

veo³ | Inspect with Confidence

Introduction

veo³



In 2010, Sonatest introduced the first phased array instrument that featured onboard scan plan capabilities and a live 3D view with ray tracer representation.

Then **Veo+** was launched in 2016. It introduced the concept of remote hardware update allowing the user to instantly unleash the power and flexibility of a greater number of PA channels. With the Sonatest XPair software package Sonatest pioneered true real-time remote collaboration allowing an expert to have full control of the instrument and share the **Veo+** screen whilst in another location anywhere in the world. Sonatest were also the first to provide phased array correction for curved surfaces making long seam weld inspections true, faster and easier than ever.

Now, introducing **Veo3**. Fitted with a state-of-the-art PCAP touch panel, the now legendary user interface is even better. But what makes **Veo3** really stand out, is its unique real-time multi-scan/multi-technique capabilities. Simultaneous TFM, PA and TOFD views are now possible.

Multi-technique Advantages

Inspect with Confidence

Even though TFM is now a ubiquitous inspection method, correct configuration and selection of the most appropriate TFM propagation mode for the application is a very real challenge. Comparing modes is frustrating and time consuming. With **Veo3**, having the ability to simultaneously show a PA and several live TFM scans it is now easier than ever to identify and size flaws with high P.O.D. and increased technician confidence.

The advanced technology in **Veo3** also allows the addition of a TOFD scan to the PA and TFM live scans. Inspect with confidence when simultaneously using three complementary inspection techniques.



No Need for Additional Qualification

The **Veo3** multi-technique functionality, combining phased array with TFM, allows users to benefit from the additional resolution and sizing performance of TFM – all while performing inspections to an already approved phased-array procedure. No need to change. No need to go through a new approval process.



Focus Where it Matters

The **Veo3** has all the flexibility necessary to help you solve challenging applications. Its unique architecture can generate up to six live TFM scans, produced from multiple FMC sources on different probes. This allows the end-users to focus where it matters, solving the most difficult inspections.

Single Scan of Thicker Parts

The **Veo3** can generate TFM images of up to 500K pixels with a maximum resolution of 100 pixel per mm without limiting the number of pixel per axis. Combining Time Corrected Gain on the TFM image, the technician is able to inspect thicker parts with superior flexibility whilst remaining ASME compliant. And all with a single scan. The **Veo3** has what it needs to answer your daily challenges.

Flaw Characterisation and Assessment has never been this easy in difficult applications.



Full Data Capture and Analysis

All of the data received during Full Matrix Capture (FMC) scanning can be recorded on the **Veo3**. As a result, further detailed analysis can be performed including comparison with previous inspection data to identify trends and flaw/corrosion growth rates.

The Sonatest UTStudio+ software package has extensive capabilities to assist the inspector/expert or alternatively the data can be exported for analysis using other algorithms. Again, Sonatest provides the tools necessary beyond just the basic inspection.

Onboard Live TFM | Touch Screen | Linux

Specification

GENERAL	PHASED ARRAY (32:128PR)	UT-TOFD (2PR)	Live TFM
Multiscan Quantity	Up to 8 scans	Up to 2 scans (UT & TOFD)	Up to 6 scans
Pulsers/Receivers	32:128PR	2PR (4 connectors)	Up to 64 elements probe
Gain Range	80dB	100dB	80dB
Sampling Frequency	125 MHz @ 12-Bit	50/100/200 MHz @ 10-Bit	125 MHz @ 12-Bit (processing 16-Bit)
System Bandwidth	0.2 to 23 MHz	0.2 to 18 MHz	0.2 to 23 MHz
Max Pulse Rate Frequency	50,000 Hz	20,000 Hz	50,000 Hz
Pulse Voltage	100-50V ActiveEdge©	400-100V ActiveEdge©	100-50V ActiveEdge©
Focusing Mode	Natural or Constant Depth/Path/Offset	na	Focusing in all points TFM
S-Scan Resolution	Up to 0.1°	na	Down to 0.01mm
L-Scan Resolution	Down to 1 element or Double Resolution	na	Down to 0.01mm
Max PA Beams (focal laws)	Up to 1024 beams	na	Up to 500,000 Pixels
Tools – Measurements and Wizard	EXTRACTION BOX, 4 gates/A-Scan, TCG, DAC/Split-DAC	4 gates/A-Scan, TCG, DGS/Split DGS, DAC/Split-DAC	10 TFM algorithms, EXTRACTION BOX, 4 gates, Velocity, TCG, Amplitude fidelity, up to 20 cursors/view
Onboard Scan Plan Tools	Onboard 3D live rendering	Operating Time	6 hours (hot swappable batteries)
Onboard Reporting Tools	PDF auto-report, Export data to CSV file, Save screen capture	Power Input	AC 110V/240V @ 50 Hz/60 Hz
Onboard PDF Reader Integrated	Ability to load and read and PDF documents	Unit Dimensions	115 x 220 x 225 mm (4.52 x 8.6)
Online Help Calibration	ACTIVE help genius for parameter optimisation procedures, reports	Weight	5.1 kg (11 lb) no battery, 460g
Standards	ISO18563 (EN16392) & EN12668	Environmental Rating	Designed for: IP66

Our Complete Set of Tools



ALL APPLICATIONS

Create
Analyse
Report

Editable A-B-C-End-Top-S-3D Views
3D data rendering
Live raytracer



CORROSION APPLICATION

Stitch
Analyse
Export

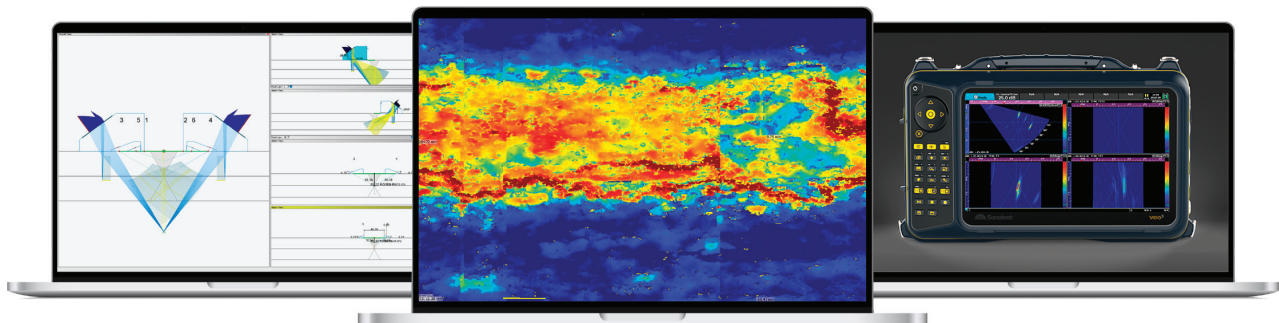
Export to CSV
Defect Auto-Sizing
C-scan Analysis modification



REMOTE APPLICATION

Share
Control
Transfer

VNC viewer
VPN network
Send Config/PDF files in the fields



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