FOERSTER

SONATEST PRODUCT FAMILY

Portable ultrasonic testing – reliable, precise, and built for the field

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Ultrasonic testing you can rely on – anywhere, anytime. Since 1958, SONATEST has been developing solutions for nondestructive ultrasonic testing. Companies such as Shell, Airbus, Siemens, and ArcelorMittal rely on SONATEST instruments, combining rugged design, high-performance signal processing, and intuitive operation for reliable inspection results.

The partnership between FOERSTER and SONATEST combines proven ultrasonic technology with application expertise and customer support. SONATEST brings decades of experience in ultrasonic testing and a comprehensive portfolio of portable UT instruments. FOERSTER complements this technology with technical consulting, application support, and direct customer service. For customers, this means access to a broader range of mobile NDT solutions – with expert support from FOERSTER in selecting the right technology for their inspection task.

The SONATEST portfolio covers different levels of ultrasonic testing requirements. Compact SITESCAN instruments provide a reliable entry point for standard manual UT tasks such as weld, corrosion, and general flaw inspection. The MASTERSCAN series offers additional inspection and evaluation capabilities for more demanding applications, including encoded B-scan and advanced wall thickness measurement. For complex inspection requirements, WAVE combines ultrasonic flaw detection with an interactive scan plan and real-time ray tracing to support the evaluation of indications in complex geometries.

From routine flaw detection and weld inspection to corrosion assessment, wall thickness measurement, and complex inspection tasks, the SONATEST product family provides a flexible range of solutions for mobile ultrasonic testing – in production, maintenance, and field inspection.

YOUR ADVANTAGES AT A GLANCE

High signal quality & penetration: High signal quality and strong penetration for reliable flaw detection

Intuitive interface: Intuitive, technician-focused interfaces for fast workflows

Rugged field construction: Rugged, field-proven construction for harsh environments

Long battery life: Long battery life for full-day autonomous operation

Comprehensive sizing tools: Comprehensive sizing tools and inspection software options

UT-Lity software: UT-Lity software for data handling, reporting and device management

Wide range of applications: Suitable for weld inspection, corrosion assessment, castings, forgings, composites and general UT

NORMS

DIN EN ISO 22232-1: Specifies the characterization and verification requirements for ultrasonic test instruments used in non-destructive testing.

SONATEST MASTERSCAN 700M

Portable narrowband ultrasonic flaw detector with 450 V pulser for demanding inspection tasks

The SONATEST MASTERSCAN 700m is a high-performance narrowband ultrasonic flaw detector for demanding manual inspection tasks. High near-surface resolution, a powerful 450 V spike and square wave pulser, and an excellent signal-to-noise ratio support reliable flaw detection and evaluation. Typical applications range from weld and corrosion inspection to composites, bonded joints, forgings and castings, as well as applications in power generation.

Different flaw evaluation and sizing methods are available to meet a variety of inspection requirements. DAC is included as standard, while additional functions such as Split DAC, DGS/AVG, TCG, AWS, API, and Backwall Echo Attenuation (BEA) are available as options.

Additional functions and software options can be added as required, allowing the MASTERSCAN 700m to adapt flexibly to different inspection procedures and future requirements.

Designed for mobile use in demanding industrial environments, the MASTERSCAN 700m combines a rugged, impact-resistant housing with up to 13.5 hours of battery life for extended inspections in the field. The transflective VGA color display provides good readability under varying lighting conditions.

UT-Lity software supports efficient management of inspection data. Calibrations, A-scans, B-scans, and thickness measurement logs can be managed both on the device and on a PC. Users can also create customized inspection report templates, analyze and export thickness measurement data, and update firmware and device software.

YOUR ADVANTAGES AT A GLANCE

Reliable flaw detection: High near-surface resolution, a powerful 450 V pulser, and an excellent signal-to-noise ratio support demanding ultrasonic inspections

Flexible flaw evaluation: DAC is included as standard, while optional methods such as Split DAC, DGS/AVG, TCG, AWS, API, and BEA allow the device to be adapted to different inspection requirements

Wide range of applications: From weld and corrosion inspection to composites, bonded joints, forgings, and castings, the MASTERSCAN 700m supports a variety of industrial inspection tasks

Flexible upgrade options: Additional functions and software options can be added as required, allowing the device to adapt to new applications and inspection requirements

Rugged for mobile use: The impact-resistant housing and up to 13.5 hours of battery life support extended inspections even in demanding field conditions

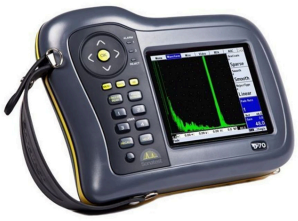
Efficient data management: UT-Lity enables users to manage calibrations and inspection data, analyze and export thickness measurements, and create customized inspection reports

TECHNICAL INFORMATION

DISPLAY:	Transflective VGA TFT display, 640 × 480 px
IP RATING:	IP67
WEIGHT:	2.5 kg incl. battery
DIMENSIONS:	255 × 145 × 145 mm
OPERATING TEMPERATURE:	-10 °C to +55 °C
BATTERY LIFE:	Up to 13.5 hours
STORAGE:	4 GB
MEASUREMENT MODES:	7
RECTIFICATION:	RF, full wave, positive half wave, negative half wave
GATES:	2
GAIN RANGE:	0–110 dB
PULSER VOLTAGE:	100–450 V, negative spike and square wave
PULSE WIDTH:	35–2500 ns
PULSE REPETITION FREQUENCY (PRF):	Adjustable from 5 Hz to 5 kHz; external synchronization available
PROBE CONNECTORS:	BNC or LEMO (factory option)
EXTERNAL SYNCHRONIZATION:	Yes
PROPORTIONAL OUTPUT:	Yes
USB PORT:	Yes
FLAW SIZING METHODS AND SOFTWARE OPTIONS::	— DAC (standard) — Split DAC (option) — DGS/AVG (option) — TCG (option) — BEA (option, requires TCG) — AWS (option) — API (option) — Interface Trigger (option) — Corrosion Software (option) — Dryscan (option)

SONATEST MASTERSCAN D-70

Ultrasonic flaw detector with encoded B-scan and advanced thickness measurement for flaw and corrosion inspection



More capabilities for weld, pipe, and corrosion inspection. The SONATEST MASTERSCAN D-70 is a versatile ultrasonic flaw detector for demanding manual inspection tasks. In addition to conventional flaw detection, it supports encoded B-scans and advanced wall thickness measurement functions. A powerful 450 V spike and square wave pulser, high near-surface resolution, and an excellent signal-to-noise ratio support reliable flaw detection and evaluation.

Typical applications include weld, pipe, and corrosion inspection as well as the inspection of composites, bonded joints, forgings and castings, and applications in power generation including EMAT. This makes the MASTERSCAN D-70 suitable for a wide range of industrial ultrasonic inspection tasks.

Different methods for flaw evaluation and sizing are available to meet various inspection requirements. DAC is included as standard, while additional functions such as Split DAC, DGS/AVG, TCG, AWS, API, and Backwall Echo Attenuation (BEA) are available as options.

The integrated evaluation methods support efficient analysis of inspection results and inspection according to different standards and requirements. Additional functions and software options can be added as required, allowing the device to adapt flexibly to different and future inspection tasks.

The rugged device is designed for mobile use in demanding industrial environments. Its impact-resistant housing and battery life of up to 10.5 hours support extended inspections in the field. The transflective VGA color display with adjustable brightness and nine color palettes provides good readability under varying lighting conditions.

UT-Lity software enables calibrations and inspection data to be managed, analyzed, and exported both on the device and on a PC. Customizable inspection report templates additionally support efficient documentation of inspection results.

YOUR ADVANTAGES AT A GLANCE

Versatile inspection: Encoded B-scan and advanced wall thickness measurement for pipe and corrosion inspection

Reliable flaw detection: 450 V pulser, high near-surface resolution, and excellent signal-to-noise ratio

Flexible flaw evaluation: DAC as standard plus optional Split DAC, DGS/AVG, TCG, AWS, API, and BEA

Wide range of applications: For welds, pipes, corrosion, composites, bonded joints, forgings, and castings

Flexible upgrades: Additional functions and software options for new inspection requirements

Rugged and mobile: Impact-resistant housing and up to 10.5 hours of battery life

Efficient data management: Manage, analyze, export, and document inspection data with UT-Lity

TECHNICAL INFORMATION

DISPLAY:	Transflective VGA TFT color display, 640 × 480 px, 9 color palettes with adjustable brightness
IP RATING:	IP67
WEIGHT:	1.7 kg incl. battery
DIMENSIONS:	238 × 172 × 70 mm
OPERATING TEMPERATURE:	-10 °C to +55 °C
BATTERY LIFE:	Up to 10.5 hours
STORAGE:	4 GB
TEST RANGE:	0 – 1 mm to 0 – 20,000 mm in steel at 5,930 m/s
VELOCITY:	256 – 16,000 m/s, continuously adjustable
TIME RANGE:	0 – 1,000 µs
MEASUREMENT MODES:	7
GATES:	2
GAIN RANGE:	0 – 110 dB
PULSER VOLTAGE:	100 – 450 V, negative spike and square wave
PULSE WIDTH:	35 – 2,500 ns
PULSE REPETITION FREQUENCY (PRF):	5 Hz to 5 kHz
ENCODER CONNECTION:	LEMO Mini, 4-pin
TRANSDUCER CONNECTIONS:	BNC or LEMO, factory option
USB CONNECTION:	Yes
FLAW SIZING METHODS AND SOFTWARE OPTIONS:	— DAC (standard) — Split DAC (option) — DGS/AVG (option) — TCG (option) — BEA (option, requires TCG) — AWS (option) — API (option) — Interface Trigger (option) — Corrosion Software (option) — Dryscan (option)

SONATEST SITESCAN 500S

Portable broadband ultrasonic flaw detector for weld, pipe, and corrosion inspection

Essential UT. Ready for the field. The SONATEST SITESCAN 500s is a portable broadband ultrasonic flaw detector designed as an entry-level solution for manual inspection tasks. Its 200 V spike pulser, 110 dB gain range, and full VGA display provide the essential capabilities for reliable ultrasonic flaw detection. Typical applications include weld and corrosion inspection, forgings and castings, as well as general industrial UT applications.

For different inspection requirements, the SITESCAN 500s provides integrated methods for flaw evaluation and sizing. DAC is included as standard, while Split DAC, DGS/AVG, TCG, AWS, API, and Backwall Echo Attenuation (BEA) are available as options. This allows the device to be adapted to different inspection standards and requirements.

Designed for mobile use in industrial environments, the SITESCAN 500s combines an impact-resistant housing with IP67 protection. The transflective VGA color display with adjustable brightness and nine color palettes provides good readability under varying lighting conditions.

UT-Lity Lite supports efficient management of inspection data. Calibrations, A-scans, B-scans, and thickness logs can be managed on the device and PC, while inspection data can be analyzed and exported and customized inspection reports can be created.

YOUR ADVANTAGES AT A GLANCE

Reliable entry-level UT: Broadband flaw detector with 200 V spike pulser and 110 dB gain range

Flexible flaw evaluation: DAC as standard plus optional Split DAC, DGS/AVG, TCG, AWS, API, and BEA

Wide range of applications: For welds, corrosion, forgings, castings, and general UT inspection

Rugged and mobile: Impact-resistant housing with IP67 protection for industrial use

Clear visualization: Transflective VGA display with adjustable brightness and nine color palettes

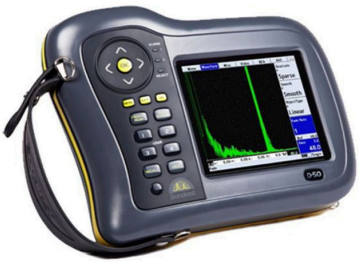
Efficient data management: Manage, analyze, export, and document inspection data with UT-Lity Lite

TECHNICAL INFORMATION

DISPLAY:	Transflective VGA TFT color display, 640 × 480 px, 9 color palettes with adjustable brightness
IP RATING:	IP67
WEIGHT:	2.5 kg incl. battery
DIMENSIONS:	255 × 145 × 145 mm
OPERATING TEMPERATURE:	-10 °C to +55 °C
BATTERY LIFE:	Up to 13.5 hours
STORAGE:	4 GB
TEST RANGE:	1 – 10,000 mm
VELOCITY:	1,000 – 10,000 m/s, continuously adjustable
TIME RANGE:	0 – 1,000 µs
MEASUREMENT MODES:	7
GATES:	2
GAIN RANGE:	0 – 110 dB
PULSER VOLTAGE:	200 V, fixed
PULSE WIDTH:	50 ns
PULSE REPETITION FREQUENCY (PRF):	35 Hz to 1 kHz; external sync available
TRANSDUCER CONNECTIONS:	BNC or LEMO, factory option
EXTERNAL SYNC:	Yes
PROPORTIONAL OUTPUT:	Yes
USB CONNECTION:	Yes
FLAW SIZING METHODS AND SOFTWARE OPTIONS:	— DAC (standard) — Split DAC (option) — DGS/AVG (option) — TCG (option) — BEA (option, requires TCG) — AWS (option) — API (option) — Interface Trigger (option) — Corrosion Software (option)

SONATEST SITESCAN D-50

Compact broadband ultrasonic flaw detector for mobile flaw and wall thickness inspection



Full UT capability. Compact by design. The SONATEST SITESCAN D-50 is a compact broadband ultrasonic flaw detector for manual inspection tasks. With its 200 V pulser, 0.5 dB gain resolution, and 110 dB gain range, it provides the essential capabilities for reliable flaw detection and evaluation. Typical applications include weld and corrosion inspection, forgings and castings, as well as general industrial ultrasonic testing.

For different inspection requirements, various methods for flaw evaluation and sizing are available. DAC is included as standard, while Split DAC, DGS/AVG, TCG, AWS, API, and Backwall Echo Attenuation (BEA) are available as options. The integrated evaluation methods support efficient analysis of inspection results and working according to different inspection requirements and standards.

Weighing only 1.7 kg, the SITESCAN D-50 is particularly compact and designed for mobile inspection. Its impact-resistant housing with IP67 protection and a battery life of up to 10.5 hours support extended inspection intervals in industrial environments. The transflective VGA color display with adjustable brightness and nine color palettes provides good readability under varying lighting conditions.

UT-Lity Lite supports efficient management of calibrations and inspection data on both the device and PC. A-scans, B-scans, and thickness logs can be analyzed and exported, while customized inspection report templates support efficient documentation.

YOUR ADVANTAGES AT A GLANCE

Compact and mobile: Weighs only 1.7 kg with up to 10.5 hours of battery life

Reliable flaw detection: 200 V pulser, 0.5 dB gain resolution, and 110 dB gain range

Flexible flaw evaluation: DAC as standard plus optional Split DAC, DGS/AVG, TCG, AWS, API, and BEA

Wide range of applications: For welds, corrosion, forgings, castings, and general UT inspection

Rugged for field use: Impact-resistant housing with IP67 protection for demanding industrial environments

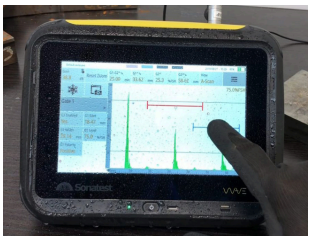
Efficient data management: Manage, analyze, export, and document inspection data with UT-Lity Lite

TECHNICAL INFORMATION

DISPLAY:	Transflective VGA TFT color display, 640 × 480 px, 9 color palettes with adjustable brightness
IP RATING:	IP67
WEIGHT:	1.7 kg incl. battery
DIMENSIONS:	238 × 172 × 70 mm
OPERATING TEMPERATURE:	-10 °C to +55 °C
BATTERY LIFE:	Up to 10.5 hours
STORAGE:	4 GB
TEST RANGE:	1 – 10,000 mm
VELOCITY:	1,000 – 10,000 m/s, continuously adjustable
TIME RANGE:	0 – 1,000 µs
MEASUREMENT MODES:	7
GATES:	2
GAIN RANGE:	0 – 110 dB
GAIN RESOLUTION:	0.5 dB
PULSER VOLTAGE:	200 V, fixed
PULSE WIDTH:	50 ns
PULSE REPETITION FREQUENCY (PRF):	35 Hz to 1 kHz
ENCODER CONNECTION:	LEMO Mini, 4-pin
TRANSDUCER CONNECTIONS:	BNC or LEMO, factory option
USB CONNECTION:	Yes
FLAW EVALUATION METHODS AND SOFTWARE OPTIONS:	— DAC (standard) — Split DAC (option) — DGS/AVG (option) — TCG (option) — BEA (option, requires TCG) — AWS (option) — API (option) — Interface Trigger (option) — Corrosion Software (option)

SONATEST WAVE

Portable ultrasonic flaw detector with interactive scan plan and real-time ray tracing for complex geometries



Complex geometries. Clearer interpretation. The SONATEST WAVE is a portable ultrasonic flaw detector for manual inspection of welds, complex component geometries, and other industrial applications. It combines powerful ultrasonic testing capabilities with intuitive operation and advanced functions that support reliable evaluation of inspection indications.

A key feature is the interactive scan plan with real-time ray tracing. It visualizes the sound path within the test object and supports the interpretation of indications, particularly in complex geometries. Curved surfaces, T-joints, nozzles, and flanges can be represented, while custom geometries can be imported using CAD data. This makes it easier to distinguish actual flaws from geometry-related indications and helps avoid unnecessary repairs.

With the WAVE Application Concept, the device can be adapted to different inspection tasks and user requirements. Up to 50 applications can be stored on the device. The WAVE Companion software allows users to manage applications, inspection data, and custom geometries and to customize the user interface. Menus can be hidden, locked, or arranged according to the respective inspection task, creating clear workflows and helping to reduce operating errors.

WAVE UTouch Technology provides intuitive multi-touch operation and distinguishes between finger input and ultrasonic couplant on the display. Combined with its rugged design, a weight of just 1.7 kg, up to 10 hours of battery life, and integrated Wi-Fi, the WAVE is well equipped for flexible use in industrial environments and in the field.

YOUR ADVANTAGES AT A GLANCE

Reliable evaluation of inspection indications: The interactive scan plan and real-time ray tracing visualize the sound path, making it easier to distinguish flaws from geometry-related indications

Flexible inspection of complex geometries: Predefined component geometries and the option to import custom CAD data extend the possibilities for inspecting demanding test objects

Application-specific inspection workflows: Up to 50 applications and customizable user interfaces allow the device to be configured for different inspection tasks

Intuitive operation: Industrial multi-touch technology reliably detects finger input and distinguishes it from ultrasonic couplant

Comprehensive evaluation capabilities: Functions including DAC/Split DAC, TCG, AVG/DGS, AWS, and Curved Surface Correction support a wide range of inspection requirements

Portable and rugged: Up to 10 hours of battery life, a weight of just 1.7 kg, and a design intended for IP67 support flexible use in the field

TECHNICAL INFORMATION

DISPLAY:	7" multi-touch display, 1024 × 600 px
IP RATING:	Designed for IP67
WEIGHT:	1.7 kg
DIMENSIONS:	222 × 174 × 63 mm
OPERATING TEMPERATURE:	-10 °C to +45 °C
BATTERY LIFE:	Up to 10 hours
WI-FI:	Integrated
PULSER VOLTAGE:	100 – 500 V
PRF:	Up to 1500 Hz
GAIN RANGE:	110 dB
BANDWIDTH:	0.25 – 30 MHz
FILTERS:	26
GATES:	4
EVALUATION METHODS:	DAC/Split DAC, TCG, AVG/DGS, AWS, API, BEA
COMPLEX GEOMETRY FUNCTIONS:	Curved Surface Correction (CSC), TKY and complex shapes

foerstergroup.com

The FOERSTER Group is represented by subsidiaries and representatives in over 60 countries worldwide. You can find a complete overview on our website.

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