

Linear Phased Array Probe Range



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.

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

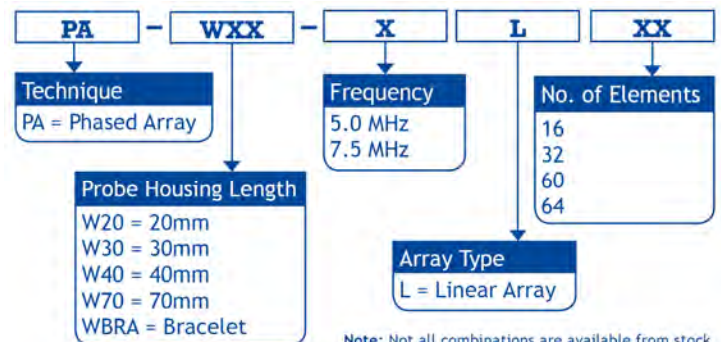
Supplied with:

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

* Other connectors available to order, upon request.



Phased Array Probe Product Codes



Note: Not all combinations are available from stock.

Phased Array Wedges



Phoenix ISL phased array wedges are manufactured from rexolite® and available to order in a range of different angles. Wedges can be contoured to your specification. Wedges include: irrigation, mounting holes and wear pins to increase wear resistance.

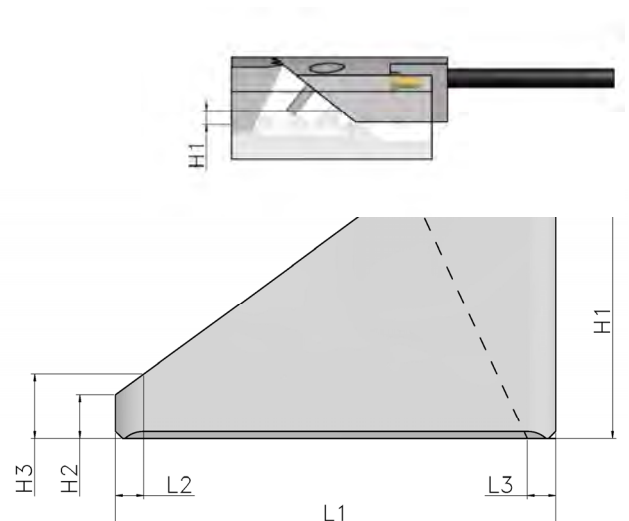
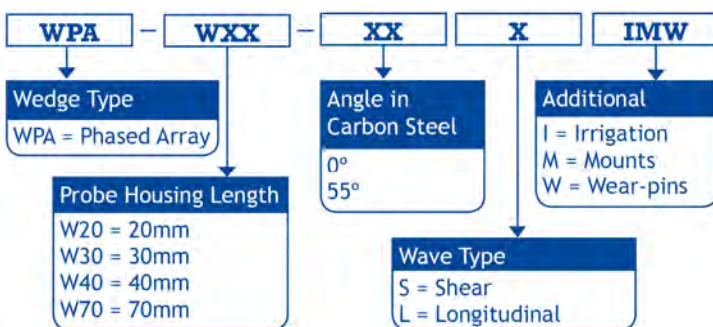
Wedge Parameters

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	20.0	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. See product code generator below.

Phased Array Wedge Product Codes



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 < Δf < 10 MHz
Relative Bandwidth, 6dB	45 % < Δf_{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



Linear Phased Array Probes

PA- W30-5L32



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	32
Pitch, mm	0.6
Aperture (A), mm	19.2
Elevation, mm	10.0
Elem. 1 to End of Case (B), mm	5.7
Length (L), mm	30
Width (W), mm	23
Height (H), mm	25
Shipping Weight (boxed), g	770
Captive Screw Separation, mm	17W x 18L
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	$4.5 \text{ MHz} < f_0 < 5.5 \text{ MHz}$
Bandwidth, 6dB	$2.25 \text{ MHz} < \Delta f < 10 \text{ MHz}$
Relative Bandwidth, 6dB	$45 \% < \Delta f_{\text{rel}} < 200 \%$
Pulse Length, 20dB	$0.5 \pm 20 \%$
Depth Tolerance	$\pm 0.2\text{mm}$

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



Linear Phased Array Probes

PA- W40-5L32



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	32
Pitch, mm	1.0
Aperture (A), mm	32.0
Elevation, mm	10.0
Elem. 1 to End of Case (B), mm	4.5
Length (L), mm	40
Width (W), mm	23
Height (H), mm	25
Shipping Weight (boxed), g	810
Captive Screw Separation, mm	17W x 28L
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

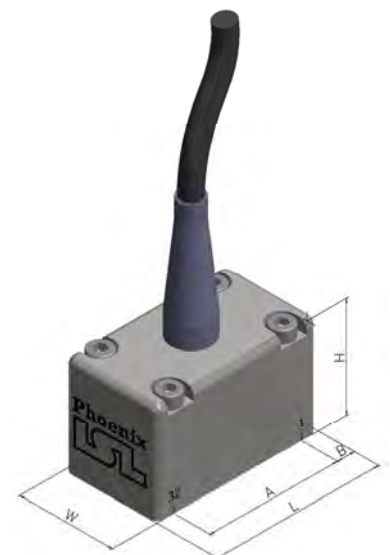
Centre Frequency, MHz	4.5 MHz < f_0 < 5.5 MHz
Bandwidth, 6dB	2.25 MHz < Δf < 10 MHz
Relative Bandwidth, 6dB	45 % < Δf_{rel} < 200 %
Pulse Length, 20dB	0.5 ± 20 %
Depth Tolerance	± 0.2mm

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



Linear Phased Array Probes

PA- W40-5L64



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	64
Pitch, mm	0.5
Aperture (A), mm	32.0
Elevation, mm	10.0
Elem. 1 to End of Case (B), mm	4.25
Length (L), mm	40
Width (W), mm	23
Height (H), mm	25
Shipping Weight (boxed), g	810
Captive Screw Separation, mm	17W x 28L
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 < Δf < 10 MHz
Relative Bandwidth, 6dB	45 % < Δf_{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



Linear Phased Array Probes

PA- W70-5L60



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	60
Pitch, mm	1.0
Aperture (A), mm	60.0
Elevation, mm	10.0
Elem. 1 to End of Case (B), mm	5.5
Length (L), mm	70
Width (W), mm	23
Height (H), mm	25
Shipping Weight (boxed), g	950
Captive Screw Separation, mm	17W x 58L
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	$4.5 \text{ MHz} < f_0 < 5.5 \text{ MHz}$
Bandwidth, 6dB	$2.25 \text{ MHz} < \Delta f < 10 \text{ MHz}$
Relative Bandwidth, 6dB	$45 \% < \Delta f_{\text{rel}} < 200 \%$
Pulse Length, 20dB	$0.5 \pm 20 \%$
Depth Tolerance	$\pm 0.2\text{mm}$

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



Linear Phased Array Probes

PA-WBRA-7.5L16



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	7.5
No. Elements	16
Pitch, mm	0.5
Aperture (A), mm	8.0
Elevation, mm	10.0
Elem. 1 to End of Case (B), mm	2.5
Length (L), mm	25.9
Width (W), mm	21.9
Height (H), mm	9.7
Shipping Weight (boxed), g	420
Captive Screw Separation, mm	16.5
Connector Type	IPEX
Connector Location	End
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

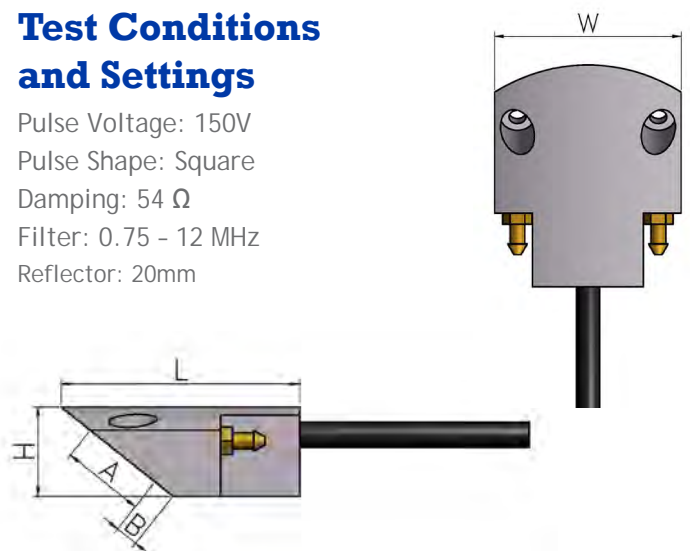
Centre Frequency, MHz	$4.5 \text{ MHz} < f_0 < 5.5 \text{ MHz}$
Bandwidth, 6dB	$2.25 \text{ MHz} < \Delta f < 10 \text{ MHz}$
Relative Bandwidth, 6dB	$45 \% < \Delta f_{\text{rel}} < 200 \%$
Pulse Length, 20dB	$0.5 \pm 20 \%$
Depth Tolerance	$\pm 0.2\text{mm}$

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

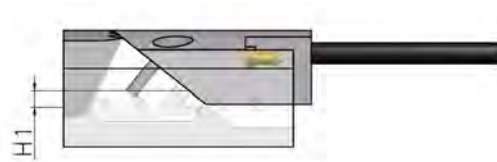
Product Code	Frequency MHz	No. of Elements	Pitch (mm)	Aperture A (mm)	El. 1 to End of Case B (mm)	Elevation (mm)	External Dimensions (mm)		
							Length L	Width W	Height H
PA-W20-5L16	5.0	16	0.60	9.6	5.5	10	20	23	25
PA-W30-5L32	5.0	32	0.60	19.2	5.7	10	30	23	25
PA-W40-5L32	5.0	32	1.00	32.0	4.5	10	40	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.