



Sonatest

PRODUCT CATALOGUE



Simplicity | Capability | Reliability

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Introduction

Founded in 1958, Sonatest is the third largest UT inspection equipment manufacturer and recognised for the quality of its rugged and portable products all around the world.

60 Years Pioneering Ultrasonics in the NDT Industry

Whether it is conventional, phased array or FMC-TFM ultrasonic technology, Sonatest is a significant partner in providing Non-Destructive Testing solutions to many industries, including transportation, aerospace, power generation, manufacturing, NDT service and oil and gas to name but a few.



Our products are used by the world's leading

companies such as Boeing, Airbus, Shell, Eon, Network Rail and are designed to give the user a powerful tool that is easy to use and will withstand the harsh environments in which NDT is carried out.

Innovative Product Design

Sonatest is focused on achieving our goals of "Simplicity, Capability and Reliability", both within our product development programs and customer relationships.

The Sitescan and Masterscan range of flaw detectors has an enviable reputation for reliability, whilst our user interface design has set the industry standard. The veo+ and Prisma ultrasonic flaw detectors reinforce Sonatest's reputation for innovative technician focused product development within phased array.

Global Coverage

Over the years Sonatest expanded its network to now provide world-class assistance with multiple service points and an extended network of one hundred distributors and agents all around the globe. Headquartered in Milton Keynes in the United Kingdom, Sonatest is a privately owned company with operations in the NDT hub of Québec City, Canada and in San Antonio, USA.



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veo+

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!



Specification:

- Multiscan Phased Array FMC-TFM 32:128PR and UT-TOFD 2PR
- Screen: 10.4 wide LED backlit LCD, enhanced sunlight readable 1024 x 600
- Software: UTstudio+
- Weight: 5 kg (11 lb) with one battery
- Battery Life: 6h (hot-swappable batteries)
- Designed to meet: IP66 & MIL-810



Ultrasonic Phased Array - Veo+ Series

veo+ 16:64PR BNC	veo+ 16-64 Standard Kit BNC
veo+ 16:64PR LEMO	veo+ 16-64 Standard Kit LEMO
veo+ 32:64PR BNC	veo+ 32-64 Standard Kit BNC
veo+ 32:64PR LEMO	veo+ 32-64 Standard Kit LEMO
veo+ 16:128PR BNC	veo+ 16-128 Standard Kit BNC
veo+ 16:128PR LEMO	veo+ 16-128 Standard Kit LEMO
veo+ 32:128PR BNC	veo+ 32-128 Standard Kit BNC
veo+ 32:128PR LEMO	veo+ 32-128 Standard Kit LEMO

Universal Encoders

JX-1004	Single Universal Encoder 2.5m
JX-1007	Single Universal 5m



Standard Kit Content:

	veo+ Flaw Detector
165281	WIFI USB key
242171	2 x Lithium battery veo+
800423	veo+ power supply
147409	veo+ User Guide
147390	veo+ Quick Start Guide
195193	Carry strap veo+
195192	veo+ transportation case
UTStudio+	UTstudio+ standard version (1 license)

Software options:

SW-VEO+PA32	Upgrade to 32 pulser/receiver
SW-VEO+PA128	Upgrade to 128 channels
SW-VEO+CSV	Export view data to CSV file
SW-VEO+PACSC	SW Option: Activate PA Curved
SW-VEO+CLOUD	SW Option: Xpair Cloud Remote
SW-VEO+FMC/TFM	FMC/TFM Software
UTSTUDIO+	UTStudio+ single license
XPAIR	Xpair: single license
UTmap	UTmap single license

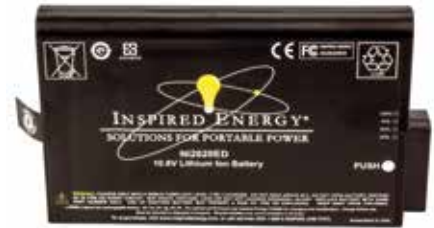
Accessories and Spares



195193
Carry Strap Veo/Prisma



195192
Veo/RSflite Transport case



242171
Lithium Battery



800423
Power Supply (LEMO)



800424
Single Bay Battery Charger



800422
Dual Bay Battery Charger



196101
Waterproof Keyboard



196100
Waterproof Mouse

Also Available:

145428 Veo Window Protector

165281 Compact USB Wi-Fi Router

147409 Quick Start CD

196102 7 Lt Portable Hand Spray Kit

147390 Quick Start Guide

T-09 125 ml bottle Couplant

Prisma

The **Prisma** Ultrasonic Flaw Detector offers the end user outstanding performance in the field together with the flexibility and capability to step up from using a high-end ultrasonic flaw detector to an instrument with phased array functionality. All models have conventional UT, TOFD and Phased Array capabilities on board, together with excellent reporting output. Just select the options you need and upgrade when ready.

Specification:

- UT-TOFD 2PR Phased Array 16:64
- Display: Multi-view, 8.4 inch display size (diagonal)
- Dimensions (HxWxD): 205 x 300 x 90 mm
- Weight: 3.5 Kg (with battery)
- Battery Life: 7h in UT mode / 6h in PA mode
- Designed to Meet: IP66



Ultrasonic Phased Array - Prisma Series

PRISMA 16:64 TOFD B	UT plus TOFD & PA (16/64)
PRISMA 16:64 TOFD L	UT plus TOFD & PA (16/64)
PRISMA UT BNC KIT	Prisma UT BNC Standard Kit
PRISMA UT LEMO KIT	Prisma UT LEMO Standard Kit
PRISMA UT/PA B	UT plus PA (16/16)
PRISMA UT/PA L	UT plus PA (16/16)
PRISMA UT/PA/TOFD B	UT plus TOFD & PA (16/16)
PRISMA UT/PA/TOFD L	UT plus TOFD & PA (16/16)
PRISMA UT/TOFD B	UT plus TOFD
PRISMA UT/TOFD L	UT plus TOFD

Universal Encoders

- JX-1004** Single Universal Encoder 2.5m
- JX-1007** Single Universal 5m



Standard Kit Content

	Prisma Flaw Detector
145512	Micro 8Gb USB Memory Key
242171	Lithium battery
800423	Power Supply (LEMO)
147394	Prisma Quick Start
147395	Prisma User Guide
195193	Carry strap Veo+
195208	Prisma Storm Case
UTStudio+	UTstudio+ standard version (1 license)

Software Options

SW-PRISMA-PA16	PRISMA Software 16:16 PA
SW-PRISMA-PA64	Upgrade to 16:64 PA
SW PRISMA TOFD	Upgrade to TOFD
SW-PRISMA CSV	Export view data to CSV file
SW-PRISMA-CLOUD	SW Option: Xpair Cloud Remote
UTstudio+	UTStudio+ single license
UTMap	UTMap: Single license
Xpair	Xpair: single license



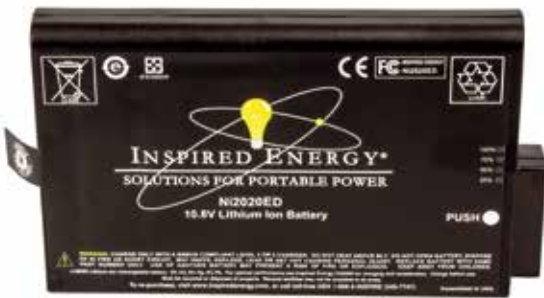
Accessories and Spares for Prisma



195193
Carry Strap Veo+/Prisma



195208
Prisma Storm Case with Insert



242171
Lithium Battery



800423
Power Supply (LEMO)



800424
Single Bay Battery Charger



800422
Dual Bay Battery Charger



196101
Waterproof Keyboard



196100
Waterproof Mouse

Also Available:

- | | | |
|--|---|---|
| 145512 Micro 8Gb USB | 196102 7Lt Portable Hand Spray Kit | 147394 QS guide |
| 152273 Portable Wi-Fi Router | 145513 Prisma Window Protector | 165264 Prisma Encoder Y-Splitter |
| 165281 Compact USB Wi-Fi Router | 147395 User Guide | T-09 125 ml bottle Couplant |

PA Probes & Wedges

X-Series

The X-Series range offers a broader choice in transducer specifications (frequency and element size) together with the assurance of industry standard configurations.

All X-Series transducers are now delivered with an integral 2.5 m or 5 m cable and a quick I-PEX latch connector including an adapter bracket that is compatible with any standard I-PEX instrument. Other length and connector options are available upon request.

Please visit www.sonatest.com for full specifications and further information on our Transducer Range.

X0 – Low Profile

These probes have a low profile design to fit in between pipes and the elements are mechanically focused to optimise detection of defects into the welds of small-diameter pipes. Paired with Sonatest low profile scanners, it makes the ultimate scanning solution for phased array inspection of circumferential welds in small bore pipeworks.

Frequent applications:

- Bore pipe
- Small diameter tube inspection
- Fits on most low profile scanners.

X1 – Miniature

These probes are very compact, making them suitable for applications in limited access area or where a minimal footprint is required. Aerospace is a key industry for Sonatest X1 series, especially for Scribe Line inspection solution.

Frequent Applications:

- Scribe lines
- Automotive parts
- Machined parts
- White metal sheets



X2 – Compact Sectorial Scan

These probes are designed to perform sectorial scan (SScan) within a compact footprint. This makes the X2 series the perfect choice for manual or encoded weld inspection solutions and for inspection of simple to complex geometry parts using up to 32E steering and focussing capabilities.

Frequent Applications:

- General & critical welds (butt, T and corner joints)
- Castings
- Flanges
- Automotive parts
- Machined parts

X3 – Sectorial Scan or Linear Scan

With similar acoustic specifications as the X2 series but with more elements (up to 64E), the X3 series is optimum to perform both sectorial (SScan) and linear scan (LScan or electronic scan) within the same probe. This makes the X3 series the

perfect choice for thick weld inspection solutions or to perform a fairly large linear scan at 0° for applications such as composite inspections, blistering and corrosion mapping solutions.

Frequent applications:

- Aerospace parts (composite)
- Aluminium plates (delaminations)
- Corrosion, blistering & thickness mapping
- General & critical welds (butt, T and corner joints)
- Castings.

X3 – Glider – Compact Composite Linear Scan

With an acoustic array packing up to 64 elements, the X3-Glider series is optimum to perform ultrasonic linear scan (LScan or electronic scan) over a small to large area. Thanks to its soft and replaceable rubber wedge construction, it will also conform to irregular surfaces making the XGlider 3 series the perfect choice for composite inspection applications.

Frequent applications:

- Aerospace
- Aerospace parts (composite)
- Aluminium plates (delaminations)
- Corrosion, blistering & thickness mapping

X4 – Small Integral Wedge of Sectorial Scan

With an integral wedge and acoustic design that match European standards for shear wave probes (refer to Sonatest SIRIUS range), the X4 series is a good choice to replace conventional UT inspection methods and gains benefits of the phased array technology within a very compact angle beam probe solution.

Frequent applications:

- General manual welds (butt, T and corner joints)
- Castings
- Flanges
- Automotive parts
- Machined parts

X5 – Deep Penetration (AWS & HT)

These high energy probes are intended to provide fairly deep penetration of ultrasounds into attenuative materials or parts of large dimension like for casting and forging inspection solutions. These are also compatible with the standard Sonatest shearwave wedges including the “AWS Snail” and the high temperature versions (SW62 & SNW62 range).

Frequent applications:

- Structural component (large pins)
- Shaft
- Casting, bars & billets
- Critical large weld inspection

X6 – Large Linear Scan

With similar acoustic specifications as the X2 series but with 128 elements, these probes have the capabilities to generate very large linear scan (LScan or electronic scan), making the X6 series ideal for composite inspections, blistering and corrosion mapping solutions because it can cover a large area very quickly. Also, with a fine element pitch and aperture up to 32E, it offers a very high resolution capabilities for better defect sizing, material penetration and signal to noise ratio performances.

- Aerospace parts (large composite)
- Large aluminium plates (delaminations)
- Corrosion, blistering & thickness mapping

DAAH

Recognised for its high quality and performance for more than 10 years, the DAAH (Detachable Active Array Head) range provides a unique phased array transducer solution by splitting the array from the cable. This concept also yields advantages in cost at purchase but also for maintenance in the long run as a cable is much less expensive to repair than replacing a phased array probe.

Please visit www.sonatest.com for full specifications and further information on our Transducer Range.

D1A – High Performance

Being compact but with a fairly large elevation design, the D1 series offers deep penetration, high signal-to-noise ratio (SNR), large steering and precise focussing performances to solve the most demanding inspection challenges.

Frequent applications:

- General & critical welds (butt, T and corner joints)
- Castings, bars & billets
- Structural component (large pins)
- Shaft, castin, bars & billets
- Flanges
- Automotive parts
- Machined parts



D1B – Dual Linear Array for Stainless Steel

Sharing the exact same quality design as the D1 series but packaged in a Dual Linear Array enclosure, the D1 series is particularly effective to inspect critical and attenuative components like stainless steel and dissimilar welds.

Frequent applications:

- General & critical welds (butt, T and corner joints)
- Austenitic stainless steel alloys
- Dissimilar welds
- Pressure vessels
- Very attenuative material

D1Z – High Performance Integral Wedge for S-Scan

These probes offer the high performances of the DAAH series but packaged within a compact enclosure making it the ideal choice for a manual or encoded weld inspection solutions. The other advantages of a phased array integral wedge design are zero wedge mounting procedures nor probe-couplant variation over time and a smaller footprint to get near the weld or for thinner plates.

Frequent applications:

- General & critical welds (butt, T and corner joints)
- Castings, bars & billets
- Structural component (large pins)
- Shaft, casting, bars & billets
- Flanges
- Automotive parts
- Machined parts

D5A – High Performance Linear Scan

With a similar acoustic design to D1 series but with 64 elements, these probes have the capabilities to generate larger linear scan (LScan or electronic scan) to cover a fairly larger area for applications such as composite inspections, blistering and corrosion mapping solutions. The D5 series will especially stand out on material penetration and signal-to-noise ratio performances.

Frequent applications:

- Aerospace parts (large composite)
- Large aluminium plates (delaminations)
- Corrosion, blistering & thickness mapping
- Critical welds of thick material

DAAH PA CABLES

DAAH 1 High Performance

D1-CABLE-001	D1-CABLE-S-QX2
D1-CABLE-002	D1-CABLE-S-QX5
D1-CABLE-003	D1-CABLE-D-QX2
D1-CABLE-004	D1-CABLE-D-QX5
D1-CABLE-005	D1-CABLE-S-QX2-AR
D1-CABLE-006	D1-CABLE-S-QX5-AR
D1-CABLE-007	D1-CABLE-D-QX2-AR
D1-CABLE-008	D1-CABLE-D-QX5-AR

DAAH 5 High Performance

D5-CABLE-001	D5-CABLE-S-QX2
D5-CABLE-002	D5-CABLE-S-QX5
D5-CABLE-003	D5-CABLE-S-QX2-AR
D5-CABLE-004	D5-CABLE-S-QX5-AR

PC Software Suites



Xpair

Xpair opens the doors of true mobility in the NDT market. It 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 Xpair Cloud option, a user can access and remotely pilot the instrument of a colleague located 1000s of km away using a mobile or wired internal connection.

Xpair solution is compatible with:

- Veo+
- Prisma
- Rsflite



UTmap



Utmap unlocks the possibilities of UT linear scanning. Its interface and set of tools are designed to process single line C-Scan efficiently and merge into a T-Scan to generate a larger and precise picture of the inspected part. On T-Scan, Utmap offers all the analysis tools properly measure and report the presence of a defective area.

UTmap is compatible with:

- Prisma
- Veo+
- RSflite



UTstudio+

Compatible with Sonatest Veo+ and Prisma instruments, Utstudio+ is PC-based software application useful to design inspection configurations, analyse data and produce reports.

Loaded with a comprehensive user interface, data analysis and setup file construction becomes natural and straight forward. 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.



UTview

Loaded with a comprehensive user interface, UTview is the FREE VIEWER version of its powerful UTstudio+ brother. Since it can be downloaded from the Sonatest website anytime. Inspection data and results are now freely accessible to anyone who wants to review them.

From customised views to additional gates, measurement tools or refine colour palettes, UTview helps sharing results with collaborators to get the job done faster.

Suitable for FMC-TFM, phased array and conventional ultrasonic technologies, Utview is able to accomplish amazing things along the side of Utstudio+.



UTLity MS SS

Compatible with Sonatest Masterscan and Sitiescan instruments, UTLity is a PC-based software providing everything you need to manage your inspection data as well as your instruments.

UTLity

Is a FREE version which gives the technician the ability to view, move and manage Calibrations, A-Scans, B-Scans and Thickness Logs both on the instrument and on the PC. With this version, it is also possible to create customised inspection report templates, cut and paste information to other applications and create printable pdf documents.

Main functionalities include:

- Load, store, manage files both on the PC and on a connected flaw detector;
- Save, analyse, colour code and export Thickness logging data to spreadsheets/asset management software;

- Update the Flaw Detector Software and Firmware as and when updates become available on our website.

UTLity Pro MS SS

Is the “professional” option and works in conjunction with the Corrosion Software option of an instrument providing the end user with the ability to create and manage inspection plans, location notes, historical thickness readings and other asset management information as required.

Main functionalities include:

- Set up inspection plan (grid) templates, notes and labels;
- Import previous readings into an inspection plan;
- Export inspection plan data to a spreadsheets or to plant maintenance databases.

Adaptors, PA Adaptors & PA Test Blocks

Adaptors

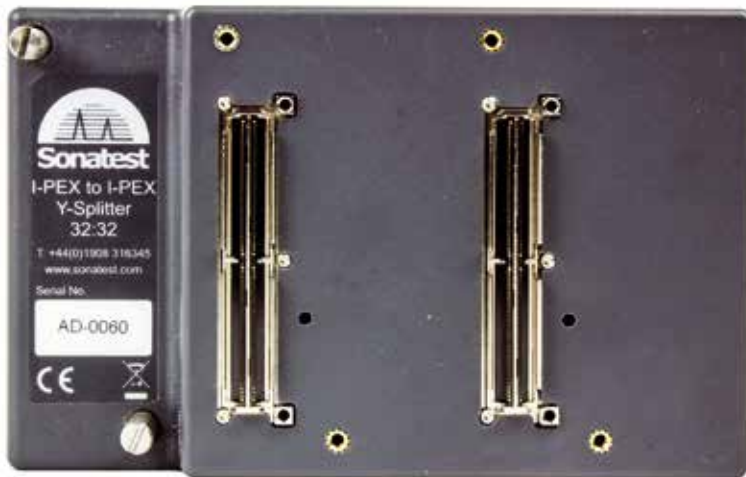
- ADAP-001** ENC-ADAP- veo 1 to MX
- ADAP-002** ENC-ADAP- SX-MX2 to Veo 1
- ADAP-003** veo 2 Axis to Prisma 2 Axis
- ADAP-011** ENC-ADAP- MX to veo
- ADAP-012** ENC-ADAP- veo 1 to SX-MX2
- ADAP-015** ENC-ADAP- RS+ & RS2 to veo 1
- WP2-ADAP-101** GPIO-ENC-ADAPT- veo to MX
- WP2-ADAP-102** GPIO-ENC-ADAPT- veo to SX-MX2

PA Adaptors

- ADAP-005** PA Splitter IX64 to IX32:32
- ADAP-006** PA Splitter IX128 to IX64:64
- ADAP-007** PA-Splitter- QX64 to Lemo00x8
- ADAP-008** PA-ADAP- GZ64 to QX64
- ADAP-009** PA-ADAP- CN64 to QX64
- ADAP-010** PA-ADAP- QX64 to CN64
- ADAP-013** PA-Splitter- IX64 to BNCx32
- ADAP-014** PA-Splitter- IX64 to BNCx64

PA Test Blocks

- 149342** PA Calibration Block (MS)
- 149118** AMK/MPAUT Block (MS)
- 149352** Type A PA Block (MS)
- TST-0007** Type B PA Block (MS)
- TST-0008** Type B PA Block (A)



Scanners



STIX – Upgradable Weld Scanner

This exclusive modular approach starts from a simple and functional STIX 2 wedge magnetic scanner that can be upgraded to fit any required configurations by adding one of the modular options.

Any Sonatest Phased Array and TOFD wedges can be accommodated and the integrated latch allows easy PCS (Probe Centre Spacing) adjustments and scanner installation.

A Park brake is provided to hold the scanner in any desired location. All the wheels (magnetic or not) are coated with urethane to prevent foreign debris from hindering smooth rolling of the scanner.

Each STIX system includes a spring loaded module to ensure accurate positioning. The encoder output is fully compatible with Sonatest instruments.

JX-1001 Basic 2 probes magnetic scanner (TOFD or PA)

JX-1002 Module adding 2 (total 4) probes (TOFD or PA)

JX-Chain 4-12/24/38 Module adding a pipe chain scanner (circumferential weld)

JX-1006 (Chain required) Module adding 2 independent probes (TOFD & PA)



Rotix

The ROTIX – Chain Weld Scanner kit is designed to provide encoded position of probes circumferentially around piping for weld inspection on ferrous or non-ferrous inspection services. It is completely configurable for phased array, TOFD and conventional UT with single or multiple probes.

Since this package includes a set of 8 magnetic wheels, this scanner can also perform inspection without the chain on ferrous materials like a standard magnetic scanner.

JX-KIT-4-12/24/38

Complete 4 probes chain scanner kit

JX-1006

Module adding 2 (total 6) prob holders (TOFD & PA)

MultiMag

This manually-operated magnetic scanner is ideal for weld inspection of steel pipes using multiple probes including phased array, TOFD and pulse echo.

The MultiMag can be used on 3" pipes up to flat plate. The compact scanner is highly versatile and can carry up to four ultrasonic probes.

The MultiMag can operate with any multi-channel flaw detection system. It includes a sprung-loaded wheel encoder that is wired to suit the customer's instrumentation.

PX-MULTIMAG-2-VEO

VEO Multi Mag 2 (PA / TOFD) G8

PX-MULTIMAG-4-VEO

VEO Multi Mag 4 (PA / TOFD)



MagMan Scanner

This manually operated magnetic whelled scanner is ideal for weld inspection of pipes using multiple probes including phased array, TOFD and pulse echo. The MagMan can be used on 1.5" pipes up to flat plate. This robust scanner can carry up to twelve ultrasonic probes.

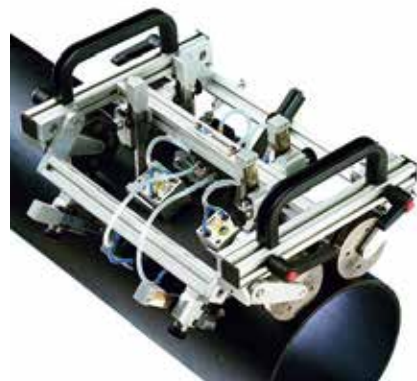
PX-MAGMAN-2-VEO VEO Magman 2 (PA / TOFD)

PX-MAGMAN-4-VEO VEO Magman 4 (PA / TOFD)

PX-MAGMAN-6-VEO VEO Magman 6 (PA / TOFD)

PX-MAGMAN-8-VEO VEO Magman 8 (PA / TOFD)

PX-MAGMAN 4 TOFD/PE VEO Magman 4 TOFD/PE

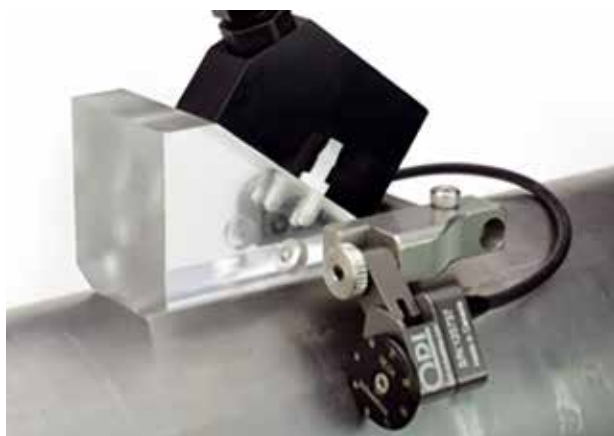


Bracelet – Bore Pipe Weld Scanner

This manually operated belt scanner is the ultimate scanning aid for Phased Array inspection or circumferential welds in small bore pipe work.

This lightweight and low-profile scanner is extremely easy to set up and use for weld testing on pipe sizes from 0.5" to 4". The Bracelet is compatible with industry standard miniature Phased Array transducers and is designed to be used in areas of limited access with a scanner height of 13 mm.

- PX-BRA-D-1.5" TO 4"** Dual Small Bore Scanner
- PX-BRA-S-0.5" TO 4"** Single Small Bore Scanner
- PX-BRA-S-0.5" TO 6"** Single Small Bore Scanner
- PX-BRA-S-1.5" TO 4"** Single Small Bore Scanner
- PX-BRA-S-1.5" TO 6"** Single Small Bore Scanner



Odi

The Odi encoder is used to provide encoded position of a probe along the scan axis. The small size of the Odi makes it a perfect tool for hard to access areas or where space is limited.

The Odi has a clamp system so it can be used with any manufacturer's wedge and probe combination. This also allows it to be clamped to a scanning frame to provide encoded position.

JX-1004/1007

Odi-II

The Odi-II is used to provide encoded position of two probes along the scan axis and its small size makes it a perfect tool for manual TOFD scanning.

The Odi-II uses Jireh's standard probe holder arms, which are compatible with most manufacturer's wedge and probe combinations. It is also available with a variety of encoder output cable options, making it compatible with most major UT instruments. The Odi-II is the perfect solution to carry out manual TOFD scans.

JX-1005



For further information on scanners, please visit sonatest.com/products/scanners

Masterscan D-70 & Sitiescan D-50

The **Masterscan D-70** is a leading flaw detector in its class. This instrument offers the inspector a fully capable and functional set of tools and software for inspection across all applications. Capabilities include encoded B-Scan, Advanced Thickness logging and Dryscan capability in a portable enclosure.

Specification:

- Battery Life: Lithium Ion 14.4V Battery Pack gives up to 12 hours usage
- Case: Environmental case sealed to IP67
- Dimensions (HxWxD): 172 x 238 x 70 mm (6.77 x 9.37 x 2.75 inches)
- Weight: 1.7 Kg (3.7 lbs) with battery
- Connection: USB socket, for connection to printers, keyboards and PCs
- Language: Supports multiple languages



The **Sitiescan D-50** offers the end user an entry level broadband flaw detector in the popular and portable casing of the established D-series; with a full VGA display, a 50nS (Spike) 200V, a Pulser 0.5dB gain resolution and an optional rubber boot.



Specification:

- Battery Life: Lithium Ion 14.4V Battery Pack gives up to 12 hours usage
- Case: Environmental case sealed to IP67
- Dimensions (HxWxD): 172 x 238 x 70 mm (6.77 x 9.37 x 2.75 inches)
- Weight: 1.7 Kg (3.7 lbs) with battery
- Connection: USB socket, for connection to printers, keyboards and PCs
- Language: Supports multiple languages



Standard Kits

D-70BKIT D-70 BNC Kit

D-70LKIT D-70 LEMO Kit

D-50BKIT D-50 BNC Kit

D-50LKIT D-50 BNC Kit

Standard Kit Content

- Digital Flaw Detector
- 242173** D-Series Battery Pack
- 800208** CH 700 Battery Charger
- 147396** D-70/50/UTLity User/Quick Start Guide
- 195163** Carry Bag
- 165028** USB Type 'A' Male Cable Assembly
- 145324** Display Window Cover (Fitted)
- 195191** Set Strap Yellow
- T-09** 125ml bottle couplant
- Calibration / conformance Certificate

Software Options

- SW-API** Activate API Functions
- SW-AWS** Activate AWS Functions
- SW-BEA** Activate BEA Functions
- SW-CORROSION** Activate T-Log & B-Chart Functions
- SW-DGS** Activate DGS Functions
- SW-DRY** Activate Dryscan Functions (D70 only)
- SW-IFT** Activate IFT Functions
- SW-SPDAC** Activate Split DAC Functions
- SW-TCG** Activate TCG Functions
- UTLITY PRO** 1 License UTLity Pro Software

Accessories and Spares



800208
CH700 Battery Charger



242173
D-Series Battery Pack



195167
D-Series Storm Case



195194
Economy D-Series Storm Case



195123
D-Series Protective Sleeve



165027
RCA Video Output Cable



195163
Carry Bag DFD



KMA-KIT1
Standard Support Pack
Magnetic Bracket Assembly
Magnetic Hook Assembly
Magnetic Harness Bracket Assembly

Also Available:

- 136168** BNC to BNC 50 ohm
- 136169** BNC Female to LEMO1 Male
- 136171** LEMO1 (M) to LEMO 00 (F)
- 145324** Display Window Cover
- 152018** BNC(M) to LEMO(F) Adapter

- 152120** Cable DFD to PC
- 165028** USB Type 'A' Male Cable Assembly
- 165040** Proportional Output Lead
- 195170** Sacci Body Hook Harness
- T-09** 125 ml Bottle

D-SERIES-SITE-PACK

- Site Pack Option:
- Yellow in Site packing case
 - 32mm dia Hook Magnet 34KG pull
 - COG Cracket Assy
 - Magnetic Bracket Assembly
 - Restraining Lanyard 1m with Karabiners
 - T-09 125ml bottle

Masterscan 700M & Sitiescan 500s

The **Masterscan 700M** offers the end user a high end narrowband flaw detector with a full VGA display, sync and proportional outputs, sync input and a Spike and Square Pulser.

Specification:

- Battery Life: Lithium Ion 14.4V Battery Pack gives up to 16 hours usage
- Case: Environmental case sealed to IP67
- Dimensions (HxWxD): 145 x 255 x 145 mm (5.7 x 10 x 5.7 inches)
- Weight: 2.5 Kg (5.5 lbs) with battery
- Connection: USB socket on front, for connection to printers, keyboards and PCs
- Language: Supports multiple languages



The **Sitiescan 500S** offers the end user an entry level broad band flaw detector with full VGA display, sync and proportional outputs and a 50nS (Spike) 200V Pulser.

Specification:

- Battery Life: Lithium Ion 14.4V Battery Pack gives up to 16 hours usage
- Case: Environmental case sealed to IP67
- Dimensions (HxWxD): 145 x 255 x 145 mm (5.7 x 10 x 5.7 inches)
- Weight: 2.5 Kg (5.5 lbs) with battery
- Connection: USB socket on front, for connection to printers, keyboards and PCs
- Language: Supports multiple languages



Standard Kits

MS700BKIT MS700 BNC Kit **MS700LKIT** MS700 LEMO Kit **SS500BKIT** SS500 BNC Kit **SS500LKIT** SS500LEMO Kit

Standard Kit Content

- | | |
|---------------|--|
| | Digital Flaw Detector |
| 242174 | SS/MS Battery Pack |
| 800208 | CH700 Battery Charger |
| 195121 | Carry Bag DFD Lite |
| 165028 | USB Type "A" Male Cable Assembly |
| 145324 | Display Window Cover (Fitted) |
| 147396 | MS700/SS500/UTLity User Guides |
| T-09 | 125ml bottle couplant
Calibration / Conformance certificate |

Software Options

- | | |
|---------------------|---|
| SW-API | Activate API Functions |
| SW-AWS | Activate AWS Functions |
| SW-BEA | Activate BEA Functions |
| SW-CORROSION | Activate T-Log & B-Chart Functions |
| SW-DGS | Activate DGS Functions |
| SW-DRY | Activate Dryscan Functions (MS700 only) |
| SW-IFT | Activate IFT Functions |
| SW-SPDAC | Activate Split DAC Functions |
| SW-TCG | Activate TCG Functions |
| UTILITY PRO | 1 License UTLity Pro Software |

Accessories and Spares



800208
CH700 Battery Charger



242174
SS/MS Battery Pack



195154
DFD Storm Case



165027
RCA Video Output Cable



195121
Carry Bag DFD Lite



MPS-701EU / MPS-701UK / MPS-701US
Flaw Detector Mains Pack

Also Available:

- 136168** BNC To BNC 50 Ohm
- 136169** BNC Female to LEMO1 Male
- 136171** LEMO1 (M) to LEMO 00 (F)
- 145324** Display Window Cover

- 152018** BNC(M) to LEMO(F) Adapter
- 152120** Cable DFD to PC
- 165028** USB Type "A" Male Cable Assembly
- 165040** Proportional Output Lead

RSflite Portable Composite Inspection Solution

Save time. Be more efficient.

Boosted by impressive recording speed, the **RSflite** lightweight battery-operated equipment is two times faster than the previous generation. Handling small to large probes and with almost no file size limitation, it can rapidly cover large surfaces and spare precious inspection hours down the production line or at the maintenance site. The RSflite responsive touchscreen

user interface is also specifically optimised to operate linear scan; saving significant training costs and time often associated with unnecessary advanced Phased Array ultrasonic (PAUT) concepts.

Please refer to page 32 for more information on the WheelProbe 2.



WheelProbe2



RSflite



UTmap



Key features

- Light reinforced frame
- Patented rubber wheel
- Best acoustics on market

Advantages

- Portability with immersion quality A-Scan data
- Ease of use with a lightweight and ergonomic design
- Great near surface resolution

Key features

- Linear Scanning
- Touch screen
- Portable device

Advantages

- User interface optimised for composite inspection
- Fast setup and outstanding inspection speed
- Ready for all site conditions

Key features

- T-Scan stitching
- Post analysis re-gating
- Automatic report

Advantages

- The adjustments can be done in post-acquisition
- Automatic data analysis and fast interpretation
- The freedom to make it fit

RSflite Key Specifications

	LINEAR SCANNING	CONVENTIONAL UT
System Bandwidth	0.2 to 23 MHz	0.2 to 18 MHz
Pulse Voltage	100V - 50V ActiveEdge©	400V - 100V ActiveEdge©
Channels	128 channels	2 channels
Gain Range	80dB	100dB
Max PRF	50 000 Hz	20 000 Hz
L-Scan Resolution	1,2,3... element step & double res.	-
Data Throughput and Storage	155 MB/sec and 128 GB SSD (no file size limit)	
Instrument Display	TOUCH 10.4" wide, LED-backlit LCD, 1024 x 600 resolution	
Communication Ports	WiFi 802.11n, Ethernet Gigabits & 3 master USB2	
Calibration Standards	ISO18563 (EN16392) & EN12668	
Operating Time	6.6h (hot swappable batteries)	
Operating Temperature	-10°C to 40°C (14°F to 104°F)	
Unit Dimensions	115 x 220 x 335 mm (4.52 x 8.66 x 13.19 in)	
Weight	4.80 kg (10.5 lb) no battery, 460 g (1 lb)/battery	
Analysis Software	UTmap for Windows® 7-8-10 & 64-bit OS	
Remote Control Software	Xpair for Windows® 7-8-10 OS	

Complete Solution Packages

Standard Package RSflite Composite Solution

RSFLITE BNC/LEMO	RSflite 128 channel L-scan instrument
WP2-5 MHz-64E	WP2 5 MHz 64 Element Buggy
WP2-PACK2	WP2 Composite Pack
WP2-CABLE-111	WP2-CABLE-veo-QX5
WP2-ACC-0501	Horizontal Handle
WP2-ADV-KIT2	Advanced Kit Two
UTMAP	UTMAP: single license
XPAIR	Xpair: single license



Fast composite inspection with RSflite & WP2



Simplify data analysis with UTmap



Automatic measurements that are **ready to share**

Standard Package + Option X-Glider for Compact Scans

Add a compact and flexible scanning capability to your kit and inspect rapidly different shapes or restricted area using the X-Glider rubber linear scanning solution.

X3A-003	X3A-5M64E-0.6x10-SQX2.5
X3AG-001	X3AG-OLW25
JX-1004	Single Universal Encoder 2.5 m

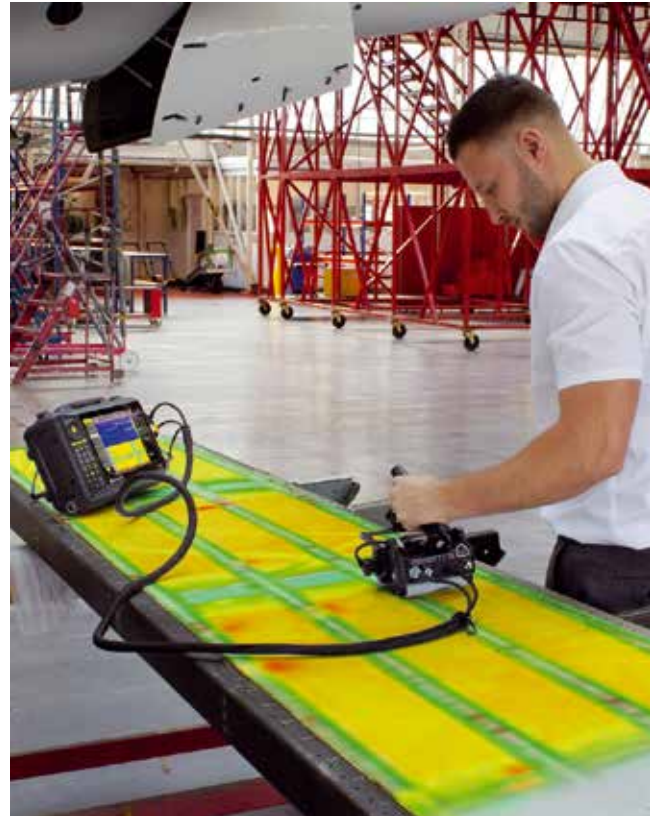
Standard Package + Option for Extended Applications

Add extended scanning capability to your kit with an extra WP2-Buggy frequency and inspect thick resin structures with a 2 MHz probe or very thin CFRP layers with the 10 MHz one.

Select one from the list below:

WP2-2 MHz-64E	WP2 2 MHz 64 Element Buggy
WP2-3.5 MHz-64E	WP2 3.5 MHz 64 Element Buggy
WP2-5 MHz-64E	WP2 5 MHz 64 Element Buggy
WP2-10 MHz-64E	WP2 10 MHz 64 Element Buggy

Promotion: receive a WP2 test and demonstration plate (WP2-ACC-0518) FREE OF CHARGE with this option.



Specialised Products

WP2 key specifications

Coupling wheel	Patented rubber - optimal acoustic performances
Near surface resolution	Up to 0.8 mm (0.032 in)
Probe frequency	2 MHz, 3.5 MHz, 5 MHz or 10 MHz
Probe array specs	64 elements, pitch 0.8mm
Probe active length	51 mm (2 in)
Detachable cable	Standard 2.5m and 5m or custom order
Weight	1.06 Kg (2.34 lb) lightweight polymer frame
Dimensions (H x L x W)	125 x 150 x 155 mm (4.9 x 5.9 x 6.1 in)
Operating temperature	10 to 50°C (50 to 122°F)

UTmap key specifications

Post-acquisition tools	T-Scan stitching for precise positioning of C-Scan
	T-Scan overlapping for precise data adjustment
	C-Scan re-gating (individually or synchronise all)
Analysis tools	Individual C-Scan software gain fine adjustment
	Industry standard and custom colour palettes
	Automatic defect measurements and statistics
	Real-time defective zone contouring
Reporting tools	Conditional defect criteria (depth and amplitude)
	CAD and image part overlay
	Geometric and freehand cursors
	Automatic PDF report generation
	Customised measurement selection
File format	Advanced reporting (CSV export)
File format	Sonatest .UTDATA and .TSCAN formats
Operating system	Windows® 7-8-10 & 64-bit OS

Railscan 125+

Industry
Approved

The new Sonatest **Railscan 125+** flaw detector delivers a higher level of near-surface resolution and penetrating power into a portable and rugged enclosure. It also offers more measuring capabilities than its predecessors for rail applications such as::

- rail walking stick inspection solutions
- rail manual defect sizing
- rail bottom depth measurements

Specification:

- Frequency Range: 2.5 MHz and 5.0 MHz
- System Linearity: Vertical = 1% Full Screen height (FSH) with amplifier accuracy ± 0.1 dB. Horizontal $\pm 0.4\%$ Full Screen Width (FSW)
- Gate Monitor: 3 fully independent gates for echo monitoring and thickness measurement. Gates are adjustable over the full range (amplitudes from 0%-100% FSH).
- Memory: All A-Scans and Panels are automatically deleted after 24 hours of creation. (Applies to Network Rail approved software version.)
- Rail-Thickness Log: Encoder triggered rail thickness log stored in a CVS file. Data accessible by a computer using the USB cable provided.
- Power: Lithium-Ion battery pack 14.4V / 5.0 ampere-hours. (up to 16 hours duration from a fully charged pack, recharge time 3-4 hrs.)



Specialised Products

Standard Kit Contents:

- Railscan 125+
- Li-ion Battery and Battery Charger
- Carry Bag and USB Cable
- Calibration Certificate
- Instruction Manual

UT-Lity Data Management Software

UT-Lity software provides everything you need to manage your inspection data, configuration files and software updates.

- Load, store, manage files both on the PC and on a connected flaw detector.
- Save, analyse, colour code and export thickness logging data to spreadsheets/ asset management software.
- Update the Flaw Detector Firmware as and when updates become available on Sonatest website

Accessories and Spares

800208
CH700 Battery Charger



242174
SS/MS Battery Pack



195154
DFD Storm Case



165027
RCA Video Output Cable



195121
Carry Bag DFD Lite



Also Available:

- | | | |
|--|---|--|
| 136168 BNC To BNC 50 Ohm | 145324 Protective Window Sticker | 165028 USB Type "A" Male Cable Assembly |
| 136169 BNC Female to LEMO1 Male | 152018 BNC(M) to LEMO(F) Adapter | 165040 Proportional Output Lead |
| 136171 LEMO1 (M) to LEMO 00 (F) | 152120 Cable DFD to PC | |

SEWP

This **Single Element WheelProbe (SEWP)** uses Sonatest rubber technology for near-dry Ultrasonic coupling. Using a single element 15 mm immersion probe, the Single Element WheelProbe is designed to operate between 1 MHz and 10 MHz and is available with a low pressure 38 mm tyre. It is complete with an optical position encoder and can be connected to any conventional flaw detector such as the Sonatest MasterScan and PRISMA UT.

Specification:

- Sensor Frequency: 1 MHz to 10 MHz
- Number Of Probe Elements: Single element
- Sensor Resolution: N/A
- Active Area: 15 mm diameter probe
- Recommended Apertures: N/A
- Encoder Resolution: 1/16th mm
- Encoder Connection: 4w LEMO
- Maximum Cable Length: 10 m

Single Element WheelProbe

SEWP-B-38-02-15-05	SEWP 2 MHz 0 Degree 5 m Cable
SEWP-B-38-05-15-02	SEWP 5 MHz 0 Degree 2 m Cable
SEWP-B-38-05-15-05	SEWP 5 MHz 0 Degree 5 m Cable
SEWP-B-38-10-15-05	SEWP 10 MHz 0 Degree 5 m Cable



WP2

Continuing the proven success of Sonatest's WheelProbe range, the new **WheelProbe 2** is proving to be unrivalled in the field of composite inspection and corrosion monitoring in terms of speed and ease of use, in addition to achieving excellent results. Typical applications include Corrosion Mapping, Marine Inspection, Aerospace Fuselage, Aerospace Large Area Scanning and Automotive Testing.



When ordering WP2 please use the following steps

- Select Frequency
- Select Application (WP2 Corrosion or Composite Pack)
- Select Cable Type

Specification:

- Weight: 1.06 Kg (2.34 lb)
- Dimensions (HxLxW): 125 x 150 x 155 mm (4.9 x 5.9 x 6.1 inches)
- Operating Temperature: 10°C to 50°C (50°F to 122°F)
- Centre Frequency Options: 2 MHz, 3.5 MHz, 5 MHz, and 10 MHz \pm 10%
- Number of Elements: 64
- Total Active Length: 51.1 mm
- Sensitivity Homogeneity: \pm 3db

WP2 Buggy Only

- | | |
|------------------------|------------------------------|
| WP2-2 MHZ-64E | WP2 2 MHz 64 Element Buggy |
| WP2-3.5 MHZ-64E | WP2 3.5 MHz 64 Element Buggy |
| WP2-5 MHZ-64E | WP2 5 MHz 64 Element Buggy |
| WP2-10 MHZ-64E | WP2 10 MHz 64 Element Buggy |

Accessory Kits



WP2-PACK1

WP2 Corrosion Pack

- Horizontal Handle
- Back Profiled Roller
- Filling Equipment
- Maintenance Tools and Manual
- Rugged Transportation Case



WP2-ADV-KIT1

Advance Kit One

- Flat Front Roller x2
- Profiled Front Roller x2
- Precision Front Roller x2
- Remote
- Front Roller Assembly



WP2-PACK2

WP2 Composite Pack

- Vertical Handle
- Back Flat Roller
- Filling Equipment
- Maintenance Tools and Manual
- Rugged Transportation Case



WP2-ADV-KIT2

Advanced Kit Two

- Flat Front Roller x2
- Remote
- Front Roller Assembly
- Laser Guidance Kit
- Phone Display Kit

Cables:

- | | |
|----------------------|------------------------|
| WP2-CABLE-101 | WP2-CABLE-veo-QX2.5 |
| WP2-CABLE-102 | WP2-CABLE-SX-MX2-QX2.5 |
| WP2-CABLE-103 | WP2-CABLE-MX-QX2.5 |
| WP2-CABLE-111 | WP2-CABLE-veo-QX5 |
| WP2-CABLE-112 | WP2-CABLE-SX-MX2-QX5 |
| WP2-CABLE-113 | WP2-CABLE-MX-QX5 |

Custom length cables available – Please call one of the Sonatest Team for assistance



Handles & Rollers



WP2-ACC-0501
Horizontal Handle



WP2-ACC-0502
Vertical Handle



WP2-ACC-0503
Profiled Roller Kit Front & Back



WP2-ACC-0504
Flat Roller Kit Front & Back



WP2-ACC-0505
Precision Roller Kit Front & Back



WP2-ACC-0506
Front Profiled Roller Assembly Kit



WP2-ACC-0507
Front Flat Roller Assembly Kit



WP2-ACC-0508
Front Precision Roller Assembly Kit



WP2-ACC-0509
Profiled Roller only



WP2-ACC-0510
Flat Roller only



WP2-ACC-0511
Precision Roller only

Accessories and Spares



WP2-ACC-0512
Remote Control



WP2-ACC-0513
Laser Guidance Kit



WP2-ACC-0514
Phone Display Kit



WP2-ACC-0515
Basic User Kit



WP2-ACC-0516
Rugged Transportation Case



WP2-ACC-0518
Demo Plate for WheelProbe 2



WP2-ADAP-101
veo*/Prisma to MX Adaptor



WP2-ADAP-102
veo*/Prisma to MX2/SX Adaptor



WP2-TOOL
Hex Key

AlphaGage+

The **AlphaGage+** series is a range of hand-held ultrasonic thickness gauges available for corrosion, precision or combined for both.

The Sonatest AlphaGage+ series is definitely a key asset for inspectors, maintenance operators or QA technicians looking to measure essentially any engineering material thickness as it combines years of ultrasonic design and knowhow.

Packaged in an extremely rugged and ergonomic hand held enclosure, the AlphaGage+ is a versatile piece of equipment as it can be used to perform integrity assessment of metal steelworks affected by erosion or corrosion processes as well as measure precisely the thickness of critical pieces of equipment which have very strict quality control requirements.

Software options available on all models:

- DL = Corrosion Data Logging
- W = A-Scan Waveform Display
- OS = Boiler Tube Oxide Scale Measures



Corrosion AlphaGage+

Standard AlphaGage+ C kit includes:

- Echo-to-Echo functionalities
- 2 GB microSD card
- AC power adapter & USB cable
- Standard 3.7V Li-ion internally rechargeable battery
- Plastic carrying case
- One couplant bottle
- CD with manual
- Data XLS interface program to export saved readings to PC (Microsoft Excel)
- NIST traceable calibration certificate

Software options and accessories included:

- Access to dual and single element probe database.
- One DKS-537 transducer (5 MHz, .375" diameter transducer with potted cable).

Feature Software options:

AlphaGage+ CDL with Data Logging software feature including:

- Datalogger functionalities
- B-Scan (time based)
- Temperature correction

AlphaGage+ CW with Waveform software feature including:

- Live A-Scan
- Positive/Negative/Full signal rectification

Adjustable range

- Temperature correction
- Coating thickness

AlphaGage+ CDLW including:

- All of the above
- Rubber Boot with Neck Strap

PRECISION AlphaGage+

Standard AlphaGage+ P kit includes:

- Echo-to-Echo functionalities
- 2 GB microSD card
- AC power adapter & USB cable
- Standard 3.7V Li-ion internally rechargeable battery
- Plastic carrying case
- One couplant bottle
- CD with manual
- Data XLS interface program to export saved readings to PC. (Microsoft Excel)
- NIST traceable calibration certificate

AlphaGage+ PDLW including:

- All of the above
- Rubber Boot with Neck Strap

AlphaGage+ PDLWOS with Oxide Scale software feature including:

- All of the above
- Simultaneous display of the boiler tube wall thickness as well as the internal oxide scale thickness
- *Oxide Scale feature is available only if Precision mode, Data Logging and Waveform software options are activated.

Software options and accessories included:

- Access to single element probe database.
- One DLK1025 transducer (10 MHz, 0.25" diameter with Lemo to Microdot cable 6").

Feature Software options:

AlphaGage+ PDL with Data Logging software feature including:

- Datalogger functionalities
- B-Scan (time based)
- Temperature correction

AlphaGage+ PW with Waveform software feature including:

- Live A-Scan
- Positive/Negative/Full signal rectification
- Adjustable range
- Temperature correction
- Coating thickness



Probes & Accessories

Corrosion Probes

DC250	Dual Composite 2.25 MHz
DC525	Dual Composite 5.0 MHz
DC537	Dual Composite 5.0 MHz
DC550	Dual Composite 5.0 MHz
DK250	Dual, K85 2.25 MHz
DK525	Dual K85 5.0 MHz,
DK550	Dual, K85 5.0 MHz
DK537	Dual, K85 5.0 MHz,
DK537EE	Dual, K85 5.0 MHz
DK537RM	Dual, K85 5.0 MHz, Right Angle
DK718	Dual, K85, 7.0 MHz, .187 inch,
DK718EE	Dual, K85, 7.0 MHz, .187 inch
DK1025	Dual, K85 10 MHz

Accessories

149103	Plastic Carry Case
149104	Li-ion Battery Pack
149105	Rubber Boot and Neck Strap
149106	Alkaline Battery Pack

Precision Probes

DLK1025	Delay Line, K85, 10 MHz, .25
DLK-1225 PP SM	Pencil probe, 12 MHz
DLK-1225 PP RM	Pencil probe, 12 MHz

Oxide Probes

DLK2025	Delay Line, K85, 20 MHz, .25
DCK20125	Delay Line Composite 20 MHz
DLK20125	Delay Line, K85, 20 MHz
DLRT-2520-1	.25" delay line replacement
DLRT-2520-10	.25" delay line replacement
DLRT-25-1	.25" delay line replacement
DLRT-25-10	.25" delay line replacement

149107	Charger with USB
149108	Magnetic Ball Head
149109	Neck Strap
USB-09-6	Mini USB cable, 6 foot

T-Gage V Series

Offering the latest technologies to support general thickness inspection in the roughest of industry conditions.

Velocity ranges to accommodate multiple material needs. One and two point calibration, 4.5 LCD, 0.500inch numerical display, 0.01 resolution. Use for thickness measurement of metal plates, pipes, plastics and Glass. Corrosion and Pitting, Tube and Pipe, Tanks and Boilers, Pressure Vessels, Storage tanks, Ships Hulls, 0.63mm to 500mm (0.25 to 19.999 inch) , twin crystal probes, 5mhz as standard, (1-10Mhz Probes are available) 200Hours Battery

See www.sonatest.com for full specification.



Specifications

- Resolution: 0.01, (0.001 Inch)
- Operating Temperature: -20 to 50°C (-4 to 122°F)
- Bandwidth: 0.5 to 20 MHz,
- Material Velocity: 0.508-18.699 mm/usec (0.200-0.736 in/sec)
- Vibration alarms, Illuminating Pads
- 2 x AA Battery (40 hours / 15Hours with backlight)
- Hold Mode
- Freeze Mode
- Loss of Signal (LOS)
- Gain
- Differential
- Stored Set Ups
- Languages – English, French, German, Spanish, Russian, Finnish, Czech Republic, others possible please ask.
- Auto Zero on Start-up, ideal for delay line wear/curvature
- Numerical Display
- Colour Screen – 220x170 TFT Display

Standard T-Gage V Kit includes:

- Ultrasonic Corrosion Thickness Gauge
- Echo-to-Echo functionalities • Operator Manual
- DKS-537 twin crystal 5.0 MHz, 0.375"/9.52 mm dia potted probe
- Couplant • Cable • Carry Case

T-Gage Probes

- DK250** Dual, K85 2.25 MHz, .5 inch potted cable
- DK525** Dual, K85 5 MHz, .25 inch potted cable
- DK550** Dual, K85 5 MHz, .5 inch potted cable
- DK537EE** Dual, K85 5.0 MHz, .375 inch for Echo to Echowith potted cable
- DK718EE** Dual, K85, 7 MHz, .187 inch, for Echo to Echo with potted cable
- DK1025** Dual, K85 10.0 MHz, .25 inch potted cable
- DHT537** Dual, K85 5.0 MHz, .375 inch potted cable High Temperature

Sonagage IV

The **Sonagage IV** is ideal for operators that test a few different materials regularly and contains 8 velocities of common materials and two velocities that the user can set using a simple software program.

See www.sonatest.com for full specification.

Standard Sonagage IV Kit

- Ultrasonic Thickness Gauge
- DKS-537 twin crystal 5.0 MHz, 0.375"/9.52 mm dia potted probe
- Operator Manual
- Couplant
- Cable
- Carry Case



SteelGage II

The **Steelgace II** is the perfect choice for testing steel day after day. The Steelgace II is set with a single material velocity, simply turn it on and measure.

See www.sonatest.com for full specification.



Steelgace II

STEELGAGE II Ultrasonic Thickness Gauge – for use on Carbon steel only

Probes and Accessories

- SG-1** 1/4" x 5.0 MHz standard with integral cable
- SG-2** 1/2" X 2.25 MHz high penetration with integral cable

Microgace III

Designed with the user in mind, the **Microgace III** utilises state of the art digital technology to produce fast and accurate precision thickness readings.

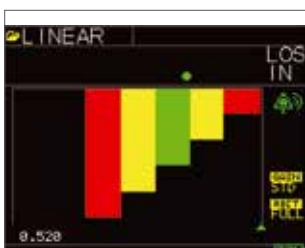
The Microgace III has a clear colour 220 X 170 colour TFT Numerical display in a Splash proof IP 54 high impact plastic case. Illuminating keypads enable go/no go alarm measurements.

The measurement range is 0.1mm to 508mm (0.004-20 inches) depending on transducer selection and material temperature.

The Microgace III offers Echo to Echo ability for to enable thickness measurement without the need to remove the paint or coating.

Specification:

- Resolution 0.001, (0.0001 Inch)
- Operating Temperature -20 to 50°C (-4 to 122°F)
- Bandwidth 30 MHz,
- Material Velocity 0.508-18.699 mm/usec (0.200-0.736 in/sec)
- Vibration alarms,
- 2 x AA Battery (40 hours / 15 with backlight)
- Hold Mode
- Freeze Mode
- Gain
- Differential
- Stored Set Ups
- Languages – English, French, German, Spanish, Russian, Finnish, Czech Republic, others possible please ask.
- Auto Zero on Start up, ideal for delay line wear/curvature
- Numerical Display



Standard Microgace III Series Kit includes:

- Microgace III
- 10 MHz Transducer with cable
- Operator manual
- Cable
- Couplant
- Carry case
- Data XL:S software available with DL versions only

Probes and Accessories

- DLK1025** Delay Line, K85, 10.0 MHz, .25 inch Right Angle Microdot
- DLK-1225 PP SM** Pencil probe, 12 MHz, focused delay line TR, 0.188 ele dia, 0.350" dia housing, 0.060 tip
- OXIDE Probes (Precision)**
- DLK2025** Delay Line, K85, 20 MHz., .25 inch right angle microdot – OXIDE Probes
- DLK20125** Delay Line, K85, 20 MHz., .125 inch right angle microdot
- DLRT-2520-1** .25" delay line replacement tip for 20 MHz transducer – 1 tip
- DLRT-2520-10** .25" delay line replacement tip for 20 MHz transducer – 10 tips
- DLRT-125-1** .125" delay line replacement tip for 20 MHz transducer – 1 tip
- DLRT-125-10** .125" delay line replacement tip for 20 MHz transducer – 10 tips

Ultrasonic Transducer Range

Contact

Applied directly to the flat surfaces of the test material or object, this range of single element transducers are commonly used to measure thickness and to detect flaws on plates, bars, forgings, casting and extrusions. Standard ranges of single compression transducers are available with different frequencies and damping specifications to fit the purpose of the application. The crystal and casing dimensions are also important, per example a smaller diameter can be applied to test slightly curved surfaces and the inclusion of a magnet can hold the transducer to ferrous surfaces.

Twin Crystal

A twin compression transducer is a mix between a contact and a delay line because both crystals (P&C) sit on two very thin, slightly angled wedges facing each other. These are primarily used to measure thickness, detect flaws and corrosion in thin materials, especially where near surface resolution is required. This range is also ideal for use in general and critical weld inspection.

Delay Line

Delay Line transducers transmit and receive sound waves with one element, coupled to the surface as with compression transducers. The crystal is held off from the test piece surface by a delay block, allowing the inspection to be carried out very close to the test piece surface.

Immersion

Immersion transducers are mainly used for mechanised or automatic systems and in principle, operate in the same way as standard contact compression transducers. Immersion applications take place in immersion tanks filled with water, where the test object is placed on a turntable or roller system so that the object is moved at a constant speed past the transducer. Applications include flaw detection in metal or composite parts inspecting bond testing or online thickness gauging, C-scan or B-scan imaging of components.



Angle Beam Transducers

Compression Transducers

Sonatest offers a wide range of Ultrasonic transducers. Please see www.sonatest.com for further information.

Couplants

The **Sonagel** range is designed for use on all types of metallic surface and is especially suited to solving the problems of rough, pitted, uneven surfaces allowing smooth probe movement during testing. The thixotropic properties of this couplant give excellent wetting and acoustic transmission and do not allow the product to flow all over the test area. This makes it very economical to use as you only cover the working area and not the whole piece, and is especially suitable for vertical and overhead surfaces.



Sonagel incorporates chemicals, which allow very slow drying even at elevated temperatures, whilst being free of VOC's and other hazardous materials. However, it

does contain a special tracer dye to enable areas to be checked for coverage but the couplant is still very easily removed with gentle water washing or solvent wipes.

Sonagel W Sonagel W is a stable clear yellow water based couplant gel specifically designed for ultrasonic inspection. It is non-toxic and safe for the environment and is available in easy to use 125ml applicator bottles, 250ml bottles, as well as in plastic 1 litre, 5 litre and 25 litre bulk containers (with suitable carrying handles).



***NB:** this product operates within a temperature range of -10°C - 60°C and has a flash point of 160°C (PM) when used for long periods at elevated temperatures.

- T-09** 125 ml Bottle
- Sonagel W1** 1 Litre Tub
- Sonagel W1/T** 1 Litre Bottle
- Sonagel W5** 5 Litre Tub
- Sonagel W25** 25 Litre Tub

Sonagel D1 is a bright yellow fine powder that when mixed with water, forms a stable clear yellow gel specifically designed for ultrasonic inspection. 1 kilo of D1 powder makes 20 litres of couplant when mixed with water. This product is specifically designed for 'on site' spot tests where it is impractical to carry or deliver ready to use couplant in bulk.



Sonagel D1 1 KG - mixes to 20 litres

Sonagel O is a stable pink/orange oil based couplant gel intended for use as a replacement for mineral oils and greases, within NDT environment. Hydrocarbon based, and retains a gel state without causing corrosion or drying on the test surface. The gel has a flash point of 175° (PM) and operates within the temperature range of -10°C - 75°C.



Sonagel O is available in easy to use 125ml applicator bottles as well as in plastic 1 litre, 5 litre and 25 litre bulk containers (with suitable carrying handles).

- T-08** 125 ml Bottle
- Sonagel 01** 1 Litre Tub
- Sonagel 05** 5 Litre
- Sonagel 025** 25 Litre

Sonagel LTHT is a thick translucent couplant paste specifically designed for ultrasonic inspection at temperatures up to 250°C and is non-toxic and safe for the environment and is easily removed with solvents such as Alcohol, Acetone or Hydrocarbon distillates.



Hazardous decomposition does not occur at elevated temperatures, the product will start to liquify as temperatures increase up to 300°C.

Sonagel-LTHT 1 Litre Tub

All products meet the sulphur and halogen requirements of nuclear and industrial specifications.

Please contact nic@sonatest.com for further details

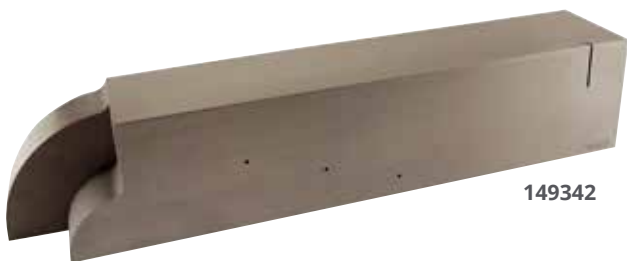
Calibration Blocks

AWS Resolution Block

Also called an RC block, the AWS Resolution Reference Block is used for checking resolution capabilities of angle beam transducers.

Contains three sets of .0625 diameter through-holes for 45°, 60° and 70°. In accordance with AWS Welding Highway and Railway Bridges specification D2.0, and Structural Welding Code ANSI/AWS D1.1. Made from 1018 Steel, Nickel-plated.

- Dimensions: 6.000x 3.000 x 1.000 (152.4 mm x 76.2 mm x 25.4 mm)
- AWS does not specify a separate metric version of the AWS Resolution block. The metric block in AWS shows only the metric equivalents to the standard design. Therefore, this one block can be used for both inch and metric requirements.
- Fitted wooden storage case optional.



Navships Block

This special Phased Array version of the popular NAVSHIPS block solves the problem of too many holes interfering with one another.

The block contains four holes at 3/64 diameter drilled through the 1.250 width.

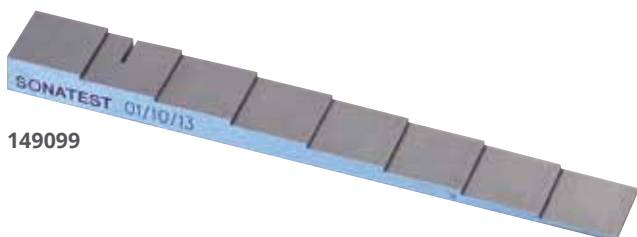
The holes are located at .250, .750, 1.250, 1.750, 2.250, and 2.750.

- Dimensions: 1.250 wide x 3.000 tall x 12.00 long
- Alloy: 1018 Steel, nickel-plated

Steel Step Wedge (VW)

Used for checking the sensitivity of twin transducers on thin sections when using flaw detectors, thickness and linearity calibration.

- 1 mm to 8 mm in 1 mm steps.
- Each "step" is 20 mm x 20 mm. (0.75" x 0.75")
- Specification ASTM E797.
- Fitted wooden storage case optional.



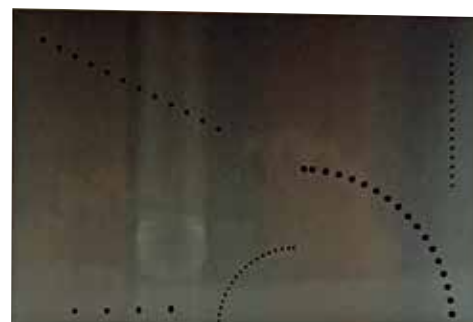
DSC Test Block

(Imperial & Metric version available)

AWS-type block used for shear wave distance and sensitivity calibration. Contains a 1.0" radius opposite a 3.0 radius. The 3.0 radius includes a .375 deep x .032 wide radiussed slot. Also contains a 0° reference point for checking exit point on wedge, and a .125 diameter through hole and corresponding markings at 45°, 60°, and 70° for measuring actual refracted angle. In accordance with ASTM E164 and AWS 6.16.1B.

Special DSC blocks with radiussed scanning surfaces for NPS sizes also offered.

- Dimensions; 1 " Thick
- Fitted wooden storage case optional



TST-007
TST-008

Test and Calibration Blocks

149093	CBU Metric Test Block
149095	Cal Block No. 1 (V1)
149097	CBM Test Block (Thickness)
149098	CBI Test Block (Thickness)
149099	8-Step Test Block (VW)
149118	AMK/MPAUT Block
149205	Cal Block No. 2 (12.5mm) V2
149273	Cal Block No. 2 (20mm) V2
149279	DAC Calibration Block
149289	Universal Test Block
TST-0007	Carbon Steel PA Test Block
TST-0008	Aluminium PA Test Block

Calibration Blocks

V1/5 (A2) Calibration Block (V1)

For calibrating ultrasonic flaw detection equipment in both laboratory and on-site conditions. Used for calibration of shear and longitudinal transducers, determination of shear wave emission point, refracted angle.

Includes a 100 mm radius, 1.5 mm and 50.0 mm holes, engraved reference mark scales, and slots at the zero point which provide calibrating signals at intervals of 100 mm range. Used for calibrating in accordance with British Standard BS 2704 Block A2 Mod. 1, EN 12223, German Standard DIN 54-120, Australian Standard AS 2803, and ISO 2400. Also meets the requirements of the Dassault Aviation Falcon 10 Mandatory. Service Bulletin #294 dated March 20, 2002.



IIW TYPE 2 BLOCK

A modified version of the original IIW-Type 1 design. Includes a 2.0" radius x .250" deep cut-out superposed on the 4.0" radius for distance calibration. Also includes numbers 3, 5 and 8 through holes (3/64", 5/64" AND 8/64" diameter) and distance calibration marks to the 2.0" hole. In accordance with International Institute of Welding, ASTM E164 and U.S. Air Force NDI Manual T.O. 33B-1-1 specifications.

- Dimensions: 12.0" x 4.0" x 1.0" • 4340 Steel, Nickel-plated.
- Fitted wooden storage case or Cordura shoulder case optional.

V2 (A4) Calibration Block (V2)

12.5 mm thick small, carbon steel, calibration block for on-site checking of miniature shear wave probe index, time base, beam angle and gain. Includes a 25 mm and 50 mm radius, 1.5 mm hole (or 5mm), engraved reference mark scales from 35° to 75°. In accordance with British Standard BS 2704 block A4, Fig. 4, and AS 2083.

- Dimensions: 75mm x 43mm x 12.5mm
- Also available in 20 mm and 25 mm thicknesses for calibration of non-miniature probes.
- Fitted wooden storage case optional.

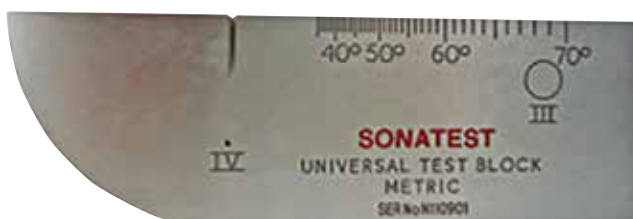


149205 | 149273

Universal CBU Calibration Block

For the calibration of small shear wave and longitudinal transducers, determination of shear wave emission point, refracted angle and measurement of sensitivity and depth resolution.

- 50 mm radius.



149093

SteelPipe Wedge (PW)

Made from 50 mm diameter pipe with thickness steps of 10, 8, 6, 4, and 2 mm. The pipe wedge simulates steam boiler tubes in power stations and is used to calibrate flaw detectors for thin tube inspections.

Cables

Cable Type		Part Number	Product Code
Lemo 1 to Subvis	Single	PC-LS	152056
	Twin	TPC-LS	152061
Lemo 1 to Microdot	Single	PC-LD	152057
	Twin	TPC-LD	152062
Lemo 1 to Lemo 00	Single	PC-LZ	152076
	Twin	TPC-LZ	152088
Lemo 1 to Lemo 1	Single	PC-LL	152074
Lemo 1 to UHF*	Single	PC-LU	152059
Lemo 1 to BNC	Single	PC-BL	152055
	Twin	TCP-BL	152075
BNC to Subvis	Single	PC-BS	152022
	Twin	TPC-BS	152023
BNC to Microdot	Single	PC-BD	152052
	Twin	TPC-BD	152060
BNC to Lemo 00	Single	PC-BZ	152086
	Twin	TPC-BZ	152087
BNC to BNC	Single	PC-BB	152053
	Twin	TPC-BB	152068
BNC to UHF*	Single	PC-BU	152058
Lemo 00 to Lemo 00	Single	PC-ZZ	152122
	Twin	TPC-ZZ	152089
Fischer to Lemo 00	Single	PC-FZ	152124
	Twin	TPC-FZ	152129
Lemo 00 to Microdot	Single	PC-ZD	152102
	Twin	TPC-ZD	152115
Lemo 00 to Subvis	Single	PC-ZS	152123
	Twin	TPC-ZS	152108
Fischer to BNC	Single	PC-FB	152127

*Waterproof



BNC



Fischer



Lemo 00



Lemo 1



Microdot



Subvis



UHF*



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