, and waveform graphics.

Memory: 32 megabit non-volatile ram.

TRANSDUCER

Auto Probe Zero: Applies to dual element probes only.

Transducer Types

Dual Element: 1 to 10MHz frequency range. Custom auto recognition probes (flaw & pit detection).

Single Element: 1 to 10MHz frequency range - (General purpose).

LEMO underwater connectors.

Standard 4 foot cable.

Custom transducers and cable lengths available for special applications.

CERTIFICATION

Factory calibration traceable to NIST & MIL-STD-45662A.

IP68 rating

WARRANTY

3 year limited

REPLACEMENT

UX-2 replaces UMX-2 & UG20DL



MADE IN THE USA

Dakota NDT
an Elcometer company