Sonatest

Simplicity | Capability | Reliability

veo+

16:64PR | 16:128PR | FMC-TFM | MULTISCAN
32:64PR | 32:128PR | UT-TOFD 2PR

Simplicity | Capability | Reliability

Smart Portable Phased Array Solution Rethink Your Standard.

Multiscan Solution

Retaining the best features of the established veo line, the new VEO+ is designed to meet the needs of today and tomorrow, making the VEO+ a smart and future proof asset for your business. Key design elements considered in the development of the VEO+ are user and performance focused. Based on a superior and innovative digital technology, four available PA configuration (16:64PR, 32:64PR, 16:128PR or 32:128PR) are offered as software options.
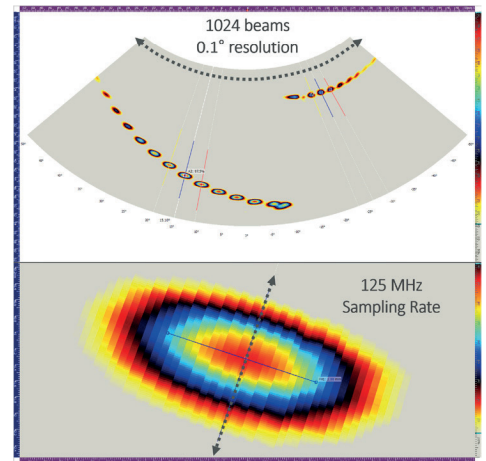
Along with Xpair Cloud Remote Access, Phased Array Curved Surface Correction and Export to CSV, the FMC-TFM is another software option that gives access to FMC recording of the acoustic information, and TFM imaging using up to 64 elements phased array probe. Upgradeability in the field when needed!

Superior Digital Technology

The VEO+ electronic & software is powered by a new architecture offering superior data throughput and unsurpassed computational capacity to deliver fast and accurate results in the most demanding conditions. It allows inspectors to easily create high resolution volumetric scans and record very precise data sets with exceptional measurement precision.

These performances come from an impressive 32 channel PA beamformer providing exceptional SNR, enhanced digital signal processing and the legendary Sonatest ActiveEdge® pulser technology. Thanks to its Linux® 64-bit operating system and its fast 128GB SSD memory capacity, data file size is not a concern for VEO+. Data compression is yet another feature allowing one to record huge amounts of information in more manageable data file size.
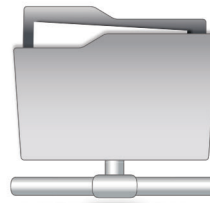
HIGH RESOLUTION SCAN

1024 beams
0.1° resolution

125 MHz
Sampling Rate

Connectivity

WiFi

Ethernet

SSD Storage 128Gb

USB

VGA

NETWORK FILES TRANSFER

TRAINING & PRESENTATION

COMPLETE REMOTE CONTROL

32:64PR

Power & Precision

Civil & Construction   **Mining**   **Transport**

- Complex geometry parts
- Deep penetration
- Attenuative special alloys
- High-Res. weld inspection

32 Element Focusing

Software Upgrade

- Standard weld inspection
- FAST corrosion mapping
- FAST composite inspection
- Multi-Scan apps

Oil & Gas   **Aerospace**   **Welding**

16:64PR

Performance

Versatility

32:128PR

Power Generation **Oil & Gas** **Service Companies**

- Heavy thickness weld inspection (S-Scan & L-Scan)
- 2x 64E probes
- 4x 32E probes
- 6x 16E probes

128 Channels Multi-scan

- Standard weld inspection
- Large & fast corrosion map
- Large & fast composite map
- Multi-Scan apps. (128 ch.)

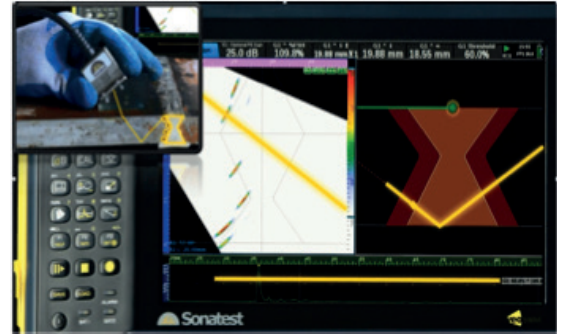**Oil & Gas** **Aerospace** **Wind Energy**

16:128PR

Productivity

Onboard Live 3D Scanplan

The Veo+ embedded modeling tools support multiple probes and scans, enabling quick and efficient set up of inspection plans. Choose from a range of weld geometries, render and visualise probes on the part, at precise locations, representing reality with high fidelity. Then add sound paths, with skips, allowing to assess and ensure proper coverage as planned in the scan plan.

The VEO+ embedded modelling tools are invaluable assets and a reference for the inspection report, communicating inspection results more completely and more clearly, as well as providing precious information to increase users' level of expertise. This feature makes the VEO+ a choice of excellence for serious NDT schools looking to provide the best academic training to future inspectors.

Remote Control Solution

Xpair is a PC-based software application solution to manage data transfer and remote control of instruments in the field wherever a network connection is available. Moreover, with the instrument Xpair Cloud software option, a user can access and remotely pilot the instrument of a colleague located 1000s of km away using a mobile or wired Internet connection.

- Assist in real time technician in the field;
- Take control of all the instrument functionalities;
- Download data for in depth analysis in the office;
- Upload specific setup files to the field technician;
- Upload procedures (PDF) to the field technician.

Advanced Analysis Software

UT Studio+ software application, which comes as part of the Veo+ package, is used to manage inspection configurations, perform data analysis and build precise reports.
Thanks to a comprehensive, right click/drag and drop user interface, one can create new data views, from customised views to additional gates, measurement tools or refined colour palettes, UTstudio+ helps you generate extended reports and much more. Suitable for FMC-TFM, phased array and conventional ultrasonic technologies, UTstudio+ is able to accomplish amazing things and get the job done for a multitude of simple to advanced applications.

Rugged

The veo+ enclosure has also been designed to withstand the toughest of environments and has been successfully tested in the field for 5 years.

WATER RESISTANT

SHOCK PROOF

SUBZERO HERO

DUST TIGHT

EXTENDED LIFE

Specification

GENERAL	PHASED ARRAY (32:128PR)	UT-TOFD (2PR)	FMC-TFM (64 ELEMENTS)
Multiscan Quantity	Up to 6 scans	Up to 2 scans (UT & TOFD)	Up to 2 scans
Pulsers / Receivers	32:128PR	2PR (4 connectors)	Up to 64 elements probe
Gain Range	80dB	100dB	80 dB
Sampling Frequency	125MHz @ 12-Bit (processing 16-Bit)	50/100/200MHz @ 10-Bit	125MHz @ 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	TFM resolution up to 0.1mm²
L-Scan Resolution	1 element or double resolution	na	TFM resolution up to 0.1mm²
Max PA Beams (focal laws)	Up to 1024 beams	na	FMC 4096 beams / TFM 1024 pixel²
Measurement tools	EXTRACTION BOX, 4 gates/ A-Scan, TCG, DAC Split-DAC	4 gates/A-Scan, TCG, DGS/ Split-DGS, DAC/Split-DAC	9 TFM algorithms, EXTRACTION BOX and all the standard PA tools
Max Points per A-Scan	Up to 8192 points per A-Scan (sub-sampling available to reduce file size)		
Data Storage & File Size	128 Gb SSD & no file size limit		
Operating System	Linux® 64-Bit OS / Powered by Intel® CPU Core		
Analysis Software (PC)	UTstudio+ for Windows® 7-8-10 & Linux® OS		
Remote Control Software (PC)	Xpair for Windows® 7-8-10 OS		
Onboard Scan Plan Tools	Onboard 3D live rendering		
Onboard Reporting Tools	PDF auto-report, Export data to CSV file, Save screen capture		
Onboard PDF Reader	Ability to load and read any PDF documents		
Integrated Online Help	ACTIVE help genius for parameter optimization procedures, reports		
Calibration Standards	ISO18563 (EN16392) & EN12668		
USER INTERFACE & PORTS			
PA & UT Connectors	1 IPEX 128 channels	4 LEMO 1 or 4 BNC	
Instrument Display	10.4" wide LED-backlit LCD, enhanced sunlight readable 1024 x 600		
Encoder Ports	2 axes : Scan, Index or Clicker (LEMO 1)		
GPIO Port (TTL)	Start, Stop, Index, Reset, Alarm(s), Trig... (LEMO 1)		
Communication Ports	WiFi 802.11n, Ethernet Gigabits & 3 master USB2		
Remote Display Ports	WiFi, Ethernet or VGA		
Data Transfer Ports	WiFi, Ethernet or USB		
OPERATING TIME, ENCLOSURE & ENVIRONMENTAL			
Operating Temperature	-10°C to 40°C (14°F to 104°F) storage -20°C to 60°C (-4°F to 140°F)		
Operating Time	6.6h (hot swapable batteries)		
Power Input	AC 110V/240V @ 50Hz/60Hz		
Unit Dimensions	115 x 220 x 335 mm (4.52 x 8.66 x 13.19 in)		
Weight	4.54 kg (10 lb) no battery, 460 g (1 lb)/battery)		
Environmental Rating	Designed for : IP66, MIL-STD-810G		

(Subject to change without notice)

Standard Package
Veo+	16:64PR	BNC
Veo+	16:64PR	LEMO
Veo+	32:64PR	BNC
Veo+	32:64PR	LEMO
Veo+	16:64PR	BNC
Veo+	16:128PR	LEMO
Veo+	32:128PR	BNC
Veo+	32:128PR	LEMO

Software Options
FMC-TFM
CSV Export
Upgrade PA 32PR
Upgrade PA 128 channels
PA Curved Surface Correction
XPAIR - Cloud Remote Access

Accessories
32:32 Y-Splitter I-PEX
64:64 Y-Splitter I-PEX
Phased Array Probes
TOFD & UT Probes
Wedge
Encoders
*More Accessories Available

Wheelprobes

Scanners

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