



Standard phased array probes and accessories

Quality at every step

For 70 years, Krautkrämer ultrasonic transducers have been synonymous with quality.

Our core ability is to match ultrasonic probes to the inspection applications of today, both simple and complex. This skill lets us design and manufacture fine-tuned quality probes that meet your customer-specific requirements.

We build quality into every step we perform—from start to finish:

- **Requirement analysis.** At the very beginning of our discussions with you, we draw on our experience manufacturing more than 1 million probes—including 14,000 probe variations—to build quality into our requirement analysis process.
- **Specifications.** To help ensure quality results, each product in our one-stop-shop adheres to our exacting specifications.
- **Simulation.** Early in the process, we use industry leading simulation technology software to help us determine what needs to be done to meet application requirements. We also understand the boundaries of simulation and how that impacts the build.
- **Feasibility studies.** We support challenging applications by conducting feasibility studies in our labs, which are located worldwide. Send us your samples and we can determine the best inspection method and technology.
- **Material selection and processing.** We use the highest standards when sourcing our raw materials, and our in-house manufacturing is fully controlled to ISO standards. Our ceramics shop in Shannon, Ireland, creates piezocomposite ceramics, an in-house offering unique to our business.
- **Prototyping.** With a strong understanding of your needs, we offer prototyping to further validate that the solution works.
- **Product validation.** With an emphasis on repeatability and process stability, our exacting build-and-test procedures and specifications are followed for every single build, meaning every step includes a quality inspection/test to meet required criteria. What's documented: Each probe has a unique serial number, and every validated manufacturing step is recorded before shipment. Finally, our database stores historical test data for every probe. We provide a certification of conformance, including probe waveform and frequency spectrum results with each probe.
- **Manufacturing.** With manufacturing available in both Europe and the USA, we can provide local variation and meet local norms. In fact, we can customize your transducer to meet your specific ultrasonic testing applications. Modifications can involve transducer case design, connector options, and element size and shape, including non-standard frequencies, sensitivity, bandwidth and focusing.
- **Delivery.** Our pledge is to provide you with exceptional product availability with our global distribution sites and customer care resources, to ensure that order status is communicated until your probe reaches your door.
- **Support.** We have expert resources available to help you with your ultrasonic inspection challenges including field application engineers and remote service technicians who can be reached through phone or email 24/7. Our probes are backed by a standard one year repair or replace warranty as a testament that we stand behind our products.

Krautkrämer ultrasonic transducers from Inspection Technologies deliver consistent readings. Our quality goes beyond standard, our pricing is competitive, and our products are delivered when and where you need them.

Now that's quality, every step of the way.

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Connector options

Almost every probe in this catalog can be delivered with four connector options.
The part numbers for each connector option are directly listed on product pages.

Phasor connector



Omniscan™ connector



Hypertronics™ connector



Mentor UT connector



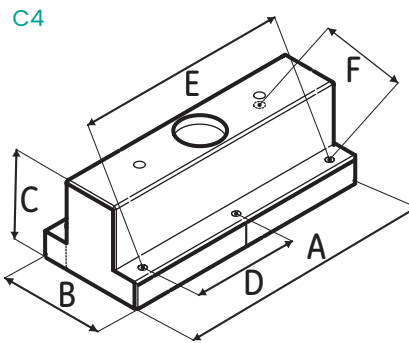
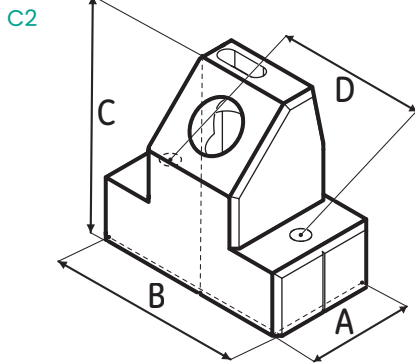
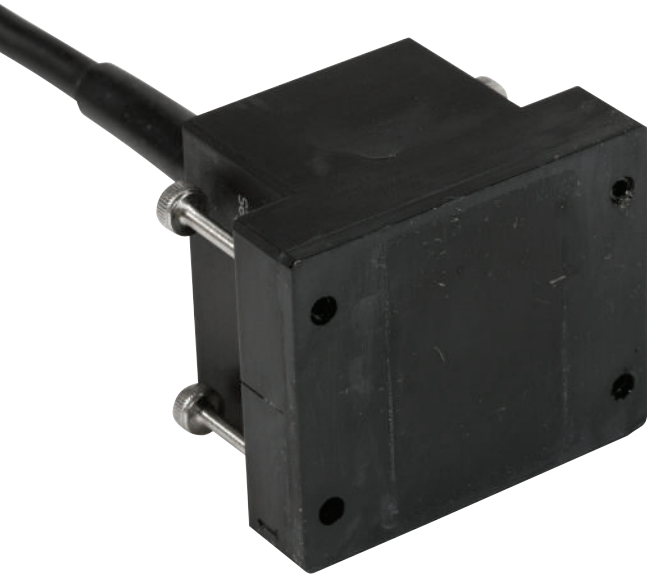
MUX module for Mentor UT - Krautkramer's flagship phased array device



For maximum functionality, attach the MUX module to your Mentor UT device and gain 32:128 capability, an additional hot swappable battery, and standard Tyco connector.

Probes with more than 32 elements need the MUX module to connect to the Mentor UT device.

General use probes



Applications

- General weld inspection
- Tubes, pipes, tanks, pressure vessels
- Axles, forgings, castings
- Bridges and other structures
- Railroad wheels and rail
- Pumps, valve housings
- Turbine blades, shafts
- Wheel rims

Features

- Wide range of applications
- 3 different connector types available
- Used with wedges, delay lines, or wear caps
- Used for sector scanning or linear scanning

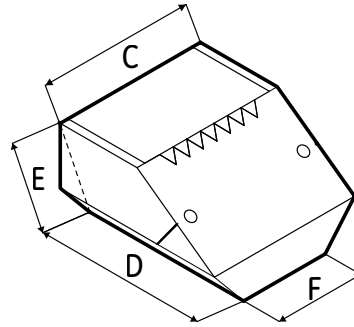
| Part number Phasor | Part number Hypertronics™ | Part number Omniscan™ | Part Number Mentor UT | Aperture (mm) | Frequency (MHz) | Element Count | Pitch (mm) | Elevation (mm) | Cable (m) | Case Style | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) |
|--------------------|---------------------------|-----------------------|-----------------------|---------------|-----------------|---------------|------------|----------------|-----------|------------|--------|--------|--------|--------|--------|--------|
| 115-100-001 | 115-120-001 | 115-130-001 | 115-110-001 | 8.0 x 9.0 | 2 | 8 | 1.0 | 9.0 | 3.0 | C2 | 15.0 | 28.0 | 27.0 | 21.0 | - | - |
| 115-100-002 | 115-120-002 | 115-130-002 | 115-110-002 | 8.0 x 9.0 | 4 | 16 | 0.5 | 9.0 | 3.0 | C2 | 15.0 | 28.0 | 27.0 | 21.0 | - | - |
| 115-100-003 | 115-120-003 | 115-130-003 | 115-110-003 | 16.0 x 10.0 | 5 | 16 | 1.0 | 10.0 | 3.0 | C2 | 23.0 | 34.0 | 37.0 | 25.0 | - | - |
| 115-100-004 | 115-120-004 | 115-130-004 | 115-110-004 | 16.0 x 10.0 | 5 | 32 | 0.5 | 10.0 | 3.0 | C2 | 23.0 | 34.0 | 37.0 | 25.0 | - | - |
| 115-100-005 | 115-120-005 | 115-130-005 | 115-110-005 | 16.0 x 13.0 | 2.25 | 16 | 1.0 | 13.0 | 3.0 | C2 | 22.0 | 37.0 | 36.0 | 29.0 | - | - |
| 115-100-006 | 115-120-006 | 115-130-006 | 115-110-006 | 24.0 x 19.0 | 2.25 | 16 | 1.5 | 19.0 | 3.0 | C2 | 30.0 | 45.0 | 30.0 | 37.0 | - | - |
| 115-100-007 | 115-120-007 | 115-130-007 | N/A | 64.0 x 10.0 | 5 | 64 | 1.0 | 10.0 | 3.0 | C4 | 84.0 | 36.0 | 32.0 | 36.0 | 71.0 | 28.0 |

Wedges/delay lines/wear caps for general use probes

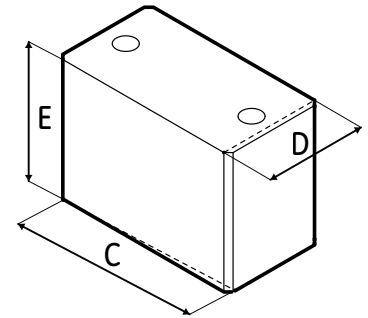
Features

- Sectorial scanning
 - Small footprint design
 - Curved wedges available
 - Optional carbide and couplant ports
- Z-Offset is the dimension from the center of the array mounted on the wedge to the bottom of the wedge (perpendicular to the bottom). This value is used to calculate delay laws in the Phasor.
- WF (Wedge Front) is the dimension from the center of the array mounted on the wedge to the front of the wedge. This value is entered into the Phasor and directly affect the frame of reference from which all projection results are measured.

Standard wedge



Delay line



Accessories part numbers

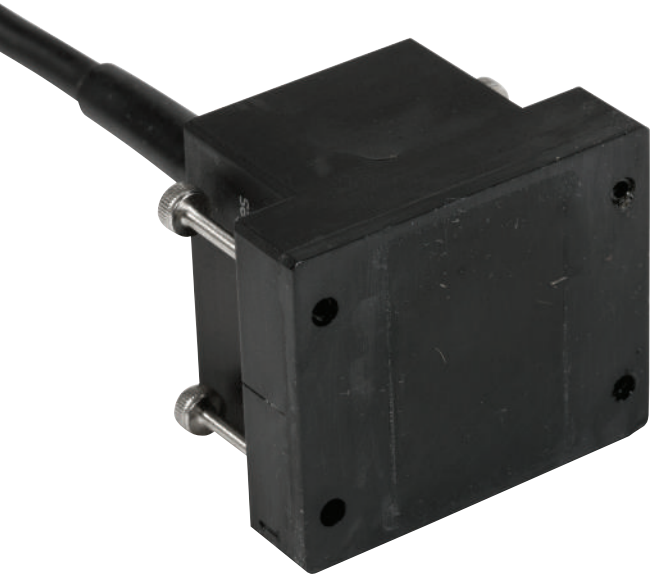
| Part number Phasor | Part number Hypertronics™ | Part number Omniscan™ | Mentor UT Part number | Shear wedge 35° to 75° | Delay line 20 mm (0.79") | Delay line 40 mm (1.58") | Wear cap |
|--------------------|---------------------------|-----------------------|-----------------------|---|--------------------------|--------------------------|-------------|
| 115-100-001 | 115-120-001 | 115-130-001 | 115-110-001 | 118-350-024 | 118-350-036 | 118-350-048 | 118-240-003 |
| 115-100-002 | 115-120-002 | 115-130-002 | 115-110-002 | 118-350-024 | 118-350-036 | 118-350-048 | 118-240-003 |
| 115-100-003 | 115-120-003 | 115-130-003 | 115-110-003 | 118-350-025 | 118-350-037 | 118-350-049 | 118-240-004 |
| 115-100-004 | 115-120-004 | 115-130-004 | 115-110-004 | 118-350-025 | 118-350-037 | 118-350-049 | 118-240-004 |
| 115-100-005 | 115-120-005 | 115-130-005 | 115-110-005 | 118-350-027 | 118-350-039 | 118-350-063 | 118-240-001 |
| 115-100-006 | 115-120-006 | 115-130-006 | 115-110-006 | 118-350-028 | 118-350-040 | 118-350-064 | 118-240-002 |
| 115-100-007 | 115-120-007 | 115-130-007 | | 360-141-182 (sweep angle) 118-350-026 (fixed angle, lateral sweep) | 118-350-038 | 118-350-050 | 118-240-005 |

| Standard wedges | C (mm) | D (mm) | E (mm) | F (mm) | Incident | Z-Offset* (mm) | WF* (mm) |
|-----------------|--------|--------|--------|--------|----------|----------------|----------|
| 118-350-024 | 28.2 | 24.7 | 15.0 | 12.3 | 36 | 10.6 | 18.7 |
| 118-350-025 | 33.5 | 32.6 | 18.5 | 21.3 | 36 | 12.4 | 24.1 |
| 118-350-026 | 84.0 | 54.8 | 31.1 | 84.1 | 36 | 20.6 | 40.5 |
| 360-141-182 | 35.6 | 124.5 | 59.9 | 35.6 | 36 | 35.3 | 65.8 |
| 118-350-027 | 37.3 | 37.8 | 22.9 | 22.0 | 36 | 15.9 | 28.9 |
| 118-350-028 | 45.4 | 50.0 | 29.6 | 26.4 | 36 | 20.5 | 37.4 |

| Standard delay lines | C (mm) | D (mm) | E (mm) | Standard delay lines | C (mm) | D (mm) | E (mm) |
|----------------------|--------|--------|--------|----------------------|--------|--------|--------|
| 118-350-036 | 28.2 | 15.0 | 20.0 | 118-350-048 | 28.2 | 15.0 | 40.0 |
| 118-350-037 | 33.5 | 23.0 | 20.0 | 118-350-049 | 33.5 | 23.0 | 40.0 |
| 118-350-038 | 84.0 | 35.6 | 20.0 | 118-350-050 | 84.0 | 35.6 | 40.0 |
| 118-350-039 | 37.3 | 21.0 | 20.0 | | | | |
| 118-350-063 | 37.3 | 21.0 | 40.0 | | | | |
| 118-350-040 | 45.4 | 30.0 | 20.0 | | | | |
| 118-350-064 | 45.4 | 30.0 | 40.0 | | | | |

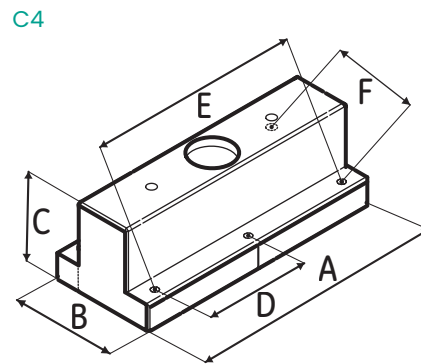
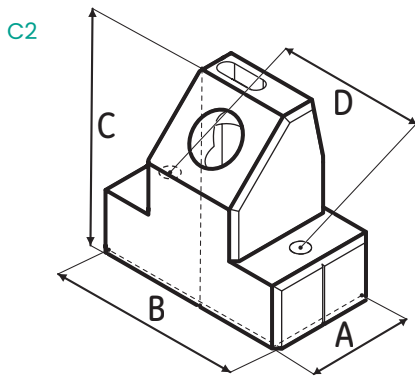
Weld inspection probes

General weld inspection



Typical weld applications:

- Plate inspection
- Pipe inspection
- Linear scanning
- Sector scanning
- Designed for wedge attachment



Features

- 3 different connector types available
- Used with wedges, delay lines, or wear caps
- Used for sector scanning or linear scanning

| Part number Phasor | Part number Hypertronics™ | Part number Omniscan™ | Part Number Mentor UT | Aperture (mm) | Frequency (MHz) | Element Count | Pitch (mm) | Elevation (mm) | Cable (m) | Case Style | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) |
|--------------------|---------------------------|-----------------------|-----------------------|---------------|-----------------|---------------|------------|----------------|-----------|------------|--------|--------|--------|--------|--------|--------|
| 115-100-001 | 115-120-001 | 115-130-001 | 115-110-001 | 8.0 x 9.0 | 2 | 8 | 1.0 | 9.0 | 3.0 | C2 | 15.0 | 28.0 | 27.0 | 21.0 | - | - |
| 115-100-002 | 115-120-002 | 115-130-002 | 115-110-002 | 8.0 x 9.0 | 4 | 16 | 0.5 | 9.0 | 3.0 | C2 | 15.0 | 28.0 | 27.0 | 21.0 | - | - |
| 115-100-003 | 115-120-003 | 115-130-003 | 115-110-003 | 16.0 x 10.0 | 5 | 16 | 1.0 | 10.0 | 3.0 | C2 | 23.0 | 34.0 | 37.0 | 25.0 | - | - |
| 115-100-004 | 115-120-004 | 115-130-004 | 115-110-004 | 16.0 x 10.0 | 5 | 32 | 0.5 | 10.0 | 3.0 | C2 | 23.0 | 34.0 | 37.0 | 25.0 | - | - |
| 115-100-005 | 115-120-005 | 115-130-005 | 115-110-005 | 16.0 x 13.0 | 2.25 | 16 | 1.0 | 13.0 | 3.0 | C2 | 22.0 | 37.0 | 36.0 | 29.0 | - | - |
| 115-100-006 | 115-120-006 | 115-130-006 | 115-110-006 | 24.0 x 19.0 | 2.25 | 16 | 1.5 | 19.0 | 3.0 | C2 | 30.0 | 45.0 | 30.0 | 37.0 | - | - |
| 115-100-007 | 115-120-007 | 115-130-007 | N/A | 64.0 x 10.0 | 5 | 64 | 1.0 | 10.0 | 3.0 | C4 | 84.0 | 36.0 | 32.0 | 36.0 | 71.0 | 28.0 |

Wedges for general weld inspection

Features

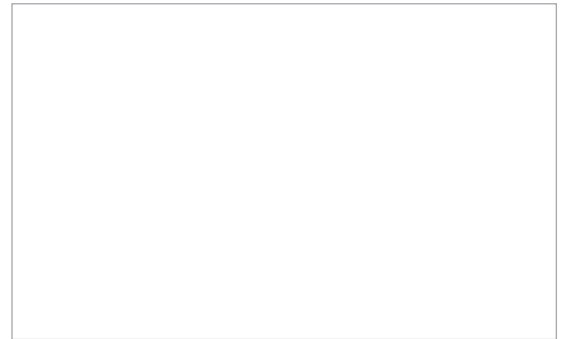
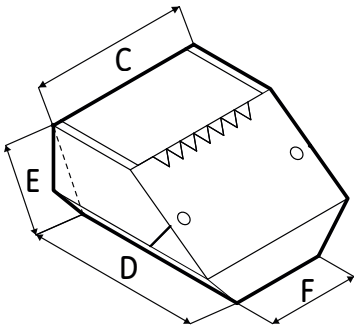
- Sectorial scanning
- Small footprint design
- Curved wedges available
- Optional carbide and couplant ports

* Z-Offset is the dimension from the center of the array mounted on the wedge to the bottom of the wedge (perpendicular to the bottom). This value is used to calculate delay laws in the Phasor.

* WF (Wedge Front) is the dimension from the center of the array mounted on the wedge to the front of the wedge. This value is entered into the Phasor and directly affect the frame of reference from which all projection results are measured.



Standard wedge

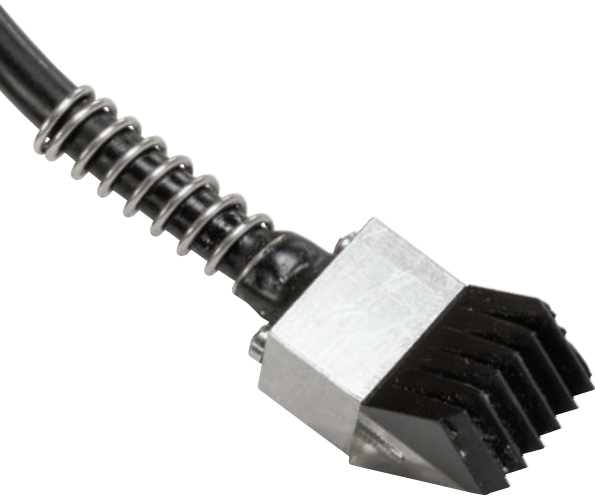


Accessories Part numbers

| Part number Phasor | Part number Hypertronics™ | Part number Omniscan™ | Mentor UT Part Number | Shear Wedge 35° to 75° | Delay Line 20 mm (0.79") | Delay Line 40 mm (1.58") | Wear Cap |
|--------------------|---------------------------|-----------------------|-----------------------|---|--------------------------|--------------------------|-------------|
| 115-100-001 | 115-120-001 | 115-130-001 | 115-110-001 | 118-350-024 | 118-350-036 | 118-350-048 | 118-240-003 |
| 115-100-002 | 115-120-002 | 115-130-002 | 115-110-002 | 118-350-024 | 118-350-036 | 118-350-048 | 118-240-003 |
| 115-100-003 | 115-120-003 | 115-130-003 | 115-110-003 | 118-350-025 | 118-350-037 | 118-350-049 | 118-240-004 |
| 115-100-004 | 115-120-004 | 115-130-004 | 115-110-004 | 118-350-025 | 118-350-037 | 118-350-049 | 118-240-004 |
| 115-100-005 | 115-120-005 | 115-130-005 | 115-110-005 | 118-350-027 | 118-350-039 | 118-350-063 | 118-240-001 |
| 115-100-006 | 115-120-006 | 115-130-006 | 115-110-006 | 118-350-028 | 118-350-040 | 118-350-064 | 118-240-002 |
| 115-100-007 | 115-120-007 | 115-130-007 | N/A | 360-141-182 (sweep angle) 118-350-026 (fixed angle, lateral sweep) | 118-350-038 | 118-350-050 | 118-240-005 |

| Standard Wedges | C (mm) | D (mm) | E (mm) | F (mm) | Incident | Z-Offset *(mm) | WF *(mm) |
|-----------------|--------|--------|--------|--------|----------|----------------|----------|
| 118-350-024 | 28.2 | 24.7 | 15.0 | 12.3 | 36 | 10.6 | 18.7 |
| 118-350-025 | 33.5 | 32.6 | 18.5 | 21.3 | 36 | 12.4 | 24.1 |
| 118-350-026 | 84.0 | 54.8 | 31.1 | 84.1 | 36 | 20.6 | 40.5 |
| 360-141-182 | 35.6 | 124.5 | 59.9 | 35.6 | 36 | 35.3 | 65.8 |
| 118-350-027 | 37.3 | 37.8 | 22.9 | 22.0 | 36 | 15.9 | 28.9 |
| 118-350-028 | 45.4 | 50.0 | 29.6 | 26.4 | 36 | 20.5 | 37.4 |

Small foot print welding probes



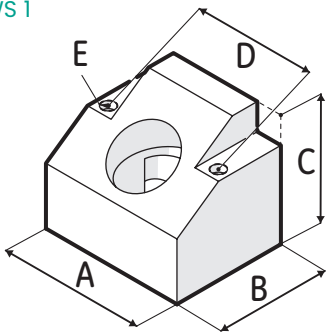
Applications

- General weld inspection, smaller objects, thinner sections
- Tubes, pipes, pressure vessels, containers
- Pumps, valve housings
- Turbine blades, shafts
- Wheel rims

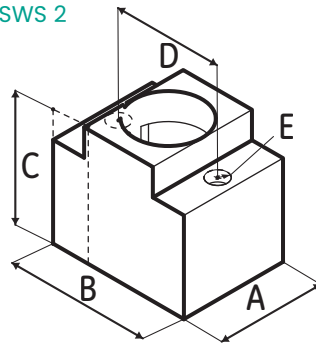
Features

- Small contact area
- Fits on standard single element MSWS wedges
- Comparable to standard single element MSWS probes with Phased Array capabilities
- Available with 3 different connectors

MSWS 1



MSWS 2

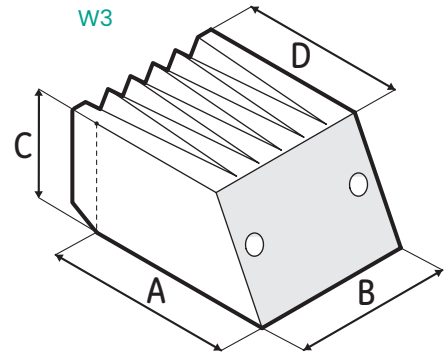
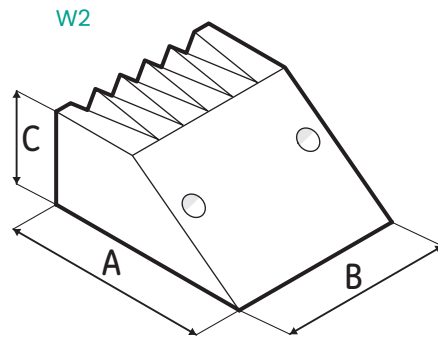
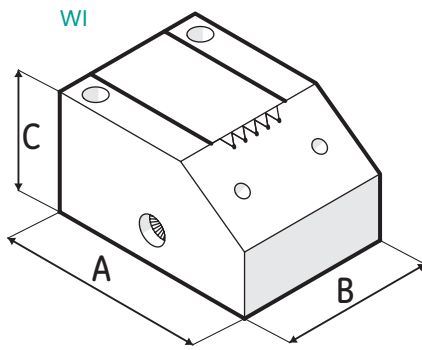


| Part number Phasor | Part number Hypertronics™ | Part number Omniscan™ | Aperture (mm) | Frequency (MHz) | Element Count | Pitch (mm) | Elevation (mm) | Cable (m) | Case Style | A (mm) | B (mm) | C (mm) | D (mm) | E |
|--------------------|---------------------------|-----------------------|---------------|-----------------|---------------|------------|----------------|-----------|------------|--------|--------|--------|--------|-------|
| 115-100-010 | 115-120-010 | 115-130-010 | 12.8 x 12.7 | 5 | 32 | 0.4 | 12.7 | 3 | MSWS1 | 19.1 | 15.1 | 16.3 | 16.0 | #1-64 |
| 115-100-011 | 115-120-011 | 115-130-011 | 12.8 x 12.7 | 10 | 32 | 0.4 | 12.7 | 3 | MSWS1 | 19.1 | 15.1 | 16.3 | 16.0 | #1-64 |
| 115-100-015 | 115-120-015 | 115-130-015 | 6.35 x 6.35 | 10 | 16 | 0.4 | 6.35 | 3 | MSWS2 | 9.5 | 12.6 | 11.2 | 9.5 | #1-64 |
| 115-100-012 | 115-120-012 | 115-130-012 | 12.8 x 12.7 | 5 | 16 | 0.8 | 12.7 | 3 | MSWS1 | 19.1 | 15.1 | 16.3 | 16.0 | #1-64 |
| 115-100-013 | 115-120-013 | 115-130-013 | 12.8 x 12.7 | 2.25 | 16 | 0.8 | 12.7 | 3 | MSWS1 | 19.1 | 15.1 | 16.3 | 16.0 | #1-64 |
| 115-100-037 | 115-120-037 | 115-130-037 | 6.4 x 6.4 | 5 | 16 | 0.4 | 6.4 | 3 | MSWS2 | 9.5 | 12.6 | 11.2 | 9.5 | #1-64 |

Wedges for small foot print welding probes

Features

- Delay line or wedge attachment
- Small contact area
- Custom wedge angles and curvatures can be special ordered
- Manual or automated inspections



| Mates to case style | Wedge style | Order code | Shear wave carbon steel | A (mm) | B (mm) | C (mm) | D (mm) |
|---------------------|-------------|-------------|-------------------------|--------|--------|--------|--------|
| MSWS2 | W1 | 360-141-219 | 30-80 DG | 22.9 | 16.8 | 12.9 | - |
| MSWS2 | W2 | 118-340-028 | 45 DG | 15.2 | 12.7 | 6.7 | - |
| MSWS2 | W2 | 118-340-030 | 60 DG | 16.6 | 12.7 | 7.6 | - |
| MSWS2 | W2 | 118-340-032 | 70 DG | 18.5 | 12.7 | 8.2 | - |
| MSWS2 | W2 | 118-340-034 | 80 DG | 20.2 | 12.7 | 8.5 | - |
| MSWS2 | W3 | 118-340-036 | 90 DG | 15.2 | 12.7 | 8.6 | 17.4 |
| MSWS1 | W2 | 118-340-040 | 45 DG | 23.9 | 19.1 | 10.9 | - |
| MSWS1 | W2 | 118-340-042 | 60 DG | 26.7 | 19.1 | 12.6 | - |
| MSWS1 | W2 | 118-340-044 | 70 DG | 29.8 | 19.1 | 13.5 | - |
| MSWS1 | W2 | 118-340-046 | 80 DG | 32.4 | 19.1 | 14.0 | - |
| MSWS1 | W3 | 118-340-048 | 90 DG | 26.3 | 19.1 | 14.8 | 30.2 |

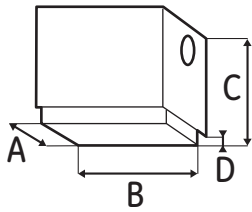
Integral wedge probes

Applications

- General weld inspection: MWB for small parts, SWB for thick parts
- Other applications where conventional MWB or SWB probes are in use

Features

- Easy transfer from conventional to phased array inspection
- Durable and ergonomically-designed, die-cast housing as known from conventional probes
- Existing mechanics and probe holders can be re-used
- Non-detachable wedges, no coupling loss between probe and wedge
- Replacement soles (sold separately) for extended service life



| Part number Phasor | Part number Hypertronics™ | Part number Omniscan™ | Probe Description | Aperture (mm) | Frequency (MHz) | Element Count | Pitch (mm) | Elevation (mm) | Cable (m) | Case Style | A (mm) | B (mm) | C (mm) | D (mm) |
|--------------------|---------------------------|-----------------------|-------------------|---------------|-----------------|---------------|------------|----------------|-----------|------------|--------|--------|--------|--------|
| 69141 | 69732 | 69730 | MWB2PA16 | 8.0 x 9.0 | 2 | 16 | 0.5 | 9.0 | 2.0 | MWB | 14.0 | 24.0 | 22.0 | 2.0 |
| 69142 | 69733 | 69731 | MWB4PA16 | 8.0 x 9.0 | 4 | 16 | 0.5 | 9.0 | 2.0 | MWB | 14.0 | 24.0 | 22.0 | 2.0 |

| Part number Phasor | Part number Hypertronics™ | Part number Omniscan™ | Probe Description | Aperture (mm) | Frequency (MHz) | Element Count | Pitch (mm) | Elevation (mm) | Cable (m) | Case Style | A (mm) | B (mm) | C (mm) | D (mm) |
|--------------------|---------------------------|-----------------------|-------------------|---------------|-----------------|---------------|------------|----------------|-----------|------------|--------|--------|--------|--------|
| 69143 | 69738 | 69736 | SWB2PA16 | 14.0 x 14.0 | 2 | 16 | 0.9 | 14.0 | 2.0 | SWB | 22.0 | 37.0 | 31.0 | 3.0 |
| 69144 | 69739 | 69737 | SWB4PA16 | 14.0 x 14.0 | 4 | 16 | 0.9 | 14.0 | 2.0 | SWB | 22.0 | 37.0 | 31.0 | 3.0 |

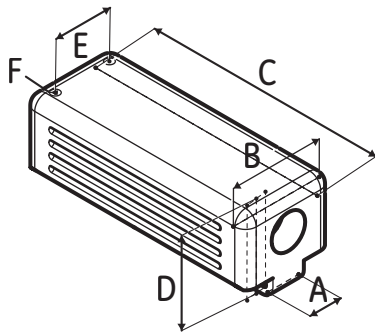
Corrosion probes

Applications

- Remaining wall thickness, corrosion, erosion
- Near surface flaw detection
- Bond testing

Features

- Amazing near surface resolution; 1.9 mm (0.075") on a #4 flat bottomed hole (1.5 mm / 0.062" diameter)
- Optimum test range 1.9 mm (0.075") to 25.4 mm (1") in steel
- Adjustable wear bars
- Available with 3 different connectors



| Part number Phasor | Part number Hypertronics™ | Part number Omniscan™ | Part number Mentor UT | Aperture (mm) | Frequency (MHz) | Element Count | Pitch (mm) | Elevation (mm) | Cable (m) | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F |
|--------------------|---------------------------|-----------------------|-----------------------|---------------|-----------------|---------------|------------|----------------|-----------|--------|--------|--------|--------|--------|--------|
| 115-100-020 | 115-120-020 | 115-130-020 | 115-110-020 | 48.0 x 10.0 | 5 | Dual 32 | 1.5 | 5.0 | 3.0 | 9.1 | 25.4 | 65.5 | 24.4 | 16.0 | M3X0.5 |
| 115-100-021 | 115-120-021 | 115-130-021 | 115-110-021 | 24.0 x 10.0 | 5 | Dual 32 | 0.8 | 5.0 | 3.0 | 9.1 | 25.4 | 41.0 | 24.4 | 16.0 | M3X0.5 |

Accessories for corrosion probes

Features

- Curved wear bars for alignment on curved pipe
- Flat wear bars for durability on flat plate
- Potted wear bars for flat or curved bars with fittings for couplant feed

Curved wear bars



Curved wear bars



Long flat wear bars



Flat ported wear bars



Curved ported wear bars

| Flat Wear Bars | Mate |
|----------------|---------------------------------------|
| 389-075-530 | 115-100-020, 115-120-020, 115-130-020 |
| 389-075-540 | 115-100-021, 115-120-021, 115-130-021 |

| Curved Wear Bars | Mate |
|------------------|---------------------------------------|
| 389-075-560 | 115-100-020, 115-120-020, 115-130-020 |
| 389-075-570 | 115-100-021, 115-120-021, 115-130-021 |

| Curved Ported Wear Bars | Mate |
|-------------------------|---------------------------------------|
| 389-077-160 | 115-100-020, 115-120-020, 115-130-020 |
| 389-077-150 | 115-100-021, 115-120-021, 115-130-021 |

| Flat Ported Wear Bars | Mate |
|-----------------------|---------------------------------------|
| 389-076-700 | 115-100-020, 115-120-020, 115-130-020 |
| 389-077-140 | 115-100-021, 115-120-021, 115-130-021 |

Composite inspection probes

RotoArray



Applications

- Primarily for the inspection of composite materials and structures
- Flaw detection and thickness measurement in a wide range of materials
- Inspection during manufacture as well as for in service inspection

Features

- Excellent acoustic performance
- Use in any attitude including overhead
- Transparent tire for easy bubble removal
- Unique encoder
- 3 popular connector options
- Owner serviceable
- Platform for future models

Standard 0–59 mm width array

The compact 51.2 mm RotoArray is designed for quick and easy scanning of a variety of different applications. Its small design allows it to be used in tight locations and its light weight and ergonomic design keeps the operator from becoming fatigued during long periods of use.

| Part number Phasor | Part number Hypertronics™ | Part number Omniscan™ | Coverage area (mm) | Frequency (MHz) | Pitch (mm) | Elements | Elevation (mm) | Focus | Cable (m) | Probe Offset (mm) |
|--------------------|---------------------------|-----------------------|--------------------|-----------------|------------|----------|----------------|-------|-----------|-------------------|
| 115-910-100 | 115-920-100 | 115-930-100 | 51.2 | 5 | 0.8 | 64 | 6.4 | Flat | 3.0 | 28.2 |
| 115-910-700 | 115-920-700 | 115-930-700 | 51.2 | 2.25 | 0.8 | 64 | 6.4 | Flat | 3.0 | 28.2 |

Standard 60–99 mm width array

The 81.3 mm RotoArray is currently our only standard offering in the 60–99 mm range. Its larger size makes it ideal for inspecting airframes and fuselages.

| Part number Phasor | Part number Hypertronics™ | Part number Omniscan™ | Coverage area (mm) | Frequency (MHz) | Pitch (mm) | Elements | Elevation (mm) | Focus | Cable (m) | Probe Offset (mm) |
|--------------------|---------------------------|-----------------------|--------------------|-----------------|------------|----------|----------------|-------|-----------|-------------------|
| 115-910-200 | 115-920-200 | 115-930-200 | 81.3 | 5 | 1.3 | 64 | 8.0 | Flat | 3.0 | 28.2 |
| 115-910-750 | 115-920-750 | 115-930-750 | 81.3 | 2.25 | 1.3 | 64 | 8.0 | Flat | 3.0 | 28.2 |

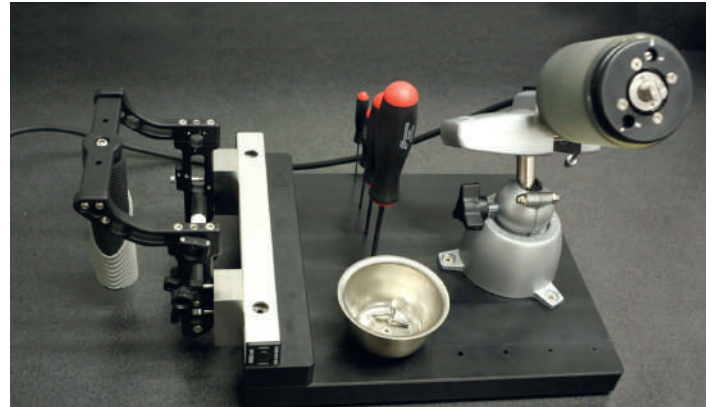
Accessories for RotoArray

Included Accessories



- The accessories included with the RotoArray allow for full functionality, and help to keep it maintained and functioning.

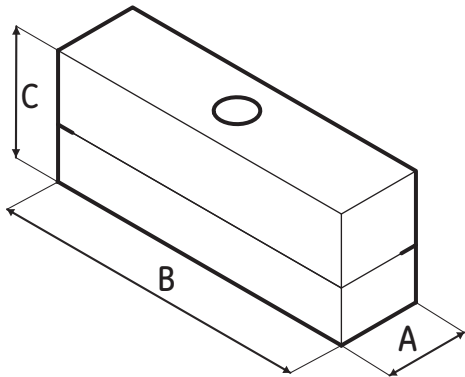
Optional Accessories



- The optional accessories are highly recommended for the RotoArray and provide an ease of maintenance, verification, and use.
- The comprehensive RotoArray Service Station is one of the most useful accessories allowing users to minimize downtime by carrying out any necessary repairs and maintenance on a customized workbench fitted with all the necessary tools.

| | Included / Optional Accessories | Part Numbers | 115-910-100 | 115-920-100 | 115-930-100 | 115-910-200 | 115-920-200 | 115-930-200 |
|-------------------------------------|---|--|----------------|-------------------|-------------------|----------------|-------------------|-------------------|
| Encoder 3 meter cable to 7 pin Lemo | Included (if Yes) | 388-000-506 | YES | YES | YES | YES | YES | YES |
| Frame Assembly w/ handels | Included (if Yes) | | YES | YES | YES | YES | YES | YES |
| 3 switch assembly w/ 3meter lemo | Included (if Yes) | 388-000-500 | NO | YES | YES | NO | YES | YES |
| Fluid fill bottle assembly | Included (if Yes) | 389-079-240 | YES | YES | YES | YES | YES | YES |
| Couplant spray bottle | Included (if Yes) | 021-265-015 | YES | YES | YES | YES | YES | YES |
| Propylene Glycol 1Qt | Included (if Yes) | 111-200-559 | YES | YES | YES | YES | YES | YES |
| RotoArray tool kit | Included (if Yes) | 388-000-502 | YES | YES | YES | YES | YES | YES |
| RotoArray spare parts kit | Included (if Yes) | 388-000-503 | YES | YES | YES | YES | YES | YES |
| Case | Included (optional large or small) | Small= 021-026-099 Large= 021-026-354 | Small or large | Small or large | Small or large | Small or large | Small or large | Small or large |
| Adapter cable | Included (if Yes) (optional DBHD or Fisher) | DBHD= 388-000-501 Fisher= 388-000-525 | NO | DBHD-15 or Fisher | DBHD-15 or Fisher | NO | DBHD-15 or Fisher | DBHD-15 or Fisher |
| Tire change station | Optional | 389-079-390 | Optional | Optional | Optional | Optional | Optional | Optional |
| Ergonomic water sprayer | Optional | 021-265-020 | Optional | Optional | Optional | Optional | Optional | Optional |
| Demo block kit | Optional | 389-081-400 | Optional | Optional | Optional | Optional | Optional | Optional |

Water wedge probes



Applications

- Composite inspection
- Bubbler applications where water is an issue

Features

- Probes use hardwater delay* to minimize water required for coupling
- Delay acoustically matched to water to minimize the water to delay interface
- Available with 3 different connectors

*Hardwater delay is a material applied to the face of the probe that is non-removable.

Main benefits:

- Acoustically matches water to minimize interface echo.
- Improves near surface resolution.
- Decreases operating gain and frequency. (5MHz design frequency operates at approximately 2.6MHz)

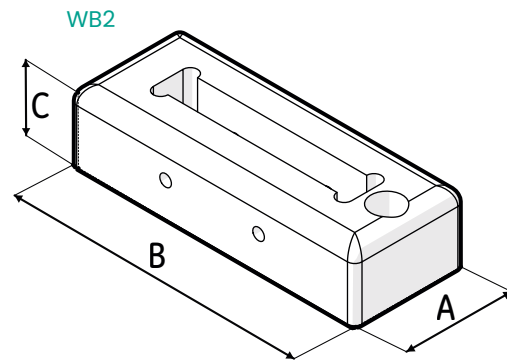
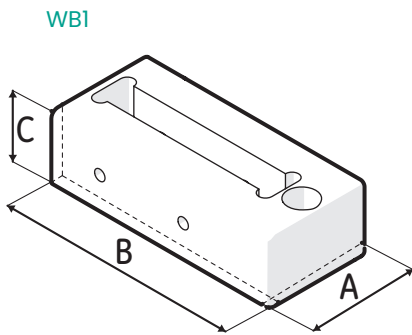
| Part number Phasor | Part number Hypertronics™ | Part number Omniscan™ | Aperture (mm) | Frequency (MHz) | Element Count | Pitch (mm) | Elevation (mm) | Cable (mm) | A (mm) | B (mm) | C (mm) |
|--------------------|---------------------------|-----------------------|---------------|-----------------|---------------|------------|----------------|------------|--------|--------|--------|
| 115-100-027 | 115-120-027 | 115-130-027 | 40.6 x 8.0 | 5 | 32 | 1.3 | 8.0 | 6.0 | 13.0 | 43.0 | 31.0 |
| 115-100-028 | 115-120-028 | 115-130-028 | 81.2 x 8.0 | 5 | 64 | 1.3 | 8.0 | 6.0 | 13.0 | 86.0 | 31.0 |

Accessories for hardwater probes



Features

- Bubbler fixture for automated or hand scanning
- Available with or without encoder
- Applies 0.050" water coupling to hardwater probe



| Part Number | Waterbox | Description | Mating Probe | A (mm) | B (mm) | C (mm) |
|-------------|----------|---|---|--------|--------|--------|
| 022-509-571 | WB1 | Waterbox with side mount encoder module | Hardwater Probe, 115-100-028, 115-120-028, 115-130-028 | 48.0 | 106.0 | 31.0 |
| 389-064-070 | WB2 | Waterbox, no encoder | | 48.0 | 125.0 | 31.0 |
| 389-074-200 | WB2 | Waterbox with mini encoder | | | | |

Immersion probes

Applications

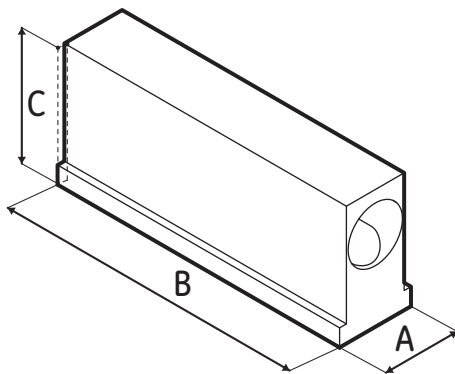
- Composite plate inspection
- Immersion scanning area coverage
- Plates, billets and bars
- Disks, axles and shafts
- Large area scanning

Features

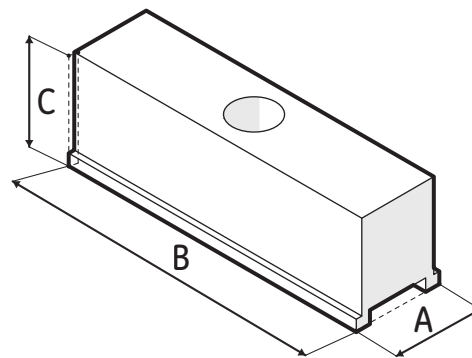
- Acoustically matched for best efficiency in water
- Fixture mountable
- Fast inspection of large areas
- Waterproof design
- Near wall design allows close access to edge of case (~1 mm)
- 6 meter cable



IM2 & IM3



INW2



| Part number Phasor | Part number Hypertronics™ | Part number Omniscan™ | Aperture (mm) | Frequency (MHz) | Element Count | Pitch (mm) | Elevation (mm) | Cable (m) | Case style | A (mm) | B (mm) | C (mm) |
|--------------------|---------------------------|-----------------------|---------------|-----------------|---------------|------------|----------------|-----------|------------|--------|--------|--------|
| 115-100-035 | 115-120-035 | 115-130-035 | 64.0 x 7.0 | 3.5 | 64 | 1.0 | 7.0 | 6.0 | INW2 | 19.0 | 65.9 | 22.0 |
| 115-100-036 | 115-120-036 | 115-130-036 | 64.0 x 7.0 | 5 | 64 | 1.0 | 7.0 | 6.0 | INW2 | 19.0 | 65.9 | 22.0 |
| N/A | 115-120-031 | 115-130-031 | 76.8 x 10.0 | 5 | 128 | 0.6 | 10.0 | 6.0 | IM2 | 21.0 | 83.0 | 35.0 |
| N/A | 115-120-032 | 115-130-032 | 64.0 x 7.0 | 10 | 128 | 0.5 | 7.0 | 6.0 | IM2 | 21.0 | 83.0 | 35.0 |
| N/A | 115-120-033 | 115-130-033 | 96.0 x 12.0 | 2.25 | 128 | 0.8 | 12.0 | 6.0 | IM3 | 21.0 | 102.0 | 35.0 |
| N/A | 115-120-034 | 115-130-034 | 96.0 x 10.0 | 5 | 128 | 0.8 | 10.0 | 6.0 | IM3 | 21.0 | 102.0 | 35.0 |

Thin plate inspection probes

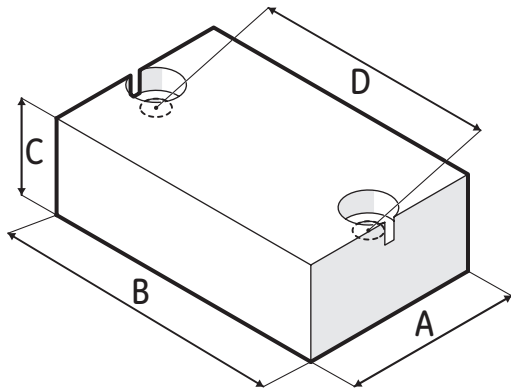
Typical Applications

- Thin Plate, near surface defects, small defects

Advantages

- High frequency highly damped arrays for near surface inspections
- Acoustically matched to water/delay material
- Waterproof design

Delay Line

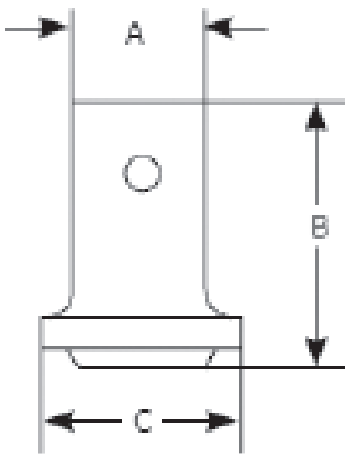


| Part number Phasor | Part number Hypertronics™ | Part number Omniscan™ | Aperture (mm) | Frequency (MHz) | Element Count | Pitch (mm) | Elevation (mm) | Cable (m) | Case Style | A (mm) | B (mm) | C (mm) | D (mm) | E |
|--------------------|---------------------------|-----------------------|---------------|-----------------|---------------|------------|----------------|-----------|------------|--------|--------|--------|--------|--------|
| 115-100-025 | 115-120-025 | 115-130-025 | 16.0 x 10.0 | 10 | 32 | 0.5 | 10.0 | 3.0 | HRD1 | 23.8 | 38.5 | 25.4 | 32.2 | M3X0.5 |
| 115-100-026 | 115-120-026 | 115-130-026 | 32.0 x 10.0 | 10 | 64 | 0.5 | 10.0 | 3.0 | HRD1 | 23.8 | 54.5 | 25.4 | 48.2 | M3X0.5 |

| Removable Delay Line (included with transducer) | A (mm) | B (mm) | C (mm) | D (mm) | Transducer number |
|---|--------|--------|--------|--------|---------------------------------------|
| 387-007-296 (12.7 mm length) | 23.8 | 38.5 | 12.7 | 32.2 | 115-100-025, 115-120-025, 115-130-025 |
| 387-007-295 (12.7 mm length) | 23.8 | 54.5 | 12.7 | 48.2 | 115-100-026, 115-120-026, 115-130-026 |

Bolt inspection probes

- Straight beam contact phased array probes
- For the detection of defective areas in threaded bolts
- High quality inspection and probability of detection
- Reduce construction failures and potential liability
- Protective membrane for steady coupling on rough surfaces
- Available with different connectors



| Part Number Phasor | Part Number Mentor | Part Number Hypertronics | Part Number Omnicscan | Probe Description | Frequency (MHz) | Element Count | Pitch (mm) | Elevation (mm) | Cable (m) | Case Style | A (mm) | B (mm) | C (mm) |
|--------------------|--------------------|--------------------------|-----------------------|-------------------|-----------------|---------------|------------|----------------|-----------|------------|--------|--------|--------|
| 0069805 | 0600416 | 0069894 | 0069888 | B2S PA16 | 2 | 16 | 1.5 | 24 | 3 | B S | 30 | 59 | 45 |
| 0069806 | 0600417 | 0069895 | 0069889 | B4S PA16 | 4 | 16 | 1.5 | 24 | 3 | B S | 30 | 59 | 45 |
| 0069905 | 0600418 | 0069909 | 0069907 | MB2S PA16 | 2 | 16 | 0.63 | 10 | 3 | MB S | 20 | 43 | 25 |
| 0069906 | 0600419 | 0069910 | 0069908 | MB4S PA16 | 4 | 16 | 0.63 | 10 | 3 | MB S | 20 | 43 | 25 |

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