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IMG ULTRASUONI was founded in 1983 as a manufacturer of ultrasonic transducers for industrial (CND) and medical (doppler effect) applications. Thanks to the experience and the know-how gained from years of experience and work, IMG offers its customers complete solutions covering every phase:

from the preliminary study to the engineering, to the manufacturing of transducers and custom systems for special applications.

Our main goals are a constant increase in the products quality, the attention to the market needs and a product development with an "application oriented" approach. IMG, besides supplying probes and equipment, develops solutions for specific applications, providing recognized technical and training support, of great importance especially for the Phased Array applications.

HEADQUARTERS

IMG ULTRASUONI's headquarters are located in Mandello del Lario, on the Como Lake.



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PRODUCTS AND SYSTEMS FOR NON-DESTRUCTIVE TESTING May 2018 - Printing 001

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COMPANY

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CONVENTIONAL PROBES

PROBES

SPECIAL

PROBES

WEDGES AND DELAY LINES

CABLES AND

ADAPTERS

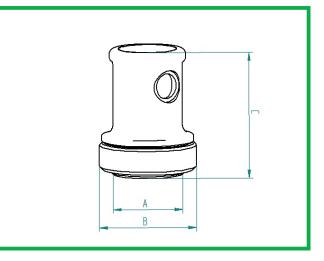
IMG Ultrasuoni has been producing all kinds of probes since over 30 years to meet any application in the industrial, civil and aerospace fields. It also designs and manufactures custom probes to satisfy even the most complex applications, otherwise impossible to satisfy with standard transducers.

Unique in Italy, it engineers and produces integrated systems for automatic and semi-automatic testing to satisfy the increasing demand for ut testing using application with data recording. Besides standard products, it develops custom scanners and systems according to customer needs.



SINGLE ELEMENT STRAIGHT BEAM





MODEL	Ø CRYSTAL	FREQUENCY	ZONE N	CONNECTOR	Α	В	С
	[mm]	[MHZ]	[mm]				
P5-5	5	5	5	LEMO 00	10	25	50
P10-1	10	1	4	LEMO 00	16	25	50
P10-2	10	2	8	LEMO 00	16	25	50
P10-4	10	4	16	LEMO 00	16	25	50
P10-5	10	5	20	LEMO 00	16	25	50
P12.5-1	12,5	1	6	LEMO 00	17,5	25	50
P12.5-2.25	12,5	2,25	14	LEMO 00	17,5	25	50
P20-1	20	1	16	LEMO 00	25	35	50
P20-2	20	2	32	LEMO 00	25	35	50
P20-4	20	4	64	LEMO 00	25	35	50
P25-0.5	25	0,5	12	LEMO 1	32	40	55
P25-1	25	1	25	LEMO 1	32	40	55
P25-2	25	2	50	LEMO 1	32	40	55
P25-4	25	4	99	LEMO 1	32	40	55

Single element longitudinal wave straight beam probe for contact manual inspection.

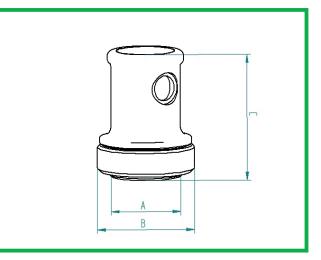
These probes can be used either with protective membrane or Rexolite delay line to so can use them with angles from 0 to 32 degrees in longitudinal waves.

Available in standard or custom size, depending on customer requirements. The available frequencies range from 0.5 MHz to 5 MHz with piezocomposite or standard crystal. Each probe is provided with a FFT certificate and, upon request, a technical data sheet. Upon request, it is possible to manufacture probes with crystal, housing, frequency and damping according customer requirements.



DUAL ELEMENT STRAIGHT BEAM



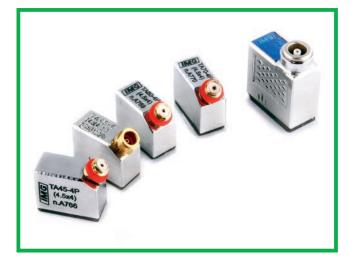


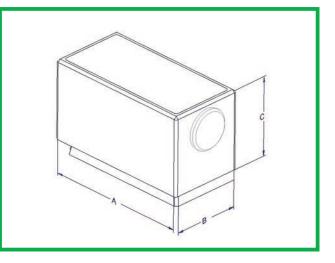
MODEL	Ø CRYSTAL	FREQUENCY	FOCAL	CONNECTOR	Α	В	С
	[mm]	[MHZ]	[mm]				
D5-4	5	4	6	LEMO 00	8	17	29
D5-5	5	5	5	LEMO 00	8	17	29
D8-2K	3X7	2	8	LEMO 00	16	25	45
D8-5K	3X7	5	8	LEMO 00	16	25	45
D10-2	10	2	10	LEMO 00	16	25	45
D10-2K	3.5X10	2	10	LEMO 00	16	25	45
D10-4	10	4	10	LEMO 00	16	25	45
D10-4K	3.5X10	4	12	LEMO 00	16	25	45
D12.5-1	12.5	1	12	LEMO 00	18	25	45
D12.5-2.25	12.5	2,25	15	LEMO 00	18	25	45
D20-2	20	2	25	LEMO 00	25	35	50
D20-2 0°	20	2	50	LEMO 00	25	35	50
D20-4	20	4	25	LEMO 00	25	35	50
D20-4 0°	20	4	50	LEMO 00	25	35	50
D20-2K	7X18	2	18	LEMO 00	28	40	60
D20-4K	6X20	4	18	LEMO 00	28	40	60
D25-2	25	2	35	LEMO 00	32	40	60
D25-2 0°	25	2	60	LEMO 00	32	40	60
D25-4	25	4	40	LEMO 00	32	40	60
D25-4 0°	25	4	60	LEMO 00	32	40	60

Dual element transducers are mainly used for thickness measurement, defect detection, and corrosion mapping through thin materials and particularly where a high resolution is required near the surface. They are available with 1 MHz to 5 MHz frequencies with piezocomposite or standard crystal. Each probe is provided with FFT certificate and, upon request, technical data sheet. Upon request, it is possible to manufacture probes with crystal, housing, frequency and damping according customer requirements.



SINGLE ELEMENT ANGLED BEAM MICRO





MODEL	Ø CRYSTAL	FREQUENCY	ANGLE	ZONE N	CONNECTOR	Α	В	С
	[mm]	[MHZ]		[mm]				
µTA 4X4.5 35-4	4X4.5	4	37	8	MICRODOT	17	8	13
µTA 4X4.5 45-4	4X4.5	4	45	8	MICRODOT	17	8	13
µTA 4X4.5 60-4	4X4.5	4	60	8	MICRODOT	17	8	13
µTA 4X4.5 70-4	4X4.5	4	70	8	MICRODOT	17	8	13
µTA 4X4.5 35-5	4X4.5	5	37	10	MICRODOT	17	8	13
µTA 4X4.5 45-5	4X4.5	5	45	10	MICRODOT	17	8	13
µTA 4X4.5 60-5	4X4.5	5	60	10	MICRODOT	17	8	13
µTA 4X4.5 70-5	4X4.5	5	70	10	MICRODOT	17	8	13
μTA 5X6 35-4	5X6	4	37	17	LEMO 00	20	10	18
µTA 5X6 45-4	5X6	4	45	17	LEMO 00	20	10	18
μTA 5X6 60-4	5X6	4	60	17	LEMO 00	20	10	18
μTA 5X6 70-4	5X6	4	70	17	LEMO 00	20	10	18

Single element shear wave angled beam microprobes for defect detection in low thickness material or hard-to-reach locations. The dimensions of the crystals are 4x4.5 or 5x6 mm and available frequencies are 4 MHz or 5 MHz.

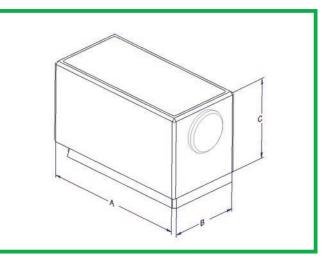
Each probe is provided with FFT certificate and, upon request, technical data sheet. Upon request, it is possible to manufacture probes with crystal, housing, frequency and damping according customer requirements.

8X9 SINGLE ELEMENT ANGLED BEAM

PROBES



IMG



MODEL	Ø CRYSTAL	FREQUENCY	ANGLE	ZONE N	CONNECTOR	Α	В	С
	[mm]	[MHZ]		[mm]				
MTA 35-1	8X9	1	37	8	LEMO 00	30	15	22
MTA 45-1	8X9	1	45	8	LEMO 00	30	15	22
MTA 60-1	8X9	1	60	8	LEMO 00	30	15	22
MTA 70-1	8X9	1	70	8	LEMO 00	30	15	22
MTA 35-2	8X9	2	37	15	LEMO 00	30	15	22
MTA 45-2	8X9	2	45	15	LEMO 00	30	15	22
MTA 60-2	8X9	2	60	15	LEMO 00	30	15	22
MTA 70-2	8X9	2	70	15	LEMO 00	30	15	22
MTA 35-4	8X9	4	37	30	LEMO 00	30	15	22
MTA 45-4	8X9	4	45	30	LEMO 00	30	15	22
MTA 60-4	8X9	4	60	30	LEMO 00	30	15	22
MTA 70-4	8X9	4	70	30	LEMO 00	30	15	22

Single element shear wave angled beam probes with 8x9 mm crystal for surface contact manual inspection, weld inspection and flaw detection.

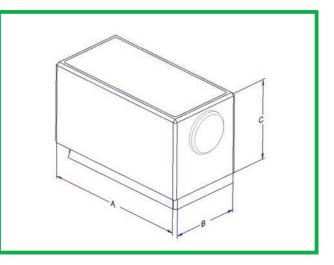
Available frequencies range from 1 MHz to 5 MHz with piezocomposite or standard crystal.

Each probe is provided with FFT certificate and, upon request, technical data sheet. Upon request, it is possible to manufacture probes with crystal, housing, frequency and damping according customer requirements.



12X12 SINGLE ELEMENT **ANGLED BEAM**





MODEL	Ø CRYSTAL	FREQUENCY	ANGLE	ZONE N	CONNECTOR	Α	В	С
	[mm]	[MHZ]		[mm]				
FTA 35-1	12X12	1	35	14	LEMO 00	30	15	22
FTA 45-1	12X12	1	45	14	LEMO 00	30	15	22
FTA 60-1	12X12	1	60	14	LEMO 00	30	15	22
FTA 70-1	12X12	1	70	14	LEMO 00	30	15	22
FTA 35-2	12X12	2	35	27	LEMO 00	30	15	22
FTA 45-2	12X12	2	45	27	LEMO 00	30	15	22
FTA 60-2	12X12	2	60	27	LEMO 00	30	15	22
FTA 70-2	12X12	2	70	27	LEMO 00	30	15	22
FTA 35-4	12X12	4	35	54	LEMO 00	30	15	22
FTA 45-4	12X12	4	45	54	LEMO 00	30	15	22
FTA 60-4	12X12	4	60	54	LEMO 00	30	15	22
FTA 70-4	12X12	4	70	54	LEMO 00	30	15	22

Single element shear wave angled beam probes with 12x12 mm crystal for surface contact manual inspection, weld inspection and flaw detection.

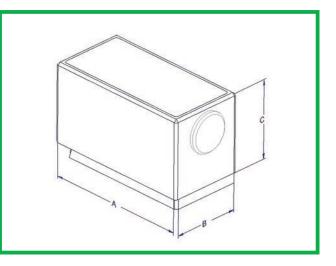
Available frequencies range from 1 MHz to 4 MHz with piezocomposite or standard crystal.

Each probe is provided with FFT certificate and, upon request, technical data sheet. Upon request, it is possible to manufacture probes with crystal, housing, frequency and damping according customer requirements.



14X14 SINGLE ELEMENT ANGLED BEAM





MODEL	Ø CRYSTAL	FREQUENCY	ANGLE	ZONE N	CONNECTOR	Α	В	С
	[mm]	[MHZ]		[mm]				
STA 35-1	14X14	1	37	18	LEMO 00	40	20	28
STA 45-1	14X14	1	45	18	LEMO 00	40	20	28
STA 60-1	14X14	1	60	18	LEMO 00	40	20	28
STA 70-1	14X14	1	70	18	LEMO 00	40	20	28
STA 35-2	14X14	2	37	37	LEMO 00	40	20	28
STA 45-2	14X14	2	45	37	LEMO 00	40	20	28
STA 60-2	14X14	2	60	37	LEMO 00	40	20	28
STA 70-2	14X14	2	70	37	LEMO 00	40	20	28
STA 35-4	14X14	4	37	74	LEMO 00	40	20	28
STA 45-4	14X14	4	45	74	LEMO 00	40	20	28
STA 60-4	14X14	4	60	74	LEMO 00	40	20	28
STA 70-4	14X14	4	70	74	LEMO 00	40	20	28

Single element shear wave angled beam probes with 14x14 mm crystal for surface contact manual inspection, weld inspection and flaw detection.

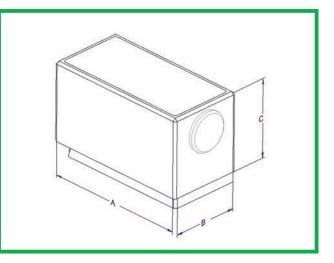
Available frequencies range from 1 MHz to 4 MHz with piezocomposite or standard crystal.

Each probe is provided with FFT certificate and, upon request, technical data sheet. Upon request, it is possible to manufacture probes with crystal, housing, frequency and damping according customer requirements.



20X22 SINGLE ELEMENT **ANGLED BEAM**





MODEL	Ø CRYSTAL	FREQUENCY	ANGLE	ZONE N	CONNECTOR	Α	В	С
	[mm]	[MHZ]		[mm]				
TA 35-1	20X22	1	37	46	LEMO 1	60	30	43
TA 45-1	20X22	1	45	46	LEMO 1	60	30	43
TA 60-1	20X22	1	60	46	LEMO 1	60	30	43
TA 70-1	20X22	1	70	46	LEMO 1	60	30	43
TA 35-2	20X22	2	37	91	LEMO 1	60	30	43
TA 45-2	20X22	2	45	91	LEMO 1	60	30	43
TA 60-2	20X22	2	60	91	LEMO 1	60	30	43
TA 70-2	20X22	2	70	91	LEMO 1	60	30	43
TA 35-4	20X22	4	37	183	LEMO 1	60	30	43
TA 45-4	20X22	4	45	183	LEMO 1	60	30	43
TA 60-4	20X22	4	60	183	LEMO 1	60	30	43
TA 70-4	20X22	4	70	183	LEMO 1	60	30	43

Single element shear wave angled beam probes with 20x22 mm crystal for surface contact manual inspection, weld inspection and flaw detection.

Available frequencies range from 1 MHz to 4 MHz with piezocomposite or standard crystal.

Each probe is provided with FFT certificate and, upon request, technical data sheet. Upon request, it is possible to manufacture probes with crystal, housing, frequency and damping according customer requirements.



MSW ANGLED BEAM

PROBES





MODEL	Ø CRYSTAL	FREQUENCY	WEDGE	CONNECTOR
	[mm]	[MHZ]		
C 6-2.25	6	2,25	W ¹ ⁄ ₄ 35/45/60/70	MICRODOT
C 6-3.5	6	3,5	W ¹ ⁄ ₄ 35/45/60/70	MICRODOT
C 6-5	6	5	W ¹ / ₄ 35/45/60/70	MICRODOT
C 6-7.5	6	7,5	W1/4 35/45/60/70	MICRODOT
C 6-10	6	10	W ¹ ⁄ ₄ 35/45/60/70	MICRODOT
C 10-2.25	10	2,25	W3/8 35/45/60/70	MICRODOT
C 10-3.5	10	3,5	W3/8 35/45/60/70	MICRODOT
C 10-5	10	5	W3/8 35/45/60/70	MICRODOT
C 10-7.5	10	7,5	W3/8 35/45/60/70	MICRODOT
C 10-10	10	10	W3/8 35/45/60/70	MICRODOT
C 12.5-1	12,5	1	W1/2 35/45/60/70	MICRODOT
C 12.5-1.5	12,5	1,5	W ¹ / ₂ 35/45/60/70	MICRODOT
C 12.5-2.25	12,5	2,25	W ¹ / ₂ 35/45/60/70	MICRODOT
C 12.5-3.5	12,5	3,5	W ¹ / ₂ 35/45/60/70	MICRODOT
C 12.5-5	12,5	5	W ¹ / ₂ 35/45/60/70	MICRODOT
C 12.5-7.5	12,5	7,5	W1/2 35/45/60/70	MICRODOT

MSW probes can be used with interchangeable plexiglass wedges, what leads to a long transducer life and high versatility.

Wedges can be custom radioused both AOD and COD. These probes are mainly used for weld defect detection. They have crystal diameters ranging from 6mm to 12.5mm and frequencies from 2.25 MHz to 7.5 MHz. Screw-mounted and supplied with microdot connector output.

Wedges are available with angles from 35 to 70 degrees.

DUAL ELEMENT ANGLED BEAM





LFI longitudinal wave probes (TRL) are used to inspect Welds in austenitic material such as pressure vessels welds in the nuclear industry, which are often difficult to inspect with conventional angled beam probes due to the high level of dispersion noise they can generate. TRL probes (Transmit-Receive-Longitudinal), as indicated by the name, use two different crystals for the transmission and the reception of the signal and generate refracted longitudinal waves. The overlapping surface of the transmission and reception beams creates a natural focal zone in which sensitivity is maximized, whereas the longer wavelength of longitudinal waves reduces the acoustic diffusion of the graininess. Furthermore the use of different elements for transmission and reception allows to minimize unwanted noise during high-gain inspections. These probes are very sensitive to the reflectors located in the focal area.

Creeping wave probes (SCR) are a special kind of dual element longitudinal waves probe, which generate compression waves in the test material at an angle between 70° and 90°. These waves, commonly called creeping waves, propagate sub-superficially to the surface of the piece under examination. Simultaneously with the creeping waves, a transverse wave beam is generated at an angle of about 32°. Creep probes are suitable for detection and the sizing of defects close to the surface such as, for example, IGSCC (intergranular stress corrosion cracking). The field being inspected is short due to the rapid decay of ultrasound energy. Usually, the most sensitive point, the so-called "Focus" is right in front of the probe itself. There focus distance varies up to 20 mm and the maximum useful range is typically 45 mm.

DUAL ELEMENT ANGLED BEAM DAL/DAT

PROBES





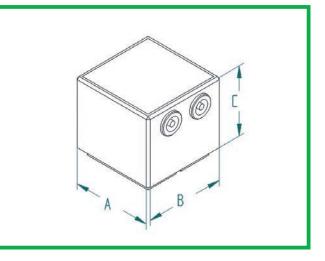
MODEL	Ø CRYSTAL	FREQUENCY	ANGLE	FOCAL	CONNECTOR	Α	В	С
	[mm]	[MHZ]		[mm]				
DAT 45-2	5X10	2	45	20	LEMO 00	15	30	34
DAT 45-4	5X10	4	45	20	LEMO 00	15	30	34
DAT 60-2	5X10	2	60	15	LEMO 00	15	30	34
DAT 60-4	5X10	4	60	15	LEMO 00	15	30	34
DAT 70-2	5X10	2	70	10	LEMO 00	15	30	34
DAT 70-4	5X10	4	70	10	LEMO 00	15	30	34
DAL 45-2	5X10	2	45	20	LEMO 00	15	30	28
DAL 45-4	5X10	4	45	20	LEMO 00	15	30	28
DAL 60-2	5X10	2	60	15	LEMO 00	15	30	28
DAL 60-4	5X10	4	60	15	LEMO 00	15	30	28
DAL 70-2	5X10	2	70	10	LEMO 00	15	30	28
DAL 70-4	5X10	4	70	10	LEMO 00	15	30	28
SCR	5X12	2	CREEP	10	LEMO 00	15	30	28
SCR	5X12	4	CREEP	10	LEMO 00	15	30	28

Dual element angled beam probes with Longitudinal waves (DAL) or with Transverse waves (DAT) are suitable for the inspection of low thickness material or for the detection of near defects. Supplied with a standard focus point, as per the above chart. However, it is possible request a specific beam focusing depth. Each probe comes with a certificate of characterization (FFT) and upon request a technical data sheet. Upon request, it is possible to manufacture probes with crystal, housing, frequency and damping according customer requirements.



DUAL ELEMENT ANGLED BEAM LFI/SCR20





MODEL	Ø CRYSTAL	FREQUENCY	ANGLE	ZONE N	CONNECTOR	Α	В	С
	[mm]	[MHZ]		[mm]				
LFI 20 45-1	7X10	1	45	20	LEMO 00	20	20	24
LFI 20 60-1	7X10	1	60	15	LEMO 00	20	20	24
LFI 20 70-1	7X10	1	70	10	LEMO 00	20	20	24
LFI 20 45-2	7X10	2	45	20	LEMO 00	20	20	24
LFI 20 60-2	7X10	2	60	15	LEMO 00	20	20	24
LFI 20 70-2	7X10	2	70	10	LEMO 00	20	20	24
LFI 20 45-4	7X10	4	45	20	LEMO 00	20	20	24
LFI 20 60-4	7X10	4	60	15	LEMO 00	20	20	24
LFI 20 70-4	7X10	4	70	10	LEMO 00	20	20	24
SCR 20 - 2	6X10	2	CREEP	8	LEMO 00	20	20	24
SCR 20 - 4	6X10	4	CREEP	8	LEMO 00	20	20	24

Complete series of LFI and SCR probes with crystals size 7×10 (LFI) and 6×10 (SCR). Both models are available with 2 or 4 MHz frequency.

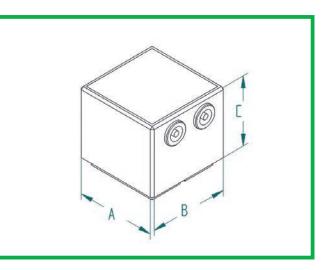
LFI probes are available with 45, 60, 70 angle and standard 20, 15 and 10mm focal lengths. SCR have 8 mm standard focal length.

Different focal lengths are available upon request.

These probes can be made with piezocomposite crystal. Each probe comes with certificate of characterization, technical data sheet and, upon request, the focus diagram.

DUAL ELEMENT ANGLED BEAM LFI/SCR25





MODEL	Ø CRYSTAL	FREQUENCY	ANGLE	FOCAL	CONNECTOR	Α	В	С
	[mm]	[MHZ]		[mm]				
LFI 25 45-1	8X14	1	45	30	LEMO 00	25	25	26
LFI 25 60-1	8X14	1	60	20	LEMO 00	25	25	26
LFI 25 70-1	8X14	1	70	10	LEMO 00	25	25	26
LFI 25 45-2	8X14	2	45	30	LEMO 00	25	25	26
LFI 25 60-2	8X14	2	60	20	LEMO 00	25	25	26
LFI 25 70-2	8X14	2	70	10	LEMO 00	25	25	26
LFI 25 45-4	8X14	4	45	30	LEMO 00	25	25	26
LFI 25 60-4	8X14	4	60	20	LEMO 00	25	25	26
LFI 25 70-4	8X14	4	70	10	LEMO 00	25	25	26
SCR 25 - 2	6X14	2	CREEP	10	LEMO 00	25	25	26
SCR 25 - 4	6X14	4	CREEP	10	LEMO 00	25	25	26

Complete series of LFI and SCR probes with crystals size 8x14 (LFI) and 6x14 (SCR). Both models are available with frequency from 1 to 4MHz.

LFI probes are available with 45, 60, 70 angle and standard 30, 20 and 10 mm focal lengths. SCR have 10 mm standard focal length.

Different focal lengths are available upon request.

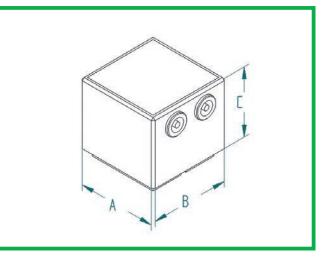
These probes can be made with piezocomposite crystal. Each probe comes with certificate of characterization, technical data sheet and, upon request, the focus diagram.

PROBES



DUAL ELEMENT ANGLED BEAM LFI/SCR30





MODEL	Ø CRYSTAL	FREQUENCY	ANGLE	FOCAL	CONNECTOR	Α	В	С
	[mm]	[MHZ]		[mm]				
LFI 30 45-1	10X18	1	45	60	LEMO 00	30	30	30
LFI 30 60-1	10X18	1	60	40	LEMO 00	30	30	30
LFI 30 70-1	10X18	1	70	20	LEMO 00	30	30	30
LFI 30 45-2	10X18	2	45	60	LEMO 00	30	30	30
LFI 30 60-2	10X18	2	60	40	LEMO 00	30	30	30
LFI 30 70-2	10X18	2	70	20	LEMO 00	30	30	30
LFI 30 45-4	10X18	4	45	60	LEMO 00	30	30	30
LFI 30 60-4	10X18	4	60	40	LEMO 00	30	30	30
LFI 30 70-4	10X18	4	70	20	LEMO 00	30	30	30
SCR 30 - 2	6X18	2	CREEP	15	LEMO 00	30	30	30
SCR 30 - 4	6X18	4	CREEP	15	LEMO 00	30	30	30

Complete series of LFI and SCR probes with crystals size 10x18 (LFI) and 6x18 (SCR). Both models are available with frequency from 1 to 4MHz.

LFI probes are available with 45, 60, 70 angle and standard 60, 40 and 20 mm focal lengths. SCR have 15 mm standard focal length.

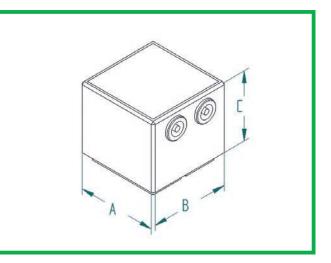
Different focal lengths are available upon request.

These probes can be made with piezocomposite crystal. Each probe comes with certificate of characterization, technical data sheet and, upon request, the focus diagram.

DUAL ELEMENT ANGLED BEAM LFI/SCR40

PROBES





MODEL	Ø CRYSTAL	FREQUENCY	ANGLE	FOCAL	CONNECTOR	Α	В	С
	[mm]	[MHZ]		[mm]				
LFI 40 45-1	15X25	1	45	75	LEMO 00	40	30	34
LFI 40 60-1	15X25	1	60	50	LEMO 00	40	30	34
LFI 40 70-1	15X25	1	70	25	LEMO 00	40	30	34
LFI 40 45-2	15X25	2	45	75	LEMO 00	40	30	34
LFI 40 60-2	15X25	2	60	50	LEMO 00	40	30	34
LFI 40 70-2	15X25	2	70	25	LEMO 00	40	30	34
LFI 40 45-4	15X25	4	45	75	LEMO 00	40	30	34
LFI 40 60-4	15X25	4	60	50	LEMO 00	40	30	34
LFI 40 70-4	15X25	4	70	25	LEMO 00	40	30	34
SCR 40 - 2	6X25	2	CREEP	20	LEMO 00	30	40	28
SCR 40 - 4	6X25	4	CREEP	20	LEMO 00	30	40	28

Complete series of LFI and SCR probes with crystals size 15x25 (LFI) and 6x25 (SCR).Both models are available with frequency from 1 to 4MHz.

LFI probes are available with 45, 60, 70 angle and standard 75, 60 and 25 mm lengths. SCR have 20 mm standard focal length.

Different focal lengths are available upon request.

These probes can be made with piezocomposite crystal. Each probe comes with certificate of characterization, technical data sheet and, upon request, the focus diagram.

SPECIAL PROBES





ANGLE BEAM PROBE for the automatic inspection of the railway wheels.



SHOE FOR RAIL INSPECTION with 70° focused twin crystal angled beam probes and one 0° focused twin crystal probe.



ARRAY PROBE with 6 elements for inspection in immersion of composite materials.



TWIN CRYSTAL FOCUSED probe for automatic testing.



FOCUSED TWIN CRYSTAL probe with a transmitter and three receivers for automatic control system of steel plates.



FOCUSED TWIN CRYSTAL BOREPROBE - Creeping wave probe for testing plate/pipe welds in heat exchangers.



BOREPROBES

PROBES



MANUAL BOREPROBE for railways axles inspection with two 45° angled probes and water inlet directly under the probe. Cable length 2 meters.



MANUAL BOREPROBE for inspection in immersion with 5 probes, inclined appropriately to obtain 45° beam in the material.



MANUAL BOREPROBE for IBW weld inspection on heat exchangers, usable with any ut instrument on the market.



MANUAL BOREPROBE for IBW weld inspection on heat exchangers with encoder for recording during inspection.



MANUAL BOREPROBE for tube inspection with 6 inclined probes to get 60° beam in the material.



MANUAL BOREPROBE for longitudinal weld inspection.



WEDGES AND DELAY LINES



Upon request we produce flat or angled delay lines for both straight beam longitudinal wave probes and angled beam transversal wawe probes, also radioused AOD or COD. Delay lines can also be manufactured based on the customer design.







CABLES

	CABLE MODEL	S
Cable RG 174	LEMO 1	LEMO 00
Cable RG 174	LEMO 1	mini lemo
Cable RG 174	LEMO 1	microdot o microdot 90°
Cable RG 174	LEMO 1	mini bnc
Cable RG 174	LEMO 1	LEMO 00 90°
Cable RG 174	LEMO 1	UHF

Cable RG 58	LEMO 1	LEMO 1
Cable RG 58 o RG 174	LEMO 1	BNC
Cable RG 58	UHF	UHF

Cable RG 174	LEMO 00	LEMO 00
Cable RG 174	LEMO 00	mini lemo
Cable RG 174	LEMO 00	microdot o microdot 90°
Cable RG 174	LEMO 00	UHF
Cable RG 174	LEMO 00	90° - UHF
Cable RG 174	LEMO 00	mini bnc
Cable RG 174	LEMO 00	LEMO 00 90°
Cable RG 174		microdot- microdot/subclick

Cable RG 174	BNC	LEMO 00
Cable RG 174	BNC	mini lemo
Cable RG 174	BNC	microdot o microdot 90°
Cable RG 174	BNC	mini bnc
Cable RG 174	BNC	UHF
Cable RG 58 o RG 174	BNC	BNC

DOUBLE	CABLE MODE	LS
Double cable 2xRG 174	LEMO 1	LEMO 00
Double cable 2xRG 174	LEMO 1	mini lemo
Double cable 2xRG 174	LEMO 1	mini BNC
Double cable 2xRG 174	LEMO 1	microdot o microdot 90°
Double cable 2xRG 174	LEMO 00	LEMO 00
Double cable 2xRG 174	LEMO 00	mini lemo
Double cable 2xRG 174	LEMO 00	microdot
Double cable 2xRG 174	LEMO 00	mini BNC
Double cable 2xRG 174	BNC	LEMO 00
Double cable 2xRG 174	BNC	mini lemo
Double cable 2xRG 174	BNC	microdot
Double cable 2xRG 174	BNC	mini BNC

Complete line of connecting cables for probes, from standard to special cables with connectors according to the customer request.

All cables employ high quality connectors.

We also produce encoder cables for any phased array instruments on the market.

The standard length is 2 meters, but we produce cables of any length upon request.



WEDGES AND DELAY LINES

ADAPTERS

IMG Ultrasuoni manufactures all main models of phased array probes and the relevant wedges, all of it done in its workshop.



PA PROBES

PROBES





MODEL	FREQUENCY	NUMBER OF ELEMENTS	РІТСН	ELEVATION	CABLE LENGTH	CONNECTOR TYPE	CASE SIZE
	[MHZ]		[mm]	[mm]			
AT24391 DUAL (1:16_33:48)	2,25	16	2	16	5	IPEX	DUAL
AT25078 DUAL (1:16 _17:32)	2,25	16	2	16	5	IPEX	DUAL
AT25090	2,25	64	0,75	12	5	IPEX	A2
AT25201	5	64	0,75	10	5	IPEX	A2
AT25250	5	64	0,6	10	5	IPEX	A2
AT25251	10	32	0,31	7	5	IPEX	A1
AT25330	7,5	64	0,6	10	5	IPEX	A2
AT25331	7,5	32	0,31	7	5	IPEX	A1
AT25522	7,5	16	0,5	10	2,5	IPEX	A15
AT25698	7,5	16	0,6	10	5	IPEX	A1
AT25699	7,5	16	0,5	10	5	IPEX	A15
AT25746	4	15	1,6	15	0,6	IPEX	A2
AT25859	3,5	128	1	6	5	IPEX	SPECIAL
AT26032	2,25	16	2	16	5	IPEX	SPECIAL
AT26167	5	16	0,6	10	5	IPEX	A1
AT26682	3,5	16	1,6	16	5	IPEX	A3
AT27033	10	32	0,25	10	5	IPEX	A16
AT27034	2,25	16	0,5	10	5	IPEX	A15
AT27174	1,5	16	2,8	26	5	IPEX	A4
AT27175	2,25	32	0,75	24	5	IPEX	A5
AT27599	5	16	1,6	16	5	IPEX	A3
ATÌ28595	2,25	16	0,6	10	5	IPEX	A1

Range of phased array probes of IMG production.

It includes the widest range of transducers for the phased array inspection, supplied with 16-element up to 128 elements with frequencies ranging from 1 MHz up to 10 MHz.

All the probes come with an integrated cable and can employ any kind of different wedges. Low profile probes are also part of the IMG product line, usable on the Circ-it Scanner.

PA WEDGES







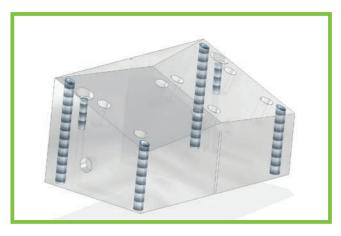
MODEL	REFRACTED ANGLE	L	W	Н
IA1 N55S IHC	55° S	40	30,5	16,5
IA1 N60S IHC	60° S	40	30,5	16,5
IA1 N55L IHC	55° L	40	28,2	20,7
IA1 N60L IHC	60° L	40	28,2	20,7
IA1 0°	0° L	40	30,5	X
IA2 N55S IHC	55° S	40	68,5	44,2
IA2 N60S IHC	60° S	40	68,5	44,2
IA2 N55L IHC	55° L	40	82	66
IA2 N60L IHC	60° L	40	82	66
IA2 0°	0° L	40	60	X
IA3 N55S IHC	55° S	50	58	29
IA3 N60S IHC	60° S	50	58	29
IA3 N55L IHC	55° L	50	53	40
IA3 N60L IHC	60° L	50	53	40
IA3 0°	0° L	50	50	X
IA4 N55S IHC	55° S	55	86	45,2
IA4 N60S IHC	60° S	55	86	45,2
IA4 N55L IHC	55° L	55	84	66
IA4 N60L IHC	60° L	55	84	66
IA4 0°	0° L	55	60	X
IA5 N55S IHC	55° S	55	48	28
IA5 N60S IHC	60° S	55	45,5	28
IA5 N55L IHC	55° L	55	40	41,5
IA5 N60L IHC	60° L	55	40	41,5
IA5 0°	0° L	55	40	X
IA15 N60S IH	60° S	22	18	11,6

All wedges for phased array probes are available in standard refracted angles of 0°, 55°, and 60° in steel for angle-beam inspection from 30° to 70°, SW or LW. Screw-mounted for a tight probe fixing onto the wedge, IHC wedges are conceived to improve the quality of inspection: irrigation, mounting holes to work with any kind of scanners and carbide pins to increase wear resistance. IMG can manufacture wedges according to the customer's drawings and specifications.

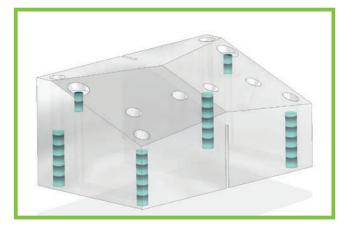


Thanks to over thirty years of experience on the field of ultrasonic non-destructive testing, IMG Ultrasuoni can design and implement any type of special wedges, for automatic and non-automatic systems.

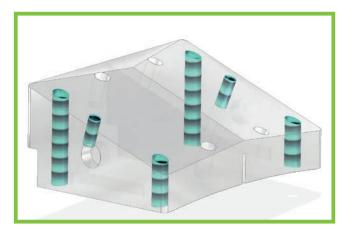




IA00

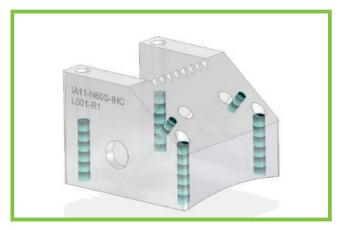


IA11 DOUBLE



IA17 DOUBLE

IA3 DOUBLE



IA 11 SINGLE





ADAPTERS







MODEL	CONNECTORS
SPLITTER 32:32 I-PEX	FROM IPEX 1:64 TO DUE IPEX 1:32_33:64
SPLITTER 64:64 I-PEX	FROM IPEX 1:128 TO DUE IPEX 1:64_65:128
SPLITTER PA/LEMO 00	FROM CONNECTOR PA TO LEMO 00
CONNECTOR I-PEX	TO CONNECT PROBES TO TOOLS SONATEST AND OMNISCAN/FOCUS PX
CONNECTOR I-PEX QUICK LATCH	TO CONNECT PROBES TO TOOLS SONATEST AND OMNISCAN/FOCUS PX
CONNECTOR HYPERTRONICS	TO CONNECT PROBES TO TOOLS ZETEC DYNARAY AND PIPEWIZARD
D78	TO CONNECT PROBES TO TOOLS TECHNOLOGY DESIGN HANDYSCAN
ITT CANNON	TO CONNECT PROBES TO TOOLS TECHNOLOGY DESIGN FOCUS
CONNECTOR PHASOR	TO CONNECT PROBES TO TOOLS GE PHASOR
CONNECTOR ZETEC	TO CONNECT PROBES TO TOOLS ZETEC DYNARAY AND PIPEWIZARD

IMG Ultrasuoni can supply all kinds of phased array adapters and splitters, that can be used on all major Phased array instruments on the market.



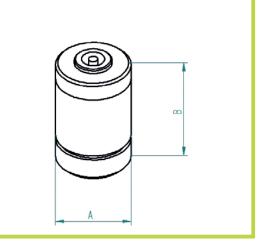


IMG Ultrasuoni manufactures the complete line of longitudinal wave probes for TOFD inspection and the associated complete range of wedges in rexolite.



TOFD TRANSDUCERS





MODEL	Ø CRYSTAL	FREQUENCY	CONNECTOR	Α	В
	[mm]	[MHZ]			
C 3-5	3	5	LEMO 00	3/8	27
C 3-7.5	3	7,5	LEMO 00	3/8	27
C 3-10	3	10	LEMO 00	3/8	27
C 3-15	3	15	LEMO 00	3/8	27
C 5-4	5	4	LEMO 00	3/8	27
C 5-5	5	5	LEMO 00	3/8	27
C 5-7.5	5	7,5	LEMO 00	3/8	27
C 6-2.25	6	2,25	LEMO 00	3/8	27
C 6-3	6	3	LEMO 00	3/8	27
C 6-4	6	4	LEMO 00	3/8	27
C 6-5	6	5	LEMO 00	3/8	27
C 6-10	6	10	LEMO 00	3/8	27
C 6.35-3.5	6,35	3,5	LEMO 00	3/8	27
C 10-2	10	2	LEMO 00	M16	24
C 10-3.5	10	3,5	LEMO 00	M16	24
C 10-4	10	4	LEMO 00	M16	24
C 10-5	10	5	LEMO 00	M16	24
C 12.5 - 2.25	12,5	2,25	LEMO 00	M16	24
C 12.5-5	12,5	5	LEMO 00	M16	24
C 20-2	20	2	LEMO 00	M24	25
C 20-4	20	4	LEMO 00	M24	25

Straight beam longitudinal wave probes to be mo unted on angled wedges to carry out tofd inspection. The probes are made with piezocomposite crystals, frequency ranges from 1MHz to 10MHz with diameters from 3mm to 20mm. Each probe comes with a certificate of characterization (FFT) and, upon request, a technical data sheet. Upon request, it is possible to manufacture probes with crystal, housing, frequency and damping according customer requirements.



TOFD WEDGES

PROBES



MODEL	THREAD	ANGLE	WIDTH
	[mm]	[MHZ]	
ST1	3/8	35/45/50/55/60/65/70	31,7
ST2	11/16	35/45/50/55/60/65/70	31,7
STB	M16	35/45/50/55/60/65/70	31,7
DUAL WEDGE	3/8 - 3/8	TO BE DEFINED	40
DUAL WEDGE	3/8-M16	TO BE DEFINED	40
DUAL WEDGE	M16-M16	TO BE DEFINED	40
ST1/2	9/16	35/45/50/55/60/65/70	31,7

IMG Ultrasuoni supplies the widest range of both standard and special rexolite wedges to be used for tofd inspection.

Special wedges, designed and manufactured by IMG, allow the use of two different probes on the same wedge.



STANDARD

SPECIAL

IMG Ultrasuoni can provide the complete set of standard calibration blocks for thickness gauges, flaw detectors and phased array instruments. It also provides calibration blocks based on the design and the defects provided by the customer. IMG performs mechanical machining, EDM machining and welding.



STANDARD BLOCKS

ACCESSORIES

Complete series of standard sample blocks for calibration of ultrasonic flaw detectors, for thickness gauges, phased array defectors in carbon steel, stainless steel and aluminum and others materials.



V1 (25 mm):

V1 calibration block in carbon steel, stainless steel or aluminum.



V2 (25 mm):

V2 Calibration block, 25 mm thickness, in carbon steel or aluminum.



V2 DUPLEX (40 mm): V2 Calibration block, 40 mm thickness, in Duplex.



V2 (12,5 mm):

V2 calibration block, 12.5 mm thickness, in carbon steel, stainless steel or aluminum.



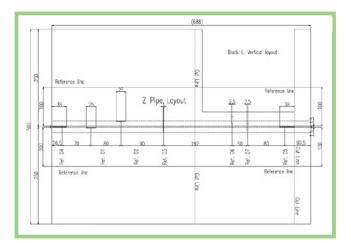
V2 (40 mm INOX): V2 calibration block, 40mm thickness, in 316L or 304 stainless steel.

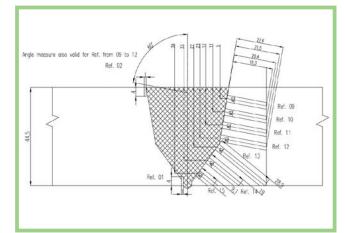


PHASED ARRAY CALIBRATION BLOCKS Calibration blocks for phased array instruments made of carbon steel, aluminum and stainless steel.

ACCESSORIES SPECIAL BLOCKS

IMG Ultrasuoni can supply calibration blocks made according to the drawing and the defects provided by the customer. IMG also performes mechanical machining, EDM machining and welding.

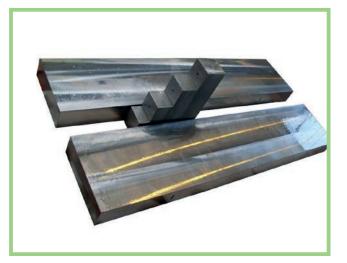


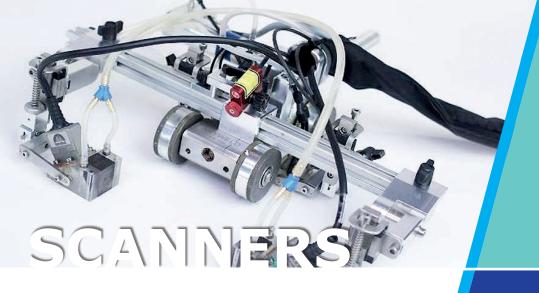












SCANNERS



IMG engineers and manufactures integrated systems for automatic, semi-automatic and manual inspection to meet the growing demand for ultrasonic testing.

In addition to the standard products, IMG can manufacture custom scanners and systems according to the customer needs.

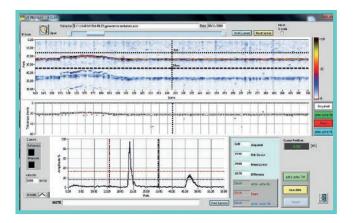
SCANNERS ANYSCAN



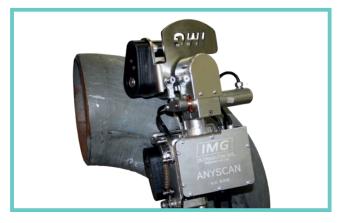


Ultrasonic solution to check pipe thickness under operation conditions, eliminating the thickness of paint or coating: suitable for remote inspection of thickness on non-accessible pipes, scanning on curves, tees, reductions and special test pieces.

It can be used for pipes from 4 in. thickness and up to 90 degrees of temperature. Anyscan is remotely controlled thanks IMG UT PROFILER tool. The 25-meter cable length allows its use on large structures.



• Italian Patent No. 10200891644391 • European Patent No. 09797592.4





BRICK SCANNERS



BRICK magnetic crawler has been designed for thickness control on large-size storage tanks without using stairs or scaffoldings because it makes use of ground controls. The robot provides continuous thickness measurements, so that anomalies are detected more easily and quickly. Being connected to the PC, it allows to acquire all data relating different readings, to add notes at any point of the scan at the operators discretion, in addition to reviewing registered B-SCAN profiles.

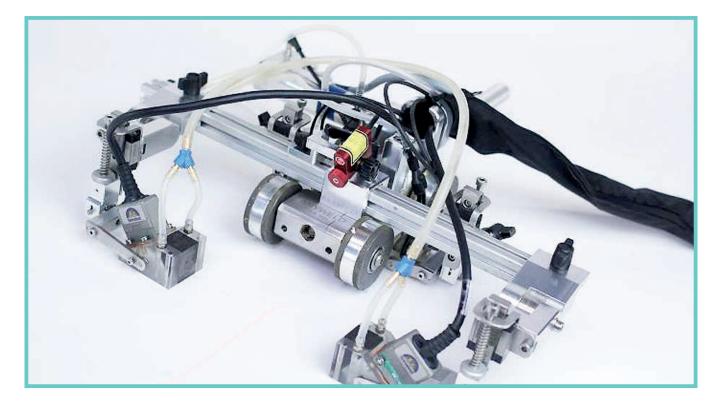
The data is represented in A-Scan, B-Scan and thickness profile; images can be saved and exported directly into spreadsheets and text files; furthermore, all thickness data related to the position are stored in text files that can be used anytime for reporting purposes.





SCANNERS ANYWELD

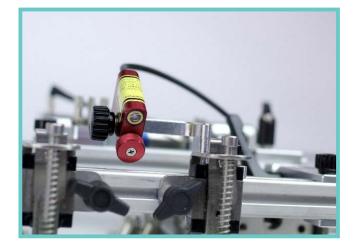


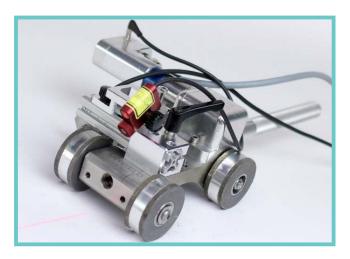


Anyweld is a magnetic wheel scanner designed for almost any type of linear weld inspection with phased array and tofd probes. It can be equipped with up to 8 different probes (10 if using special dual todf wedges). The high modularity allows the scanner to be assembled in 14 different configurations according to the customer requests. Its innovative design allows the scanning of circumferential tube welding starting from 4 "up to flat surfaces. Its modular design allows the use also for longitudinal welds scanning.

The scanner can also be used on non-magnetic materials thanks to optional chains.

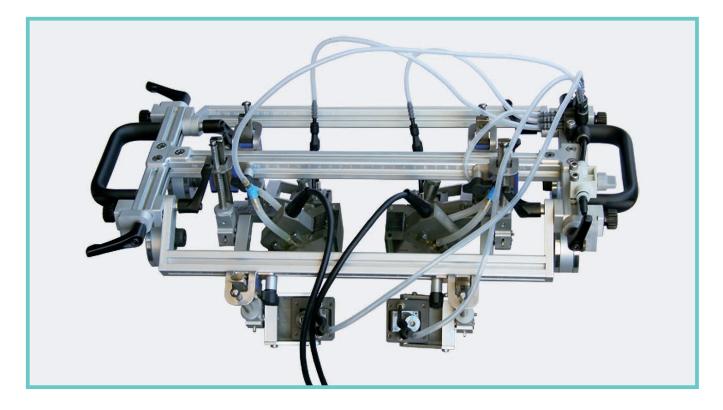
It can be equipped with laser pointer for accurate positioning, saving time in inspection. The external 12v rechargeable battery allows a long duty while scanning. The scanner Anyweld is compatible with all AUT flaw detectors on the market.







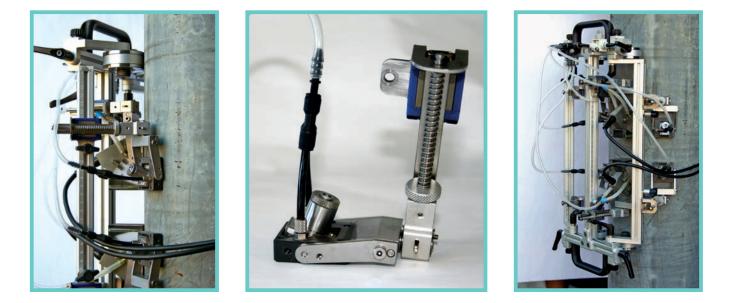
TOFD SCANNERS



The Tofd scanner consists of 3 graduated rods where up to 12 probe holder suspensions can be mounted. By means of specific supports it is possible to equip the scanner with any kind of probe and an encoder. Probes are mounted on shoes with anti-wear grains and a water injection kit. Coupling to the piece being inspected is guaranteed by spring support with tilting movement.

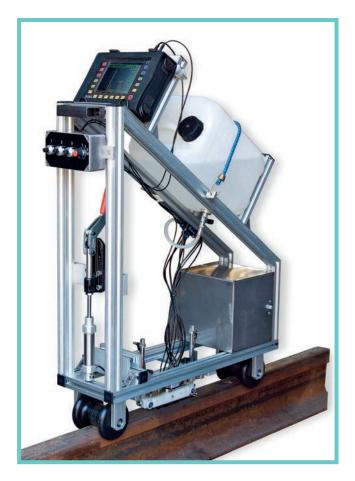
The adhesion of the scanner to wall is entrusted to 4 magnetic wheels and the unit handling is manual.

The inclination of the magnetic wheels allows inspection of longitudinal and circular welds up to 4 inches diameter.



SCANNERS

SCANNER FOR RAIL INSPECTION



The crawler for rail inspection is constructed of light alloy and thanks to its scroll wheels is suitable for different rail sections. It is equipped with a third wheel serving as a support for the crawler, being mounted on an articulated rod of variable length to facilitate transport and mounting from either side.

The three probes are spring-mounted in vertical position on a shoe self-fitting to the width of the contact surface, allowing it to be lifted during transport.

It is possible to regulate the flow of coupling liquid of each probe.

A passive mixer is mounted on the crawler. By means of a manual selector, this mixer allows to use the probes individually or simultaneously, with the possibility to adjust the signal amplitude for each probe.

The rotating probe device for the railways axles inspection is fully constructed of aluminium and may be interfaced with any electronic instrument for defects detection. It may be equipped with 3, 4 or 5 ultrasonic probes. Crystal size, frequency and angle can be arranged at your request.

The coupling to the axles is ensured by a magnet and some springs, maintaining a constant pressure among axle and probes. Furthermore, every probe holder is provided with anti-wear carbides delivering a longer lifespan of the probes.





Tandem system with angled beam probes for wheel inspection, capable of adapting to various diameters.



HISCAN SPECIAL SYSTEMS



Automatic control system for internal bore welding and fillet welds inspection on tube sheets of heat exchangers.

This system consists of a multi-turn robot with 0.5mm fixed pitch and 30mm maximum scannable length.

System configuration:

- Ultrasonic system specifically designed for IBW and fillet welds inspection.
- Multi-turn robot for helical scanning with 0.5 mm fixed pitch and 30 mm maximum scanning depth.
- Automatic water injection system directly into the pipe being inspected.
- Motion control unit, programmable via software.
- Twin crystal probes, specifically designed according to the kind of welds being inspected.

Automatic water injection system directly in the tube being inspected. Movement control unit programmable through dedicated software.

Twin crystal probes specifically designed for the inspection being carried out.



SPECIAL SYSTEMS HISCAN



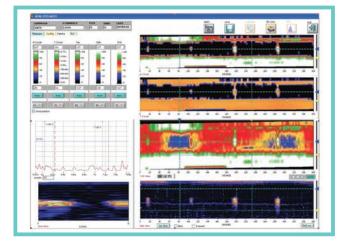


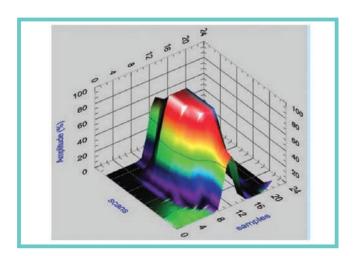
DATABASE MANAGEMENT

In order to facilitate simple and clear classification, management and retrieval of files, an organized, tried-and-test procedure is identified.

The identification of the inspection activities is possible by entering the following fields:

- JOB NUMBER: identification number of the job activity
- FACTORY: identification number of the plant being inspected
- ROW: pipe row number
- TUBE: number of the pipe in the row
- SIDE: side of the tube sheet being inspected (TOP, BOTTOM, INTERNAL, EXTERNAL)





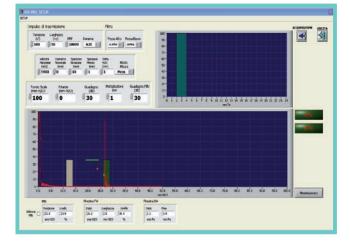


IRIS SPECIAL SYSTEMS

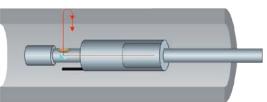


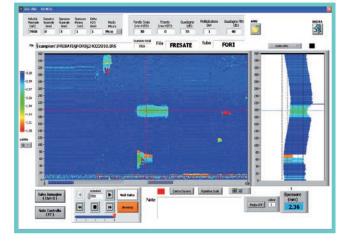
The setup procedure is very immediate. All parameters necessary are shown on a single screen.

The double A-Scan display allows the parameters setting in a few simple steps. The management function of the A-Scans permits immediate and reliable identification of the PIN position and of echoes of internal and external surfaces.



IRIS PRO is an high speed ultrasonic system, designed to be used with any IRIS (Internal Rotary Inspection System) turbine. The high performance of the UT board ensures high accuracy measurements and perfect adaptation to all types of IRIS probes. The software has been designed to meet the requirements of engineers specialized in UT inspection. Simplicity, reliability and superior performance make IRIS the perfect system for field inspection. IRIS can also work with the battery (optional): this ensures an outstanding operational flexibility on the field. The reporting and operation software is customisable upon request, being adaptable to individual needs: data storage and communication can be redesigned on specific requests.





SPECIAL SYSTEMS IRIS





INSPECTION AND ANALYSIS LAYOUT

The Side View (B-Scan) can be displayed in black or on a colour scale as for C-Scan.

B-Scan and C-Scan are displayed in real-time at the same rotation rate of the turbine.

Thanks to the high performance of the UT board and the optimized software, IRIS PRO can operate at high rotation speed of turbines (> 50 rpm), ensuring 360 acquisitions per lap. All the main features: Main Gain, Pin Gain, Range, Nominal Tube Diameter, Minimum Thickness, Peak/Flank.

Measurement gates can be modified in real time during the acquisition.

The automatic file generation allows an immediate organization of archives, by reducing the operating time on the field.







5200 SPECIAL SYSTEMS



Low frequency digital instrument to check homogeneity in composite materials. Very robust and safe (IP65), easy to use thanks to the data entry through the touch screen and multiple functions, such as saving of oscillograms (A-Scan) and related calibration parameters.

It works with rechargeable NiMH batteries allowing for 8 hours autonomy.

It can be used for cross-hole inspection thanks to the UMACS unit.

Low frequency control of composite materials:

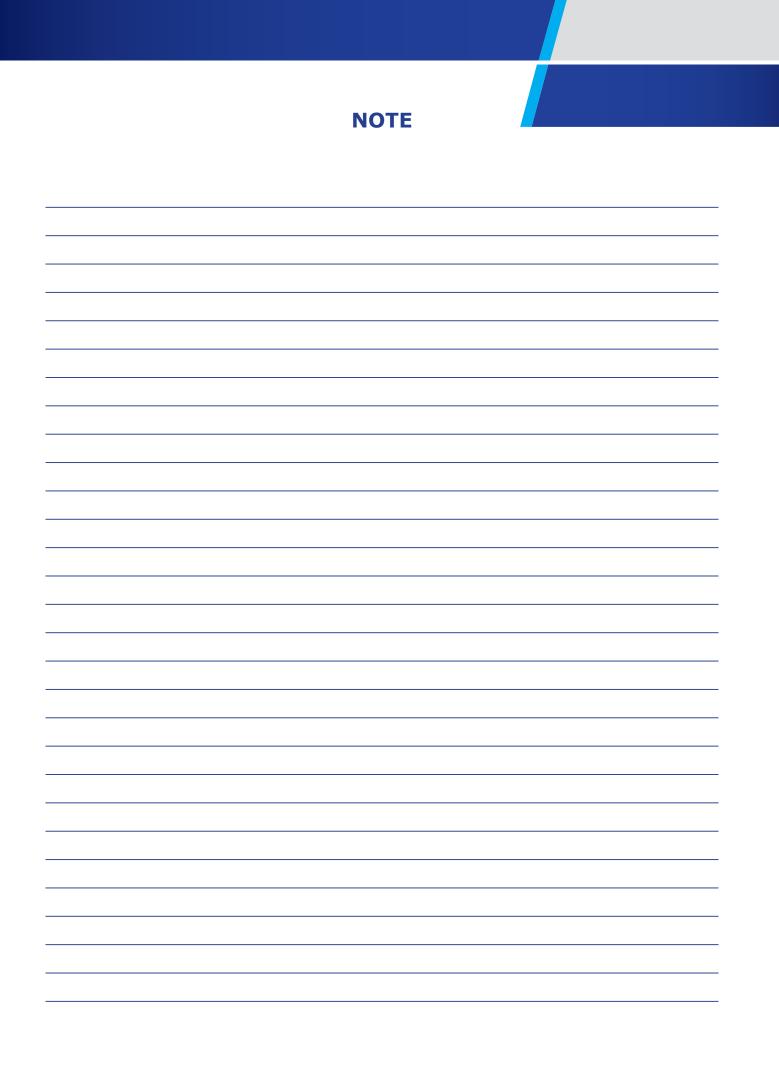
Concrete - Brick structures - Stone materials - Glass and carbon fibers - Natural stones - Composites materials - Marbles - Granites.

Palifications, cross-hole control with UMACS. Agglomerates - Grana cheese.





NOTE



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