



Precision Thickness Gage With Waveform Display

The Panametrics-NDT™ Model 25DL PLUS ultrasonic precision thickness gage provides cost-effective solutions in applications where the opposite side of the test material is difficult or impossible to reach. An important benefit of this handheld unit is its ability to make thickness measurements on many materials in a wide variety of shapes and sizes. A large Liquid Crystal Display displays both the live ultrasound waveform and the thickness reading. Operation of this handheld gage is intuitive with a color-coded keypad and direct-access number keys.

One of the many unique features of this gage, Application Auto-Recall, allows the user to select and recall any of the stored standard or custom transducer setups in the gage's memory. This permits easy

switching among our full line of contact, delay line, and immersion transducers to solve an almost infinite number of measurement problems.

Internal Datalogger

The 25DL PLUS internal datalogger stores, recalls, and transmits 1,750 waveforms and more than 18,000 thickness readings along with alphanumeric Identification codes.

Waveform Display

The A-scan shows both the live waveform and the thickness reading, which is ideal for turbine blade inspections and any other application where the user needs to ensure proper transducer alignment.

Features

- General purpose thickness gage for metals, plastics, glass, rubber, composites and other materials
- Internal alphanumeric file-based datalogger stores 18,000 thickness readings or 1,750 waveforms
- Large LCD waveform display with backlight
- Wide thickness range from 0.003" to 20" (0.080 mm to 500 mm), depending on material
- Resolution up to 0.0001" (0.001 mm)
- Uses contact, delay line, and immersion transducers
- Application Auto-Recall with default and custom setups
- Handheld, weighs only 2.1 lbs (0.95 Kg)
- Min/Max mode
- Hi-Low alarm
- Inches/mm



25DL PLUS Specifications*

Measurements

Mode 1: Time interval between excitation pulse and first backwall echo. Using contact transducers.

Mode 2: Time interval between the first interface echo after the excitation pulse and the first backwall echo. Using delay line or immersion transducers.

Mode 3: Time interval between successive backwall echoes following the first interface echo after the excitation pulse. Using delay line and immersion transducers.

Thickness Measurement Range:

Steel: 0.006 - 20" (0.15 - 500 mm)

Plastic: 0.003 - 2" (0.08 - 50 mm)

Thickness range depends on material, transducer, surface condition and setup selected, extended thickness ranges are possible using custom setups.

Material Velocity Range:

0.02000 - 0.55110 inch/ μ S

(0.5080 - 13.9979 mm/ μ S)

Resolution, keypad selectable:

LOW: 0.01" 0.1 mm

STANDARD: 0.001" 0.01 mm

HIGH: 0.0001" 0.001 mm

Measurement Rate: 4, 8, 12, 16, or 20 measurements per second

Transducer Frequency Range:

2.25 - 30 MHz

Three Differential Modes: Standard and Percent: Thickness difference and percent difference between actual measurement and reference value. Rate Reduction: Display actual thickness and percent difference from setpoint. Both values can be stored in the internal datalogger

Min/Max Mode: Works in conjunction with FAST Mode for rapid location of minimum or maximum thickness reading and associated waveform

Two Alarm Modes: 1) Standard Hi-Low 2) Previous thickness (Absolute or Percentage). Both with audible and visual indicators

Application Auto-Recall: Automatically adjusts internal parameters and zero offset for a wide variety of transducers. Stores 25 standard transducer setups and up to 35 custom transducer setups

Other Standard 25DL PLUS Features:

Calibration Lock Mode, Internal Diagnostic Test Mode, Metric/English

Display

Display: Liquid Crystal Display with backlight. Contrast keypad adjustable. Display area 4.0 x 3.39 inch (102 x 86 mm)

Backlight: Backlit electroluminescent display with Power Save feature

Zoom Mode: Expands the horizontal span of the waveform to the minimum range associated with each transducer and automatically centers the measured echoes.

Freeze Mode: Freeze and Un-Freeze live A-scan with thickness

Display Hold/Blank: Display blanks after last reading or holds reading

Rectification: RF, half wave positive or negative, and full wave

Waveform Display Range and Delay

Control: The horizontal span of the waveform is set at selected intervals with a fully adjustable delay

Power Supply

Battery: 6 V Rechargeable NiCad battery pack. Optional replaceable alkaline "AA" cells

Battery Life: 30 hrs nominal (normal operation), Nicad. Optional alkaline "AA" cells approximately 70 hours

Battery Charge Time: 2 hours using provided charger

Charger: External wall plug-in charger/AC Adapter for 100/115/230 VAC inputs

Auto Power On/Off, Low Battery Indicator

General

Keypad: Sealed color-coded keypad with tactile and audible feedback

Multi-Language Display: English, French, German, and Spanish

Operating Temperature:

-10°C to +50°C (+14°F to 122°F)

Size: L 9.375" x W 5.45" x D 1.5",
L 238 x W 138 x D 38 mm

Weight: 2.1 lbs (0.95 Kg)

Internal Datalogger

Identify, store, recall, clear, and transmit thickness readings and gage setup information via the full duplex RS-232 Serial Port. Baud rate, word length, stop bits, and parity are adjustable from keypad.

Maximum # of Stored Values:

Standard: 18,000 thickness readings or 1,750 waveforms with thickness.

Upgrade 1: 36,000 thickness readings or 3,400 waveforms with thickness.

Upgrade 2: 54,000 thickness readings or 5,100 waveforms with thickness.

Location Codes: 8-character file name plus 16-character alphanumeric location code input. Multiple Comments per location

File Structures: 7 standard or custom application-specific file structures

Reports: On-gage reporting of: Summary with statistics, Min/Max with locations, and File Comparison. On-screen Comparison of current and previous readings

On-board Statistics Calculator:

Permits statistical reporting directly to Serial Printer

Standard Inclusions

Model 25DL PLUS Digital Ultrasonic Multi-Mode Thickness Gage, AC or Battery Operation, 50-60 Hz, with Internal Alphanumeric Datalogger. Including: Universal Quick Charger/AC Adapter, Transducer Cable, Test Block, Couplant, RS-232 I/O Cable, Carrying Case, Instruction Manual, Two Year Limited Warranty

Optional Accessories

36DLP/SPC/KIT: Protective Pouch with Neck Strap

Plus/RPC: Rubber Boot with Gage Stand

GAGEVIEW: Interface Program

25DLP/EW: Extended Limited Warranty, 3rd Year

2214E:† 5-Step Test Block, 1018 steel, English Units: .100", .200", .300", .400", .500"

2213E:† 5-Step Test Block, Aluminum, English Units: 100", .200", .300", .400", .500"

26DLPLUS/HDC: Heavy Duty Shipping Case

†Test Blocks are available in metric units.

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