

USD 30 Systems

High Resolution Large Screen Ultrasonic Flaw Detector

The USD 30 is a single channel ultrasonic flaw detector with advanced features for laboratory and immersion tank testing.

- GE Aircraft Engines qualified to P3TF22 and P3TF35 for inspection of aircraft engine forgings
- Large, high resolution color display providing easy readability
- Sealed, direct entry keypad supports use with immersion tanks
- User selectable languages with English, German, French, Spanish, Italian, Portuguese, Dutch, Finnish, Norwegian, Swedish, Danish, Romanian, Slovenian and Russian
- SmartView display technology ensures the operator never misses a shot during high speed scans
- Standard 16 point DAC/TCG
- Standard Back Echo Attenuator
- Optional DGS-513 displays a curve for a particular gain of an equivalent reflector size as a function of the distance between the probe and the reflector for 25 selectable narrow band probes.
- Optional VGA-514 output provides an easy connection to a PC monitor or projector for training purposes
- Optional RF-199 outputs the raw RF waveform for further analysis
- Optional HiSPD-515 provides digital output at 20 times the speed of the standard RS232 port.



USD 30 Features include:

- **Data Storage and Documentation**
 - 99,999 thickness reading file size with user defined notes. Easy file navigation and viewing of both A-Scan and thickness data.
 - User defined memo structure for operator to provide notes to further document inspection.
- **Multiple Curve DAC (Distance Amplitude Correction)/TCG (Time Corrected Gain)** for echo amplitude adjustment and evaluation. DAC includes up to four additional curves based on dB offset from original recorded

DAC. TCG attenuation and transfer correction features enable use on other materials and surface conditions.

- **BEA (Back Echo Attenuator)** allows independent gain control of the region under Gate B for backwall echo monitoring.
- **Dedicated function keys** to display test menu, return instrument to Home, display Help text, Freeze A-Scan image, and Copy information to the on-board data logger or I/O port.

- **2-year conditional warranty** on parts and labor; free second year contingent upon return of unit to GE Inspection Technologies for recertification within 13 months of original purchase.
- **Outputs** include three independently assigned TTL outputs (instantaneous, timed, and latched with visual LED and audible horn alarms); and four independently assigned Amplitude (1 to 100% screen height at 0 to 2.5 V) and Thickness.

Specifications:

Test Range

0.040" to 1100" (1 to 27,940 mm) at steel velocity; range selectable in fixed steps or continuously variable

Material Velocity

Continuously adjustable from 0.0394 to 0.6229 inches/microsecond (1,000 to 16,000 m/sec); 65 selectable material velocities

Display Delay

-20 to 3498 microseconds in steel

Probe Delay/Zero Offset

0 to 999.9 microseconds

Damping

50, 75, 150, 1000 ohms

Gain

0 to 110 dB adjustable in steps of 0.1, 0.5, 1.0, 2.0, 6.0 steps

Test Modes

Pulse-echo, dual, and thru-transmission

Pulser

Spike/excitation pulse; selectable low and high energy

Pulse Repetition Frequency

15 to 6000 Hz in 5 Hz increments; external trigger

Receiver Bandwidth

0.25 to 25 MHz

Gates

Interface gate and two independent flaw gates

Measurement Modes

Zero-to-first, multi-echo; Flank or Peak detection

Rectification

Positive and negative halfwave, full-wave, RF

Units

Inch, millimeter, microsecond

Operating Temperature

0 to 55°C

Color LCD Display

8.3" x 6.23" (210 x 158 mm); 60Hz update rate; Hollow, filled, smart hollow, smart filled A-Scan waveform selection; Enhanced A-Scan mode with Sparkle, baseline break, sparkle plus baseline break.

Size

14.6" W x 11.4" H x 12.6" D
(370 x 290 x 320 mm)

Weight

18 lbs. (8.2 kg)

