

# ZX-1

## Fixed Velocity Thickness Gauges



### Highlights:

- Easy to operate
- Pulse-echo measurement
- Dual element transducers (1-10MHz options)
- 120MHz FPGA timing
- 150 volt square wave pulser
- Low temperature custom LCD display (-22F / -30C)
- Adjustable material velocity
- IP65 protection rating
- 5 year limited warranty

# ZX-1 Thickness Gauge



The ZX-1 is a thickness gauge for users who will typically **measure only one material type**.

Calibration is done by simply scrolling to a known material velocity. The gauge was designed and built to withstand the roughest industry conditions, is affordable, and backed by a 5 year limited warranty. If you're looking for a quality instrument to reliably meet or exceed your application expectations, look no further.

## SPECIFICATIONS

### Physical

**Weight:**

11 ounces (with batteries).

**Size:**

Width (2.5 in / 63.5 mm)  
Height (5.17 in / 131.3 mm)  
Depth (1.24 in / 31.5 mm)

**Operating Temperature:**

-22 to 167F (-30 to 75C).

**Case:**

Extruded aluminum body with nickel-plated aluminum end caps (gasket sealed).

### Keypad

Sealed membrane that is resistant to both water and petroleum products.

Seven or eight tactile-feedback keys.

### Transducer

Dual-element (transmit and receive).

1 to 10 MHz frequency range.

Locking quick disconnect LEMO connectors.

4 foot cable.

Custom transducers available for special applications.



### Power Source

Two 1.5V alkaline, 1.2V NiCad, or 1.5V Lithium AA cells.

Typically operates for 45 hours on alkaline and 23 hours on NiCad.

Low battery indicator on display. Unit turns off automatically when battery is too low to operate reliably.

### Display

Multi-function 7 segment 4.5 digit liquid crystal display with 0.500 in digit height. Two 0.125 in 14 segment fields for labels and values, and one 7 segment field for labels and values. Additional icons to indicate features and modes.

Backlight is selectable on/off/auto, and selectable brightness (Lo, Med, Hi) options.

Bar graph indicates stability of reading.

### Certification

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

### Warranty

5 year limited.

### Measuring

**Range:**

Measures from 0.025 to 36.00 inches (0.63 to 914.4 millimeters). Range dependent on material and transducer type.

**Units:**

English & Metric

**Resolution:**

0.001 inches (0.01 millimeters)

**Velocity Range:**

0.0120 to .7300 in/μs (305 to 18,542 m/sec)

**PRF:** 200Hz

**Display Update Rate:** 10Hz

**Velocity Settings:**

ZX-1: Adjustable on keypad.

**Velocity Chart**

	in.	/ mm
1. Steel 4340	.2330	/ 5918
2. Stainless 303	.2230	/ 5664
3. Aluminum 2024	.2510	/ 6375
4. Cast Iron	.1800	/ 4572
5. Plexiglass	.1060	/ 2692
6. PVC	.0940	/ 2388
7. Polystyrene	.0920	/ 2337
8. Polyurethane	.0700	/ 1778
9. Custom		
10. Custom		