Unique ActiveEdge™ Transmitter Technology
The Masterscan series of flaw detectors have an ActiveEdge™ transmitter that drives the pulse on both the leading edge and trailing edge. This development enhances near surface resolution and removes the need for sensitivity reducing damping resistors. The added control achieved by the design helps the Masterscan optimise characteristics for a wide range of transducers, reaching even higher performance.

Robust and Reliable
Sonatest's reputation for robust design and proven reliability is an important aspect of flaw detector ownership, ensuring maximum productivity. The Masterscan 350M is constructed to high standards using Xenoy plastics and sealed to IP67, resulting in excellent water resistance, withstanding the toughest application environments.

High Performance with Total Control
The 350M 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 Masterscans 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.

High Visibility Display
For any flaw detector the display is a crucial element. The Masterscan 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 maximises the A-scan area to improve readability further whilst testing and its fast response and peak capture functionality ensure any indication is clearly displayed.

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, colour 3D mapping etc.

Masterscan 350 Specification

Test Range 0 - 1mm (0.05in) up to 0 - 20000 mm (800 in.) at steel
Velocity Variable in 1,2,5 sequence or continuously in 1mm(0.05in) increments. Also from 1 to 5000(µs). Velocity 256 to 16000m/s continuously variable.
Probe Zero 0 to 999.999 µs, continuously variable.
Delay Calibrated delay from 0 -20000mm in 0.05 mm steps at steel velocity (0-400in. in 0.002 in. steps).
Gain 0 to 110dB. Adjustable in 0.1, 0.5, 1, 2, 6, 10, 14 and 20dB steps. Direct access to gain control at all times.
Test Modes Pulse echo and transmit/receive.
Pulser 100V - 350V (450V MS380) square wave pulser.
Active Edge TM Unique active pulse control for enhanced near surface resolution and signal response. Replaces traditional damping control.
P.R.F Selectable 5 to 5000 Hz.

Thickness Logging Storage for 8000 thickness readings configured either by Block/Location/Number mode or pre-programmable work sheets in sequential mode. Readings can be exported to MS Excel using optional SDMS software.

Language Support Supports multiple languages. User selectable between English, German, Spanish, French, Dutch, Italian, Russian, Polish, Czech, Finnish & Hungarian. Others available on request.

Measurement Modes
Mode 1 Signal Monitor
Mode 2 Depth and amplitude of first signal in gate.
Mode 3 Echo-to-Echo distance measurement. (single gate)
Mode 4 Trigonometric display of beam path, surface distance and depth of indication, curve surface correction and X-OFFSET for probe index. Half skip indication on screen.
Mode 5 Gate to Gate distance measurement. (independent gates).
Mode 6 T-Min mode for holding minimum thickness reading. Resolution to 0.01mm (0.001in) for distance measurement or 1% FSH for amplitude measurement. Large display of measurement at top of A-Scan display. Measurement mode selectable between peak and flank.

AGC Automatic Gain Control automatically sets the signal to a level between 10-90% FSH with tolerance between 5-20% accuracy.
DAC DAC defined by up to 10 points and digitally drawn on screen. DAC curves meet requirements of EN 1714, JIS and ASME standards, select able between -2, -6, -10, -12 and -14dB. Amplitude read out selectable between % DAC, % FSH or relative dB.
TCG Time Corrected Gain, also known as Swept Gain. 40dB dynamic range greater than 30dB per microsecond and up to 10 points may be used, setting all signals initially to 80% FSH.
Update Rate 60Hz (NTSC Mode); 50Hz (PAL Mode).
Rectification Full wave, positive or negative half wave and unrectified rf.
Frequency Range 6 narrow bands centred at 0.5 MHz, 1MHz, 2.25MHz, 5MHz, 10MHz and 15MHz. Broad band at 2 MHz to 22MHz (-6dB) and 1MHz to 35 MHz (-20dB).