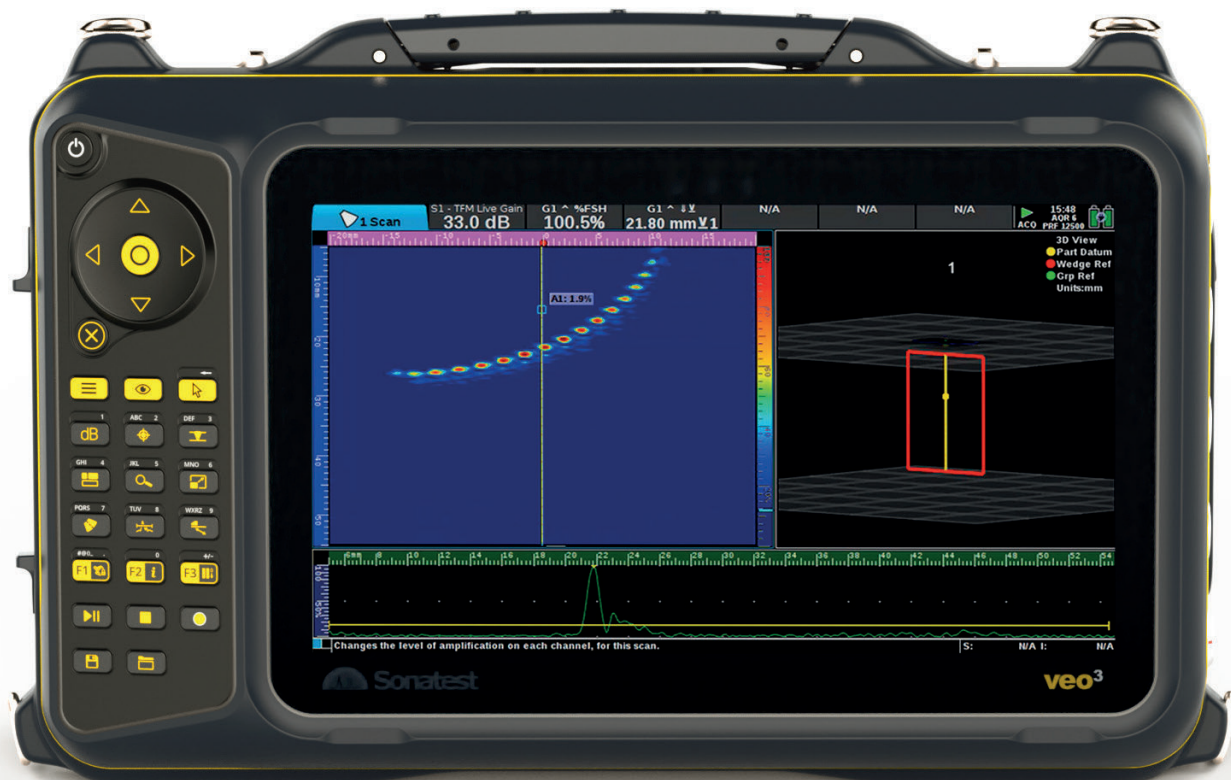




**veo<sup>3</sup>** | Inspect with Confidence

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# Introduction

veo<sup>3</sup>



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

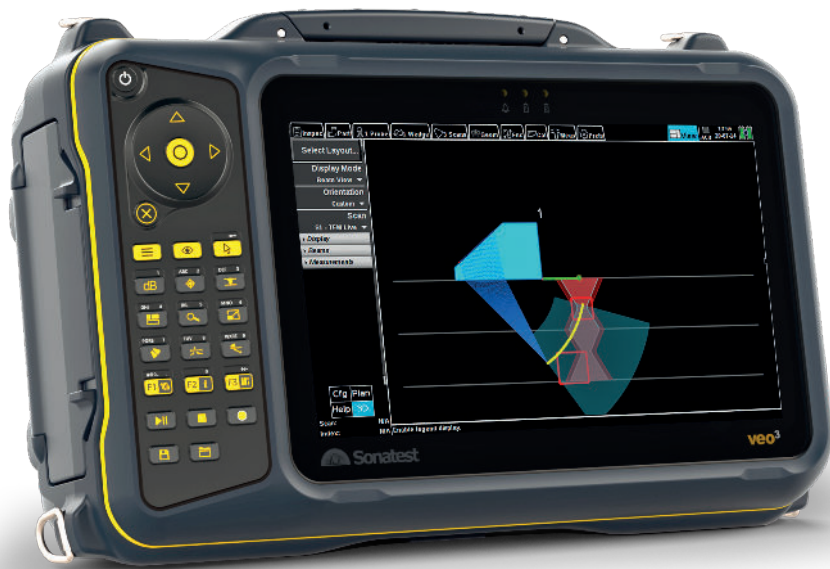
Even though TFM is now a ubiquitous inspection method, correct configuration and selection of the most appropriate TFM propagation mode for the application is a very real challenge. Comparing modes is frustrating and time consuming. With **Veo3**, having the ability to simultaneously show a PA and several 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.



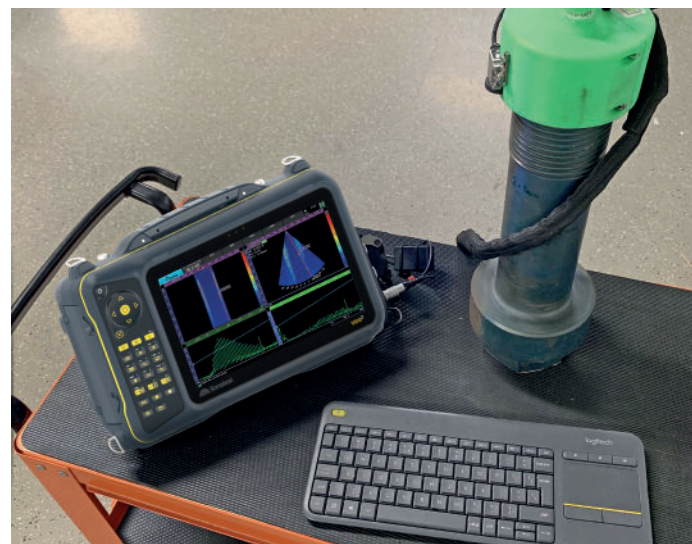
## Focus Where it Matters

The **Veo3** has all the flexibility necessary to help you solve challenging applications. Its unique architecture can generate up to six live TFM (including TFMi™) 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.**



## We Revolutionised TFM Imaging

The **Veo3** can combine up to 4 live TFM modes. As known as TFMi™, the details of the defects have never been so close to the reality. That imaging scan provides a high-precision height assessment and an improved shape accuracy compared to conventional PA inspections.

The ability to characterise the type of defects is now effortless. This technique has indeed demonstrated superior results on weld analysis.



# 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 & two TFM Intermode methods                                                                        |
| 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 | 12 TFM algorithms, Up to 4 modes per TFMi™, 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

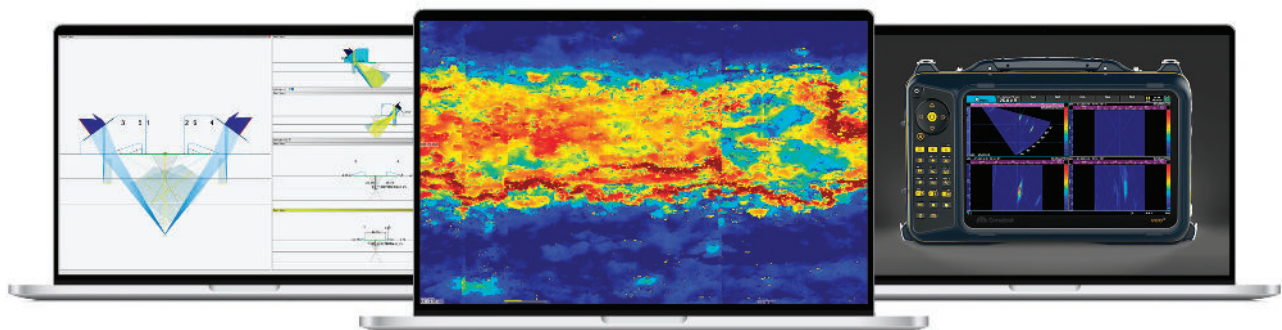
Export to CSV  
Defect Auto-Sizing  
C-scan Analysis modification



### REMOTE APPLICATION

Share  
Control  
Transfer

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



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