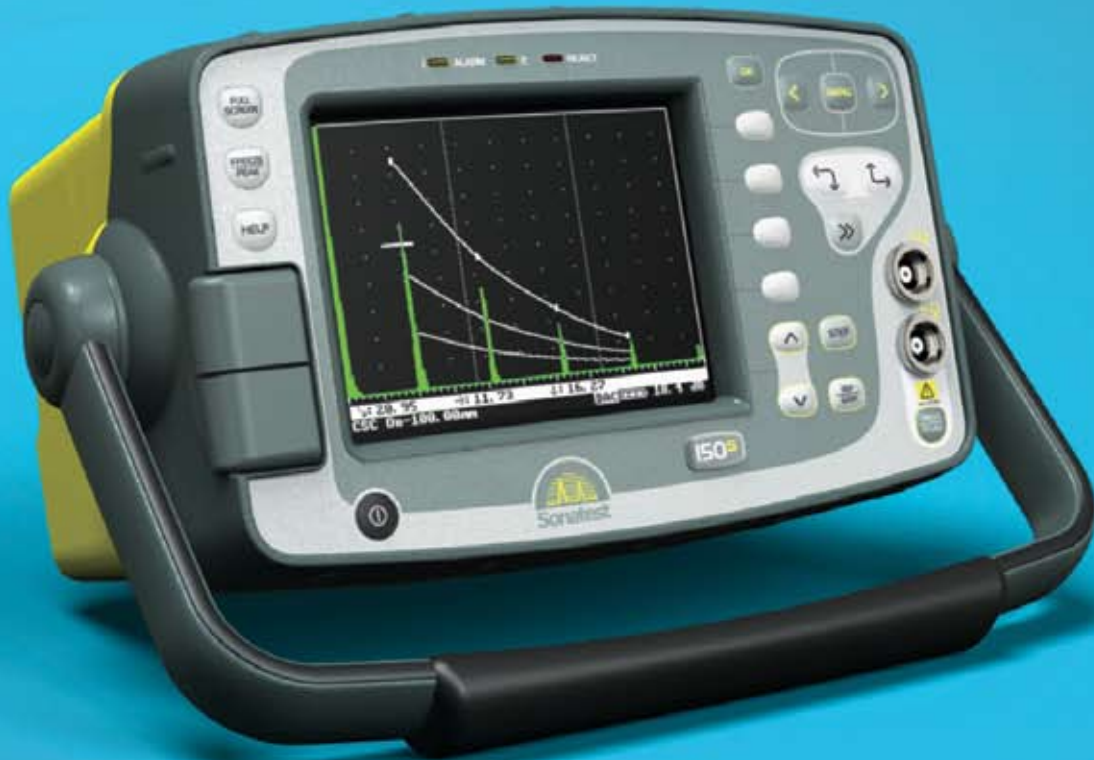**Sonatest**

SITESCAN SERIES

GENERAL PURPOSE DIGITAL ULTRASONIC FLAW DETECTORS

Sunlight viewable colour transflective display

DAC/AWS/DGS/API sizing tools

Robust, waterproof IP67 case

Full screen A-scan display

Up to 16 hour battery life

THE **SITESCAN** SERIES

Setting standards of performance and reliability

For over 20 years the Sitescan name has meant highly reliable, technician focussed flaw detectors and the new range continues this tradition. From the 123^W entry level model to the high specification 250^S - ease of use, rugged construction and high quality amplifiers are key elements of the design. Typical applications are weld inspection, corrosion testing, small castings/forgings and lamination checking.

Advanced Defect Sizing Tools as Standard

Weld and pipe inspection are major applications for the Sitescan series and we have therefore equipped them with the latest software tools for defect sizing. The 123^W has DAC, while the 150^S and 250^S have DAC, AVG, AWS and API sizing techniques. The use of integrated sizing software reduces analysis time and hence speeds inspection.

Multiple standard sizing techniques are essential for service companies working to different customer standards, especially as service work becomes more international and operators are required to work to different codes.

High Visibility Display

For any flaw detector the display is a crucial element. The Sitescan has a colour transflective TFT display as standard, providing high visibility at any light level. The choice of colours for menus and waveform display enhance clarity, with the LCD simulation mode giving direct sunlight readability. The TFT does not suffer the typical black out problems or temperature limitations of LCD giving full weather capability. The new Full Screen mode maximizes the A-scan area to improve readability further whilst testing and its fast response and peak capture functionality ensure any indication is clearly displayed, even if it only appears for one cycle of the PRF.

High Performance with Total Control

The Sitescan delivers high performance and advanced features, yet our engineer's experience in user interface design has ensured it is easy and quick to use. The acknowledged ease of use of previous generation Sitescans has been enhanced with the menu navigation key, providing easy access to functions. The menu structure has been designed to guide the user through their task with operation quickly becoming second nature.
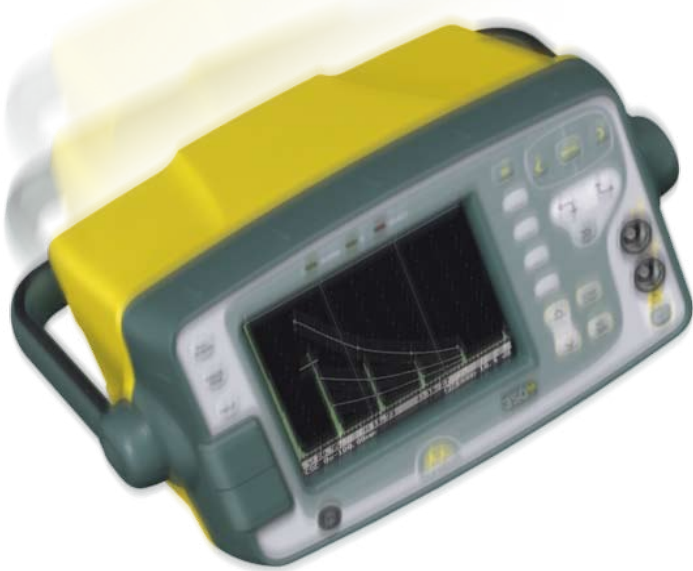
Robust and Reliable

Sonatest's reputation for robust design and proven reliability is an important aspect of flaw detector ownership. Down time is expensive and should be minimized to ensure maximum productivity. The Sitescan series is constructed to high standards using Xenoy plastics and sealed to IP67, giving excellent water resistance so it can withstand the tough environments in which operators work.

The Sitescan comes with 2 years warranty, extendable to 5 years with Sonacover, supported by a worldwide service network.

Models in The Range

123^W The ideal Training School Flaw Detector

The 123^W is a simple to operate flaw detector and is used by the world's leading training organisations. With the user interface becoming familiar in minutes technicians can concentrate on operation and learning ultrasonic theory. The "analogue feel" from the high quality broadband amplifier shows all the detail required to demonstrate how ultrasound changes with defect types, such as holes and cracks, essential in understanding ultrasonics at Level I and II. For classroom presentation the 123^W has a composite video output for connection to LCD projectors.

## 150^S Full Featured Broadband Flaw Detector

Based on the 123^W the 150^S has the same broadband amplifier enhanced with all the software features required to improve operator efficiency and accuracy. These includes standard sizing tools, advanced measurement modes, full screen waveform display, thickness reading memory and an automatic calibration feature.

250^S Narrow Band amplifier for optimal performance

Top of the Sitescan range is the 250^S. This version includes all the software features of the 150^S combined with a narrow band amplifier and TCG for more demanding ultrasonic applications. The square wave ActiveEdge^{TM} pulser automatically optimizes for each filter band selected, ensuring maximum performance.

SDMS
## (Optional Sonatest Data Management Software)

This Windows based data management tool allows the user to interface a Sonatest digital flaw detector with a PC. The software uploads and downloads panel settings and A-scans, which can also be copied and pasted into Word for customised reporting. Thickness readings can be transferred directly into Excel with the ability to produce charts for B & C-Scans and colour 3-D mapping.
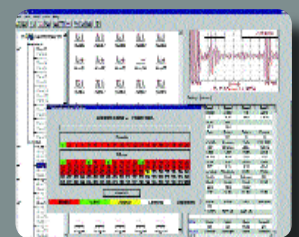
Features

Colour Reference Feature

An A-scan from a known defect free component can be stored and recalled in a different colour to the live A-scan. This effectively means that defects are highlighted in a different colour to the natural reflectors, enabling quicker and more reliable defect detection.
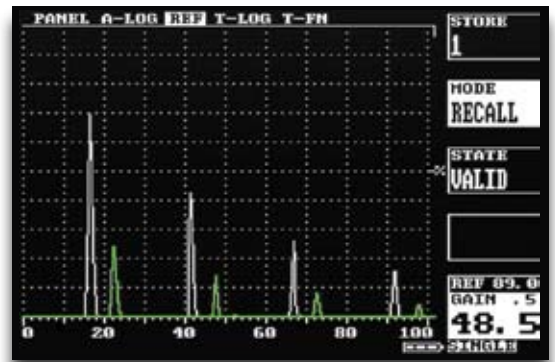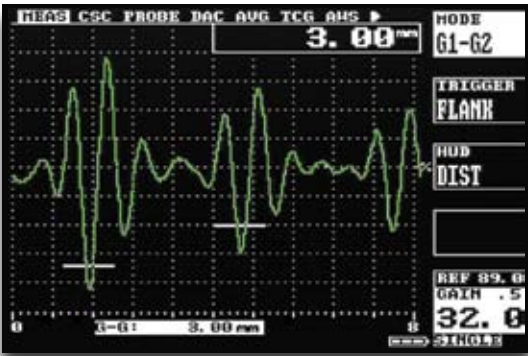

Flexible Measurement

Two independent bar monitor gates offer a range of measurement options for signal height or distance using either flank or peak triggering. The echo-to-echo mode gives through paint thickness readings while the G1-G2 mode allows accurate gate positioning for signals which are extremely close together. The TRIG function gives surface distance and depth when using angle beam transducers.

Curve Surface Correction

When using angle beam transducers on a curved surface the Sitescan will calculate the surface distance and depth of defect, taking into account the internal or external radius.
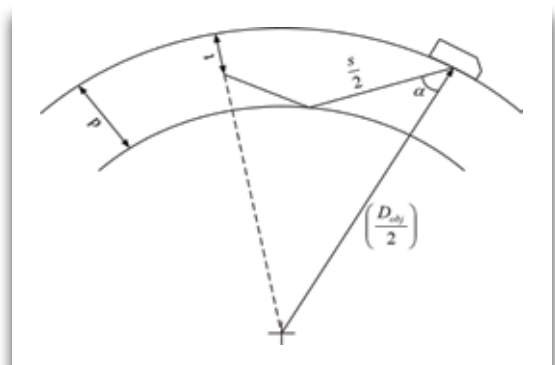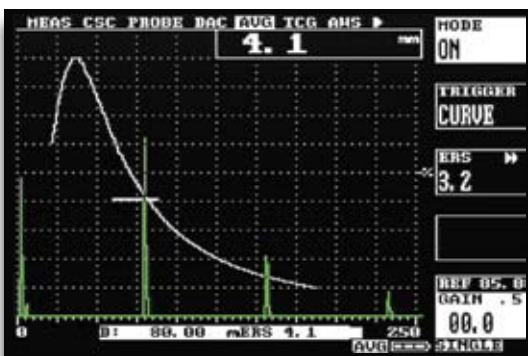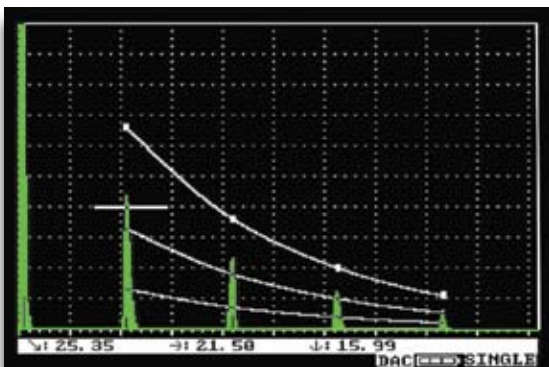

Flaw Sizing

Automatic flaw sizing using DGS/AVG, AWS D1.1, API 5UE, speeds reporting of defect acceptance or rejection.

Help Facility

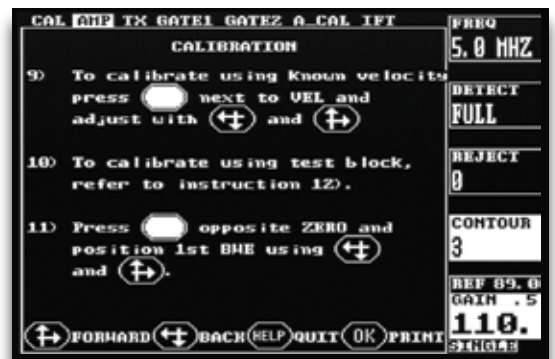...ance. Full instructions for all functions are clearly displayed. A very useful function for multi-disciplined technicians who use a variety of NDT techniques and do not use the Sitescan on a day-to-day basis.

Full Screen A-scan

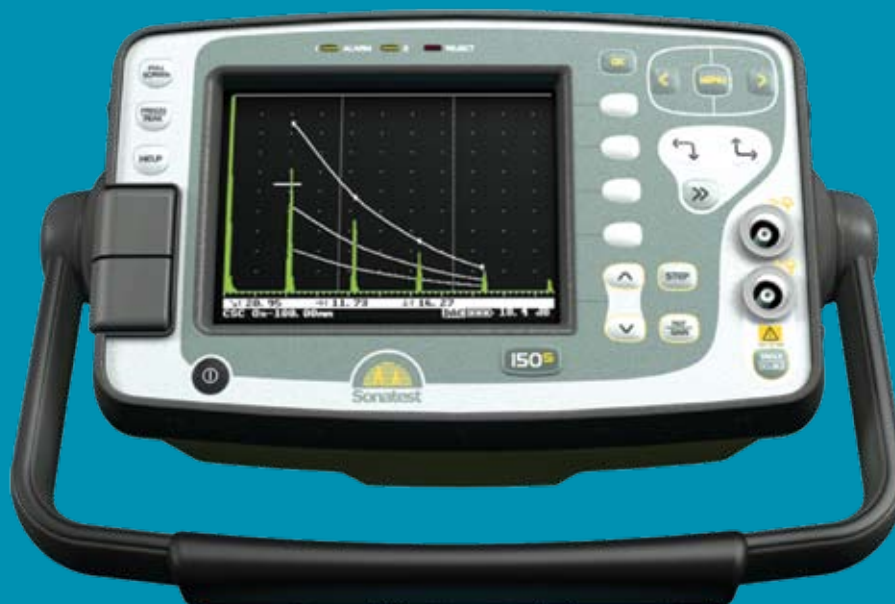In full screen mode the A-scan fills the display improving visibility.

Fast Set Up Screen

The split screen mode enables fast set up and overview of basic parameters.

SITESCAN SERIES Specifications 123ᵂ, 150ˢ and 250ˢ

		123ᵂ	150ˢ	250ˢ
Test Range	0-5mm (0.2in) up to 0-10000 (400in) at steel velocity. Variable in sequence, 10mm or 1mm	•	•	•
Velocity	1000 - 9999 m/s	•	•	•
Probe Zero	0 - 999.999 us	•	•	•
Delay	0 - 10000m at steel velocity in 0.05 steps (0 - 400 in 0.002 in steps)	•	•	•
Gain	0 - 110dB in 0.5, 1, 2, 6, 10, 14, 20 dB steps	•	•	•
Test Modes	Pulse echo and transmit-receive	•	•	•
Gates	Start & width adjustable over full range Amplitude 0-100%, 0.5% steps Visual & audible alarms	•	•	•
	Single gate positive trigger	•		
	Two gates Positive and negative triggering Gate 2 has selectable 0.6 second delay on alarm		•	•
Measurement Modes				
Depth	Depth and amplitude of signal in gate	•	•	•
Echo - Echo	Echo - Echo distance, automatic gate 2 position		•	•
Gate to Gate	Echo - Echo distance, manual gate 2 position			•
Trig	Trigonometric display of beam path, depth and surface distance Calculation of skip depth and curve surface compensation, X-offset for transducer	•	•	•
T-Min	Holds minimum thickness in depth mode	•	•	•
Pulser Voltage	-200 volt peak amplitude, rise/fall time <10ns into 50 ohm	•	•	•
Pulser Width	Fixed 100ns	•	•	
	30 - 250 ns linked to filter band			•
Pulser Repetition Frequency	Selectable 5 - 1000Hz.	•	•	•
Display	Colour transflective TFT Display area 111.4 x 83.5mm (4.39 x 3.29 in) A-scan area 315 x 200 max Variable brightness Sunlight viewable	•	•	•
	8 Selectable colour schemes for A-scan & menu		•	•
Screen Update Rate	50 or 60Hz	•	•	•
Rectification	Full Wave	•		
	Full Wave, positive, negative, RF		•	•
Frequency Bands	Broadband 1 - 10 Mhz (-6dB)	•	•	
	Narrow bands at 1Mhz, 2.25 Mhz, 5 Mhz, 10 Mhz			•
	Broadband 1.5 - 15 MHz			•
Vertical Linearity	1% full screen height	•	•	•
Amplifier Linearity	+- 0.1 dB	•	•	•

SITESCAN SERIES Specifications 123ᵂ, 150ˢ and 250ˢ

		123ᵂ	150ˢ	250ˢ
Horizontal Linearity	0.33% full screen width	•	•	•
Reject	50% Suppressive LED warning light when activated	•	•	•
Waveform Smoothing	Produces a smooth signal envelope	•	•	•
Units	mm or inches	•		
	mm, inches or time		•	•
AGC	Automatic Gain Control sets selected echo to a user defined level (10-90%)		•	•
DAC	Up to 10 points may be entered and used to digitally draw a DAC curve Reference -2, -6, -10, -12, -14 dB curves can be selected for JIS, ASME and EN1714 codes	•	•	•
AWS	Automatic defect sizing in accordance with AWS D1.1 Structural Welding Code	•	•	•
API	Automatic defect sizing in accordance with API 5UE		•	•
AVG/DGS	Automatic defect sizing using probe data		•	•
TCG	Time Corrected Gain 40 dB dynamic range, 30dB per microsecond, up to 10 points for curve definition			•
A-scan Memory	800 waveforms		•	•
Panel Memory	100 stores for calibration setting	•	•	•
Thickness Logging	8000 readings stored in Block/Location/Number coding or alpha-numeric pre-programmed work sheets Transferable to Excel using optional SDMS		•	•
Auto-Cal	Automatic calibration with two echoes		•	•
Reference Waveform	Recalled waveform can be shown in a different colour to live waveform for direct comparison		•	•
Display Freeze	Holds current waveform on screen	•	•	•
Peak Memory	For echo-dynamic pattern capture	•	•	•
Online Help	Instant operator guidance on operation accessed from direct key	•	•	•
Language Support	Six user selectable languages from: English, German, French, Spanish, Dutch, Italian, Russian, Polish, Czech, Finnish & Hungarian Others available on request	•	•	•
Front USB	For connection to PC, keyboard and printer	•	•	•
Outputs	Serial Interface, composite video (PAL & NTSC), analogue output for amplitude and distance updated at PRF rate Transmitter sync output	Video & RS232	•	•
Transducer Sockets	BNC or LEMO 1 (factory option)	•	•	•
Battery	Lithium Ion 14.4V 5.0 ampere hours Up to 16 hours, indication of battery charge. Recharge time 4 hours. Mains pack option.	•	•	•
Charger	100 - 240 VAC, 50-60Hz	•	•	•
Environmental	Meets IP67	•	•	•
Temperature Range	Operating -10ºC to 55ºC (14ºF - 131ºF) Storage -40ºC to 75ºC (-40ºF to 167ºF)	•	•	•
Size	256 x 145 x 145mm (10 x 5.7 x 5.7 in.)	•	•	•
Weight	2.5Kg (5.5 lbs) with battery	•	•	•

CE

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Sonatest

Part No: 147334 (Issue 2)