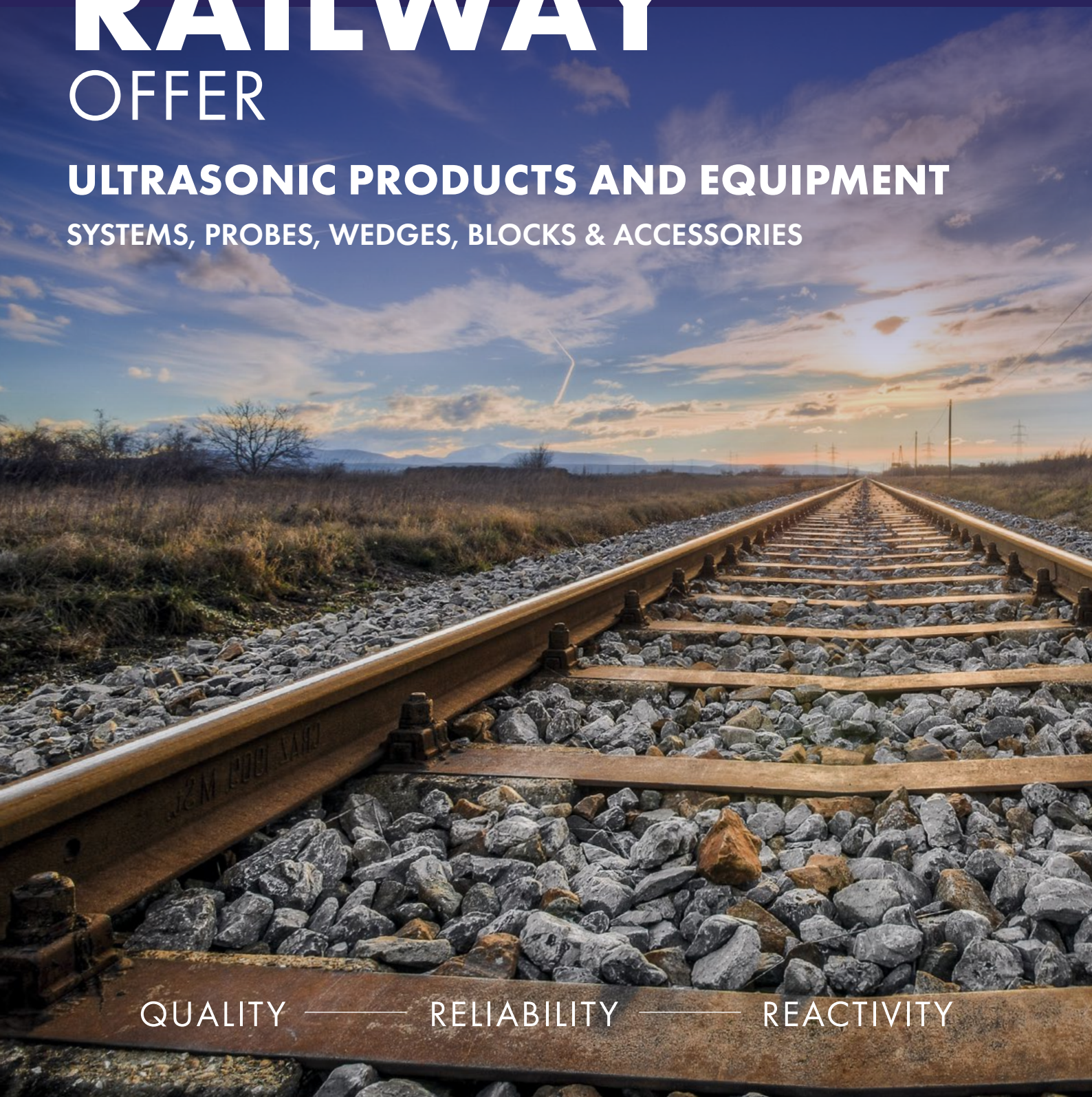
EKOSCAN
INDUSTRIAL ULTRASOUND

NON-DESTRUCTIVE
TESTING

SPECIAL RAILWAY OFFER

ULTRASONIC PRODUCTS AND EQUIPMENT

SYSTEMS, PROBES, WEDGES, BLOCKS & ACCESSORIES



QUALITY — RELIABILITY — REACTIVITY

EKOSCAN
INDUSTRIAL ULTRASOUND

CONTINUITY AND EVOLUTION.

These are the key words of the history of EKOSCAN. Continuity has been present since 1973, the year when the founder of EKOSCAN held a probe in his hands for the first time. Continuity also exists in the daily efforts of our team to adapt to your expectations and contribute to your success.

The ongoing challenges of technological advances have contributed to the evolution of EKOSCAN. Throughout its history, EKOSCAN has strived to remain at the forefront of innovation in order to adapt to the changes in the industry.

YOU EVOLVE, WE ADAPT.

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

AB certification ISO 9001 : 2015

EKOSCAN is certified
ISO 9001:2015

www.ekoscan.fr

CONVENTIONAL TRANSDUCERS

"TRIPLE MANUAL" PROBE

"TRIPLE STICK" PROBE

SPECIFIC PROBE EK213

TRIPLE STICK PROBE

MOUNTED ON INSPECTION STICK

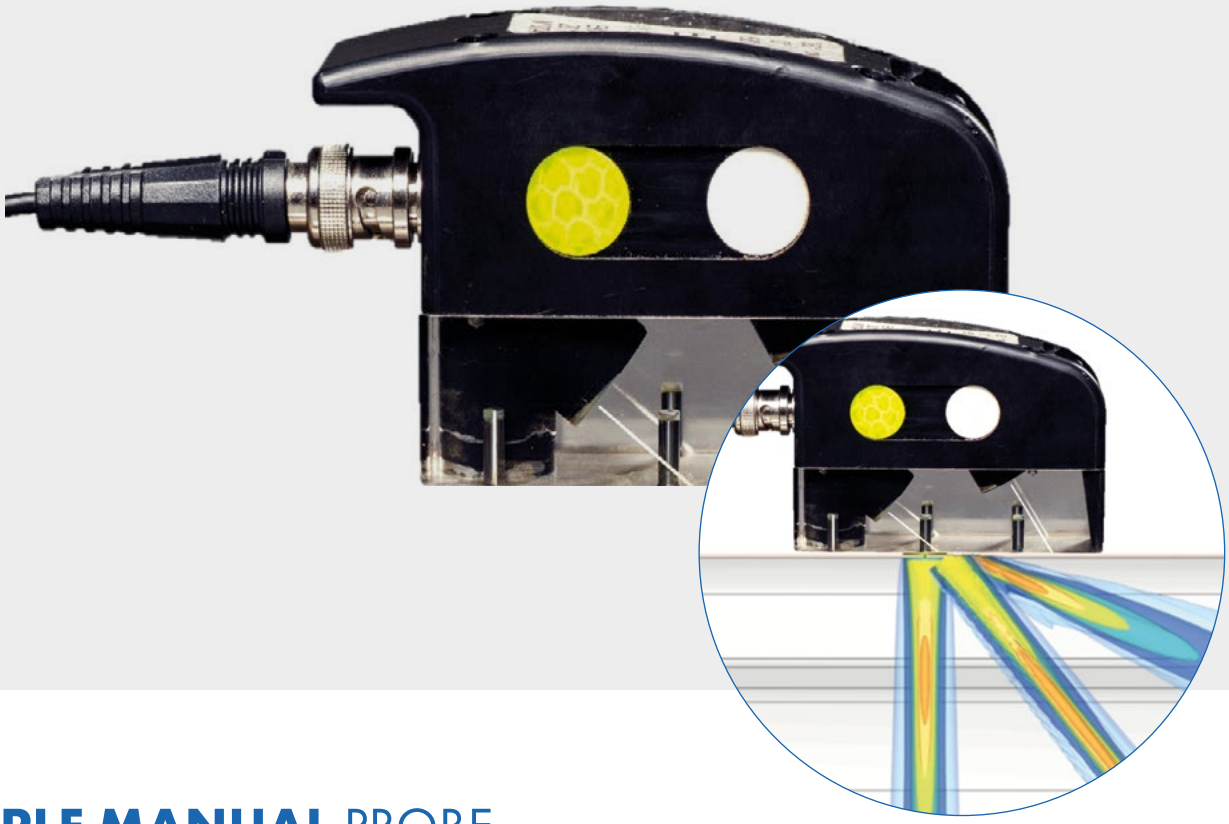
INSPECTION STICK: EKORAIL3

EKORAIL4

PROBES AND TOOLS

SHEAR AND LONGITUDINAL WAVES

SNCF APPROVED



TRIPLE MANUAL PROBE

Ref : EKTM

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

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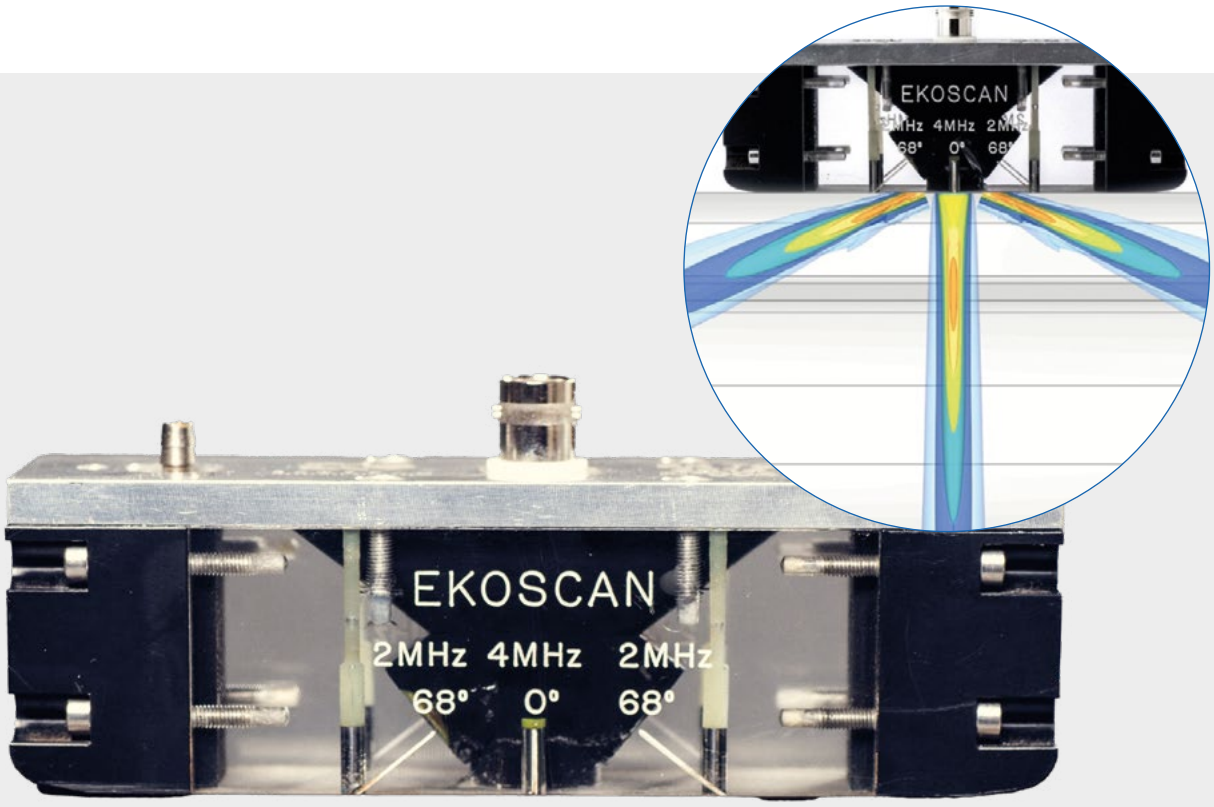

TRIPLE STICK PROBE

Ref : EKTC

SPECIFIC PROBE ADAPTABLE TO FIT THE INSPECTION STICK, DEDICATED TO THE CONTROL OF BOTH RAILS.

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” probe 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

SPECIFIC PROBE 213

Ref : EK213

SPECIFIC PROBE ADJUSTABLE TO INSPECTION STICK: EKORAIL..

- Probe dedicated to the control of noth rails.
- Composed of two piezoelectric ceramics piezoelectric ceramics allowing the detection of 213 defects.
- This new generation probe is equipped with with an anti-wear plate at the front and at the back of the base.
- BNC connector
- X2 transverse waves frequency 2MHz
- Probe sold with its conformity certificate associated.

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TRIPLE STICK PROBE
MOUNTED ON INSPECTION STICK

the picture is property of Pandrol

APPROVED

RAIL INSPECTION

INSPECTION STICK

Ref : EKORAIL3

MAGNETIC INSPECTION STICK USED IN RAIL FLAW DETECTION:

- Rugged solution with membrane-free coupling
- Optimized water consumption
- Anti-derailment magnetic wheels

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BACKPACK FOR CONSTRUCTION SITE

Ref : SAC 20L

CONSTRUCTION BACKPACK WITH REFLECTIVE STRIPES.

- Multi-pockets and reinforced bottom. Ergonomic and padded harness.
- Inner tank made of PVC with thermo welding, water capacity: 20L.
- Supplied with a 1.60 m water hose and a tap.

DIMENSIONS:
62 x 48 x 5 cm

WEIGHT: 2,4 KG

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
LONGITUDINAL WAVE TRANSDUCERS				
V4-OL0°/4	0	4	Ø17/2	BNC
V6-OL0°/4	0	4	Ø17/2	BNC
V3-ERD-OL0°-2.25-D17/2-SN	0	2,25	17x2	BNC
V4-OL0°/2.25	0	2,25	Ø17/2	BNC
V6-OL0°/2.25	0	2,25	Ø17/2	BNC
V3-ERD-OL55/TOFD-2.25-4X20-SN	55	2,25	4x20	BNC
V3-TOFD55°	55	2	4x20	BNC
V4-TOFD55°	55	2	4x20	BNC
V6-TOFD55°	55	2	4x20	BNC
V5-TOFD55°	55	2	4x20	BNC
SHEAR WAVE TRANSDUCERS				
V4-OT35°	35	2,25	Ø20	BNC
V6-OT55°	55	2,25	Ø13	BNC
V4-OT55°	55	2,25	Ø13	BNC
V6-OT55°	55	2,25	Ø13	BNC
V3-ERC-OT70D-2.25-15X20-SN	70	2,25	15x20	Lemo00
V3-ERC-OT70G-2.25-15X20-SN	70	2,25	15x20	Lemo00
OT70	70	2,25	25x12	BNC

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CONTROL KIT FOR WELDING RAILS

FOR TRANSVERSE WAVES

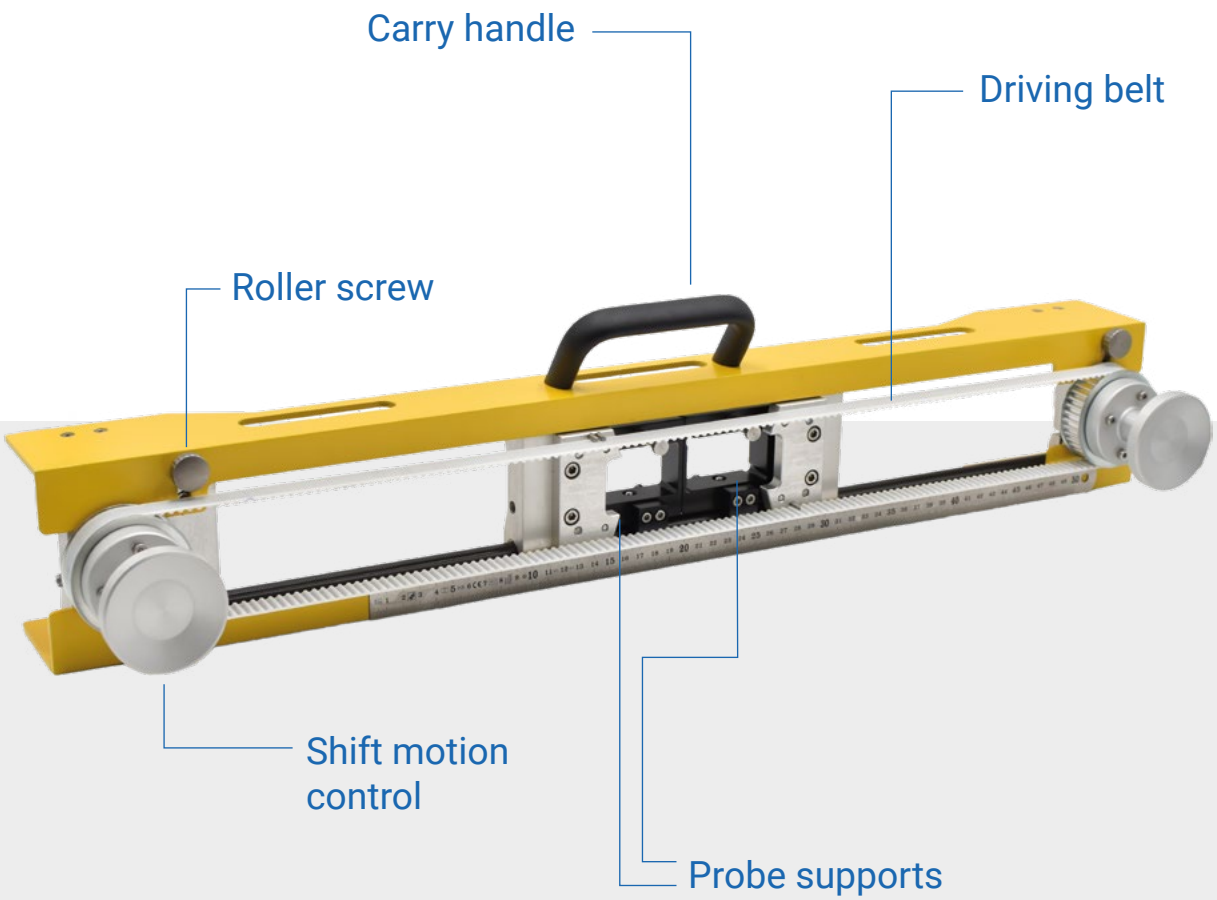
Ref : TRWS-400

TRWS IS AN ULTRASONIC SCANNER ENABLING RAILWAY WELD INSPECTION. IT IS EQUIPPED WITH TWO W45-2 TC TRANSDUCERS WHICH ARE INSTALLED IN TRANSMISSION.

The two transducers are automatically adjusted to move simultaneously in opposite direction along the TRWS. It enables a full coverage of the weld heights and the detection of specific searching of vertical indication to the surface of inspection.

TRWS is designed for a use on any kind of rail and industrial environment.

TRWS maintenance is quick and simple.



PROBE

REFERENCE	REFRACTED ANGLE in °	FREQUENCY MHz	CRYSTAL SIZE mm	CONNECTOR
Traducteur W45-2 TC	45	2	20X22	LEMO 01

Single-element probe, shear waves, 2MHz, refracted angle 45°. Ceramic size : 20x22. Superior output connector Lemo 00.

Detection and characterization of flaws in components, welds, sheet metal, and complex geometry parts in medium and high thick steel

Supplied with its own certificate in conformity with EN 22232-2

CABLE

REFERENCE	DESCRIPTION
CBL00-00/2/M	Cable LEMO 00/LEMO 00 single, length 2 m

RAIL SAMPLE WITH ARTIFICIAL REFLECTORS

Ref : CALRAIL

Service including:

- Rail sample supply
- Machining of artificial reflectors:
  - 3x FBH Ø5mm length 20mm
  - 1x notch 20mm long, 0.2mm opening and 2mm deep located at the bottom of the rail
- Laser engraving
- Dimensional control of the whole block and artificial reflectors
- Establishment of the control report

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RAIL INSPECTION

EKORAIL4

THE EKORAIL4 IS DESIGNED FOR EASY USE ON ANY TYPE OF TYPE OF RAIL.

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 th detection of vertical and horizontal cracks.

The information collected is displayed on one unique screen (right rail / left rail) for real-time visualization.

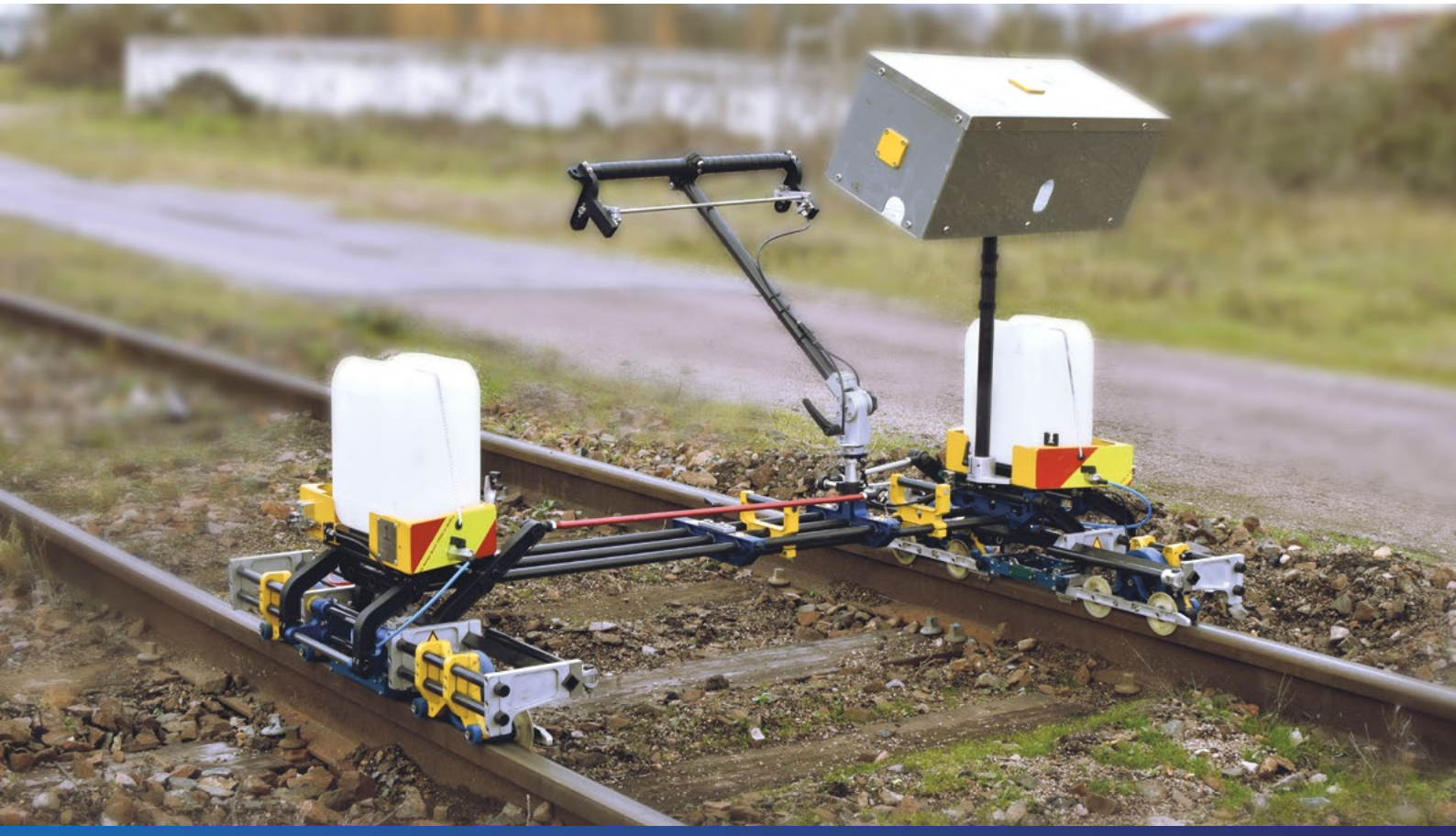
Its maintenance is quick and simple. A smart system allows the EKORAIL4 to be folded for easy transportation. The EKORAIL4 is also compatible with metric lines and can fit in an utility vehicle.

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.

GENERAL

Dimensions	1787 mm x 105 0mm x 1071 mm
Empty weight	25 kg
Weight of the truck in working condition	45 kg



CALIBRATION BLOCKS

“INTERNATIONAL” BLOCK

CONVENTIONAL UT BLOCKS

CAL1A-SNCF

International wedge n°1 in specific carbon steel SNCF for the calibration of transverse and longitudinal waves.

- Verification of the emergence point and the angle of the probes.
- Data reading directly on the block.

SUPCAL1

Rotating support for blovk n°1 allowing an easy calibration by turning the block around an axis (safety is significantly improved).

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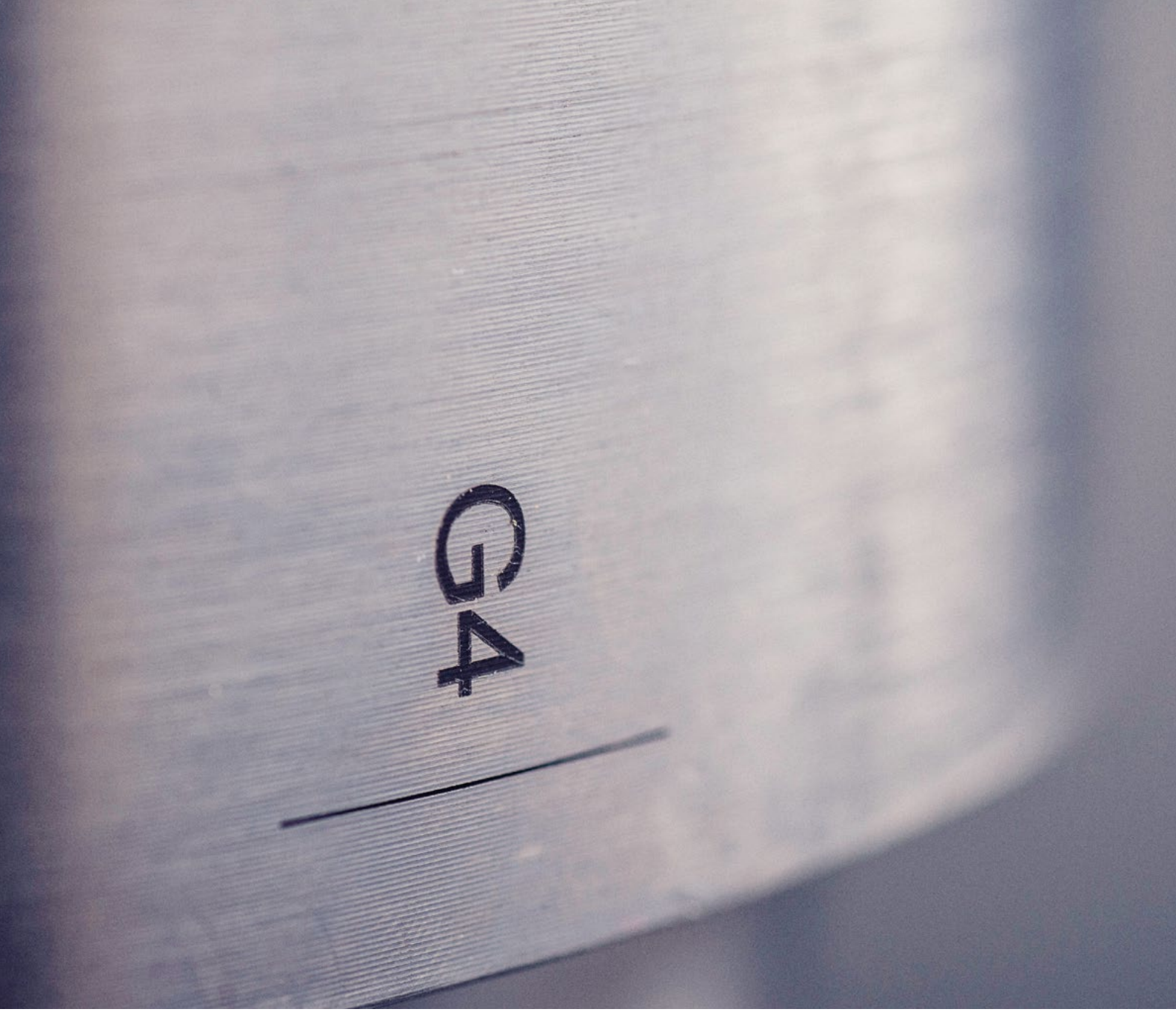

CUSTOM-MADE BLOCKS

EKOSCAN can manufacture special blocks to suit your needs. As an ISO 9001 certified manufacturer. EKOSCAN is particularly attentive to the selection of its raw materials.

Our very strict internal procedure, requires a preliminary control of both the material and the ultrasound speed. Our manufacturing and verification tools are COFRAC certified.

Based on your technical specificationss and the application, EKOSCAN will design the specific block that meets your expectations.

Contact us for the study of your block

STARMANS DIO 1000 SFE & DIO 1000 2CH

CONVENTIONAL ULTRASOUND DEVICES

COMPACT FLAW DETECTOR: STARMANS FEATURED BY EKOSCAN

Ref : DIO1000SFE Ref : DIO1000-2CH

Balanced between ergonomics and robustness, the DIO 1000 SFE and DIO1000-2CH are a perfect solution for your daily applications in the workshop, laboratory or construction site.

The latest generation of electronic components generation, fast microprocessors as well as our long experience as a manufacturer of ultrasonic of ultrasonic measuring instruments has led to the development of a revolutionary ultra-compact ultrasonic station with a wide range of features.

TECHNICAL SPECIFICATIONS

- LCD screen 1024 x 768 pixels
- Light and thin 1.28k g and 34 mm
- 200 MHz frequency sampling
- Direct access to 12 features
- Fully configurable transmitter circuit
- EMAT function
- Trigonometry function for positioning
- B- TOFD scan
- DAC, JIS-DAC, AVG, API curves, automatic thickness measurement in mode 1, 2 and 3, automatic gain, image freeze, automatic calibration, surface curvature correction.

MAIN APPLICATIONS

- Railway: control of rails or hearts in manganese

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GENERAL

	Ref : DIO1000SFE	Ref : DIO1000-2CH
Display	Color TFT sunlight, 1024 px (W) X 768 px (H)	Color TFT sunlight, 1024 px (W) X 768 px (H)
Display Update	Rate minimum 60 Hz	Rate minimum 60 Hz
Screen dimensions	99×130 mm	99×130 mm
True Sampling Rate	200 MHz, 12-bit	200 MHz
Operating Temperature	-10 °C to 60 °C	-10 °C to 60 °C
Storage Temperature	-40 °C to 70 °C	-40 °C to 70 °C
Power Requirements	AC Mains: 100-120 V AC, 200-240 V AC, 50-60 Hz	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	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	10 hours, depending on display brightness
Keypad	Graphic symbols, International	Graphic symbols, International
Languages	Selectable in menu, user-defined custom language	Selectable in menu, user-defined custom language
Memory	2 – 16 Gb	2 – 16 Gb
Dimensions	224 × 188 × 34 mm	224 × 188 × 34 mm
Weight	0.74 Kg without battery + 0.54 kg battery for 10 operating hours	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®	PC running minimum Microsoft® Windows® Vista®, Microsoft® Windows® XP®, Microsoft Windows 2000®
Warranty	Two year warranty, battery not included. Optional three year warranty available.	Two year warranty, battery not included. Optional three year warranty available.

INPUT / OUTPUTS

Transducer Cable Connectors	Lemo01	2-BNC
Communications Ports	USB, RS232, Ethernet, Wireless Ethernet (optional), Bluetooth (optional)	USB, RS232, Ethernet, Wireless Ethernet (optional), Bluetooth (optional)
B-scan input	Encoder, A, B – pulses, start, TTL 5 V, Encoder supply – switchable 5V	Encoder, A, B – pulses, start, TTL 5 V, Encoder supply – switchable 5V
High Speed Parallel and TTL	Port Alarm outputs, trigger in/out control	Port Alarm outputs, trigger in/out control
Analog Output	Selectable voltage output of depth or amplitude data	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	repetition rate up to 20 kHz and peak envelope of A-Scan display
Pulser Type	User Selectable: Tunable square wave, negative spike excitation, burst	User Selectable: Tunable square wave, negative spike excitation, burst
Pulser Energy	Low (100 V) and Max (400 V)	Low (100 V) and Max (400 V)
Damping	50, 57, 200, and 1000 Ohms	50, 57, 200, and 1000 Ohms

RECEIVER

	Ref : DIO1000SFE	Ref : DIO1000-2CH
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	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	Full Wave, Half Wave Positive or Negative rectified, and RF waveform
	0,5 MHz to 30 MHz to –3 dB	0,5 MHz to 30 MHz to –3 dB
Receiver Bandwidth	Broadband, Narrowband, or Custom Selectable Low and High Pass Filters – 1 MHz	Broadband, Narrowband, or Custom Selectable Low and High Pass Filters – 1 MHz
Filters	2 MHz, 2,25 MHz, 4 MHz, 5 MHz, 10 MHz	2 MHz, 2,25 MHz, 4 MHz, 5 MHz, 10 MHz

CALIBRATION

Auto Transducer Calibration	Automated calibration of transducer, zero offset and/or velocity	Automated calibration of transducer, zero offset and/or velocity
Units	metric or microsecond	metric or microsecond
Material Velocity	From 100 to 15240 m/s in steel	From 100 to 15240 m/s in steel
Range	Standard 1 mm to 60,000 mm in steel	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	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	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.	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	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	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	10 km of B-scan, 1 mm resolution
Peak Hold Freezes	Peak Memory echo envelope for recorded waveform comparison with live A-Scan.	Peak Memory echo envelope for recorded waveform comparison with live A-Scan.
Auto Gate	Thickness	Thickness
DAC	Standard, up to 20 points, 111 dB dynamic range (71 dB continual)	Standard, up to 20 points, 111 dB dynamic range (71 dB continual)
TCG	For echo amplitude adjustment and evaluation	For echo amplitude adjustment and evaluation
Curvature correction	Automatically	Automatically
Spot weld	Auto Gain echo, Auto Freeze	Auto Gain echo, Auto Freeze

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ACCESSORIES

CABLES

CONNECTORS

UT GEL

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CONTROL ACCESSORIES

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 mm
- Standard impedance 50 Ω
- Operating temperature: ambient temperature

Contact us for any specific need specific needs (type of connection, length and impedance)

SINGLE WIRES	LEMO00	LEMO01	BNC
Lemo00	CBL00-00/2/M	-	-
Lemo01	CBL00-1/2/M	CBL01-1/2/M	-
BNC	CBL00-BNC/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	LEMO01	BNC
Lemo00	CBL00-00/2/D	-	-
Lemo01	CBL00-1/2/D	CBL01-1/2/D	-
BNC	CBL00-BNC/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

UT GEL REFERENCE	SIZE ml	DESCRIPTION
EKOGEL2	5 L	Pot de couplant ultrasons de couleur bleue, type UCA2
EKOGEL2 250	250 ml	Pot de couplant ultrasons de couleur bleue, type UCA2
EKOGEL2 100	100 ml	Pot de couplant ultrasons de couleur bleue, type UCA2
CB90	100 ml	Specific coupling without bubble, blue color, allowing to realize an ultrasonic control with a small thin layer of couplant. Antibacterial product.

For any specific need, contact us by indicating the following references: CBL "Connection1" / "Connection2" / "length in m" / "D for Double or M for Mono"

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ACCESSORIES USED IN ULTRASONIC TESTING

CONNECTORS - ADAPTERS

LEMO1M/BNCF ADAPTERS

Adapter station/probes for ultrasonic test. Impedance 50 Ω

Ref : ADP01F-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-BNC

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 : ADP00M-01F

Other impedances and connectors upon request

THANK YOU FOR YOUR TRUST AND CONFIDENCE.

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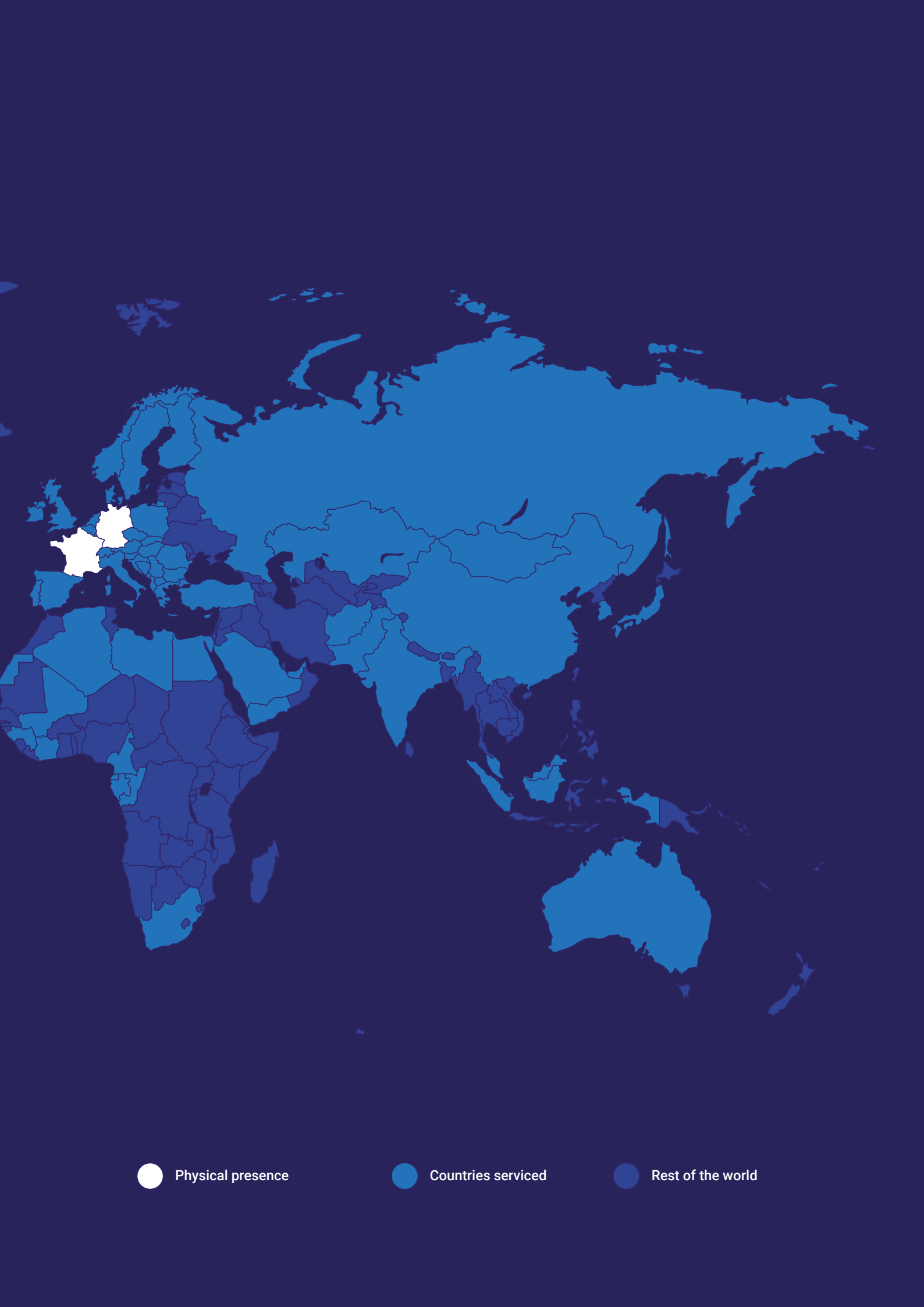
Physical presence
Countries serviced
Rest of the world

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NDT PRODUCTS & EQUIPMENT

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