ndtXducer

Ultrasonic Transducers

Transducers, sensors, accessories

Angle Beam
Contact
Delay Line
High Frequency
Immersion
Needle
Shear Wave
Accessories

Welcome to ndtXducer

Precision in Ultrasonic Transducers and Accessories

At ndtXducer, we pride ourselves on manufacturing high-quality ultrasonic transducers and accessories that meet the rigorous demands of today's industry standards. Our comprehensive catalog features a wide array of standard transducers, each meticulously designed and crafted to ensure top-notch performance and reliability.

Custom Solutions for Unique Needs

We understand that every application is unique, and sometimes standard transducers may not fit your specific requirements. Our dedicated engineering team specializes in developing and designing custom transducers tailored to your exact needs. Whether you require modifications to existing models or entirely new designs, we are here to provide innovative solutions.

Why Choose ndtXducer?

Industry-Leading Quality: Our transducers are produced with precision and care, adhering to the highest industry standards.
Extensive Range: From standard models to specialized units, our catalog offers a variety of options to suit diverse applications.
Expert Engineering: Our experienced engineers are adept at creating custom transducers to meet specialized demands.
Technical Support: We offer comprehensive technical information and expert advice to help you select the right transducer for your needs.

Contact Us for Customized Solutions

If you need more technical information or advice on transducer selection, please do not hesitate to contact us. Our team is ready to assist you in finding or developing the perfect ultrasonic transducer for your application.

Explore Our Catalog

Discover the full range of precision ultrasonic transducers designed and manufactured by ndtXducer. Our commitment to quality and innovation ensures that we provide products that meet and exceed your expectations.

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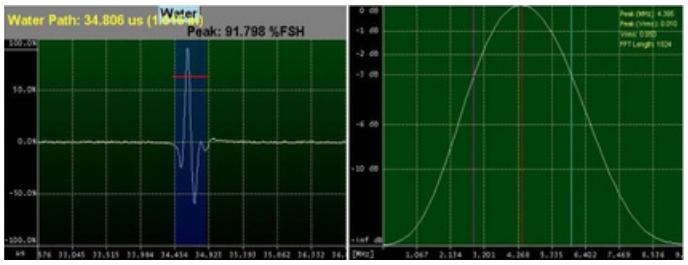
Transducer Selection

ndtXducer® offers three performance styles of transducers: **R**, **G** and **P**. To better determine which of these performance styles is best for your application please read our technical information on this page or contact us. Transducer certification with real time waveform and frequency certification is included with every transducer at no charge.

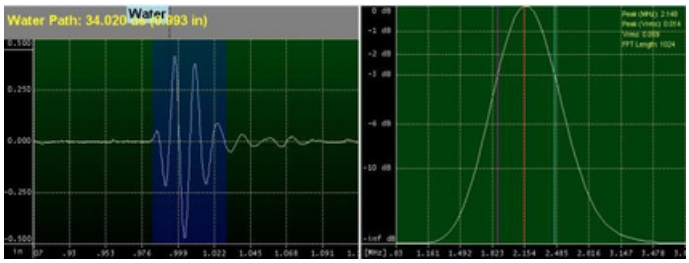
R-style performance:

- Recommended for applications where resolutions is necessary.
- Broadband, with typical 6dB bandwidths range 50%-100%.
- Gain usually lower than that of other three performance styles.
- Suitable for applications such as thickness measurements and near surface flaw detection



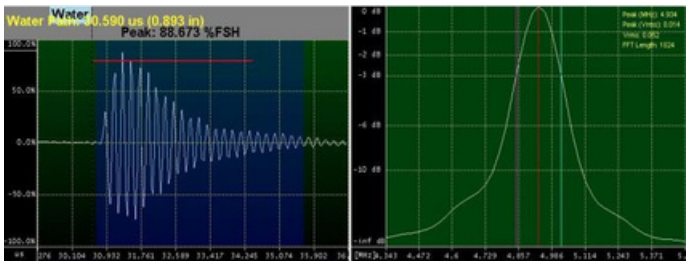
G-style performance:

- Recommended for general purpose applications
- Medium bandwidth, with typical range 30% - 50%
- Optimum combination of gain and resolution



P-style performance:

- Provides maximum penetration for highly attenuative materials
- Narrow bandwidth, with typical range 10% - 30%



Frequency Color Coding

For easy identification of frequency where possible our transducers are codded as follows:

Frequency in MHz	0.5	1	2.25	3.5	5	7.5	10
Color	Yellow	Brown	Red	Orange	Green	Blue	Black

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Angle Beam Transducers

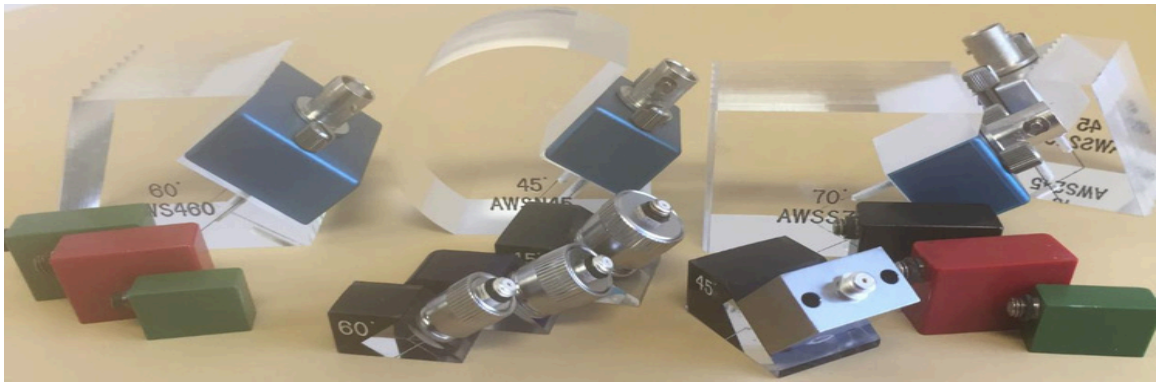
The Angle Beam Transducer is designed for ultrasonic non-destructive testing (NDT), offering precise flaw detection in materials with challenging geometries, such as welds and thick components. By emitting sound waves at an angle—typically 45°, 60°, or 70°—it excels in identifying subsurface defects that would be missed by normal incidence testing.

Key Features

- **Customizable Angles:** Available in standard beam angles (45°, 60°, 70°) for optimal inspection of various materials and weld geometries.
- **High Sensitivity:** Detects small defects with excellent resolution, ensuring reliable and accurate test results.
- **Durable Construction:** Built for use in harsh industrial environments, offering robust performance with minimal maintenance.
- **Adherence to Industry Standards:** Transducers and wedges use industry accepted hole spacing

Benefits for Your Applications

- **Efficient Weld Inspection:** Easily detect flaws like cracks, lack of fusion, and porosity in welds.
- **Versatility:** Suitable for various material thicknesses and types, from metals to composites.
- **Cost-Effective:** Reduces downtime with quick inspections and high reliability, minimizing the need for repeated tests or repairs.
- **Custom modifications available**



Angle Beam Transducers

AT-Style Angle Beam Transducers

AT-style is designed for quick change option for transducers and wedges and for limited access areas or thin material testing.

- Knurled stainless steel case with top Microdot connector
- Top Microdot connector
- Thread size compatible with many other brands

Frequency (MHz)	Element Diameter (inch)	Element Diameter (mm)	Part Number
1	0.25"	6	AT012
1	0.375"	10	AT013
1	0.5"	13	AT014
2.25	0.25"	6	AT022
2.25	0.375"	10	AT023
2.25	0.5"	13	AT024
3.5	0.25"	6	AT032
3.5	0.375"	10	AT033
3.5	0.5"	13	AT034
5	0.25"	6	AT052
5	0.375"	10	AT053
5	0.5"	13	AT054
7.5	0.25"	6	AT072
10	0.25"	6	AT102

Element Size	45°	60°	70°	90°
0.25"	AWT24	AWT26	AWT27	AWT29
0.375"	AWT34	AWT36	AWT37	AWT39
0.5"	AWT44	AWT46	AWT47	AWT49

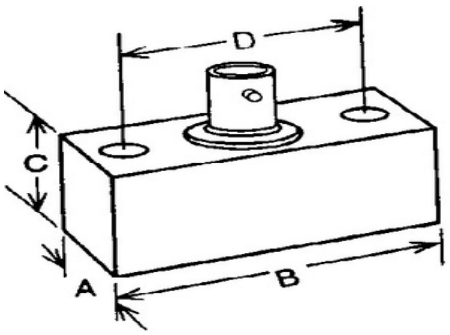
Angle Beam Transducers

AS-Style Angle Beam Transducers

AS-style or standard angle beam transducers and wedges are designed to introduce refracted shear wave from longitudinal wave into a test material by the use of proper wedge.

- Captive screwes included with every transducer
- Top BNC connector is standard

Frequency (MHz)	Element Diameter (inch)	Part Number
0.5	0.5" x 0.5"	AS0.544
0.5	0.5" x 1.0"	AS0.548
0.5	1.0"	AS0.58
1.0	0.5" x 0.5"	AS0144
1.0	0.5" x 1.0"	AS0148
1.0	1.0"	AS018
2.25	0.5" x 0.5"	AS0244
2.25	0.5" x 1.0"	AS0248
2.25	1.0"	AS028
5.0	0.5" x 0.5"	AS0544
5.0	0.5" x 1.0"	AS0548
5.0	1.0"	AS058



Element Size	A	B	C	D
1.0"	1.25	1.65	0.63	1.38
0.5" x 1.0"	0.73	1.53	0.63	1.53
0.5"	0.72	1.02	0.63	0.81
AW	1.0	1.47	0.75	1.0

Angle Beam Transducers

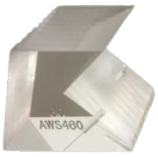
AW-Style Angle Beam Transducers

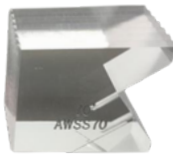
AW-style transducers and wedges confirm to AWS Code Section D1.1 and they are offered with snail or serrated wedges.

- Captive screwes included with every transducer
- Top BNC connector is standard
- Wedge included

Frequency (MHz)	Element Size (inch)	Transducer Part Number
2.25	0.625" x 0.625"	AW255
2.25	0.625" x 0.75"	AW256
2.25	0.75" x 0.75"	AW266

Refracted Angle	AWS Serrated Wedge	AWS Snail Wedge
45°	AWS45	AWSN45
60°	AWS60	AWSN60
70°	AWS70	AWSN70



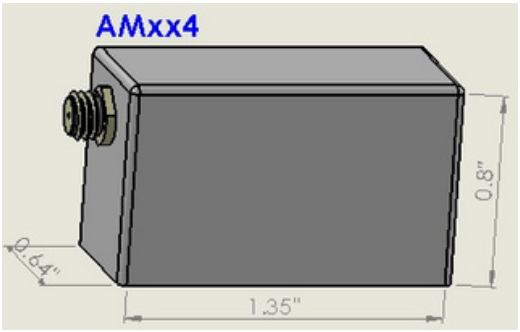


Angle Beam Transducers

Angle Beam Transducer Styles

AM-style or miniature angle beam transducers are designed to introduce refracted shear wave from longitudinal wave into a test material by the use of proper wedge. Their main application is inspection of welds for flows with suitable orientation.

- Work with most commercially available flaw detectors.
- Small dimensions make these an ideal choice for limited access applications
- Side Microdot connector is standard



Frequency (MHz)	Element Size	45°	60°	70°	90°
2.25	0.25x0.25" 6x6mm	AM224	AM226	AM227	AM229
2.25	0.5x0.5" 13x13mm	AM244	AM246	AM247	AM249
5.0	0.25x0.25" 6x6mm	AM524	AM526	AM527	AM529
5.0	0.5x0.5" 13x13mm	AM544	AM546	AM547	AM549

Contact Transducers

ndtXducer® single element contact longitudinal wave transducers are used for general purpose manual ultrasonic inspection where test material is relatively flat and smooth. Contact transducers provide high sensitivity for better penetration and are ruggedly constructed for extended life service under the roughest testing conditions

Contact transducers are widely used for direct coupling to the surface of a material without the need for an immersion medium. They are ideal for general-purpose ultrasonic testing, including flaw detection, thickness measurements, and material characterization.

Key Features

- **Direct Application:** Designed for hands-on contact with test materials, minimizing setup time.
- **Wide Frequency Range:** Available in frequencies from 1 MHz to 10 MHz, allowing flexibility based on inspection needs.
- **Rugged Durability:** Built to withstand frequent use in industrial environments with strong wear-resistant materials.
- **Interchangeable Wear Plates:** Easy to maintain, ensuring longer service life.

Benefits for Your Applications

- **Versatile Testing:** Suitable for a variety of materials like metals, plastics, and composites.
- **Quick Setup:** Efficient for field testing where fast deployment is crucial.
- **Cost-Effective:** Reduces the need for additional couplants or immersion tanks.

Ideal for:

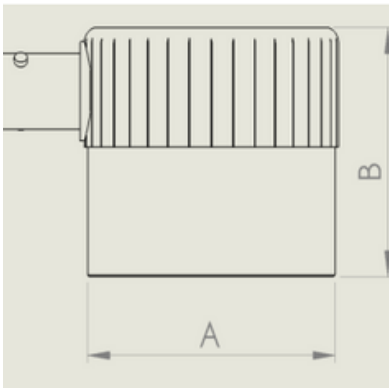
- Flaw detection in welds, pipelines, and structural materials.
- Measuring thickness in corrosion monitoring and quality control applications.

Contact Transducers

Contact Transducer Styles

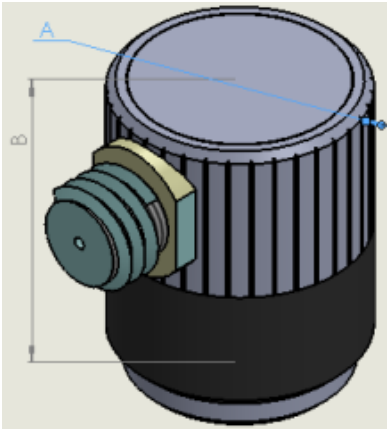
CB-style Contact Transducers
Large diameter single element longitudinal wave transducer for direct contact with test material. Use for inspection of plates, bars, billets, castings, forgings as well as a variety of other metallic and non-metallic materials.

- Knurled stainless steel case with side BNC connector.
- Designed for rugged industrial applications.
- Compatible with most commercial flaw detectors.
- Custom modifications available.



CM-style Contact Transducers
Small diameter, single element longitudinal wave transducer used for direct contact with test material. Used for flaw detection and sizing, material characterization and sound velocity measurements.

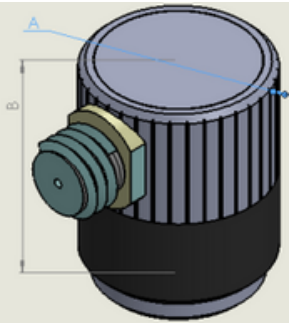
- Knurled stainless steel case with Microdot connector
- Noise reduction sleeve
- Small size is ideal for inspection in limited access areas
- Custom modifications available



CM- Style Transducer Specifications

Small diameter, single element longitudinal wave transducer used for direct contact with test material. Used for flaw detection and sizing, material characterization and sound velocity measurements.

Frequency (MHz)	Element Diameter (inch)	Element Diameter (mm)	G-style	R-style
0.5	0.5"	13	CMG0.54	CMR0.54
1	0.25"	6	CMG012	CMR012
1	0.375"	10	CMG013	CMR013
1	0.5"	13	CMG014	CMG014
2.25	0.25"	6	CMG022	CMR022
2.25	0.375"	10	CMG023	CMR023
2.25	0.5"	13	CMG024	CMR024
2.25	0.75"	19	CMG026	CMR026
3.5	0.25"	6	CMG032	CMR032
3.5	0.375"	10	CMG033	CMR033
3.5	0.5"	13	CMG034	CMR034
3.5	0.75"	19	CMG036	CMR036
5	0.25"	6	CMG052	CMR052
5	0.375"	10	CMG053	CMR053
5	0.5"	13	CMG054	CMR054
5	0.75"	19	CMG056	CMR056
7.5	0.25"	6	CMG072	CMR072
7.5	0.375"	10	CMG073	CMR073
7.5	0.5"	13	CMG074	CMR074
7.5	0.75"	19	CMG076	CMR076
10	0.25"	6	CMG102	CMR102
10	0.375"	10	CMG103	CMR103
10	0.5"	13	CMG104	CMR104

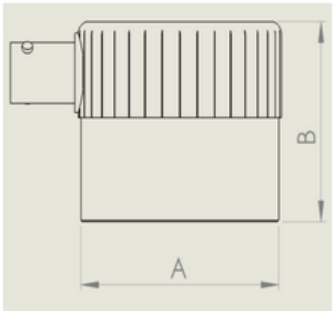


Element Size	A	B
0.125" 3mm	0.25"	0.40"
0.25" 6mm	0.42"	0.55"
0.375" 10mm	0.54"	0.55"
0.5" 13mm	0.70"	0.63"
0.75" 19mm	0.96"	0.63"
1.0" 25mm	1.24"	0.63"

CB- Style Transducer Specifications

Large diameter single element longitudinal wave transducer for direct contact with test material. Use for inspection of plates, bars, billets, castings, forgings as well as a variety of other metallic and non-metallic materials.

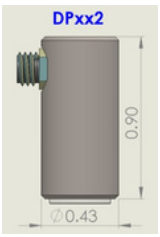
Frequency (MHz)	Element Diameter (inch)	Element Diameter (mm)	G-style	P-style
0.1	1.25"	32	CBG0.110	CBP0.110
0.1	1.5"	38	CBG0.112	CBP0.112
0.2	1.25"	32	CBG0.210	CBP.210
0.25	1.5"	38	CBG0.212	CBP0.212
0.5	1.0"	25	CBG0.58	CBP0.58
0.5	1.25"	32	CBG0.510	CBP0.510
0.5	1.5"	38	CBG0.512	CBP0.512
1	0.5"	13	CBG014	CBP014
1	0.75"	19	CBG016	CBP016
1	1.0"	25	CBG018	CBP018
1	1.25"	32	CBG0110	CBP0110
1	1.5"	38	CBG0112	CBP0112
2.25	0.5"	13	CBG024	CBP024
2.25	0.75"	19	CBG026	CBP026
2.25	1.0"	25	CBG028	CBP028
2.25	1.25"	32	CBG0210	CBP0210
2.25	1.5"	38	CBG0212	CBP0212
3.5	0.5"	13	CBG034	CBP034
3.5	0.75"	19	CBG036	CBP036
3.5	1.0"	25	CBG038	CBP038
5	0.5"	13	CBG054	CBP054
5	0.75"	19	CBG056	CBP056
5	1.0"	25	CBG058	CBP058

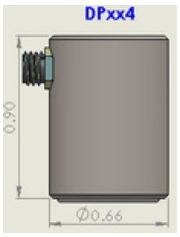


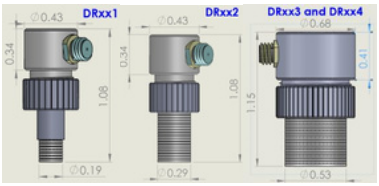
Element Size	A	B
0.5" 13mm	0.74"	1.25"
0.75" 19mm	0.98"	1.25"
1.0" 25mm	1.24"	1.25"
1.25" 32mm	1.46"	1.25"
1.5" 38mm	1.74"	1.25"

Delay Line Transducers

DP, DR-style Delay Line Transducers This transducer type is designed for applications such as high precision thickness gauging of thin materials, flaw detection and delamination checks in composite materials.







- Stainless steel case with side Microdot connector
- Small size is ideal for inspection in limited access areas
- Available high temperature and dry delay lines
- Delay lines can be machined to desired curvature

Frequency (MHz)	Element Diameter (inch)	Element Diameter (mm)	DP-style	DR-style
1	0.5"	13	DP014	DR014
2.25	0.25"	6	DP022	DR022
2.25	0.5"	13	DP024	DR024
3.5	0.25"	6	DP032	DR032
3.5	0.5"	13	DP034	DR034
5	0.25"	6	DP052	DR052
5	0.5"	13	DP054	DR054
10	0.25"	6	DP072	DR072
10	0.5"	13	DP074	DR074
15	0.125"	3	DP151	DR151
15	0.25"	6	DP152	DR152
20	0.125"	3	DP201	DR201
20	0.25"	6	DP202	DR202
25	0.125"	3	DP251	DR251
25	0.25"	6	DP252	DR252

High Frequency Transducers

At ndtXducer we manufacture the highest quality high frequency ultrasonic transducers for your applications. We offer both contact and immersion, focused and unfocused style transducers up to 200 MHz.

In addition to our standard catalog items we can custom design a transducer to meet your specific requirements. With more than 25 years of custom design experience we can solve and manufacture to meet your unique needs and requests. Please contact our design team to see how we can help you solve your specific design needs.

Key Features

- **High Frequency Range:** Up to 200 MHz, suitable for advanced applications requiring precision and detail.
- **Versatile Designs:** Available in both contact and immersion types, with options for focused and unfocused transducers.
- **Custom Solutions:** Over 25 years of custom design expertise, offering tailored solutions to meet specific application needs.

Benefits for Your Applications

- **Superior Accuracy:** Ideal for measuring extremely thin materials and detecting near-surface flaws with pinpoint precision.
- **High-Resolution Imaging:** Perfect for acoustic microscopy and material analysis, providing detailed results even in complex applications.
- **Adaptability:** Custom transducer designs ensure that unique requirements are met efficiently, allowing for specialized and flexible use cases.

Ideal for:

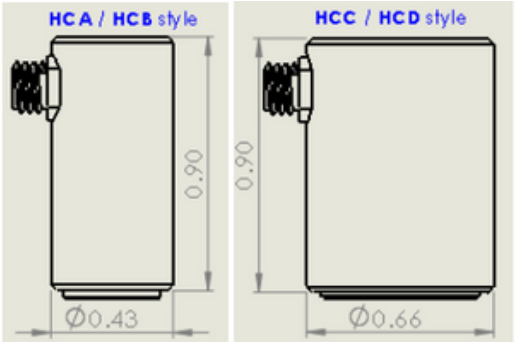
- **Thin Material Thickness Measurements:** Suited for materials requiring high precision, such as foils or coatings.
- **Near-Surface Flaw Detection:** Effective for detecting defects close to the surface in critical components.
- **Acoustic Microscopy:** Perfect for both material analysis and inspection in research and industrial applications.
- **Non-Metallic Coatings:** Excellent for evaluating very thin coatings in a variety of materials.

High Frequency Transducers

HC-Style High Frequency Transducers

HC-style, High Frequency Contact Transducers

- High frequency contact transducers with integral delay line useful for thickness gauging and near surface flaw detection
- Delay Time 2.5us and 4.25us is standard
- Side Microdot connector is standard



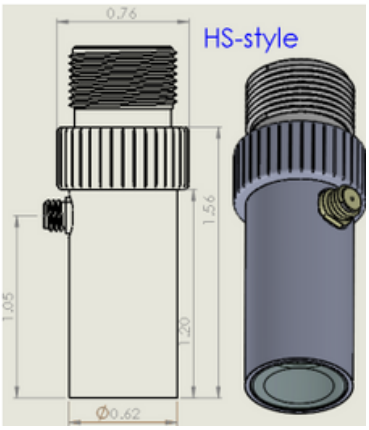
Frequency (MHz)	Element Diameter (mm)	2.5us	4.25us
20	6	HCA206	HCB206
30	6	HCA306	HCB306
50	6	HCA506	HCB506
75	6	HCA756	HCB756
100	3	HCA1003	HCB1003
125	2	HCA1252	HCB1252
150	1	HCA1501	HCB1501
200	1	HCA2001	HCB2001

High Frequency Transducers

HS-Style High Frequency Transducers

HS-style, High Frequency Standard Case Style Transducers

- High Frequency Immersion transducers with integral delay line are useful for thickness gauging and near surface flaw detection
- Available as Flat or Focused with optically ground lens Delay Time 2.5us and 4.25us is standard
- Active side Microdot connector with passive UHF for mounting is standard, other connectors or configurations are optional



Frequency (MHz)	Element Diameter (mm)	Delay (us)	Focal Length (mm)	Part Number
20	6	2.5	51	HSA206-51
20	6	4.25	51	HSB206-51
20	6	2.5	32	HSA206-32
20	6	4.25	32	HSB206-32
20	6	2.5	19	HSA206-19
20	6	4.25	19	HSB206-19
20	6	2.5	12	HSA206-12
20	6	4.25	12	HSB206-12
30	6	4.25	12	HSB306-12
50	6	4.25	12	HSB506-12
75	6	4.25	12	HSB756-12
100	3	4.25	12	HSB1003-12

High Frequency Transducers

HM High Frequency Transducer Styles

HM-style, High Frequency Immersion Transducers

- High Frequency Immersion transducers with integral delay line useful for acoustic microscopy applications
- Available as Flat or Focused with optically ground lens
- Delay Time 9.5us is standard. Ask us about custom options
- Active side Microdot connector with passive UHF for mounting is standard, other connectors or configurations are optional

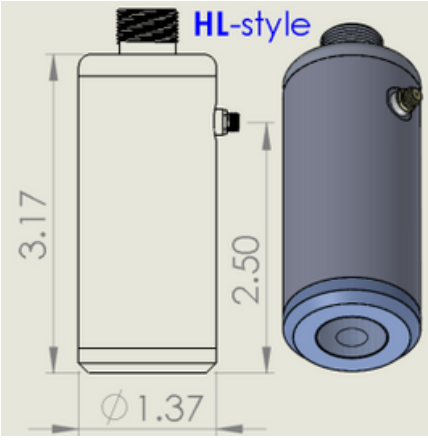
Frequency (MHz)	Element Diameter (mm)	Delay (us)	Focal Length (mm)	Part Number
35	6	10	25	HM35-25
35	6	10	12	HM35-12
50	6	10	12	HM50-12
75	6	10	12	HM75-12
100	3	10	8	HM100-8
150	2	10	8	HM150-8
200	1	10	8	HM200-8
150	2	10	3	HM150-3
200	1	10	3	HM200-3
200	1	10	2	HM200-2

High Frequency Transducers

HL High Frequency Transducer Styles

HL-style, High Frequency Immersion Transducers
High Frequency Immersion transducers with integral delay line useful for acoustic microscopy and material analysis applications

- Available as Flat or Focused with optically ground lens
- Delay Time 19.5us is standard. Ask us about custom options
- Active side Microdot connector with passive UHF for mounting is standard, other connectors or configurations are optional



Frequency (MHz)	Element Diameter (inch/mm)	Delay (us)	Focal Length (inch/mm)	Part Number
50	0.25" 6mm	19.5	2.0" 51mm	HL50-51
50	0.25" 6mm	19.5	1.25" 32mm	HL50-32
50	0.25" 6mm	19.5	1.0" 25mm	HL50-25
50	0.25" 6mm	19.5	0.75" 19mm	HL50-19
50	0.25" 6mm	19.5	0.5" 13mm	HL50-13
50	0.25" 6mm	9.4	0.2" 5mm	HLSW50-5
75	0.25" 6mm	19.5	0.75" 19mm	HL75-19
75	0.25" 6mm	19.5	0.5" 13mm	HL75-13
100	2mm	19.5	0.5" 13mm	HL100-13
100	0.25" 6mm	9.4	0.2" 5mm	HLSW100-5
100	2mm	19.5	0.125" 3mm	HL100-3

Immersion Transducers

Key Features

- **Water-Coupled Operation:** Designed for use in liquid environments, allowing consistent and efficient sound transmission.
- **High Frequency Range:** Available in a broad range of frequencies, offering precision for both shallow and deep penetration tests.
- **Customizable Focus:** Available in focused and unfocused configurations, enabling optimal adaptation for different material inspections.
- **Durable Build:** Constructed to resist corrosion and wear, ensuring longevity in both lab and industrial environments.

Benefits for Your Applications

- **Enhanced Accuracy:** The immersion method ensures uniform sound transmission, leading to more accurate and repeatable results.
- **Versatile Application:** Suitable for testing a wide range of materials, from thin coatings to large, complex shapes, without the need for direct contact.
- **Custom Design Options:** Tailored solutions are available to meet specific testing requirements, ensuring transducers match your exact needs.

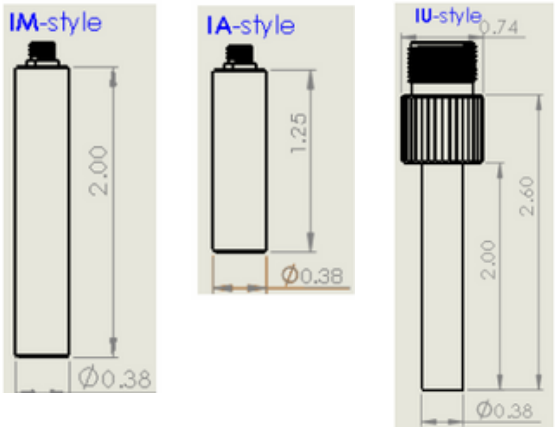
Ideal for:

- **Non-Contact Testing:** Ideal for delicate or small components where contact might damage the material or affect the results.
- **Complex Geometry Inspection:** Great for testing parts with intricate shapes or surfaces that would be difficult to couple with contact transducers.
- **Material and Flaw Detection:** Used in both industrial and research applications to evaluate material properties and detect defects such as cracks, voids, and inclusions.

Immersion Transducers

IM and IU-style Immersion Transducers
Our IM and IU case design focused and unfocused style transducers ranging from 1MHz to 25MHz and from 0.125" to 0.25" diameter fit for especially hard to reach applications.

- Small diameter stainless steel case for hard to reach areas
- Available with ¼" and 1/8" element diameters
- Top Microdot connector is standard for 'IM'-style and UHF connector for 'IU'-style
- Consult us for available design changes



IM (Immersion Transducer Body)

- Design: IM transducers are designed for use in a water bath or other liquid coupling medium. They typically have a smooth, cylindrical body to prevent water ingress and ensure consistent sound transmission through the coupling medium.
- Application: These transducers are widely used in non-contact testing, where water acts as a coupling agent between the transducer and the test object. This allows for even sound wave transmission, making them ideal for inspecting complex shapes and delicate surfaces.
- Body Structure: IM transducers are often made from materials resistant to corrosion and wear from water exposure, with no contact with the material being tested.

IU (Integral Ultrasound Transducer Body)

- Design: IU transducers are designed for direct contact applications, where the transducer is placed directly on the test material. They feature a more robust housing, often with a protective wear face to handle the physical contact with surfaces.
- Application: Used for contact testing, where the transducer must be pressed directly against the material. IU transducers are typically used with a couplant (like gel or grease) to facilitate sound transmission.
- Body Structure: The design includes a built-in wear plate or protective layer to ensure durability during repeated contact testing, making them more resistant to wear and tear.

Immersion Transducers

IM-Style Immersion Transducers

Frequency (MHz)	Element Diameter (inch/mm)	G-style	R-style	P-style
1.0	0.25" 6mm	IMG012	IMR012	IMP012
2.25	0.25" 6mm	IMG022	IMR022	IMP022
3.5	0.25" 6mm	IMG032	IMR032	IMP032
5.0	0.25" 6mm	IMG051	IMR051	IMP051
5.0	0.125" 3mm	IMG052	IMR052	IMP052
7.5	0.125" 3mm	IMG071	IMR071	IMP071
7.5	0.25" 6mm	IMG072	IMR072	IMP072
10.0	0.125" 3mm	IMG101	IMR101	IMP101
10.0	0.25" 6mm	IMG102	IMR102	IMP102
15.0	0.125" 3mm	IMG151	IMR151	IMP151
15.0	0.25" 6mm	IMG152	IMR152	IMP152
20.0	0.125" 3mm	IMG201	IMR201	IMP201
20.0	0.25" 6mm	IMG202	IMR202	IMP202
25.0	0.125" 3mm	IMG251	IMR251	IMP251
25.0	0.25" 6mm	IMG252	IMR252	IMP252

IU-Style Immersion Transducers

Frequency (MHz)	Element Diameter (inch/mm)	G-style	R-style	P-style
1.0	0.25" 6mm	IUG012	IUR012	IUP012
2.25	0.25" 6mm	IUG022	IUR022	IUP022
3.5	0.25" 6mm	IUG032	IUR032	IUP032
5.0	0.25" 6mm	IUG051	IUR051	IUP051
5.0	0.125" 3mm	IUG052	IUR052	IUP052
7.5	0.125" 3mm	IUG071	IUR071	IUP071
7.5	0.25" 6mm	IUG072	IUR072	IUP072
10.0	0.125" 3mm	IUG101	IUR101	IUP101
10.0	0.25" 6mm	IUG102	IUR102	IUP102
15.0	0.125" 3mm	IUG151	IUR151	IUP151
15.0	0.25" 6mm	IUG152	IUR152	IUP152
20.0	0.125" 3mm	IUG201	IUR201	IUP201
20.0	0.25" 6mm	IUG202	IUR202	IUP202
25.0	0.125" 3mm	IUG251	IUR251	IUP251
25.0	0.25" 6mm	IUG252	IUR252	IUP252

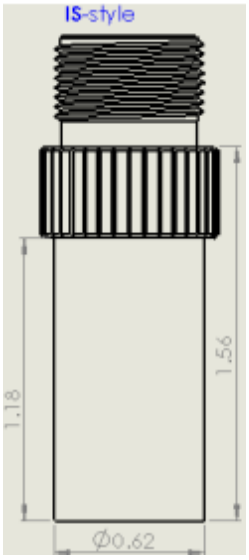
Immersion Transducers

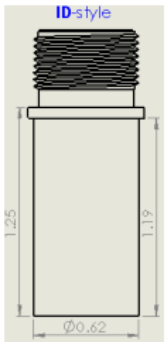
IS-Immersion Transducer Styles

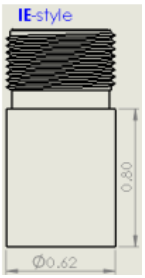
IS-style Immersion Transducers Our IS-style single element focused and unfocused style transducers from 0.5MHz to 25MHz and for 0.25" - 0.25" diameter commonly used for thickness gauging, automated scanning, and material analysis.

- Corrosion resistant knurled stainless steel case
- Top UHF connector is standard
- Consult us for available design changes

Frequency (MHz)	Element Diameter (inch/mm)	G-style	R-style	P-style
0.5	0.5" 13mm	ISG0.54	ISR0.54	ISP0.54
1	0.5" 13mm	ISG014	ISR014	ISP014
2.25	0.25" 6mm	ISG022	ISR022	ISP022
2.25	0.375" 10mm	ISG023	ISR023	ISP023
2.25	0.5" 13mm	ISG024	ISR024	ISP024
3.5	0.25" 6mm	ISG032	ISR032	ISP032
3.5	0.375" 10mm	ISG033	ISR033	ISP033
3.5	0.5" 13mm	ISG034	ISR034	ISP034
5	0.25" 6mm	ISG052	ISR052	ISP052
5	0.375" 10mm	ISG053	ISR053	ISP053
5	0.5" 13mm	ISG054	ISR054	ISP054
7.5	0.25" 6mm	ISG072	ISR072	ISP072
7.5	0.375" 10mm	ISG073	ISR073	ISP073
7.5	0.5" 13mm	ISG074	ISR074	ISP074
10	0.25" 6mm	ISG102	ISR102	ISP102
10	0.375" 10mm	ISG103	ISR103	ISP103
10	0.5" 13mm	ISG104	ISR104	ISP104
15	0.25" 6mm	ISG152	ISR152	ISP152
15	0.375" 10mm	1SG153	1SR153	1SP153
15	0.5" 13mm	ISG154	ISR154	ISP154
20	0.25" 6mm	ISG202	ISR202	ISP202
25	0.25" 6mm	ISG252	ISR252	ISP252







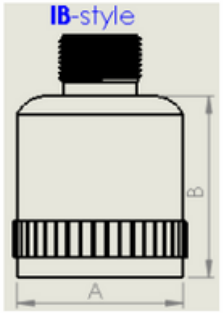
Immersion Transducers

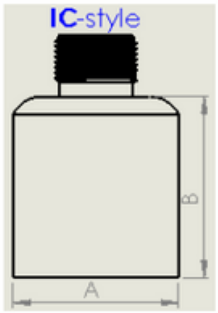
IB Immersion Transducer Styles

IB-style Immersion Transducers
Our IB-style singe element focused and unfocused style transducers from 0.5MHz to 10MHz and 0.75" to 1.5" diameter with increased scanning index and near field length, great for automated scanning and material analysis.

- Corrosion resistant knurled stainless steel case
- Top UHF connector is standard
- Lower frequencies and bigger aperture designs available for demanding applications
- Consult us for available design changes

Frequency (MHz)	Element Diameter (inch/mm)	G-style	R-style	P-style
0.5	0.75" 19mm	IBG0.56	IBR0.56	IBP0.56
0.5	1.0" 25mm	IBG0.58	IBR0.508	IBP0.58
0.5	1.25" 32mm	IBG0.510	IBR0.510	IBP0.510
0.5	1.5" 38mm	IBG0.512	IBR0.512	IBP0.512
1	0.75" 19mm	IBG016	IBR016	IBP016
1	1.0" 25mm	IBG018	IBR018	IBP018
1	1.25" 32mm	IBG0110	IBR0110	IBP0110
1	1.5" 38mm	IBG0112	IBR0112	IBP0112
2.25	0.75" 19mm	IBG026	IBR026	IBP026
2.25	1.0" 25mm	IBG028	IBR028	IBP028
2.25	1.25" 32mm	IBG0210	IBR0210	IBP0210
2.25	1.5" 38mm	IBG0212	IBR0212	IBP0212
3.5	0.75" 19mm	IBG036	IBR036	IBP036
3.5	1.0" 25mm	IBG038	IBR038	IBP038
3.5	1.25" 32mm	IBG0310	IBR0310	IBP0310
3.5	1.5" 38mm	IBG0312	IBR0312	IBP0312
5	0.75" 19mm	IBG056	IBR056	IBP056
5	1.0" 25mm	IBG058	IBR058	IBP058





IB Case Dimensions		
Element Size (inch/mm)	**A (inch/mm)**	**B (inch/mm)**
0.75" 19mm	1.0" 25mm	1.38" 35mm
1.0" 25mm	1.25" 32mm	1.38" 35mm
1.25" 32mm	1.5" 38mm	1.38" 35mm
1.5" 38mm	1.8" 46mm	1.38" 35mm

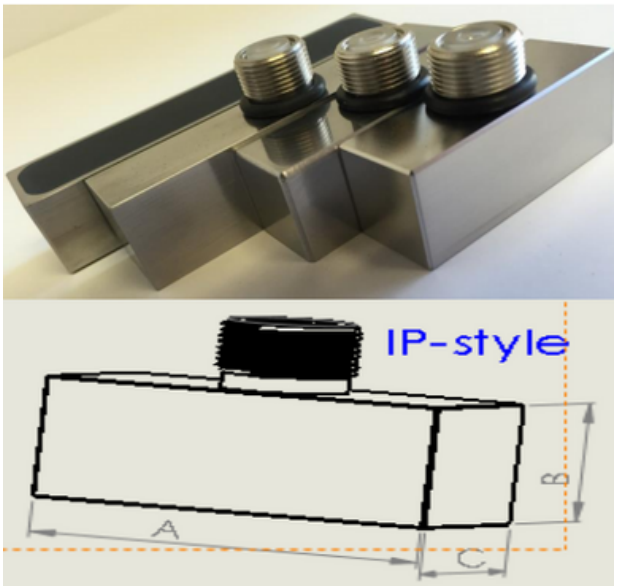
Immersion Transducers

IPB Immersion Transducer Styles

IPB style Immersion transducers Our IP-style singe element focused and unfocused ‘paintbrush’ style transducers from 2.25MHz to 10MHz and 1.5" to 3.0" long, offer increased scanning index for inspections of aluminum or steel plates.

- Corrosion resistant stainless steel case
- Top UHF connector is standard
- Sensitivity uniformity is maintained across the transducer lens
- Consult us for available design changes

Frequency (MHz)	Element Dimensions (inch/mm)	Part Number
1	1.5"x0.25" 38mmx6mm	IPB011
1	2.0"x0.25" 51mmx6mm	IPB012
1	3.0"x0.25" 76mmx6mm	IPB013
2.25	1.5"x0.25" 38mmx6mm	IPB021
2.25	2.0"x0.25" 51mmx6mm	IPB022
2.25	3.0"x0.25" 76mmx6mm	IPB023
3.5	1.5"x0.25" 38mmx6mm	IPB031
3.5	2.0"x0.25" 51mmx6mm	IPB032
3.5	3.0"x0.25" 76mmx6mm	IPB033
5	1.5"x0.25" 38mmx6mm	IPB051
5	2.0"x0.25" 51mmx6mm	IPB052
5	3.0"x0.25" 76mmx6mm	IPB053
7.5	1.5"x0.25" 38mmx6mm	IPB071
7.5	2.0"x0.25" 51mmx6mm	IPB072
7.5	3.0"x0.25" 76mmx6mm	IPB073
10	1.5"x0.25" 38mmx6mm	IPB101
10	2.0"x0.25" 51mmx6mm	IPB102
10	3.0"x0.25" 76mmx6mm	IPB103



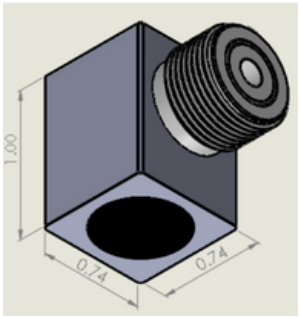
Element Size (inch/mm)	A (inch/ mm)	B (inch/ mm)	C (inch/ mm)
1.5" x 0.25" 38mm x 6mm	2.00" 51mm	0.82" 21mm	0.75" 19mm
2.0" x 0.25" 51mm x 6mm	2.50" 64mm	0.82" 21mm	0.75" 19mm
3.0" x 0.25" 76mm x 6mm	3.50" 89mm	0.82" 21mm	0.75" 19mm

Immersion Transducers

IR Immersion Transducer Styles

IR-style immersion transducers are the optimum choice for direct right angle beam applications, including thru-transmission, inside diameters, bore holes and other limited access situations.

- Available in a wide range of frequencies and sizes.
- Right angle IR-style transducers fit standard STA-style search tubes, eliminating the need for right angle adapters or reflectors.



Frequency (MHz)	Element Diameter (inch/mm)	G-style	R-style	P-style
0.5	0.5" 13mm	IRG0.54	IRR0.54	IRP0.54
1	0.5" 13mm	IRG014	IRR014	IRP014
2.25	0.25" 6mm	IRG022	IRR022	IRP022
2.25	0.375" 10mm	IRG023	IRR023	IRP023
2.25	0.5" 13mm	IRG024	IRR024	IRP024
3.5	0.25" 6mm	IRG032	IRR032	IRP032
3.5	0.375" 10mm	IRG033	IRR033	IRP033
3.5	0.5" 13mm	IRG034	IRR034	IRP034
5	0.25" 6mm	IRG052	IRR052	IRP052
5	0.375" 10mm	IRG053	IRR053	IRP053
5	0.5" 13mm	IRG054	IRR054	IRP054
7.5	0.25" 6mm	IRG072	IRR072	IRP072
7.5	0.375" 10mm	IRG073	IRR073	IRP073
7.5	0.5" 13mm	IRG074	IRR074	IRP074
10	0.25" 6mm	IRG102	IRR102	IRP102
10	0.375" 10mm	IRG103	IRR103	IRP103
10	0.5" 13mm	IRG104	IRR104	IRP104
15	0.25" 6mm	IRG152	IRR152	IRP152
15	0.375" 10mm	IRG153	IRR153	IRP153
15	0.5" 13mm	IRG154	IRR154	IRP154
20	0.25" 6mm	IRG202	IRR202	IRP202
25	0.25" 6mm	IRG252	IRR252	IRP252

Needle Style Sensors

NM, NP and NC styles Needle Sensors

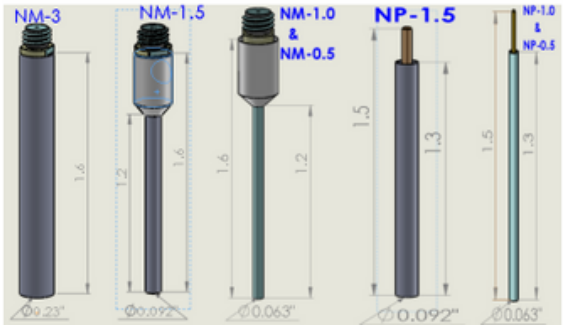
At ndtXducer® we manufacture miniature needle type sensors for industrial and laboratory use in ultrasonic and acoustic measurements. Sensors can be made with Microdot and Push-Pin connector, or with integral potted coaxial cable. All sensors are handmade, therefore there are always some variations between individual devices.

Applications

- ultrasonic measurements in solids, liquids and gasses
- calibration of reference standards
- cavitation measurements
- acoustic field mapping

Key Features

- flat sensitivity and good directivity
- rugged
- low cost
- stable parameters
- broadband
- range of apertures and connection styles
- maximum operating temperature 100°



Part Number	Aperture	Description
NM-0.5	0.5mm	Needle Probe 0.5mm with Microdot Connector
NM-1.0	1.0mm	Needle Probe 1.0mm with Microdot Connector
NM-1.5	1.5mm	Needle Probe 1.5mm with Microdot Connector
NM-3.0	3.0mm	Needle Probe 3.0mm with Microdot Connector
C213-1m	-	BNC-Microdot cable for all 'NM' models, 1m long
NP-1.0	1.0mm	Needle Probe 1.0mm with Pin Connector
NPC-1.0	-	BNC-Pin cable only for NP-1.0, 1m long
NP-1.5	1.5mm	Needle Probe 1.5mm with Pin Connector
NPC-1.5	-	BNC-Pin cable only for NP-1.5, 1m long
NC-1.0	1.0mm	Needle Probe 1.0mm with Cable, BNC, 1m Long
NC-1.5	1.5mm	Needle Probe 1.5mm with Cable, BNC, 1m Long

Shear Wave Transducers

These model transducers introduce shear waves directly into the test piece without the use of refraction. Generated shear wave propagate perpendicular to the test surface. Ratio of the longitudinal to shear wave component is very low. Direction of the shear wave polarization is normally in line with side connector, otherwise is marked

Key Features

- **Angular Sound Propagation:** Emits sound waves at precise angles (45°, 60°, 70°), ideal for inspecting welds and detecting subsurface defects.
- **High Sensitivity:** Offers excellent sensitivity to small, near-surface flaws, ensuring accurate detection in critical areas.
- **Mode Conversion:** Generates shear waves that travel perpendicular to the wave direction, enhancing defect detection in various orientations.
- **Durable Construction:** Built to endure harsh environments with rugged housing and protective wear plates for repeated use.

Benefits for Your Applications

- Shear wave velocity measurements
- Material characterization
- Calculation of Young's Modulus of elasticity and shear modulus

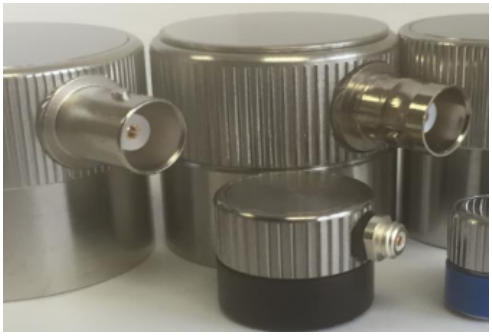
Ideal for:

- **Weld Inspection:** Perfect for detecting cracks, lack of fusion, and other defects in welded joints.
- **Flaw Detection in Metals:** Effective at identifying internal defects like voids, inclusions, and cracks in metals and other solid materials.
- **Pipe and Tubing Inspection:** Used to assess the structural integrity of pipelines and tubing in industries such as oil and gas.
- **Near-Surface Flaw Detection:** Best suited for detecting flaws located just beneath the surface of the material.

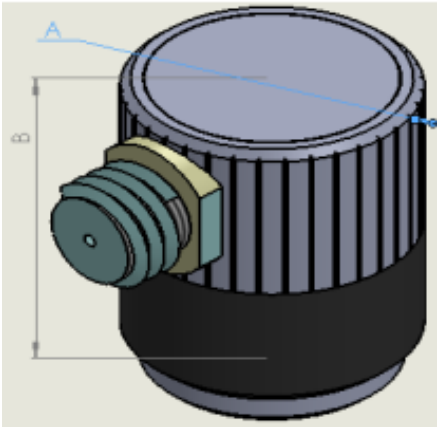
Shear Wave Transducers

SM-style Direct Shear Wave Transducers

- Knurled stainless steel case with side connector
- Proprietary wear resistive front plate increases durability
- SM-style with Microdot connector is ideal for limited access areas or smaller samples



Frequency (MHz)	Element Diameter (inch/mm)	Part Number
1	0.5" 13mm	SM014
2.25	0.25" 6mm	SM022
2.25	0.5" 13mm	SM024
5	0.125" 3mm	SM051
5	0.25" 6mm	SM052
5	0.5" 13mm	SM054



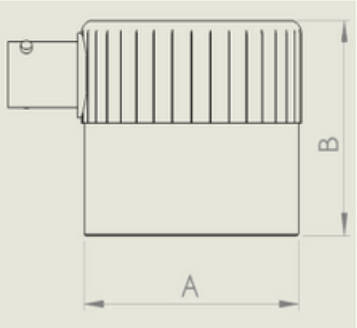
Element Size (inch/mm)	A (inch)	B (inch)
0.125" 3mm	0.25"	0.40"
0.25" 6mm	0.42"	0.55"
0.5" 13mm	0.70"	0.63"

SM Case Dimensions

Shear Wave Transducers

SB-style Direct Shear Wave Transducers

- Knurled stainless steel case with side connector
- Proprietary wear resistive front plate increases durability
- SB-style with BNC connector for lower frequencies and larger element diameters



Frequency (MHz)	Element Diameter (inch/mm)	Part Number
0.1	1.0" 25mm	SB0.18
0.2	1.0" 25mm	SB0.28
0.5	1.0" 25mm	SB0.58
1	0.5" 13mm	SB014
1	1.0" 25mm	SB018
2.25	0.5" 13mm	SB024
2.25	1.0" 25mm	SB028
5	0.5" 13mm	SB054
5	1.0" 25mm	SB058

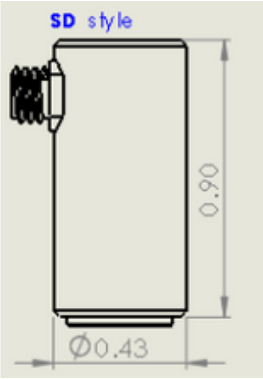
Element Size (inch/mm)	A (inch)	B (inch)
0.5" 13mm	0.74"	1.25"
1.0" 25mm	1.24"	1.25"

SB Case Dimensions

Shear Wave Transducers

SD-style Direct Shear Wave Transducers

- Integral Delay line allows to achieve higher frequencies
- Proprietary delay line material chosen to minimize attenuation
- SD-style with Microdot connector is standard



Frequency (MHz)	Element Diameter (inch/mm)	4us	7us
5	0.25" 6mm	SDS052	SDL052
10	0.25" 6mm	SDS102	SDL102
15	0.25" 6mm	SDS152	SDL152
20	0.25" 6mm	SDS202	SDL202
25	0.25" 6mm	SDS252	SDL252
30	0.25" 6mm	SDS302	SDL302

Transducer Accessories

At ndtXducer® we offer a complete selection of transducer cables, search tubes and adapters with most commonly used connections.

Cables are designed with reinforced connector-to-cable junctions for long service life.

Custom transducer cables and adapters are available upon request.

Part Number	Description
STA1	BNC Male/UHF Female
STA2	UHF Male/BNC Female
STA3	Lemo 1 Male/BNC Female
STA4	Lemo 1 Female/BNC Female
STA5	BNC Male/BNC Male
STA6	UHF Male/UHF Female @90Â°
STA7	UHF Male/Flange
STA8	BNC Tee Adaptor
STA9	Lemo 00 - BNC Female
STA10	BNC Female - BNC Female
STA11	UHF-Microdot (for Needle Sensors)
STA12	UHF-uDot @90Â°
STA13	UHF M/UHF F @90Â° with top Microdot
STA14	UHF-UHF with side uDot

Part Number	Length	Cable	Connectors
C212-6	6 ft	RG58	BNC - BNC
C212-12	12 ft	RG58	BNC - BNC
C221-6	6 ft	RG174	BNC - Microdot
C221-12	12 ft	RG174	BNC - Microdot
C222-6	6 ft	RG174	BNC - BNC
C222-6	12 ft	RG174	BNC - BNC
C213-6	6 ft	RG58	BNC - UHF
C213-12	12 ft	RG58	BNC - UHF
CW213-6	6 ft	RG58	Waterproof UHF - BNC
CW213-12	12 ft	RG58	Waterproof UHF - BNC
C313-6	6 ft	RG58	UHF - UHF
C313-12	12 ft	RG58	UHF - UHF
C216-6	6 ft	RG58	BNC - Lemo 1
C215-6	6 ft	RG58	BNC - Lemo 00
C626-6	6 ft	RG174	Lemo 1 - Lemo 1
C125-6	6 ft	RG174	Microdot - Lemo 00
C316	6 ft	RG58	UHF - Lemo 1
CW216-6	6 ft	RG58	UHF Waterproof - Lemo 1
C526-6	6 ft	RG174	Lemo 00/Lemo 1
C134-6"	6"	RG316DS	Microdot - SMA
C134-9"	9"	RG316DS	Microdot - SMA
C134-12"	12"	RG316DS	Microdot - SMA

Length	Connectors	Diameter	Part Number
2"	UHF - UHF	0.738" 18.75mm	STU2
3"	UHF - UHF	0.738" 18.75mm	STU3
4"	UHF - UHF	0.738" 18.75mm	STU4
6"	UHF - UHF	0.738" 18.75mm	STU6
8"	UHF - UHF	0.738" 18.75mm	STU8
12"	UHF - UHF	0.738" 18.75mm	STU12
18"	UHF - UHF	0.738" 18.75mm	STU18
24"	UHF - UHF	0.738" 18.75mm	STU24
32"	UHF - UHF	0.738" 18.75mm	STU32
36"	UHF - UHF	0.738" 18.75mm	STU36

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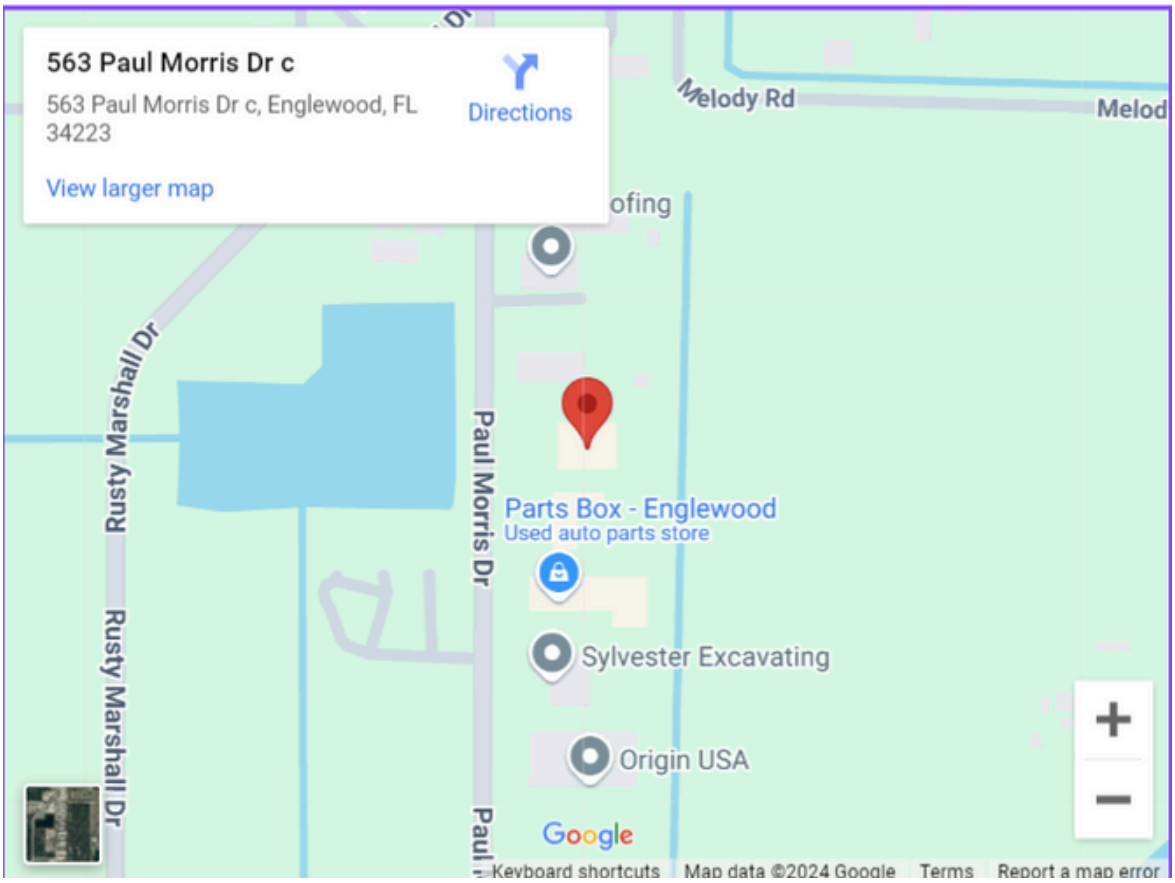

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