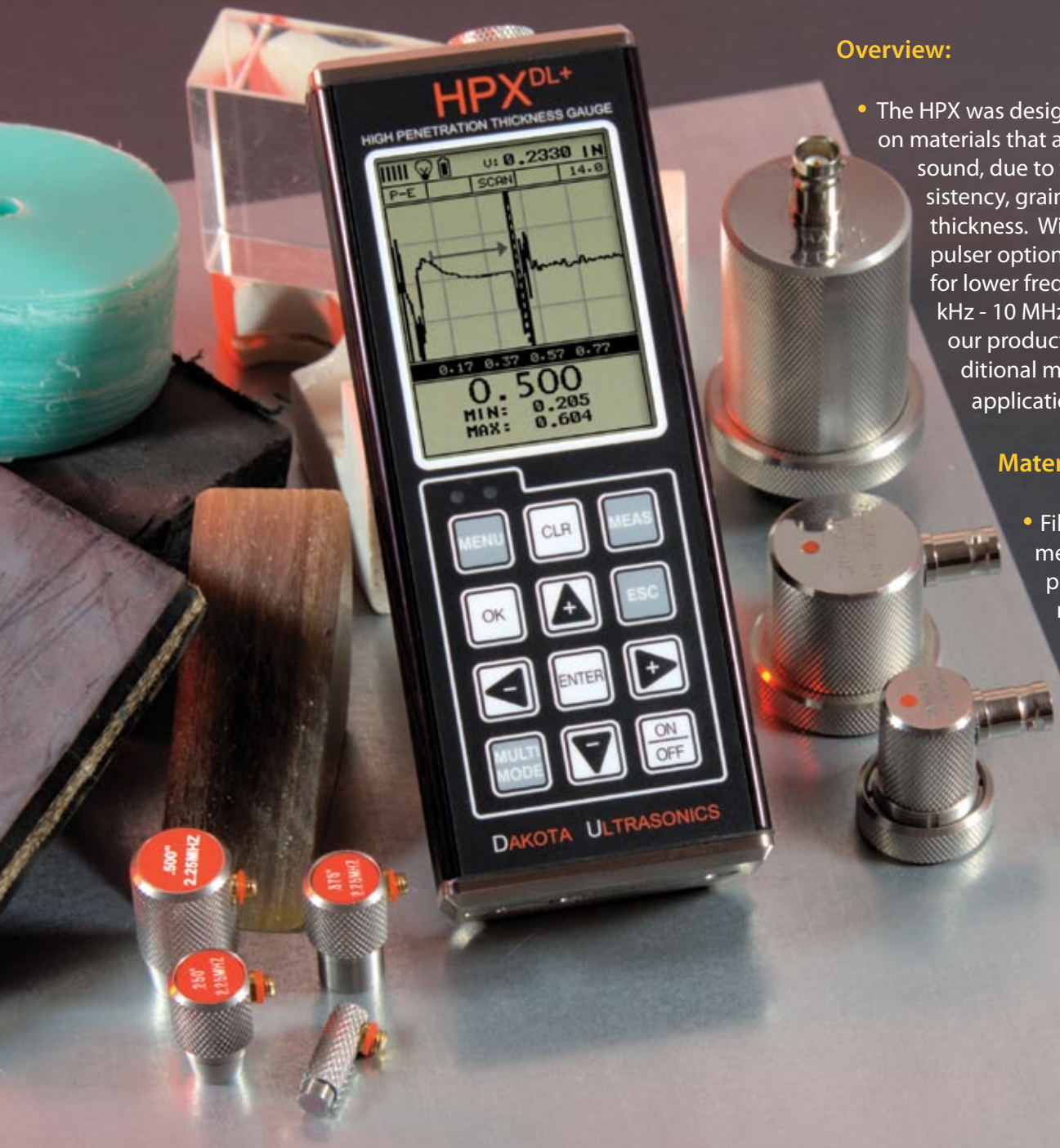
DAKOTA ULTRASONICS

Nothing But Power!

The HPX DL+

High Penetration A-Scan Thickness Gauge



Overview:

- The HPX was designed specifically for use on materials that are difficult to penetrate sound, due to the lack of material consistency, grain structure, and overall thickness. With multiple high voltage pulser options, as well as filters tuned for lower frequency transducers (500 kHz - 10 MHz), the HPX compliments our product range by adding additional material types to our list of application possibilities.

Materials:

- Fiberglass, carbon fiber, cast metals, rubber, high density polyethylene (HDPE), fiber reinforced plastic (FRP), lead, all steels and aluminums.

Applications:

- Fiberglass sheets, pipes, storage tanks, aerospace composites, boat hulls, conveyor belts, composite plastics, etc.

SOUND SOLUTIONS

HPX^{DL+} SPECIFICATIONS

Physical

Size:
Width (2.5in/63.5 mm)
Height (6.5 in/165 mm)
Depth (1.24 in/31.5 mm)

Weight:
13.5 ounces (with batteries).

Keyboard:
Membrane switch pad with twelve tactile keys.

Operating Temperature:
14 to 140F (-10C to 60C)

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

Data Output:
USB-C port. Windows® PC interface software.

Display:
1/8in VGA grayscale display (240 x 160 pixels); viewable area 2.4 x 1.8in (62 x 5.7mm); EL backlit (on/off/auto invert).

Ultrasonic Specifications

Measurement Modes:

Pulse-Echo (P-E): Contact transducers.

Echo-Echo (E-E): Contact transducers.

Echo-Echo Verify (E-EV): Contact transducers.

Pulser:
Spike - 200 volt adjustable.
Square wave: 400 volt adjustable.
Tone Burst: 400 volt adjustable with selectable frequency.

Receiver:
Manual or AGC gain control with 110dB range, varies with mode selected. Adjustable damping (50, 75, 100, 300, 600 & 1500 ohms).

Frequency Range:
500 kHz to 10 MHz.

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

Power Source

Line Power: USB-C to PC or power outlet.

Batteries:

Three AA cells. Alkaline - 35 hrs, Nicad - 10 hrs and NI-MH - 35hrs.
* Dependent on pulser & backlight settings.

Auto power off if idle 5 minutes.

Battery status icon.

Measuring

Range:
* Dependent on material type and consistency.

Pulse-Echo Contact:
Steel .050 in. – 100.0 ft. (1.27 mm – 30.5 M).
Composites .100 in. – 5.00 in. (2.54 mm – 127 mm).

Echo-Echo Contact:
Steel .100–3.0 ft. (2.54–91.44 cm).

Echo-Echo Verify Contact:
Steel .100–6.0 in. (2.54–152.4 mm).

Resolution (selectable):
+/- .01 inch (0.1 mm).
+/- .001 inch (0.01 mm).

Velocity Range:
0.0122 to 0.7300 inches/µs
309.88 to 18542 meters/sec.

Single and Two point calibration option, or selection of basic material types.

Units:
English & Metric

Display

Display Views:

A-Scan: Rectified +/- (flaw view) RF (full waveform view). Refresh rate at 25 Hz.

B-Scan: Time based cross section view. Display speed variable (10 to 200 readings per second).

Large Digits: Standard thickness view; Digit Height: 0.700 in (17.78 mm).

Scan Bar: Speed 10 Hz. Viewable in B-Scan and Large Digit views.

Bar Graph: Measurement stability.

Memory

Log Formats: Grid (Alpha Numeric), or Sequential (Auto Identifier).

Capacity: 4 Gb internal SD card.

Screen Capture: Bitmap graphic capture for quick documentation (.tif).

OBSTRUCT to indicate inaccessible locations.

Transducer

Transducer Types:
Single Contact (1 to 10MHz) & Custom 500 kHz Delay Line (HPD1005B).

Locking quick disconnect LEMO "00" connector.

Standard 4 foot cable, custom transducers and cable lengths available.

Features

Setups:
64 custom user-defined setups.

Gates:
3 adjustable gates, depending on measure mode selected.

Alarm Mode:
Set Hi and Lo tolerances with audible beeper and visual LEDs.

Scan Mode:
Takes 250 readings per second and displays the minimum reading found when the transducer is removed.

Connections

Output: Direct USB-C 1.1 PC connectivity.

Transducer Connector: LEMO 00

Certification

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

CE approved

MADE IN THE USA