

# Linear Phased Array Probes

## PA- W20-5L16



High performance linear phased array probes, designed with piezo-composite elements to provide high resolution imaging and to maximise sensitivity.

Housed in a rugged stainless steel case for all industrial NDT applications. Phoenix ISL linear phased array probes are compatible with market leading instruments and the Phoenix ISL range of phased array wedges.

### Transducer Properties

Element Pattern	Linear
Coupling Type	Contact
Frequency, MHz	5.0
No. Elements	16
Pitch, mm	0.6
Aperture (A), mm	9.6
Elevation, mm	10.0
Elem. 1 to End of Case (B), mm	5.5
Length (L), mm	20
Width (W), mm	23
Height (H), mm	25
Shipping Weight (boxed), g	640
Captive Screw Separation, mm	17
Connector Type	IPEX
Connector Location	Top
Case Material	Stainless Steel
Front Face	Flat

### Supplied with:

- Phased array probe with integral cable and IPEX connector\*
- Array Characterisation Report
- Carry Case

\* Other connectors available to order, upon request.

### Performance Specification

Centre Frequency, MHz	4.5 MHz < $f_0$ < 5.5 MHz
Bandwidth, 6dB	2.25 MHz < $\Delta f$ < 10 MHz
Relative Bandwidth, 6dB	45 % < $\Delta f_{rel}$ < 200 %
Pulse Length, 20dB	0.5 ± 20 %
Depth Tolerance	± 0.2mm

Specification derived with the following equipment:

- Micropulse LT2 Pulser/Receiver
- National Instruments 128ch Multiplexer
- InspectionWare 9 Software

### Test Conditions and Settings

Pulse Voltage: 150V  
Pulse Shape: Square  
Damping: 54 Ω  
Filter: 0.75 - 12 MHz  
Reflector: 20mm



## Phased Array Probe Parameters

Product Code	Frequency MHz	No. of Elements	Pitch (mm)	Aperture A (mm)	El. 1 to End of Case B (mm)	Elevation (mm)	External Dimensions (mm)		
							Length L	Width W	Height H
PA-W20-5L16	5.0	16	0.60	9.6	5.5	10	20	23	25
PA-W30-5L32	5.0	32	0.60	19.2	5.7	10	30	23	25
PA-W40-5L32	5.0	32	1.00	32.0	4.5	10	40	23	25
PA-W40-5L64	5.0	64	0.50	32.0	4.25	10	40	23	25
PA-W70-5L60	5.0	60	1.00	60.0	5.5	10	70	23	25
PA-WBRA-7.5L16	7.5	16	0.5	8.0	2.5	10	25.9	21.9	9.7

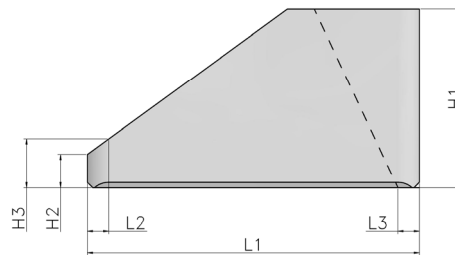
■ The above phased array probes are available from stock

■ Other specification phased array probes available on request

## Phased Array Wedges

Phoenix ISL phased array wedges are available in a range of angle sizes and can be contoured to your specification.

Wedges include: irrigation, mounting holes and wear pins to increase wear resistance.



Product Code	Velocity m/s	Front Height H1 (mm)	Rear Height H2 (mm)	Height to El. 1 H3 (mm)	Length L1 (mm)	Length to El. 1 L2 (mm)	Length to Damping L3 (mm)	Width (mm)	Wedge Angle°	Wave Type	Angle° in C/Steel
WPA-W20-55S-IMW	2330	15.50	3.62	7.0	25.0	4.7	4.0	40.0	36.1	Shear	55
WPA-W30-55S-IMW	2330	32.00	11.33	16.0	49.0	6.4	4.0	40.0	36.1	Shear	55
WPA-W40-55S-IMW	2330	33.50	6.27	11.0	62.0	6.4	4.0	40.0	36.1	Shear	55
WPA-W70-55S-IMW	2330	47.50	4.18	8.2	82.0	5.5	4.0	40.0	36.1	Shear	55
WPA-W20-0L-IMW	2330	20.00	20.00	20.00	25.0	8.0	--	40.0	0	Long	0
WPA-W30-0L-IMW	2330	20.00	20.00	20.00	49.0	15.2	--	40.0	0	Long	0
WPA-W40-0L-IMW	2330	20.00	20.00	20.00	62.0	15.5	--	40.0	0	Long	0
WPA-W70-0L-IMW	2330	20.00	20.00	20.00	82.0	11.5	--	40.0	0	Long	0

Bracelet Wedges (contoured)

Available for pipes ranging from 0.5" - 8" NPS . Please contact our Sales team to order.

■ Other specification phased array wedges available on request.