

# Phased Array Wheel Probe

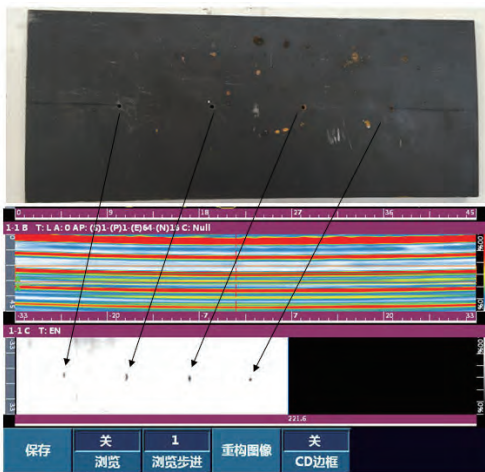
The Phased Array Wheel Probe is specially good for fast testing of composite plates and pipe corrosion.

## Superior Features

- Easy operation, C-Scan can be achieved easily with simple coupling.
- High resolution and strong penetration.
- Easy quantitative analysis of lamination and porosity for composite plates.



## Application



The  $\phi 2$  flat bottom holes with different depth can be detected with good C-Scan imaging.



C-Scan in-amplitude on flat pannel engraved with SIUI logo



C-Scan in-depth on flat pannel engraved with SIUI logo

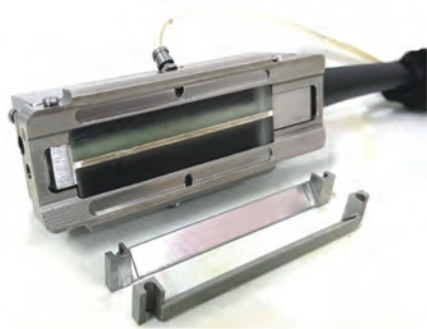
## Specifications

Probe Model	Frequency	Elements No.	Pitch	Active aperture	Array Width
	MHz		mm	mm	mm
5.0L64-1.3-8-W28	5	64	1.3	8	83.2
5.0L64-1.3-10-W28	5	64	1.3	10	83.2
5.0L64-0.8-8-W28	5	64	0.8	8	51.2

# Dual Linear Array Probe

The DLA probe combines the “pitch-catch” mode of a conventional dual thickness probe and element electronic control of a PA probe. The combination also retain the "pseudo-focusing effect" of the conventional dual probe and electronic focusing of phased array, which concentrates sound field energy, provides better pitting testing capabilities, and also has great advantages for detecting coarse-grained and composite materials with severe attenuation.

## Superior Features



Probe with integrated wedge

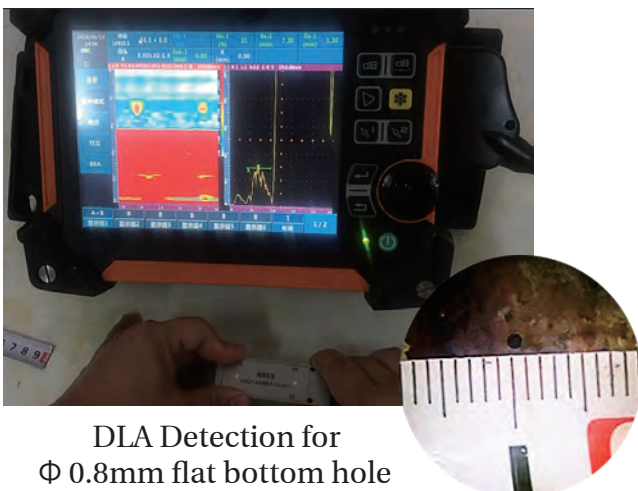
- Adapt to wall thickness:  $\geq 4\text{mm}$
- Adapt to pipe diameter:  $\geq 20.3\text{mm}$  and flat materials
- 1mm testing performance near the surface
- Sound beam coverage width up to 30mm~40mm
- Carbide wear-resistant design to protect wedge
- Adjustable positioning strips for perfect fit on different curvatures or flat materials
- With a water injection frame for irrigation water spray coupling, the bottom of the wedge is always in good coupling with the surface of the workpiece.



Probe with replaceable wedge

- Adapt to wall thickness:  $\geq 4\text{mm}$
- Adapt to pipe diameter:  $\geq 100\text{mm}$  and flat materials
- 1mm testing performance near the surface
- Sound beam coverage width up to 30mm
- Carbide wear-resistant design to protect wedge
- Detachable for perfect fit on different curvatures or flat materials

## Application



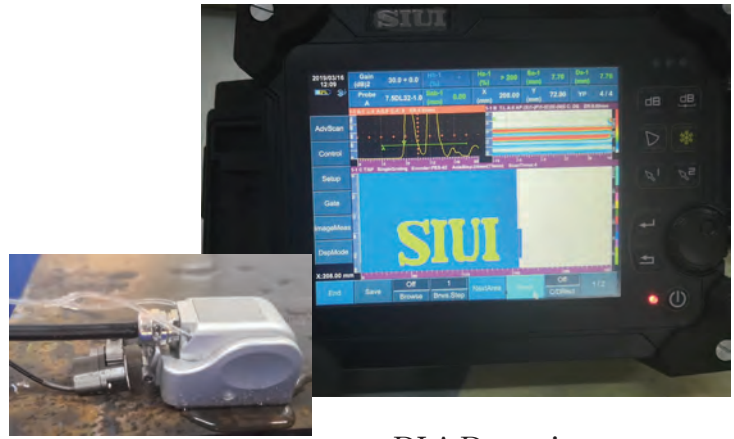
DLA Detection for  $\Phi 0.8\text{mm}$  flat bottom hole



DLA Detection for thin-walled workpiece



DLA Detection for curved panel



DLA Detection for 8mm plate

## Specifications

### Probe with integrated wedge

Probe Model	Frequency	Elements No.	Pitch	Active aperture	Array Width
	MHz		mm	mm	mm
5.0DL32-1.0-4.8-F8E	5.0	32*2	1.0	4.8	32
5.0DL32-1.3-4.8-F8E	5.0	32*2	1.3	4.8	41.6
7.5DL32-1.0-4.8-F8E	7.5	32*2	1.0	4.8	32
7.5DL32-1.3-4.8-F8E	7.5	32*2	1.3	4.8	41.6

Positioning strip Model	Model
	41N-WEAR-AOD21
	41N-WEAR-AOD26
	41N-WEAR-AOD33
	41N-WEAR-AOD42
	41N-WEAR-AOD48
	41N-WEAR-AOD73
	41N-WEAR-AOD114
	41N-WEAR

Water injection frame Model	Model
	41N-WEAR-I-AOD21
	41N-WEAR-I-AOD26
	41N-WEAR-I-AOD33
	41N-WEAR-I-AOD42
	41N-WEAR-I-AOD48
	41N-WEAR-I-AOD60
	41N-WEAR-I-AOD73
	41N-WEAR-I-AOD88
	41N-WEAR-I-AOD101
	41N-WEAR-I-AOD114
	41N-WEAR-I

### Probe with replaceable wedge

Probe Model	Frequency	Elements No.	Pitch	Active aperture	Array Width	Corresponding Wedge
	MHz		mm	mm	mm	
5.0DL32-1.0-5.0-FRE	5.0	32*2	1.0	5.0	32	32x5DL00L-RA12.6
7.5DL32-1.0-5.0-FRE	7.5	32*2	1.0	5.0	32	

# Low-profile Phased Array Probe

## Superior Features

With the Low-profile PA probe, the probability of small defects detection in small pipe can be increased.



## Application

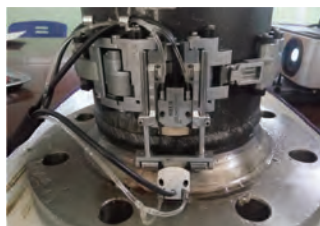
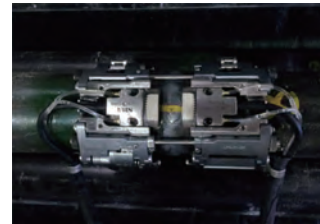
Low-profile PA probe is compatible with bracelet type crawler LPS series to cover standard pipes with outside diameters ranging from 20.32-300mm.



PAUT solution for small pipe weld

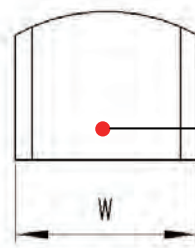
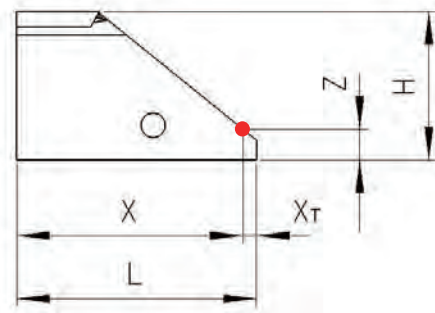


PAUT solution for medium pipe weld



## Specifications

Probe Model	Frequency	Elements No.	Pitch	Elevation	Active aperture mm	Corresponding Wedge
	MHz		mm	mm		
5.0SL16-0.5-10-R35E	5	16	0.5	10	35	8R(35)60S4-I-AOD-XX
7.5SL16-0.5-10-R35E	7.5	16	0.5	10	35	8R(35)60S4-I-AOD-XX
10SL16-0.5-10-R35E	10	16	0.5	10	35	8R(35)60S4-I-AOD-XX
3.5SL32-0.5-10-R35E	3.5	32	0.5	10	35	16R(35)60S4-I-AOD-XX
7.5SL32-0.5-10-R35E	7.5	32	0.5	10	35	16R(35)60S4-I-AOD-XX



Center of first element

Wedge Model	Description	X	X <sub>T</sub>	Z	Velocity m/s	Refracted Angle in Steel	L	W	H	Fixed Aperture Diameter mm
		mm	mm	mm			mm	mm	mm	
8R(35)60S4-I-AOD-21	35°-70°shear wave angle block	17.7	1.3	4.2	2360	60°	18	22	15.5	φ3
8R(35)60S4-I-AOD-26									15.2	
8R(35)60S4-I-AOD-33									15	
8R(35)60S4-I-AOD-42									14.2	
8R(35)60S4-I-AOD-48									13.9	
8R(35)60S4-I-AOD-60									13.4	
8R(35)60S4-I-AOD-73									13	
8R(35)60S4-I-AOD-88									12.9	
8R(35)60S4-I-AOD-101									12.6	
8R(35)60S4-I-AOD-114									12.7	
8R(35)60S5-I-AOD-140									12.4	
8R(35)60S5-I-AOD-195									12.2	
8R(35)60S5-I-AOD-250									12.1	
8R(35)60S5-I-AOD-270									12.1	
8R(35)60S5-I-AOD-300									12.1	
8R(35)60S4-I									11.7	

Wedge Model	Description	X	X <sub>T</sub>	Z	Velocity m/s	Refracted Angle in Steel	L	W	H	Fixed Aperture Diameter mm
		mm	mm	mm			mm	mm	mm	
16R(35)60S4-I-AOD-21	35°-70° shear wave angle block	26.7	2.3	4.6	2360	60°	29	22	21.7	φ3
16R(35)60S4-I-AOD-26									21.5	
16R(35)60S4-I-AOD-33									21.1	
16R(35)60S4-I-AOD-42									20.4	
16R(35)60S4-I-AOD-48									20	
16R(35)60S4-I-AOD-60									19.6	
16R(35)60S4-I-AOD-73									19.3	
16R(35)60S4-I-AOD-88									19	
16R(35)60S4-I-AOD-101									18.9	
16R(35)60S4-I-AOD-114									18.8	
16R(35)60S4-I-AOD-140									18.6	
16R(35)60S4-I-AOD-195									18.4	
16R(35)60S4-I-AOD-250									18.3	
16R(35)60S4-I-AOD-270									18.3	
16R(35)60S4-I-AOD-300									18.2	
16R(35)60S4-I									17.9	

# SIUI

Shantou Institute of Ultrasonic Instruments Co., Ltd.

Add: #77, Jinsha Road, Shantou 515041, Guangdong, China

Tel: +86-754-88250150 Fax: +86-754-88251499

E-mail: [siui@siui.com](mailto:siui@siui.com) Website: <http://www.siui.com>



Specifications and appearance are subject to change without prior notice.  
DCY2.781.EN.Custom PA probes. CY/9A02