

## 02

## INDUSTRIAL ARRAY PROBE

- Linear Array Probe Series
- Near-Wall Probe Series
- Immersion Probe Series
- Laterally Focused Array Probe Series
- Immersion Probe Series (Self-Focusing Linear Array)
- Matrix Probe Series
- Integrated Wedge Probe Series
- Water Bag Probe Series
- Soft Protective Film Probe Series
- Wheeled Probe Series
- Flexible Probe Series
- High Temperature Probe Series
- R-Angle Probe Series
- Concave Array Probe Series
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- Dual-Linear Array/Dual-Matrix Probe Series
- Other Special Probes
- Options
- Wedge
- Industrial Array Probe Connector
- Connector Conversion Box



Since its establishment in 2008, Doppler has designed and developed a wide range of ultrasonic industrial array probes with excellent performance and stable quality, and drafted JB/T 11731-2013 «General Technical Requirements for Ultrasonic Phased Array Probes for Nondestructive Testing» NB/T 47013.15-2021 «Nondestructive Testing of Pressure Equipment Part 15: Phased Array Ultrasonic Testing» and other related standards for phased array probes.

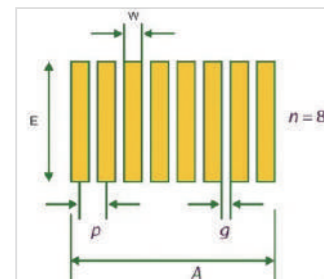
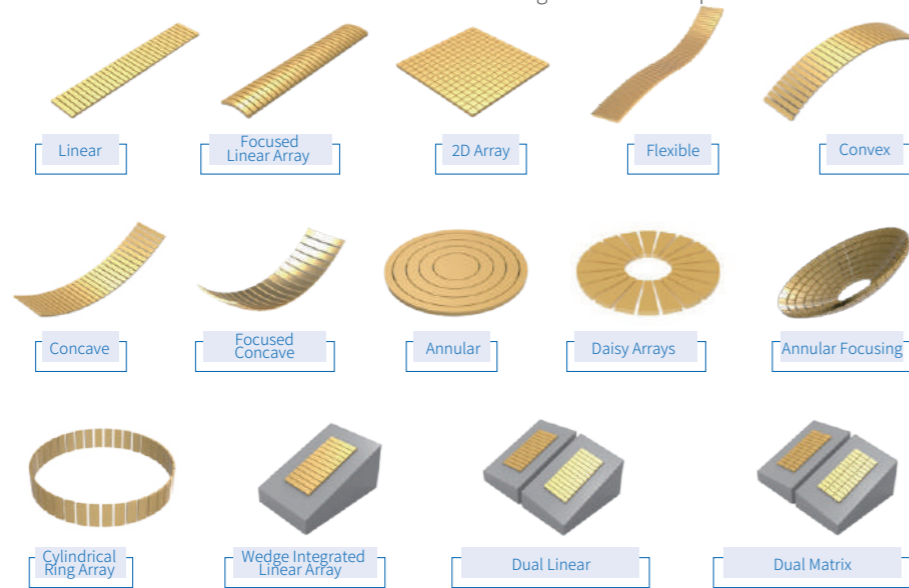
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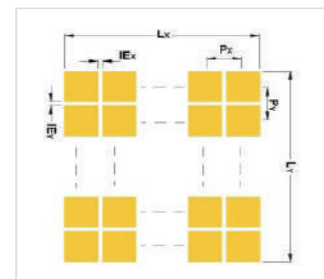
## Ordering Instructions

The probe frequency of Doppler conventional ultrasonic industrial array is 0.5MHz-20MHz, the number of array elements is 8-1024, and the center distance between adjacent array elements is 0.2 mm-2.0 mm. Array categories include linear array, matrix, Self-focus, ring array, concave array, convex array, integrated wedge array, etc. Other types of probes can be customized according to customer requirements, and wedges, connector conversion boxes and extension lines can also be customized according to customer requirements.



### 1D Probe parameters

- A: Active aperture
- E: Elevation
- p: Elementary pitch
- n: Number of elements in the PA probe
- g: Internal element spacing
- w: Element width
- Active aperture:  $A = n \times p$
- Precise active aperture:  $A = (n - 1) \times p + w$



### 2D Probe parameters

- Px: Primary Pitch
- Py: Secondary Pitch
- IEx: Primary Element spacing
- IEy: Secondary Element spacing
- Lx: Primary Aperture
- Ly: Secondary Aperture



## Custom Probe Description

We have a professional R&D technical team and a world-class ultrasonic transducer production line. We can customize transducers according to customer requirements. To develop self-defined transducers for customers, we need to know:

- Application scenarios, how to use existing probes;
- Probe's frequency, number of array elements, array element spacing, array element length, array configuration, probe type;
- Requirements such as size restrictions;
- Cable length and environmental requirements;
- Connector type and wire sequence requirements.



## Probe Model Illustration

Frequency	1= 1 MHz 2.5= 2.5 MHz 5= 5 MHz 7.5= 7.5 MHz 10= 10 MHz 20= 20MHz		
Array Type	L(Linear) C(Concave) M(Matrix) S(Special)		
No.Elements	64= 64 Elements		
Pitch	0.6= 0.6mm		
Elevation	10= 10mm		
Probe Type	DP3= DP3 Series		
Cable Jacket Type	U= PU ( Low smoke halogen-free )		
Cable Capacitance	110= 110pf/m 50= 50pf/m		
Cable Length	2.5=2.5m		
Connector Type	T1: QLC-260P	P1: I-PEX 30056	H1: Hypetronics
	D1: DL-156P	D2: DL-260P	D3: DL-96P
	M1: MOLEX 78P	J1: D38999/26FF35SN	C1: CONEC 78PIN

**5 L 64 - 0.6 x 10 - DP3 - U - 110 - 2.5 - T1**  
Frequency Array type No.Elements Pitch Elevation Probe Type Cable Jacket Type Cable capacitance Cable length Connector Type



## Wedge Model Illustration

Wedge Type	Casing type matched to the wedge XX
Mounting Method	Angle between primary axis of probe and wedge N= Normal L= Lateral
Refraction Angle	0 = 0° 45 = 45° 55 = 55° 60 = 60°
Wave Type	S= Share Wave L= Longitudinal Wave
Auxiliary Use	I= Irrigation H= Scanner yoke attachment points C= Adjustable carbide wear pins P=Wear-resistant screw with hard plastic S=Stainless steel frame A=Limit groove.
Curvature Type	AOD= Axial outside diameter (circumferential scan) AID= Axial inner diameter (circumferential scan) COD= Circumferential outside diameter (axial scan) CID= Circumferential inner diameter (axial scan) SOD= Sphere outside diameter SID= Sphere inner diameter
Tube Diameter	203.2= 203.2mm
(HT)	High temperature wedge

**SDP3 - N 55 S - IHC - AOD 203.2 (HT)**  
Wedge type Mounting Method Refraction Angle Wave Type Auxiliary Use Curvature Type Tube Diameter High Temperature

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## Linear Array Series



### Features

- Acoustically matched with Rexolite
- Linear array is the most widely used probe type in array probe at present. It can realize shear wave or longitudinal wave detection with wedge, and is widely used in the detection of base metal and weld seam of pipe fittings, forgings and flat plates.
- It can be used in aerospace, oil pipeline, automobile axle and other application scenarios, and special probes can be customized according to actual needs for special application scenarios.



### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch(mm)	Active Aperture (mm)	Elevation (mm)	Long (mm)	Width (mm)	Height (mm)	Case Type
10L16-0.2×5	10	16	0.2	3.2	5	6	8	23	DP40
10L16-0.31×5	10	16	0.31	4.96	5	8	8	21	DP30
5L16-0.6×10	5	16	0.6						
7.5L16-0.6×10	7.5	16	0.6						
7.5L32-0.3×10	5	32	0.3	9.6	10	13.4	28.5	20	DP1
10L32-0.3×10	10	32	0.3						
5L32-0.6×10	5								
7.5L32-0.6×10	7.5	32	0.6	19.2	10	23	28.5	23	DP2
10L32-0.6×10	10								
2.25L32-0.75×24	2.25	32	0.75	24	24	29.5	42.5	25	DP4
5L32-0.8×10	5	32	0.8	25.6	10	29.5	28.5	23	DP31
2.25L32-1.0×10	2.25	32	1	32	10	36	28.5	23	DP28
5L32-1.0×10	5	32	1	32	10	36	28.5	23	DP28
5L64-0.5×10	5	64	0.5						
5L64-0.6×10	5	64	0.6	38.4	10	42.5	28.5	23	DP3
7.5L64-0.6×10	7.5	64	0.6						
2.25L64-1.0×10	2.25								
5L64-1.0×10	5	64	1.0	64	10	70	28.5	23	DP5
7.5L64-1.0×10	7.5								
5L128-1.0×10	5	128	1.0	128	10	135	29.5	30	DP6

## Near-wall Probe Series

(The distance from the edge of the first element and the edge of the last element to the outside of the housing is 1 mm)



### Features

- Acoustically matched with Rexolite
- There are smaller blind spots at both ends.
- C-scan imaging combined with encoder is very suitable for detecting delamination, debonding and porosity of composites.



### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch(mm)	Active Aperture (mm)	Elevation (mm)	Long (mm)	Width (mm)	Height (mm)	Case Type
7.5L32-0.5×7	7.5	32	0.5	16	7	18	18	20	DP44
5L32-1.0×7	5	32	1.0	32	7	34	19	25	DP55
5L64-1.0×7	5	64	1.0	64	7	66	19	20	DP22
5L128-1.0×7	5	128	1.0	128	7	130	21	35	DP33

## Water Immersion Probe Series (Linear array)



### Features

- Acoustic impedance matching water
- The shell material is corrosion-resistant stainless steel.
- It has waterproof performance within 1m underwater.
- Combined with automation system, online detection can be carried out.



### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch(mm)	Active Aperture (mm)	Elevation (mm)	Long (mm)	Width (mm)	Height (mm)	Case Type
20L64-0.4×5	20	64	0.4	25.6	5	32	11	20	DP19
5L64-1.0×7	5	64	1.0	64	7	75	19	30	DP18
7.5L64-1.0×7	7.5	64	1.0	64	7	75	19	30	DP18
0.5L64-1.5×22	0.5	64	1.5	96	22	116	58	40	DP21
1L64-1.5×22	1	64	1.5	96	22	116	58	40	DP21
5L128-0.8×10	5	128	0.8	102.4	10	114	22	30	DP20
7.5L128-0.8×10	7.5	128	0.8	102.4	10	114	22	30	DP20

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## Laterally Focused Array Probe Series



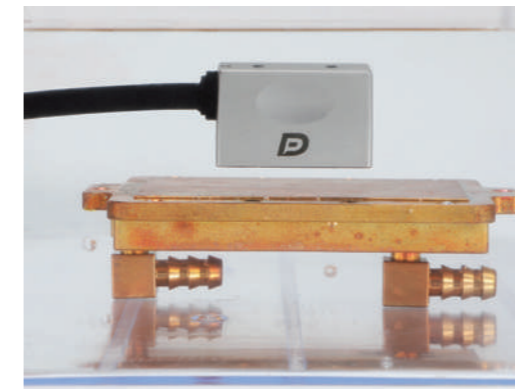
### Features

- ✓ Acoustically matched with Rexolite
- ✓ The array element is bent in the length direction, and the sound beam is focused on the secondary axis, so that the sound field focus is greatly reduced and the energy is more concentrated, thus providing higher fine defect detection ability.
- ✓ DP8 series or DP38 series probes with Doppler Cobra scanning device and wedge can be used for automatic or semi-automatic inspection of pipelines with an external diameter of 20 mm ~ 115 mm.

### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch(mm)	Active Aperture (mm)	Elevation (mm)	Physical focusing radius(mm)	Long (mm)	Width (mm)	Height (mm)	Case Type
5S16-0.5×10	5	16	0.5							
7.5S16-0.5×10	7.5			8	10	R35	24.64	22	10	DP8
7.5S32-0.25×10	7.5	32	0.25							
10S32-0.25×10	10			8	8	R20	24.76	22	11	DP38
10S32-0.25×8	10	32	0.25							
2S16-0.5×10	2	16	0.5	8	10	R80	25	22	14	DP9
2.5S16-0.5×10	2.5			8	10	R80	23	28.5	23	DP29
5S32-0.6×10	5	32	0.6	19.2	10	R80	23	28.5	23	DP29
7.5S32-0.6×10	7.5			38.4	10	R35	42.5	28.5	24.5	DP7
5S64-0.6×10	5	64	0.6							
7.5S64-0.6×10	7.5									
10S64-0.6×10	10									

## Water Immersion Probe Series (Self-focusing linear array)



### Features

- ✓ Acoustic impedance matching water
- ✓ The array element is bent in the length direction, and the sound beam is focused on the secondary axis, so that the sound field focus is greatly reduced and the energy is more concentrated, thus providing higher fine defect detection ability.
- ✓ The shell material is corrosion-resistant stainless steel.
- ✓ It has waterproof performance within 1m underwater.
- ✓ Combined with automation system, online detection can be carried out.

### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch(mm)	Active Aperture (mm)	Elevation (mm)	Physical focusing radius(mm)	Long (mm)	Width (mm)	Height (mm)	Case Type
18S64-0.2×5	18	64	0.2	12.8	5	R35	22	12	26.48	DP48
20S128-0.2×5	20	128	0.2	25.6	5	R35	35	14	26.66	DP49
15S64-0.6×10	15	64	0.6	38.4	10	R35	43	16	26.87	DP50
15S128-0.6×10	15	128	0.6	76.8	10	R35	83	17	26.99	DP51

## Matrix Probe Series



### Features

- ✓ Acoustically matched with Rexolite
- ✓ Can be used for three-dimensional imaging.
- ✓ Both the primary and secondary acoustic beams can be deflected, with smaller spatial focus, more concentrated energy and better signal-to-noise ratio.

### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch Px(mm)	Pitch Py(mm)	Active Aperture Lx(mm)	Active Aperture Ly(mm)	Long (mm)	Width (mm)	Height (mm)	Case Type
5M8×8-1.0×1.0	5									
7.5M8×8-1.0×1.0	7.5	64 (Primary8 /Secondary 8)	1.0	1.0	8	8	21	13	28	DP15
10M8×8-1.0×1.0	10									
5M16×8-1.5×1.5	5	128 (Primary16 /Secondary 8)	1.5	1.5	24	12	30	28	35	DP35
10M16×8-1.5×1.5	10									

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## Integrated Wedge Probe Series



### Features

- ✓ The wafer and wedge are permanently fixed, and there is no need to add coupling agent between them during testing.
- ✓ The wedge is built in, and the overall size of the probe is smaller, which is convenient for detection in a narrow space.
- ✓ Direct contact scanning with angle is possible.
- ✓ The probe with built-in wedge can be customized according to actual requirements (including making copying coupling surface to adapt to specific curved workpiece).



### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch(mm)	Active Aperture (mm)	Elevation (mm)	Refract angle	Long (mm)	Width (mm)	Height (mm)	Case Type
5L12-0.5×6	5	12	0.5	6	6	55° SW (Steel)	24.87	13	10.35	DP16
5L12-0.5×6	5	12	0.5	6	6	45° SW (Aluminum)	25	9	10.42	DP36
5L12-0.5×6	5	12	0.5	6	6	45° LW (Aluminum)	28	9	12	DP46
4L16-0.5×9	4	16	0.5	8	9	58° SW (Steel)	27	16.56	22	DP45

## Water Bag Probe Series



### Features

- ✓ With the use of water bag wedge, the special structure design reduces the influence of clutter compared with the conventional wedge.
- ✓ The bottom of the water bag wedge is a replaceable flexible coupling surface, which can be used to detect irregular curved workpieces without surface damage during the detection process.
- ✓ Combined with Doppler scanner and water bag wedge, it can be used to detect the electrofusion butt joint of PE pipe.



### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch(mm)	Active Aperture (mm)	Elevation (mm)	Long (mm)	Width (mm)	Height (mm)	Case Type
4L64-0.8×10	4	64	0.8	51.2	10	66	35	25	C45
2.5L64-1.0×7	2.5	64	1.0	64	7	79	35	35	Z63
5L128-0.6×10	5	128	0.6	76.8	10	94	36	25	WD94
4L128-0.8×10	4	128	0.8	102.4	10	120	36	25	WD83

## Soft Protective Film Probe Series



### Features

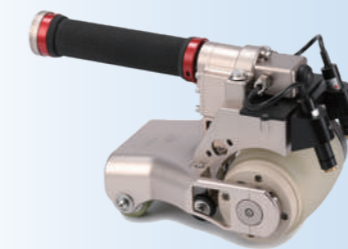
- ✓ The front end is a replaceable soft protective film and a fixed sleeve, which not only prolongs the service life of the probe, but also provides reliable coupling to rough surfaces.
- ✓ Ergonomic shell design is adopted, with 0° longitudinal wave incidence, which supports the detection of thick workpieces (such as castings, forgings, solid shafts, etc.) and can cover+30° to-30° S-scan.



### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch(mm)	Active Aperture (mm)	Elevation (mm)	Diameter (mm)	Height (mm)	Case Type
2L16-1.0×16	2	16	1.0	16	16	Φ46	59	DP25
4L16-1.0×16	4	16	1.0	16	16	Φ46	59	DP25
2.25L32-0.5×16	2.25	32	0.5	16	16	Φ46	59	DP25

## Wheel Probe Series



### Features

- ✓ With its own water storage coupling system and encoder, the coupling effect is good and efficient C-scan imaging can be carried out.
- ✓ Using tire materials with extremely low attenuation
- ✓ Optional with angle adjustment block, the angle of incidence of the probe can be adjusted from 0° to 20°.
- ✓ With automatic scanning device, it can be suitable for large-area plane or micro-surface detection.



### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch(mm)	Active Aperture (mm)	Elevation (mm)	Long (mm)	Width (mm)	Height (mm)	Case Type
5L64-0.8×6.4	5	64	0.8	51.2	6.4	128	25	25	E96
7.5L64-0.8×6.4	7.5	64	0.8	51.2	6.4	128	25	25	E96
10L64-0.8×6.4	10	64	0.8	51.2	6.4	128	25	25	E96
0.5L64-1.5×22	0.5	64	1.5	96	22	166	40	40	G79
1L64-1.5×22	1	64	1.5	96	22	166	40	40	G79
1L128-1.0×22	1	128	1.0	128	22	195	42	42	K44
2.25L128-1.0×22	2.25	128	1.0	128	22	195	42	42	K44

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## Flexible Probe Series



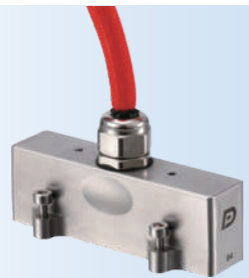
### Features

- ✓ The principal axis direction can bend with the shape of the workpiece surface, and the curvature is variable, with a minimum bending radius of 30 mm.
- ✓ The minimum thickness of the flexible part is 3mm, which can be detected in a narrow space.
- ✓ Combined with Doppler scanning device, it can detect corrosion or thickness of pipes and bars with different sizes.

### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch(mm)	Active Aperture (mm)	Elevation (mm)	Long (mm)	Width (mm)	Height (mm)	Case Type
5S64-0.5×10	5	64	0.5	32	10	80	19	4	DP26
7.5S64-0.5×10	7.5	64	0.5	32	10	80	19	4	DP26
5S64-1.0×10	5	64	1.0	64	10	150	29	4	DP27
7.5S64-1.0×10	7.5	64	1.0	64	10	150	29	4	DP27

## High Temperature Probe Series



### Features

- ✓ The probe is temperature-resistant, matched with Doppler high-temperature wedge, and can continuously detect on the workpiece with surface temperature of 150°C without cooling.
- ✓ Matching can be used as 0 degree longitudinal wave or high temperature wedge with angle.

### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch(mm)	Active Aperture (mm)	Elevation (mm)	Long (mm)	Width (mm)	Height (mm)	Case Type
2.25L32-1.0×10	2.25	32	1.0	32	10	36	28.5	23	DP28
5L32-1.0×10	5	32	1.0	32	10	36	28.5	23	DP28
5L64-1.0×10	5	64	1.0	64	10	70	28.5	23	DP5

## R-angle Probe Series



### Features

- ✓ Acoustically matched with Rexolite
- ✓ It can be used to detect the fillet of composite materials, and a single scan can cover the whole fillet area.
- ✓ The acoustic beams of all elements are incident on the rounded surface at an angle of 90°, and the incident mode is similar to that of plane detection.
- ✓ With different wedges, it can be detected from both the inside and the outside of the fillet.

### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch(mm)	Active Aperture (mm)	Elevation (mm)	Radius (mm)	Long (mm)	Width (mm)	Height (mm)	Case Type
7.5C32-0.5×10	7.5	32	0.5	16	10	11	28	30	25	DP23
5C32-1.47×10	5	32	1.47	16	10	11	28	30	25	DP23
5C64-0.735×10	5	64	0.735	47.04	10	30	70.18	30	35.52	DP39
10C64-0.735×10	10	64	0.735	47.04	10	30	70.18	30	35.52	DP39

## Concave Array Probe Series



### Features

- ✓ Acoustic impedance matching water
- ✓ The shell material is corrosion-resistant stainless steel.
- ✓ It has waterproof performance within 1m underwater.
- ✓ Combined with automation system, online detection can be carried out.
- ✓ With Doppler scanning device, corrosion and thickness measurement of pipes and bars with different sizes can be automatically or semi-automatically detected.

### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch(mm)	Active Aperture (mm)	Elevation (mm)	Radius (mm)	Long (mm)	Width (mm)	Height (mm)	Case Type
10C128-0.6×9	10	128	0.6	76.8	9	40	94	20	60	DP43
5C128-0.95×12	5	128	0.95	121.6	12	50	120	23	70	DP24

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## ▼ Bolt Probe Series



### Features

- ✓ In-service inspection can be carried out on the bolts in working state without disassembly, which greatly shortens the maintenance time.
- ✓ High detection accuracy and efficiency, and the whole defect detection of bolts can be completed by single coupling.
- ✓ It is suitable for detecting bolt defects in different fields such as bridges, high-speed rail and wind power.
- ✓ Suitable for M20~M100 bolt inspection.

### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch(mm)	Inner Diameter(mm)	Outer Diameter(mm)	Bolt Diameter(mm)	Diameter (mm)	Height (mm)	Case Type
5S64(Φ15-Φ8)	5	64	0.56	8	15	M20	22	25	DP37
5S64(Φ29-Φ18)	5	64	1.15	18	29	M36	35	25	DP17
5S64(Φ42-Φ30)	5	64	1.77	30	42	M48	47	25	DP47

## ▼ Spot Welding Probe Series



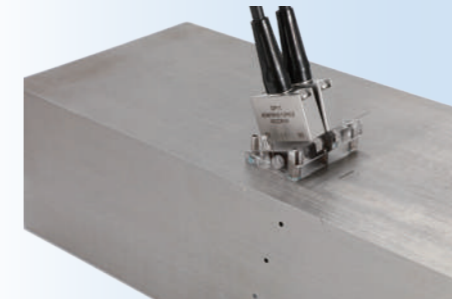
### Features

- ✓ Acoustically matched with Rexolite
- ✓ The probe is in spontaneous and self-collecting mode, which can obtain the surface and internal information of the workpiece and understand the welding situation covering the solder joint area.
- ✓ The front end is a replaceable delay block and a fixed sleeve, which can not only prolong the service life of the probe, but also eliminate the near-field blind zone of ultrasonic wave.
- ✓ Suitable for resistance spot welding and other welding spot detection.

### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch Px(mm)	Pitch Py(mm)	Active Aperture Lx(mm)	Active Aperture Ly(mm)	Long (mm)	Width (mm)	Height (mm)	Case Type
15M8×8-1.0×1.0	15	64(Primary8/Secondary8)	1.0	1.0	8	8	24	20	30	DP41
15M8×8-1.5×1.5	15	64(Primary8/Secondary8)	1.5	1.5	12	12	26.5	25	30	DP42

## ▼ Dual-Linear Array/Dual Matrix Probe Series



### Features

- ✓ Acoustically matched with Rexolite
- ✓ The probe is in the mode of sending and receiving, and has a very small surface blind area, which greatly optimizes the surface resolution of the workpiece to be measured.
- ✓ Compared with conventional dual-crystal UT probe, this series of probes has larger coverage, better imaging effect and better signal-to-noise ratio.
- ✓ Suitable for welding seam detection of austenitic materials and dissimilar materials.

### Specifications and Dimensions

Model	Frequency (MHz)	Elements	Pitch Px(mm)	Pitch Py(mm)	Active Aperture Lx(mm)	Active Aperture Ly(mm)	Long (mm)	Width (mm)	Height (mm)	Case Type
5DL16-0.75×5	5	32 (Dual linear array)	0.75	/	12	5	24	23.6	19.72	DP12
10DL32-0.375×5	10	/64 (Dual linear array)	0.375	/	12	5	24	23.6	19.72	DP12
2.25DL32-0.6×12	2.25	32 (Linear array) /64 (Dual linear array)	0.6	/	19.2	12	33.8	17	25	DP13
4DL32-1.0×10	4	32 (Linear array) /64 (Dual linear array)	1.0	/	32	10	46	16	20	DP14
2.25DL64-1.0×12	2.25	64 (Linear array) /128 (Dual linear array)	1.0	/	64	12	80.2	16.5	25	DP34
2.25DM7×4-2.71×3.0	2.25	28 (Matrix array) /56 (Dual Matrix array)	2.71	3.0	18.97	12	33.8	16	20	DP10
4DM16×2-1.0×3.0	4	32 (Matrix array) /64 (Dual Matrix array)	1.0	3.0	16	6	28.5	10	20	DP11

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## Other Special Probes

According to the needs of on-site detection, we can develop special customized probes for customers. Some customized probes are listed below. Doppler is your best choice for solutions for difficult scenes.



Multi circular sector probe



Self-focusing concave array probe



Annular taper probe



Multi connector probe



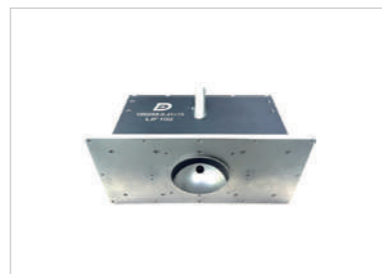
Inner-through annular self focusing convex array probe



Inner-through annular convex array probe



Inner-through annular convex matrix probe



Integrated self-focusing concave probe



Circular array probe



Annular hollow focusing probe

## Options



- The corrugated sleeve can protect the cable from corrosion and external impact
- Nylon mesh sleeve can increase protection while maintaining the flexibility of cable
- Metal corrugated tube can enhance shielding and anti-interference on the basis of protecting cable lines from corrosion and impact resistance

High sound transmission soft protective film can be directly pasted on the surface of phased array probe, so that the 0° wedge is not needed for detection, the interference caused by multiple echoes on the lower surface of the wedge is effectively eliminated, and the detection cost is effectively reduced

### Instructions for Phased Array Probe

- A layer of blue protective film is pasted on the probe surface to avoid scratches during transportation. Please tear off the protective film before use, otherwise it will affect the performance of the probe
- Do not forcibly plug and unplug the connector to avoid pin damage
- Use the probe carefully to avoid impact by external force
- When the probe is not in use, it shall be sealed and stored, such as in the original suitcase, so as not to be affected by environment
- The application scenarios of different types of probes are determined according to the specific application standards. The solutions of different scenarios are welcome to inquire. Website: [www.cndoppler.com](http://www.cndoppler.com) , Email: [cndoppler@cndoppler.cn](mailto:cndoppler@cndoppler.cn)

### Warranty Description

The warranty period of Doppler phased array probe is generally one year, and the warranty scope does not include damage or wear caused by misuse or accident, such as:

- Incorrect assembly method
- Incorrect use, including but not limited to the impact of the probe surface, unauthorized disassembly, etc.
- For use in an environment outside the allowable range, the storage temperature range of the probe is generally -30 ° C to 50 ° C, and the service temperature range is -20 ° C to 50 ° C
- The excitation voltage is too large. Generally, the maximum repetition frequency is 10 KHz, and the continuous operation is no more than 5 KHz 100V (the details shall be subject to the probe test report)
- Use of substandard couplant

### General Index of Phased Array Probe

Doppler has strict quality standards for products, and the general indicators of products are as follows (according to JB / T 11731-2013 test standard):

Sensitivity conformity	±2dB
Sensitivity difference between batches	±2dB
Service temperature	-20°C to 50°C
Storage temperature	-30°C to 50°C

# 02

INDUSTRIAL  
ARRAY  
PROBE

## Wedge

### Features

- ☑ Generally, it is used for SW or LW detection with an angle between 30 ° and 70 °, providing refraction angles in standard steel such as 0 °, 45 °, 55 ° and 60 °
- ☑ Composite anti-wear screws can be used on easily scratched surfaces
- ☑ High temperature wedge is used in high temperature environment and can withstand high temperature of 260 °C
- ☑ Wedge shape and parameters can be customized according to customer requirements



Anti Wear Wedge



Water Wedge



Angle Wedge



Dual Array Wedge



0° Wedge



High Temperature Wedge

### Specifications and Dimensions

Wedge Type	Wedge Mode	Probe Type	Refraction Angle	Wedge Dimensions			Wedge Angle
				Long(L)mm	Width(W)mm	Height(H)mm	
0°Wedge	SDP3-N0L-H	DP3	0°LW	48	30	20	0°
Angle Wedge	SDP2-N55S-IH	DP2	55°SW	41	30	26.64	36°
Anti Wear Wedge	SDP2-N55S-IHC-AOD326	DP2	55°SW	41	30	27.29	Φ326mm
Dual array Wedge	SDP11-N55L-IHC (TR, roofangle3.7°, F=15)	DP11	55°LW	30	40	14.96	18.7°
High temperature Wedge	SDP28-N55S-IH(HT)	DP28	55°SW	64	44	34	39.5°
Water Wedge	SDP8-N65L-IH-AOD270	DP8	65°LW	23.96	22	13.12	Φ270mm

## Industrial Array Probe Connector

Doppler provides compatible connectors for all kinds of Phased Array Probes in the market, such as T1, P1, J1, H1, D1, D2, D3, M1, etc.



T1: QLC-260P



P1: I-PEX 30056



J1: D38999/26FF35SN



D1: DL-156P



D2: DL-260P



H1: Hypertronic

## Connector Conversion Box

The Doppler phased array ultrasound probe connector adapter box can be arbitrarily switched between T1, P1, J1, H1, D1, D2, D3, M1 and other interfaces, and can be customized according to customer requirements.



T1(Male)-J1(Female)



T1(Male)-P1(Female)



T1(Male)-H1(Female)



P1(Male)-T1(Female)

J1(Probe)-T1(Instrument) P1(Probe)-T1(Instrument) H1(Probe)-T1(Instrument) Integrated Adapter Box

