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# 25DL PLUS
Precision Thickness Gages

## 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

# 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.

**Innovation in NDT**™

920-120A-EN

# 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/µS
(0.5080 - 13.9979 mm/µS)

**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 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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