



**FOR FIBERGLASS, COMPOSITES, CAST METALS, RUBBER AND THICK PLASTICS**



Input Thickness Via Optional Digital Caliper

### FEATURES

- A-scan Display for Waveform Verification
- Measurement Types:
  - Thickness
  - Velocity
  - Time of Flight
- Pulsar Configuration:
  - Pulse Echo
  - Pitch Catch
  - Thru-Transmission
- Internal Alphanumeric File-Based Datalogger Stores 18,000 thickness or 1,750 waveforms
- Application Auto-Recall with Stored Standard and Custom Setups
- Selectable Waveform Update Rate (4, 8, 12 or 20 Hz)
- Instant in/mm Conversion

### ULTRASONIC THICKNESS, VELOCITY, AND TIME OF FLIGHT GAGE

The Model 25HP PLUS is an advanced ultrasonic gage that makes thickness, material velocity, and time of flight measurements on materials such as composites, fiberglass, plastic, rubber, and cast metals that are difficult or impossible to measure using standard ultrasonic gages. Measuring sound velocity with this gage allows monitoring of changes in material properties such as the degree of nodularity in cast metals.

This 25HP PLUS features a large LCD that displays both the selected type of measurement in bold numerals and the

live ultrasound waveform. This unique gage features a host of standard measurement features and a sophisticated alphanumeric file-based datalogger.

### STANDARD INCLUSIONS

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

# 25HP 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.

**Measurement Types:** Thickness, Velocity and Time of Flight

**Pulsar Configuration:** Pulse Echo, Pitch Catch and Thru-Transmission

### Thickness Measurement Range:

#### Pulse Echo and Pitch Catch

Steel:	0.050 - 25.000 inches (1.27 - 635.00 mm)
Plastic:	0.030 - 3.00 inches (0.75 - 75.00 mm)

#### Thru-Transmission

Steel:	0.075 - 50.000 inches (1.91 - 1270.0 mm)
Plastic:	0.035 - 6.000 inches (0.89 - 152.00 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/ $\mu$ S  
(0.5080 - 13.9979 mm/ $\mu$ S)

### Thickness resolution, keypad selectable:

LOW:	0.01"	0.1 mm
STANDARD:	0.001"	0.01 mm

### Velocity resolution, keypad selectable:

LOW:	0.001 inch/ $\mu$ S	0.01 mm/ $\mu$ S
STANDARD:	0.0001 inch/ $\mu$ S	0.001 mm/ $\mu$ S

### Time of flight resolution:

0.001 inch/ $\mu$ S 0.01 mm/ $\mu$ S

### Measurement Rate:

4, 8, 12, 16 or 20 measurements per second

### Transducer Frequency Range:

0.5 - 5.0 MHz

**Min/Max Mode:** Displays current thickness, minimum thickness, or maximum thickness depending on setting.

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

**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.

**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.

**Alarm Mode:** Programmable Hi-Low alarm setpoints with audible and visual indicators.

**Differential Mode:** Displays thickness difference between actual measurement and preset reference value.

**Application Auto-Recall:** Automatically adjusts internal parameters and zero offset for a wide variety of transducers.

**Stored Standard Setups:** 25 stored transducer setups allow fast, easy calibration for Panametrics-NDT standard transducers.

**Stored Custom Setups:** Up to 35 stored custom transducer setups for best performance in special applications.

## POWER SUPPLY

**Battery:** 6 V Rechargeable NiCad battery pack

**Battery Life:** 25 hrs nominal (with backlight off)

**Low Battery Indicator:** Active display shows percentage of remaining battery life

**Charger:** Two hour fast fast charger with universal voltage

**Auto Power On/Off**

## GENERAL

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

**Thickness Display:** 5-Digit LCD with Backlight. 0.5" (12.7 mm) numerals. Viewable area 2.2" x 1.5" (56.3 x 38.4 mm)

**Backlight:** Electroluminescent backlit display. With power save feature

**Multi-Language Display:** Keypad selectable display languages. Included are English, French, German, and Spanish

### Operating Temperature:

-10°C to +50°C (+14°F to 122°F)

**Size:** 9.375 x 5.45 x 1.5"  
(238 x 138 x 38 mm)

**Weight:** 2.1 lbs (0.95 kg)

## INTERNAL DATALOGGER

**Datalogger and RS-232:** The 25HP PLUS identifies, stores, recalls, clears, and transmits thickness readings, waveform images, and gage setup information via the RS-232 Serial Port. Baud Rate, Word Length, Stop Bits, and Parity are adjustable from the keypad.

### Maximum # of Stored Values:

**Standard:** 18,000 thickness readings or 1,700 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:** Data can be stored in 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

## OPTIONAL ACCESSORIES

HPV/C Digital Caliper for Thickness Input

PLUS/RPC Protective Rubber Boot with Stand and Straps

36DLP/SPC/KIT Protective Pouch with Neck Strap

Win25DLPLUS Interface Program

25DLP/EW Extended Limited Warranty  
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



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