

ULTRASONIC

PRODUCTS & EQUIPMENT

SYSTEMS, PROBES, WEDGES, BLOCKS & ACCESSORIES

NDT PRODUCTS

PROBES AND TRANSDUCERS



SYSTEMS



BLOCKS



ACCESSORIES



Find all our ranges of products on our website www.ekoscan.fr

THE STORY OF EKOSCAN IS ONE OF CONTINUITY AND EVOLUTION.

It has been constant since 1973, the date our founder and CEO put a probe in his hand for the first time. Continuity again in our daily efforts to match your expectations. We take great pride in helping you succeed in your business. EKOSCAN's story is also about evolving. Innovation must be a priority to survive the drastic changes of our industry.

YOU CHANGE, WE ADAPT.

In order to serve you better and control all aspects of manufacturing, our products are conceived, made, and tested in France by our team of experts.



EKOSCAN est certifié
ISO 9001:2015

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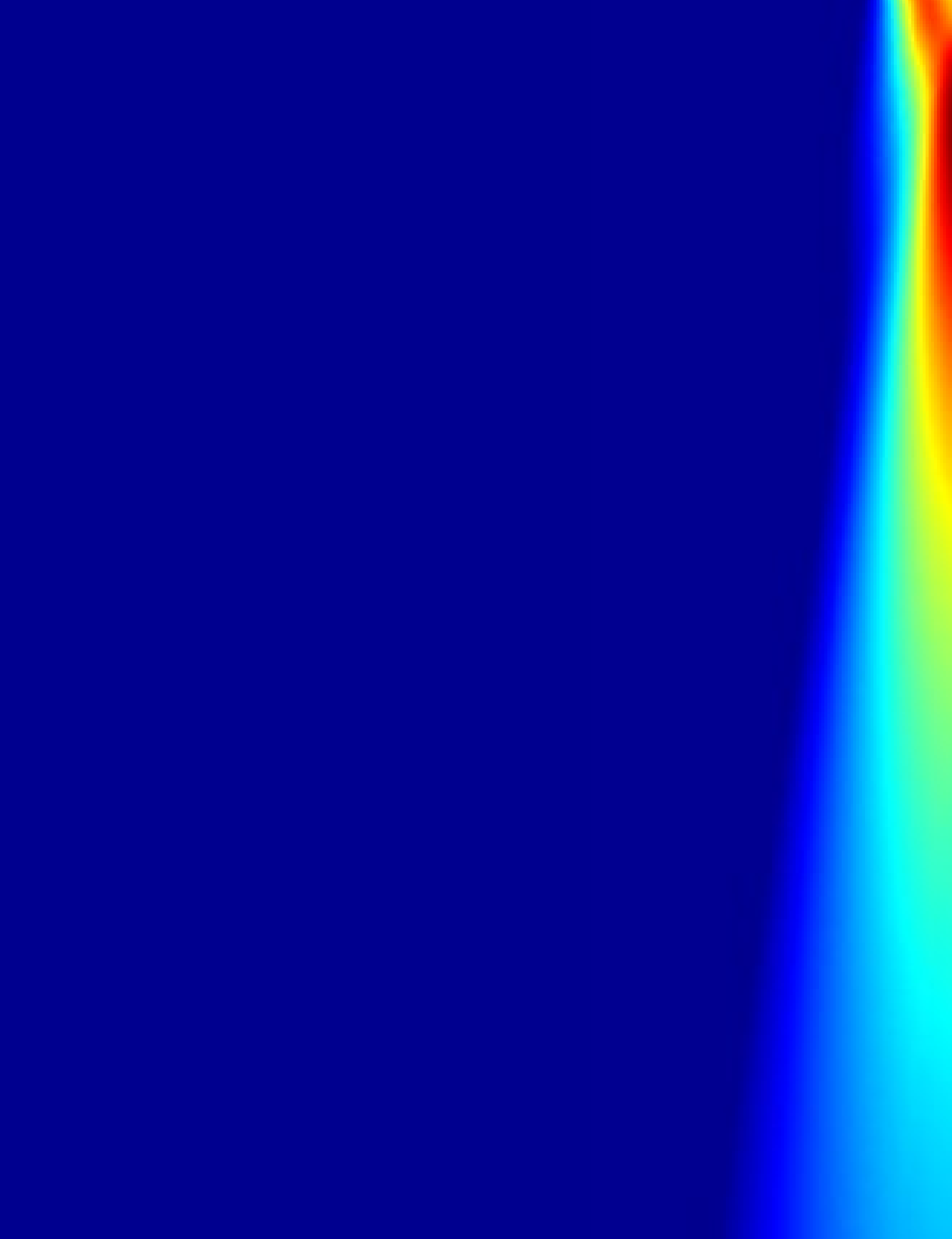
ACOUSTICAL PROPERTIES OF COMMON MATERIALS

| MATERIAL | Ultrasonic Velocity | | | | |
|-----------------------------|---------------------|--------------|--------------------|--------------|----------------|
| | LONGITUDINAL WAVE | | SHEAR WAVE | | IMPEDANCE Z |
| | in / μ s | mm / μ s | in / μ s | mm / μ s | |
| METALS | | | | | |
| Aluminum 1100-0 | 0.248 | 6.229 | 0.121 | 3.073 | 17.1 |
| Aluminum 2024-T4 | 0.251 | 6.375 | 0.124 | 3.150 | 17.6 |
| Aluminum 6061-T6 | 0.248 | 6.299 | 0.124 | 3.150 | 17.0 |
| Beryllium | 0.507 | 12.878 | 0.350 | 8.890 | 23.5 |
| Brass (70% Cu - 30% Zn) | 0.172 | 4.369 | 0.083 | 2.108 | 37.1 |
| Bronze (Phosphor 5%) | 0.139 | 3.531 | 0.088 | 2.235 | 31.3 |
| Copper (CP) | 0.187 | 4.750 | 0.092 | 2.337 | 42.5 |
| Gold | 0.128 | 3.251 | 0.047 | 1.194 | 62.6 |
| Hastelloy C | 0.230 | 5.842 | 0.114 | 2.896 | 52.2 |
| Hastelloy X | 0.228 | 5.791 | 0.108 | 2.743 | 47.7 |
| Inconel (Wrought) | 0.308 | 7.823 | 0.119 | 3.023 | 64.5 |
| Iron (Cast), Various Alloys | 0.138-0.220 | 3.505-5.588 | 0.087-0.126 | 2.210-3.200 | 24.3-41.2 |
| Lead (94Pb-6Sb) | 0.085 | 2.159 | 0.032 | 0.813 | 23.5 |
| Magnesium, Various Alloys | 0.215-0.228 | 5.461-5.791 | 0.119-0.122 | 3.023-3.099 | 9.24-10.6 |
| Monel | 0.211 | 5.359 | 0.107 | 2.718 | 47.2 |
| Nickel (CP) | 0.222 | 5.639 | 0.117 | 2.972 | 50.0 |
| Silver (0.99 Fine) | 0.142 | 3.607 | 0.063 | 1.600 | 37.8 |
| Steel 1020 | 0.232 | 5.893 | 0.128 | 3.251 | 45.4 |
| Steel 4340 | 0.230 | 5.842 | 0.128 | 3.251 | 45.6 |
| Steel, CRES 300 Series | 0.221-0.226 | 5.613-5.740 | 0.120-0.123 | 3.048-3.124 | 44.6-45.4 |
| Steel, CRES 400 Series | 0.212-0.237 | 5.385-6.020 | 0.118-0.132 | 2.997-3.353 | 41.3-46.3 |
| Titanium, 6Al-4V | 0.243 | 6.172 | 0.130 | 3.302 | 27.3 |
| Zircaloy | 0.186 | 4.724 | 0.093 | 2.362 | 44.2 |
| Zirconium | 0.183 | 4.648 | 0.089 | 2.261 | 30.1 |
| POLYMERS | | | | | |
| Acrylics | 0.105-0.109 | 2.667-2.769 | 0.044-0.057 | 1.118-1.448 | 3.15-3.51 |
| Cellulose Acetate | 0.096 | 2.438 | No Shear Component | | 3.19 |
| Nylon | 0.016 | 2.692 | No Shear Component | | - |
| Phenolic | 0.056 | 1.422 | No Shear Component | | 1.90 |
| Polycarbonate | 0.090 | 2.286 | No Shear Component | | 2.71 |
| Polyethylene | 0.105 | 2.667 | No Shear Component | | 2.94 |
| Polystyrene | 0.094 | 2.388 | 0.045 | 1.143 | 2.52 |
| Rubber (natural) | 0.061 | 1.549 | No Shear Component | | 1.74 |
| Rubber (Carbon Filter) | 0.066 | 1.676 | No Shear Component | | - |
| Rubber (Silicone) | 0.037 | 0.94 | No Shear Component | | 1.40 |
| Teflon | 0.054 | 1.372 | 0.250 | 6.35 | 3.00 |

ACOUSTICAL PROPERTIES OF COMMON MATERIALS

| MATERIAL | Ultrasonic Velocity | | | | |
|---|---------------------|--------------|--------------------|--------------|-----------|
| | LONGITUDINAL WAVE | | SHEAR WAVE | | IMPEDANCE |
| | in / μ s | mm / μ s | in / μ s | mm / μ s | Z |
| MISCELLANEOUS SOLIDS | | | | | |
| Alumina (Al ₂ O ₃) | 0.427 | 10.846 | No Shear Component | | 43.1 |
| Concrete | 0.167-0.207 | 4.242-5.258 | 0.135 | 3.429 | 12.4 |
| Glass (Plate) | 0.227 | 5.766 | No Shear Component | | 14.5 |
| Granite | 0.156 | 3.962 | 0.076 | 1.93 | 10.9 |
| Ice (-16 °C) | 0.150 | 3.81 | No Shear Component | | 3.60 |
| Quartz, Natural | 0.226 | 5.74 | 0.139 | 3.531 | 15.2 |
| Quartz, Fused | 0.219 | 5.563 | 0.302 | 7.671 | 14.5 |
| Sapphire | 0.469 | 11.913 | 0.157 | 3.988 | 47.2 |
| Tungsten Carbide | 0.262 | 6.655 | No Shear Component | | 67.6 |
| COMPOSITE MATERIALS | | | | | |
| Fiberglass (50 v/o) | 0.124 | 3.15 | 0.068 | 1.727 | 6.04 |
| Graphite/Epoxy (60 v/o) | 0.117 | 2.972 | 0.077 | 1.956 | 4.65 |
| Boron/Epoxy (50 v/o) | 0.131 | 3.327 | 0.072 | 1.829 | 6.38 |
| LIQUIDS | | | | | |
| Ethylene Glycol | 0.064 | 1.626 | No Shear Component | | 1.80 |
| Glycerin | 0.076 | 1.93 | No Shear Component | | 2.42 |
| Oil (SAE 20) | 0.069 | 1.753 | No Shear Component | | 1.51 |
| Water (20 °C) | 0.058 | 1.473 | No Shear Component | | 1.48 |
| LIQUIDS | | | | | |
| Air (20°C) | 0.014 | 0.356 | No Shear Component | | 0.00041 |
| Nitrogen (20°C) | 0.014 | 0.356 | No Shear Component | | 0.00041 |
| Oxygen (20°C) | 0.013 | 0.33 | No Shear Component | | 0.00043 |





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BEAM APERTURE ANGLE

$$\sin \alpha = 1,22 \frac{\lambda}{D}$$

FRESNEL ZONE

$$N = \frac{D^2}{4 \lambda}$$

ACOUSTIC IMPEDANCE

$Z = \rho c$ ρ : material density
 c : sound celerity in meter per second (m/s)

TRANSMISSION COEFFICIENT

REFLEXION COEFFICIENT

| | | |
|-----------|---------------------------------------|-----------------------------------|
| Amplitude | $\frac{Z_2 - Z_1}{Z_1 + Z_2}$ | $\frac{2 Z_2}{Z_1 + Z_2}$ |
| Energy | $\frac{(Z_2 - Z_1)^2}{(Z_1 + Z_2)^2}$ | $\frac{4 Z_1 Z_2}{(Z_1 + Z_2)^2}$ |



TRANSDUCERS

Each of our transducer is delivered with its EN12668-2 certificate



CONVENTIONAL TRANSDUCERS

Aeronautics

Railway

Contact

Immersion

TOFD

Specific

AMW SERIES

Standard angle beam probes

AERONAUTICS MINIATURE EDITION

AMW - 4x6

| | | |
|---|---------|--|
| A | 10.8 mm | |
| B | 10 mm | |
| C | 8 mm | |

Technical specifications

- Shear wave transducer
- Microdot back or top connector upon request
- Very small footprint
- High resolution, sensitivity and repeatability

Main applications

- Contact inspection
- Inspection of parts with complex geometry
- Parts up to 6 mm thick
- Aircraft component inspection
- Detection of flaws in profile changing surfaces

| REFERENCE | REFRACTED ANGLE in ° | FREQUENCY MHz | CRYSTAL SIZE mm | CONNECTOR |
|------------|-------------------------|------------------|--------------------|-----------|
| AMW38-2.25 | 38 | 2.25 | 4x6 | Microdot |
| AMW45-2.25 | 45 | | | |
| AMW60-2.25 | 60 | | | |
| AMW70-2.25 | 70 | | | |
| AMW38-5 | 38 | 5 | | |
| AMW45-5 | 45 | | | |
| AMW60-5 | 60 | | | |
| AMW70-5 | 70 | | | |
| AMW38-7.5 | 38 | 7.5 | | |
| AMW45-7.5 | 45 | | | |
| AMW60-7.5 | 60 | | | |
| AMW70-7.5 | 70 | | | |
| AMW38-10 | 38 | 10 | | |
| AMW45-10 | 45 | | | |
| AMW60-10 | 60 | | | |
| AMW70-10 | 70 | | | |



Standard angle beam probes

SUBMINIATURE EDITION

Technical specifications

- Shear wave transducer
- Wear resistant thermoplastic wedges
- Microdot back or top connector upon request
- High resolution, sensivity and repeatability

Main applications

- Contact inspection
- Inspection of parts with complex geometry
- Parts up to 8 mm thick
- Weld inspection
- Detection of flaws in profile changing surfaces

| REFERENCE | REFRACTED ANGLE in ° | FREQUENCY MHz | CRYSTAL SIZE mm | CONNECTOR |
|-----------|-------------------------|------------------|--------------------|-----------|
| SMW35-5 | 35 | 5 | 6x6 | Microdot |
| SMW38-5 | 38 | | | |
| SMW45-5 | 45 | | | |
| SMW60-5 | 60 | | | |
| SMW70-5 | 70 | | | |
| SMW35-7.5 | 35 | 7.5 | | |
| SMW38-7.5 | 38 | | | |
| SMW45-7.5 | 45 | | | |
| SMW60-7.5 | 60 | | | |
| SMW70-7.5 | 70 | | | |
| SMW35-10 | 35 | 10 | | |
| SMW38-10 | 38 | | | |
| SMW45-10 | 45 | | | |
| SMW60-10 | 60 | | | |
| SMW70-10 | 70 | | | |



SMW60-10

| | | |
|---|-------|--|
| A | 16 mm | |
| B | 25 mm | |
| C | 12 mm | |



SMW45-5



LG SERIES

Delay Line Probes

Technical specifications

- Longitudinal wave transducer
- Microdot axial connector
- Contact or with a water film scanning
- Interchangeable protective wedges
- Shielding adapted to automated inspection
- Bandwidth $\geq 75\%$
- LG-10 probes are delivered with anti-wear rings

Main applications

- Inspection of composite parts, carbon or epoxy glass fiber
- Characterization of flaws in metal parts
- Flaws detection and sizing near surface at a 0.25 mm in-depth
- Density measurements

High temperature delay line upon request up to 250 °C

| REFERENCE | FREQUENCY MHz | CRYSTAL SIZE mm | DELAY LINE LW 0° | CONNECTOR | |
|-----------|---------------|-----------------|------------------|-----------|--------------|
| LG10-3 | 10 | 3 | S10 (10 mm) | Microdot | |
| LG15-3 | 15 | | | | |
| LG3-6 | 3 | 6 | | | |
| LG5-6 | 5 | | | | |
| LG8-6 | 8 | | | | |
| LG10-6 | 10 | | | | |
| LG15-6 | 15 | | | | |
| LG3-10 | 3 | 10 | | | SG13 (13 mm) |
| LG5-10 | 5 | | | | |
| LG8-10 | 8 | | | | |
| LG10-10 | 10 | | | | |
| LG3-13 | 3 | 13 | | | |
| LG5-13 | 5 | | | | |
| LG10-13 | 10 | | | | |
| LG15-13 | 15 | | | | |
| LG3-15 | 3 | 15 | SH13 (13 mm) | | |
| LG5-15 | 5 | | | | |
| LG8-15 | 8 | | | | |



S10 DELAY LINE



TPG Wedge



LP Wedge

LG WEDGES SERIES

LG shear wave wedges

| REFERENCE | REFRACTED ANGLE IN ° | ADAPTABLE PROBES |
|---------------------------------------|----------------------|------------------|
| INTERCHANGEABLE SCREWED WEDGES | | |
| TS38 | 38 | LG-3 / LG-6 |
| TS45 | 45 | |
| TS60 | 60 | |
| TS70 | 70 | |
| TSG38 | 38 | LG-10 / LG-13 |
| TSG45 | 45 | |
| TSG60 | 60 | |
| TSG70 | 70 | |
| TSH38 | 38 | LG-15 |
| TSH45 | 45 | |
| TSH60 | 60 | |
| TSH70 | 70 | |
| INTERCHANGEABLE SLOT IN WEDGES | | |
| TP38 | 38 | LG-3 / LG-6 |
| TP45 | 45 | |
| TP60 | 60 | |
| TP70 | 70 | |
| TPG38 | 38 | LG-10 / LG-13 |
| TPG45 | 45 | |
| TPG60 | 60 | |
| TPG70 | 70 | |
| TPH38 | 38 | LG-15 |
| TPH45 | 45 | |
| TPH60 | 60 | |
| TPH70 | 70 | |

LG longitudinal wave wedges

| REFERENCE | REFRACTED ANGLE IN ° | ADAPTABLE PROBES |
|---------------------------------------|----------------------|------------------|
| INTERCHANGEABLE SCREWED WEDGES | | |
| LS38 | 38 | LG-3 / LG-6 |
| LS45 | 45 | |
| LS60 | 60 | |
| LS70 | 70 | |
| LSG38 | 38 | LG-10 / LG-13 |
| LSG45 | 45 | |
| LSG60 | 60 | |
| LSG70 | 70 | |
| LSH38 | 38 | LG-15 |
| LSH45 | 45 | |
| LSH60 | 60 | |
| LSH70 | 70 | |
| INTERCHANGEABLE SLOT IN WEDGES | | |
| LP38 | 38 | LG-3 / LG-6 |
| LP45 | 45 | |
| LP60 | 60 | |
| LP70 | 70 | |
| LPG38 | 38 | LG-10 / LG-13 |
| LPG45 | 45 | |
| LPG60 | 60 | |
| LPG70 | 70 | |
| LPH38 | 38 | LG-15 |
| LPH45 | 45 | |
| LPH60 | 60 | |
| LPH70 | 70 | |







CONVENTIONAL TRANSDUCERS

Aeronautics

Railway

Contact

Immersion

TOFD

Specific

RAIL INSPECTION: PROBES AND TOOLS

Shear and longitudinal waves

TRIPLE MANUAL - TRIPLE STICK



“TRIPLE MANUAL” PROBE

The purpose of this probe is to ensure monitoring, evolution and characterization of flaws in manual mode. The probe is made up of 3 independent, commutable elements which can be switched with a 3 way-switch:

- Shear waves 38°, frequency 4 MHz
- Shear waves 68°, frequency 4 MHz
- Longitudinal waves 0°, frequency 4 MHz

Ref:

- EKTМ



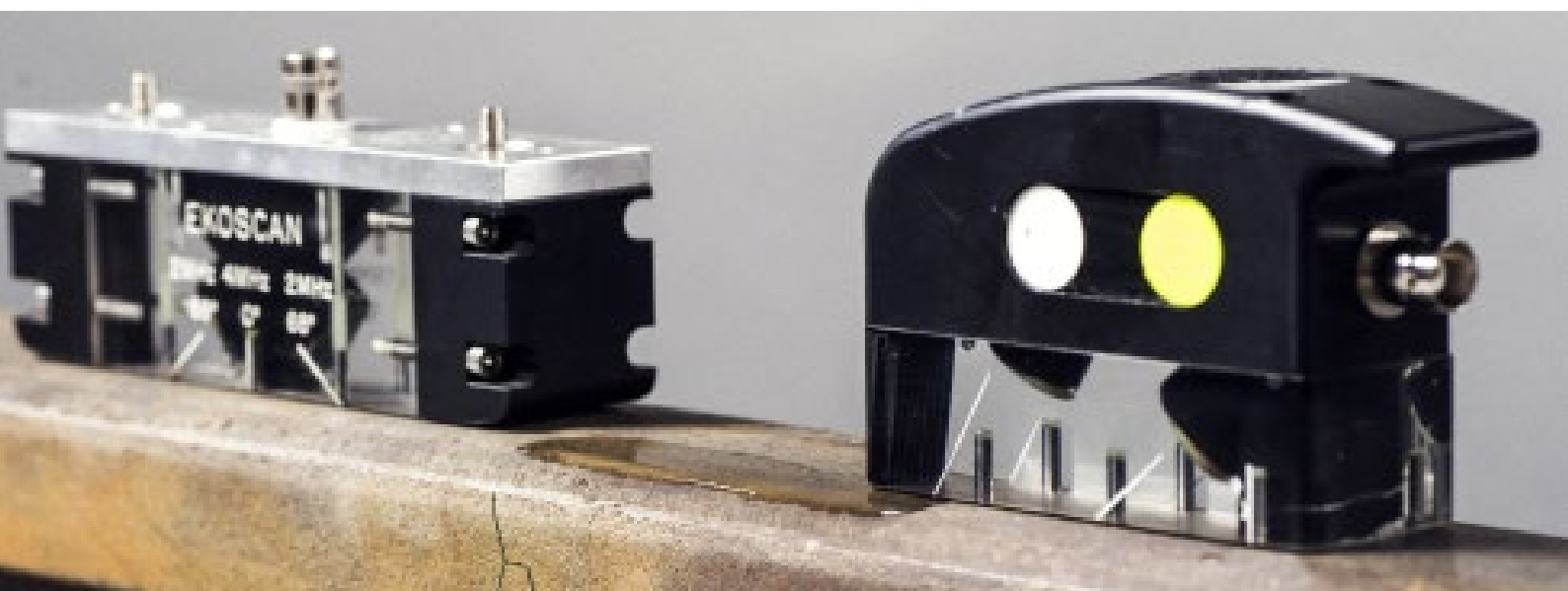
“TRIPLE STICK” PROBE

A probe composed of three ceramic piezoelectric elements is used for the detection of transverse cracks and rail head detachment. The three piezoelectric elements are balanced in sensitivity to allow simplified calibration (amplification and sound circuit). This new generation “triple stick” transducer is equipped with an anti-wear pad in the front and back sides of the wedge. Triple stick probe is used with EKOSCAN inspection stick for a quick and comfortable inspection.

- Shear waves 68°, frequency 2 MHz
- Longitudinal wave 0°, frequency 4 MHz
- One unique connector for the 3 crystals

Ref:

- EKTC



TRIPLE STICK PROBE MOUNTED ON INSPECTION STICK



✓ APPROVED



RAIL INSPECTION: INSPECTION STICK

Inspection stick used in rail flaw detection



Magnetic testing stick with an adjusted telescopic handle. For more comfort at work this telescopic handle can be adjusted to the user's height.

An aluminum carriage equipped with 2 magnetic wheels prevents derailment of the stick. An adjustable water inlet minimizes water flow. This probe is maintained in place thanks to 2 retaining springs.

Ref:

- EKORAIL3
- SAC



LOCOMOTIVE MOUNTED PROBES

Shear and longitudinal waves

Probes are mounted on wagons for automated conventional or TOFD railway inspection

| REFERENCE | REFRACTED ANGLE IN° | FREQUENCY MHz | CRYSTAL SIZE mm | CONNECTOR |
|--------------------------------------|---------------------|---------------|-----------------|-----------|
| SHEAR WAVE TRANSDUCERS | | | | |
| V6-ERC-OT35-2.25-D20-SN | 35 | 2.25 | Ø20 | BNC |
| V6-ERC-OT35-2.25-D20-SP | | | | |
| V6-ERC-OT55-2.25-D13-SN | 55 | | Ø13 | |
| V6-ERC-OT55-2.25-D13-SP | | | | |
| V6-ERC-OT70-2.25-25X12-SN | 70 | | 25x12 | |
| V6-ERC-OT70-2.25-25X12-SP | | | | |
| V6-ERC-OT70/5D-2.25-20X15-SN | | | 20x15 | |
| V6-ERC-OT70/5D-2.25-20X15-SP | | | | |
| V6-ERC-OT70/5G-2.25-20X15-SN | | | | |
| V6-ERC-OT70/5G-2.25-20X15-SP | | | | |
| LONGITUDINAL WAVE TRANSDUCERS | | | | |
| V6-ERD-OL0-2.25-D17/2-SN | 0 | 2.25 | Ø17/2 | BNC |
| V6-ERD-OL0-2.25-D17/2-SP | | | | |
| V6-ERD-OL0-4-D17/2-SN | | 4 | | |
| V6-ERD-OL0-4-D17/2-SP | | | | |
| V6-ERD-OL55/TOFD-2.25-4X20-SN | 55 | 2.25 | 4x20 | |
| V6-ERD-OL55/TOFD-2.25-4X20-SP | | | | |
| SPI-ERC-OT70/5D-2.25-20X15-MA | 70 | 2.25 | 20x15 | |
| SPI-ERC-OT70/5G-2.25-20X15-MA | | | | |
| SHEAR WAVE TRANSDUCERS | | | | |
| V3-ERC-OT70D-2.25-15X20-SN | 70 | 2.25 | 15x20 | Lemo00 D |
| V3-ERC-OT70G-2.25-15X20-SN | | | | Lemo00 G |
| LONGITUDINAL WAVE TRANSDUCERS | | | | |
| V3-ERD-OL0-2.25-D17/2-SN | 0 | 2.25 | Ø17/2 | Lemo00 |

SN: without spoke, without chamfer.

SP: with spoke, with chamfer







RAIL INSPECTION: EKORAIL4

EKORAIL4 has been designed to allow the simultaneous inspection of both rails. Pushed along the track by a qualified SNCF operator, this mechanical system uses two SNCF approved EKTC transducers, equipped with three active elements (68 °, 0 °, 68 °). It allows the detection of vertical and horizontal cracks. The information collected is displayed on one unique screen (right rail / left rail) for real-time visualization.

The EKOSCAN EKORAIL4 has been designed for easy use on any type of tracks. Its maintenance is quick and simple. A smart system allows the EKORAIL4 to be folded for easy transportation. The EKORAIL4 is also compatible with metric lines and can fit in an utility vehicle.

The ultrasonic boards are protected by a holder from weather conditions (sun, rain...). The EKORAIL4 is supplied with two SNCF approved EKTC transducers. A wheel encoder allows the precise localization of anomalies detected along the tracks.

The EKORAIL4 is also available without any UT board holder but with a bluetooth connected device allowing an overall weight reduction of 3 kg.

Ref:

- EKORAIL4





CONVENTIONAL TRANSDUCERS

Aeronautics

Railway

Contact

Immersion

TOFD

Specific

Shear wave angle beam transducers

MINIATURE EDITION

Technical specifications

- Shear wave transducer
- High-energy piezoelectric element
- Lemo00 axial or top output connectors upon request
- Shielding adapted to automated control
- High resolution, sensitivity and repeatability
- AVG diagrams available upon request
- Wear resistant probes

Main applications

- Contact inspection
- Inspection of parts with complex geometry
- 8 mm to 50 mm thick parts
- Used for production and maintenance

| REFERENCE | REFRACTED ANGLE in ° | FREQUENCY MHz | CRYSTAL SIZE mm | CONNECTOR |
|--|-------------------------|------------------|--------------------|----------------------|
| SHEAR WAVE ANGLE BEAM TRANSDUCERS | | | | |
| MW35-4 | 35 | 4 | 8x9 | Lemo00-Axial |
| MW38-4 | 38 | | | |
| MW45-4 | 45 | | | |
| MW60-4 | 60 | | | |
| MW70-4 | 70 | | | |
| MW35-4 TC | 35 | 4 | 8x9 | Lemo00-Top connector |
| MW38-4 TC | 38 | | | |
| MW45-4 TC | 45 | | | |
| MW60-4 TC | 60 | | | |
| MW70-4 TC | 70 | | | |
| SURFACE WAVE TRANSDUCER | | | | |
| MW90-4 | 90 | 4 | 8x9 | Lemo00-Axial |

| | | |
|---|---------|--|
| A | 22 mm |  |
| B | 28 mm | |
| C | 16,7 mm | |



MW45-4



MW60-4



MW70-4

Shear wave angle beam transducers

PIEZOCOMPOSITE MINIATURE EDITION

Technical specifications

- Shear wave transducer
- High-energy piezocomposite element
- Lemo00 axial or top output connectors upon request
- Shielding adapted to automated control
- High resolution, sensivity and repetability
- AVG diagrams available upon request
- Wear resistant probes

Main applications

- Contact inspection
- Inspection of parts with complex geometry
- 8 mm to 50 mm thick parts
- Used for production and maintenance

| REFERENCE | REFRACTED ANGLE in ° | FREQUENCY MHz | CRYSTAL SIZE mm | CONNECTOR |
|--------------|-------------------------|------------------|--------------------|----------------------|
| MW35-2 PC | 35 | 2 | 8x9 | Lemo00-Axial |
| MW38-2 PC | 38 | | | |
| MW45-2 PC | 45 | | | |
| MW60-2 PC | 60 | | | |
| MW70-2 PC | 70 | | | |
| MW35-2 PC TC | 35 | | | Lemo00-Top connector |
| MW38-2 PC TC | 38 | | | |
| MW45-2 PC TC | 45 | | | |
| MW60-2 PC TC | 60 | | | |
| MW70-2 PC TC | 70 | | | |

| | | |
|---|---------|--|
| A | 22 mm |  |
| B | 28 mm | |
| C | 16,7 mm | |



MIW PC SERIES

Shear waves angle beam transducers

PIEZOCOMPOSITE MINIATURE EDITION

MIW PC
14x16 or 14x14

Technical specifications

- Shear wave transducer
- High-energy piezocomposite element
- Lemo00 axial or top output connectors upon request
- Shielding adapted to automated control
- High resolution, sensitivity and repeatability
- AVG diagrams available upon request
- Wear resistant probes

Main applications

- Contact inspection
- Inspection of parts with complex geometry
- 8 mm to 50 mm thick parts
- Used for production and maintenance

| REFERENCE | REFRACTED ANGLE iN ° | FREQUENCY MHz | CRYSTAL SIZE mm | CONNECTOR | | |
|---------------------|-------------------------|------------------|--------------------|----------------------|-------|----------------------|
| MIW35-2 14x14 PC | 35 | 2 | 14x14 | Lemo00-Axial | | |
| MIW38-2 14x14 PC | 38 | | | | | |
| MIW45-2 14x14 PC | 45 | | | | | |
| MIW60-2 14x14 PC | 60 | | | | | |
| MIW70-2 14x14 PC | 70 | | | | | |
| MIW35-4 14X14 PC | 35 | 4 | | | 14x14 | Lemo00-Axial |
| MIW38-4 14X14 PC | 38 | | | | | |
| MIW45-4 14x14 PC | 45 | | | | | |
| MIW60-4 14x14 PC | 60 | | | | | |
| MIW70-4 14X14 PC | 70 | | | | | |
| MIW35-2 14X14 PC TC | 35 | 2 | 14x14 | Lemo00-Top connector | | |
| MIW38-2 14X14 PC TC | 38 | | | | | |
| MIW45-2 14X14 PC TC | 45 | | | | | |
| MIW60-2 14X14 PC TC | 60 | | | | | |
| MIW70-2 14X14 PC TC | 70 | | | | | |
| MIW35-4 14X14 PC TC | 35 | 4 | | | 14x14 | Lemo00-Top connector |
| MIW38-4 14X14 PC TC | 38 | | | | | |
| MIW45-4 14X14 PC TC | 45 | | | | | |
| MIW60-4 14X14 PC TC | 60 | | | | | |
| MIW70-4 14X14 PC TC | 70 | | | | | |



| | | | |
|-----------|---|-------|--|
| MIW 14x16 | A | 30 mm | |
| | B | 43 mm | |
| | C | 21 mm | |
| MIW 14x14 | A | 30 mm | |
| | B | 38 mm | |
| | C | 20 mm | |

| REFERENCE | REFRACTED ANGLE in ° | FREQUENCY MHz | CRYSTAL SIZE mm | CONNECTOR | | |
|---------------------|-------------------------|------------------|--------------------|----------------------|-------|----------------------|
| MIW35-2 14x16 PC | 35 | 2 | 14x16 | Lemo00-Axial | | |
| MIW38-2 14x16 PC | 38 | | | | | |
| MIW45-2 14x16 PC | 45 | | | | | |
| MIW60-2 14x16 PC | 60 | | | | | |
| MIW70-2 14x16 PC | 70 | | | | | |
| MIW35-4 14X16 PC | 35 | 4 | | | 14x16 | Lemo00-Axial |
| MIW38-4 14X16 PC | 38 | | | | | |
| MIW45-4 14x16 PC | 45 | | | | | |
| MIW60-4 14X16 PC | 60 | | | | | |
| MIW70-4 14X16 PC | 70 | | | | | |
| MIW35-2 14X16 PC TC | 35 | 2 | 14x16 | Lemo00-Top connector | | |
| MIW38-2 14X16 PC TC | 38 | | | | | |
| MIW45-2 14X16 PC TC | 45 | | | | | |
| MIW60-2 14X16 PC TC | 60 | | | | | |
| MIW70-2 14X16 PC TC | 70 | | | | | |
| MIW35-4 14X16 PC TC | 35 | 4 | | | 14x16 | Lemo00-Top connector |
| MIW38-4 14X16 PC TC | 38 | | | | | |
| MIW45-4 14X16 PC TC | 45 | | | | | |
| MIW60-4 14X16 PC TC | 60 | | | | | |
| MIW70-4 14X16 PC TC | 70 | | | | | |



MIW SERIES

Shear waves angle beam transducers

MINIATURE EDITION

MIW
14x16 or 14x14

Technical specifications

- Shear wave transducer
- High-energy piezoelectric element
- Lemo00 axial or top output connectors upon request
- Shielding adapted to automated control
- High resolution, sensivity and repetability
- AVG diagrams available upon request
- Wear resistant probes

Main applications

- Contact inspection
- Inspection of parts with complex geometry
- 8 mm to 50 mm thick parts
- Used for production and maintenance

| REFERENCE | REFRACTED ANGLE IN ° | FREQUENCY MHz | CRYSTAL SIZE mm | CONNECTOR |
|------------------|-------------------------|------------------|--------------------|----------------------|
| MIW35-4 14x14 | 35 | 4 | 14x14 | Lemo00-Axial |
| MIW38-4 14x14 | 38 | | | |
| MIW45-4 14x14 | 45 | | | |
| MIW60-4 14x14 | 60 | | | |
| MIW70-4 14x14 | 70 | | | |
| MIW35-4 14X14 TC | 35 | 4 | 14x14 | Lemo00-Top connector |
| MIW38-4 14X14 TC | 38 | | | |
| MIW45-4 14X14 TC | 45 | | | |
| MIW60-4 14X14 TC | 60 | | | |
| MIW70-4 14X14 TC | 70 | | | |
| MIW35-4 14x16 | 35 | 4 | 14x16 | Lemo00-Axial |
| MIW38-4 14x16 | 38 | | | |
| MIW45-4 14x16 | 45 | | | |
| MIW60-4 14x16 | 60 | | | |
| MIW70-4 14x16 | 70 | | | |
| MIW35-4 14X16 TC | 35 | 4 | 14x16 | Lemo00-Top connector |
| MIW38-4 14X16 TC | 38 | | | |
| MIW45-4 14X16 TC | 45 | | | |
| MIW60-4 14X16 TC | 60 | | | |
| MIW70-4 14X16 TC | 70 | | | |



| | | | |
|-----------|---|-------|--|
| MIW 14x16 | A | 30 mm | |
| | B | 43 mm | |
| | C | 21 mm | |
| MIW 14x14 | A | 30 mm | |
| | B | 38 mm | |
| | C | 20 mm | |

Shear waves angle beam transducers

STANDARD EDITION

Technical specifications

- Shear wave transducer
- High-energy piezoelectric element
- Lemo1 back output connectors
- AVG diagrams upon request
- High resolution, sensivity and repetability
- AVG diagrams available upon request
- Wear resistant probes

Main applications

- Contact inspection
- Inspection of parts with complex geometry
- Parts above 50 mm thick
- Used for production and maintenance

| | | |
|---|-------|---|
| A | 45 mm |  |
| B | 54 mm | |
| C | 32 mm | |

| REFERENCE | REFRACTED ANGLE in ° | FREQUENCY MHz | CRYSTAL SIZE mm | CONNECTOR |
|-----------|-------------------------|------------------|--------------------|----------------------|
| W35-1 | 35 | 1 | 20x22 | Lemo01-Axial |
| W38-1 | 38 | | | |
| W45-1 | 45 | | | |
| W60-1 | 60 | | | |
| W70-1 | 70 | | | |
| W35-2 | 35 | 2 | | |
| W38-2 | 38 | | | |
| W45-2 | 45 | | | |
| W60-2 | 60 | | | |
| W70-2 | 70 | | | |
| W35-4 | 35 | 4 | | |
| W38-4 | 38 | | | |
| W45-4 | 45 | | | |
| W60-4 | 60 | | | |
| W70-4 | 70 | | | |
| W35-1 TC | 35 | 1 | 20x22 | Lemo01-Top connector |
| W38-1 TC | 38 | | | |
| W45-1 TC | 45 | | | |
| W60-1 TC | 60 | | | |
| W70-1 TC | 70 | | | |
| W35-2 TC | 35 | 2 | | |
| W38-2 TC | 38 | | | |
| W45-2 TC | 45 | | | |
| W60-2 TC | 60 | | | |
| W70-2 TC | 70 | | | |
| W35-4 TC | 35 | 4 | | |
| W38-4 TC | 38 | | | |
| W45-4 TC | 45 | | | |
| W60-4 TC | 60 | | | |
| W70-4 TC | 70 | | | |

EK-H SERIES

Longitudinal waves 0°, hard wear plate

STANDARD OR MINIATURE EDITION

Technical specifications

- Longitudinal wave transducer
- High energy piezocomposite element
- Lateral output connector
- Shielding adapted to automated control
- High resolution, sensivity and repetability
- AVG diagrams upon request
- Abrasion-resistant front part

Main applications

- Contact inspection of flat parts (sheet of metal)
- Inspection of rough or machined surfaces
- Used for production and maintenance
- Smooth or rough material
- Inspection of large forging parts

| REFERENCE | FREQUENCY MHz | CRYSTAL SIZE mm | CONNECTOR | |
|-----------|---------------|-----------------|-----------|--------|
| EK1H10 | 1 | 10 | Lemo00 | |
| EK2H10 | 2 | | | |
| EK4H10 | 4 | | | |
| EK5H10 | 5 | | | |
| EK1H20 | 1 | 20 | | |
| EK2H20 | 2 | | | |
| EK4H20 | 4 | | | |
| EK5H20 | 5 | | | |
| EK1H24 | 1 | 24 | | Lemo01 |
| EK2H24 | 2 | | | |
| EK4H24 | 4 | | | |



EK4H24



EK4H24



EK4H10

EK-M SERIES

Longitudinal waves 0°, membrane

STANDARD OR MINIATURE EDITION

Technical specifications

- Longitudinal wave transducer
- High energy piezocomposite element
- Lemo00 lateral output connector and Lemo01
- Shielding adapted to automated control
- High resolution, sensivity and repetability
- AVG diagrams upon request
- Protection membrane available

Main applications

- Contact inspection of flat pieces (sheet of metal)
- Inspection of rough or machined surfaces
- Used for production and maintenance
- Smooth or rough material
- Inspection of large forging parts

| REFERENCE | FREQUENCY MHz | CRYSTAL SIZE mm | CONNECTOR | MEMBRANE |
|-----------|---------------|-----------------|-----------|----------|
| EK1M10 | 1 | 10 | Lemo00 | MEM10 |
| EK2M10 | 2 | | | |
| EK4M10 | 4 | | | |
| EK5M10 | 5 | | | |
| EK1M20 | 1 | 20 | | MEM20 |
| EK2M20 | 2 | | | |
| EK4M20 | 4 | | | |
| EK5M20 | 5 | | | |
| EK1M24 | 1 | 24 | MEM24 | |
| EK2M24 | 2 | | | |
| EK4M24 | 4 | | | |



EK4M10



EK4M24



MEM10



EKD SERIES

Longitudinal waves - Dual crystal

STANDARD EDITION

Technical specifications

- Longitudinal wave transducers
- Dual element probes
- Semicircular or rectangular elements
- Low interference between emission and reception
- Lemo00 connector
- Shielding adapted to automated inspection
- High resolution, sensivity and repetability

Main applications

- Can be used for inspection according to EN 10160
- Detection of small or/and near surface flaws
- Corrosion detection on pipes
- Inspection of stainless steel cladding on ferritic steel
- Inspection of metal sheet and thin forged parts

| REFERENCE | FREQUENCY MHz | CRYSTAL SIZE mm | FOCAL DEPTH mm | CONNECTOR |
|---------------|---------------|-----------------|----------------|-----------|
| EKD1-21/2 | 1 | Ø21/2 | 10 | Lemo00 |
| EKD2-7/18F15 | 2 | 7x18 | 15 | |
| EKD2-7/18 0° | | | 20 | |
| EKD2-10 | | 3.5x10 | 10 | |
| EKD2-20 | | Ø20/2 | 20 | |
| EKD4-6/20 F12 | 4 | 6x20 | 12 | |
| EKD4-6/20 F25 | | | 25 | |
| EKD4-10 | | 3.5x10 | 10 | |
| EKD4-20 | | Ø20/2 | 20 | |
| EKD5-10 | 5 | 3.5x10 | 10 | |



EKD2-7/18F15



EKD4-10

SD-SMD SERIES

Longitudinal waves - Dual crystal

MINIATURE EDITION

Technical specifications

- Longitudinal wave transducers
- Dual element probes
- Semicircular or rectangular elements
- Low interference between emission and reception
- Microdot connectors
- Shielding adapted to automated inspection
- High resolution, sensivity and repetability

Main applications

- Can be used for inspection according to EN 10160
- Detection of small or/and near surface flaws
- Corrosion detection on pipes
- Inspection of stainless steel cladding on ferritic steel
- Inspection of metal sheet and thin forged parts

| REFERENCE | FREQUENCY MHz | CRYSTAL SIZE mm | FOCAL DEPTH mm | CONNECTOR |
|-----------|---------------|-----------------|----------------|-----------|
| SD-5 | 5 | Ø5/2 | 6 | Microdot |
| SD-10 | 10 | | | |
| SMD4F8 | 4 | Ø10/2 | 8 | |
| SMD5F8 | 5 | Ø5/2 | 3 | |
| SMD5F3 | | | | |
| SMD10F3 | 10 | | | |



SD10



SMD10F3



SWQ SERIES

Longitudinal waves transducers with interchangeable wedges

SUBMINIATURE EDITION

Technical specifications

- Longitudinal wave transducers
- Microdot axial connector
- Probes can be screwed on specific angle wedges to generate shear and longitudinal waves
- Custom made wedges available

Main applications

- Inspection of parts with complex geometry
- 6 mm to 15 mm thick parts



| REFERENCE | FREQUENCY MHz | CRYSTAL SIZE mm | WEDGE FOR SHEAR WAVES INSPECTION | WEDGE FOR LONGITUDINAL WAVES INSPECTION |
|------------|---------------|-----------------|----------------------------------|---|
| SWQ2.25-6 | 2.25 | 6 | EKT Series | EKL Series |
| SWQ3.5-6 | 3.5 | | | |
| SWQ5-6 | 5 | | | |
| SWQ7.5-6 | 7.5 | | | |
| SWQ10-6 | 10 | | | |
| SWQ2.25-10 | 2.25 | 10 | EKTG Series | EKLG Series |
| SWQ3.5-10 | 3.5 | | | |
| SWQ5-10 | 5 | | | |
| SWQ7.5-10 | 7.5 | | | |
| SWQ10-10 | 10 | | | |
| SWQ2.25-13 | 2.25 | 13 | EKTH Series | EKLH Series |
| SWQ3.5-13 | 3.5 | | | |
| SWQ5-13 | 5 | | | |
| SWQ7.5-13 | 7.5 | | | |
| SWQ10-13 | 10 | | | |

SWQ WEDGES SERIES

EKT

| SERIES | | REFERENCE | REFRACTED ANGLE IN ° | ADAPTABLE PROBES |
|--------|----------|-----------|-----------------------------------|----------------------------------|
| EKT | Standard | EKT35 | 35 | Interchangeable wedges for SWQ-6 |
| | | EKT38 | 38 | |
| | | EKT45 | 45 | |
| | | EKT60 | 60 | |
| | | EKT70 | 70 | |
| | | EKT90 | 90 | |
| | Court | EKT35-C | 35 | |
| | | EKT38-C | 38 | |
| | | EKT45-C | 45 | |
| | | EKT60-C | 60 | |
| | | EKT70-C | 70 | |
| | | EKT90-C | 90 | |
| EKTG | EKTG35 | 35 | Interchangeable wedges for SWQ-10 | |
| | EKTG38 | 38 | | |
| | EKTG45 | 45 | | |
| | EKTG60 | 60 | | |
| | EKTG70 | 70 | | |
| EKTH | EKTH35 | 35 | Interchangeable wedges for SWQ-13 | |
| | EKTH38 | 38 | | |
| | EKTH45 | 45 | | |
| | EKTH60 | 60 | | |
| | EKTH70 | 70 | | |

EKL

| SERIES | | REFERENCE | REFRACTED ANGLE IN ° | ADAPTABLE PROBES |
|--------|--------|-----------|-----------------------------------|------------------|
| EKL | EKL35 | 35 | Interchangeable wedges for SWQ-6 | |
| | EKL38 | 38 | | |
| | EKL45 | 45 | | |
| | EKL60 | 60 | | |
| | EKL70 | 70 | | |
| EKLG | EKLG35 | 35 | Interchangeable wedges for SWQ-10 | |
| | EKLG38 | 38 | | |
| | EKLG45 | 45 | | |
| | EKLG60 | 60 | | |
| | EKLG70 | 70 | | |
| EKLG | EKLH35 | 35 | Interchangeable wedges for SWQ-13 | |
| | EKLH38 | 38 | | |
| | EKLH45 | 45 | | |
| | EKLH60 | 60 | | |
| | EKLH70 | 70 | | |



VP AND DVP SERIES

Variable angle transducers

STANDARD OR MINIATURE EDITION

Technical specifications

- Single or dual element probes
- Shear or longitudinal transducer depending on angle
- Ultrasonic beam angle can be modified manually
- High resolution, sensitivity and repeatability
- Interchangeable piezoelectric elements
- Probes which can be used up to 140 °C for uninterrupted operations
- Three faces of the probe can be used when inspecting
- Lemo00 connector

Main applications

- Contact control of variable profile parts (nozzles...)
- Standard inspections and expertise on welds during or after welding
- Austenitic steel inspections
- TOFD inspection of materials
- Inspections of surfaces using Lamb waves
- Development of ultrasonic inspection methods

| EDITION | REFERENCE | TYPE | FREQUENCY MHz | CRYSTAL SIZE mm | ROOF ANGLE in ° | CONNECTOR |
|-----------|-----------|--------------|---------------|-----------------|-----------------|-----------|
| MINIATURE | MVP1 | Mono-element | 1 | 8x9 | - | Lemo00 |
| | MVP2 | | 2 | | | |
| | MVP4 | | 4 | | | |
| | MDVP2-1 | Bi-elements | 2 | 3.5x10 | 1 | |
| | MDVP2-3 | | | | 3 | |
| | MDVP4-1 | | 4 | | 1 | |
| | MDVP4-3 | | | | 3 | |
| STANDARD | VP05 | Mono-element | 0.5 | 20x22 | - | |
| | VP1 | | 1 | | | |
| | VP2 | | 2 | | | |
| | VP4 | | 4 | | | |
| | DVP2-3 | Bi-elements | 2 | 6x20 | 3 | |
| | DVP4-3 | | 4 | | | |



| | | | |
|--------------|---|-------|--|
| MVP/ MDVP | A | 40 mm | |
| | B | 45 mm | |
| | C | 20 mm | |
| DVP/VP | A | 48 mm | |
| | B | 62 mm | |
| | C | 32 mm | |



HIGH TEMPERATURE TRANSDUCER RANGE

Shear/Longitudinal wave transducers

HT EDITION

Technical characteristics

- High-energy piezoelectric element
- For temperatures up to **150 °C**
- Lemo00 output connectors
- Shielding adapted to automated control
- High resolution, sensivity and repetability
- Wear resistant probes

Main applications

- High temperature contact inspection
- Inspection of parts with complex geometry
- 8 mm to 50 mm thick parts
- Used for production and maintenance

| REFERENCE | REFRACTED ANGLE in ° | CRYSTAL SIZE mm | FREQUENCY MHz | CONNECTOR |
|--------------------------------------|-------------------------|--------------------|------------------|-----------|
| SHEAR WAVE TRANSDUCERS | | | | |
| MW45-4-HT | 45 | 8x9 | 4 | Lemo00 |
| MW60-4-HT | 60 | | | |
| MW70-4-HT | 70 | | | |
| MIW45-4-HT 14x14 | 45 | 14x14 | | |
| MIW60-4-HT 14x14 | 60 | | | |
| MIW70-4-HT 14x14 | 70 | | | |
| MIW45-4-HT 14x16 | 45 | 14x16 | | |
| MIW60-4-HT 14x16 | 60 | | | |
| MIW70-4-HT 14x16 | 70 | | | |
| LONGITUDINAL WAVE TRANSDUCERS | | | | |
| EKD4-10-HT | 0 | 3.5x10 | 4 | Lemo00 |
| HT510 | | | 5 | |

Additional characteristics (high temperature applications, frequency, angle, piezo size, top connectors) upon request
Steel value, please contact us about other materials (aluminium, cast iron, stainless steel, plastic parts)

DL AND DLM SERIES

Longitudinal angle beam transducers

STANDARD OR MINIATURE EDITION

Technical specifications

- Longitudinal wave transducer
- Dual element probe
- Lemo00 back output connector
- Shielding adapted to automatic control
- High resolution, sensitivity and repeatability
- System of water irrigation upon request
- Wear resistant probes

Main applications

- Contact inspection
- Probes used for austenitic weld inspection in either automatic or manual mode
- Adapted or standard depth focusing
- Can be used up to 100 °C
- Creeping waves inspection

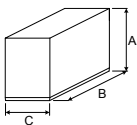
| EDITION | REFERENCE | REFRACTED ANGLE IN ° | FREQUENCY MHz | CRYSTAL SIZE mm | CONNECTOR |
|------------------------|--------------|----------------------|---------------|-----------------|-----------|
| TRL TRANSDUCERS | | | | | |
| MINIATURE | DLM38-2 5x10 | 38 | 2 | 5x10 | Lemo00 |
| | DLM45-2 5x10 | 45 | | | |
| | DLM60-2 5x10 | 60 | | | |
| | DLM38-4 5x10 | 38 | 4 | | |
| | DLM45-4 5x10 | 45 | | | |
| | DLM60-4 5x10 | 60 | | | |
| | DLM38-2 6x13 | 38 | 2 | 6x13 | |
| | DLM45-2 6x13 | 45 | | | |
| | DLM60-2 6x13 | 60 | | | |
| | DLM38-4 6x13 | 38 | 4 | | |
| | DLM45-4 6x13 | 45 | | | |
| | DLM60-4 6x13 | 60 | | | |
| STANDARD | DL38-2 10x22 | 38 | 2 | 10x22 | |
| | DL45-2 10x22 | 45 | | | |
| | DL60-2 10x22 | 60 | | | |
| | DL38-2 15x25 | 38 | 2 | 15x25 | |
| | DL45-2 15x25 | 45 | | | |
| | DL60-2 15x25 | 60 | | | |
| | DL38-4 15x25 | 38 | 4 | | |
| | DL45-4 15x25 | 45 | | | |
| | DL60-4 15x25 | 60 | | | |
| | DL38-2 20x34 | 38 | 2 | 20x34 | |
| | DL45-2 20x34 | 45 | | | |
| | DL60-2 20x34 | 60 | | | |
| | DL38-4 20x34 | 38 | 4 | | |
| | DL45-4 20x34 | 45 | | | |
| | DL60-4 20x34 | 60 | | | |

DL AND DLM SERIES

Creeping waves transducers

STANDARD OR MINIATURE EDITION

| EDITION | REFERENCE | REFRACTED ANGLE in ° | FREQUENCY MHz | CRYSTAL SIZE mm | CONNECTOR |
|----------------------------------|--------------|-------------------------|------------------|--------------------|-----------|
| CREeping WAVE TRANSDUCERS | | | | | |
| MINIATURE | DLM70-2 5X10 | 70 | 2 | 5x10 | Lemo00 |
| | DLM80-2 5x10 | 80 | | | |
| | DLM70-4 5x10 | 70 | 4 | | |
| | DLM80-4 5x10 | 80 | | | |
| | DLM70-2 6x13 | 70 | 2 | 6x13 | |
| | DLM80-2 6x13 | 80 | | | |
| | DLM70-4 6x13 | 70 | 4 | | |
| | DLM80-4 6x13 | 80 | | | |
| STANDARD | DL70-2 10x12 | 70 | 2 | 10x12 | Lemo00 |
| | DL80-2 10x12 | 80 | | | |
| | DL70-2 15x25 | 70 | 2 | 15x25 | |
| | DL80-2 15x25 | 80 | | | |
| | DL70-4 15x25 | 70 | 4 | | |
| | DL80-4 15x25 | 80 | | | |
| | DL70-2 20x34 | 70 | 2 | 20x34 | |
| | DL80-2 20x34 | 80 | | | |
| | DL70-4 20x34 | 70 | 4 | | |
| | DL80-4 20x34 | 80 | | | |

| | | | |
|-----|---|-------|---|
| DLM | A | 30 mm |  |
| | B | 35 mm | |
| | C | 20 mm | |
| DL | A | 44 mm | |
| | B | 55 mm | |
| | C | 31 mm | |



DL60-2 15x25



DLM60-2 5x10





CONVENTIONAL TRANSDUCERS

Aeronautics

Railway

Contact

Immersion

TOFD

Specific

IM SERIES

Immersion transducers

Technical specifications

- Single probe
- Longitudinal wave transducer
- High energy piezocomposite element
- High resolution, sensitivity and repetability
- Adapted to automated control
- Bandwidth $\geq 80\%$
- UHF connectors

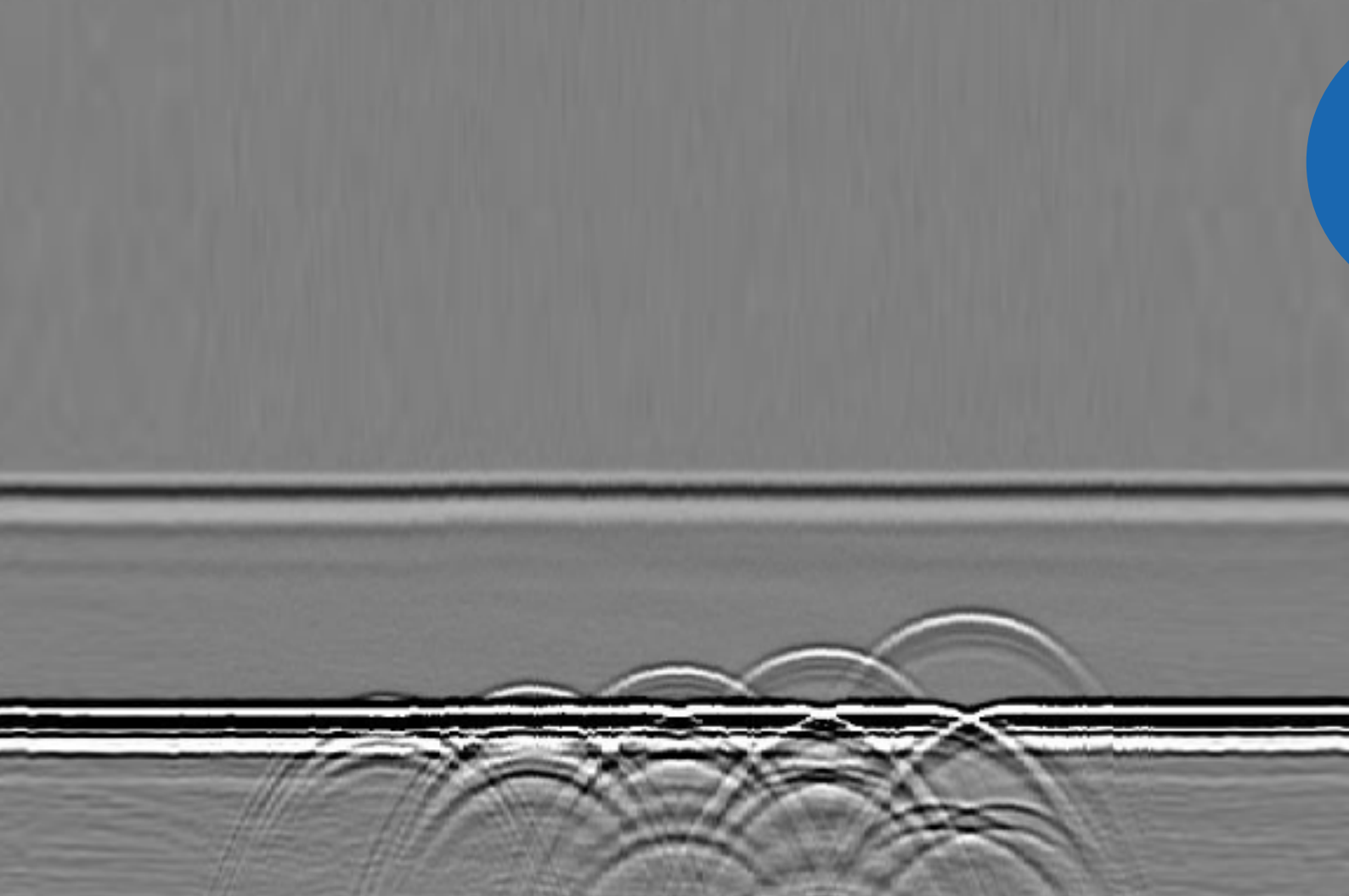
| REFERENCE | FREQUENCY MHz | CRYSTAL SIZE mm | CONNECTOR |
|------------|---------------|-----------------|-----------|
| IM-0.5-13 | 0.5 | Ø13 | UHF |
| IM-0.5-19 | | Ø19 | |
| IM-0.5-25 | | Ø25 | |
| IM-0.5-29 | | Ø29 | |
| IM-0.5-38 | | Ø38 | |
| IM-1-13 | 1 | Ø13 | |
| IM-1-19 | | Ø19 | |
| IM-1-25 | | Ø25 | |
| IM-1-29 | | Ø29 | |
| IM-1-38 | | Ø38 | |
| IM-2.25-6 | 2.25 | Ø6 | |
| IM-2.25-10 | | Ø10 | |
| IM-2.25-13 | | Ø13 | |
| IM-2.25-19 | | Ø19 | |
| IM-2.25-25 | | Ø25 | |
| IM-2.25-29 | | Ø29 | |
| IM-2.25-38 | | Ø38 | |

Main applications

- Immersion control
- Inspection of rough or machined surfaces
- Inspection of a wide range of materials: forged or machined parts, composite etc.

| REFERENCE | FREQUENCY MHz | CRYSTAL SIZE mm | CONNECTOR |
|-----------|---------------|-----------------|-----------|
| IM-3.5-6 | 3.5 | Ø6 | UHF |
| IM-3.5-10 | | Ø10 | |
| IM-3.5-13 | | Ø13 | |
| IM-3.5-19 | | Ø19 | |
| IM-3.5-25 | | Ø25 | |
| IM-5-6 | 5 | Ø6 | |
| IM-5-10 | | Ø10 | |
| IM-5-13 | | Ø13 | |
| IM-5-19 | | Ø19 | |
| IM-5-25 | | Ø25 | |
| IM-7.5-13 | 7.5 | Ø13 | |
| IM-7.5-19 | | Ø19 | |
| IM-10-6 | 10 | Ø6 | |
| IM-10-10 | | Ø10 | |
| IM-10-13 | | Ø13 | |
| IM-15-6 | 15 | Ø6 | |





CONVENTIONAL TRANSDUCERS

Aeronautics

Railway

Contact

Immersion

TOFD

Specific

TOFD PROBES

TFDT edition

Technical characteristics

- Longitudinal wave transducers
- High-energy piezoelectric element
- High resolution thanks to a very short time pulse signal
- Lemo00 or Microdot using an upper output connector
- Bandwidth adapted to more than 80% TOFD inspections
- Wedges including 2 water inlets to allow good coupling

Main applications

- Weld inspections compliant to NF EN ISO 10863 (See the recommended b devices according to the nature of the material and to the part to be inspected)
- Probes and wedges compatible with every TOFD system



TFDT M10 & TFDT M12



COMPAS

TOFD KIT

| REFERENCE | FREQUENCY MHz | CRYSTAL SIZE mm | THREAD DIAMETER OF THE WEDGE mm | LONGITUDINAL WAVE WEDGES | | |
|-----------------|---------------|-----------------|---------------------------------|-------------------------------|-----|-------------------------------|
| TFDT5-3/M10 | 5 | 3 | Ø 10 | WT M10 WTI M10 WT M10 O | | |
| TFDT7.5-3/M10 | 7.5 | | | | | |
| TFDT10-3/M10 | 10 | | | | | |
| TFDT15-3/M10 | 15 | | | | | |
| TFDT5-5/M10 | 5 | 5 | | | | |
| TFDT3.5-6/M10 | 3.5 | 6 | | | | |
| TFDT5-6/M10 | 5 | | | | | |
| TFDT7.5-6/M10 | 7.5 | | | | | |
| TFDT10-6/M10 | 10 | | | | | |
| TFDT15-6/M10 | 15 | | | | | |
| TFDT4-3/M12 | 4 | 3 | Ø12 | WT M12 WTI M12 WT M12 O | | |
| TFDT5-3/M12 | 5 | | | | | |
| TFDT7.5-3/M12 | 7.5 | | | | | |
| TFDT10-3/M12 | 10 | | | | | |
| TFDT15-3/M12 | 15 | | | | | |
| TFDT10-5/M12 | 10 | 5 | | | | |
| TFDT15-5/M12 | 15 | | | | | |
| TFDT4-6/M12 | 4 | 6 | | | | |
| TFDT3.5-6/M12 | 3.5 | | | | | |
| TFDT5-6/M12 | 5 | | | | | |
| TFDT7.5-6/M12 | 7.5 | | | | | |
| TFDT10-6/M12 | 10 | | | | | |
| TFDT15-6/M12 | 15 | | | | | |
| TFDT3.5-10/M12 | 3.5 | 10 | | | | |
| TFDT5-10/M12 | 5 | | | | | |
| TFDT7.5-10/M12 | 7.5 | | | | | |
| TFDT10-10/M12 | 10 | | | | | |
| TFDT2.25-13/M20 | 2.25 | 13 | | | Ø20 | WT M20 WTI M20 WT M20 O |
| TFDT5-13/M20 | 5 | | | | | |
| TFDT2.25-19/M25 | 2.25 | 19 | | | Ø25 | WT M25 WTI M25 WT M25 O |
| TFDT3.5-19/M25 | 3.5 | | | | | |
| TFDT5-19/M25 | 5 | | | | | |

TOFD WEDGES WT SERIES

Technical characteristics

- Wedges suitable for TOFD welding control
- Wedges composed of two water inlets for an optimized coupling with the inspected piece

Main applications

- Compatible with TFDT probes
- Compatible with EKOSCAN scanners and compas

| REFERENCE | REFRACTED ANGLE in ° | ADAPTABLE PROBES | ADAPTABLE COMPAS |
|-----------|-------------------------|------------------|------------------|
| WT38/M10 | 38 | TFDT/M10 | COMPASM10 |
| WT45/M10 | 45 | | |
| WT55/M10 | 55 | | |
| WT60/M10 | 60 | | |
| WT70/M10 | 70 | | |
| WT38/M12 | 38 | TFDT/M12 | COMPASM12 |
| WT45/M12 | 45 | | |
| WT55/M12 | 55 | | |
| WT60/M12 | 60 | | |
| WT70/M12 | 70 | | |
| WT38/M20 | 38 | TFDT/M20 | |
| WT45/M20 | 45 | | |
| WT55/M20 | 55 | | |
| WT60/M20 | 60 | | |
| WT70/M20 | 70 | | |
| WT38/M25 | 38 | TFDT/M25 | |
| WT45/M25 | 45 | | |
| WT55/M25 | 55 | | |
| WT60/M25 | 60 | | |
| WT70/M25 | 70 | | |



TOFD WEDGES WTI SERIES

Technical characteristics

- Stainless steel wedges suitable for TOFD welding control
- Wedges composed of two water inlets for an optimized coupling with the inspected piece

Main applications

- Compatible with TFDT probes
- Compatible with EKOSCAN scanners and compas

| REFERENCE | REFRACTED ANGLE in ° | ADAPTABLE PROBES | ADAPTABLE COMPAS |
|-----------|-------------------------|------------------|------------------|
| WTI35/M10 | 35 | TFDT/M10 | COMPASM10 |
| WTI38/M10 | 38 | | |
| WTI45/M10 | 45 | | |
| WTI55/M10 | 55 | | |
| WTI60/M10 | 60 | | |
| WTI70/M10 | 70 | | |
| WTI35/M12 | 35 | TFDT/M12 | COMPASM12 |
| WTI38/M12 | 38 | | |
| WTI45/M12 | 45 | | |
| WTI55/M12 | 55 | | |
| WTI60/M12 | 60 | | |
| WTI70/M12 | 70 | | |



TOFD WEDGES WT/O SERIES

Technical characteristics

- Wedges suitable for TOFD welding control
- Wedges composed of two water inlets for an optimized coupling with the inspected piece

Main applications

- Compatible with TFDT probes
- Compatible with all scanners on the market.

| REFERENCE | REFRACTED ANGLE in ° | ADAPTABLE PROBES |
|-------------|-------------------------|------------------|
| WTI35/M10/O | 35 | TFDT/M10 |
| WTI38/M10/O | 38 | |
| WTI45/M10/O | 45 | |
| WTI55/M10/O | 55 | |
| WTI60/M10/O | 60 | |
| WTI70/M10/O | 70 | |
| WTI35/M12/O | 35 | TFDT/M12 |
| WTI38/M12/O | 38 | |
| WTI45/M12/O | 45 | |
| WTI55/M12/O | 55 | |
| WTI60/M12/O | 60 | |
| WTI70/M12/O | 70 | |



TOFD PROBES

F-SCAN edition



Technical characteristics

- Longitudinal wave transducers
- High-energy piezoelectric element
- High resolution due to a very short time pulse signal
- Bandwidth adapted to more than 80% TOFD inspections
- Welds thicker than 6 mm
- Wear resistant wedges
- Ceramic size is defined in order to maximize the beam aperture within the inspection plan

Main applications

Weld inspections compliant to NF EN ISO 10863 (See recommended devices according to the nature of the material and to the part to be inspected)



| REFERENCE | FREQUENCY MHz | REFRACTED ANGLE in ° | CRYSTAL SIZE mm | BANDWIDTH | CONNECTOR |
|-----------|---------------|----------------------|-----------------|-----------|-----------|
| F-SCAN4 | 4 | 55 | 4x8 | >80% | Lemo00 |
| F-SCAN5 | 5 | | | | |
| F-SCAN7.5 | 7.5 | | | | |
| F-SCAN10 | 10 | | | | |





CONVENTIONAL TRANSDUCERS

Aeronautics

Railway

Contact

Immersion

TOFD

Specific

SPECIFIC PROBES

In order to always fit your needs, EKOSCAN can manufacture all types of UT transducers, either conventional or Phased Array.

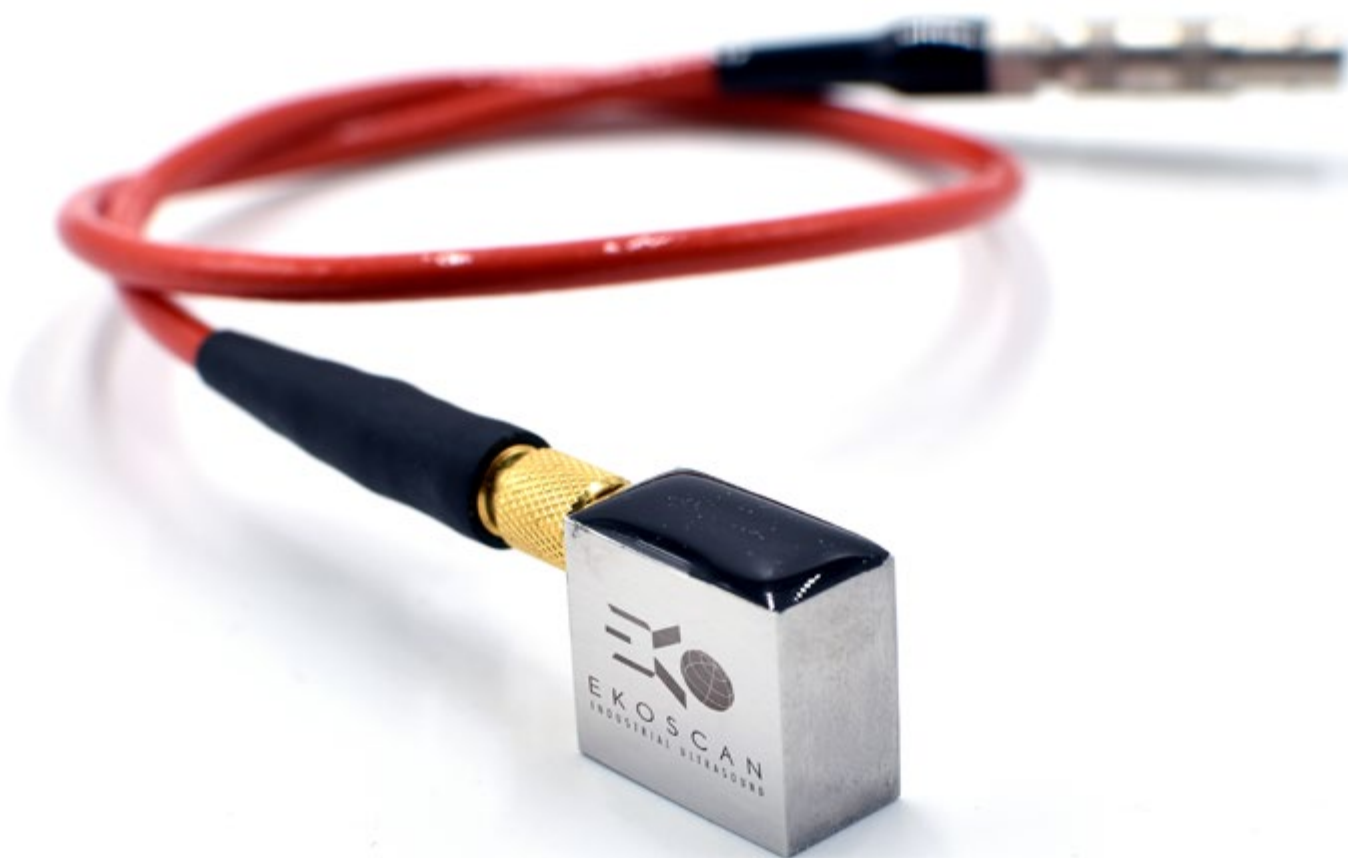
As an ISO 9001: 2015 certified company, EKOSCAN is extremely careful about material selection and manufacturing processes. Our probes guarantee our customers the benefits of the latest innovations regarding piezocomposite, backing, impedance adaptation layer, etc.

Specific probes for hostile environment: high temperature, high pressure, corrosive environment, etc.

Specific probes designed to fit your specific application: optimization of every parameter to guarantee you the best detection.

All our custom and specific probes are in compliance with EN 12 668-2 standards

You can now customize your Linear Phased Array Probes online. See instructions on page 127







PROBES

EK10-11-12

DLA & DMA

EK FX

EK EX-NF

HP

Sapphire

EK10-11-12 & IDC

High temperature wedge



EK 10 - 11 - 12 - 13 PROBES

Description

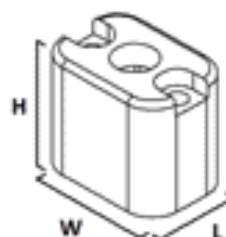
- Probes are designed to have a low profile for area with restricted access
- Acoustic adaptation to water or Rexolite®
- Each probe is delivered with its EN 18563-2 certificate
- IPEX and HYPERTRONIX connectors are available with 3 m cable or any other length upon request



Typical applications

- Manual or automated inspection
- Detection of flaws and sizing

| REFERENCE | FREQUENCY MHz | NUMBER OF ELEMENTS | PITCH mm | ELEVATION mm | EXTERNAL DIMENSIONS | | |
|----------------------|---------------|--------------------|----------|--------------|---------------------|----|----|
| | | | | | L | W | H |
| LINEAR PROBES | | | | | | | |
| EK10-LA2.25/16 | 2.25 | 16 | 0.6 | 10 | 16 | 23 | 20 |
| EK10-LA3.5/16 | 3.5 | | 0.6 | 10 | | | |
| EK10-LA5/16 | 5 | | 0.6 | 10 | | | |
| EK10-LA5/32 | 5 | 32 | 0.3 | 8 | | | |
| EK10-LA7.5/32 | 7.5 | | 0.3 | 7 | | | |
| EK10-LA10/32 | 10 | | 0.3 | 7 | | | |
| EK11-LA2.25/32 | 2.25 | 32 | 0.6 | 10 | 25 | 23 | 20 |
| EK11-LA5/32 | 5 | | 0.6 | 10 | | | |
| EK11-LA5/64 | 5 | 64 | 0.3 | 8 | | | |
| EK11-LA10/64 | 10 | | 0.3 | 7 | | | |
| EK11-LA15/64 | 15 | | 0.3 | 8 | | | |
| EK12-LA3.5/64 | 3.5 | 64 | 0.6 | 10 | 45 | 23 | 20 |
| EK12-LA5/64 | 5 | | 0.6 | 10 | | | |
| EK12-LA2.25/64 | 2.25 | | 0.6 | 10 | | | |
| EK12-LA7.5/64 | 7.5 | | 0.5 | 9 | | | |
| EK12-LA10/64 | 10 | | 0.6 | 7 | | | |
| EK13-LA5/128 | 5 | | 128 | 0.6 | | | |
| MATRIX PROBES | | | | | | | |
| EK10-M10/64 | 10 | 64 | 0.8 | 1.3 | 16 | 23 | 20 |
| EK11-M5/64 | 5 | | 1.4 | 0.35 | 25 | | |
| EK11-M7.5/64 | 7.5 | | 1.3 | 1.8 | | | |
| EK11-M10/64 | 10 | | 0.35 | 7.5 | | | |



DMA & DLA PROBES

Description

- Dual Matrix Array Probes for beam steering in 2 directions
- Each probe is delivered with its EN 18563-2 certificate

Typical applications

- High thickness weld inspection
- Austenitic weld inspection

| REFERENCE | TYPE | FREQUENCY MHz | NUMBER OF ELEMENTS | PITCH mm | ELEVATION mm | EXTERNAL DIMENSIONS | | |
|---------------------------------------|------|---------------|--------------------|----------|--------------|---------------------|------|----|
| | | | | | | L | W | H |
| DUAL MATRIX ARRAY (DMA) PROBES | | | | | | | | |
| EK17-DMA1.5/56 | DMA | 1.5 | 2 x (7x4) | 2.7 | 3 | 16 | 34.7 | 20 |
| EK17-DMA2.25/56 | | 2.25 | | | | | | |
| EK17-DMA4/56 | | 4 | | | | | | |
| EK27-DMA4/64 | | 4 | 2 x (16x2) | 1 | | 29 | 10 | |
| EK27-DMA7.5/64 | | 7.5 | | | | | | |
| DUAL LINEAR ARRAY (DLA) PROBES | | | | | | | | |
| EK28-DLA2.25/64 | DLA | 2.25 | 2 x 32 | 1 | 5 | 44 | 12 | 20 |
| EK28-DLA4/64 | | 4 | | | | | | |
| EK28-DLA7.5/64 | | 7.5 | | | | | | |
| EK280-DLA5/128 | | 5 | 2 x 64 | | | 78 | | |
| EK280-DLA7.5/128 | | 7.5 | | | | | | |



EK FX PROBES

Ekoflex

Description

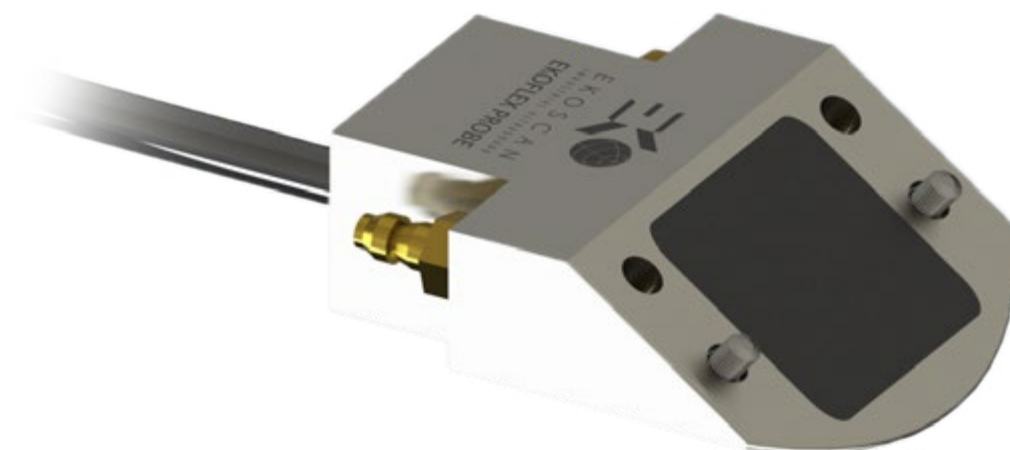
- Miniature edition
- Low profile probes
- Shaped active elements for low thickness inspection
- Each probe is delivered with its EN 18563-2 certificate
- Design for EKOFLEX scanner use

Typical applications

- Small piping/tube inspection
- Low thickness weld



| REFERENCE | TYPE | FREQUENCY MHz | NUMBER OF ELEMENTS | PITCH mm | ELEVATION mm | EXTERNAL DIMENSIONS | | |
|----------------|--|---------------|--------------------|----------|--------------|-----------------------------------|---|---|
| | | | | | | L | W | H |
| EKOFLEX PROBES | | | | | | | | |
| EKFX-LA5/16 | Linear Array with 35mm curved shaping in elevation direction | 5 | 16 | 0.5 | 10 | scanner compatible design EKOFLEX | | |
| EKFX-LA7.5/16 | | 7.5 | | | | | | |
| EKFX-LA7.5/32 | | 10 | 32 | 0.25 | | | | |
| EKFX-LA10/32 | | | | | | | | |



EK EX-NF PIPE PROBES

Low Frequency and Nearfield Probes (NF)



Description

- Large aperture probes
- Highly damped probes
- Each probe is delivered with its EN 18563-2 certificate

Typical applications

- Corrosion mapping
- Composite inspection
- C-Scan

| REFERENCE | TYPE | FREQUENCY MHz | NUMBER OF ELEMENTS | PITCH mm | ELEVATION mm | EXTERNAL DIMENSIONS | | |
|--|------------------|---------------|--------------------|----------|--------------|---------------------|----|----|
| | | | | | | L | W | H |
| LOW FREQUENCY AND NEARFIELD (NF) PROBES | | | | | | | | |
| EK EX-LA1/60 | Linear nearfield | 1 | 60 | 1.4 | 22 | 94 | 38 | 50 |
| EK EX-LA15/64 | | 15 | 64 | 0.3 | 6 | 25 | 23 | 20 |
| EKNF1-3.5/64 | | 3.5 | | 1 | 7 | 66 | 19 | 25 |
| EKNF1-5/64 | | 5 | 130 | | | | | |
| EKNF3-5/128 | | | 128 | | | | | |

Description

- Large aperture probes
- Each probe is delivered with its EN 18563-2 certificate

Typical applications

- Pipe and tube inspection
- Weld inspection
- C-Scan

| REFERENCE | TYPE | FREQUENCY MHz | NUMBER OF ELEMENTS | PITCH mm | ELEVATION mm | EXTERNAL DIMENSIONS | | |
|----------------|--------|---------------|--------------------|----------|--------------|---------------------|----|----|
| | | | | | | L | W | H |
| EKPIPE-2.25/60 | Linear | 2,25 | 60 | 1 | 10 | 68 | 26 | 30 |
| EKPIPE-5/60 | | 5 | | | | | | |
| EKPIPE-7.5/60 | | 7.5 | | | | | | |
| EKPIPE-5/64 | | 5 | 64 | 0.9 | | | | |



HIGH PRESSURE PROBES

EKHP probes

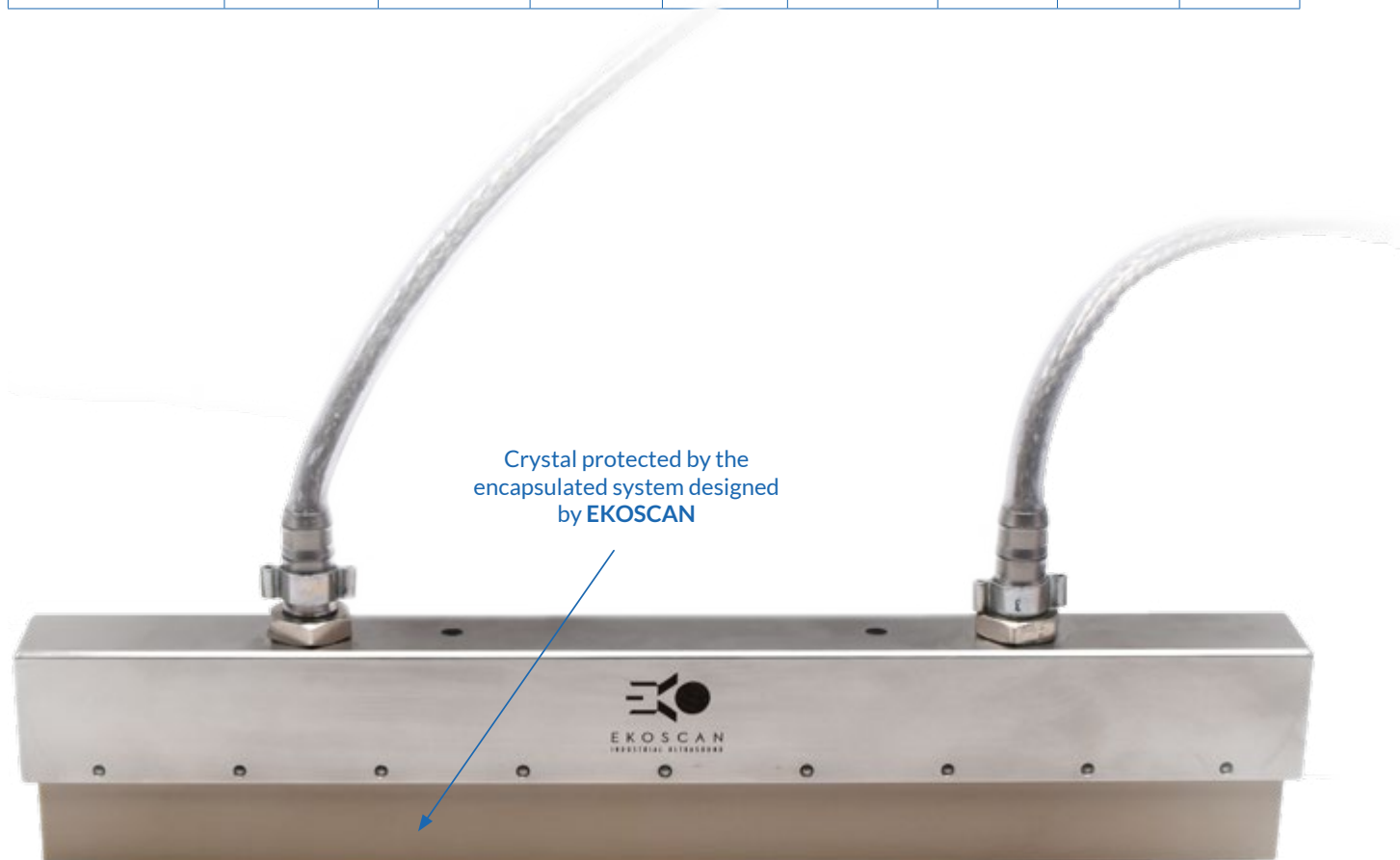
Description

EKOSCAN proudly presents its new high pressure phased-array probe range: EKHP PROBES. By encapsulating box technics, EKOSCAN succeeds in developing a High Pressure Phased-Array Probe that can operate under 2000 m depth.

Typical applications

- Corrosion and weld submarine inspections

| REFERENCE | TYPE | FREQUENCY MHz | NUMBER OF ELEMENTS | PITCH mm | ELEVATION mm | EXTERNAL DIMENSIONS | | |
|------------------|----------|---------------|--------------------|----------|--------------|---------------------|----|----|
| | | | | | | L | W | H |
| EK HP 12 PROBES | | | | | | | | |
| EKHP12-LA2.25/64 | HP PROBE | 2.25 | 64 | 0.6 | 10 | 56 | 24 | 50 |
| EKHP12-LA3.5/64 | | 3.5 | | | | | | |
| EKHP12-LA5/64 | | 5 | | | | | | |



SAPPHIRE PROBES

New generation Phased Array probes without wedge



EKOSCAN proudly presents its new Phased-Array probe range: SAPHIRE

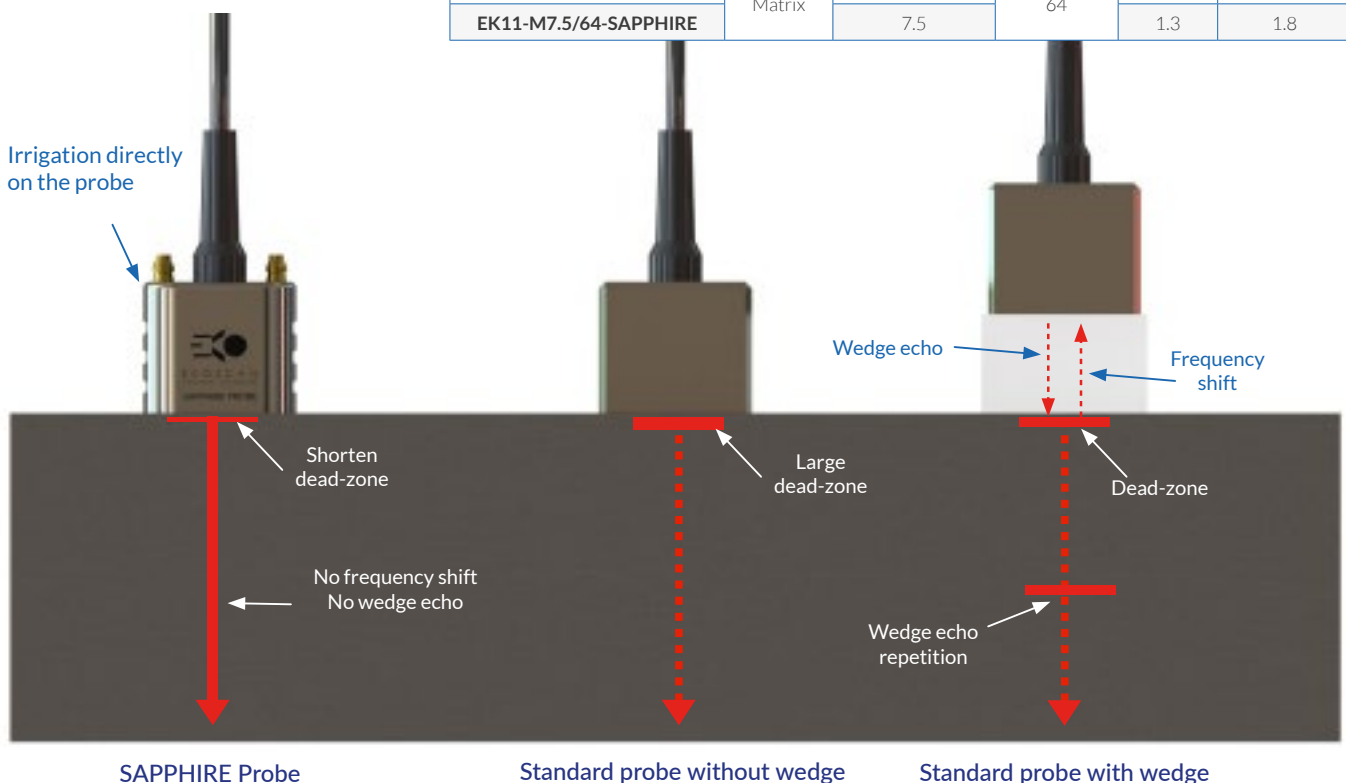
After 2 years of R&D, testing and qualification, EKOSCAN finalized the design of this unique kind of probe.

Through a revolutionary piezocomposite crystal technology associated to highly performant and wear resistant hybrid front face, SAPHIRE probes are the first contact phased-array probes in the world.

Ultrasonic waves transmission without wedge offers a lot of advantages:

- Reduced dead-zone
- Better signal to noise ratio
- Wedge echo suppression
- Frequency shift suppression (due to the wedge)

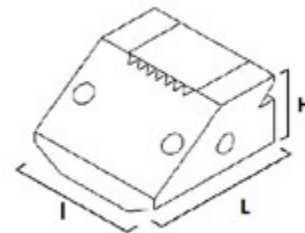
| REFERENCE | TYPE | FREQUENCY MHz | NUMBER OF ELEMENTS | PITCH mm | ELEVATION mm |
|-------------------------|--------|---------------|--------------------|----------|--------------|
| LINEAR PROBES | | | | | |
| EK10-LA3.5/16-SAPPHIRE | Linear | 3.5 | 16 | 0.6 | 10 |
| EK10-LA5/16-SAPPHIRE | | 5 | | 0.6 | 10 |
| EK10-LA7.5/32-SAPPHIRE | | 7.5 | 32 | 0.3 | 7 |
| EK11-LA2.25/32-SAPPHIRE | | 2.25 | | 0.6 | 10 |
| EK11-LA5/32-SAPPHIRE | | 5 | 0.6 | 10 | |
| EK11-LA5/64-SAPPHIRE | | 5 | 64 | 0.35 | 8 |
| EK11-LA10/64-SAPPHIRE | | 10 | | 0.35 | 7 |
| EK12-LA2.25/64-SAPPHIRE | | 2.25 | | 0.6 | 10 |
| EK12-LA3.5/64-SAPPHIRE | | 3.5 | | 0.6 | 10 |
| EK12-LA5/64-SAPPHIRE | | 5 | | 0.6 | 10 |
| EK12-LA7.5/64-SAPPHIRE | | 7.5 | | 0.6 | 10 |
| EK12-LA10/64-SAPPHIRE | | 10 | 0.6 | 7 | |
| MATRIX PROBES | | | | | |
| EK11-M5/64-SAPPHIRE | Matrix | 5 | 64 | 1.4 | 2 |
| EK11-M7.5/64-SAPPHIRE | | 7.5 | | 1.3 | 1.8 |



EK 10 - 11 - 12 - 13 & IDC PROBES

Description

- All our wedges are made of Rexolite® to fit our phased-array probes
- Available for refracted angles of 0°, 55° and 60° in steel
- Wedges are designed to fit a manual inspection or an automated scan
- Our “L” wedges are designed for longitudinal waves and “S” wedges for shear waves



| REFERENCE | TYPE L/S | PROBE HOUSING | REFRACTED ANGLE in ° | EXTERNAL DIMENSIONS | | |
|-------------------------------|-------------|---------------|-------------------------|---------------------|----|----|
| | | | | L | W | H |
| EK 10-11-12 WEDGES | | | | | | |
| EK10-WL0 | L | EK10 | 0° | 25 | 23 | 20 |
| EK10-WS45 | S | | 45° | 23 | 23 | 14 |
| EK10-WS55 | S | | 55° | 23 | 23 | 14 |
| EK10-WL60 | L | | 60° | 26 | 23 | 30 |
| EK11-WL0 | L | EK11 | 0° | 35 | 23 | 23 |
| EK11-WS45 | S | | 45° | 41 | 23 | 29 |
| EK11-WS55 | S | | 55° | 41 | 23 | 29 |
| EK11-WL60 | L | | 60° | 43 | 23 | 53 |
| EK12-WL0 | L | EK12 | 0° | 62 | 23 | 20 |
| EK12-WS45 | S | | 45° | 73 | 23 | 45 |
| EK12-WS55 | S | | 55° | 73 | 23 | 45 |
| EK12-WL60 | L | | 60° | 61 | 23 | 53 |
| EK13-WL0 | L | EK13 | 0° | 105 | 24 | 20 |
| EK13-WL0-I | L | | 0° | 105 | 43 | 20 |
| EK13-WS45 | S | | 45° | 127 | 24 | 70 |
| EK13-WS55 | S | | 55° | 127 | 43 | 70 |
| EK13-WL60 | L | | 60° | X | X | X |
| EK13-WS55-I | S | | 55° | 126,5 | 43 | 70 |
| PIPE INSPECTION WEDGES | | | | | | |
| EKPIPE-WS55 | S | EKPIPE | 55° | 82 | 38 | 43 |
| EKPIPE-WS70 | S | | 70° | 82 | 38 | 43 |
| EKPIPE-WL60 | L | | 60° | X | X | X |
| EKPIPE-WL80 | L | | 80° | X | X | X |
| DLA & DMA WEDGES | | | | | | |
| EK17-WL0-A0 | L | EK17 | 0° | | | |
| EK17-WL0-A3 | L | | 0° | | | |
| EK17-WL0-A5 | L | | 0° | | | |
| EK17-WL60-A3 | L | | 60° | | | |
| EK17-WL60-A5 | L | | 60° | | | |
| EK17-WL80-A3 | L | | 80° | | | |
| EK17-WL80-A5 | L | | 80° | | | |
| EK27-WL0-A0 | L | EK27 | 0° | | | |
| EK27-WL0-A3 | L | | 0° | | | |
| EK27-WL0-A5 | L | | 0° | | | |
| EK27-WL60-A3 | L | | 60° | | | |
| EK27-WL60-A5 | L | | 60° | | | |
| EK27-WL80-A3 | L | | 80° | | | |
| EK27-WL80-A5 | L | | 80° | | | |
| EK28-WL0-1 | L | EK28 | 0° | 44 | 37 | 9 |
| EK28-WL0-3 | L | | 0° | 44 | 37 | 9 |
| EK280-WL0-1 | L | EK280 | 0° | 78 | 37 | 8 |
| EK280-WL0-3 | L | | 0° | 78 | 37 | 8 |
| EKOFLEX WEDGES | | | | | | |
| EKFX-WS60 | S | EKFX | 60° | 18 | 22 | 12 |
| EKFX-WL60 | L | EKFX | 60° | 22 | 22 | 22 |
| WATER SUPPLY | | | | | | |
| IDC10 | - | EK10 | - | - | - | - |
| IDC11 | - | EK11 | - | - | - | - |
| IDC12 | - | EK12 | - | - | - | - |

HIGH TEMPERATURE WEDGES

Typical applications

- Maximum temperature: 150 °C
- Maximum frequency: 7.5 MHz
- Maximum duration for continuous inspection: 12 minutes
- Frequency shift for a 5 MHz probe: 5 MHz -> 4 MHz
- Signal attenuation: -3 dB
- 4 times more resistant than a Rexolite® wedge

| REFERENCE | TYPE L/S | PROBE HOUSING | REFRACTED ANGLE in ° | EXTERNAL DIMENSIONS | | |
|-------------------------------|----------|---------------|----------------------|---------------------|----|----|
| | | | | L | W | H |
| EK 10-11-12 WEDGES | | | | | | |
| EK10-WL0-HT | L | EK10 | 0° | 25 | 23 | 20 |
| EK10-WS55-HT | S | | 55° | 23 | 23 | 14 |
| EK10-WL60-HT | L | | 60° | 26 | 23 | 30 |
| EK11-WL0-HT | L | EK11 | 0° | 33 | 40 | 18 |
| EK11-WS55-HT | S | | 55° | 41 | 23 | 29 |
| EK11-WL60-HT | L | | 60° | 43 | 23 | 53 |
| EK12-WL0-HT | L | EK12 | 0° | 62 | 40 | 20 |
| EK12-WS55-HT | S | | 55° | 73 | 23 | 45 |
| EK12-WL60-HT | L | | 60° | 61 | 23 | 53 |
| PIPE INSPECTION WEDGES | | | | | | |
| EKPIPE-WS55-HT | S | EKPIPE | 55° | 82 | 38 | 43 |
| EKPIPE-WS70-HT | S | EKPIPE | 70° | 82 | 38 | 43 |
| DLA & DMA WEDGES | | | | | | |
| EK17-WL60-HT | L | EK17 | 60° | 37 | 50 | 20 |
| EK17-WL80-HT | L | EK17 | 80° | 37 | 50 | 19 |







CALIBRATION BLOCKS

Conventional UT blocks

TOFD blocks

Phased Array blocks

Training blocks

Custom made blocks

"INTERNATIONAL" BLOCKS

Conventional UT blocks

BLOCK V1

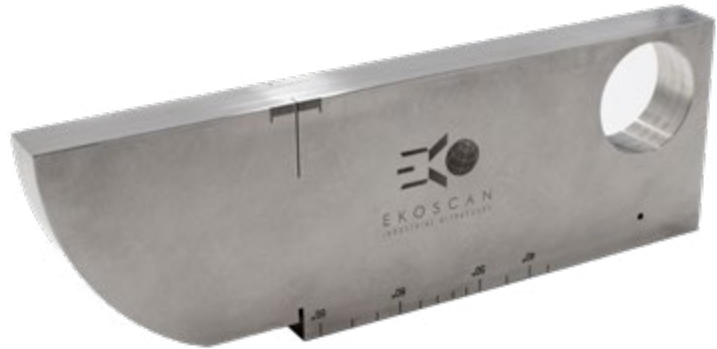
Calibration blocks certified for ISO 2400. Can be used to determine probe exit point and beam angle.

The values are read straight on the block.

Ref :

- CAL1A: carbon steel
- CAL1I: stainless steel
- CAL1AL: aluminium

The block can be supplied with its rotative stand.



BLOCK V2

Calibration blocks certified for ISO 2400. Can be used to determine probe exit point and beam angle.

The values are read straight on the block.

Ref :

- CAL2A12: Carbon steel, Thickness 12 mm.
- CAL2A20: Carbon steel, Thickness 20 mm.
- CAL2AL12: Aluminium, Thickness 12 mm.
- CAL2AL20: Aluminium, Thickness 20 mm
- CAL2I12: Stainless steel, Thickness 12 mm.
- CAL2I20 : Stainless steel, Thickness 20 mm.



BLOCK V3

Calibration block including 3 radii to calibrate shear and longitudinal wave probes. Can be used to determine probe exit point and beam angle.

The values are read straight on the block.

Ref :

- CAL3 A: V3 in carbon steel



AC BLOCKS

Conventional UT blocks in compliance with US 319-21

Calibration block in conformity with the recommendation IS.US-319.21, document A, Annex C. including a side-drilled hole and a 2x2 mm notch. Every block is supplied with its own material and metrological certificate. A US certificate can also be provided upon request.

AC 0 BLOCK



| REFERENCE | SIDE DRILL HOLE DIAMETER mm | MATERIAL | DIMENSIONS Lxlxe |
|-----------|--------------------------------|-----------------|---------------------|
| AC0AØ1.5 | 1.5 | STEEL | 250x40x15 mm |
| AC0AØ2 | 2 | | |
| AC0AØ3 | 3 | | |
| AC0IØ1.5 | 1.5 | STAINLESS STEEL | |
| AC0IØ2 | 2 | | |
| AC2IØ3 | 3 | | |
| AC0ALØ1.5 | 1.5 | ALUMINIUM | |
| AC0ALØ2 | 2 | | |
| AC0ALØ3 | 3 | | |

AC 1 BLOCK



| REFERENCE | SIDE DRILL HOLE DIAMETER mm | MATERIAL | DIMENSIONS Lxlxe |
|-----------|--------------------------------|-----------------|---------------------|
| AC1AØ1.5 | 1.5 | STEEL | 250x40x25 mm |
| AC1AØ2 | 2 | | |
| AC1AØ3 | 3 | | |
| AC1IØ1.5 | 1.5 | STAINLESS STEEL | |
| AC1IØ2 | 2 | | |
| AC1IØ3 | 3 | | |
| AC1ALØ1.5 | 1.5 | ALUMINIUM | |
| AC1ALØ2 | 2 | | |
| AC1ALØ3 | 3 | | |

AC 2 BLOCK



| REFERENCE | SIDE DRILL HOLE DIAMETER mm | MATERIAL | DIMENSIONS Lxlxe |
|-----------|--------------------------------|-----------------|---------------------|
| AC2AØ1.5 | 1.5 | STEEL | 300x40x50 mm |
| AC2AØ2 | 2 | | |
| AC2AØ3 | 3 | | |
| AC2IØ1.5 | 1.5 | STAINLESS STEEL | |
| AC2IØ2 | 2 | | |
| AC2IØ3 | 3 | | |
| AC2ALØ1.5 | 1.5 | ALUMINIUM | |
| AC2ALØ2 | 2 | | |
| AC2ALØ3 | 3 | | |

AC 3 BLOCK



| REFERENCE | SIDE DRILL HOLE DIAMETER mm | MATERIAL | DIMENSIONS Lxlxe |
|-----------|--------------------------------|-----------------|---------------------|
| AC3AØ1.5 | 1.5 | STEEL | 325x50x100 mm |
| AC3AØ2 | 2 | | |
| AC3AØ3 | 3 | | |
| AC3IØ1.5 | 1.5 | STAINLESS STEEL | |
| AC3IØ2 | 2 | | |
| AC3IØ3 | 3 | | |
| AC3ALØ1.5 | 1.5 | ALUMINIUM | |
| AC3ALØ2 | 2 | | |
| AC3ALØ3 | 3 | | |

AC 4 BLOCK



| REFERENCE | SIDE DRILL HOLE DIAMETER mm | MATERIAL | DIMENSIONS Lxlxe |
|-----------|--------------------------------|-----------------|---------------------|
| AC4AØ1.5 | 1.5 | STEEL | 425x55x150 mm |
| AC4AØ2 | 2 | | |
| AC4AØ3 | 3 | | |
| AC4IØ1.5 | 1.5 | STAINLESS STEEL | |
| AC4IØ2 | 2 | | |
| AC4IØ3 | 3 | | |
| AC4ALØ1.5 | 1.5 | ALUMINIUM | |
| AC4ALØ2 | 2 | | |
| AC4ALØ3 | 3 | | |

AC 5 BLOCK



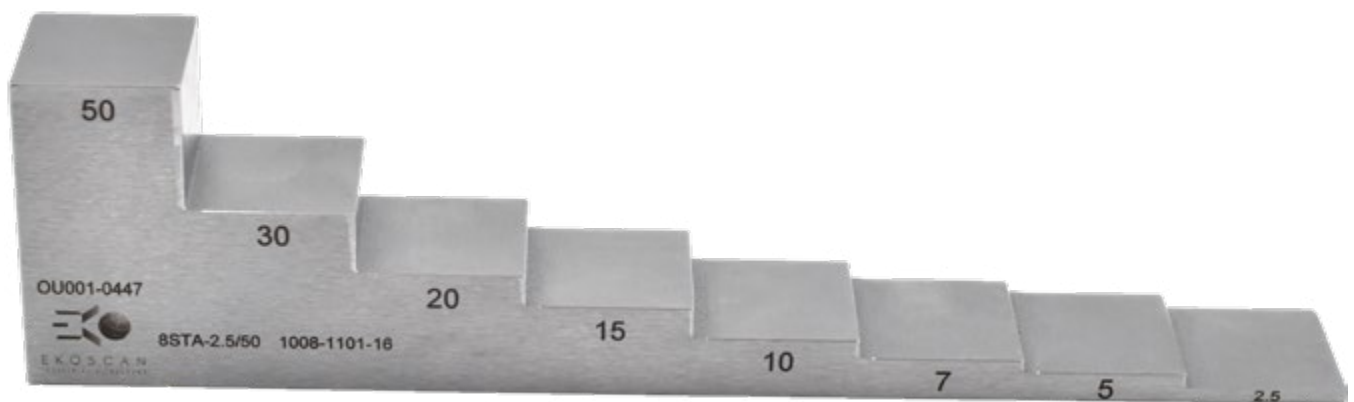
| REFERENCE | SIDE DRILL HOLE DIAMETER mm | MATERIAL | DIMENSIONS Lxlxe |
|-----------|--------------------------------|-----------------|---------------------|
| AC5AØ1.5 | 1.5 | STEEL | 525x60x200 mm |
| AC5AØ2 | 2 | | |
| AC5AØ3 | 3 | | |
| AC5IØ1.5 | 1.5 | STAINLESS STEEL | |
| AC5IØ2 | 2 | | |
| AC5IØ3 | 3 | | |
| AC5ALØ1.5 | 1.5 | ALUMINIUM | |
| AC5ALØ2 | 2 | | |
| AC5ALØ3 | 3 | | |

STEP BLOCKS

Step blocks for thickness gage calibration

Standard calibration blocks used for thickness gage calibration. Made out of with high quality selected raw material, entirely manufactured in France. Each block is supplied with its own metrological certificate, including 5 different velocity check per step.

| REFERENCE | NUMBER OF STEPS | MATERIAL | THICKNESSES mm |
|--------------|-----------------|-----------------|----------------|
| 5STA-2/10 | 5 | Steel | 2 to 10 |
| 5STI-2/10 | | Stainless steel | |
| 5STA-5/25 | | Steel | 5 to 25 |
| 5STI-5/25 | | Stainless steel | |
| 7STA-1/10 | 7 | Steel | 1 to 10 |
| 7STI-1/10 | | Stainless steel | |
| 7STA-2/25 | | Steel | 2 to 25 |
| 7STI-2/25 | | Stainless steel | |
| 7STA-5/50 | | Steel | 5 to 50 |
| 7STI-5/50 | | Stainless steel | |
| 8STA-2.5/50 | 8 | Steel | 2.5 to 50 |
| 8STI-2.5/50 | | Stainless steel | |
| 8STA-6/65 | | Steel | 6 to 65 |
| 8STI-6/65 | | Stainless steel | |
| 10STA-1/10 | 10 | Steel | 1 to 10 |
| 10STI-1/10 | | Stainless steel | |
| 10STA-2.5/25 | | Steel | 2.5 to 25 |
| 10STI-2.5/25 | | Stainless steel | |

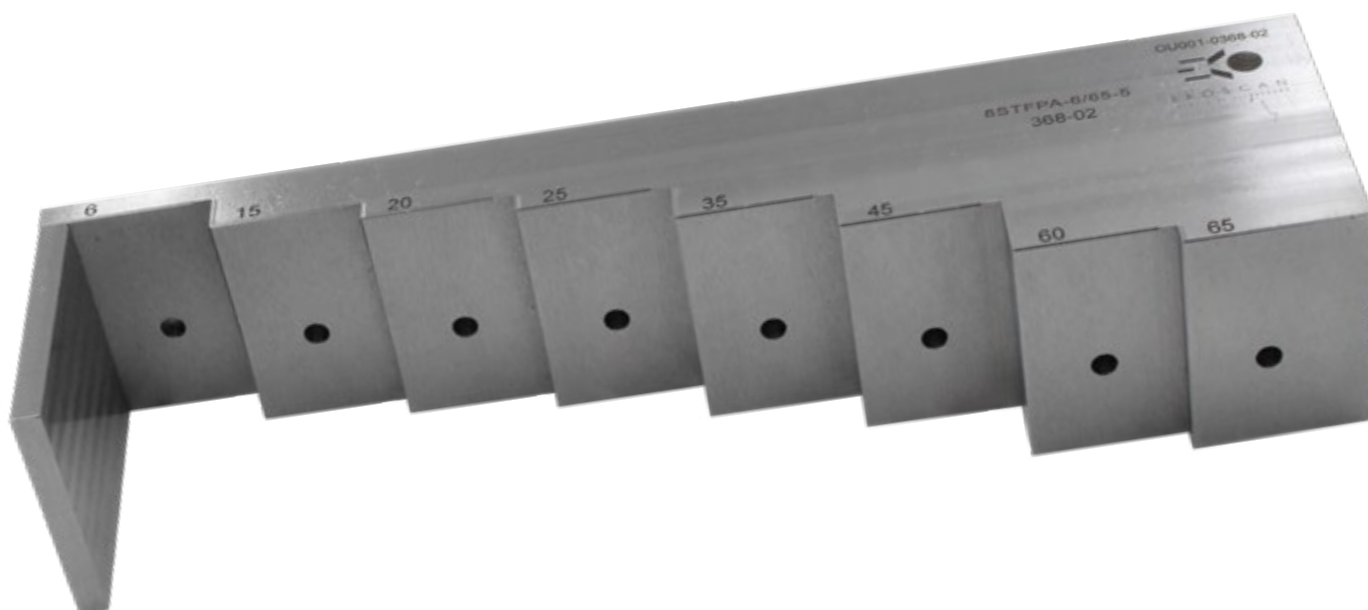


STEP BLOCKS EN 10160

Conventional UT blocks in compliance with EN10160

Standard calibration blocks in conformity with the recommendations of the EN 10160 standard for ultrasonic inspection of flat materials. Each block is supplied with its own certificate of compliance. Engraving can also be supplied upon request.

| REFERENCE | FLAT BOTTOM HOLE DIAMETER mm | NUMBER OF STEPS | MATERIAL | THICKNESSES mm |
|-----------------|------------------------------|-----------------|-----------------|----------------|
| 8STFPA-6/65-1.5 | 1,5 | 8 | Steel | 6 to 65 |
| 8STFPI-6/65-1.5 | | | Stainless steel | |
| 8STFPA-6/65-2 | 2 | | Steel | |
| 8STFPI-6/65-2 | | | Stainless steel | |
| 8STFPA-6/65-3 | 3 | | Steel | |
| 8STFPI-6/65-3 | | | Stainless steel | |
| 8STFPA-6/65-5 | 5 | | Steel | |
| 8STFPI-6/65-5 | | | Stainless steel | |
| 8STFPA-6/65-6 | 6 | | Steel | |
| 8STFPI-6/65-6 | | | Stainless steel | |
| 8STFPA-6/65-8 | 8 | | Steel | |
| 8STFPI-6/65-8 | | | Stainless steel | |
| 8STFPA-6/65-11 | 11 | | Steel | |
| 8STFPI-6/65-11 | | | Stainless steel | |



ASME BLOCKS

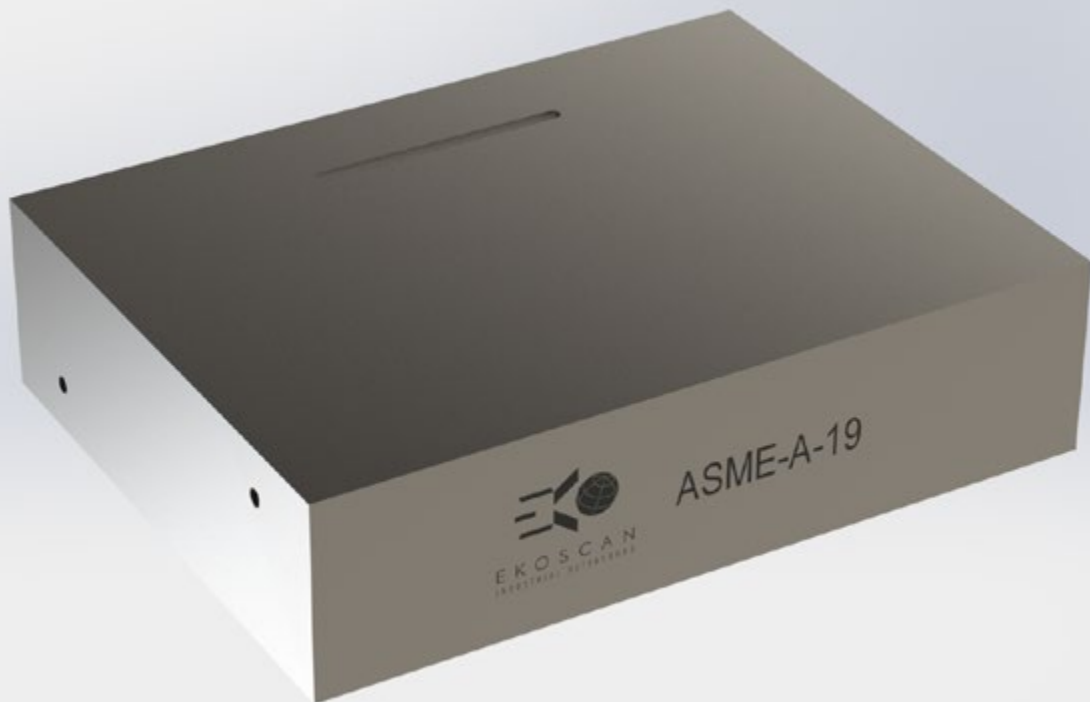
Conventional UT blocks in compliance with ASME V and VIII

Standard calibration blocks in conformity with the recommendations of ASME V and VIII standards for ultrasonic welding inspection. Each block is supplied with its own certificate of compliance. Engraving can also be supplied upon request.

Specification :

ASME Sec V Art. 4 Fig. T-434.2.1

| REFERENCE | SIDE DRILLED HOLE DIAMETER mm | NOTCH DEPTH mm | THICKNESS mm |
|-----------|----------------------------------|-------------------|-----------------|
| ASME-A-19 | 2,5 | 0,38 | 19 |
| ASME-I-19 | 2,5 | 0,38 | 19 |
| ASME-A-38 | 3 | 0,76 | 38 |
| ASME-I-38 | 3 | 0,76 | 38 |
| ASME-A-75 | 5 | 1,5 | 75 |
| ASME-I-75 | 5 | 1,5 | 75 |



ASME 19

Description

Calibration block in carbon steel thickness 3/4" including 3 side-drilled holes located at 1/4, 1/2 and 3/4 of the thickness. Calibration block also contains 2 EDM notches in compliance with ASME Sec V Art. 4 Fig. T-434.2.1.

Ref:

- ASME-A-19 : Carbon steel
- ASME-I-19 : Stainless steel 304L



ASME 38

Description

Calibration block in carbon steel thickness 1,5" including 3 side-drilled holes located at 1/4, 1/2 and 3/4 of the thickness. Calibration block also contains 2 EE in compliance with ASME Sec V Art. 4 Fig. T-434.2.1.

Ref:

- ASME-A-38 : Carbon steel
- ASME-I-38 : Stainless steel 304L



ASME 75

Description

Calibration block in carbon steel thickness 3" including 3 side-drilled holes located at 1/4, 1/2 and 3/4 of the thickness. Calibration block also contains 2 EE in compliance with ASME Sec V Art. 4 Fig. T-434.2.1.

Ref:

- ASME-A-75 : Carbon steel
- ASME-I-75 : Stainless steel 304L



PACS BLOCK

Description

Used to check refracted angles and exit points. Allows the calibration of sensitivity and DAC/TCG curves for thicknesses of up to 50 mm.

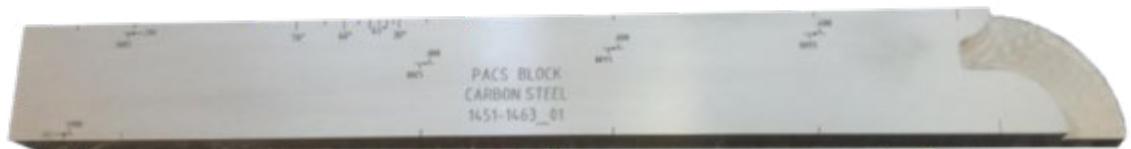
For the naval industry.

Options

- Carbon steel with anti-corrosion coating
- Stainless steel 304L

Ref:

- CALPACSA



DSC BLOCK (DISTANCE / SENSITIVITY CALIBRATION BLOCK)

Specification

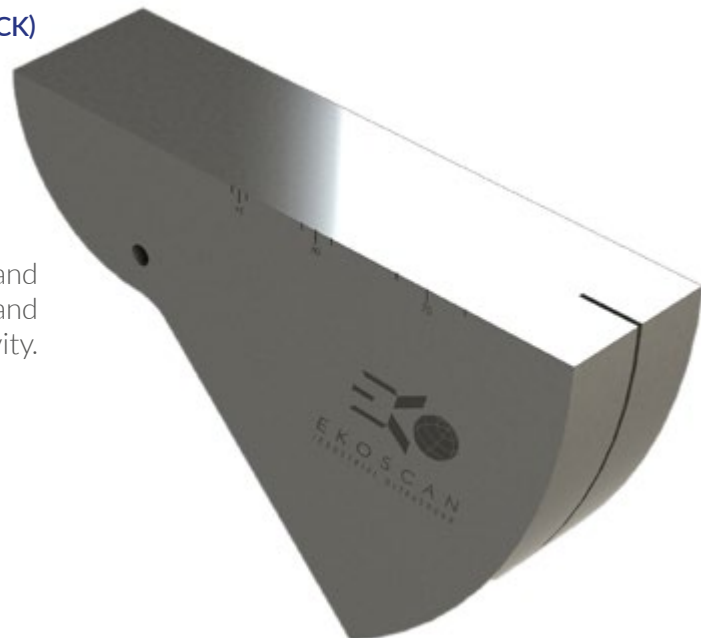
ASTM E164-97 fig. A1.11

Description

Calibration block used for calibration of transverse and longitudinal wave transducers. Verification of exit point and refracted angles (from 45° to 70°) and adjustment in sensitivity. Carbon steel block with anti-corrosion coating.

Ref:

- CALDCSA



DC BLOCK (DISTANCE CALIBRATION BLOCK)

Specification

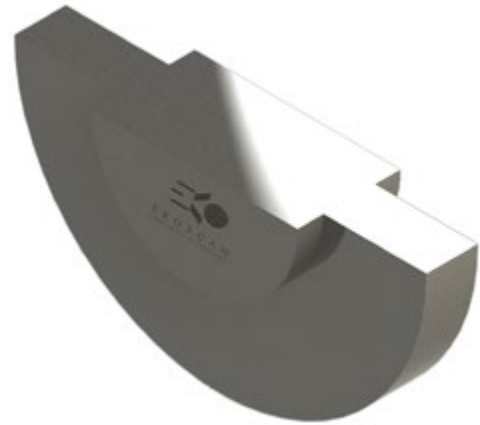
ASTM E164-97 Fig. 1.9

Description

Calibration block used for distance calibration and for verification of the exit point and refracted angles. Carbon steel block with anti-corrosion coating.

Ref:

- CALDCAA



DS BLOCK (SENSITIVITY AND DISTANCE BLOCK)

Specification

AWS D1.1

Description

Calibration block used to check horizontal linearity as well as to calibrate in distance and sensitivity with a normal incidence transducer.

Carbon steel block.

Ref:

- CALDSAA



RC BLOCK (CALIBRATION RESOLUTION BLOCK)

Specification

AWS D1.1

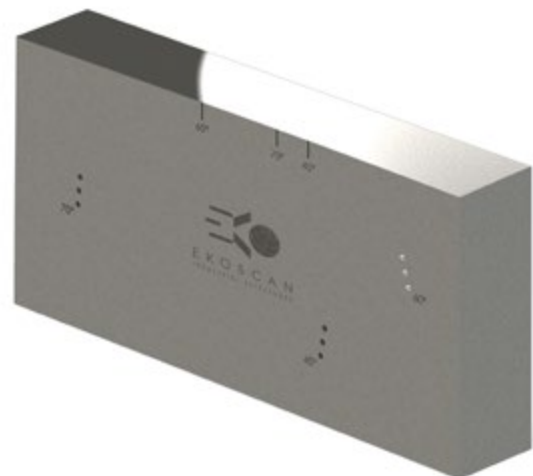
Description

Calibration block used to verify Angle Transducer resolution (45°, 60° and 70°).

Carbon steel block with anti-corrosion coating.

Ref:

- CALRCAA



EKOCAL6[®]

Conventional UT, TOFD, Phased Array



The block includes

- 5 x Notches: for sensitivity calibration in TOFD or Phased Array (notches: 10 mm long, 3 mm high, 0.2 mm aperture)
- 5 x Flat Bottom Holes: to evaluate the reflectivity of volumetric flaws for TOFD or to draw a DAC for conventional UT (diameter: Ø3 mm or Ø5 mm)
- 5 x Side-Drilled Holes: to characterize TOFD Lateral Wave or for sensitivity calibration in conventional UT or Phased Array (diameter Ø1.5 mm or Ø3 mm)
- 1 x Radius: for delay and angle calibration (radius 50 mm)

A certificate that includes a metrological report of the block is supplied on delivery (optional moldings of artificial flaws).

length: 475 mm, width: 50 mm, height: 52 mm

Each block is delivered with its material certificate and TOFD B-scan.

Ref:

- TOFDV6A
- TOFDV6I

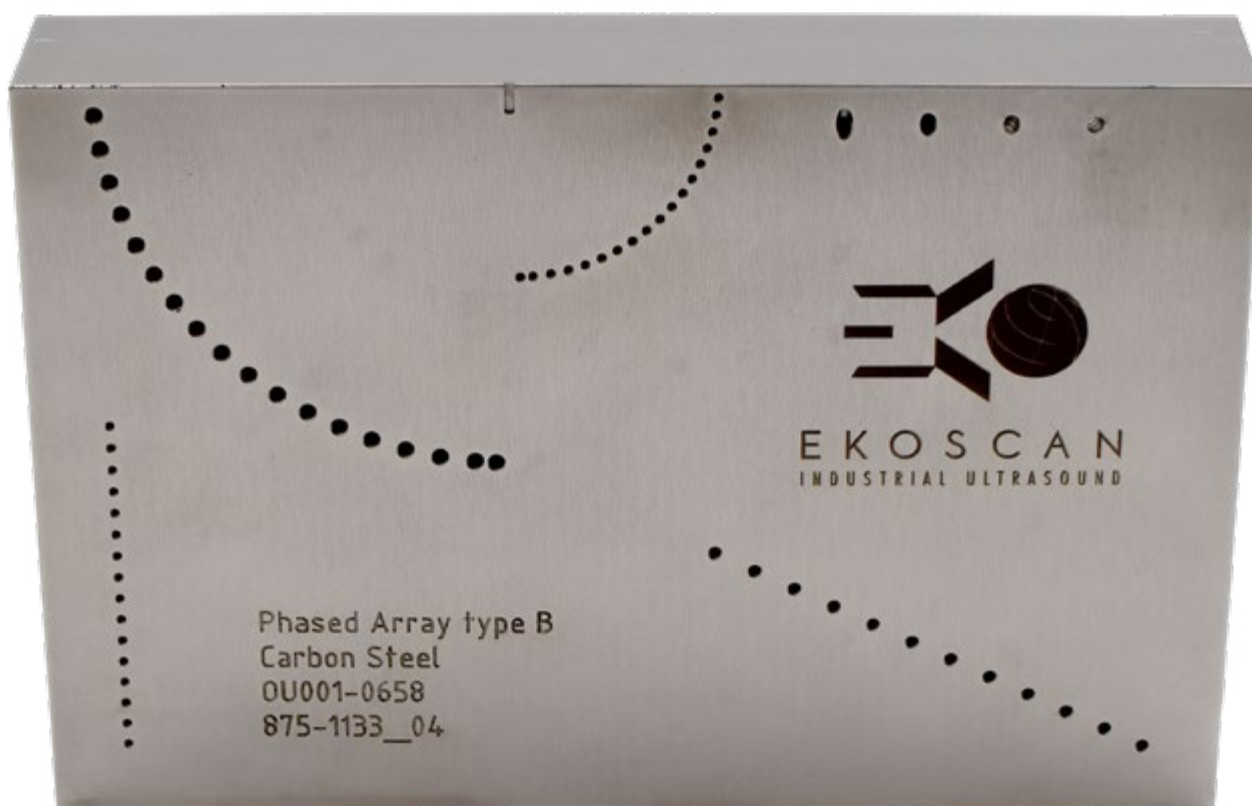


PHASED ARRAY TYPE A & B BLOCKS

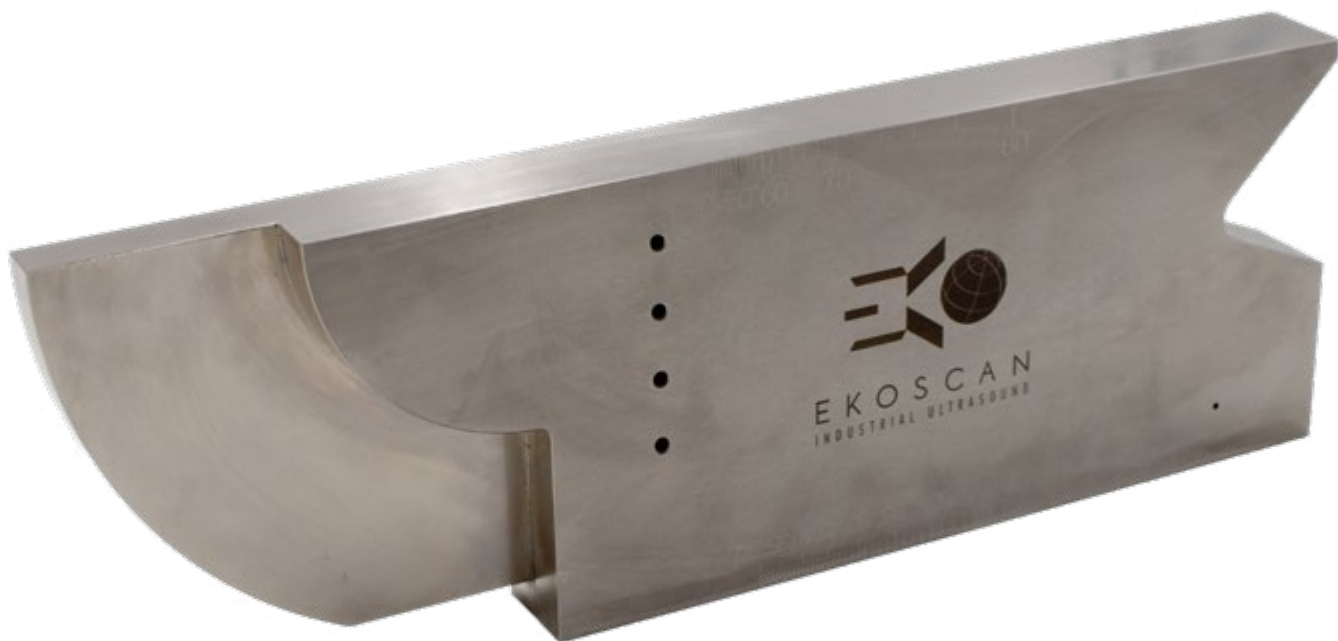
Reference block in carbon steel, stainless or aluminium for Phased Array application.

Control of refraction angles, delay and amplitude correction for parts up to a 50 mm thickness

| REFERENCE | MATERIAL | DESCRIPTION |
|---------------|-----------------|--|
| PATYPEAA | Steel | Block in accordance with ASME code (code cases 2541.2557.2558) |
| PATYPEAI | Stainless steel | |
| PATYPEAAL | Aluminium | |
| PATYPEBA | Steel | Block in accordance with ASTM E2491 code |
| PATYPEBI | Stainless steel | |
| PATYPEBAL | Aluminium | |
| PATYPE19675A | Steel | Block in accordance with ISO 19675 |
| PATYPE19675I | Stainless steel | |
| PATYPE19675AL | Aluminium | |



PATYPEBA



PATYPE19675



PATYPEAA

VAROUL VARIAL BLOCK



Used for NDT Ultrasonic training. This block helps to understand the reflectivity of volumetric and non-volumetric defects.

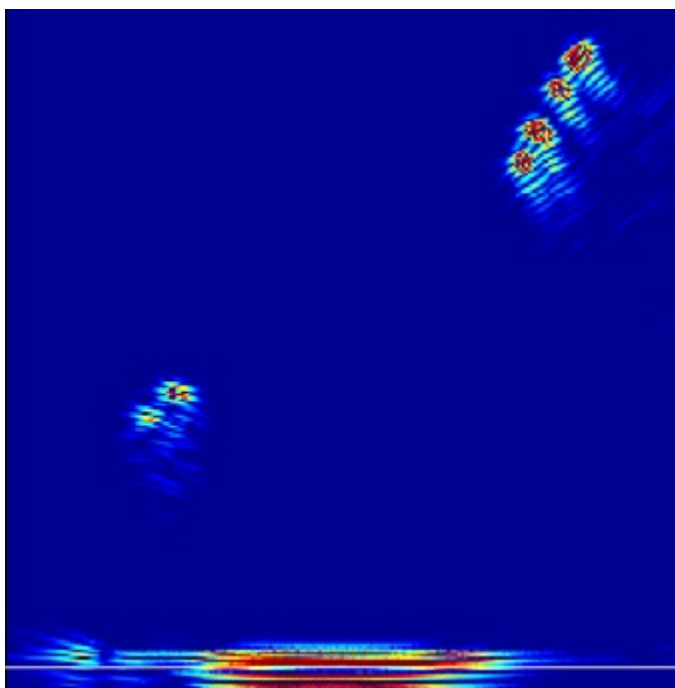
Notches, regular and multifaceted, are oriented at 30°. Waveforms obtained for this type of defects are VARIAL type, i.e., with a discontinued echodynamic.

The side-drilled holes are used to evaluate spatial resolution and the ability to discriminate close indications. Waveforms obtained for this type of defects are the VAROUL type, i.e., a bell-shaped echodynamic.

Block supplied with its material certificate.)

Ref:

- VVA-L



HTHA BLOCKS

Made from P1, SA 516 GR 70 material



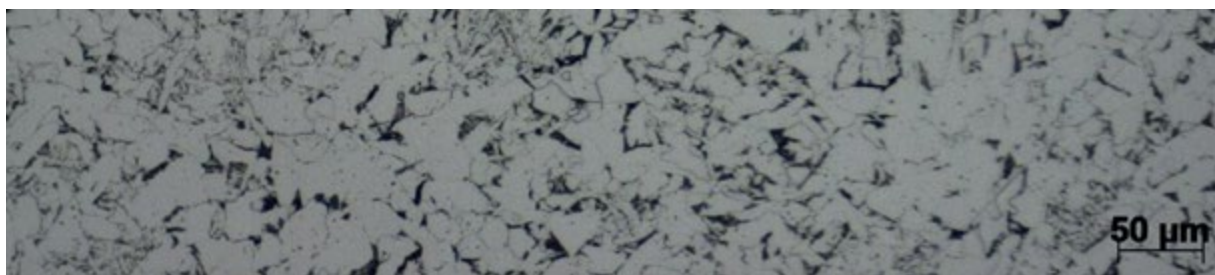
The blocks are first checked to verify the absence of any significant indications according to our internal procedure. An accelerated phenomenon of HTHA micro-cracking is then performed in the thickness of the material by injecting of a combination of hydrogen and carbon to obtain CH₄ molecules.

HTHA cracks up to 20% of the block thickness.

Acoustic results are similar to those obtained for pressure vessels in the petrochemical industry.

Ref:

- CALHTHA-25 (thickness 25 mm)
- CALHTHA-50 (thickness 50 mm)



SPECIFIC BLOCKS

Conventional machining of blocks of maximum size
L 600 x W 400 x H 400 mm and up to 40 kg.



- Working area for wire erosion : L 350 x l 500 x h 250 mm.
- Working area for electro-erosion by die sinking : L 400 x l 300 x h 250 mm.
- Opening notches 0.2 mm +0.05 depth up to 15 mm (under conditions).
- Minimum generator diameters 0.18 mm.
- Material control carried out according to our internal procedure, more restrictive than the control standard for flat products (NF EN 10160) in order to ensure the absence of indications that could disrupt the use of the block.
- Specific block plan validated with the customer before machining.
- Mark check for defect shape.
- Provision of TQR plan (As Realized) on request with actual measured ratings.
- Custom laser engraving (on request).
- Each block is supplied with a control report including: dimensional survey, material certificate, average speed reading in OL and OT as well as the manufacturing plan of the block.
- Our measuring devices are connected COFRAC in accordance with ISO 9001.
- Certificates of conformity kept at our premises for ten years.

CUSTOM MADE BLOCKS

EKOSCAN can manufacture custom blocks according to your needs upon request. As a French ISO 9001 certified manufacturer, we work rigorously on the selection of our raw materials. A preliminary control of the material's ultrasound speed and integrity is performed according to a very strict internal procedure. Our manufacturing and verification tools are also COFRAC certified.

Starting from your technical and functional specifications, EKOSCAN will design and manufacture the custom block that answers your problems.

Contact us for a feasibility study of your block.







FLAW DETECTORS

Ekosmart
Ekoblue
Starmans DIO 1000

EKOSMART

USB ultrasonic board



Presentation

EKOSMART is a portable UT system that comes with an ultrasonic board and its own software. The board can be connected to a PC or a tablet via a USB port. Configuration, data recording and analysis are done on the computer/tablet using regular tools (mouse, keyboard, touchscreen...).

With its intuitive (and pedagogical) graphical user interface, it can be used by beginners and trainees or confirmed and expert users. Every user can rely on its reliability, its characteristics and its advanced features (FFT, TOFD, averaging ...)

The EKOSCAN UT board can carry out a wide range of inspection including welds, composite materials, forged, and cast iron parts, ultrasonic rail tests, material characterization in B-scan mode. Its high bandwidth (1-30 MHz) is adapted for thin and thick component inspections.

An optional 3-MATRYX axe control arm can be connected to carry out C-Scan and to follow the evolution of the inspected flaws in maintenance. EKOSCAN UT board meets the requirements of the NF EN 12668-1 standard (March 2010).

Imaging

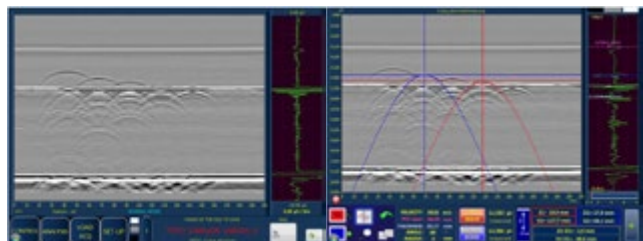
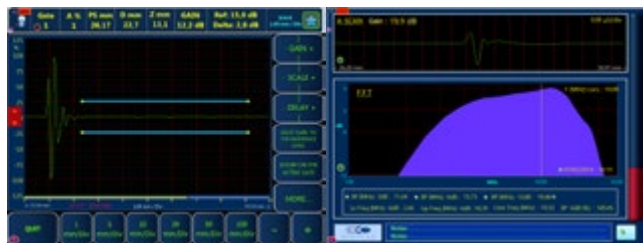
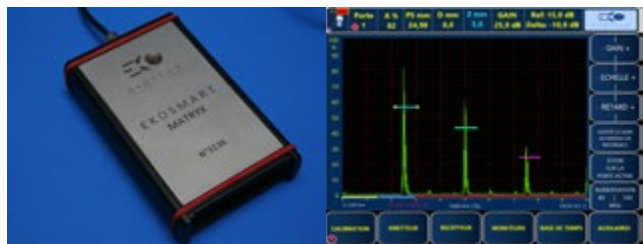
- A-scan
- B-scan (Encoded or scrolling)
- TOFD (Time of Flight Diffraction)
- C-scan 2 encoders (standard) 3 encoders in option

Main features

- DAC and fractioned DAC (-3, -6, and -12 dB), TCG
- FFT to check probes in frequency, bandwidth and sensitivity
- Auto calibration with 2 points (delay sensor, speed, thickness measure)
- Screen freeze
- Dynamic echo to test the probe focal length
- Real-time averaging (2, 4, 8)
- TOFD with hyperbolic cursors
- Linearization of the TOFD lateral wave
- Visual representation of half skip and full skip in weld inspection
- Saving and loading of settings

Technical specifications

- Square emission (250V max)
- Emission frequency (maximum 33 MHz)
- Pulse Repetition Frequency (PRF) up to 5000Hz
- Digital filters (Bandwidth from 1 to 30 MHz)
- Gain from 0 to 80 dB



Ekosmart system is sold with a certificate meeting the requirements of the EN 12668-1. A rugged computer can be provided in option.

Technical specifications

PUSLER

| | |
|----------------------------|---|
| Pulser | negative square pulser |
| Fall time | < 15 ns |
| Pulse Repetition Frequency | from 100 Hz to 5000 Hz, with increments of 100 Hz |
| Voltage | From 25 V to 250 V (by minimum step of 10 V) |
| Impulsion width | adjustable from 15 ns (33M Hz) to 1600 ns (0,3 MHz) |

RECEIVER

| | |
|-----------------------|---|
| Gain | from 0 dB to 80 dB (by step of 0,1, 1,3 and 6 dB) |
| Input referred noise | < 80 nV/Hz |
| Bandwith of receiver | from 0,1 MHz to 30 MHz to -3 dB (5 filters) |
| Rectification | RF, RF rectified |
| Amplitude measuring | from 0% to 125% of full screen height |
| Sampling | 160 MHz, 80 MHz, 40 MHz, 20 MHz |
| Averaged in real time | Off, 2, 4 or 8 |

CALIBRATION

| | |
|-----------------------|--|
| Automatic calibration | speed propagation, sensor delay |
| Methods of control | reflection technique, transmission/reception separated |
| Measure unit | millimeter, microsecond |
| Range | from 0 to 500 mm |
| Propagation speed | from 500 m/s to 9000 m/s |
| Zero offset | from 0 μ to 90 μ |
| Display delay | from 0 mm to 1088 mm to speed propagation in steel |
| Refraction angle | from 0° to 90° by increments of 0,1% |

GATE

| | |
|-------------|---|
| Gates | 3 gates for amplitude measuring and in time-of-flight |
| Gate start | variable on all the calibration displayed |
| Gate width | variable from the start of gate to the end of calibration displayed |
| Gate height | variable from 0% to 100% of the full screen height |
| Alarm | on appearance or disappearance of echoes |

MEASURES

| | |
|-------------------------------|---|
| Gate (1,2,3) | ultrasonic circuit, time-of-flight, amplitude, distance between probe's front face and defect, defect depth |
| Measure between reverberation | in standard from gate 1 to gate 2, synchronization of interface gate in option |
| Curve DAC and TCG | standard |
| Dots DAC and TCG | dynamic calibration of 80 dB |

GENERAL

| | |
|-------------------------------|---|
| Dimensions | 168 mm x 34 mm x 105 mm |
| Weight | 500 g |
| Supply | 5V DC (USB) |
| Official languages | english, french |
| Probes connection | 2 bases Lemo00 (coaxial) |
| Encoders | up to 3 encoders (5V supply) |
| Encoders connection | base Lemo01 (10 pins) |
| Output connection US (option) | amplitude of 3 gates (analog signal), alarm of 3 gates (TTL signal), synchronization (TTL signal) |

Ref:

- EKOSMART

EKOBLUE

Ultrasonic Bluetooth

FOR SMARTPHONES AND ANDROID TABLETS

UT on your smartphone, android tablet with Bluetooth connection

Welding - Material health test - Characterization of flaws

Training - study



Presentation

Transform your smartphone and your android tablet into a real ultrasonic device.

After 3 years of R&D, EKOSCAN developed the first Bluetooth inspection device.

The probe is connected to EKOBLUE which is Bluetooth connected to your tablet or smartphone, turning it into a real UT Board.

This board meets the requirements of the NF EN 12668-1 (march 2010).

Applications

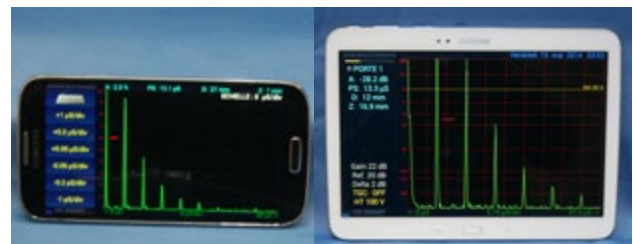
- UT examinations in hostile environments
- Measurement of thickness at high temperature
- Data transmission of measurements up to 60 m away from EKOBLUE.

Main specifications

- A-Scan
- DAC and fractional DAC (-3, -6 and -12 dB), TCG
- A-scan Freeze
- Echo dynamic function to evaluate the focalisation of the probes
- Visual representation of multiple skips for complete inspection of the welds

Main Features:

- Connection to all systems running on Android
- Square type of emission (250 V max)
- Max 20 MHz transmission frequency
- Up to 5,000 Hz PRF (Pulse Repetition Frequency)
- Digital filters (Bandwidth 0.1 to 20 MHz)
- Gain of 0 dB to 80 dB
- Autonomy 8 h + battery backup



Technical specifications

PUSLER

| | |
|----------------------------|---|
| Pulser | negative square pulser |
| Fall time | < 15 ns |
| Pulse Repetition Frequency | from 100 Hz to 5000 Hz, with increments of 100 Hz |
| Voltage | from 10 V to 250 V (by minimum step of 1 V) |
| Transmission frequency | adjustable from 1 to 20 MHz |

RECEIVER

| | |
|-----------------------|---|
| Gain | from 0 dB to 80 dB (by step of 0.1, 1,3 and 6 dB) |
| Input referred noise | < 80 nV/Hz |
| Bandwidth of receiver | from 0,1 MHz to 20 MHz to -3 dB (5 filters) |
| Rectification | RF, RF rectified |
| Amplitude measuring | from 0% to 100% of full screen height |
| Sampling | 80 MHz |

DISPLAY

| | |
|--------------------|--|
| Methods of control | reflection technique, transmission/reception separated |
| Measuring unit | millimeter, microsecond |
| Calibration | 0.59 / s to 35.52 /s |
| Propagation speed | from 100 m/s to 10000 m/s |
| Display delay | from 0 mm to 2900 m/s to speed propagation in steel |
| Refraction angle | from 0° to 90° by increments of 0,1° |

GATE

| | |
|---------------|---|
| Gates measure | 3 gates for amplitude measuring and time-of-flight |
| Gate start | variable on all the calibration displayed |
| Gate width | variable from the start of gate to the end of calibration displayed |
| Gate height | variable from 0% to 100% of the full screen height |

MEASURES

| | |
|-------------------------------|---|
| Gate (1, 2, 3) | ultrasonic circuit, time-of-flight, amplitude, distance between probe's front face and defect, defect depth |
| Measure between reverberation | gate 1 to gate 2 |
| Curve DAC and TCG | standard |
| Dots DAC and TCG | dynamic calibration of 80 dB |

GENERAL

| | |
|--------------------|--------------------------|
| Dimensions | 112 mm x 32 mm x 79 mm |
| Weight | 240 g |
| Supply | battery or mains supply |
| Official languages | english, french |
| Probe connection | 2 bases Lemo00 (coaxial) |
| Connexion | Bluetooth |
| OS | Android 4.2 |

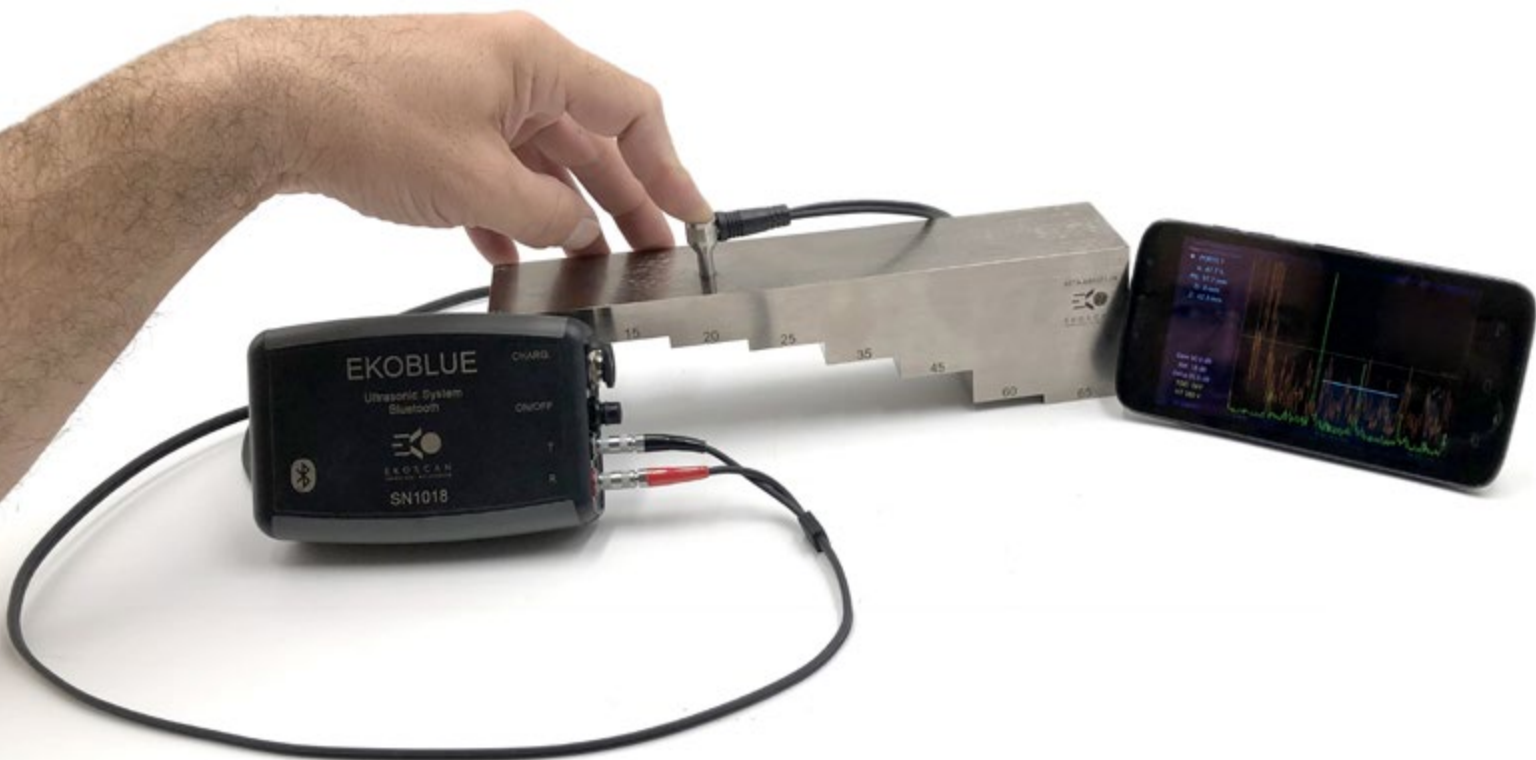
Ref:

- EKOBLUE



EKOBLUE TG

Thickness gage



Presentation

Transform your smartphone and your android tablet into a real thickness gage device. After 3 years of R&D, EKOSCAN developed the first Bluetooth inspection device. The probe is connected to EKOBUEMEMP which is Bluetooth connected to your tablet or smartphone, turning it into a real US thickness gage. This device meets the requirements NF EN 12668-1 (march 2010).

Applications

- Inspection with accessibility difficulties
- Thickness measurement in hostile environments
- Thickness measurement using automated or semi-automated systems

Main specifications

- A-Scan
- Light, compact and wireless
- Great user comfort
- Data transmission of measurements up to 50 m away from EKOBUE.

Main Features

- Connection to all systems running on Android
- Square type of emission (250 V max)
- Max 20 MHz transmission frequency
- Up to 5,000 Hz PRF (Pulse Repetition Frequency)
- Digital filters (Bandwidth 0.1 to 20 MHz)
- Gain of 0 dB to 80 dB
- Autonomy 8 h + battery backup

Ref:

- EKOBUE TG

STARMANS DIO 1000SFE

Flaw detector

COMPACT FLAW DETECTOR: STARMANS FEATURED BY EKOSCAN

Well balanced between ergonomics and functionality the DIO1000 is easy to use for your daily applications in workshop, laboratory and outdoors.

New generation of electronic components, fast micro-processors and our long-term experience in manufacturing of ultrasonic instruments enabled us to develop an advanced ultrasonic flaw detector Defectobook® DIO1000 with the best parameters and functions.

Technical specifications

- LCD screen 1024 x 768 pixels
- Light weight 1.28 kg and 34 mm thin
- Sampling rate of 200 MHz
- Direct access to 12 main functions
- Selectable and tunable burst pulser
- EMAT for non-contact testing
- Trigonometric flaw location function
- TOFD B-Scan
- Standard DAC, JIS-DAC, AVG, API, Automatic Thicknessmeter, Auto Gain, Auto Freeze, Automatic Calibration, Curved Surface Measurement



Main applications

- Aerospace – composite testing
- Steel production – large castings, hot and cold rolled steel
- Engineering – welds and joints
- Railway – track junctions in manganese steel
- Energy – austenitic welds, drive shafts
- Pipe inspection
- Crack detection and sizing



Ref:

- DIO1000SFE

GENERAL

| | |
|------------------------|--|
| Display | Color TFT sunlight, 1024 pixels (W) X 768 pixels (H) |
| Display Update Rate | Minimum 60 Hz |
| Display dimensions | 99×130 mm |
| True Sampling Rate | 200 MHz, 12-bit |
| Operating Temperature | -10 °C to 60 °C |
| Storage Temperature | -40 °C to 70 °C |
| Power Requirements | AC Mains: 100-120 V AC, 200-240 V AC, 50-60 Hz |
| Battery | Built-in and external rechargeable Li-ion battery pack rated at 3.6 V at 16 Ah |
| Battery Operating Time | 10 hours, depending on display brightness |
| Keypad | Graphic symbols, International |
| Languages | Selectable in menu, user-defined custom language |
| Memory | 2 – 16 GB |
| Dimensions | 224×188×34 mm |
| Weight | 0.74 Kg without battery + 0.54 kg battery for 10 operating hours |
| PC Requirements | PC running minimum Microsoft® Windows® Vista®, Microsoft® Windows® XP®, Microsoft Windows 2000®, |
| Warranty | Two year warranty, battery not included. Optional three year warranty available |

INPUT / OUTPUTS

| | |
|----------------------------------|--|
| Transducer Cable Connectors | Lemo® |
| Communications Ports | USB, RS232, Ethernet, Wireless Ethernet (optional), Bluetooth (optional) |
| B-scan input | Encoder, A, B – pulses, start, TTL 5 V, Encoder supply – switchable 5V |
| High Speed Parallel and TTL Port | Alarm outputs, trigger in/out control |
| Analog Output | Selectable voltage output of depth or amplitude data |

PULSER

| | |
|---------------|--|
| Peak Memory | Pulse repetition rate up to 20 kHz and peak envelope of A-Scan display |
| Pulser Type | User Selectable: Tunable square wave, negative spike excitation, burst |
| Pulser Energy | Low (100 V) and Max (400 V) |
| Damping | 50, 57, 200, and 1000 Ohms |

RECEIVER

| | |
|--------------------|--|
| Gain Control | 110 dB Max and reference gain, level control in 6 dB, 1 dB, 0.5 dB and 0.1 dB selectable steps 0 % to 80 % of full scale in 1 % increments |
| Reject | Full Wave, Half Wave Positive or Negative rectified, and RF waveform |
| Rectification | 0.5 MHz to 30 MHz at –3 dB |
| Receiver Bandwidth | Broadband, Narrowband, or Custom Selectable Low and High Pass Filters – 1 MHz |
| Filters | 2 MHz, 2.25 MHz, 4 MHz, 5 MHz, 10 MHz |

CALIBRATION

| | |
|-----------------------------|--|
| Auto Transducer Calibration | Automated calibration of transducer, zero offset and/or velocity |
| Units | metric or microsecond |
| Material Velocity | From 100 to 15240 m/s in steel |
| Range | Standard 1 mm to 60,000 mm in steel |
| Refracted Angle | Fixed settings of 0°, 30°, 45°, 60°, 70°, or variable from 10° to 90° in 0.1° steps for calculations |
| Test Modes | Pulse Echo, Dual, or Through Transmission |

GATES

| | |
|---------------|---|
| Gate Monitors | Four independent AW gates controllable over entire sweep range - Floating gate, Interface gate, Measuring gate (relative, absolute, amplitude, time), Back-wall echo attenuator |
| Alarms | Selectable threshold positive/negative or minimum depth modes |

MEASUREMENTS

| | |
|----------------------|---|
| A-scan memory | 40 000 A-scans (up to 200 000 optional) – printscreen PNG, A-scan, setup |
| B-scan memory | 10 km of B-scan, 1 mm resolution |
| Peak Hold | Freezes Peak Memory echo envelope for recorded waveform comparison with live A-Scan |
| Auto Gate | Thickness |
| DAC | Standard, up to 20 points, 111 dB dynamic range (71 dB continual) |
| TCG | For echo amplitude adjustment and evaluation |
| Curvature correction | Automatically |
| Spot weld | Auto Gain echo, Auto Freeze |



STARMANS DIO 1000 2CH

2 Channels Flaw Detector

COMPACT FLAW DETECTOR: STARMANS FEATURED BY EKOSCAN

DIO 1000 2 CH with its 1.2kg is the lightest equipment of its kind available in the world. It provides 2 UT channels that can be set-up separately the enable inspections with 2 transducers in parallel. The 2 channel mode enable a display of 2 A-Scan simultaneously on the screen and to perform and display 2 B-Scan at the same time.

Technical specifications

- LCD screen 1024 x 768 pixels
- Light weight 1.28 kg and 34 mm thin
- Sampling rate of 200 MHz
- Direct access to 12 main functions
- 2 independent channels that enable single or dual inspection on each
- Selectable and tunable burst pulser for each channel
- Trigonometric flaw location function
- Standard DAC, JIS-DAC, AVG, API, Automatic Thicknessmeter, Auto Gain, Auto Freeze, Automatic Calibration, Curved Surface Measurement

Main applications

- Aerospace – composite testing
- Steel production – large castings, hot and cold rolled steel
- Engineering – welds and joints
- Railway – track junctions in manganese steel
- Energy – austenitic welds, drive shafts
- Pipe inspection
- Crack detection and sizing

Ref:

- DIO1000 2CH



GENERAL

| | |
|------------------------|--|
| Display | Color TFT sunlight, 1024 pixels (L) x 768 pixels (H) |
| Display Update Rate | Minimum 60 Hz |
| Display dimensions | 99×130 mm |
| True Sampling Rate | 200 MHz, 12-bit |
| Operating Temperature | -10 °C to 60 °C |
| Storage Temperature | -40 °C to 70 °C |
| Power Requirements | AC Mains: 100-120 V AC, 200-240 V AC, 50-60 Hz |
| Battery | Built-in and external rechargeable Li-ion battery pack rated at 3.6 V at 16 Ah |
| Battery Operating Time | 10 hours, depending on display brightness |
| Keypad | Graphic symbols, International |
| Languages | Selectable in menu, user-defined custom language |
| Memory | 2 – 16 GB |
| Dimensions | 224×188×34 mm |
| Weight | 0.74 Kg without battery + 0.54 kg battery for 10 working hours |
| PC Requirements | PC running minimum Microsoft® Windows® Vista®, Microsoft® Windows® XP®, Microsoft Windows 2000®, |
| Warranty | Two year warranty, battery not included. Optional three year warranty available |

INPUT / OUTPUTS

| | |
|----------------------------------|--|
| Transducer Cable Connectors | BNC x4 |
| Communication Ports | USB, RS232, Ethernet, Wireless Ethernet (optional), Bluetooth (optional) |
| B-scan input | Encoder, A, B – pulses, start, TTL 5 V, Encoder supply – switchable 5V |
| High Speed Parallel and TTL Port | Alarm outputs, trigger in/out control |
| Analog Output | Selectable voltage output of depth or amplitude data |

PULSER

| | |
|---------------|--|
| Peak Memory | Pulse repetition rate up to 20 kHz and peak envelope of A-Scan display |
| Pulser Type | User Selectable: Tunable square wave, negative spike excitation, burst |
| Pulser Energy | Low (100 V) and Max (400 V) |
| Damping | 50, 57, 200, and 1000 Ohms |

RECEIVER

| | |
|--------------------|--|
| Gain Control | 110 dB Max and reference gain, level control in 6 dB, 1 dB, 0.5 dB and 0.1 dB selectable steps 0 % to 80 % of full scale in 1 % increments |
| Reject | Full Wave, Half Wave Positive or Negative rectified, and RF waveform |
| Rectification | 0.5 MHz to 30 MHz at –3 dB |
| Receiver Bandwidth | Broadband, Narrowband, or Custom Selectable Low and High Pass Filters – 1 MHz |
| Filters | 2 MHz, 2.25 MHz, 4 MHz, 5 MHz, 10 MHz |

CALIBRATION

| | |
|-----------------------------|--|
| Auto Transducer Calibration | Automated calibration of transducer, zero offset and/or velocity |
| Units | metric or microsecond |
| Material Velocity | From 100 to 15240 m/s in steel |
| Range | Standard 1 mm to 60,000 mm in steel |
| Refracted Angle | Fixed settings of 0°, 30°, 45°, 60°, 70°, or variable from 10° to 90° in 0.1° steps for calculations |
| Test Modes | Pulse Echo, Dual, or Through Transmission |

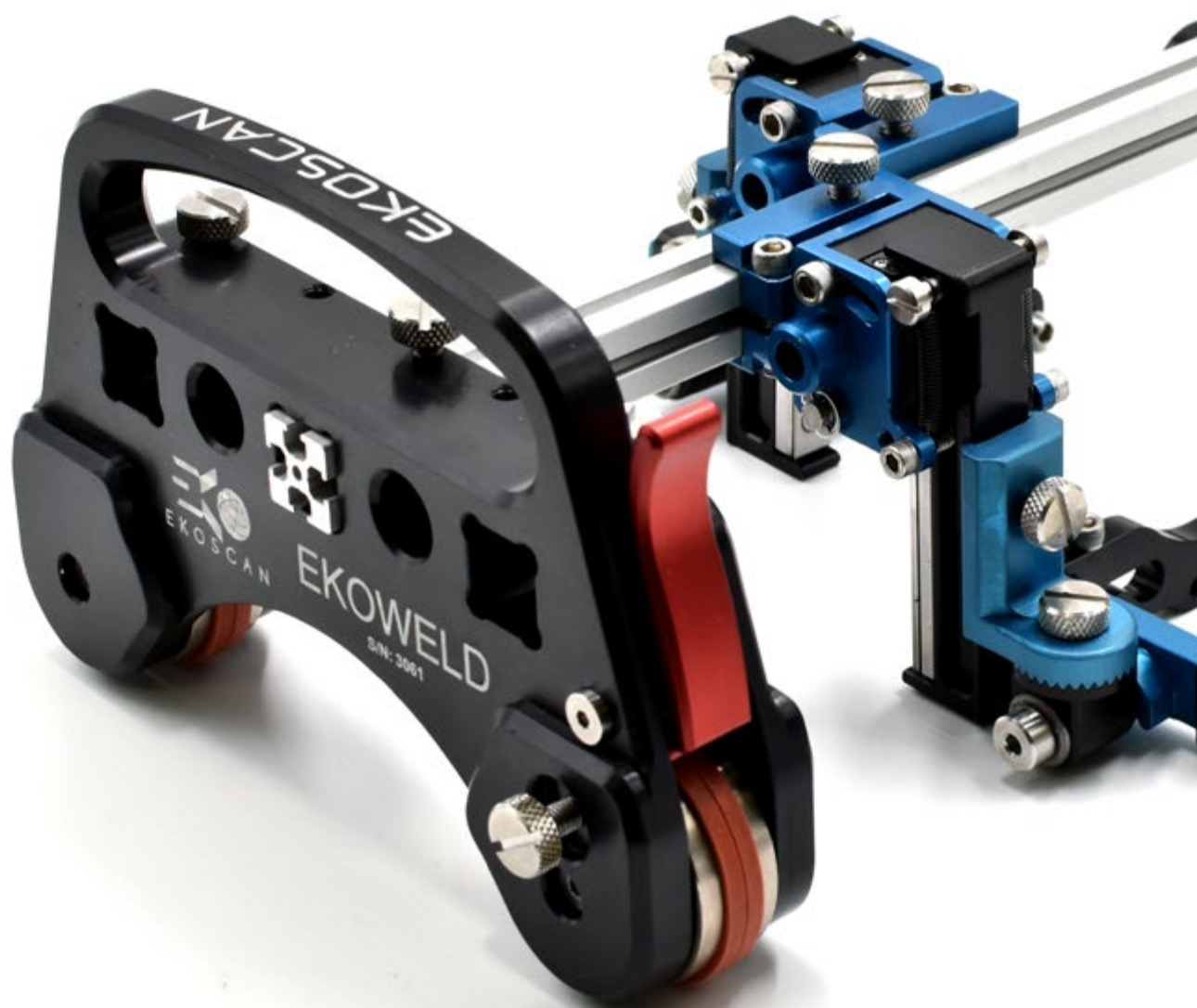
GATES

| | |
|---------------|---|
| Gate Monitors | Four independent AW gates controllable over entire sweep range - Floating gate, Interface gate, Measuring gate (relative, absolute, amplitude, time), Back-wall echo attenuator |
| Alarms | Selectable threshold positive/negative or minimum depth modes |

MEASUREMENTS

| | |
|----------------------|---|
| A-scan memory | 40 000 A-scans (up to 200 000 optional) – screenshot PNG, A-scan, setup |
| B-scan memory | 10 km of B-scan, 1 mm resolution |
| Peak Hold | Freezes Peak Memory echo envelope for recorded waveform comparison with live A-Scan |
| Auto Gate | Thickness |
| DAC | Standard, up to 20 points, 111 dB dynamic range (71 dB continual) |
| TCG | For echo amplitude adjustment and evaluation |
| Curvature correction | Automatically |
| Spot weld | Auto Gain echo, Auto Freeze |







SCANNERS

Matryx RT

Matryx XY

Ekoflex

Ekopipe

Ekoweld

MATRYX RT

3-axis scanner

ROTATING ARM

Presentation

Manual inspection encoded system designed for flat and curved surfaces encoding on 3 axis (C-Scan mapping). Fixed by magnets or suction cups. Ergonomic design.

Applications

- Traceability of ultrasonic testing, sizing defects, characterization, corrosion mapping.
- Maintenance in aeronautics (leeway, wing, fuselage...)
- Ability to inspect vertical surfaces
- Optional Phased Array or multichannel: probe rotating encoding (phased array or multichannel probe)

Main specifications

- 360° rotating
- Compatible with any kind of probe

Compatibility

MATRYX RT is compatible with any Phased-Array system



Ref:
• MATRYX RT



MATRYX XY

2-axis scanner

CARTESIAN SCANNER

Presentation

Manual inspection encoded system designed for flat and curved surfaces 6 degrees of freedom. Encoding on 2 axes (C-Scan mapping). The encoding case is sliding on a rail which is fixed on the part to be inspected. Magnets or suction fixing cups are available for non-ferritic materials.

Applications

- Traceability of ultrasonic testing, sizing defects, characterization, corrosion mapping
- Maintenance in aeronautics (leeway, wing, fuselage...)
- Ability to control vertical surfaces
- Adjustable fork to fit any wedge or probe

Main specifications

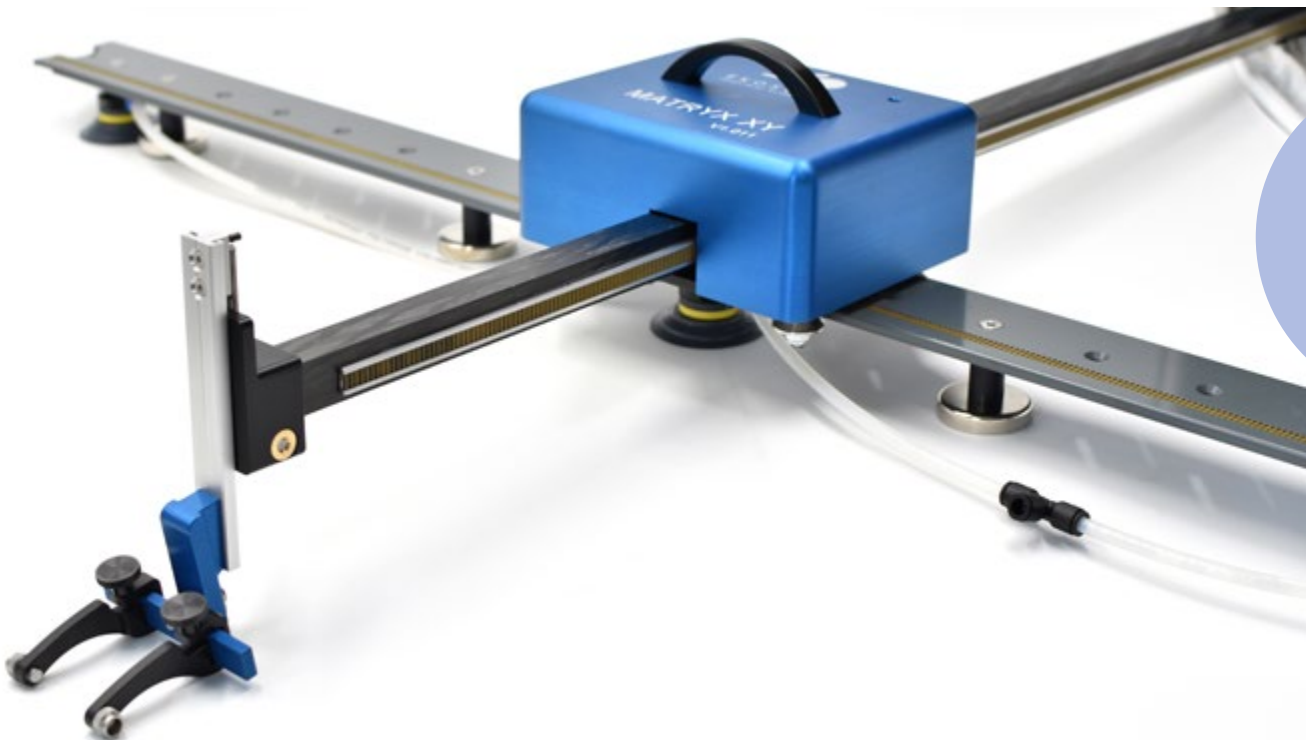
- 360° rotating
- Compatible with any kind of probe

Compatibility

MATRYX XY is compatible with any conventional or Phased Array system.

Ref:

- MATRYX XY



SCANNER EKOSCAN: EKOFLEX SIMPLE

1-axis scanner

SCANNER FOR SMALL TUBES AND PIPES INSPECTION

EKOFLEX scanner was designed to inspect small diameter pipe/tube welds and has a low-profile height to operate between obstructions found for boiler tube inspection.

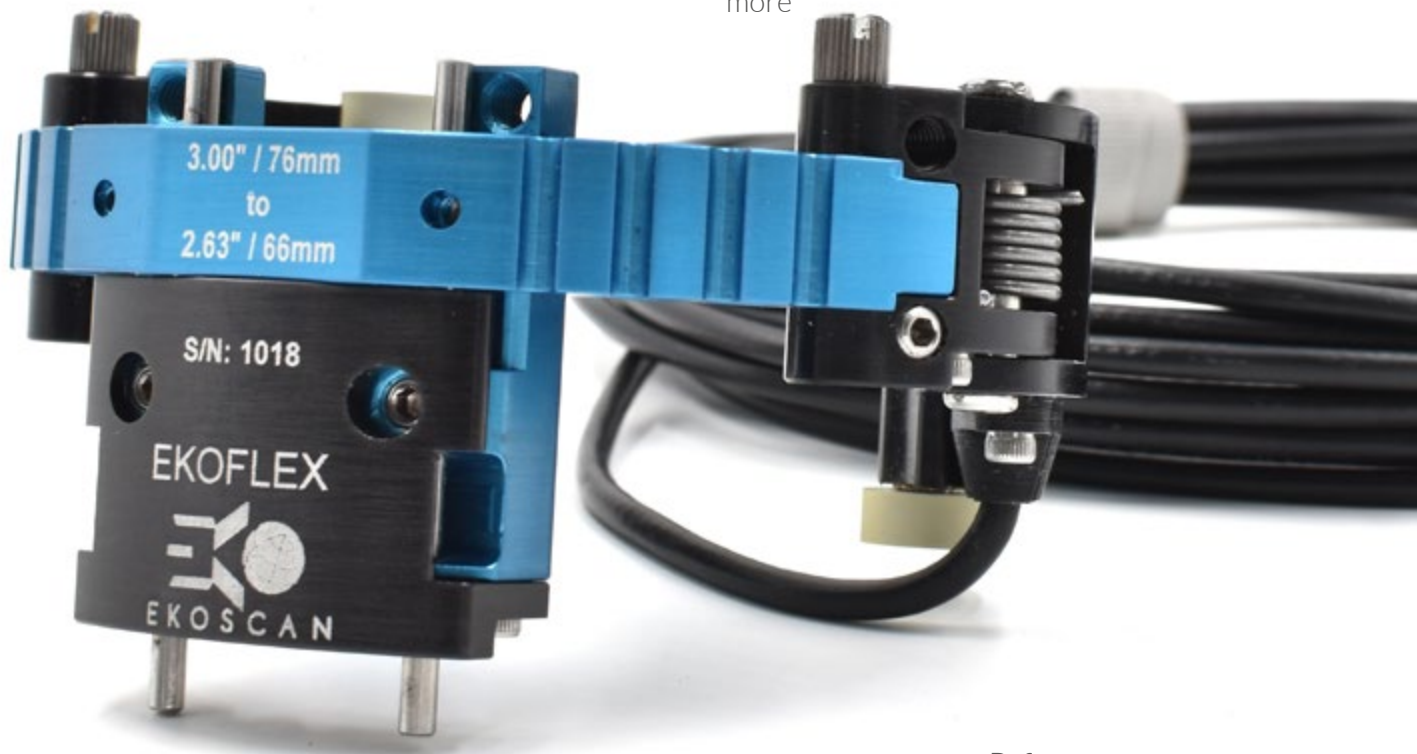
Users can configure the EKOFLEX for a single side phased-array inspection or dual side for complete weld coverage. The encoder is IP68 and is designed to operate in many types of industrial conditions.

Main applications

- Weld inspection on pipes
- Small diameter pipe inspection
- Boiler tube inspection
- Maintenance and manufacturing inspection

Technical specifications

- 10 bands covering a range of pipe from 0.8" (20.3 mm) to 4.5" (114.3 mm)
- Uses EKOSCAN EKOFLEX phased array probes
- Modular design
- Ultra-small size for limited access
- Scans at up to 100 °C
- High resolution encoder (<0.001 inch)
- Urethane wheels to prevent slipping and hold
- Self-adjusting, spring loaded wheel
- Compatible with OmniScan, Zetec, TD Scan, PRAGMA, GE, GEKKO, MANTIS, VEO, and more



Ref:

- EKOFLEX SIMPLE

SCANNER EKOSCAN: EKOFLEX DOUBLE

1-axis scanner

SCANNER FOR SMALL TUBES AND PIPES INSPECTION

EKOFLEX scanner was designed to inspect small diameter pipe/tube welds and has a low profile height to operate between obstructions such as for boiler tube inspection.

Users can configure the EKOFLEX for a single side phased array inspection or dual side for complete weld coverage. The encoder used is IP68 and is designed to operate in many types of industrial conditions.

Main applications

- Weld inspection on pipes
- Small diameter pipe inspection
- Boiler tube inspection
- Maintenance and manufacturing inspection

Technical specifications

- 10 bands covering a range of pipe from 0.8" (20.3 mm) to 4.5" (114.3 mm)
- Uses EKOSCAN EKOFLEX phased array probes
- Modular design
- Ultra-small size for limited access
- Scans at up to 100 °C
- High resolution encoder (<0.001 inch)
- Urethane wheels to prevent slipping and hold
- Self-adjusting, spring loaded wheel
- Compatible with OmniScan, Zetec, TD Scan, PRAGMA, GE, GEKKO, MANTIS, VEO, and more



Ref:
• EKOFLEX DOUBLE



EKOFLEX kit includes:

| PART NAME | DESCRIPTION | QUANTITY |
|------------------------|---|----------|
| Bands | High grade anodized aluminum parts circling the pipe/tube | x 10 |
| Encoded Truck | IP68 high resolution encoder on its wheel truck | x1 |
| Idler Truck | Spring loaded truck for pipe/tube holding | x1 |
| Probe Clamp | Spring loaded probe holder adapted to EKOFLEX probes | x1 |
| Tool kit | Tool kit to assemble/disassemble the scanner | x1 |
| Spare Parts Kit | Kit of spare screws and parts | x1 |
| HD Travel Case | Waterproof and dust resistant travel case | x1 |

EKOPIPE

1-axis scanner

SCANNER FOR PIPELINES WELDS

The **EKOPIPE** is the ultimate scanning solution for weld and corrosion inspections for ferrous and non-ferrous piping such as stainless steel and HDPE. Setup is fast and simple as it should be!

The **EKOPIPE** with its patent pending design does not require multiple chain links to hold onto a pipe like other pipe scanners. Its revolutionary adjustable clamp design allows the scanner to adapt to pipe sizes ranging from 4" to 24" with a simple turn of a handle using 3 available arms in just a matter of seconds.

The basic kit comes with 2 probe holders perfect for TOFD or Phased Array inspection, and our high-resolution water proof RME encoder with a detachable cable. The **EKOPIPE** is also designed to hold 6 or more probes and can be used in multiple scanning positions such as center or side mount. The complete kit is ultra-portable and fits into one small carrying case!

The **EKOPIPE**, truly is the smart way to perform pipe inspections.



Ref:

- EKOPIPE

EKOWELD

1-axis scanner

SCANNER FOR LONGITUDINAL AND CIRCULAR WELDS

Design intent

The EKOWELD is a simple solution to performing Phased Array and TOFD. The scanner can scan pipe in a circumferential or axial direction and can hold up to 6 transducers at a time. Configuring the scanner is quick and easy. The EKOWELD has magnetic wheels to prevent slipping and hold the scanner's weight. The scanner has compatible connectors available for most UT systems.

Dimensions and weight

The shipping case containing all components weighs about 21 lbs. The scanner alone weighs just 6.6 lbs.



Ref:
• EKOWELD



ACCESSORIES

Cables

Adapters

Wire encoder

TOFD accessories

UT gel

Profile comb

Pump TOFD

Compas

ACCESSORIES USED IN ULTRASONIC TESTING

Single and double wires

Technical specifications

- Cables for combined emission and reception or distinct emission and reception probes
- Lemo00, Lemo1, Microdot, BNC, UHF, Subvis, standard connections
- Standard length: 2 m
- Standard impedance 50 Ω
- Operating temperature: ambient temperature

| SINGLE WIRES | LEMO00 | LEMO1 | BNC |
|-----------------|---------------|---------------|----------------|
| Lemo00 | CBL00-00/2/M | - | - |
| Lemo01 | CBL01-00/2/M | CBL01-01/2/M | - |
| BNC | CBLBNC-00/2/M | CBL01-BNC/2/M | CBLBNC-BNC/2/M |
| Microdot | CBL00-MIC/2/M | CBL01-MIC/2/M | CBLBNC-MIC/2/M |
| UHF | CBL00-UHF/2/M | CBL01-UHF/2/M | CBLBNC-UHF/2/M |
| Subvis | CBL00-SUB/2/M | CBL01-SUB/2/M | CBLBNC-SUB/2/M |



| DOUBLE WIRES | LEMO00 | LEMO1 | BNC |
|-----------------|---------------|---------------|----------------|
| Lemo00 | CBL00-00/2/D | - | - |
| Lemo01 | CBL01-00/2/D | CBL01-01/2/D | - |
| BNC | CBLBNC-00/2/D | CBL01-BNC/2/D | CBLBNC-BNC/2/D |
| Microdot | CBL00-MIC/2/D | CBL01-MIC/2/D | CBLBNC-MIC/2/D |
| UHF | CBL00-UHF/2/D | CBL01-UHF/2/D | CBLBNC-UHF/2/D |
| Subvis | CBL00-SUB/2/D | CBL01-SUB/2/D | CBLBNC-SUB/2/D |



For any specific request, please contact us indicating your reference as follows:

CBL"Connection1"- "Connection2" / "length in m" / "D for Dual or M for Mono"

ACCESSORIES USED IN ULTRASONIC TESTING

Adapters



Lemo1M/BNCF ADAPTERS

Adapter station/probes for ultrasonic test. Impedance 50 Ω

Ref:

- ADP01M-BNCF



Lemo1F/BNCM ADAPTERS

Adapter station/probes for ultrasonic test. Impedance 50 Ω

Ref:

- ADP01F-BNCM



Lemo00F/BNCM ADAPTERS

Adapter station/probes for ultrasonic test. Impedance 50 Ω

Ref:

- ADP00F-BNCM



Lemo00M/BNCF ADAPTERS

Adapter station/probes for ultrasonic test. Impedance 50 Ω

Ref:

- ADP00M-BNCF



Lemo1F/Lemo00M ADAPTERS

Adapter station/probes for ultrasonic test. Impedance 50 Ω

Ref:

- ADP01F-00M



EKOSCAN/GEKKO ADAPTERS (LEMO10/MOLEX)

Adapter station/probes for ultrasonic test. Impedance 50Ω

Ref:

- ADPL10-MOLEX



MX1/MX2 ADAPTERS (LEMO16/SUB-D)

Adapter station/probes for ultrasonic test. Impedance 50Ω

Ref:

- ADPL16F-SUBDM

Other impedances and connectors upon request

ACCESSORIES USED IN ULTRASONIC TESTING

Wire encoder

EKOSCAN wire encoder, compatible with any UT board and probe.

- Encoded length: 1000 mm
- Encoding step: 0.1 mm
- Linearity: $\pm 0.20\%$
- Protection indication: IP50
- Fixing system: magnet

Ref:

- COD-F/1M



TOFD accessories

Preamplifier for TOFD method

- Lateral Lemo00 output
- 40 dB amplification
- Electronical protection to prevent in/out channel inversion
- Rugged casing against water flow and dust

Ref:

- PREAMP-1CH-40



2-channel preamplifier

Twin preamplifier for TOFD or dual probe operation

- Lem00 Eq. input
- Incl. Battery low indicator
- Amplification 40 dB other values on request
- Bandwidth <500 kHz - <25 MHz
- Measures approx. 60 x 125 x 35 mm
- Li-ion battery and charger
- Calibration certificate included
- One charge for over 30 hours of use

Ref:

- PREAMP-2CH-40

ACCESSORIES USED IN ULTRASONIC TESTING

UT couplant



Standard UT gel type UCA2
PMUC certified
5L bucket or 250 mL pipette

Ref:

- EKOGE2

Specific UT gel without bubble. Do not dry.
Can be used for probe/wedge or
probe/delay line coupling
90 mL pipette

Ref:

- CB90



High temperature couplant, heat-resistant up to 300°
High adherence capacity to be used for controlling
vertical parts/workpieces
Packaging : 400 grams

Ref:

- EKOGREASE-HT

ACCESSORIES USED IN ULTRASONIC TESTING

Profile Comb



Profiles combs length 150, 300 and 500 mm enabling to take quickly and precisely a complex profile or shape.

Aluminum core, stainless steel edges

Ref:

- EKOFORM150
- EKOFORM300
- EKOFORM500

TOFD pump



Irrigation water pump for TOFD control

Ref:

- POMPETOFD



NDT EQUIPMENT CHECK



EKOSCAN is a company specialized in **ultrasonic NDT equipment** manufacturing. **ISO 9001 : 2015** certified. and based in **Saint Rémy, close to Chalon-sur-Saône** (71100).

EKOSCAN can check your equipment under **48 h** upon request:

| VERIFICATION TYPES | DESCRIPTION | MAXIMUM DURATION |
|---|--|------------------|
| Conventional UT Board | Verification according to EN 12668-1 | 1 week |
| Phased Array | Phased Array Board 16: 32 | 2 weeks |
| | Phased Array Board 16: 64 | 2 weeks |
| | Phased Array Board 16: 128 | 2 weeks |
| | Phased Array Board 32: 128 | 2 weeks |
| | Phased Array Board 64: 64 | 2 weeks |
| | Phased Array Board 64: 128 | 2 weeks |
| Thickness gage | Verification according to EN 15317 | 1 week |
| | Verification according to an internal procedure | 1 week |
| | Verification according to an internal procedure (simplified) | 1 week |
| UT transducer | Verification according to EN 12668-2 | 1 week |
| | Verification according to aeronautics procedures | 1 week |
| Equipments <ul style="list-style-type: none"> ● Magnetic particles ● Penetrant testing ● Various | Electro-magnet of any brand according to EN ISO 9934-3 | 1 week |
| | Portable generator and testing bench for magnetic particles testing of any brand according to EN 9934-3 | 1 week |
| | Tangential and persistent field measurer (3 probes maximum) according to EN ISO 9934-3 for any wave form and frequency | 1 week |
| | Light meter verification according to EN 3059 | 1 week |
| | Ultraviolet radiometer verification according to EN 3059 | 1 week |
| | Light meter and radiometer combination verification according to EN 3059 | 1 week |
| | Thermometer verification (any probe type) according to FD X 07-028 and 029 | 1 week |
| | Calibration blocs verification for penetrant testing | 1 week |
| | Hardness measurer verification according to ASTM D 2240 | 1 week |
| | Coating measurer (for ferromagnetic or amagnetic) verification according to ASTM D 6132 | 1 week |
| Eddy current board | Verification according to ISO 15548-1 | 1 week |
| Calibration blocks for any technique | Verification according to current standards | To be defined |

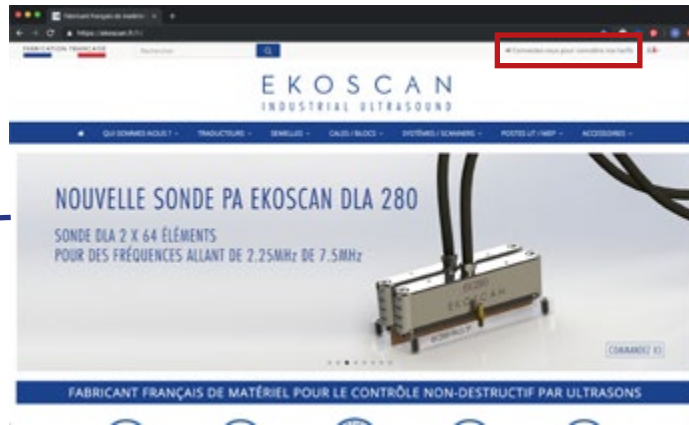
CONNECT !

1

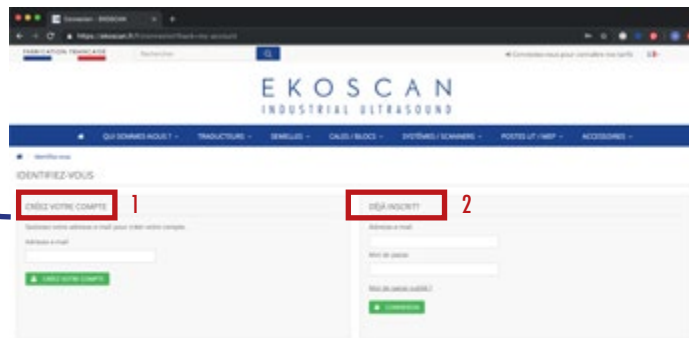
Go to our website www.ekoscan.fr

2

Click on the link: «Sign in»

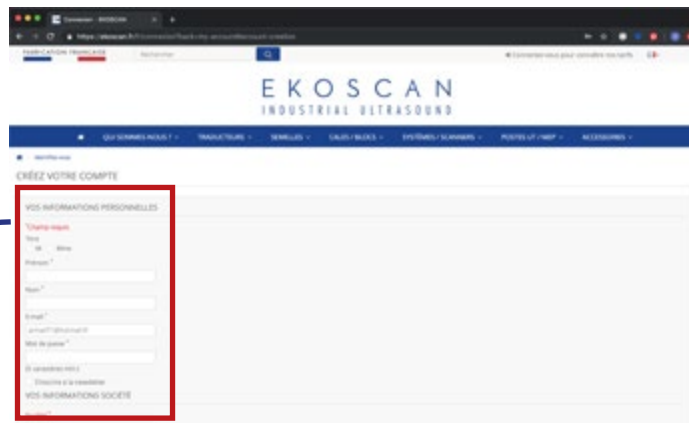


3



1 - Create your customer account using an email address
or
2 - Log in to your account

4



Enter all required fields.

5

Your account will be validated after receiving the confirmation email from the administrator



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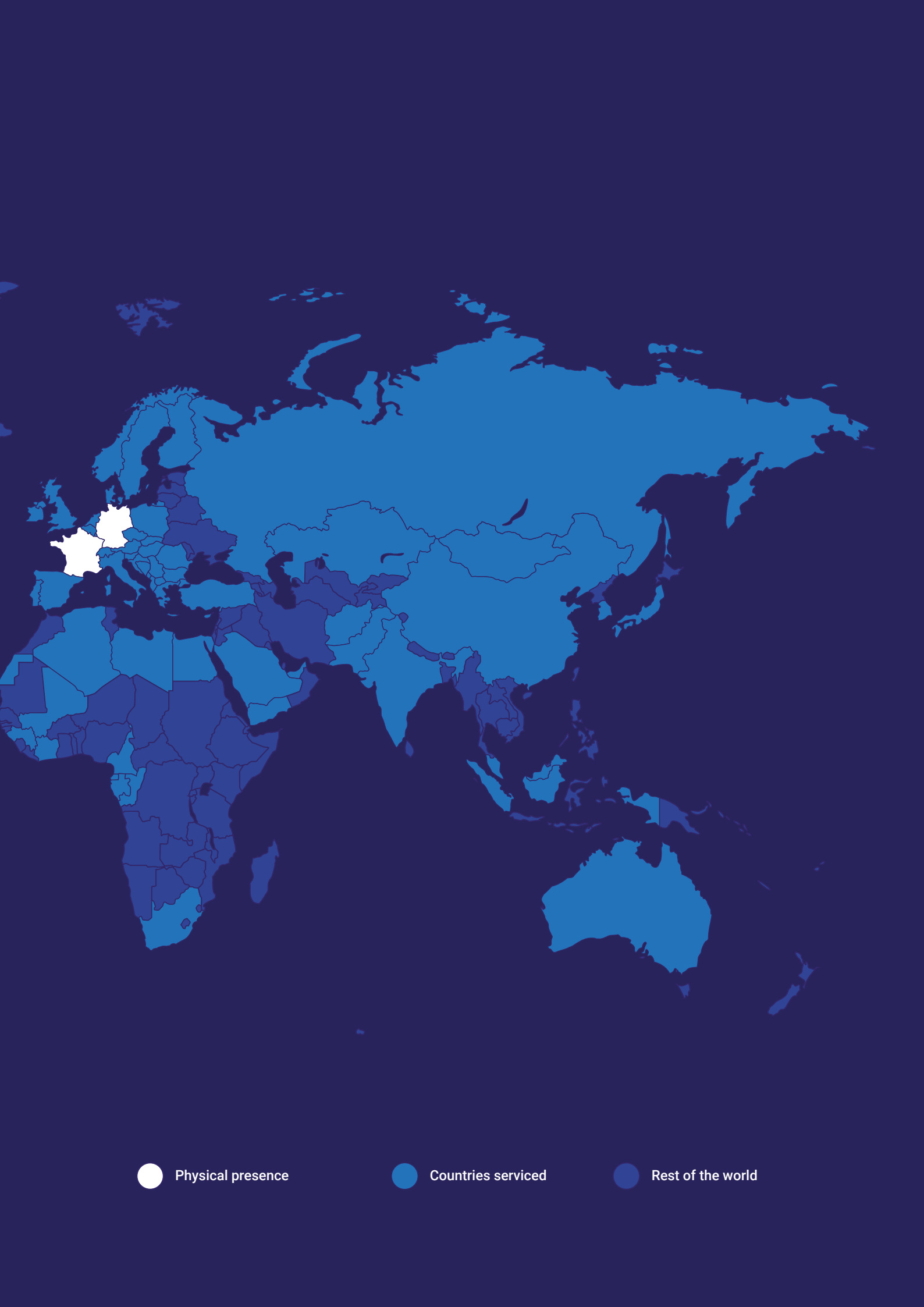
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