Phone：400 022 6762
Web: www.eintik.com
Address：Building No. 9, Lane 258 Yinlong Road,
Jiading District, Shanghai 201813, P.R.C

Eintik technology (Shanghai) Co., Ltd.

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Insight Into The Future

CONVENTIONAL ULTRA-SOUND PROBE
CATALOG

www.eintik.com

eintik

- Conventional probe
- Phased array probe
- Industrial scanner
- Wedge

About us

Eintik Technology(Shanghai) Co., Ltd. is a high-tech company specializing in designing and manufacturing ultrasound probes. We provide leading-edge ultrasound probes, PAUT (phased-array ultrasound) probes, TOFD probes, medical imaging probes, and customized probes.

Eintik Technology encourages innovation and intellectual property protection. We aim to be competitive by possessing proprietary technologies, including core technology in gradient acoustic matching layer, 1-3 piezoelectric monocrystal composite, two-dimensional array probe encapsulation technology, etc. We strictly follow ISO9001:2015 Quality Management System.

We take pride in providing ward-winning products and customer service. Every day, thousands of inspectors around the world are benefiting from Eintik. Together we hope to build the best probes around the globe.

Angle probe

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Naming rules for conventional ultrasonic probes

Case type
1
2
3

Acoustic type
P: General bandwidth
C: Composite material
N: Narrow pulse

Wafer size
6 φ6mm
8x12
8x12mm

Beam type
L: Longitudinal wave
S: Shear wave
GW: Guided wave
SAW: Surface wave
CW: Creeping wave

Coupling mode
I : Filling port

Connector type
M: Microdot
9: Q9(大BNC)
6: Q6(小BNC)
0: LEMO 00
1: LEMO 01
U: UHF
A: SMA
B: SMB

Probe standard
CN: Chinese standard
EN: European standard
AS: North American standard

TR 1-5C 8x12-45 L-FD20-I R M-AOD406-EN

Probe type
C:Straight probe
A:Angle probe
F: TOFD probe
P: Protective film probe
D:Delay block probe
W: Angle beam probe
TR:Twin crystal straight probe
TRL:Twin longitudinal wave skew probe
TRS:Twin-crystal shear wave oblique probe
NF:Immersion natural focusing probe
CF:Immersion line focusing probe
SF:Immersion point focusing probe

Center frequency
0.5 0.5MHz
1 1.0MHz
1.5 1.5MHz
2.25 2.25MHz
3.5 3.5MHz
5 5MHz
7.5 7.5MHz
10 10MHz
15 15MHz
20 20MHz

Beam Angle
K1: 45°
K1.5: 56.3°
K2: 63.4°
K2.5: 68.2°
K3: 71.6°
45: 45°
60: 60°
70: 70°

Focusing mode
FD:Focal depth
FS:Focusing acoustic path

Outgoing direction
R: Side outlet
S: Top outlet

Shape of the coupling with the workpiece
AOD:Axial outside diameter
COD:Circumferential outside diameter
SOD:Spherical outside diameter
AID:The axial inside diameter
CID:Circumferential inside diameter
SID:Spherical bore diameter

Note:
Probe parameters in the dotted box are optional according to different probe types.

Probe type	example
Straight probe	C1-5P6-S9
Angle probe	A1-5C8x9-45S-R0-AS
TOFDprobe	F1-5N6-SM-EN
Protective film probe	P1-5P6-R0
Delay block probe	D1-5P6-R0
Angle beam probe	W1-5N6-SM-EN
Twin crystal straight probe	TR1-2C6x20-FD25-R0
Twin-crystal P-wave oblique probe	TRL1-2C8x12-45-FS20-R0-AOD559
Twin-crystal shear wave oblique probe	TRS1-2C8x12-45-FS20-R0-AOD559
Immersion natural focusing probe	NF1-5C10-SU
Immersion line focusing probe	CF1-5C10-FD20-SU
Immersion point focusing probe	SF1-5C10-FD20-SU

Naming rules of conventional ultrasonic wedges

Case type
1
2
3

Probe fixing mode
N Routine
L Rotate 90 degrees relative to normal
DN Twin crystals; Conventional fixation

Options
IH With water injection port, scanner clamp hole
IHS With water injection port, scanner holding hole, stainless steel jacket
IHC With water injection port, scanner holding hole, wear-resistant screw

F 1-N0 L - IHC - AOD50

Probe type
F: TOFD probe
P: Protective film probe
D: Delay block probe
W: Angle beam probe

Beam Angle
K1: 45°
K1.5: 56.3°
K2: 63.4°
K2.5: 68.2°
K3: 71.6°
45: 45°
60: 60°
70: 70°

Beam type
L: Longitudinal wave
S: Shear wave
GW: Guided wave
SAW: Surface wave
CW: Creeping wave

Coupling shape to workpiece
AOD: Axial outside diameter
COD: Circumferential outside diameter
SOD: Spherical outside diameter
AID: The axial inside diameter
CID: Circumferential inside diameter
SID: Spherical bore diameter

Cable naming rules

Number of connectors
1 (Omitted)
2 Doublet
3 Three-wire

Unit of length
Meter

M x2 - L0 x2 - 1.8 M

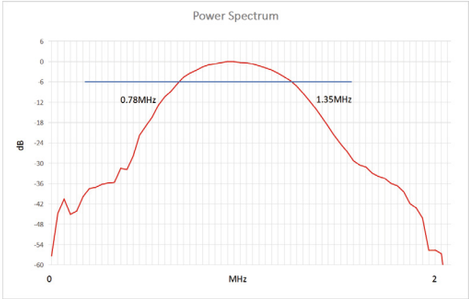
Connector type
M: Microdot
Q9: Large BNC
Q6: Small BNC
C5: LEMO 00
C9: LEMO 01
L0: LEMO 00
L1: LEMO 01
UHF: UHF
SMA: SMA
SMB: SMB

Cable length
1.8 Meter
2 Meter
2.5 Meter

Conventional ultrasonic probe product series description

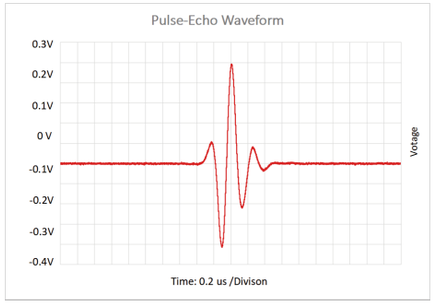
P Series (Universal)

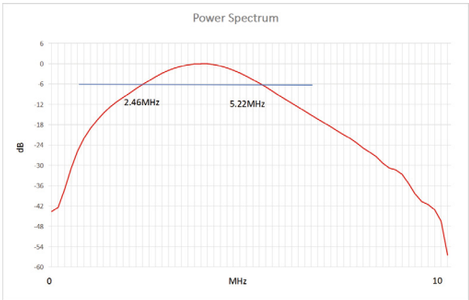
For applications that require high sensitivity and penetration and require low resolution and bandwidth.



C Series (Piezoelectric composites)

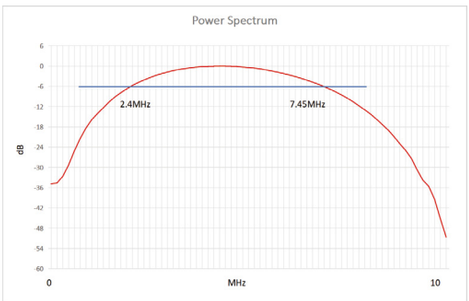
Ensures a high signal-to-noise ratio in the detection of high-attenuation materials, and perfectly combines sensitivity, resolution and penetration.





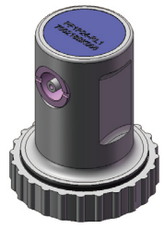
N-series (Narrow pulse)

It presents high damping and high bandwidth characteristics, and has a high signal-to-noise ratio and excellent vertical and horizontal resolution in the detection of materials with high attenuation and high scattering. The very small initial blind area width is the best choice for accurate thickness measurement and imaging applications.

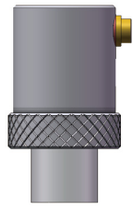


Connector type

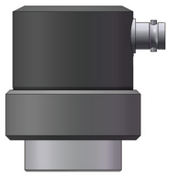
S9



R0



RM

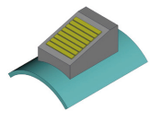


R9

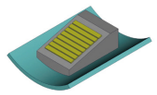
SM

SU

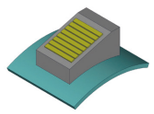
Surface introduction



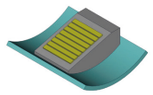
AOD
(Axial outward diameter)



AID
(Axial internal diameter)

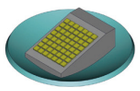


COD
(Circumferential diameter)



CID
(Circumferential inward diameter)

SOD
(The outward diameter of the ball)



SID
(Ball inward diameter)

Focusing type (immersion)

NF
Natural focusing)

CF
(Line focusing)

SF
(Point focusing)

Aggregation type	annotation
Natural focusing	Plate contact surface
Line focusing	Concave cylinder
Point focusing	Concave sphere

Probe selection

Application	Mode of use	Probe series	Probe fitting	Narrow bandwidth	Composite wafer	Narrow pulse Large bandwidth	Chinese standard (CN)	European standard (EN)	American standard (AS)	其它 标准
Common	Contact type	Straight probe		√	√	√	√	√	√	
		Angle probe		√	√		√	√		
		Angle beam probe	wedge		√				√	
		Twin crystal straight probe			√		√	√	√	
		Twin-crystal P-wave oblique probe			√		√	√		
		TOFD probe	wedge		√	√	√	√	√	
		Protective film probe	Soft protective film		√			√	√	
		Delay block probe	Delay block		√		√			
	Immersion type Usually flooding	Unfocused water probe			√	√			√	
		Focus on water immersion probe			√	√			√	
Industry applications and custom probes	Industry specific probe	Thickness probe			√					
		Ultrasonic microscope probe			√					
		Pocket probe for aviation Small chip probe : diameter 3mm,4x6 Pocket inclined probe			√					
		Titanium alloy tube rod testing			√					
		Railway wheelset detection			√					
	Customer customization	High temperature probe			√					
		0 degree shear wave probe			√					
		Combined P-wave and S-wave probe			√					
		Creep probe			√					
		Surface wave probe			√					
		Plate wave probe			√					
		Wave guide probe			√					
		Air coupled probe								
		Combined twin probe			√					
		Four-crystal probe			√					
Probe fitting		Connecting line								
		Connector converter								
		Coupling agent								
		Test block								

Probe selection

Straight probe: The straight probe is a single crystal probe with a longitudinal wave to detect the sample, and the matching surface of all straight probes is equipped with corundum sheets, which are not only provided and metal materials The material has excellent acoustic impedance, and the wear resistance can extend the probe life!

Oblique probe: The ultrasonic oblique probe can realize the conversion of wave mode, and the acoustic beam of the oblique probe is tilted to the surface of the probe, so it can be used to detect the direct acoustic beam cannot reach The area where there is an Angle between the position, or the direction of the defect and the detection surface. The TOFD probe is a probe that relies on the diffraction energy obtained from the "end Angle" and "end point" of the internal structure of the specimen to be tested (mainly referring to defects) A defect measurement method for defect detection, quantification, and location. Good reliability, high quantitative accuracy, simple and convenient detection, high efficiency, can be adapted to automatic half The automatic scanning device can determine the relative position of the defect and the probe, which is more conducive to the identification and analysis of the defect.

Protective film probe: The protective film probe is a single crystal longitudinal wave probe with a threaded cap. The unique structural design allows the protection to be changed according to different application requirements The probe is suitable for rough surfaces and small curvature surfaces. The flexibility of the probe is greatly enhanced, while the replaceable protector is greatly extended The service life of the probe is given.

Delay block probe: The delay block probe is a single crystal broadband longitudinal wave probe, which is often used for the thickness detection of the material to be tested, and different thicknesses of materials are selected In addition, the probe can also be used for the detection of high-temperature materials.

Angular beam probe: The angular beam probe is a single crystal probe that can be used alone or in combination with a wedge, and can achieve both longitudinal wave and longitudinal wave To achieve shear wave detection, the knob thread design allows quick disassembly of the wedge, allowing for areas of the workpiece that cannot be detected by the vertical incidence probe.

Twin-crystal direct probe: twin-crystal direct probe is a longitudinal wave probe with independent transmitting and receiving chips, widely used in coating measurement, thickness measurement, corrosion monitoring, etc. With high penetration, no impact of the initial wave blind zone! Probes with different frequencies and different focusing depths can be selected according to the size and approximate location of the defect.

Twin-crystal longitudinal wave oblique probe: For shallow fatigue cracks, the detection sensitivity of the vertically incident longitudinal wave probe is low, and the oblique incident twin longitudinal wave is used The probe can effectively improve its detection sensitivity and improve the defect detection rate. The design method of the twin-crystal inclined probe is used to detect defects with a certain inclination Angle High sensitivity of near surface defects, often used in austenitic stainless steel welded joints and other coarse crystal materials detection.

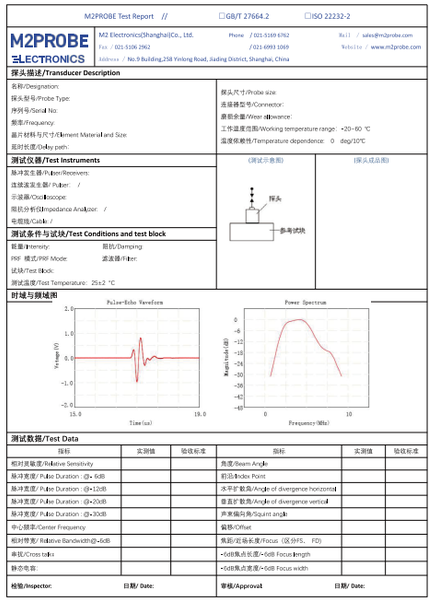
Twin-crystal shear wave inclined probe: The twin-crystal shear wave inclined probe has a narrow initial wave width, less clutter, and a high signal-to-noise ratio, for some thin plates with a thickness of less than 8mm For seam detection, a twin-crystal transverse wave inclined probe is often used, which can be detected on the edge of the weld without grinding the weld It can also be flexibly used in the structural components.

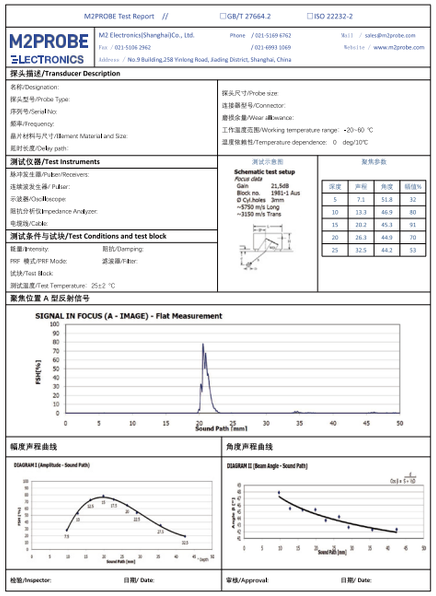
Liquid immersion probe: The liquid immersion probe is a single crystal longitudinal wave probe, the liquid immersion probe uses water as a coupling agent, and can be used for a long time to completely soak in water High damage sensitivity, liquid coupling sound energy loss is small, can overcome the workpiece by the surface finish is not enough or surface shape caused by the loss of sound energy factors, and will The probe's "blind zone" caused by the piezoelectric effect is submerged in the liquid.

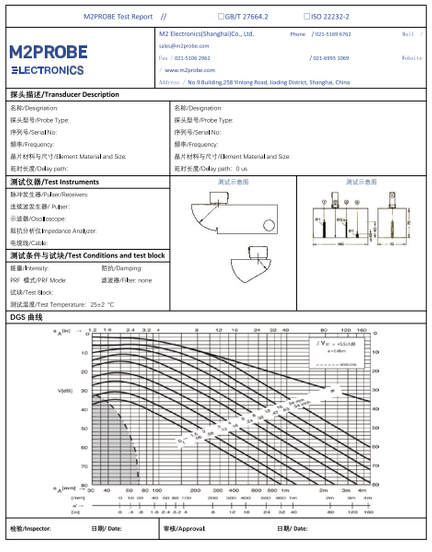
Test reports and documents

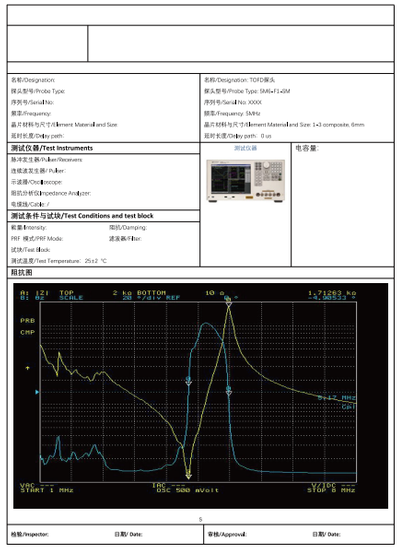
Eintik provides a test report for every probe produced, and all of our conventional probes are passed hundreds of times Test to ensure that customer requirements are met. Mantu Electronics is continuously providing users with a comprehensive database of information, including the characteristics of each probe sold. If you have special testing requirements, please contact Mantu Electronics.

Eintik probe produced by Aintic provides a test report with the following information (available to the customer) :









Straight probe

The straight probe is a single crystal probe with vertical incidence of sound wave, which can directly contact with the workpiece to be inspected.

Feature

- Good match with most metal acoustic impedance
- An oxide metal material is added to the front end of the probe for durable wear
- Can be used to detect a variety of metal and non-metal materials
- The shell is ergonomic, durable and stable by hard die casting

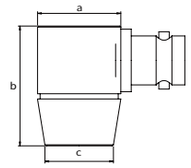
Apply

- Large forging or ductile iron
- Nylon, Teflon, polypropylene and other materials
- Gray cast iron, plastic synthetic materials, etc
- Building materials, core and semiconductor materials

Chinese specification

- The probe interface defaults to a side-mounted Q9(BNC) connector

Overall dimension							
Applicable chip size		a		b		c	
mm	in	mm	in	mm	in	mm	in
14	0.38	19.5	0.77	29	1.14	18	0.71
20	1.38	29	1.14	33	1.3	24.5	0.96



Probe specification			
Frequency	Wafer size		Probe type
MHz	mm	in	Pseries/Q9
1	20	0.79	C5-1P20-R9
2.5	14	0.55	C6-2.5P14-R9
	20	0.79	C5-2.55P20-R9
5	14	0.55	C6-5P14-R9
	20	0.79	C5-5P20-R9

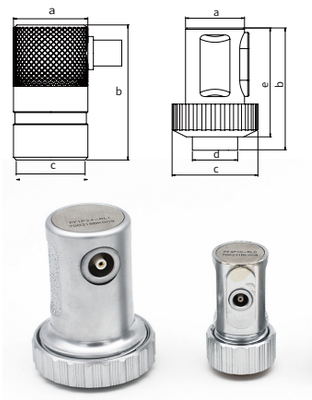
European specification EN1

· The probe interface is by default side mounted with L5(Microdot), C9(LEMO-01) connectors, and C5(LEMO-00) needs to be customized

Overall dimension												
Applicable chip size		a		b		c		d		e		coupler
mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	\
10	0.375	20	0.79	42.5	1.67	24	0.94	14	0.55	2	0.08	LEMO 00
24	0.94	30	1.18	59.5	2.34	45	1.77	29	1.14	2.5	0.1	LEMO 01

Overall dimension								
Applicable chip size		a		b		c		Coupler Side mount
mm	in	mm	in	mm	in	mm	in	\
5	0.2	10	0.39	15	0.59	9	0.35	Microdot

· Probe default P series



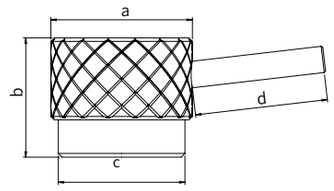
Probe specification			
Frequency	Wafer size		Probe type
MHz	mm	in	\
1	10	0.375	C10-1P10-R0-EN
	24	0.94	C11-1P24-R1-EN
2	10	0.375	C10-2P10-R0-EN
	24	0.94	C11-2P24-R1-EN
4	10	0.375	C10-4P10-R0-EN
	24	0.94	C11-4P24-R1-EN
5	10	0.375	C10-5P10-R0-EN
	24	0.94	C11-5P24-R1-EN
10	5	0.2	C8-10P5-RM-EN

European specification EN2

· Low probe height for tight Spaces
· The probe interface is by default side mounted C5(Lemo 00) and has a holding handle grip

Overall dimension									
Applicable chip size		a		b		c		d	
mm	in	mm	in	mm	in	mm	in	mm	in
10	0.38	19	0.75	16	0.63	17	0.67	20	0.79
20	0.79	29	1.14	16	0.63	17	1.06	20	0.79

Probe specification			
frequency	Wafer size		Probe type
MHz	mm	in	\
1	10	0.38	C12-1P10-R0-EN
2	10	0.38	C12-2P10-R0-EN
	20	0.79	C13-2P20-R0-EN
4	10	0.38	C12-4P10-R0-EN
	20	0.79	C13-4P20-R0-EN
5	10	0.38	C12-5P10-R0-EN
	20	0.79	C13-5P20-R0-EN
10	10	0.38	C12-10P10-R0-EN

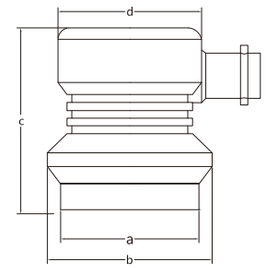


North American specification AS1

· The probe interface defaults to side mount Q9 (BNC)

Overall dimension									
Applicable chip size		a		b		c		d	
mm	in	mm	in	mm	in	mm	in	mm	in
13	0.5	19	0.75	28.5	1.12	36	1.42	22	0.87
19	0.75	27	1.06	37	1.44	36	1.42	30	1.18
25	1	31	1.22	41	1.61	36	1.42	34	1.34
29	1.125	37	1.46	47	1.85	36	1.42	40	1.57

Probe specification			
Frequency	Wafer size		Probe type
MHz	mm	in	\
0.5	19	0.75	C15-0.5P19-R9-AS
	25	1	C4-0.5P25-R9-AS
	29	1.125	C3-0.5P29-R9-AS
1	13	0.5	C14-1P13-R9-AS
	19	0.75	C15-1P19-R9-AS
	25	1	C4-1P25-R9-AS
	29	1.125	C3-1P29-R9-AS
2.25	13	0.5	C14-2.25P13-R9-AS
	19	0.75	C15-2.25P19-R9-AS
	25	1	C4-2.25P25-R9-AS
	29	1.125	C3-2.25P29-R9-AS
3.5	13	0.5	C14-3.5P13-R9-AS
	19	0.75	C15-3.5P19-R9-AS
	25	1	C4-3.5P25-R9-AS
5	13	0.5	C14-5P13-R9-AS
	19	0.75	C15-5P19-R9-AS
	25	1	C4-5P25-R9-AS
7.5	13	0.5	C14-7.5P13-R9-AS
10	13	0.5	C14-10P13-R9-AS

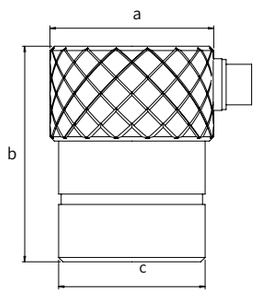


North American specification AS2

· The probe interface is by default side mounted L5 (Microdot), and the probe performance is by default P series

Overall dimension							
Applicable chip size		a		b		c	
mm	in	mm	in	mm	in	mm	in
6	0.25	10.5	0.41	13	0.51	9	0.35
10	0.375	15	0.59	14	0.55	14	0.55
13	0.5	18	0.71	16	0.63	17	0.67
19	0.75	25	0.98	16	0.63	24	0.94
25	1	30	1.18	16	0.63	29	1.14

Probe specification			
Frequency	Wafer size		Probe type
MHz	mm	in	\
1	13	0.5	C18-1P13-RM-AS
	19	0.75	C19-1P19-RM-AS
	25	1	C20-1P25-RM-AS
2.25	6	0.25	C16-2.25P6-RM-AS
	10	0.375	C17-2.25P10-RM-AS
	13	0.5	C18-2.25P13-RM-AS
	19	0.75	C19-2.25P19-RM-AS
	25	1	C20-2.25P25-RM-AS
3.5	6	0.25	C16-3.5P6-RM-AS
	10	0.375	C17-3.5P10-RM-AS
	13	0.5	C18-3.5P13-RM-AS
	19	0.75	C19-3.5P19-RM-AS
	25	1	C20-3.5P25-RM-AS
5	6	0.25	C16-5P6-RM-AS
	10	0.375	C17-5P10-RM-AS
	13	0.5	C18-5P13-RM-AS
	19	0.75	C19-5P19-RM-AS
7.5	6	0.25	C16-7.5P6-RM-AS
	10	0.375	C17-7.5P10-RM-AS
	13	0.5	C18-7.5P13-RM-AS
10	6	0.25	C16-10P6-RM-AS
	10	0.375	C17-10P10-RM-AS
	13	0.5	C18-10P13-RM-AS



Angle probe

The oblique probe is a single chip transducer which refracts the ultrasonic beam into shear or longitudinal wave in the detecting workpiece by a delay block at a fixed Angle.

Performance characteristics

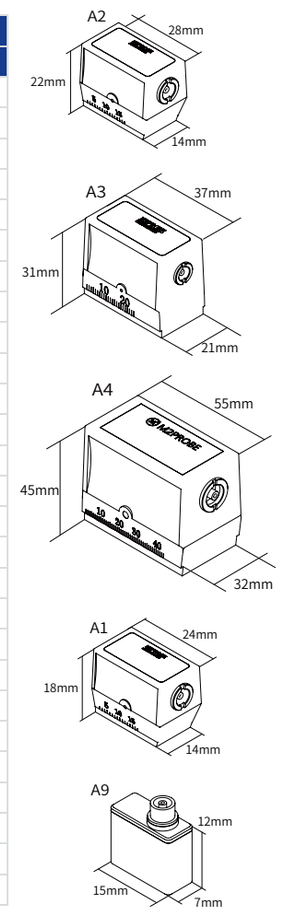
· Single crystal oblique probe to realize the transmission and reception of ultrasonic pulses
· Standard probe series to realize shear wave oblique scanning
· The ergonomic die-cast housing is extremely durable
· With shape matching performance, suitable for curved workpiece, can be customized according to workpiece curvature

Apply

· Common weld inspection
· Pipe fittings, pressure vessels, storage tanks
· Turbine blade
· Axle, forgings, castings
· Bonding detection
· Railway wheels and tracks
· Plate testing

European specification

Frequency	Wafer size		Angle	Near field		Coupler	Probe type
MHz	mm	in	°	mm	in	\	\
1	20x22	0.79x0.87	45	45	1.77	LEMO 1	A4-1C20x22-45S-R1-EN
	20x22	0.79x0.87	60	45	1.77	LEMO 1	A4-1C20x22-60S-R1-EN
	20x22	0.79x0.87	70	45	1.77	LEMO 1	A4-1C20x22-70S-R1-EN
2	8x9	0.31x0.35	45	15	0.59	LEMO 00	A2-2C8x9-45S-R0-EN
	8x9	0.31x0.35	60	15	0.59	LEMO 00	A2-2C8x9-60S-R0-EN
	8x9	0.31x0.35	70	15	0.59	LEMO 00	A2-2C8x9-70S-R0-EN
	14x14	0.55x0.55	45	39	1.54	LEMO 00	A3-2C14x14-45S-R0-EN
	14x14	0.55x0.55	60	39	1.54	LEMO 00	A3-2C14x14-60S-R0-EN
	14x14	0.55x0.55	70	39	1.54	LEMO 00	A3-2C14x14-70S-R0-EN
	20x22	0.79x0.87	45	90	3.54	LEMO 1	A4-2C20x22-45S-R1-EN
	20x22	0.79x0.87	60	90	3.54	LEMO 1	A4-2C20x22-60S-R1-EN
	20x22	0.79x0.87	70	90	3.54	LEMO 1	A4-2C20x22-70S-R1-EN
4	8x9	0.31x0.35	45	30	1.18	LEMO 00	A2-4C8x9-45S-R0-EN
	8x9	0.31x0.35	60	30	1.18	LEMO 00	A2-4C8x9-60S-R0-EN
	8x9	0.31x0.35	70	30	1.18	LEMO 00	A2-4C8x9-70S-R0-EN
	20x22	0.79x0.87	45	180	7.09	LEMO 1	A4-4C20x22-45S-R1-EN
	20x22	0.79x0.87	60	180	7.09	LEMO 1	A4-4C20x22-60S-R1-EN
	20x22	0.79x0.87	70	180	7.09	LEMO 1	A4-4C20x22-70S-R1-EN
5	6x6	0.24x0.24	45	13	0.51	LEMO 00	A1-5C6x6-45S-R0-EN
	6x6	0.24x0.24	60	13	0.51	LEMO 00	A1-5C6x6-60S-R0-EN
	6x6	0.24x0.24	70	13	0.51	LEMO 00	A1-5C6x6-70S-R0-EN
	14x14	0.55x0.55	45	88	3.46	LEMO 00	A3-5C14x14-45S-R0-EN
	14x14	0.55x0.55	60	88	3.46	LEMO 00	A3-5C14x14-60S-R0-EN
	14x14	0.55x0.55	70	88	3.46	LEMO 00	A3-5C14x14-70S-R0-EN
6	3x4	0.12x0.16	45	N/A		Microdot	A9-6C3x4-45S-RM-EN
	3x4	0.12x0.16	60	N/A		Microdot	A9-6C3x4-60S-RM-EN
	3x4	0.12x0.16	70	N/A		Microdot	A9-6C3x4-70S-RM-EN



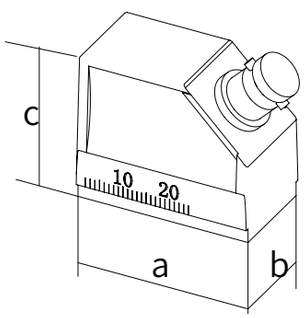
Chinese specification

· Probe "Performance type" default P series
· Probe connectors bevel or side mount Q9(BNC) and L5(Microdot) interfaces

Probe specification						
Frequency	Wafer size		Angle	Near field		Probe type
MHz	mm	in	°	mm	in	\
2.5	9x9	0.35x0.35	45	21	0.83	A10 -2.5P9x9 -K1 -R9
2.5	9x9	0.35x0.35	60	21	0.83	A10 -2.5P9x9 -60S -R9
2.5	9x9	0.35x0.35	70	21	0.83	A10 -2.5P9x9 -70S -R9
2.5	9x9	0.35x0.35	56.4	21	0.83	A10 -2.5P9x9 -K1.5 -R9
2.5	9x9	0.35x0.35	63.4	21	0.83	A10 -2.5P9x9 -K2 -R9
2.5	9x9	0.35x0.35	68.2	21	0.83	A10 -2.5P9x9 -K2.5 -R9
2.5	9x9	0.35x0.35	71.6	21	0.83	A10 -2.5P9x9 -K3 -R9
2.5	8x12	0.31x0.47	45	25	0.98	A11 -2.5P8x12 -K1 -R9
2.5	8x12	0.31x0.47	60	25	0.98	A11 -2.5P8x12 -60 -R9
2.5	8x12	0.31x0.47	70	25	0.98	A11 -2.5P8x12 -70 -R9
2.5	8x12	0.31x0.47	56.4	25	0.98	A11 -2.5P8x12 -K1.5 -R9
2.5	8x12	0.31x0.47	63.4	25	0.98	A11 -2.5P8x12 -K2 -R9
2.5	8x12	0.31x0.47	68.2	25	0.98	A11 -2.5P8x12 -K2.5 -R9
2.5	8x12	0.31x0.47	71.6	25	0.98	A11 -2.5P8x12 -K3 -R9
2.5	10x16	0.39x0.63	45	42	1.65	A12 -2.5P10x16 -K1 -R9
2.5	10x16	0.39x0.63	60	42	1.65	A12 -2.5P10x16 -60 -R9
2.5	10x16	0.39x0.63	70	42	1.65	A12 -2.5P10x16 -70 -R9
2.5	10x16	0.39x0.63	56.4	42	1.65	A12 -2.5P10x16 -K1.5 -R9
2.5	10x16	0.39x0.63	63.4	42	1.65	A12 -2.5P10x16 -K2 -R9
2.5	10x16	0.39x0.63	68.2	42	1.65	A12 -2.5P10x16 -K2.5 -R9
2.5	10x16	0.39x0.63	71.6	42	1.65	A12 -2.5P10x16 -K3 -R9
2.5	13x13	0.51x0.51	45	44	1.73	A12 -2.5P13x13 -K1 -R9
2.5	13x13	0.51x0.51	60	44	1.73	A12 -2.5P13x13 -60 -R9
2.5	13x13	0.51x0.51	70	44	1.73	A12 -2.5P13x13 -70 -R9
2.5	13x13	0.51x0.51	56.4	44	1.73	A12 -2.5P13x13 -K1.5 -R9
2.5	13x13	0.51x0.51	63.4	44	1.73	A12 -2.5P13x13 -K2 -R9
2.5	13x13	0.51x0.51	68.2	44	1.73	A12 -2.5P13x13 -K2.5 -R9
2.5	13x13	0.51x0.51	71.6	44	1.73	A12 -2.5P13x13 -K3 -R9
2.5	20x20	0.79x0.79	45	115	4.53	A13 -2.5P20x20 -K1 -R9
2.5	20x20	0.79x0.79	60	115	4.53	A13 -2.5P20x20 -60 -R9
2.5	20x20	0.79x0.79	70	115	4.53	A13 -2.5P20x20 -70 -R9
2.5	20x20	0.79x0.79	56.4	115	4.53	A13 -2.5P20x20 -K1.5 -R9
2.5	20x20	0.79x0.79	63.4	115	4.53	A13 -2.5P20x20 -K2 -R9

Probe specification						
Frequency	Wafer size		Angle	Near field		Probe type
MHz	mm	in	°	mm	in	\
5	6x6	0.24x0.24	45	19	0.75	A14 -5P6x6 -K1 -RM
5	6x6	0.24x0.24	60	19	0.75	A14 -5P6x6 -60 -RM
5	6x6	0.24x0.24	70	19	0.75	A14 -5P6x6 -70 -RM
5	6x6	0.24x0.24	56.4	19	0.75	A14 -5P6x6 -K1.5 -RM
5	6x6	0.24x0.24	63.4	19	0.75	A14 -5P6x6 -K2 -RM
5	6x6	0.24x0.24	68.2	19	0.75	A14 -5P6x6 -K2.5 -RM
5	6x6	0.24x0.24	71.6	19	0.75	A14 -5P6x6 -K3 -RM
5	9x9	0.35x0.35	45	42	1.65	A10 -5P9x9 -K1 -R9
5	9x9	0.35x0.35	60	42	1.65	A10 -5P9x9 -60S -R9
5	9x9	0.35x0.35	70	42	1.65	A10 -5P9x9 -70S -R9
5	9x9	0.35x0.35	56.4	42	1.65	A10 -5P9x9 -K1.5 -R9
5	9x9	0.35x0.35	63.4	42	1.65	A10 -5P9x9 -K2 -R9
5	9x9	0.35x0.35	68.2	42	1.65	A10 -5P9x9 -K2.5 -R9
5	9x9	0.35x0.35	71.6	42	1.65	A10 -5P9x9 -K3 -R9
5	8x12	0.31x0.47	45	50	1.97	A11 -5P8x12 -K1 -R9
5	8x12	0.31x0.47	60	50	1.97	A11 -5P8x12 -60 -R9
5	8x12	0.31x0.47	70	50	1.97	A11 -5P8x12 -70 -R9
5	8x12	0.31x0.47	56.4	50	1.97	A11 -5P8x12 -K1.5 -R9
5	8x12	0.31x0.47	63.4	50	1.97	A11 -5P8x12 -K2 -R9
5	8x12	0.31x0.47	68.2	50	1.97	A11 -5P8x12 -K2.5 -R9
5	8x12	0.31x0.47	71.6	50	1.97	A11 -5P8x12 -K3 -R9
5	10x16	0.39x0.63	45	84	3.31	A12 -5P10x16 -K1 -R9
5	10x16	0.39x0.63	60	84	3.31	A12 -5P10x16 -60 -R9
5	10x16	0.39x0.63	70	84	3.31	A12 -5P10x16 -70 -R9
5	10x16	0.39x0.63	56.4	84	3.31	A12 -5P10x16 -K1.5 -R9
5	10x16	0.39x0.63	63.4	84	3.31	A12 -5P10x16 -K2 -R9
5	10x16	0.39x0.63	68.2	84	3.31	A12 -5P10x16 -K2.5 -R9
5	10x16	0.39x0.63	71.6	84	3.31	A12 -5P10x16 -K3 -R9
5	13x13	0.51x0.51	45	84	3.31	A12 -5P13x13 -K1 -R9
5	13x13	0.51x0.51	60	84	3.31	A12 -5P13x13 -60 -R9
5	13x13	0.51x0.51	70	84	3.31	A12 -5P13x13 -70 -R9
5	13x13	0.51x0.51	56.4	84	3.31	A12 -5P13x13 -K1.5 -R9
5	13x13	0.51x0.51	63.4	84	3.31	A12 -5P13x13 -K2 -R9
5	13x13	0.51x0.51	68.2	84	3.31	A12 -5P13x13 -K2.5 -R9
5	13x13	0.51x0.51	71.6	84	3.31	A12 -5P13x13 -K3 -R9

Overall dimension								
Wafer size		a		b		c		Coupler
mm	in	mm	in	mm	in	mm	in	L5(Microdot)
6x6	0.24x0.24	20	0.79	11.7	0.46	15.5	0.61	BNC(Q9)
9x9	0.35x0.35	30	1.18	14	0.55	21	0.83	
8x12	0.31x0.47	28.5	1.12	16.5	0.65	22	0.87	
10x16	0.39x0.63	35.5	1.39	19.5	0.77	28	1.1	
13x13	0.51x0.51	35.5	1.39	19.5	0.77	28	1.1	
20x20	0.79x0.79	54	2.13	25	0.98	38	1.5	

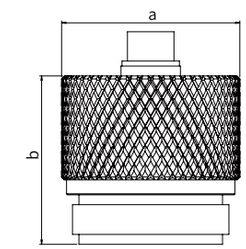


Angle beam probe

The angular beam probe is a single crystal probe used with a wedge, which can be replaced to emit refracted shear or longitudinal waves into the workpiece under test.

Performance characteristics

- The wedge has shape matching performance and can be machined into different shapes to ensure good coupling with the workpiece surface
- Users can customize wedges of any Angle according to their needs
- Quick replacement of wedges



Apply

- Weld inspection of axle, forgings and castings
- Pipe fittings, pressure vessels, storage tanks, blades
- Bonding detection, railway wheels and tracks

North American specification

Applicable chip size		a		b		Coupler
mm	in	mm	in	mm	in	
6	0.25	11	0.43	14	0.55	Microdot Top mounting
10	0.375	14	0.55	15	0.59	
13	0.5	18	0.71	17	0.67	

Probe specification			
Frequency	Wafer size		Probe type
MHz	mm	in	\
1	6	0.25	W1-1C6-SM
	13	0.5	W3-1C13-SM
2.25	6	0.25	W1-2.25C6-SM
	10	0.375	W2-2.25C10-SM
	13	0.5	W3-2.25C13-SM
3.5	6	0.25	W1-3.5C6-SM
	10	0.375	W2-3.5C10-SM
	13	0.5	W3-3.5C13-SM
5	6	0.25	W1-5C6-SM
	10	0.375	W2-5C10-SM
	13	0.5	W3-5C13-SM
7.5	6	0.25	W2-7.5C6-SM

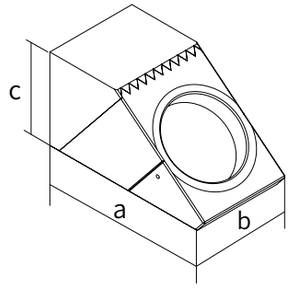
Replaceable wedge model

Wedge6mm(0.25in)Overall dimension										
Wedge gauge	Angle	A		B		C		Screw thread	Applicable chip size	
	steel	mm	in	mm	in	mm	in	in	mm	in
Φ6-45°	45	19.1	0.75	11.4	0.45	9.4	0.37	3/8-32	6	0.25
Φ6-60°	60	21.3	0.84	11.4	0.45	11.2	0.44	3/8-32		
Φ6-70°	70	25.4	1	11.4	0.45	12.7	0.5	3/8-32		
Φ6-90°	90	24.1	0.95	11.4	0.45	12.7	0.5	3/8-32		

Wedge 10mm(0.375in)Overall dimension										
Wedge gauge	Angle	A		B		C		Screw thread	Applicable chip size	
	steel	mm	in	mm	in	mm	in	in	mm	in
Φ10-45°	45	22.6	0.89	14	0.55	11.9	0.47	1/2-28	10	0.375
Φ10-60°	60	26.4	1.04	14	0.55	14	0.55	1/2-28		
Φ10-70°	70	30.2	1.19	14	0.55	14.7	0.58	1/2-28		
Φ10-90°	90	29.5	1.16	14	0.55	14.7	0.58	1/2-28		

Wedge 13mm(0.5in)Overall dimension										
Wedge gauge	Angle	A		B		C		Screw thread	Applicable chip size	
	steel	mm	in	mm	in	mm	in	in	mm	in
Φ13-45°	45	26.7	1.05	17.8	0.7	14	0.55	26.7	13	0.5
Φ13-60°	60	31.5	1.24	17.8	0.7	16.3	0.64	31.5		
Φ13-70°	70	35.8	1.41	17.8	0.7	17.3	0.68	35.8		
Φ13-90°	90	35.5	1.4	17.8	0.7	18.5	0.73	35.5		

Probe specification			
Frequency	Wafer size		Probe type
MHz	in	mm	\
1	0.25	6	W1-1C6-SM
	0.5	13	W3-1C13-SM
2.25	0.25	6	W1-2.25C6-SM
	0.375	10	W2-2.25C10-SM
	0.5	13	W3-2.25C13-SM
3.5	0.25	6	W1-3.5C6-SM
	0.375	10	W2-3.5C10-SM
	0.5	13	W3-3.5C13-SM
5	0.25	6	W1-5C6-SM
	0.375	10	W2-5C10-SM
	0.5	13	W3-5C13-SM
7.5	0.25	6	W2-7.5C6-SM



Twin crystal straight probe

The twin-crystal straight probe is a kind of ultrasonic sensor which integrates independent transmitting and receiving P-wave.

Performance characteristics

· Excellent near surface resolution
· Independent acoustic wave transmitting and receiving unit
· The use of wear-resistant plastic delay blocks can also achieve good coupling in rough or curved surfaces
· Integrated penetration performance of low frequency single crystal probe and near-surface resolution performance of high frequency single crystal probe Bind together

Apply

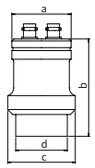
· Forged or cast objects
· Pores, micropores and cracks
· Layered structural defects, slag holes, and separation lines in thick steel plates
· Screw, screw bearing ring and other assembly materials
· Corroded and eroded pipes, containers, etc

Chinese specification

· **Probe interface default: top L5(Microdot), Q6, probe default "performance type" is P series**

Probe specification					
Frequency	Wafer size		Focusing depth		Probe type
MHz	mm	in	mm	in	\
2.5	ϕ 10/2	0.39	5	0.2	TR10 -2.5P10 -FD5 -SM
	ϕ 10/2	0.39	10	0.39	TR10 -2.5P10 -FD10 -SM
	ϕ 14/2	0.55	10	0.39	TR11 -2.5P14 -FD10 -S6
	ϕ 14/2	0.55	15	0.59	TR11 -2.5P14 -FD15 -S6
	ϕ 14/2	0.55	20	0.79	TR11 -2.5P14 -FD20 -S6
	ϕ 20/2	0.79	10	0.39	TR12 -2.5P20 -FD10 -S6
	ϕ 20/2	0.79	15	0.59	TR12 -2.5P20 -FD15 -S6
	ϕ 20/2	0.79	20	0.79	TR12 -2.5P20 -FD20 -S6
	ϕ 20/2	0.79	25	0.98	TR12 -2.5P20 -FD25 -S6
5	ϕ 10/2	0.39	5	0.2	TR10 -5P10 -FD5 -SM
	ϕ 10/2	0.39	10	0.39	TR10 -5P10 -FD10 -SM
	ϕ 10/2	0.39	15	0.59	TR10 -5P10 -FD15 -SM
	ϕ 14/2	0.55	10	0.39	TR11 -5P14 -FD10 -S6
	ϕ 14/2	0.55	15	0.59	TR11 -5P14 -FD15 -S6
	ϕ 14/2	0.55	20	0.79	TR11 -5P14 -FD20 -S6
	ϕ 14/2	0.55	25	0.98	TR11 -5P14 -FD25 -S6
	ϕ 14/2	0.55	30	1.18	TR11 -5P14 -FD30 -S6
	ϕ 20/2	0.79	10	0.39	TR12 -5P20 -FD10 -S6
	ϕ 20/2	0.79	15	0.59	TR12 -5P20 -FD15 -S6
	ϕ 20/2	0.79	20	0.79	TR12 -5P20 -FD20 -S6
	ϕ 20/2	0.79	25	0.98	TR12 -5P20 -FD25 -S6
	ϕ 20/2	0.79	30	1.18	TR12 -5P20 -FD30 -S6

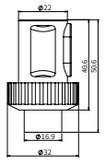
外形尺寸(中国规格										
适用晶片尺寸		a		b		c		d		连接器
mm	in	mm	in	mm	in	mm	in	mm	in	\
ϕ10/2	0.39	18.2	0.72	27	1.06	17	0.67	15	0.59	Microdot
ϕ14/2	0.56	23	0.91	33	1.3	21.5	0.85	19	0.75	Q6
ϕ20/2	0.8	23	0.91	37	1.46	26	1.02	25	0.98	



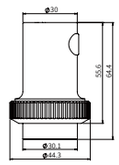
欧洲规格

·探头接口默认为:侧装C5(LEMO 00 (2)),探头默认“性能类型”为C系列

探头规格					
频率	晶片尺寸		聚焦深度	探头型号	壳体型号
MHz	in	mm	mm	\	\
2	0.43	ϕ 11/2	8	TR2-2C11-FD8-R0	TR2
	0.28x0.71	7x18	15	TR7-2C7x18-FD15-R0	TR7
	0.28x0.71	7x18	30	TR7-2C7x18-FD30-R0	TR7
4	0.14x0.39	3.5x10	10	TR2-4C3.5x10-FD10-R0	TR2
	0.24x0.79	6x20	12	TR7-4C6x20-FD12-R0	TR7
	0.24x0.79	6x20	25	TR7-4C6x20-FD25-R0	TR7



TR2



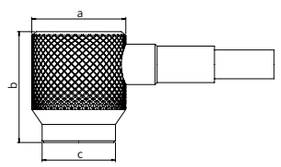
TR7

北美规格

·探头尺寸小高度集成,适用于有限空间的检测

·探头默认侧面出线,线长为1.8m,连接器根据需求可自由选则

外形尺寸							
适用晶片尺寸		a		b		c	
mm	in	mm	in	mm	in	mm	in
6	0.25	12.7	0.5	16.3	0.64	9.1	0.36
10	0.375	16	0.63	16.3	0.64	11.9	0.47
13	0.5	19.1	0.75	17.3	0.68	15.2	0.6



探头规格				
频率	晶片尺寸		探头型号	
MHz	mm	in	BNC(Q9)	L5(Mricodot)
2.25	6	0.25	TR13 -2.25C6 -R9	TR13 -2.25C6 -RM
	10	0.375	TR14 -2.25C10 -R9	TR14 -2.25C10 -RM
	13	0.5	TR15 -2.25C13 -R9	TR15 -2.25C13 -RM
3.5	6	0.25	TR13 -3.5C6 -R9	TR13 -3.5C6 -RM
	10	0.375	TR14 -3.5C10 -R9	TR14 -3.5C10 -RM
	13	0.5	TR15 -3.5C13 -R9	TR15 -3.5C13 -RM
5	6	0.25	TR13 -5C6 -R9	TR13 -5C6 -RM
	10	0.375	TR14 -5C10 -R9	TR14 -5C10 -RM
	13	0.5	TR15 -5C13 -R9	TR15 -5C13 -RM
7.5	8	0.3	TR14 -5C8 -R9	TR14 -5C8 -RM
10	6	0.25	TR13 -10C6 -R9	TR13 -10C6 -RM
	10	0.375	TR14 -10C10 -R9	TR14 -10C10 -RM

双晶纵波斜探头

双晶纵波探头是包含两个独立发射和接收的晶片,在工件中产生折射角并具有一定的聚焦区域,衰减比横波斜射要小,常用于检测奥氏体钢焊缝等粗晶材料。

性能特点

·始波宽度较窄，杂波少，散射少，信噪比高

·对有一定倾角的缺陷检测灵敏

·楔块具有外形吻合性能，可加工成不同形状以保证与工件表面耦合良好

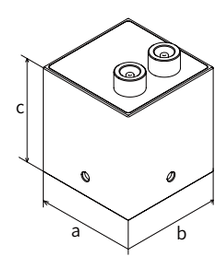
应用

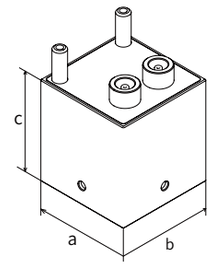
·粗晶奥氏体不锈钢材料等

·轴类、螺栓等的疲劳裂纹检测

·核电、核工业等领域的检测

·厚度超过20mm的板材焊缝





晶片尺寸（mm）		2（7x10）	2（8x12）	2（10x18）	2（15x25）	2（20x34）	2（24x42）
外壳尺寸axbxc（mm）		20x20x31.75	25x25x31.75	30x30x31.75	40x40x31.75	50x50x31.75	60x60x31.75
频率（MHz）	角度	可选聚焦声程（FS）mm					
0.5	45°	-	-	-	15/30	25/60	35/80
	60°	-	-	-	15/25	20/40	30/70
	70°	-	-	-	15/20	20/35	25/60
1	45°	-	10/25	15/30	20/55	30/80	40/120
	60°	-	10/20	15/30	20/45	25/75	35/110
	70°	-	10/20	15/30	15/45	25/75	30/110
2	45°	10/25	15/30	20/45	25/85	40/130	45/160
	60°	10/25	10/30	15/40	20/75	30/120	40/140
	70°	10/25	15/35	15/35	20/70	30/110	35/125
4	45°	10/35	20/60	25/90	30/100	-	-
	60°	10/35	15/55	20/70	25/90	-	-
	70°	10/30	10/50	15/65	20/85	-	-

注意：FD=FS*COSβ，其中β为探头折射角度

TOFD探头

TOFD探头是一种具有高带宽、小周期和高灵敏度的高阻尼纵波探头，探头频率从2.25MHz到15MHz,通过衍射时差法对焊缝进行检测，独特的外形结构设计使其可满足快速更换楔块，使用便捷，根据自身使用需求，可自行选择楔块类型（进水口、防磨螺钉、不锈钢结构），配备扫查器可提高检测速度。

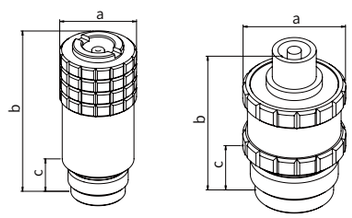
性能特点

- 探头为窄脉冲高带宽特性
- 探头和楔块更换便捷
- IHC表示楔块带注水口、扫查器夹持孔、底面耐磨螺钉
- IHS表示楔块带注水口、扫查器夹持孔、不锈钢外套结构

应用

- 近表面缺陷的检测
- 对板之间焊缝的检测
- 不规则方向性缺陷的探伤

外壳型号	探头尺寸						
	a		b		c		螺距
	mm	in	mm	in	mm	in	\
F1	11	0.43	16.1	0.63	5.6	0.22	3/8-32
F2	18	0.71	17.4	0.69	6.5	0.26	11/16-24
F3	12	0.47	26	1.02	5.7	0.22	3/8-32
F4	19.6	0.77	31	1.22	6.6	0.26	11/16-24
F8	14.3	0.56	16.5	0.65	6.5	0.26	9/16-24

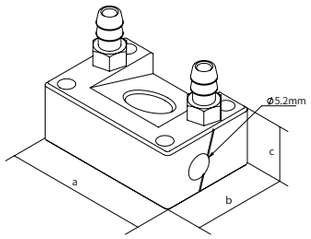


规格型号

频率	晶片尺寸		外壳型号	螺距	探头型号
MHz	mm	in	\	\	\
2.25	6	0.25	F1	3/8-32	F1-2.25N6-SM
	10	0.375	F2	11/16-24	F2-2.25N10-SM
	10	0.375	F4	11/16-24	F4-2.25N6-S0
	10	0.375	F8	9/16-24	F8-2.25N10-SM
	13	0.5	F2	11/16-24	F2-2.25N13-SM
	13	0.5	F4	11/16-24	F4-2.25N13-S0
3.5	6	0.25	F1	3/8-32	F1-3.5N6-SM
	6	0.25	F3	3/8-32	F3-3.5N6-S0
	10	0.375	F2	11/16-24	F2-3.5N10-SM
	10	0.375	F4	11/16-24	F4-3.5N10-S0
	10	0.375	F8	9/16-24	F8-3.5N10-SM
	13	0.5	F2	11/16-24	F2-3.5N13-SM
	13	0.5	F4	11/16-24	F4-3.5N13-S0
5	3	0.125	F1	3/8-32	F1-5N3-SM
	3	0.125	F3	3/8-32	F3-5N3-S0
	6	0.25	F1	3/8-32	F1-5N6-SM
	6	0.25	F3	3/8-32	F3-5N6-S0
	10	0.375	F2	11/16-24	F2-5N10-SM
	10	0.375	F4	11/16-24	F4-5N10-S0
	10	0.375	F8	9/16-24	F8-5N10-SM
	13	0.5	F2	11/16-24	F2-5N13-SM
	13	0.5	F4	11/16-24	F4-5N13-S0
7.5	3	0.125	F1	3/8-32	F1-7.5N3-SM
	3	0.125	F3	3/8-32	F3-7.5N3-S0
	6	0.25	F1	3/8-32	F1-7.5N6-SM
	6	0.25	F3	3/8-32	F3-7.5N6-S0
10	3	0.125	F1	3/8-32	F1-10N3-SM
	3	0.125	F3	3/8-32	F3-10N3-S0
	6	0.25	F1	3/8-32	F1-10N6-SM
	6	0.25	F3	3/8-32	F3-10N6-S0
15	3	0.125	F1	3/8-32	F1-15N3-SM
	3	0.125	F3	3/8-32	F5-15N3-S0

TOFD wedge

Wedge type		Applicable housing	Refraction Angle
F1-45L-IHS	F1-45L-IHC	F1/F3	45
F1-60L-IHS	F1-60L-IHC		60
F1-70L-IHS	F1-70L-IHC		70
F2-45L-IHS	F2-45L-IHC	F2/F4	45
F2-60L-IHS	F2-60L-IHC		60
F2-70L-IHS	F2-70L-IHC		70
F8-45L-IHS	F8-45L-IHC	F8	45
F8-60L-IHS	F8-60L-IHC		60
F8-70L-IHS	F8-70L-IHC		70



Wedge size								
Model number	Angle	a		b		c		Screw thread
	Steel	in	mm	in	mm	in	mm	in
F1-45L-IHC	45	1.26	32	0.83	21	0.51	13	3/8-32
F1-45L-IHS								
F1-60L-IHC	60							
F1-60L-IHS								
F1-70L-IHC	70							
F1-70L-IHS								
F2-45L-IHC	45	1.26	32	1.12	28	0.71	18	9/16-24
F2-45L-IHS								
F2-60L-IHC	60							
F2-60L-IHS								
F2-70L-IHC	70							
F2-70L-IHS								

Protective film probe

The protective film probe is a single chip transducer with a replaceable soft film, a delay block or an anti-wear cap at the front end, and the sound wave is vertically incident.

Performance characteristic

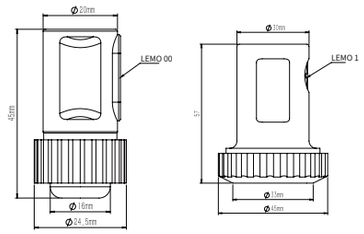
- The soft film probe is a single chip transducer with a replaceable soft film or wear sleeve at the front end and vertical incidence of sound waves
- Provide two kinds of front end accessories for different occasions, such as soft film and wear sleeve
  Soft film can reduce the impact of coupling on uneven or rough surfaces
- Wear sleeve is suitable for quick scanning on rough surfaces
- The front soft film and wear sleeve can be replaced to extend the service life of the probe
- Soft film options are available only in European specifications and soft film and wear sleeve options are available in North American specifications

Apply

- Metal workpiece with simple structure or rough surface
- Large plates, bars, billets, forgings, castings, various metals and non-metals
- Defect detection in vertical direction

European specification

Probe specification						
Frequency	Wafer size		Near field		Coupler	Probe type
MHz	mm	in	mm	in	\	\
1	24	0.94	23	0.91	LEMO 1	P2-1C24-R1-EN
2	10	0.39	7.2	0.28	LEMO 00	P1-2C10-R0-EN
	24	0.94	45	1.77	LEMO 1	P2-2C24-R1-EN
4	10	0.39	15.6	0.61	LEMO 00	P1-4C10-R0-EN
	24	0.94	91	3.58	LEMO 1	P2-4C24-R1-EN

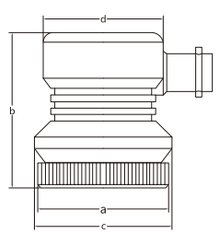


Protective film（European standard）			
Instructions	Applicable chip size		Model number
\	mm	in	\
12	10	0.39	P1-10
12	24	0.94	P2-24

North American specification

- Probe interface default Q9(BNC) connector

Overall dimension									
Applicable chip size		a		b		c		d	
mm	in	mm	in	mm	in	mm	in	mm	in
13	0.5	25	0.98	41	1.61	28.5	1.12	22	0.87
19	0.75	33	1.3	41	1.61	36.5	1.44	30	1.18
25	1	38	1.5	41	1.61	40.5	1.59	34	1.34



Probe specification			
Frequency	Wafer diameter		Probe type
MHz	mm	in	\
1	13	0.5	P3 -1P13 -R9-AS
	19	0.75	P4 -1P19 -R9-AS
	25	1	P5 -1P25 -R9-AS
2.25	13	0.5	P3-2.25P13-R9-AS
	19	0.75	P4-2.25P19 -R9-AS
	25	1	P5-2.25P25 -R9-AS
3.5	13	0.5	P3-3.5P13 -R9-AS
	19	0.75	P4-3.5P19 -R9-AS
	25	1	P5-3.5P25 -R9-AS
5	13	0.5	P3-5P13-R9-AS
	19	0.75	P4-5P19-R9-AS
	25	1	P5-5P25-R9-AS

Protective film specification (North American standard)			
Instructions	Applicable chip size		Model number
\	mm	in	\
10	13	0.5	P3-13
10	19	0.75	P4-19
10	25	1	P5-25

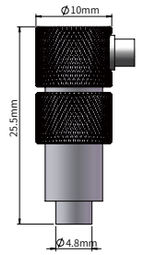
Wear block specification (North American standard)			
Instructions	Applicable chip size		Model number
name	mm	in	\
Wear-resistant block	13	0.5	P3-NM13
	19	0.75	P4-NM19
	25	1	P5-NM25

Delay block probe

Delay block probe is a single crystal longitudinal wave probe, widely used in petroleum, chemical industry, metallurgy, shipbuilding, aviation, aerospace and other fields, to provide non-destructive testing for various thickness measurement The best performance.

Performance characteristic

- The delay block can be replaced at any time after wear
- Delay blocks can be purchased separately
- The probe frequency can be selected from 2.25MHz-20MHz
- With shape matching performance, suitable for curved workpiece, can be customized according to workpiece curvature

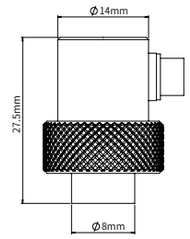


D1

Apply

- Thickness measurement of large plates, bars, billets, forgings, castings, various metals and non-metals
- Detection of vertical defects
- High temperature resistant delay blocks can be configured to detect in-service workpieces

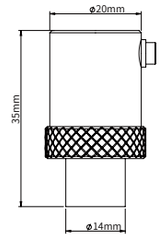
Frequency	Wafer size		Probe type
MHz	mm	in	\
2.25	6	0.25	D2-2.25C6-RM
	13	0.5	D3-2.25C13-RM
3.5	6	0.25	D2-3.5C6-RM
5	6	0.25	D2-5C6-RM
	13	0.5	D3-5C13-RM
10	3	0.125	D1-10C3-RM
	6	0.25	D2-10C6-RM
15	3	0.125	D1-15C3-RM
	6	0.25	D2-15C6-RM
20	3	0.125	D1-20C3-RM



D2

Replaceable delay block specifications

Model number	Length		Applicable chip size	
	mm	in	mm	in
D1-H5.5	5.5	0.22	3	0.125
D2-H9.5	9.5	0.37	6	0.25
D2-H12.7	12.7	0.5	6	0.25
D3-H9.5	9.5	0.37	13	0.5
D3-H12.7	12.7	0.5	13	0.5



D3

Immersion probe (natural focus, line focus, point focus)

The immersion probe is a P-wave single-crystal probe designed to detect a workpiece that is completely or partially immersed in water, using water as a coupling agent.

Performance characteristic

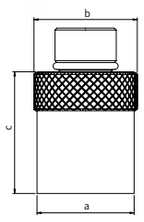
· The front 1/4 wavelength matching layer and excellent acoustic impedance enhance the output of sound energy
· The shell is made of 304 stainless steel, anti-corrosion and anti-rust
· Water immersion ensures coupling uniformity and stability
· Probe frequency and focal length can be customized according to requirements

Apply

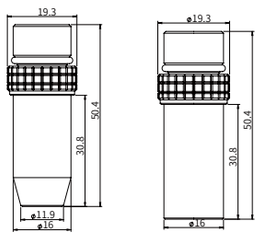
· Can cooperate with automatic equipment to realize automatic scanning of the workpiece
· Natural focusing is generally applied to the measurement of sheet metal thickness
· Line focusing is generally used in the detection of bar defects
· Point focusing generally uses high frequency to detect small defects
· In-service detection of workpieces in water can be realized

North American Specification AS1 (Standard round case)

Overall dimension							
Applicable chip size		a		b		c	
mm	in	mm	in	mm	in	mm	in
19	0.75	25	0.98	27	1.06	32	1.25
25	1	32	1.26	33	1.3	32	1.25
29	1.125	35	1.38	37	1.46	32	1.25



Note: The probe defaults to UHF waterproof connectors



North American specification AS2

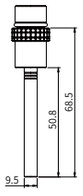
· Probe outer diameter ϕ10mm (0.376in), suitable for applications with limited detection space
· The probe interface defaults to a Microdot connector

Probe specification					
Frequency	Wafer size		Focusing range		Outlet mode
MHz	mm	in	mm	in	\
2.25	6	0.25	10-12	0.39-0.47	apex
3.5	6	0.25	11-17	0.43-0.67	apex
5	6	0.25	12-25	0.47-0.98	apex
10	6	0.25	13-45	0.51-1.77	apex
15	3	0.125	7-15	0.28-0.59	apex
	6	0.25	13-40	0.51-1.57	apex
20	3	0.125	8-22	0.31-0.87	apex

North American Specification AS3 (Slender case)

· The outer diameter of the probe shell is ϕ10mm (0.376in), the length is 51mm (2in), suitable for applications such as the detection space limited hole environment
· The probe interface defaults to a UHF connector

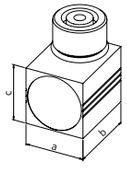
Probe specification					
Frequency	Wafer size		Focusing range		Outlet mode
MHz	mm	in	mm	in	\
2.25	6	0.25	10-12	0.39-0.47	apex
3.5	6	0.25	11-17	0.43-0.67	apex
5	6	0.25	12-25	0.47-0.98	apex
10	6	0.25	13-45	0.51-1.77	apex
15	3	0.125	7-15	0.28-0.59	apex
	6	0.25	13-40	0.51-1.57	apex
20	3	0.125	8-22	0.31-0.87	apex



North American Specification AS4 (Square housing)

· The transducer is cuboid shape, and the acoustic wave direction is 90° with the interface, which is suitable for some special applications
· The probe interface defaults to a UHF connector

Overall dimension							
Applicable chip size		a		b		c	
mm	in	mm	in	mm	in	mm	in
6	0.25	19	0.75	24	0.94	19	0.75
13	0.5						
19	0.75						



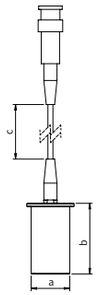
Probe specification					
Frequency	Wafer size		Focusing range		Outlet mode
MHz	mm	in	mm	in	\
1	19	0.75	30-45	1.18-1.77	flank
	13	0.5	15-20	0.59-0.79	flank
2.25	13	0.5	20-48	0.79-1.90	flank
	10	0.375	13-27	0.50-1.06	flank
	6	0.25	9-12	0.35-0.47	flank
3.5	13	0.5	21-75	0.83-2.95	flank
	10	0.375	15-42	0.59-1.65	flank
	6	0.25	10-18	0.39-0.71	flank
5	13	0.5	19-106	0.75-4.20	flank
	10	0.375	15-60	0.59-2.36	flank
	6	0.25	11-25	0.43-1.00	flank
10	13	0.5	19-213	0.75-8.39	flank
	10	0.375	15-120	0.59-4.72	flank
	6	0.25	12-53	0.47-2.09	flank

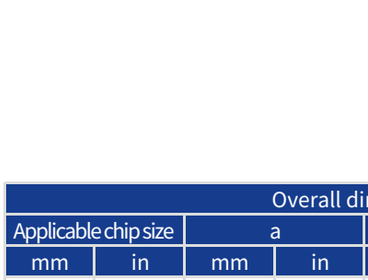
European specification

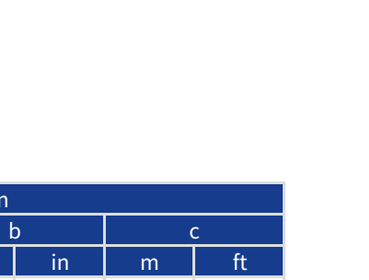
· The probe is wired from the top, using highly flexible double-mesh shielded cables with wire lengths of 1.8m and 2.5m
· The cable end interface is C9

Probe specification					
Frequency	Wafer size		Focusing range		Outlet mode
MHz	mm	in	mm	in	\
1	19	0.75	30-45	1.18-1.77	flank
	13	0.5	15-20	0.59-0.79	flank
2.25	13	0.5	20-48	0.79-1.90	flank
	10	0.375	13-27	0.50-1.06	flank
	6	0.25	9-12	0.35-0.47	flank
3.5	13	0.5	21-75	0.83-2.95	flank
	10	0.375	15-42	0.59-1.65	flank
	6	0.25	10-18	0.39-0.71	flank
5	13	0.5	19-106	0.75-4.20	flank
	10	0.375	15-60	0.59-2.36	flank
	6	0.25	11-25	0.43-1.00	flank
10	13	0.5	19-213	0.75-8.39	flank
	10	0.375	15-120	0.60-4.72	flank
	6	0.25	12-53	0.47-2.09	flank

Overall dimension							
Applicable chip size		a		b		c	
mm	in	mm	in	mm	in	m	ft
5	0.2	9.5	0.37	25	0.98	1.8	7.1
10	0.39	13	0.51	62	2.44	2.5	9.84
20	0.79	24	0.94	62	2.44	2.5	8.2







Industry special probe, custom probe, high temperature probe, UHF probe

With the continuous development of industrial manufacturing, new technologies, new materials, and new applications are emerging in an endless stream, and the ever-changing workpiece structure, application environment, and the needs of automated production lines are not lost.The testing puts forward the personalized requirements of "changing according to demand, testing according to demand", and also tests the technical strength of non-destructive testing enterprises and the ability of practical application of overall solutions Only a few of them are listed here. For more custom probes, please consult the Mantu Application Center and probe design team.

Titanium alloy tube inspection special

Special for ultrasonic microscopy

Hollow bolt detection

Surface wave probe

Connectors and cables

- Multiple cable levels are available to meet user specific application requirements.
- Standard length is 1.8 m (6 ft). When ordering cables, check the cable model naming rules.
- Impedance of all cables is 50 ohms unless otherwise stated.
- For special or custom cables, such as cables with metal sleeves, contact the Mantu Application Center and probe design team.

Specification and model

Model number	Instructions
C5-Q9-1.8m	C5 to Q9
L1x2-Q9x2-1.8m	Large LEMO 1 to Q9
C9x2-Q9x2-1.8m	C9toQ9
Mx2-Q9x2-1.8m	Microdot to Q9
L5x2-Q6x2-1.8m	Microdot to Q6
SMAx2-L5x2-1.8m	SMA to L5
UHFx2-Q9x2-1.8m	UHF to Q9
Q9x2-Q9x2-1.8m	Q9 to Q9
L0x2-Q9x2-1.8m	Small LEMO 00 to Q9
. . .	. . .

C5-C5

C5-C9

C9-Q9

C9-C9

C5-Q9

Q9-UHF

Service support

Fast and efficient response thoughtful and perfect service

Adhere to customer satisfaction as the purpose, to scientific and rigorous quality management system to ensure the good performance of equipment.

Custom probes can better reflect our strength

1. Change as needed, measure as needed

Nowadays, new technologies, new materials emerge in an endless stream, the workpiece structure, application environment and automated production line demand ever-changing, which to non-destructive testing put forward the "on-demand change, on-demand testing" personalized requirements, and non-destructive testing enterprises need to have excellent technical strength and the ability of industry solutions. Mantu excels at this and is your choice.

2.If don’t solved, no need to pay

In order to protect our principles, we will implement the "f don’t solved, no need to pay" cooperation policy for customized solutions, and better customize the overall solution for you.

3. Custom series

- TOFD probe
- Spot welding probe
- High temperature probe
- Flat water probe
- Low-frequency probe
- Line focusing water probe
- Water filled probe
- Point focus water probe

More custom probes can be customized according to the user to provide other frequencies, chip size, focal length, probe characteristics, as well as the material shape of the object under inspection and application environment.