



Insight Into The Future



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Eintik technology (Shanghai) Co., Ltd.



# Phased Array Ultrasound Probe Catalog

www.eintik.com



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# eintik

#### 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.



#### EINTIK **Product Manuals**

Types of Phased Array Probes

### **Type of phased array probes**

Type

Standard phased array products can be divided into the following categories, frequency between 1-20Mhz, the number of array elements between 10 and 256. Aintic can provide a wide variety of phased array probes to facilitate the completion of weld, pipe, casting, conforming materials and other applications. At the same time, I can not customize the special phased array probe according to customers' needs. Please refer to the manual for more details.









Linear (L)





1.5D Matrix (M)





Variable angle (VL)





Daisy Array(DA)





Circular Array(CC)



Skew (SL)

Dual linear(DL)

Dual 1.5D(DM)

Cone array (CA)

Convex (V)

Concave (C)

**Parameters** 

One line face array

Two wire array

- Chip spindle line (spindle) : The line between the center points of each array of a one-dimensional array probe
- Secondary axis of the wafer (secondary axis) : The axis perpendicular to the main axis
- Number of elements (principal axis /n) : indicates the number of elements along the principal axis
- Number of elements (sub-axis direction /m) : The number of elements along the sub-axis direction
- Spindle chip spacing (Px) : The spacing between adjacent array centers along the spindle line

- Secondary axis chip spacing (Py) : Spacing between adjacent array centers along the secondary axis (for array probes)
- Spindle Activation Aperture (Ax) : The total length of the wafer activated by the transducer along the spindle direction. Ax is equal to n minus 1 times Px plus Ex
- Secondary axis active aperture (Wpassive/Ay) : Total length of transducer activated wafer along the secondary axis Ay= (m-1).Py+Ey

# Type and namin phased array

#### **Probe&Wedge naming rules**



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#### **Custom probe**

#### Customized

The phased array probe wedges can be customized according to the requirements of customers, which can be used to meet the needs of customers to complete specific applications or special workpiece detection. To this end, when designing and manufacturing custom probes, we need to understand the following information:

 $\rightarrow$  application

Customized

- → Conventional ultrasonic probe with comparability
- $\rightarrow$  Probe center frequency
- $\rightarrow\,$  The number of arrays, the spacing between arrays, and the length of the sub-axis direction of the wafer
- $\rightarrow$  Shape of transducer array
- → Is the array elevation focused?
- $\rightarrow$  Shell type (S series, A series, others)
- → Case size restrictions, case shape requirements
- → Cable skin material (PVC,PU, etc.)
- → Cable with jacket material
- → Length of cable
- $\rightarrow$  Connector Type

For more information, please visit our website: www.eintik.com



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Product Manuals	

# Minimal case series

**Product Series** 

Extra Small Series	Small c parts.	Small contact probe: Very small shape, widely used in aviation, or some small parts.					some small
Model	M00	a range			M0		
Features	Advant • Compa detect	age Features: ict (8x8x23mm), small areas	easy to	•	Application Aerospace: hubs, etc	s: Aircraft scra	atches, wheels,
	Custon	nize the lead mo	de of the lii	ne •	Petrochem leum pipeli	ical industry	y: special petro- ank
	<ul> <li>Small underside contact, can be equipped with small wedge</li> <li>Medical: small surgical instruments,</li> </ul>						instruments,
	<ul> <li>High se signal- quantiz</li> </ul>	ensitivity consist to-noise ratio, de zation of defects	ency, good etection an	d•	Automobile	e: Axle, hub,	brake disc
				•	Power: sma pipeline, tu	all pressure rbine blade	vessel and , rotor monitoring
Model Select	Classification of case	Model and Specification	Frequency of center (Mhz)	Number of elements (n)	Spacing of elements (mm)	Aperture of activation (mm)	Secondary axis length of wafer (mm)
		5L16-0.31x5	5	16	0.31	5.0	5.0
	M00	7.5L16-0.31x5	7.5	16	0.31	5.0	5.0
		10L16-0.31x5	10	16	0.31	5.0	5.0
		2.25L10-0.6x6	2.25	10	0.60	6.0	6.0
	MO	5L10-0.6x6	5	10	0.60	6.0	6.0
		7.5L10-0.6x6	7.5	10	0.60	6.0	6.0

10

10

0.60

6.0

6.0

10L10-0.6x6

### Minimal case series

Wedge Select	Type of probe	Type of wedge	Refraction in standard steel	Scanning Angle is recommended
		NOL-5MM	0°p-wave	-30°~ 30°
		NOL-20MM	0°p-wave	-30°~ 30°
		N45L	45°p-wave	40°~ 70°
	M00	N60L	60°p-wave	40°~70°
		N45S	45°shear wave	40°~ 70°
		N60S	60°shear wave	40°~ 70°
		N60S-IHC	60°shear wave	40°~ 70°
		N60S-IHC-AOD100	60°shear wave	40°~ 70°
		NOL	0°p-wave	-30°~ 30°
		N45L	45°p-wave	40°~ 70°
		N45S	45°shear wave	40°~ 70°
	M0	N60S	60°shear wave	40°~ 70°
		N60S-IHC	60°shear wave	40°~ 70°
		N60S-AOD100	60°shear wave	40°~ 70°
		N60S-IHC-AOD100	60°shear wave	40°~ 70°

Size

M00 LxWxH : 8x8x23(mm) LxWxH : 0.31x0.31x0.91(in)



#### M0 LxWxH : 13x10x23(mm) LxWxH : 0.51x0.39x0.91(in)



EINTIK Product Manuals

Product Series

### Small shell series

Small Series	Line array weld probe: small size, suitable for space restricted area detection, and all kinds of parts.							
Model	M10							
	<ul> <li>S5 Model:</li> <li>Small size, easy to detect small areas</li> <li>Custom line leads with excellent signal-to-noise ratio</li> <li>Inspect castings, forgings, pipes, pipe fittings and various machining and structural parts</li> <li>The thick welds from 6.35mm to 38mm were tested</li> <li>S114 Model:</li> <li>For carbon steel weld detection, 3mm to 60mm thick weld manual or automatic detection</li> <li>Broad thickness measurement, unique wedge design</li> <li>Excellent signal to noise ratio</li> <li>The welding position of straight pipe and pipe fitting can be evaluated</li> </ul>							
Applications	Aerospace: Aircraft scratches, rotors, hubs, etc Petrochemical industry: special petroleum pipeline, bottle, tank Automobile: Axle, hub, brake disc Power: small pressure vessel and pipeline, turbine blade, rotor test							
Model Select	Classification Model and Frequency Number of Spacing of Aperture of Secondary axis of case Specification of center elements elements activation length of wafer (mb) (mm) (mm)							

of case	Specification	(Mhz)	(n)	(mm)	(mm)	(mm)
	2.25L8-1.2x10	2.25	8	1.20	9.6	10.0
	2.25L16-0.6x10	2.25	16	0.60	9.6	10.0
	2.25L32-0.3x10	2.25	32	0.30	9,6	10.0
	3.5L16-0.6x10	3.5	16	0.60	9.6	10.0
	4L16-0.6x10	4	16	0.60	9.6	10.0
M10	4L32-0.3x10	4	32	0.30	9.6	10.0
	5L16-0.6x10	5	16	0.60	9.6	10.0
	7.5L16-0.6x10	7.5	16	0.60	9.6	10.0
	7.5L32-0.3x10	7.5	32	0.30	9.6	10.0
	10L16-0.6x10	10	16	0.60	9.6	10.0
	10L32-0.31x7	10	32	0.31	9.9	7.0

#### **Small shell series**

Model Select	Classification of case	Model and Specification	Frequency of center (Mhz)	Number of elements (n)	Spacing of elements (mm)	Aperture of activation (mm)	Secondary axis length of wafer (mm)
		2.25L32-0.6x10	2,25	32	0.60	19.2	10.0
		5L32-0.6x10	5	32	0.60	19.2	10.0
	M31	7.5L32-0.6x10	7.5	32	0.60	19.2	10.0
		10L32-0.6x10-S14	10	32	0.60	19.2	10.0
		10L64-0.3x10-S14	10	64	0.60	19.2	10.0

Wedge

Type of probe	Type of wedge	Refraction in standard steel	Scanning Angle is recommended
	NOL	0°p-wave	-30°~ 30°
	N45L	45°p-wave	40°~ 70°
	N55L	55°p-wave	40°~ 70°
	N60L	60°p-wave	40°~ 70°
M10	N45S	45°shear wave	<b>40°∼ 70°</b>
	N55S	45°shear wave	40°~ 70°
	N70S	70°shear wave	<b>40°∼ 70°</b>
	N60S-IHC	60°shear wave	40°~ 70°
	N60S-AOD215	60°shear wave	40°~ 70°
	N60S-IHC-AOD215	60°shear wave	40°~ 70°
	NOL	0°p-wave	-30°~ 30°
	N60L	60°p-wave	40°~70°
	N55S	55°shear wave	40°~ 70°
M31	N55S-IHC	55°shear wave	40°~ 70°
	N55S-AOD112	55°shear wave	40°~70°
	N55S-IHC-AOD112	55°shear wave	40°~70°

Size

M10 LxWxH : 22.5x15.5x20 (mm) LxWxH : 0.89x0.61x0.79 (in)

M31 LxWxH : 30x16x25(mm) LxWxH : 1.18x0.63x0.98 (in)





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Product Series

# **Medium shell series**

Medium Series

Classical linear array phased array probe: the size is moderate, the traditional phased array probe, widely used.

Model



M12 Universal:

- Electronically control beam Angle, focus and scan path
- Fixed Angle with focusing probe
- Replaceable wedge and delay block
- Weld raw materials and other inspection
  Moderate physique, large monitoring range



M32 carbon steel weld series:

- 3mm-60mm thick weld inspection
- Perform manual or automatic detection
- Broad thickness measurement
- Excellent signal-to-noise ratio
- Moderate physique, large monitoring range





M3 and M5 weld deep penetration series:

- Acoustically, can match with Rexolite, can complete most Angle beam applications
- Thick flat materials and weld forgings, noisy or granular materials
- Moderate physique, large monitoring range

Applications

**Product Series** 

#### **Medium shell series**

Aerospace: Aircraft scratches, rotors, hubs, etc Petrochemical industry: special petroleum pipeline, bottle, tank Automobile: Axle, hub, brake disc Power: small pressure vessels and pipelines, turbine blades,Detection of rotor

Model Select	Classification of case	Model and Specification	Frequency of center (Mhz)	Number of elements (n)	Spacing of elements (mm)	Aperture of activation (mm)	Secondary axis length of wafer (mm)
		2.25L64-0.6x10	2.25	64	0.60	38.4	10.0
		3.5L64-0.6x10	3.5	64	0.60	38.4	10.0
	M12	5L64-0.6x10	5	64	0.60	38.4	10.0
		7.5L64-0.6x10	7.5	64	0.60	38.4	10.0
		10L64-0.6x7	10	64	0.60	38.4	7.0
		2.25L32-1.0x10	2.25	32	1.0	32.0	10.0
		2.25L64-0.5x10	2.25	64	0.50	32.0	10.0
	M32	5L32-1.0x10	5	32	1.0	32.0	10.0
		5L64-0.5x10	5	64	0.50	32.0	10.0
		7.5L32-1.0x10	7.5	32	1.0	32.0	10.0
		10L64-0.5x10	10	64	0.50	32.0	10.0
		3.5L16-1.6x16	3.5	16	1.60	25.6	16.0
	M3	5L16-1.2x16	5	16	1.20	19.2	16.0
		5L16-1.6x16	5	16	1.60	25.6	16.0
		1.5L32-0.75x24	1.5	32	0.75	24.0	24.0
		2.25L16-1.5x24	2.25	16	1.50	24.0	24.0
	ME	2.25L32-0.75x24	2.25	32	0.75	24.0	24.0
	CIVI	5L16-1.5x24	5	16	1.50	24.0	24.0
		5L16-1.2x20	5	16	1.20	19.2	20.0
		5L32-0.6x20	5	32	0.60	19.2	20.0

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**Product Series** 

### Medium shell series

Model Select	Type of probe	Type of wedge	Refraction in standard steel	Scanning Angle is recommended
		NOL	0°p-wave	-30°~ 30°
		N40L	40°p-wave	40°~ 70°
	M12	N60L	60°p-wave	40°~ 70°
		N75L	75°p-wave	<b>40°~ 80°</b>
		N55S	55°shear wave	40°~ 70°
		NOL	0°shear wave	-30°~ 30°
		N60L	60°shear wave	40°~ 70°
		N55S	55°shear wave	40°~ 70°
	M32	N55S-IHC	55°shear wave	40°~ 70°
		N55S-AOD500	55°shear wave	40°~ 70°
		N55S-IHC-AOD500	55°p-wave	40°~ 70°
		NOL	0°p-wave	-30°~ 30°
		N30L	30°shear wave	-30°~ 30°
		N45L	45°shear wave	40°~ 70°
		N60L	60°shear wave	40°~ 70°
	М3	N45S	45°shear wave	40°~ 70°
		N55S	55°shear wave	40°~ 70°
		N60S-IHC	60°shear wave	40°~ 70°
		N60S-AOD100	60°shear wave	40°~ 70°
		N60S-IHC-AOD100	60°shear wave	40°~ 70°
		NOL	0°shear wave	-30°~ 30°
		N45L	45°p-wave	40°~ 70°
		N60L	60°p-wave	40°~ 70°
		N45S	45°shear wave	40°~ 70°
	M5	N55S	55°shear wave	40°~ 70°
		N60S	60°shear wave	40°~ 70°
		N60S-IHC	60°shear wave	40°~ 70°
		N60S-AOD100	60°shear wave	40°~ 70°
		N60S-IHC-AOD100	60°shear wave	40°~ 70°

#### **Medium shell series**



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#### Large shell series

**Product Series** 

Large Series

Pipeline and thick weld probe: large volume, large measuring range, for the completion of oil, gas, electricity and other related pipeline detection.

Model









Advantages and Characteristics:

- The combination of S19 and S20 can automatically detect girth welds
- Suitable for manual or automatic inspection of pipeline welds
- The \$20 can be self-focused or side-focused to optimize the signal-to-noise ratio for specific depths
- In the application of small pipe fittings/thin wall samples, the sound beam energy is better
- Acoustically, can match with Rexolite, can complete most Angle beam
- Can detect thick flat materials and welds, forgings, loud noise or granular materials

Applications:

Petrochemical industry: special petroleum pipeline, bottle, tank

Routine: Inspection and quantification of defects in welds, boilers, fittings and process fittings

Other: conventional weld detection pipeline circumferential weld, tank, conventional weld detection

Model

Product Series

### Large shell series

t Classifica of case	tion Model and Specification	Frequency of center (Mhz)	Number of elements (n)	Spacing of elements (mm)	Aperture of activation (mm)	Secondary axis length of wafer (mm)
	2.25L60-1.0x10	2.25	60	1.0	60.0	10.0
	4L60-1.0x10	4	60	1.0	60.0	10.0
М1	5L60-1.0x10	5	60	1.0	60.0	10.0
	7.5L60-1.0x10	7.5	60	1.0	60.0	10.0
	10L120-0.5x10	10	120	0.50	60.0	10.0
	1.5EF60-1.0x18*	1.5	60	1.0	60.0	18.0
	2.25EF60-1.0x18*	2.25	60	1.0	60.0	18.0
M16	3.5EF60-1.0x18*	3.5	60	1.0	60.0	18.0
	5EF60-1.0x18*	5	60	1.0	60.0	18.0
	7.5EF60-1.0x18*	7.5	60	1.0	60.0	18.0
	2.25L60-1.0x10	2,25	60	1.0	60.0	10.0
	3.5L60-1.0x10	3.5	60	1.0	60.0	10.0
M14	5L60-1.0x10	5	60	1.0	60.0	10.0
	7.5L60-1.0x10	7.5	60	1.0	60.0	10.0
	10L60-1.0x10	10	60	1.0	60.0	10.0
	0.5L16-2.8x26	0.5	16	2.80	44.8	26.0
	1.5L16-2.8x26	1.5	16	2.80	44.8	26.0
M4	2.25L16-2x20	2.25	16	2.0	32.0	20.0
	3.5L16-2.8x26	3.5	16	2.80	38.4	26.0

Wedge Select	Type of probe	Type of wedge	Refraction in standard steel	Scanning Angle is recommended
		NOL	<b>0</b> °横波	-30°~ 30°
		N45L	<b>45</b> °纵波	40°~ 70°
		N60L	<b>60</b> °纵波	40°~ 70°
		N45S	<b>45°</b> 横波	40°~ 70°
	M4	N55S	55°横波	40°~ 70°
		N60S	<b>60</b> °横波	40°~ 70°
		N60S-IHC	<b>60</b> °横波	40°~ 70°
		N60S-AOD100	<b>60</b> °横波	40°~ 70°
		N60S-IHC-AOD100	<b>60</b> °横波	40°~ 70°

EINTIK Product Manuals

**Product Series** 

# Large shell series

Wedge Select	Type of probe	Type of wedge	Refraction in standard steel	Scanning Angle is recommended
		NOL	0°p-wave	-30°~ 30°
		N45L	40°p-wave	40°~ 70°
		N55L	55°p-wave	40°~ 70°
		N60L	60°p-wave	40°~ 70°
	M1	N45S	45°shear wave	40°~ 70°
	MI	N55S	55°shear wave	40°~ 70°
		N60S	60°shear wave	40°~ 70°
		N70S	70°shear wave	40°~ 70°
		N60S-IHC	60°shear wave	40°~ 70°
		N60S-AOD100	60°shear wave	40°~ 70°
		N60S-IHC-AOD100	60°shear wave	40°~ 70°
		NOL	0°p-wave	-30°~ 30°
	M16	N55S	55°p-wave	40°~ 70°
		N60L	60°shear wave	40°~ 70°

Size

M1 LxWxH : 70x16x30 (mm) LxWxH : 2.76x0.63x1.18 (in) M14 LxWxH : 68x21x30 (mm) LxWxH : 2.68x0.83x1.18 (in)



M16 LxWxH : 68x23x20 (mm) LxWxH : 2.68x0.91x0.79 (in)





M4 LxWxH : 57x34x40 (mm) LxWxH : 2.24x1.34x1.57 (in)



### Water flooding series

Immersion	Series

Water immersion series: can be used with the water wedge, the detection object into the water for detection.

Model MI1 MI2 MI3 Features Features of MI1, MI2 and MI3: Application: • Water matched acoustic resistance, To inspect sheet or pipe fittings (of suitable for geometrically complex steel, aluminum, or other materials). shape of the workpiece flaw detection. Defects such as delamination and • The probe is designed to be fitted to a debonding were detected by testing water wedge, allowing it to be more the composites. easily coupled to a variety of surfaces, and has a adjustable water medium It can scan large area of the detected sound path. object and measure thickness online. • A single scan of a linear scan can cover a distance of 30mm-90mm. • Extremely high accuracy.

• Normal operation up to 24 hours under

one meter of water.

EINTIK Product Manuals

**Product Series** 

# Water flooding series

l Select	Classification of case	Model and Specification	Frequency of center (Mhz)	Number of elements (n)	Spacing of elements (mm)	Aperture of activation (mm)	Secondary axis length of wafer (mm)
		5L64-0.6x10	5	64	0.6	38.4	10.0
	M11	7.5L128-0.6x10	7.5	128	0.6	38.4	10.0
	MIT	10L64-0.6x7	10	64	0.6	32.0	7.0
		15L64-0.5x7	15	64	0.5	32,0	7.0
		2.25L64-1.0x10	2.25	64	1.0	64.0	10.0
		3.5L128-0.6x10	3.5	128	0.6	76.8	10.0
	MI2	5L128-0.6x10	5	128	0.6	76.8	10.0
		7.5L128-0.6x10	7.5	128	0.6	76.8	10.0
		10L128-0.5x7	10	128	0.5	64.0	7.0
		1L64-1.5x12	1	64	1.5	96.0	12.0
MI3		2.25L128-0.75x12	2.25	128	0.75	96.0	12.0
	MI3	3.5L128-0.75x10	3.5	128	0.75	96.0	10.0
		5L128-0.75x10	5	128	0.75	96.0	10.0
	7.5L128-0.75x10	7.5	128	0.75	96.0	10.0	

Size

MI1 LxWxH : 50x19x30 (mm) LxWxH : 1.97x0.75x1.18 (in)

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MI2 LxWxH : 83x21x35 (mm) LxWxH : 3.27x0.83x1.38 (in)



MI3 LxWxH : 102x21x35(mm) LxWxH : 4.01x0.83x1.38(in)



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#### Narrow shell series

Narrow Side Series	Near-wall narrow casing probe: With a smaller width, convenient for enhance near-surface resolution.
Model	MNW1

Features MNW probe features:

Application:

- The near wall probes have short blind spots at both ends
- Widely used in composite material channel detection
- Can be used for C-scan testing of composite materials (delamination, debonding and porosity)
   Automatic and manual scanning

General: small diameter pipe weld,

boiler, pipe and process pipe Petroleum and natural gas: narrower pipes, cylinders and tanks Automobile: axle, wheel hub, brake disc and other auto parts Power: wall pipe, plate weld, boiler pipe fittings

Model Select	Classification of case	Model and Specification	Frequency of center (Mhz)	Number of elements (n)	Spacing of elements (mm)	Aperture of activation (mm)	Secondary axis length of wafer (mm)
	MNW1	1L32-2.0x7	1	32	2.0	64.0	7.0
		2.25L64-1.0x7	2.25	64	1.0	64.0	7.0
		3.5L64-1.0x7	3.5	64	1.0	64.0	7.0
		5L64-1.0x7	5	64	1.0	64.0	7.0
		7.5L64-1.0x7	7.5	64	1.0	64.0	7.0
		10L64-1.0x7	10	64	1.0	64.0	7.0

Size





EINTIK Product Manuals

**Product Series** 

#### Small shell chip self-focusing series

Low Profile Series

Self-focusing probe: It acts on the space restricted area, improves the detection accuracy, and reduces the near surface blind area. It plays a very important role in the detection of thin-walled tube.

Model

Features



Features:

Acoustically, can match with Rexolite

- It can detect standard pipe fittings with outer diameter between 21mm and 115mm, and the special space is limited
- Minimal profile design, wafer self-focusing improves the ability to detect fine defects on thin-walled pipe fittings
- Most beam Angle detection applications can be accomplished with wedges.

General: small diameter pipe weld, boiler, pipe and process pipe Thin wall applications: small diameter pipe welds, boiler pipe fittings, low space and process pipe fittings Automobile: axle, wheel hub, brake disc and other auto parts It is equipped with a scanner to complete the inspection of most complex parts.

Application:

Model Select	Classification of case	Model and Specification	Frequency of center (Mhz)	Number of elements (n)	Spacing of elements (mm)	Aperture of activation (mm)	Secondary axis length of wafer (mm)
		2.25EF16-0.5x10*	2.25	16	0.5	8.0	10.0
		3.5EF16-0.5x10*	3.5	16	0.5	8.0	10.0
	M15	5EF16-0.5x10*	5	16	0,5	8.0	10.0
		7.5EF16-0.5x10*	7.5	16	0.5	8.0	10.0
		10EF16-0.5x7*	10	16	0.5	8.0	7.0
	10EF32-0.25x7*	10	16	0.25	8.0	7.0	

Size

M15 LxWxH : 25x22x10(mm) LxWxH : 0.98x0.87x0.39(in)



### **Concave array series**

Concave Series	Concave array probe: the detection is more st match the detection parts, widely used in CFR	able, concave array design better P corner detection
Model	MR1	MR4
	MR5	
Features	Features:	Application:
	<ul> <li>Acoustic impedance matching water ensures normal operation at a depth of 1 m underwater</li> </ul>	Automobile: The composite material inside the automobile
	<ul> <li>Compatible with adjustable water wedge</li> </ul>	Aerospace: Composites, Carbon fiber Reinforced polymers (CFRP)
	• High resolution, more detailed detection, often used for carbon fiber reinforced polymer (CFRP) edge and corner detection	
	• The exterior is made of stainless steel, durable and durable.	

EINTIK Product Manuals

Product Series

### **Concave array series**

Model Select	Classification of case	Model and Specification	Frequency of center (Mhz)	Number of elements (n)	Spacing of elements (mm)	Aperture of activation (mm)	Secondary axis length of wafer (mm)
		2.25C16-1.0x8	2.25	16	1.0	16.0	8.0
	MR1	3.5C16-1.0x8	3,5	16	1.0	16.0	8.0
		5C16-1.0x8	5	16	1.0	16.0	8.0
MR4		2.25C32-1.35x8	2.25	32	1.35	43.2	8.0
	MR4	3.5C32-1.35x8	3.5	32	1.35	43.2	8.0
		5C32-1.35x8	5	32	1.35	43.2	8.0
		10C32-1.35x8	10	32	1.35	43.2	8.0
		3.5C64-1.65x8	3.5	64	1.65	105.6	8.0
	MDE	5C64-1.65x8	5	64	1.65	105.6	8.0
	MR5	5C128-0.8x8	5	128	0.8	102.4	8.0
		10C64-1.65x8	10	64	1.65	105.6	8.0

Size

MR1 LxWxH : 23.5x14x23.5(mm) LxWxH : 0.93x0.55x0.93(in)



MR5 LxWxH : 131x14x55(mm) LxWxH : 5.16x0.55x2.17(in)



MR4 LxWxH : 43x14x43(mm)

LxWxH : 1.69x0.55x1.69(in)



#### 2D array series

 2D Matrix Series
 2D array probe: three dimensional spatial focus can be realized, but also can be used for water detection

 Model
 \$10





Features

Application:

- Suitable for high attenuation materials such as soft weathering
- Widely used for adhesive testing
- Can be used for 3D imaging

Features:

• Light and flexible, easy to carry, easy to measure

cation:

Railway: train track, wheel track, bridge, etc

Power: welds, forgings, castings, pipe fittings, Bridges and steel structures

Oil and gas: pipeline circumferential weld, tank, conventional weld inspection

Automobile: axle, wheel hub, brake disc and other auto parts

General: weld inspection, bottle weld inspection, pipeline turbine blade inspection and rotor inspection

EINTIK Product Manuals

**Product Series** 

#### 2D array series

Model Select	Classification of case	Model and Specification	Frequency of center (Mhz)	Number of elements (n)	Spacing of elements (mm)	Aperture of activation (mm)
	\$10	5M8x8-1.5x1.5	5	64	1.5/1.5	12/12
		7.5M8x8-1.5x1.5	7.5	64	1.5/1.5	12/12
		10M8x8-1.2x1.2	10	64	1.2/1.2	9.6/9.6
		15M8x8-1.2x1.2	15	64	1.2/1.2	Aperture of activation (mm) 12/12 9.6/9.6 9.6/9.6 9.6/9.6 8.0/8.0 6.4/6.4 4.8/4.8 4.8/4.8
		5M8x8-1.0x1.0 5 64 1	1.0/1.0	8.0/8.0		
	611	7.5M8x8-0.8x0.8	7.5	64	0.8/0.8	6.4/6.4
	511	10M8x8-0.6x0.6 10 64	0.6/0.6	4.8/4.8		
		15M8x8-0.6x0.6	15	64	0.6/0.6	4.8/4.8

Size

\$10 LxWxH : 31x18x34(mm) LxWxH : 1.22x0.71x1.34(in) \$11 LxWxH : 29x16x38(mm) LxWxH : 1.14x0.63x1.50(in)





#### **Double 1.5D array series**

Dual 1.5D Matrix Series

Model



M17/M27 Features:

Features

Dual 1.5D array probe: brings together the advantages of the one-point-one-collect

detection strategy to complete most austenite detection applications

- Double matrix design, one to one longitudinal wave detection, excellent signal-to-noise ratio
- Widely used in austenitic stainless steel, coarse crystal, corrosion resistant alloy and heterogeneous weld welding and complex assembly workpiece.
- Two 1.5D array probes are used together for detection, with a wider detection range and increased detection accuracy. For small defects, the water immersion method can be used as the water probe.

#### **Model Select**

Classification of case	Model and Specification	of center (Mhz)	elements (n)	elements (mm)	activation (mm)	length of wafer (mm)
M17/M27	2.25DM7x4-2.8x3	2.25	56	2.8/3.0	19.6	12.0
	4DM16x2-1.0x3	4	64	1.0/3.0	16.0	6.0
	5DM16x2-1.0x3	5	64	1.0/3.0	16.0	6.0

Size

\$31 LxWxH : 34x16x25(mm) LxWxH : 1.34x0.63x0.98(in)



Purpose:

rotor inspection

nhar of Spacing of Aparture of Seco

bridge and structural steels

Railway: train track, wheel track, bridge, etc

General: weld inspection, bottle weld inspec-

tion, pipeline turbine blade inspection and

Power: Welds, forgings, castings, pipe fittings,

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#### **Scanner series**

**Product Series** 



- Simple structure, flexible and convenient, can be 90° according to the need of the probe clamping direction, compatible with "left and right scan" and "front and back scan"
- Can assemble encoder scan, quickly disassemble, easy to install

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EINTIK Product Manuals Wegde

# Wedge

Model

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Parameter



Wedges with a refraction Angle of 55° in standard steel are available

Wedges are available in different IHC options with water injection ports, with sweep holder holding holes, and with wear resistant material anti-wear screws

Wedges can be used for manual or automatic scanning (IHC)

The center height of the first matrix

Users can order wedges for specific purposes, such as Angle, shape, wedge material (high temperature resistant material is available), etc



Omniscan / Tomoview

Ζ



Accessory

#### Connector、 cable and wire protector







D3(Match the Omniscan instrument)







D6(Hypertronics 160PIN) D7(matching Topaz/zircon instrument)

Electric	cable
line	

Туре	50 euro micro coaxial cable with shielding layer				
Number of elements	16	32	64	128	192
Outer diameter of cable	4.6mm	5.0mm	6.3mm	7.6mm	8.0mm
Cable color	Black				
Cable outer cover material	PVC/PU(Low smoke, no halogen)				

Long service life

• Low signal attenuation

D8(CONNON 96PIN)

- Good flexibility
- Good bending resistance
- Can be customized temperature resistant, nuclear radiation resistant cable

Protective cover for cable		Nylon woven net	Plastic corrugated pipe	Metal woven net	Corrugated metal pipe
					R
	Anti-wear and anti-cutting properties	•	••	•	•••
	Pressure proof performance		•		•
	water proof		•		
	Electromagnetic screen performance		•	•	•

EINTIK Product Manuals

Package

### Package

Package

Eintik provides a safety protection case for each product, with external fall and impact resistance and built-in pre-cut mesh cotton to protect the product safety during transportation



Test Report

#### **Test Report**

Eintik provides a test report for every probe manufactured, and all of our phased array probes are tested hundreds of times to ensure that they meet customer requirements. Eindec continues to provide users with a comprehensive database of information, including the characteristics of each probe sold. If you have special testing requirements, please contact us.

Each probe produced by Eintec provides a test report with the following information:





After-sale service

#### **After-sale Service**

Warranty

Under normal use, the company provides a one-year warranty on all phased arrays sold. The warranty does not cover defects and damage due to normal wear and tear, nor does it cover damage due to external accidents such as:

1. The user did not assemble the probe correctly

- 2. The maintenance method is incorrect
- 3. Use inappropriate couplings

4. If the pressure is too high or the immersion depth exceeds 1.0 m, the recommended immersion depth and time are as follows:

Conventional phased array probes can operate for 1 hour at 0.5 m underwater (standard design)

Water immersion phased array probe can operate continuously for 24 hours at 1.0 m underwater (standard design)

5. The storage temperature exceeds -20 ° C to 60 ° C

6. The operating temperature exceeds the range of 10°C-40°C

7. Wear and tear of the product during normal use

8. Too high voltage (for the frequency of 7.5MHz and below the probe, beyond the maximum voltage of 200V; For probes with frequency 19MHz and above, the maximum voltage of 150V is exceeded)

9. The instrument excitation signal repetition frequency exceeds 10kHz

# Support

# Fast and efficient response, thoughtful and perfect service

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

#### Attentive customer service

We cherish every customer, listen to every customer's voice, and try our best to meet every customer's needs

If you have any questions, call the service hotline, you can get intimate, quick one-stop service

The remote diagnostic maintenance system monitors machine problems in real time and arranges maintenance plans in advance

Telephone at any time to pay attention to the service effect, listen to the voice of customers, and constantly improve satisfaction

#### Perfect service system

After-sales service management system, real-time technical and data support

Remote diagnostic maintenance system enables preventive maintenance

Shanghai headquarters as a strong backing, to provide strong support for after-sales service

#### Professional service team

Nearly 100 people service team, distributed in 18 cities across the country

Every engineer receives regular technical training

Perfect knowledge system, strict operation evaluation, ensure the professional skills and quality of engineers

#### Scientific management methods

The first company passing ISO9001:2015 in the industrial

Apply for 5 invention patents in 2018

Apply for 10 invention patents in 2019

Service process standardization, service quality can be evaluated