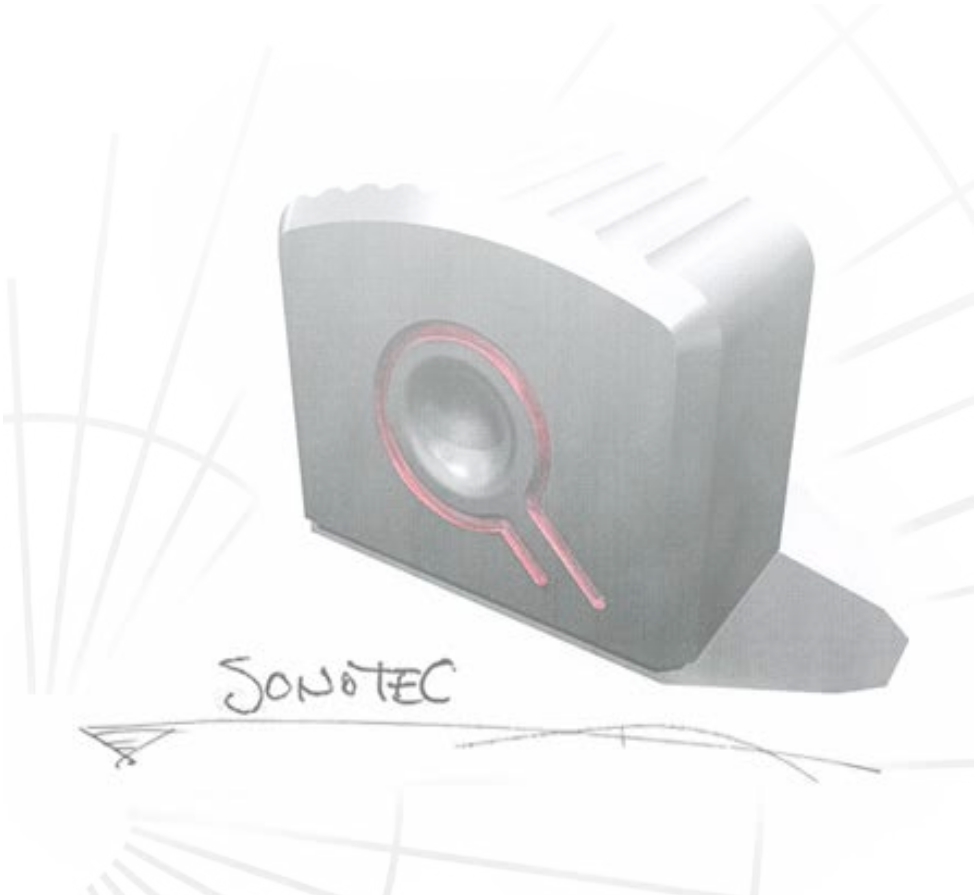
SONOSCAN

PROBE CATALOG

For Nondestructive Testing

SONOTEC
ULTRASONIC SOLUTIONS

Ultrasound is our Strength.



SONOTEC
ULTRASONIC SOLUTIONS

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Test Equipment from the Ultrasound Specialist

SONOTEC was founded in the beginning of 1991 by the physicists Dr. Santer zur Horst-Meyer and Hans-Joachim Münch and has been owner-managed since then. With currently more than 150 employees, today we are a growing technology company established on the market as a provider of specific solutions using ultrasonic measurement technologies.

Ultrasound is our Strength.

More than 25 years of experience in the development, production and worldwide distribution of innovative ultrasonic solutions - our philosophy of strong customer orientation and an open corporate culture are the secrets of our success.

You don't find the required product or the suitable accessories on the following pages? Contact us!

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SONOSCAN Probes
High Quality - Made in Germany.

Ultrasonic Flaw Detectors for NDT

Experienced material testers have supervised the development of SONOTEC flaw detector and probes focusing on **simple operation procedures and high sensitivity** while simultaneously providing a robust design.
The SONOSCREEN ST10 can be used for all conventional ultrasonic tests such as weld inspections, wall thickness measurements and the detection of discontinuities, which includes invisible cracks, inclusions, voids and other discontinuities in metals, plastics, ceramics and composites.

Precise Wall Thickness Measurement Gages

Wall thickness measurement as part of nondestructive testing is one of the most common uses of ultrasonic technologies. In addition to the classic measurement of wall thickness as part of **quality control**, our precise wall thickness measurement devices can also be used to detect damage caused by **erosion and corrosion** on, for example, ships, storage tanks, pipelines and cranes. We have a variety of versions of our devices for all types of applications as well as stationary solutions.

Air-Coupled Ultrasonic Inspection Systems

Compared to conventional contact non-destructive testing methods the advantage of air-coupling is that the inspection can be performed **100 % contact free**.
Accordingly, this innovative testing method is suited especially for the **inspection of modern composite materials** as they are used in several industries such as automotive, aerospace, ship building, machine building and sports and leisure goods. The applications and structures are highly diverse and are being developed further constantly.

In addition to standard products, **we also manufacture customized solutions**.

SONOSCAN Probes
Made in Germany.

Our Probe Quality

Our ergonomically designed, in manufactory work individually produced probes are used for locating objects accurately as well as for safe evaluation of material defects and discontinuities within components and test objects. The evaluation of such flaws is made on the basis of reflected ultrasound using the maximum of this echo signal. Decisive for extraordinary acoustic properties of the probe are the characteristics of the transducer. With a strong R&D department and an own production for piezo-composites we are able to offer efficient probes as well as implement variable solutions fast and flexible.

At SONOTEC you receive high quality - made in Germany.
Probes are characterized by technical specifications like nominal frequency, bandwidth, and the diameter of transducer. However, only the long-term stability of these parameters is a sign for the reliability and quality of our probes. Additional requirements are set in specific applications by environmental conditions such as temperature, pressure, and resistance to media.

To make sure that the various probes cope with the particular measuring tasks, all technical data of the SONOSCAN probes is specified in very close tolerance limits. In order to ensure a high quality every probe manufactured at SONOTEC has to pass a strict quality control. In this test it is checked if the measuring values of the probe lie in the close tolerance range of our acceptance inspection. The evaluation of measuring data enables us to restrict our tolerance range to a smaller extent. So, we can steadily increase the precision of our probes and create more accurate products for our customers.

Probe Parameters

Size of transducer	Describes the dimensions (diameter or length x width) of the ultrasound generating element, i.e., piezo-ceramic or piezo-composite material. The dimensions of the active element have a significant impact on the shape of the emitted sound field.
Center frequency	Is the arithmetic mean of the cut-off frequency: $f_0 = \frac{f_u + f_l}{2}$ Within the frequency spectrum of an echo, the upper and lower cut-off frequencies are determined at -6 dB compared to the largest amplitude.
Bandwidth	Describes the range of frequencies in an echo spectrum that shows a maximum amplitude deviation of up to 6 dB from the center frequency. A probe with a broad bandwidth can generate shorter ultrasonic pulses. As the lower frequencies of the pulse are less attenuated than the center frequency, resolution and penetration can be improved with higher bandwidths.

SONOSCAN Probes
for Nondestructive Testing

Focus	Probes can be focused with acoustic lenses in order to identify even small reflectors with a higher sensitivity. The focal length refers to the distance of a reflector to the probe which generates the highest possible echo amplitude. Focusing is only possible within the near field of a probe. Flat probes have a natural focus which is defined by the transducer size and its frequency as well as diffraction effects and interferences.

SONOSCAN Straight Beam Probes According to European Standard

The ergonomic straight beam probes of the SONOSCAN series for Nondestructive Testing comply with the European Standard DIN EN 12668-2. They are used to check metals, plastics and ceramic materials for discontinuities, such as cracks, inclusions, blowholes and other material flaws. The pulse echo and dual element probes "Made in Germany" are powerful, robust ultrasonic probes, which are compatible to the new ultrasonic flaw detector SONOSCREEN ST10, developed by SONOTEC as well, and common mobile ultrasonic test equipment.

We offer our precise ultrasonic probes with different frequencies and transducer sizes. Choose the most suitable probe for your application, depending on material characteristics, thickness and geometry of the work piece.

Applications

- Straight beam flaw detection and wall thickness measurement on metals,
- plastics and ceramic materials
- Inspection of pipes, plates, billets, castings and forgings
- Testing of pipes and bars
  Detection of delaminations

Advantages

- Excellent acoustic characteristics
- Unique ergonomics and fatigue-proof, handy usage
- Suitable for DGS evaluation

SONOSCAN Straight Beam Probes According to European Standard

General Probe Data

Operating temperature:	-20 °C to +60 °C
Transducer material:	Piezo-ceramic
Casing material:	Stainless steel, plastics
Standard:	EN 12668-2:2009
Order number:	500 01 0093

Pulse Echo Probe with Hard Wear Plate

SONOSCAN HS

Element size:	Ø 10 mm
Contact face:	Ø 14 mm
Protective layer:	Aluminum oxide
Connector:	LEMO 00

Probe type	Center frequency	Order number
HS4 EN	4 MHz	100 02 0007

SONOSCAN Straight Beam Probes According to European Standard

Pulse Echo Probe for Delay Line Assembly

SONOSCAN PXS

Element size: Ø 6 mm contact face with delay line
Contact face: Ø 8 mm
Connector: Microdot

Probe type	Center frequency	Order number
PXS10 EN	10 MHz	100 02 0308
PXS10 EN Set Incl. delay line, conical	10 MHz	700 02 0321

Pulse Echo Probe with Protective Membrane

SONOSCAN PS

Element size: Ø 10 mm
Contact face: Ø 14 mm
Coupling membrane: Vulkollan®
Connector: LEMO 00

Probe type	Center frequency	Order number
PS2 EN	2 MHz	100 02 0004
PS4 EN	4 MHz	100 02 0005

SONOSCAN Straight Beam Probes According to European Standard

Pulse Echo Probe with Protective Membrane

SONOSCAN PL

Contact face: Ø 29 mm
Coupling membrane: Vulkollan®
Connector: LEMO 1S

Probe type	Center frequency	Element Size	Order number
PL1 EN	1 MHz	24 mm	100 02 0001
PL2 EN	2 MHz	24 mm	100 02 0002
PL4 EN	4 MHz	24 mm	100 02 0003

SONOSCAN Straight Beam Probes According to European Standard

Dual Element Probes

SONOSCAN TXS

Contact face: Ø 8 mm
Delay material: Plastics
Connectors: 2 x LEMO 00

Probe type	Center frequency	Element size	Order number
TXS10 EN	10 MHz	Ø 6/2 mm	100 02 0032

SONOSCAN TS

Contact face: TS4 Ø 17 mm
TS2 Ø 17 mm
TS5 Ø 12 mm
Delay material: Plastics
Connectors: 2 x LEMO 00

Probe type	Center frequency	Element size	Order number
TS2 EN	2 MHz	Ø 11/2 mm	100 02 0010
TS4 EN	4 MHz	3.5 x 10 mm²	100 02 0011
TS5 EN	5 MHz	Ø 9/2 mm	100 02 0305

SONOSCAN Straight Beam Probes According to European Standard

Dual Element Probes

SONOSCAN TL

Contact face: Ø 29 mm
Delay material: Polystyrene
Connectors: 2 x LEMO 00

Probe type	Center frequency	Element size	Order number
TL2 EN	2 MHz	7 x 18 mm²	100 02 0008
TL4 EN	4 MHz	6 x 20 mm²	100 02 0009

SONOSCAN Angle Beam Probes According to European Standard

The SONOSCAN series angle beam probes for Nondestructive Testing detect even smallest discontinuities and quality failures such as cracks, incomplete fusions, blowholes or inclusions. All SONOSCAN probes are compatible with the new flaw detector SONOSCREEN ST10, developed by SONOTEC as well, and other common ultrasonic testing equipment.

During the testing process, the transducer transmits ultrasonic waves through an integrated wedge into the test object. Typical incident angles are 45°, 60° and 70°. There exist several construction types and sizes for various applications.
By individual grinding, the probes can be adapted to differently curved surfaces.

Due to the high quality of the angle beam probes, the EN 12668-2 Standard can easily be achieved. Their unique and ergonomic design allows comfortable and fatigue-proof testing.

The high precision SONOSCAN probes are manufactured in three different construction types. They can be selected according to their angle, frequency, transducer size and environmental conditions. In addition to standard probes, customer specific solutions can be realized.

Advantages

- Excellent acoustic characteristics
- Unique ergonomics and fatigue-proof, handy usage
- Realization of customized solutions possible

SONOSCAN Angle Beam Probes According to European Standard

General Probe Data

Operating temperature:	0 °C to +60 °C
Transducer material:	Piezo-ceramic
Casing material:	Anodized aluminum
Delay line material:	Polystyrene
Label:	Probe type, frequency (color coded), angle of incidence, Element size, serial number
Color code:	Yellow - 2 MHz, Blue - 4 MHz
Standard:	EN 12668-2:2009

SONOSCAN Angle Beam Probes According to European Standard

WS Type (8 x 9 mm²)

SONOSCAN WS

Element size: 8 x 9 mm²
Contact face: 24 x 15.5 mm²
Connector: LEMO 00
Dimensions W x H x D: 24 x 25.5 x 15.5 mm³

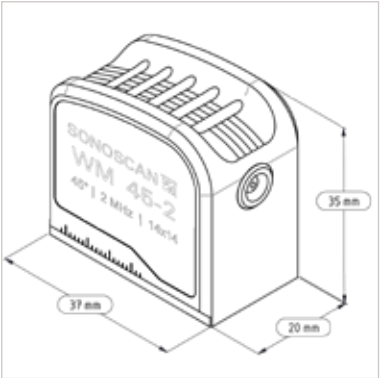
Probe type	Angle of incidence in steel	Center frequency	Order number
WS 45-2	45°	2 MHz	100 01 0170
WS 60-2	60°	2 MHz	100 01 0171
WS 70-2	70°	2 MHz	100 01 0172
WS 45-4	45°	4 MHz	100 01 0173
WS 60-4	60°	4 MHz	100 01 0174
WS 70-4	70°	4 MHz	100 01 0175

SONOSCAN Angle Beam Probes According to European Standard

WM Type (14 x 14 mm²)

SONOSCAN WM

Element size: 14 x 14 mm²
Contact face: 37 x 20 mm²
Connector: LEMO 00
Dimensions W x H x D: 37 x 35 x 20 mm³



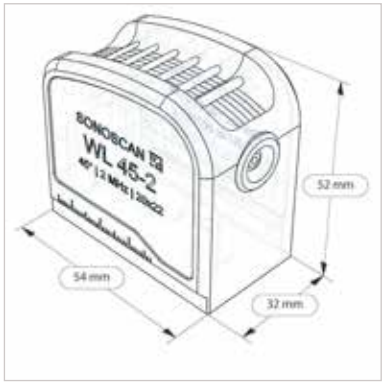
Probe type	Angle of incidence in steel	Center frequency	Order number
WM 45-2	45°	2 MHz	100 02 0012
WM 60-2	60°	2 MHz	100 02 0013
WM 70-2	70°	2 MHz	100 02 0014

SONOSCAN Angle Beam Probes According to European Standard

WL Type (20 x 22 mm²)

SONOSCAN WL

Element size:	20 x 22 mm²
Contact face:	54 x 32 mm²
Connector:	LEMO 1S
Dimensions W x H x D:	54 x 52 x 32 mm³



Probe type	Angle of incidence in steel	Center frequency	Order number
WL 45-2	45°	2 MHz	100 01 0176
WL 60-2	60°	2 MHz	100 01 0177
WL 70-2	70°	2 MHz	100 01 0178

SONOSCAN Quick Change Probes According to North American Standard

In addition to the angle beam probes according to European Standards, we offer Quick Change probes with interchangeable wedges for weld seam testing in all common sizes and frequencies especially for the American market. Suitable wedges you can find on page 48.

The probes are manufactured by ourselves according to specific requirements of the ASTM E1065 defined by the American Welding Society. Instead of regular ceramics are used highly sensitive piezo-composites for the SONOSCAN probe series, manufactured in our own in-house production. An innovative manufacturing technology for the protective layer also helps to ensure advantageous acoustic features such as high sensitivity and low noise.

The SONOTEC angle wedges as well as all common wedges can be mounted easily at the probe with the customary screw thread and can be changed quickly, if different frequencies or angles are necessary to perform an adequate evaluation of defects. Quick Change probes are used anywhere where the access to the test object is limited. In addition, the fairly small, circular transducers offer a better failure resolution.

SONOSCAN Quick Change Probes According to North American Standard

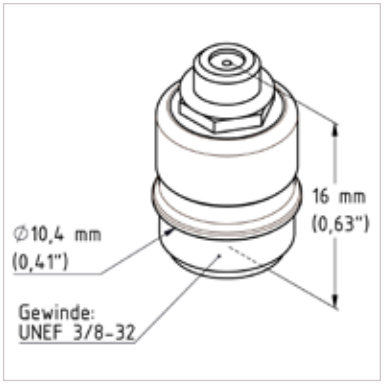
General Probe Data

Transducer material:	Piezo-composite
Casing material:	Stainless steel, plastics
Label:	Probe type, frequenzy (color coded), transducer dimension, serial number
Farbcodierung:	Yellow - 2.25 MHz, Green - 5 MHz
Connector:	Microdot
Standard:	ASTM E1065

QS Type (Ø 1/4")

SONOSCAN QSC

Element size:	Ø 1/4" (6.4 mm)
Contact face:	Ø 0.41" (10.4 mm)
Thread:	UNEF 3/8-32



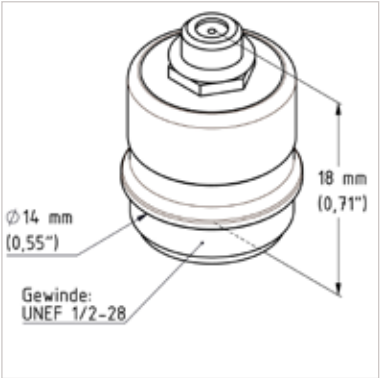
Probe type	Center frequency	Order number
QSC 2.25	2.25 MHz	100 02 0023
QSC 5	5 MHz	100 02 0026

SONOSCAN Quick Change Probes According to North American Standard

QM Type (Ø 3/8")

SONOSCAN QMC

Element size: Ø 3/8" (9.5 mm)
Contact face: Ø 0,55" (14 mm
Thread: UNEF 1/2-28

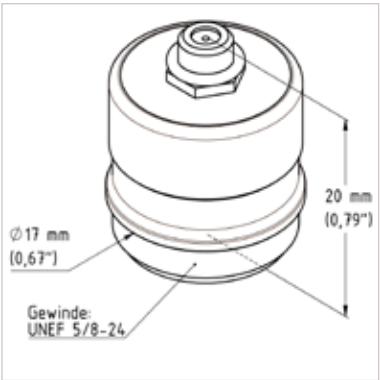


Probe type	Center frequency	Order number
QMC 2.25	2.25 MHz	100 02 0022
QMC 5	5 MHz	100 02 0025

QL Type (Ø 1/2")

SONOSCAN QLC

Element size: Ø 1/2" (12.7 mm)
Contact face: Ø 0,67" (17 mm)
Thread: UNEF 5/8-24



Probe type	Center frequency	Order number
QLC 2.25	2.25 MHz	100 02 0021
QLC 5	5 MHz	100 02 0024

SONOSCAN AWS Probes
According to North American Standard

In addition to the angle beam probes according to European Standards and Quick Change probes, we offer AWS probes with interchangeable wedges for weld seam testing in all common sizes and frequencies especially for the American market. Suitable wedges (serrated and snail wedges) you can find on page 49.

The probes are manufactured by ourselves according to specific requirements of the ASTM E1065 defined by the American Welding Society. Instead of regular ceramics are used highly sensitive piezo-composites for the SONOSCAN probe series, manufactured in our own in-house production. An innovative manufacturing technology for the protective layer also helps to ensure advantageous acoustic features such as high sensitivity and low noise.

The robust probes with BNC connector allow a fast scanning over comparatively large areas with high precision and repeatability. Via the mounting screws can be attached the SONOTEC angle wedges as well as common angle wedges.

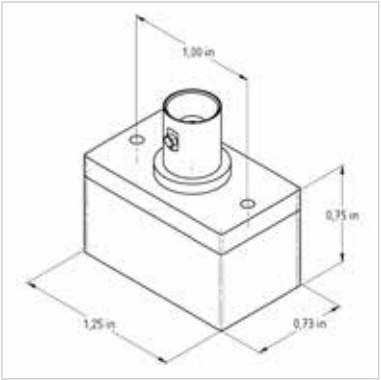
Thanks to the different types of wedges various material tests can be performed.

SONOSCAN AWS Probes
According to North American Standard

General Probe Data

Transducer material:	Piezo-composite
Casing material:	Stainless steel, plastics
Label:	Probe type, Element size, serial number
Connector:	BNC
Thread:	UNF 4-40
Standard:	ASTM E1065

RS Type (0.63" x 0.63")



SONOSCAN RSC

Element size: 0.63" x 0.63" (16 x 16 mm²)
Contact face: 1.25" x 0,73" (31.8 x 18.5 mm²)

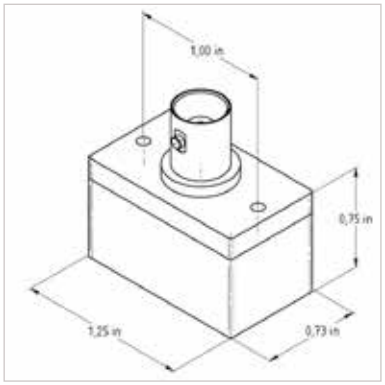
Probe type	Center frequency	Order number
RSC 2.25	2.25 MHz	100 02 0300

SONOSCAN AWS Probes
According to North American Standard

RM Type (0.63" x 0.75")

SONOSCAN RMC

Element size: 0.63" x 0.75" (16 x 19 mm²)
Contact face: 1.25" x 0.73" (31.3 x 18.5 mm²)

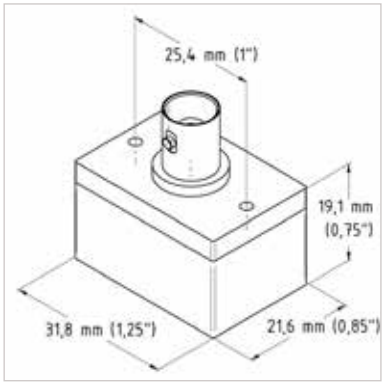


Probe type	Center frequency	Order number
RMC 2.25	2.25 MHz	100 02 0028

RL Type (0.75" x 0.75")

SONOSCAN RLC

Element size: 0.75" x 0.75" (19 x 19 mm²)
Contact face: 1.25" x 0.85" (31.8 x 21.6 mm²)



Probe type	Center frequency	Order number
RLC 2.25	2.25 MHz	100 02 0029

SONO-ID Wireless Probe Recognition For SONOWALL 70 / SONOFLAW

Intelligent and wireless probe recognition

SONO-ID probes are especially conducted for SONOWALL 70 / SONOFLAW.
The SONOWALL 70 / SONOFLAW is the first gage in the market with intelligent probe recognition. The wireless recognitions allows a quick probe setup for testing. In addition the extended probe management enables probe-specific information, such as DAC-curves, delay lines and serial numbers, to be saved directly in the probe.

Thanks to the different sizes various material tests can be performed.

SONO-ID Wireless Probe Recognition For SONOWALL 70 / SONOFLAW

Pulse Echo Probes with Protective Membrane

SONOSCAN PXSi Fingertip Probe

Element size: Ø 8 mm
Contact face: Ø 12 mm
Connector: Microdot

Probe type	Center frequency	Order number
PXS10i EN	10 MHz	100 02 0309
PXS10i EN Set Incl. delay line, conical	10 MHz	700 01 0320

SONOSCAN PSi

Element size: Ø 10 mm
Contact face: Ø 14 mm
Protective Layer: Epoxy filled
Connector: LEMO 00

Probe type	Center frequency	Order number
PS2i EN	2 MHz	100 02 0307

SONO-ID Wireless Probe Recognition For SONOWALL 70 / SONOFLAW

Dual Element Probes

SONOSCAN TXSi Miniature Probe

Contact face: Ø 6/2 mm
Delay material: PMMA
Connectors: 2 x LEMO 00

Probe type	Center frequency	Element size	Order number
TXS10i EN	10 MHz	Ø 8 mm	100 02 0035

SONOSCAN TSi

Contact face: TS2i Ø 14 mm
TS5i Ø 12 mm
Delay material: Polystyrene
Connectors: 2 x LEMO 00

Probe type	Center frequency	Element size	Order number
TS2i EN	2 MHz	Ø 11/2 mm	100 02 0311
TS5i EN	5 MHz	Ø 9/2 mm	100 02 0306

Probe Sets
Testing of Forgings

Order number: 700 01 0211

Probe Sets
Testing of Forgings

Consisting of:

SONOSCAN Angle Beam Probes

Probe type	Center frequency	Order number
WS 45-4	4 MHz	100 01 0173
WS 70-4	4 MHz	100 01 0175
WL 45-2	2 MHz	100 01 0176

SONOSCAN Straight Beam Probes

Probe type	Center frequency	Order number
HS4	4 MHz	100 02 0007
PS4	4 MHz	100 02 0005
PL2	2 MHz	100 02 0002
PL4	4 MHz	100 02 0003
TL2	2 MHz	100 02 0008
TL4	4 MHz	100 01 0009

Probe Cables

Cable type	Order number
Lemo 1S to 1S	800 01 0033
Lemo 00 to 1S	800 01 0032
Lemo 00 to 2 Lemo 1S	800 01 0030

Probe Sets
Weld Seam Testing

Order number: 700 01 0212

Probe Sets
Weld Seam Testing

Consisting of:

SONOSCAN Angle Beam Probes

Probe type	Center frequency	Order number
WS 45-2	2 MHz	100 01 0170
WS 45-4 (2x)	4 MHz	100 01 0173
WS 60-4	4 MHz	100 01 0174
WS 70-4 (2x)	4 MHz	100 01 0175
WL 45-2	2 MHz	100 01 0176
WL 70-2	2 MHz	100 01 0178

SONOSCAN Straight Beam Probes

Probe type	Center frequency	Order number
PS4	4 MHz	100 01 0005
TL4	4 MHz	100 01 0009

Probe Cables

Cable type	Order number
Lemo 1S to 1S	800 01 0033
Lemo 00 to 1S (2x)	800 01 0032

Probe Sets
Steel Testing

Order number: 700 01 0212

Probe Sets
Steel Testing

Consisting of:

SONOSCAN Angle Beam Probes

Probe type	Center frequency	Order number
WS 45-4 (2x)	4 MHz	100 01 0173
WS 70-4	4 MHz	100 01 0175
WL 45-2	2 MHz	100 01 0176
WL 70-2	2 MHz	100 01 0178

SONOSCAN Straight Beam Probes

Probe type	Center frequency	Order number
HS4	4 MHz	100 02 0007
PL4	4 MHz	100 02 0003
TS4	4 MHz	100 02 0011
TL2	2 MHz	100 02 0008

Probe Cables

Cable type	Order number
Lemo 1S to 1S	800 01 0033
Lemo 00 to 1S	800 01 0032
Lemo 00 to 2 Lemo 1S	800 01 0030

SONOSCAN Immersion Probes

Immersion probes are used for semi- or fully-automatic testing of serial and mass production over a water stand-off distance.
The test object is checked for smallest defects or defective fabrics with maximum repeatability of the testing results. Thus, defects in soldered junctions, welding faults or cracks and pinholes in metal parts can be identified reliably.

Most testings are conducted in water-filled immersion tanks. Thereby the test object is completely immersed. To check the object, it is either firmly clamped and scanned by the probe or it is uniformly moved on coordinates passing the probe.
Larger test objects, which cannot be immersed completely, are clamped into special attachments. The probe is either connected from the bottom through a water-filled reservoir or through a free water jet.

The emitted ultrasonic impulses are transmitted through the water into the test object. The signals are reflected by inhomogeneities and interfaces of the object. Therefore, the immersion analysis provides constant connection conditions and accurately repeatable testing results.

Properties

- Complete waterproof construction
- Robust stainless steel housing
- Extremely high detection sensitivity for smallest inhomogeneities with high-frequency probes

SONOSCAN Immersion Probes

General Probe Data

Casing material:	Stainless steel
Protective layer:	Plastics
Label:	Probe type, serial number
Connector:	LEMO HVR 03
Bandwidth (-6 dB):	approx. 80 %
Storage temperature:	-20 to + 60 °C
Operating temperature:	+10 to +40 °C
Operating pressure:	0.2 to 1 bar
Medium resistance:	Water

Type IW – Broadband Probe

SONOSCAN IW-10-6

Center frequency:	10 MHz
Element size:	Ø 6 mm
Contact face:	Ø 9.5 mm
Transducer material:	Piezo-ceramic
Order number:	100 01 0130

Further types on request.

Type IK

Broadband Probe with Composite Transducer

SONOSCAN IK

Transducer material: Piezo-composite

Contact faces:

IK 1-20	Ø 24 mm
IK 2-20	Ø 24 mm
IK 5-6	Ø 9.5 mm
IK 5-10	Ø 13 mm




Probe type	Center frequency	Element size	Order number
IK 1-20	1 MHz	Ø 20 mm	100 01 0161
IK 2-20	2 MHz	Ø 20 mm	100 01 0163
IK 5-6	5 MHz	Ø 6 mm	100 01 0162
IK 5-10	5 MHz	Ø 10 mm	100 01 0195

SONOSCAN CF Probes
For Air-Coupled Testing

The high performing probes of the **SONOSCAN CF** series have been designed for couplant-free material testing. Due to their stainless steel housing the probes are extremely rugged and maintenance free. Currently the portfolio comprises **frequencies from 50 to 400 kHz**. In addition to these standard specifications customized probes with the following features can be realized as well:

- Outstanding acoustic characteristics
- Your technical requirements
- Reasonable price performance ratio

Probes from the ultrasound specialist:

- In-house piezo-composite manufacturing
- SONOSCAN CF probes for absolutely contact free testing
- Air-coupled probes within the frequency range of 50 to 400 kHz, focusing and non-focusing as well as multi-element probes

SONOSCAN CF Probes
For Air-Coupled Testing

Overview Air-Coupled Probes SONOSCAN CF

We offer the extremely rugged and maintenance free probes in stainless steel housing in frequencies from 50 to 400 kHz.

Designation	CF 050	CF 075	CF 125
Order number	700 01 0265	700 01 0266	700 01 0267
Frequency	50 kHz ± 4 %	75 kHz ± 4 %	125 kHz ± 4 %
Near field length	73 mm	50 mm	32 mm
Sound beam Ø (-6 dB)	13 mm	8 mm	5 mm
Wavelength in air	6.8 mm	4.5 mm	2.8 mm
Max. voltage (2 % duty cycle tone burst)	1500 Vpp	1000 Vpp	800 Vpp
Sensitivity (transfer ratio in air)	-34 dB	-34 dB	-32 dB
Operating temperature	-40 °C to 60 °C	-40 °C to 60 °C	-40 °C to 60 °C
Dimensions	Ø 62 x 77 mm	Ø 42 x 64 mm	Ø 28 x 51 mm
Weight	465 g	195 g	95 g

SONOSCAN CF Probes
For Air-Coupled Testing

Probes for Phased-Array Air-Coupled System:

SONOAIR

Designation	CF 200	CF 300	CF 400 *
Order number	700 01 0268	700 01 0269	700 01 0270
Frequency	200 kHz ± 4 %	300 kHz ± 4 %	400 kHz ± 4 %
Near field length	18 mm	12 mm	50 mm *
Sound beam Ø (-6 dB)	3 mm	2 mm	4 mm
Wavelength in air	1.7 mm	1.1 mm	0.8 mm
Max. voltage (2 % duty cycle tone burst)	500 Vpp	400 Vpp	400 Vpp
Sensitivity (transfer ratio in air)	-35 dB	-52 dB	-31 dB
Operating temperature	-40 °C to 60 °C	-40 °C to 60 °C	-20 °C to 60 °C
Dimensions	Ø 19 x 43 mm	Ø 19 x 38 mm	Ø 28 x 51 mm
Weight	39 g	38 g	90 g

* This probe can be offered as well as multi element probe with the possibility of an electronic focused sound beam.
This is linked with a halving of the near field length and a considerably improved resolution.

Accessories
For Nondestructive Testing

In addition to our ultrasonic flaw detectors and probes we offer extensive accessories for different applications. On the following pages we offer common articles and consumables:

- Probe cables with various connectors
- Selection of calibration blocks with certificates
- Couplant
- Coupling membranes for straight beam probes
- Replacement soles for angle beam probes to extend service life
- Life extension soles for angle beam probes
- Angle wedges for quick change and AWS probes (according to North American Standard)

Accessories
For Nondestructive Testing

Probe Cables

Length: approx. 6.56 ft (2 m)

Probe type	Connectors	Order number
Straight or angle beam probes	LEMO 00 – LEMO 00	800 01 0035
	LEMO 00 – LEMO 1S	800 01 0036
	LEMO 1S – Lemo 1S	800 01 0037
T/R probes dual	Dual LEMO 00 – 2 x LEMO 1S	800 01 0030
	Dual LEMO 00 – 2 x LEMO 00	800 01 0034
T/R probes	2x LEMO 00 to LEMO 00	800 01 0043
AWS probes	LEMO 1S – LEMO BNC	800 01 0056
Quick change pulse echo probes	LEMO 1S – Microdot	800 01 0046
	LEMO 00 – Microdot	800 01 0048
	Microdot – BNC	800 01 0059

Further cable types on request.

Accessories
For Nondestructive Testing

Calibration blocks

Calibration block K1 with certificate

Order number: 500 01 0043

Calibration block K2 with certificate

Order number:

25 mm 500 01 0044
12.5 mm 500 01 0076

Step block with certificate

Step block, steel (metrical)
Steps: 2.5 mm / 5 mm / 7.5 mm / 10 mm / 12.5 mm
Order number: 500 01 0045

Step block, steel (Inch)
Stufen: 0.100"-0.500"
Order number: 500 01 0124

Step block, aluminum (metrical)
Order number: 500 01 0125

Box for step block
Order number: 500 01 0126

Accessories
For Nondestructive Testing

Couplant

Oil Couplant

Amount: 100 ml
Order number: 500 01 0032

Water-Based Gel Couplant

Amount: 250 ml
Order number: 500 01 0061

Coupling Membranes for Straight Beam Probes

Scope of delivery: 10 pieces
Thickness: 0.7 bis 0.3 mm
Material: Vulkollan®

Probe type	Order number
PS	002 09 0016
PL	002 09 0015

Accessories
For Nondestructive Testing

Life Extension Soles for Angle Beam Probes

Scope of delivery: 5 pieces
Thickness: 3 mm
Material: PMMA

Probe type	Order number
WS	500 01 0047
WM	500 01 0048
WL	500 01 0049

Angle Wedges for Quick Change Probes

Probe type	Transducer size	Thread	Angle	Order number
QSC	Ø 1/4" (6.4 mm)	UNEF 3/8-32	45°	500 01 0078
			60°	500 01 0079
			70°	500 01 0080
QMC	Ø 3/8" (9.5 mm)	UNEF 1/2-28	45°	500 01 0081
			60°	500 01 0082
			70°	500 01 0083
QLC	Ø 1/2" (12.7 mm)	UNEF 5/8-24	45°	500 01 0084
			60°	500 01 0085
			70°	500 01 0086

Angle Wedges for AWS Probes

Thread: UNF 4-40
Probe types: RSC, 0,63 x 0,63" (16 x 16 mm²)
RMC, 0,63 x 0,75" (16 x 19 mm²)
RLC, 0,75 x 0,75" (19 x 19 mm²)

Angle Wedge	Angle	Order number
AWS Serrated Wedge	45°	500 01 0087
	60°	500 01 0088
	70°	500 01 0089
AWS Snail Wedge	45°	500 01 0090
	60°	500 01 0091
	70°	500 01 0092

Notes

Notes

Nauendorfer Str. 2
06112 Halle (Saale)

Revision: 4.0; Date: 2018-04-11

PROBE CATALOG

For Nondestructive Testing

Nauendorfer Str. 2, 06112 Halle / Saale

SONOTEC
ULTRASONIC SOLUTIONS