About the Company

Staveley Instruments is a US manufacturing company based in Kennewick, Washington producing a wide range of innovative NDT equipment and sensors. The company manufactures all the top names in NDT such as *Nortec, Sonic, CPX-160 X-Ray* and of course *Nortec* eddy current probes and *Harisonic* ultrasonic transducers. The latest technology is reflected in each product we produce, including the new *PowerLink*™ technology, which allows special programming features to be included on each probe and recalled when used with *Nortec PowerLink*™ compatible instruments.

Our products contribute to quality control and preventive maintenance which leads to cost reduction, improved material utilization and better overall results for our many customers throughout the world.

As part of a family of companies within Staveley NDT Technologies, we have connections throughout the world making us one of the largest NDT companies with global representation.

Staveley Instruments has representation throughout Europe and the United Kingdom, parts of Africa and the Far East including Japan and China, Australia and New Zealand as well as the US, Canada and Mexico.

With this international experience, Staveley Instruments has become more responsive and better able to meet the future challenges in NDT applications and the problems that you face today with testing, measurement and quality assurance.

Application Engineering Support

At Staveley Instruments we have engineering staff and application engineers on hand to assist you with all your NDT applications.

We also have a dedicated staff of Eddy Current Probe and Ultrasonic Transducer engineers to help you with all your sensor requirements, particularly if you require a product that must be specially engineered to your application.

Representation

Staveley Instruments is represented by a well trained team of experienced technical representatives, most of whom work directly for Staveley Instruments. Each representative is qualified to demonstrate our complete range of products, and assist customers with their application needs by helping them to select correct solutions.

Nortec Eddy Current Probes

PowerStation

WorkStation

Nortec® 3000

Nortec® 1000 Series

Nortec® 24

Nortec® 19ell

Probe Compatibility

Each page contains figures similar to those above. This represents which instruments the probes are primarily designed for.

Contents

Eddy Current Probe Selection

General Considerations

Like other non destructive testing methods, eddy current can perform a variety of tests depending on the type of probe being used. Optimal performance therefore is ensured by careful probe selection. This catalog offers information and specifications for selecting probes to meet your inspection requirements.

Instruments

Impedance Plane Display EC instruments take the greatest advantage of the many different probe designs available. Most can be used with bridge and reflection probe types, displaying phase and amplitude changes. Units featuring enhanced filtering, frequency range, sensitivity and recording should be considered for additional versatility.

Material and Test Requirements

The material for inspection often determines whether EC can be used or not. Nonmagnetic conductive material ranging from .6% IACS to 110% IACS offers the best opportunity for a successful EC test. Test criteria are based on penetration depth, sensitivity, signal to noise ratio and scan speed.

Detectable flaw size, resolution and accuracy requirements must also be determined. Eddy current is traditionally used to determine material thickness, non-conductive coating thickness, conductivity and plating measurement, and cracks. Crack detection of surface and subsurface flaws is the most popular application.

Frequency of the instrument and probe is decided by the material being inspected and the size of the defects requested for detection. The *Nortec EC Slide Rule* can be of assistance in defining this test parameter by calculating the best depth of penetration, flaw angle and frequency.

Probe Selection

Advanced eddy current inspection requires the use of many different coil configurations. Absolute and differential coils are available in both bridge and reflection designs. Depending on the test, some are very small in diameter and others can be quite large. A compromise is usually made to give the best depth of penetration, greatest sensitivity to the smallest defects, and smallest coil diameter.

In addition to coil size and frequency, the physical shape of a probe contributes to a successful EC test. Flaw location and part geometry determine whether a standard probe can be used or if a custom design is needed. Because the coil must pass over the flaw or be in close proximity to it, the probe body requires accurate geometric specifications.

Eddy Current Probe Design

Standard Probe designs

Cost, uniformity and availability make it desirable to use standard probes whenever possible. Many standard designs, with various frequencies, diameters and detection circuits are listed in this catalog.

Primary applications for standard probes:

Surface probes- are used for discovering flaws both on and below surfaces. Available in a broad frequency range, their diameters are usually large for accommodating lower frequencies or scanning large areas.

Pencil probes- have smaller diameter housing coils built for higher frequencies. Applications are usually limited to surface flaws because of higher frequency.

Right Angle Pencil Probes- reach areas inaccessible to pencil probes. They normally employ the same coils and frequencies as pencil probes.

Hand Held Bolt Hole Probes- have coils located at right angles to the probe direction, and are rotated by hand with the fastener removed. Standard and custom diameters are available with absolute and differential coils.

Scanner Driven Bolt Hole Probes- are used with mechanical devices for automatically rotating and Indexing into hole. Absolute and differential coils are common at higher frequencies of 500 kHz and 2 MHz. They bear close tolerances and are highly reliable.

Donut Probes- are designed to inspect aircraft fastener holes with fasteners in place, and can be used on uneven fastener holes. Various inside/outside diameters and frequencies for different size fasteners and differing materials are available.

Sliding Probes- are designed to inspect aircraft fastener holes with fasteners in place, at higher scan rates than donut probes. Common sizes and frequencies using the reflection coil techniques are often applied in major airframe inspection requirements.

ID Probes- usually have a frequency range of 5 kHz to 100 kHz made in absolute or differential configurations. Many body styles are available depending on the inside surfaces of tubes to be inspected. Most probe diameters are made to meet customers' requirements.

OD Probes- are usually designed for a frequency range of 5 kHz to 100 kHz and available in absolute, differential and switchable configurations. Tubes to be inspected are passed through the coil for absolute or differential flaw detection at high speeds.

Eddy Current Probe Design

Special Probe designs*

Probes are designed to meet customers' special requirements. The accuracy of a design is tested by placing a test coil over a defect through matching surfaces of the part and the EC probe.

Special configurations are used in many applications. The broadest range is employed in the inspection of aircraft engines and airframes. These are developed in cooperation with the customer and Staveley Instruments' designers.

Custom development is done routinely at Staveley Instruments. More than thirty years of experience in solving difficult problems maximizes the performance of instrument and probe. Our understanding of *Impedance Plane Analysis* and the performance of certain EC components, are a guide to expected results shown on an EC instrument like the *Nortec® 2000.* Impedance changes (Z=X+R) are direct results of changes in the inductive reactance or resistance of the EC field induced into a part. Both phase and amplitude changes are viewable on the instrument screen.

Coil configurations, diameter and frequency effect sensitivity, but calibration standards are also important to the success of the EC test. Calibration standards are usually based upon the material to be inspected containing known notches of minimum size for detection. These notches are made by EDM processing for best results, but a narrow saw cut is adequate in certain situations. Conductivity measurements can be certified to N.I.S.T.

* See last page cover for more information.

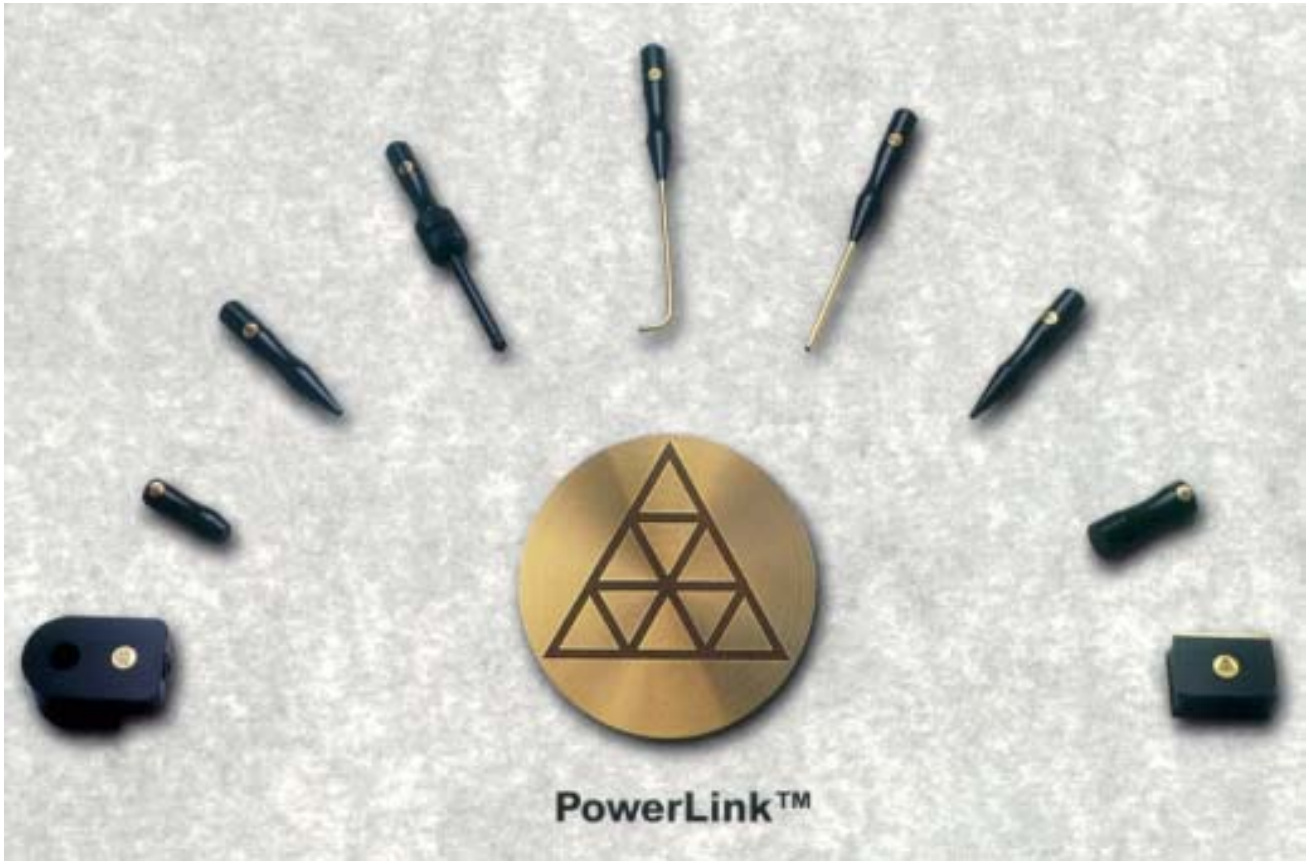
PowerLink™ Technology

Nortec® probes have always set the standard for **Performance, Repeatability** and **Quality.** The new generation of *Nortec® PowerLink™ Technology Sensors* continue to build on its reputation, now providing an additional "Value Added" capability when used on Staveley Instruments new line of eddy current instruments.

PowerLink™ Eddy Current Probes feature:

- Automatic probe setup including frequency, gain, filters, horizontal and vertical position, and alarm gates*.
- Common cable configuration allows both bridge and reflection probes to be operated with the same cable.
- Provides probe model number, serial number, screen data and space for comments on printout from Staveley's new eddy current instruments.
- Probes are backward compatible with earlier versions of Nortec® instruments, such as the NDT-19e and NDT-24, with the appropriate cable.
- Probes are capable of being reprogrammed as the need arises.
- PowerLink™ can be bypassed to allow the probe to be used for any applicable test.
- Level III programming (user programmable) supported in the *Nortec WorkStation and PowerStation* instrumentation.

**Any command featured in the instrument documentaion may be programmed into the Nortec PowerLink™ probes.*

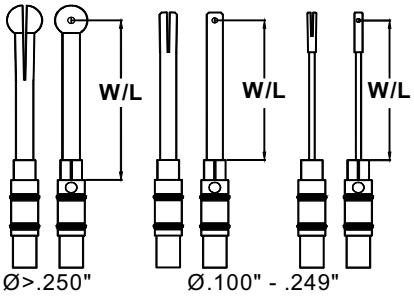


Rotating Scanner Probes

Bolt Hole Probes for Spitfire, MiniMite (4 pin Fischer), Hocking and Rohmann Scanners

SPO-5965 expanding probes have a long wearing plastic tip and stainless steel backshell. Probes are fitted with a 4 pin Fischer connector. These probes are similar to SPO-5000 probes but are expanded to their larger diameter. They are designed to allow the use of the same probe when holes are reamed to a larger diameter. They are also useful to check unusual hole sizes when a fixed size probe is unavailable.

These probes use a reflection differential type coil operating in the 500 kHz to 3 MHz range. This makes them suitable for aluminum structures as well as low conductivity materials. These probes are also available in kits.



SPO-5965

How to Order:

Provide part number, description and working length

Probe Description	Part Number	Working Length (W/L)
SPO-5965 .156-.187	9230061	1.75
SPO-5965 .187-.218	9219979	1.75
SPO-5965 .218-.250	9219980	2.00
SPO-5965 .250-.281	9219981	2.00
SPO-5965 .281-.312	9219982	2.00
SPO-5965 .312-.375	9219983	2.00
SPO-5965 .375-.437	9219978	2.00
SPO-5965 .437-.500	9219984	2.00
SPO-5965 .500-.562	9219985	2.00
SPO-5965 .562-.625	9230156	2.00
SPO-5965 .625-.687	9230157	2.00
SPO-5965 .687-.750	9230158	2.00
SPO-5965 .750-.812	9230159	2.00

Other diameters and working lengths available. Contact the Sensors department at Staveley Instruments for more information.

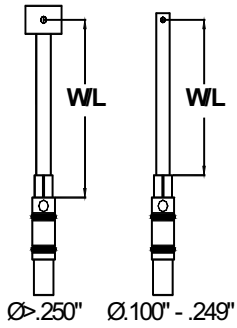
Rotating Scanner Probes

Bolt Hole Probes for Spitfire, MiniMite (4 pin Fischer), Hocking and Rohmann Scanners

SPO-5393 probes are a hybrid of the original RA probes and are fitted with a 4 pin Fischer connector.

These probes use a reflection differential type coil operating in the 500 KHz to 3 MHz range. This makes them suitable for aluminum structures as well as low conductivity materials.

The standard stock types are identified in fractions (1/2”). The actual probe size is diameter .010” (.25mm) below this size to provide clearance. Identify special orders with decimals (.505”). These probes will be made to the diameter ordered without under-sizing. The working length (WL) required should also be stated. These probes are also available in kits.



SPO-5393

How to Order:

Provide part number, description and working length

Probe Description	Part Number	Working Length
SPO-5393 5/32”	9219999	2.00
SPO-5393 3/16”	9220000	2.00
SPO-5393 7/32”	9230035	2.00
SPO-5393 1/4”	9219987	2.00
SPO-5393 9/32”	9219988	2.00
SPO-5393 5/16”	9219989	2.00
SPO-5393 11/32”	9219990	2.00
SPO-5393 3/8”	9219991	2.00
SPO-5393 13/32”	9219992	2.00
SPO-5393 7/16”	9219993	2.00
SPO-5393 1/2”	9219994	2.00
SPO-5393 9/16”	9219995	2.00
SPO-5393 5/8”	9219996	2.00
SPO-5393 11/16”	9219997	2.00
SPO-5393 3/4”	9219998	2.00

Other diameters and working lengths available. Contact the Sensors department at Staveley Instruments for more information.

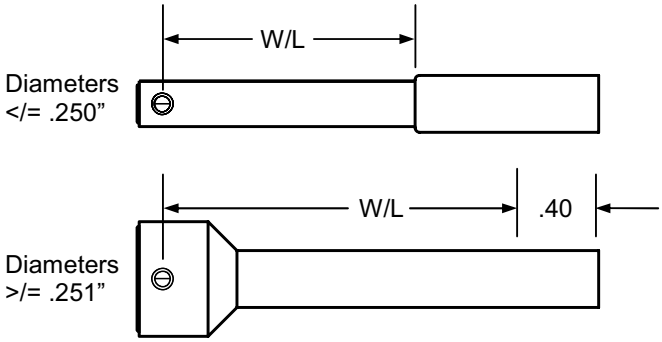
Rotating Scanner Probes

Bolt Hole Probes for RA19, RA2000 and MiniMite (4 pin Lemo) Hand Held Scanners

RA probes are made from durable stainless steel and are non-contact probes. Probes are fitted with a 4 pin Lemo connector.

These probes use a reflection differential type coil operating in the 500 KHz to 3 MHz range. This makes them suitable for aluminum structures as well as low conductivity materials.

The standard stock types are identified in fractions (1/2”). The actual probe size is diameter .010” (.25mm) below this size to provide clearance. Identify special orders with decimals (.500”) . These probes will be made to the diameter ordered without under-sizing. The working length (WL) required should also be stated. These probes are also available in kits.



RA PROBES

How to Order:

Provide part number, description and working length

Probe Description	Part Number	Probe Description	Part Number	Working Length (W/L)
RA-5/32S	9216290	RA-1/4S	9203484	0.25”
RA-5/16S	9203486			0.30”
RA-3/16	9203481	RA-1/4	9203483	1.10”
RA-7/32	9203482	RA-9/32	9216291	1.10”
RA-5/16	9203485	RA-11/32	9216292	1.50”
RA-3/8	9203487	RA-13/32	9216293	1.50”
RA-7/16	9203488	RA-1/2	9203489	1.50”
RA-9/16	9216294	RA-5/8	9203490	1.50”
RA-11/16	9216295	RA-3/4	9216296	1.50”

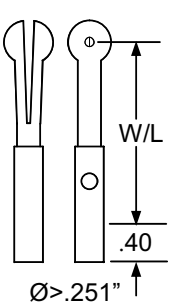
Other diameters and working lengths available. Contact the Sensors department at Staveley Instruments for more information.

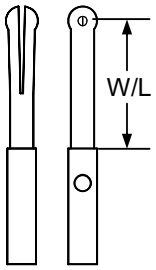
Rotating Scanner Probes

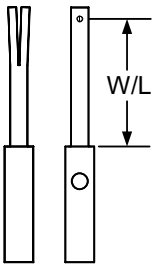
Bolt Hole Probes for RA19, RA2000 and MiniMite (4 pin Lemo) Hand Held Scanners

SPO-3564 expanding probes have a long wearing plastic tip and stainless steel backshell. Probes are fitted with a 4 pin Lemo connector. These are expandable to 20% above their nominal diameter. They are designed to allow the use of the same probe when holes are reamed to a larger diameter. They are also useful to check unusual hole sizes when a fixed size probe is unavailable.

These probes use a reflection differential type coil operating in the 500 KHz to 3 MHz range. This makes them suitable for aluminum structures as well as low conductivity materials. These probes are also available in kits.







SPO-3564

How to Order:

Provide part number, description and working length

Probe Description	Part Number	Working Length (W/L)
SPO-3564 .156-.187	9230078	1.10
SPO-3564 .187-.218	9217153	1.10
SPO-3564 .218-.250	9217154	1.10
SPO-3564 .250-.281	9217155	1.10
SPO-3564 .281-.312	9217156	1.50
SPO-3564 .312-.375	9217157	1.50
SPO-3564 .375-.437	9217158	1.50
SPO-3564 .437-.500	9217159	1.50
SPO-3564 .500-.562	9217160	1.50
SPO-3564 .562-.625	9218785	1.50
SPO-3564 .625-.687	9218786	1.50
SPO-3564 .687-.750	9218787	1.50
SPO-3564 .750-.812	9218788	1.50

Other diameters and working lengths available. Contact the Sensors department at Staveley Instruments for more information.

Rotating Scanner Probes

Special Scanner Probes for RA19, RA2000, and MiniMite (4 pin Lemo) Hand Held Scanners

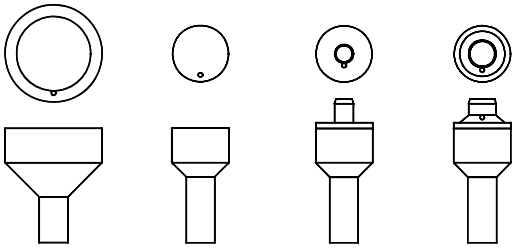
These probes are fitted with a 4 pin Lemo connector and RA style coils operating in the 500 KHz to 3 MHz range. This makes them suitable for first layer aluminum structures.

1. Surface Inspection Probes (raised head fasteners)- for inspecting the immediate area surrounding a raised head fastener.

2. Surface Inspection Probes– for use in detecting flaws emanating from under fastener heads. Inspection can be done with flush fasteners installed. Probe uses ball bearing guide for alignment.

3. Surface Inspection Probes (non countersink)- for inspecting the immediate area outside of a non countersink hole (fastener must be removed). All probes have a pilot shaft for ease in alignment. Five sizes are available.

4. Countersink Probes– for use in detecting flaws in countersinks with the fasteners removed. All probes are designed for the standard 100° countersink unless otherwise specified. All probes have a pilot shaft for ease in alignment. Five sizes are available.



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Special Probes

How to Order:

Provide part number, description.

Countersink	Part Number	Non-Countersink	Part Number
SPO-4031-5/32”	9216594	SPO-3986-5/32”	9216604
SPO-4031-3/16”	9216595	SPO-3986-3/16”	9216605
SPO-4031-7/32”	9216596	SPO-3986-7/32”	9216606
SPO-4031-1/4”	9216597	SPO-3986-1/4”	9216607
SPO-4031-5/16”	9216598	SPO-3986-5/16”	9216608

Surface Inspection	Part Number	Surface Inspection (Raised fastener)	Part Number
SPO-2906-(5/32 to 3/16”)	9216603	SPO-4308-5/32	9216602
SPO-4243-(3/16 to 7/32”)	9216599	SPO-4307-5/16	9216601

Rotating Scanner Probes

Special Scanner Probes for Spitfire, MiniMite (4 pin Fischer), Hocking and Rohmann Scanners.

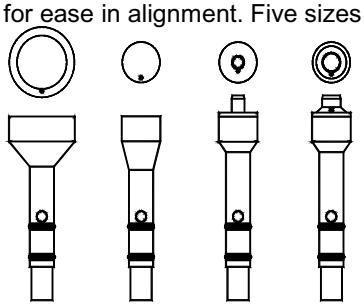
These probes are fitted with a 4 pin Fischer connector and RA style coils operating in the 500 KHz to 3 MHz range. This makes them suitable for first layer aluminum structures.

1. Surface Inspection Probes (raised head fasteners)- for inspecting the immediate area surrounding a raised head fastener.

2. Surface Inspection Probes– for use in detecting flaws emanating from under fastener heads. Inspection can be done with flush fasteners installed. Probe uses ball bearing guide for alignment.

3. Surface Inspection Probes (non countersink)- for inspecting the immediate area outside of a non countersink hole (fastener must be removed). All probes have a pilot shaft for ease in alignment. Five sizes are available.

4. Countersink Probes– for use in detecting flaws in countersinks with the fasteners removed. All probes are designed for the standard 100° countersink unless otherwise specified. All probes have a pilot shaft for ease in alignment. Five sizes are available.



1. 2. 3. 4.

Special Probes

How to Order:

Provide part number, description.

Countersink	Part Number	Non-Countersink	Part Number
SPO-5787-5/32”	9222381	SPO-5786-5/32”	9222386
SPO-5787-3/16”	9222382	SPO-5786-3/16”	9222387
SPO-5787-7/32”	9222383	SPO-5786-7/32”	9222388
SPO-5787-1/4”	9222384	SPO-5786-1/4”	9222389
SPO-5787-5/16”	9222385	SPO-5786-5/16”	9222390

Surface Inspection	Part Number	Surface Inspection (Raised fastener)	Part Number
SPO-6635-(5/32 to 3/16”)	9222391	SPO-5784-5/32	9222393
SPO-6636-(3/16 to 7/32”)	9222392	SPO-5785-5/16	9222394

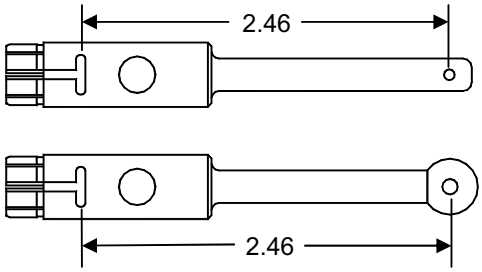
Rotating Scanner Probes

Bolt Hole Probes for Nortec® PS-5 Stainless Steel and Aluminum Scanners.

These probes are manufactured with a choice of bridge/absolute, bridge/differential or reflection/ differential coils in a variety of frequency ranges. They have a long wearing plastic expandable tip and stainless steel backshell. These probes are expandable to 20% above their nominal diameter. They are designed to allow the use of the same probe when holes are reamed to a larger diameter. They are also useful to check unusual hole sizes when a fixed size probe is unavailable.

Standard probes are available with a 1.5” working length, other working lengths and probe diameters are available.

These probes are also available in kits. The most popular kit is listed on page 14, other kits are available.



PS-5 Scanner Probes

How to Order:

Provide part number, description.

Description	Part Number	Description	Part Number	Description	Part Number
PS5/100KHZ-500KHZ/A.156	9217628	PS5/500KHZ-2MHZ/D.156	9217648	PS5/200KHZ-1MHZ/RD.156	9217569
PS5/100KHZ-500KHZ/A.187	9217629	PS5/500KHZ-2MHZ/D.187	9217520	PS5/200KHZ-1MHZ/RD.187	9217570
PS5/100KHZ-500KHZ/A.218	9217630	PS5/500KHZ-2MHZ/D.218	9217649	PS5/200KHZ-1MHZ/RD.218	9217571
PS5/100KHZ-500KHZ/A.250	9217631	PS5/500KHZ-2MHZ/D.250	9217521	PS5/200KHZ-1MHZ/RD.250	9217572
PS5/100KHZ-500KHZ/A.281	9217632	PS5/500KHZ-2MHZ/D.281	9217650	PS5/200KHZ-1MHZ/RD.281	9217573
PS5/100KHZ-500KHZ/A.312	9217633	PS5/500KHZ-2MHZ/D.312	9217522	PS5/200KHZ-1MHZ/RD.312	9217574
PS5/100KHZ-500KHZ/A.343	9217634	PS5/500KHZ-2MHZ/D.343	9217651	PS5/200KHZ-1MHZ/RD.343	9217575
PS5/100KHZ-500KHZ/A.375	9217635	PS5/500KHZ-2MHZ/D.375	9217523	PS5/200KHZ-1MHZ/RD.375	9217576
PS5/100KHZ-500KHZ/A.406	9217636	PS5/500KHZ-2MHZ/D.406	9217652	PS5/200KHZ-1MHZ/RD.406	9217577
PS5/100KHZ-500KHZ/A.437	9217637	PS5/500KHZ-2MHZ/D.437	9217524	PS5/200KHZ-1MHZ/RD.437	9217578
PS5/100KHZ-500KHZ/A.468	9217638	PS5/500KHZ-2MHZ/D.468	9217653	PS5/200KHZ-1MHZ/RD.468	9217579
PS5/100KHZ-500KHZ/A.500	9217639	PS5/500KHZ-2MHZ/D.500	9217525	PS5/200KHZ-1MHZ/RD.500	9217580
PS5/100KHZ-500KHZ/A.531	9217640	PS5/500KHZ-2MHZ/D.531	9217654	PS5/200KHZ-1MHZ/RD.531	9217581
PS5/100KHZ-500KHZ/A.562	9217641	PS5/500KHZ-2MHZ/D.562	9217526	PS5/200KHZ-1MHZ/RD.562	9217582
PS5/100KHZ-500KHZ/A.593	9217642	PS5/500KHZ-2MHZ/D.593	9217655	PS5/200KHZ-1MHZ/RD.593	9217583
PS5/100KHZ-500KHZ/A.625	9217643	PS5/500KHZ-2MHZ/D.625	9217527	PS5/200KHZ-1MHZ/RD.625	9217584
PS5/100KHZ-500KHZ/A.656	9217644	PS5/500KHZ-2MHZ/D.656	9217656	PS5/200KHZ-1MHZ/RD.656	9217585
PS5/100KHZ-500KHZ/A.687	9217645	PS5/500KHZ-2MHZ/D.687	9217657	PS5/200KHZ-1MHZ/RD.687	9217586
PS5/100KHZ-500KHZ/A.718	9217646	PS5/500KHZ-2MHZ/D.718	9217658	PS5/200KHZ-1MHZ/RD.718	9217587
PS5/100KHZ-500KHZ/A.750	9217647	PS5/500KHZ-2MHZ/D.750	9217528	PS5/200KHZ-1MHZ/RD.750	9217588

Rotating Scanner Probes

Bolt Hole Probe Kits for Nortec® PS-5 Stainless Steel and Aluminum Scanners.

PS-5 Scanner Probes

How to Order:
Provide part number, description.

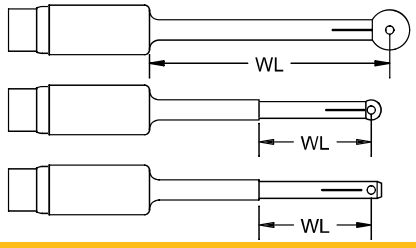
Probe Kit, PS5 AF Part Number 9217666 NSN 6635-01-415-9099	Probe Kit, PS5 Absolute Part Number 9230230	Probe Kit, PS5 Differential Part Number 9230231
PS5/200KHZ-1MHZ/RD.156	PS5/100KHZ-500KHZ/A.156	PS5/500KHZ-2MHZ/D.156
PS5/200KHZ-1MHZ/RD.187	PS5/100KHZ-500KHZ/A.187	PS5/500KHZ-2MHZ/D.187
PS5/200KHZ-1MHZ/RD.218	PS5/100KHZ-500KHZ/A.218	PS5/500KHZ-2MHZ/D.218
PS5/200KHZ-1MHZ/RD.250	PS5/100KHZ-500KHZ/A.250	PS5/500KHZ-2MHZ/D.250
PS5/200KHZ-1MHZ/RD.281	PS5/100KHZ-500KHZ/A.281	PS5/500KHZ-2MHZ/D.281
PS5/200KHZ-1MHZ/RD.312	PS5/100KHZ-500KHZ/A.312	PS5/500KHZ-2MHZ/D.312
PS5/200KHZ-1MHZ/RD.343	PS5/100KHZ-500KHZ/A.343	PS5/500KHZ-2MHZ/D.343
PS5/200KHZ-1MHZ/RD.375	PS5/100KHZ-500KHZ/A.375	PS5/500KHZ-2MHZ/D.375
PS5/200KHZ-1MHZ/RD.406	PS5/100KHZ-500KHZ/A.406	PS5/500KHZ-2MHZ/D.406
PS5/200KHZ-1MHZ/RD.437	PS5/100KHZ-500KHZ/A.437	PS5/500KHZ-2MHZ/D.437
PS5/200KHZ-1MHZ/RD.468	PS5/100KHZ-500KHZ/A.468	PS5/500KHZ-2MHZ/D.468
PS5/200KHZ-1MHZ/RD.500	PS5/100KHZ-500KHZ/A.500	PS5/500KHZ-2MHZ/D.500
PS5/200KHZ-1MHZ/RD.531	PS5/100KHZ-500KHZ/A.531	PS5/500KHZ-2MHZ/D.531
PS5/200KHZ-1MHZ/RD.562	PS5/100KHZ-500KHZ/A.562	PS5/500KHZ-2MHZ/D.562
PS5/200KHZ-1MHZ/RD.593	PS5/100KHZ-500KHZ/A.593	PS5/500KHZ-2MHZ/D.593
PS5/200KHZ-1MHZ/RD.625	PS5/100KHZ-500KHZ/A.625	PS5/500KHZ-2MHZ/D.625
PS5/200KHZ-1MHZ/RD.656	PS5/100KHZ-500KHZ/A.656	PS5/500KHZ-2MHZ/D.656
PS5/200KHZ-1MHZ/RD.687	PS5/100KHZ-500KHZ/A.687	PS5/500KHZ-2MHZ/D.687
PS5/200KHZ-1MHZ/RD.718	PS5/100KHZ-500KHZ/A.718	PS5/500KHZ-2MHZ/D.718
PS5/200KHZ-1MHZ/RD.750	PS5/100KHZ-500KHZ/A.750	PS5/500KHZ-2MHZ/D.750

Rotating Scanner Probes

Bolt Hole Probes for PS-2 and PS-3 Scanners.

The SA and SD scanner bolt hole probes are fitted with 4 pin Switchcraft connectors and available with absolute or differential coils in bridge configuration.

The SA type absolute probe has a shielded 100 kHz coil for aluminum structures. SD type differential probes have 500 kHz shielded coils for aluminum and/or low conductivity materials, and provide increased sensitivity to small defects. Other frequencies are available. Probe body material is of Black Delrin unless otherwise specified.



SA and SD Scanner Probes

How to Order standard probes:

Provide part number, description.
Example:

9216318	SD	16
Part Number	Absolute (SA) or Differential (SD)	Probe Size in “X”/64”

How to Order non-standard probes:
Example:

SD	R	.325	500 kHz	2” W/L
Absolute (SA) or Differential (SD)	Add “R” if coil is recessed	Probe diameter	Frequency	Working Length

Special order probes should be identified with size in decimals (.505”) Working length (WL) required should be stated if different from the standard 3.0”. If coil is recessed add “R”

Notes: Probes below .160” are unshielded and have no expansion slot or cheeks. Probes below .220” have no ball end.

Diameter of probe or Hole			SA Absolute Shielded	Part Number	SD Differential Shielded	Part Number	Working Length (WL)
.156”	4.0mm	5/32”	SA-10	9216299	SD-10	9216315	1.4”
.187”	4.7mm	3/16”	SA-12	9216301	SD-12	9216316	1.4”
.218”	5.5mm	7/32”	SA-14	9216302	SD-14	9216317	1.4”
.250”	6.3mm	1/4”	SA-16	9216303	SD-16	9216318	1.4”
.281”	7.1mm	9/32”	SA-18	9216304	SD-18	9216319	1.4”
.312”	7.9mm	5/16”	SA-20	9216305	SD-20	9216320	3.0”
.343”	8.7mm	11/32”	SA-22	9216306	SD-22	9216321	3.0”
.375”	9.5mm	3/8”	SA-24	9216307	SD-24	9216322	3.0”
.406”	10.3mm	13/32”	SA-26	9216308	SD-26	9216323	3.0”
.437”	11.1mm	7/16”	SA-28	9216309	SD-28	9216324	3.0”
.500”	12.7mm	1/2”	SA-32	9216310	SD-32	9216325	3.0”
.562”	14.3mm	9/16”	SA-36	9216311	SD-36	9216326	3.0”
.625”	15.9mm	5/8”	SA-40	9216312	SD-40	9216327	3.0”
.687”	17.5mm	11/16”	SA-44	9216313	SD-44	9216328	3.0”
.750”	19.0mm	3/4”	SA-48	9216314	SD-48	9216329	3.0”

*Other diameters and working lengths can be made to special order. Standard frequency range for SA absolute probes is 100 KHz to 500KHz. Standard frequency range for SD differential probes is 500KHz to 2MHz.

Rotating Scanner Probes

Non-Contact Bolt Hole Probes for RC RECHII Scanners

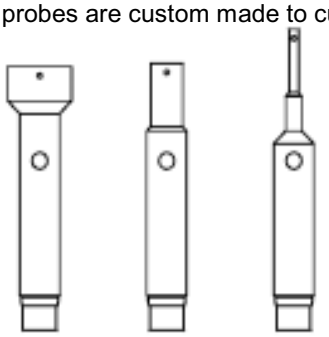
The RC Scanner Bolt hole probes are fitted with a 4 pin Switchcraft connector. RC probes are made of stainless steel.

The standard coils used are reflection differential. They offer a wide frequency range (typically 500 KHz to 2 MHz) with good signal-to-noise ratio.

RC probes are manufactured for the RECHII High Speed (1500 rpm) Scanner. These probes are not interchangeable with the PS-2 or PS-3 scanners.

Non-Contact RC style probes are normally ordered .010” (.25mm) less than the hole diameter for clearance. They will operate with more clearance (depending on defect size) with reduced sensitivity.

All RECHII probes are custom made to customer specifications.



RC Scanner Probes

How to Order:

Provide Probe Type, Probe diameter and Working length.
Example:

RCB	**.240**	**WL.800**
Probe Type	Probe Diameter	Working Length

When ordering

All RC probe sizes should be identified using decimals (.___”). The probe will be made to the diameter ordered **without** under sizing. Working lengths should be requested when placing an order.

RC Scanner Probes are available from .050” to 1.500” in diameter. They are designed to be used with the RECHII II scanner and NDT-25L with RECHII option instruments. They are used to detect minute cracks and defects in titanium, inconel and other low conductivity alloys.

RCS	**RCA**	**RCB**	**RCC**
Available Diameters	Available Diameters	Available Diameters	Available Diameters
.050” to .129”	.130” to .169”	.170” to .624”	.625” to 1.500”

Rotating Scanner Probes

Bolt Hole Probes for PS-4 Scanner.
(Contact and Non-Contact)

The standard PS-4 probes are fitted with a 6 pin Lemo connector. These probes are made with an aluminum backshell and a high quality plastic tip.

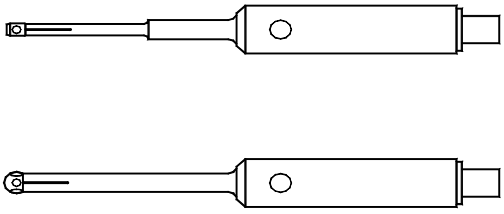
The standard coils used are reflection differential, double-ended, shielded. They offer a wide frequency range (typically 500 Khz-4 Mhz) with optimum signal to noise ratio. They are used for detecting minute cracks and defects in titanium, inconel and other low conductivity alloys. These probes are offered in three different styles:

1. SNC (*Staveley Non-Contact)* are normally ordered .010" (.25mm) less than the hole diameter for clearance. The will operate with more clearance (depending on the defect size) with reduced sensitivity.

2. SCR (*Staveley Contact Recessed)* are expandable to maintain surface contact. They can be expanded up to 10% of their nominal size. SCR coils are recessed slightly below the contact surface which reduces scanning noise and does not require protective tape.

3. SC (*Staveley Contact)* are the same as SCR probes except the coil is not recessed. They provide the best sensitivity but require protective tape.

All PS-4 probes are custom made to customer specifications.



SCR, SNC and SC Scanner Probes

How to Order:

Provide Probe Type, Probe diameter and Frequency.
Example:

SCR	**.239**	**-S/2**
Probe Type	Probe Diameter	Frequency in MHz

*(**SCR**– Staveley Contact Recessed)*
*(**SC** – Staveley Contact)*
*(**SNC** - Staveley Non-Contact)*

-S/2 = 2Mhz
-S/6 = 6Mhz

Scanner Probe Kits

RA19, RA2000 and MiniMite (4 pin Lemo) Bolt Hole Probe Kits

Stainless Steel, Non Contact

Two Probe Kits are available:

The Standard Kit brings together eight of our most popular sizes in a convenient carrying case.

The Deluxe Kit is made of 15 sizes ranging from 5/32” to 3/4” in a convenient carrying case.

Both kits are comprised of our stock, high quality, stainless steel probes. All are manufactured .010” (.25mm) less than the fractional sizes shown. Standard working lengths are supplied.

Expanding probes, Contact

Expandable Kit contains eight SPO-3564 probes to cover hole sizes from .187” to over .500”. These probes have an expansion range of about 20%.

Deluxe RA Probe Kit

Expandable (SPO-3564) Kit

RA19, 2000 and MiniMite 4 pin Lemo Scanner Kits

How to Order

Provide stock part number and description.

Example: 9216656 Standard RA Kit

Standard RA Kit Part Number 9216656 Includes:	
9203481	RA-3/16
9203482	RA-7/32
9203483	RA-1/4
9213485	RA-5/16
9203487	RA-3/8
9203488	RA-7/16
9203489	RA-1/2
9203490	RA-5/8
Carrying Case	

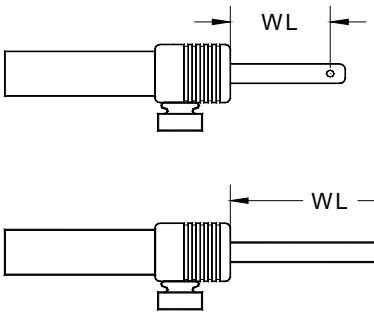
Deluxe RA Kit Part Number 9216657 Includes:	
9216290	RA-5/32
9216293	RA-13/32
9203481	RA-3/16
9203488	RA-7/16
9203482	RA-7/32
9203489	RA-1/2
9203483	RA-1/4
9216294	RA-9/16
9216291	RA-9/32
9203490	RA-5/8
9203485	RA-5/16
9216295	RA-11/16
9216292	RA-11/32
9216296	RA-3/4
9203487	RA-3/8
Carrying Case	

Expandable Kit (SPO-3564) Part Number 9216658 Includes:	
9217153	SPO-3564 .187-.218
9217154	SPO-3564 .218-.250
9217155	SPO-3564 .250-.281
9217156	SPO-3564 .281-.312
9217157	SPO-3564 .312-.375
9217158	SPO-3564 .375-.437
9217159	SPO-3564 .437-.500
9217160	SPO-3564 .500-.562
Carrying Case	

Detachable Bolt Hole Probes

Standard Manual Bolt Hole Probes, Absolute and Differential

The detachable bolt hole probes are manual probes available with absolute or differential coils in bridge or reflection configurations. Internal reference coils ensure accurate balance without external adaptors. The detachable connector allows the probe to be rotated while holding the cable stationary. Cables are sold separately.



Manual Bolt Hole Probes

How to Order:

Provide part number, description.

Example:

9216156	**B/**	**100KHZ-500KHZ**	**/A**	**.250**
Part Number	Bolt Hole	Frequency Range	Absolute (D if Differential coil	Probe/ Hole diameter
	**BR if reflection coil*			

When ordering cables the standard instrument connector supplied will be the Nortec 8 pin Burndy unless otherwise specified. Adaptors are available to match different instrument manufacturers.

Note: Probes .156" and below are unshielded and have no expansion slot. Probes below .236" have no ball end. Collar is non-removable in probes .250" to .531" in diameter.

Probe Diameter	Absolute Shielded	Part Number	Differential Shielded	Part Number	Working length (WL)
.156"	B/100KHZ-500KHZ/A.156	9216153	B/500KHZ-2MHZ/D.156	9216168	1.0"
.187"	B/100KHZ-500KHZ/A.187	9216154	B/500KHZ-2MHZ/D.187	9216169	1.0"
.218"	B/100KHZ-500KHZ/A.218	9216155	B/500KHZ-2MHZ/D.218	9216170	1.0"
.250"	B/100KHZ-500KHZ/A.250	9216156	B/500KHZ-2MHZ/D.250	9216171	2.0"
.281"	B/100KHZ-500KHZ/A.281	9216157	B/500KHZ-2MHZ/D.281	9216172	2.0"
.312"	B/100KHZ-500KHZ/A.312	9216158	B/500KHZ-2MHZ/D.312	9216173	2.0"
.343"	B/100KHZ-500KHZ/A.343	9216159	B/500KHZ-2MHZ/D.343	9216174	2.0"
.375"	B/100KHZ-500KHZ/A.375	9216160	B/500KHZ-2MHZ/D.375	9216175	2.0"
.406"	B/100KHZ-500KHZ/A.406	9216161	B/500KHZ-2MHZ/D.406	9216176	2.0"
.437"	B/100KHZ-500KHZ/A.437	9216162	B/500KHZ-2MHZ/D.437	9216177	2.0"
.500"	B/100KHZ-500KHZ/A.500	9216163	B/500KHZ-2MHZ/D.500	9216178	2.0"
.562"	B/100KHZ-500KHZ/A.562	9216164	B/500KHZ-2MHZ/D.562	9216179	3.2"
.625"	B/100KHZ-500KHZ/A.625	9216165	B/500KHZ-2MHZ/D.625	9216180	3.2"
.687"	B/100KHZ-500KHZ/A.687	9216166	B/500KHZ-2MHZ/D.687	9216181	3.2"
.750"	B/100KHZ-500KHZ/A.750	9216167	B/500KHZ-2MHZ/D.750	9216182	3.2"

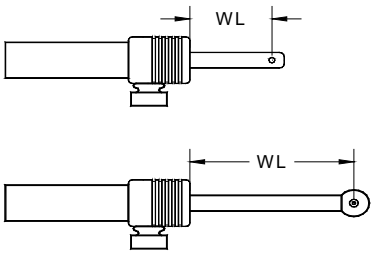
For Bridge Probes use detachable cable C/SC/6 (Stock #9113016) or C/RA/6 (Stock #9113017). Standard frequency range for Absolute Probes is 100 KHz to 500Khz. Standard frequency range for Differential Probes is 500 KHz to 2MHz.

*When ordering reflection coils (special order) omit part number and order by description. For Reflection Type Probes (special order) use detachable cable CR/SC/6 (Stock #9113429) or CR/RA/6. (Stock #9113430). Lengths shown are approximate.

Detachable Bolt Hole Probes

PowerLink™ Manual Bolt Hole Probes, Absolute and Differential

The PowerLink™ detachable bolt hole probes are manual probes available with absolute or differential coils in bridge or reflection configurations. Internal reference coils ensure accurate balance without external adaptors. All probes are supplied with an adjustable collar. Common cable compatibility among most PowerLink™ eddy current probes allows one cable to operate probes in either bridge or reflection configuration. All Nortec® PowerLink™ eddy current probes are backward compatible to Nortec® NDT-19 and NDT-24 instruments. Cables "CL/SC/6" for Nortec® 2000 series and "C/SC/6 7P" for NDT-19 and NDT-24 instruments, are sold seperately.



PowerLink™ technology offers unmatched performance when used with Staveley's new eddy current instrumentation. PowerLink™ features automatic probe recognition and documentation, as well as providing the optimum integration between instrument and sensor.

PowerLink™ Manual Bolt Hole Probes

How to Order:

Provide part number, description.

Example:

9222218	**BL/**	**100KHZ-500KHZ**	**/A**	**.250**
Part Number	Bolt Hole	Frequency Range	Absolute (D if Differential coil	Probe/ Hole diameter
	**BRL if reflection coil*			

Note: Probes .156" and below are unshielded and have no expansion slot. Probes below .236" have no ball end. Collar is non-removable in probes .250" to .531" in diameter.

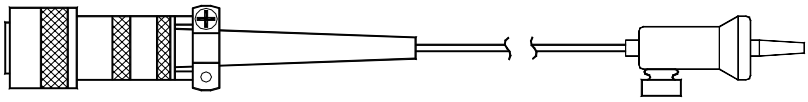
Probe Diameter	Absolute Shielded	Part Number	Differential Shielded	Part Number	Working length (WL)
.156"	BL/100KHZ-500KHZ/A.156	9222433	BL/500KHZ-2MHZ/D.156	9222441	1.0"
.187"	BL/100KHZ-500KHZ/A.187	9222217	BL/500KHZ-2MHZ/D.187	9222442	1.0"
.218"	BL/100KHZ-500KHZ/A.218	9222434	BL/500KHZ-2MHZ/D.218	9222443	1.0"
.250"	BL/100KHZ-500KHZ/A.250	9222218	BL/500KHZ-2MHZ/D.250	9222444	2.0"
.281"	BL/100KHZ-500KHZ/A.281	9222435	BL/500KHZ-2MHZ/D.281	9222445	2.0"
.312"	BL/100KHZ-500KHZ/A.312	9222219	BL/500KHZ-2MHZ/D.312	9222446	2.0"
.343"	BL/100KHZ-500KHZ/A.343	9222436	BL/500KHZ-2MHZ/D.343	9222447	2.0"
.375"	BL/100KHZ-500KHZ/A.375	9222220	BL/500KHZ-2MHZ/D.375	9222448	2.0"
.406"	BL/100KHZ-500KHZ/A.406	9222437	BL/500KHZ-2MHZ/D.406	9222449	2.0"
.437"	BL/100KHZ-500KHZ/A.437	9222221	BL/500KHZ-2MHZ/D.437	9222450	2.0"
.500"	BL/100KHZ-500KHZ/A.500	9222438	BL/500KHZ-2MHZ/D.500	9222451	2.0"
.562"	BL/100KHZ-500KHZ/A.562	9222439	BL/500KHZ-2MHZ/D.562	9222452	3.2"
.625"	BL/100KHZ-500KHZ/A.625	9222223	BL/500KHZ-2MHZ/D.625	9222453	3.2"
.687"	BL/100KHZ-500KHZ/A.687	9222440	BL/500KHZ-2MHZ/D.687	9222454	3.2"
.750"	BL/100KHZ-500KHZ/A.750	9222224	BL/500KHZ-2MHZ/D.750	9222455	3.2"

*When ordering reflection coils (special order) omit part number and order by description. Lengths shown are approximate.

3551 Pencil Probes

Nortec® 3551 Pencil Probes

The 3551 type pencil probes are supplied with a built-in small diameter, low noise cable and an adjustable collar. They are available with absolute or differential coils in both bridge and reflection configurations (shielded and unshielded). Shielded coils have an effective sensitive area approximately .08" (2mm) diameter. Probes will be supplied with Nortec® 8 pin Burndy connector unless otherwise specified.



Nortec® 3551 Pencil Probes

How to Order:

Provide part number, description.

Example:

9204914	**3551F**	**100KHZ**
Part Number	Type	Frequency

Standard Absolute (Bridge type non-PowerLink™)

Frequency Range	Absolute Unshielded	Part Number	Absolute Shielded	Part Number
50Khz-100Khz	3551 50Khz	9213382	3551 F 50Khz	9213384
100Khz-500Khz	3551 100Khz	9204910	3551 F 100Khz	9204914
500Khz-1Mhz	3551 500Khz	9204911	3551 F 500Khz	9204915
1Mhz-2Mhz	3551 1Mhz	9204912	3551 F 1Mhz	9204916
2Mhz-4Mhz	3551 2Mhz	9204913	3551 F 2Mhz	9204917
4Mhz-6Mhz	3551 4Mhz	9213383	3551 F 4Mhz	9213385

Standard Differential (Bridge type non-PowerLink™)

Frequency Range	Differential Unshielded	Part Number	Differential Shielded	Part Number
100Khz-500Khz	3551 D 100Khz	9216590	3551 DF 100Khz	9216591
500Khz-2Mhz	3551 D 500Khz	9213386	3551 DF 500Khz	9213389
2Mhz-4Mhz	3551 D 2Mhz	9213387	3551 DF 2Mhz	9213428
4Mhz-6Mhz	3551 D 4Mhz	9213388	3551 DF 4Mhz	9213390

Reflection Absolute (non-PowerLink™)

Frequency Range	Absolute Unshielded	Part Number	Absolute Shielded	Part Number
1Khz-100Khz	3551 R 1Khz	9216592*	3551 RF 1Khz	9216593*
100Khz-1Mhz	3551 R 100Khz	9213391	3551 RF 100Khz	9213394
1Mhz-3Mhz	3551 R 1Mhz	9213392	3551 RF 1Mhz	9213395
3Mhz-6Mhz	3551 R 3Mhz	9213393	3551 RF 3Mhz	9213396

Reflection Differential (non-PowerLink™)

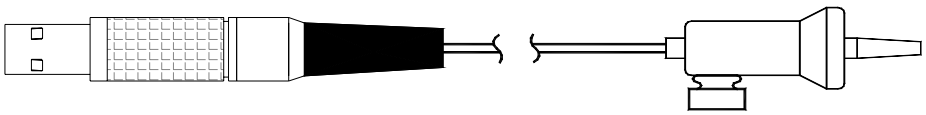
Frequency Range	Differential Unshielded	Part Number	Differential Shielded	Part Number
500Khz-3Mhz	3551 RD 500Khz	9213397	3551 RDF 500Khz	9213399
3Mhz-6Mhz	3551 RD 3Mhz	9213398	3551 RDF 3Mhz	9213400

The 3551 probe has a standard O.D. = .18"
*** Probe diameter =.25"**

3551 Pencil Probes

Nortec® 3551L PowerLink™ Pencil Probes

The 3551L type pencil probes are supplied with a built-in small diameter, low noise cable and an adjustable collar. They are available with absolute or differential coils in both bridge and reflection configurations (shielded and unshielded). Shielded coils have an effective sensitive area approximately .08" (2mm) diameter. Probes will be supplied with a Lemo 16 pin connector.



Nortec® PowerLink™ 3551L Pencil Probes

How to Order:

Provide part number, description.

Example:

9230122	**3551FL**	**100KHZ**
Part Number	Type	Frequency

Standard Absolute (Bridge type)

Frequency Range	Absolute Unshielded	Part Number	Absolute Shielded	Part Number
50Khz-100Khz	3551L 50Khz	9230115	3551 FL 50Khz	9230121
100Khz-500Khz	3551 L 100Khz	9230116	3551 FL 100Khz	9230122
500Khz-1Mhz	3551 L 500Khz	9230117	3551 FL 500Khz	9230123
1Mhz-2Mhz	3551 L 1Mhz	9230118	3551 FL 1Mhz	9230124
2Mhz-4Mhz	3551 L 2Mhz	9230119	3551 FL 2Mhz	9230125
4Mhz-6Mhz	3551 L 4Mhz	9230120	3551 FL 4Mhz	9230126

Standard Differential (Bridge type)

Frequency Range	Differential Unshielded	Part Number	Differential Shielded	Part Number
100Khz-500Khz	3551 DL 100Khz	9230127	3551 DFL 100Khz	9230131
500Khz-2Mhz	3551 DL 500Khz	9230128	3551 DFL 500Khz	9230132
2Mhz-4Mhz	3551 DL 2Mhz	9230129	3551 DFL 2Mhz	9230133
4Mhz-6Mhz	3551 DL 4Mhz	9230130	3551 DFL 4Mhz	9230134

Reflection Absolute

Frequency Range	Absolute Unshielded	Part Number	Absolute Shielded	Part Number
1Khz-100Khz	3551 RL 1Khz	9230103*	3551 RFL 1Khz	9230107*
100Khz-1Mhz	3551 RL 100Khz	9230104	3551 RFL 100Khz	9230108
1Mhz-3Mhz	3551 RL 1Mhz	9230105	3551 RFL 1Mhz	9230109

Reflection Differential

Frequency Range	Differential Unshielded	Part Number	Differential Shielded	Part Number
500Khz-3Mhz	3551 RDL 500Khz	9230111	3551 RDFL 500Khz	9230113
3Mhz-6Mhz	3551 RDL 3Mhz	9230112	3551 RDFL 3Mhz	9230114

The 3551 probe has a standard O.D. = .18"
*** Probe diameter =.25"**

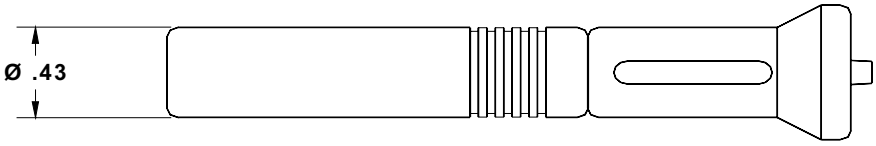
Detachable Pencil Probes

Nortec® Standard Detachable Pencil Probes

The Nortec® standard detachable pencil probes are supplied with an adjustable collar and a high quality quick release connector.

They are available with absolute or differential coils in both bridge and reflection configurations (shielded and unshielded). Shielded coils have an effective sensitive area approximately .08” (2mm) diameter.

Cables sold separately.



Nortec® Standard Detachable Pencil Probes

How to Order:

Provide part number, description.

Example:

9213408	**P**	**/100KHZ-500KHZ/**	**A**
Part Number	Pencil, (PR if reflection)	Frequency range	Absolute (D if differential)

Detachable Absolute (Bridge type)

Frequency Range	Absolute Unshielded	Part Number	Absolute Shielded	Part Number
50Khz-100Khz	P/50Khz-100Khz/AU	9213401	P/50Khz-100Khz/A	9213407
100Khz-500Khz	P/100Khz-500Khz/AU	9213402	P/100Khz-500Khz/A	9213408
500Khz-1Mhz	P/500Khz-1Mhz/AU	9213403	P/500Khz-1Mhz/A	9213014
1Mhz-2Mhz	P/1Mhz-2Mhz/AU	9213404	P/1Mhz-2Mhz/A	9213409
2Mhz-4Mhz	P/2Mhz-4Mhz/AU	9213405	P/2Mhz-4Mhz/A	9213410
4Mhz-6Mhz	P/4Mhz-6Mhz/AU	9213406	P/4Mhz-6Mhz/A	9213411

Detachable Differential (Bridge type)

Frequency Range	Differential Unshielded	Part Number	Differential Shielded	Part Number
500Khz-2Mhz	P/500Khz-2Mhz/DU	9213412	P/500Khz-2Mhz/D	9213015
2Mhz-4Mhz	P/2Mhz-4Mhz/DU	9213413	P/2Mhz-4Mhz/D	9213415
4Mhz-6Mhz	P/4Mhz-6Mhz/DU	9213414	P/4Mhz-6Mhz/D	9213416

Detachable Reflection Absolute

Frequency Range	Absolute Unshielded	Part Number	Absolute Shielded	Part Number
1Khz-100Khz	PR/1Khz-100Khz/AU	9216538*	PR/1Khz-100Khz/A	9216539*
100Khz-1Mhz	PR/100Khz-1Mhz/AU	9213417	PR/100Khz-1Mhz/A	9213420
1Mhz-3Mhz	PR/1Mhz-3Mhz/AU	9213418	PR/1Mhz-3Mhz/A	9213421

Detachable Reflection Differential

Frequency Range	Differential Unshielded	Part Number	Differential Shielded	Part Number
500Khz-3Mhz	PR/500Khz-3Mhz/DU	9213423	PR/500Khz-3Mhz/D	9213425
3Mhz-6Mhz	PR/3Mhz-6Mhz/DU	9213424	PR/3Mhz-6Mhz/D	9213426

For bridge probes use cables “C/SC/6” (P/N 9113016) or “C/RA/6” (P/N 9113017). For reflection probes use cables “CR/SC/6” (P/N 9113429) or “CR/RA/6” (P/N 9113430). **The above probes have a standard O.D. = .18”, * Probe diameter =.25”**

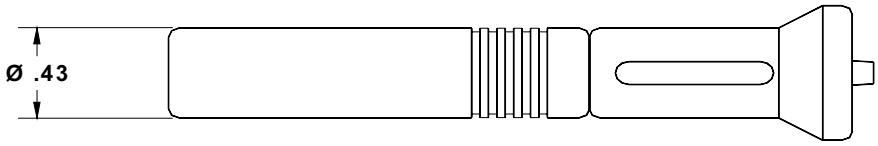
Detachable Pencil Probes

Nortec® PowerLink™ Detachable Pencil Probes

The Nortec® PowerLink™ detachable pencil probes are supplied with an adjustable collar and a high quality quick release connector.

They are available with absolute or differential coils in both bridge and reflection configurations (shielded and unshielded). Shielded coils have an effective sensitive area approximately .08" (2mm) diameter.

Cables sold separately.



Nortec® PowerLink™ Detachable Pencil Probes

How to Order:

Provide part number, description.

Example:

9222180	**PL**	**/100KHZ-500KHZ/**	**A**
Part Number	Pencil, (PRL if reflection)	Frequency range	Absolute (D if differential)

Detachable Absolute (Bridge type)

Frequency Range	Absolute Unshielded	Part Number	Absolute Shielded	Part Number
50Khz-100Khz	PL/50Khz-100Khz/AU	9222411	PL/50Khz-100Khz/A	9222179
100Khz-500Khz	PL/100Khz-500Khz/AU	9222412	PL/100Khz-500Khz/A	9222180
500Khz-1Mhz	PL/500Khz-1Mhz/AU	9222413	PL/500Khz-1Mhz/A	9222162
1Mhz-2Mhz	PL/1Mhz-2Mhz/AU	9222414	PL/1Mhz-2Mhz/A	9222181
2Mhz-4Mhz	PL/2Mhz-4Mhz/AU	9222415	PL/2Mhz-4Mhz/A	9222416
4Mhz-6Mhz	PL/4Mhz-6Mhz/AU	9222417	PL4Mhz-6Mhz/A	9222418

Detachable Differential (Bridge type)

Frequency Range	Differential Unshielded	Part Number	Differential Shielded	Part Number
500Khz-2Mhz	PL/500Khz-2Mhz/DU	9222426	PL/500Khz-2Mhz/D	9222184
2Mhz-4Mhz	PL/2Mhz-4Mhz/DU	9222427	PL/2Mhz-4Mhz/D	9222185
4Mhz-6Mhz	PL/4Mhz-6Mhz/DU	9222428	PL/4Mhz-6Mhz/D	9222186

Detachable Reflection Absolute

Frequency Range	Absolute Unshielded	Part Number	Absolute Shielded	Part Number
1Khz-100Khz	PRL/1Khz-100Khz/AU	9222419*	PRL/1Khz-100Khz/A	9222420*
100Khz-1Mhz	PRL/100Khz-1Mhz/AU	9222421	PRL/100Khz-1Mhz/A	9222188
1Mhz-3Mhz	PRL/1Mhz-3Mhz/AU	9222422	PRL/1Mhz-3Mhz/A	9222423

Detachable Reflection Differential

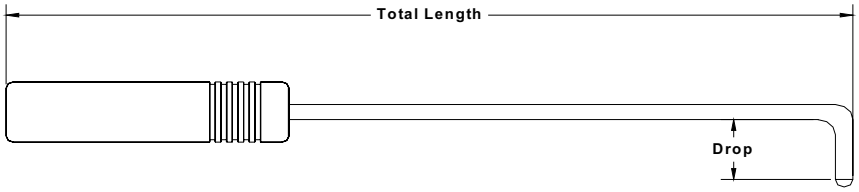
Frequency Range	Differential Unshielded	Part Number	Differential Shielded	Part Number
500Khz-3Mhz	PRL/500Khz-3Mhz/DU	9222430	PRL/500Khz-3Mhz/D	9222163
3Mhz-6Mhz	PRL/3Mhz-6Mhz/DU	9222431	PRL/3Mhz-6Mhz/D	9222432

The above probes have a standard O.D. = .18", * Probe diameter =.25"
Probes use CL/SC/6 cable (P/N 9122083).

Detachable Pencil Probes

Nortec® Standard Detachable Metal Shaft Pencil Probes

These general purpose probes are used for surface or near surface crack detection. They are also used for conductivity and coating thickness measurements. They are available with absolute coils in the bridge configuration (shielded, unshielded and reflection shielded). Reference coils are internal, insuring the best match to the test coil without an external adapter. These probes include a high quality quick release connector. Cables sold separately.



Nortec® Standard Detachable Metal Shaft Probes

How to Order:

Provide part number, description.

Example:

9213408	**P**	**/100KHZ-500KHZ/**	**A**	**/90**	**.5**	**/6**
Part Number	Pencil, (PR if reflection)	Frequency range	Absolute Coil	Angle at tip	Drop at tip	Total Length

Straight Shaft

Frequency Range	Absolute Shielded	Part Number	Reflection Absolute Shielded	Part Number
50Khz-100Khz	P/50Khz-100Khz/A/0.0/4	9216190	PR/50Khz-500Khz/A/0.0/4	9216194
100Khz-500Khz	P/100Khz-500Khz/A/0.0/4	9216191		
500Khz-1Mhz	P/500Khz-1Mhz/A/0.0/4	9216192	PR/500Khz-2Mhz/A/0.0/4	9216195
1Mhz-2Mhz	P/1Mhz-2Mhz/A/0.0/4	9216193		

Right Angle Shaft .03" Drop

Frequency Range	Absolute Shielded	Part Number	Reflection Absolute Shielded	Part Number
50Khz-100Khz	P/50Khz-100Khz/A/90.03/6	9216200	PR/50Khz-500Khz/A/90.03/6	9216204
100Khz-500Khz	P/100Khz-500Khz/90.03/6	9216201		
500Khz-1Mhz	P/500Khz-1Mhz/A/90.03/6	9216202	PR/500Khz-2Mhz/A/90.03/6	9216205
1Mhz-2Mhz	P/1Mhz-2Mhz/A/90.03/6	9216203		

Right Angle Shaft .25" Drop

Frequency Range	Absolute Shielded	Part Number	Reflection Absolute Shielded	Part Number
50Khz-100Khz	P/50Khz-100Khz/A/90.25/6	9216210	PR/50Khz-500Khz/A/90.25/6	9216214
100Khz-500Khz	P/100Khz-500Khz/90.25/6	9216211		
500Khz-1Mhz	P/500Khz-1Mhz/A/90.25/6	9216212	PR/500Khz-2Mhz/A/90.25/6	9216215
1Mhz-2Mhz	P/1Mhz-2Mhz/A/90.25/6	9216213		

Right Angle Shaft .50" Drop

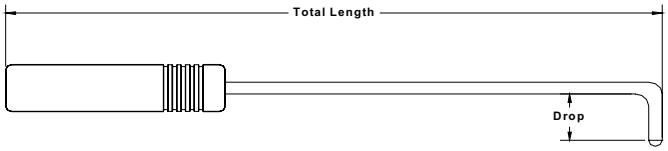
Frequency Range	Absolute Shielded	Part Number	Reflection Absolute Shielded	Part Number
50Khz-100Khz	P/50Khz-100Khz/A/90.5/6	9216220	PR/50Khz-500Khz/A/90.5/6	9216223
100Khz-500Khz	P/100Khz-500Khz/90.5/6	9213013		
500Khz-1Mhz	P/500Khz-1Mhz/A/90.5/6	9216221	PR/500Khz-2Mhz/A/90.5/6	9216224
1Mhz-2Mhz	P/1Mhz-2Mhz/A/90.5/6	9216222		

For bridge probes use cables "C/SC/6" (P/N 9113016) or "C/RA/6" (P/N 9113017). For reflection probes use cables "CR/SC/6" (P/N 9113429) or "CR/RA/6" (P/N 9113430). **Other angles, drops and lengths available.**

Detachable Pencil Probes

Nortec® PowerLink™ Detachable Metal Shaft Pencil Probes

These PowerLink™ Metal Shaft probes are used for surface or near surface crack detection. They are also used for conductivity and coating thickness measurements. They are available with absolute coils in the bridge configuration (shielded, unshielded and reflection shielded). Reference coils are internal, insuring the best match to the test coil without an external adapter. Common cable compatibility among most PowerLink™ eddy current probes allows one cable to operate probes in either bridge or reflection configuration. All Nortec® PowerLink™ eddy current probes are backward compatible to Nortec® NDT-19 and NDT-24 instruments. Cables “CL/SC/6” for Nortec 2000 series and “C/SC/6 7P” for NDT-19 and NDT-24 instruments, are sold seperately.



Nortec® Standard Detachable Metal Shaft Probes

How to Order:

Provide part number, description.

Example:

9222164	**ML**	**/100KHZ-500KHZ/**	**A**	**/90**	**.5**	**/6**
Part Number	ML= Bridge MRL= Reflection	Frequency range	Absolute Coil	Angle at tip	Drop at tip	Total Length

Straight Shaft

Frequency Range	Absolute Shielded	Part Number	Reflection Absolute Shielded	Part Number
50Khz-100Khz	ML/50Khz-100Khz/A/0.0/4	9222165	MRL/50Khz-500Khz/A/0.0/4	9222209
100Khz-500Khz	ML/100Khz-500Khz/A/0.0/4	9222202		
500Khz-1Mhz	ML/500Khz-1Mhz/A/0.0/4	9222203	MRL/500Khz-2Mhz/A/0.0/4	9222210
1Mhz-2Mhz	ML/1Mhz-2Mhz/A/0.0/4	9222472		

Right Angle Shaft .03” Drop

Frequency Range	Absolute Shielded	Part Number	Reflection Absolute Shielded	Part Number
50Khz-100Khz	ML/50Khz-100Khz/A/90.03/6	9222473	MRL/50Khz-500Khz/A/90.03/6	9222477
100Khz-500Khz	ML/100Khz-500Khz/90.03/6	9222204		
500Khz-1Mhz	ML/500Khz-1Mhz/A/90.03/6	9222205	MRL/500Khz-2Mhz/A/90.03/6	9222478
1Mhz-2Mhz	ML/1Mhz-2Mhz/A/90.03/6	9230022		

Right Angle Shaft .25” Drop

Frequency Range	Absolute Shielded	Part Number	Reflection Absolute Shielded	Part Number
50Khz-100Khz	ML/50Khz-100Khz/A/90.25/6	9222474	MRL/50Khz-500Khz/A/90.25/6	9222213
100Khz-500Khz	ML/100Khz-500Khz/90.25/6	9222206		
500Khz-1Mhz	ML/500Khz-1Mhz/A/90.25/6	9222207	MRL/500Khz-2Mhz/A/90.25/6	9222214
1Mhz-2Mhz	ML/1Mhz-2Mhz/A/90.25/6	9230004		

Right Angle Shaft .50” Drop

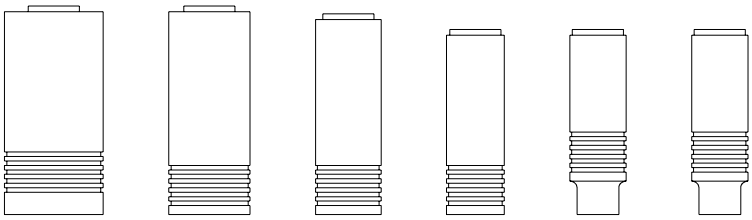
Frequency Range	Absolute Shielded	Part Number	Reflection Absolute Shielded	Part Number
50Khz-100Khz	ML/50Khz-100Khz/A/90.5/6	9222476	MRL/50Khz-500Khz/A/90.5/6	9222215
100Khz-500Khz	ML/100Khz-500Khz/90.5/6	9222164		
500Khz-1Mhz	ML/500Khz-1Mhz/A/90.5/6	9222208	MRL/500Khz-2Mhz/A/90.5/6	9222216
1Mhz-2Mhz	ML/1Mhz-2Mhz/A/90.5/6	9230071		

Probes use CL/SC/6 cable (P/N 9122083). **Other angles, drops and lengths available.**

Detachable Surface Probes

Nortec® Standard Detachable Surface Probes

Detachable surface probes are available in a variety of diameters and frequency ranges. They are shielded to provide maximum sensitivity and are used for crack detection as well as thickness measurement. Other applications include conductivity and coating thickness measurements. These probes include a high quality quick release connector. Cables sold separately.



Nortec® Standard Detachable Surface Probes

How to Order:

Provide part number, description.

Example:

9213012	**S**	**/1KHZ-50KHZ**	**/.31**
Part Number	Surface, (SR if reflection)	Frequency range	Diameter

Standard Bridge

Frequency Range	Diameter	Description	Equivalent to Non Detachable SPO Probe	Part Number
100Hz-2Khz	.75	S/100Hz-2Khz/.75		9213549
300Hz-10Khz	.62	S/300Hz-10Khz/.62	SPO-565, SPO-1125	9213011
400Hz-30Khz	.50	S/400Hz-30Khz/.50	SPO-565A	9213548
500Hz-40Khz	.44	S/500Hz-40Khz/.44	SPO-1402, SPO-1391	9213547
1Khz-50Khz	.31	S/1Khz-50Khz/.31	SPO-1284, SPO-1598	9213012
5Khz-100Khz	.25	S/5Khz-100Khz/.25	SPO-2132	9213546
100Khz-500Khz	.25	S/100Khz-500Khz/.25		9216541

Standard Reflection

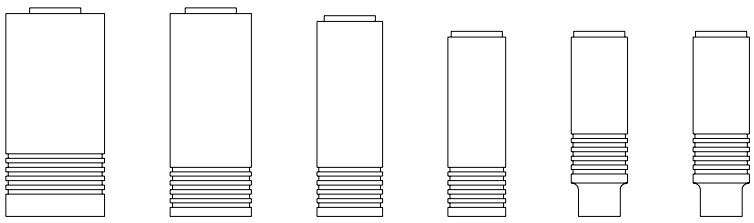
Frequency Range	Diameter	Description	Equivalent to Non Detachable Alcoprobe and SPO Probes	Part Number
100Hz-5Khz	.75	SR/100Hz-5Khz/.75	APS/20/S	9213555
100Hz-20Khz	.62	SR/100Hz-20Khz/.62	APG/16/S, SPO-2134	9213554
300Hz-40Khz	.50	SR/300Hz-40Khz/.50	APB/12.5/S, SPO-2136	9213553
400Hz-60Khz	.44	SR/400Hz-60Khz/.44	APBK/10.5/S, SPO-2025	9213552
700Hz-80Khz	.31	SR/700Hz-80Khz/.31	APR/8/S, SPO-2026	9213551
2Khz-200Khz	.25	SR/2Khz-200Khz/.25	APR/7/S, SPO-2404	9213550

For bridge probes use cables “C/SC/6” (P/N 9113016) or “C/RA/6” (P/N 9113017). For reflection probes use cables “CR/SC/6” (P/N 9113429) or “CR/RA/6” (P/N 9113430).

Detachable Surface Probes

Nortec® PowerLink™ Detachable Surface Probes

Detachable surface probes are available in a variety of diameters and frequency ranges. They are shielded to provide maximum sensitivity and are used for crack detection as well as thickness measurement. Other applications include conductivity and coating thickness measurements. Common cable compatibility among most PowerLink™ eddy current probes allows one cable to operate probes in either bridge or reflection configuration. All Nortec® PowerLink™ eddy current probes are backward compatible to Nortec® NDT-19 and NDT-24 instruments. Cables “CL/SC/6” for Nortec 2000 series and “C/SC/6 7P” for NDT-19 and NDT-24 instruments, are sold seperately.



Nortec® PowerLink™ Detachable Surface Probes

How to Order:

Provide part number, description.

Example:

9222161	**SL**	**/1KHZ-50KHZ**	**/.31**
Part Number	Surface, (SRL if reflection)	Frequency range	Diameter

Standard Bridge

Frequency Range	Diameter	Description	Equivalent to Non Detachable SPO Probe	Part Number
100Hz-2Khz	.75	SL/100Hz-2Khz/.75		9222192
300Hz-10Khz	.62	SL/300Hz-10Khz/.62	SPO-565, SPO-1125	9222193
100Khz-500Khz	.62	SL/100Khz-500Khz/.62		9222282
400Hz-30Khz	.50	SL/400Hz-30Khz/.50	SPO-565A	9222457
500Hz-40Khz	.44	SL/500Hz-40Khz/.44	SPO-1402, SPO-1391	9222456
1Khz-50Khz	.31	SL/1Khz-50Khz/.31	SPO-1284, SPO-1598	9222161
5Khz-100Khz	.25	SL/5Khz-100Khz/.25	SPO-2132	9222196
100Khz-500Khz	.25	SL/100Khz-500Khz/.25		9222308

Standard Reflection

Frequency Range	Diameter	Description	Equivalent to Non Detachable Alcoprobe and SPO Probes	Part Number
100Hz-5Khz	.75	SRL/100Hz-5Khz/.75	APS/20/S	9222458
100Hz-20Khz	.62	SRL/100Hz-20Khz/.62	APG/16/S, SPO-2134	9222160
300Hz-40Khz	.50	SRL/300Hz-40Khz/.50	APB/12.5/S, SPO-2136	9222198
400Hz-60Khz	.44	SRL/500Hz-60Khz/.44	APBK/10.5/S, SPO-2025	9222199
700Hz-80Khz	.31	SRL/700Hz-80Khz/.31	APR/8/S, SPO-2026	9222200
2Khz-200Khz	.25	SRL/2Khz-200Khz/.25	APR/7/S, SPO-2404	9222201

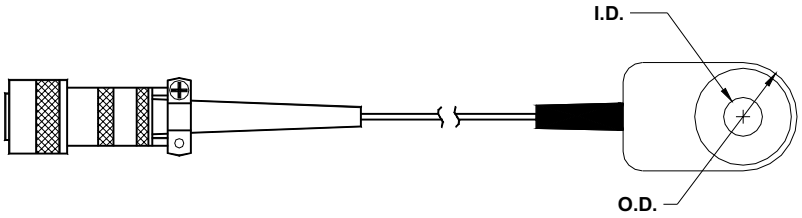
Probes use CL/SC/6 cable (P/N 9122083).

Ring/ Donut Probes

Nortec® Standard Ring/ Donut Probes (SPO Series)

Ring/ Donut (encircling) probes are made to fit various fastener head diameters. They are mostly used for subsurface crack detection with the fastener in place. These probes are supplied with a built-in small diameter low noise cable. They are available in both bridge or reflection configurations.

Probes will be supplied with Nortec 8 pin Burndy connector unless otherwise specified. Other sizes and frequencies are available to meet specific requirements. Contact the Sensors department at Staveley Instruments for more details.



Nortec® Standard Ring/ Donut Probes (SPO Series)

How to Order:

Provide part number, description.

Example:

9203307 Part Number — **SPO-996 Ring/ Donut Probe** SPO Number

Bridge Ring/ Donut Probes

Frequency Range	I.D.	O.D.	Description	Part Number
500Hz-5Khz	.30	.75	SPO-996	9203307
100Hz-1Khz	.33	.83	SPO-1589	9214019
100Hz-1Khz	.33	1.00	SPO-1747	9214020
100Hz-1Khz	.34	1.00	SPO-731	9202950
100Hz-1Khz	.38	1.00	SPO-1746	9214021
200Hz-1Khz	.40	.80	SPO-1074	9204788*
200Hz-1Khz	.42	.80	SPO-2352	9214023
100Hz-1Khz	.46	1.00	SPO-1745	9214024
100Hz-1Khz	.50	1.00	SPO-2733	9214025
100Hz-1Khz	.50	1.25	SPO-783	9202951
100Hz-1Khz	.56	1.15	SPO-1744	9214026
100Hz-1Khz	.62	1.12	SPO-1240	9214030*
100Hz-1Khz	.62	1.40	SPO-1154	9202955
100Hz-1Khz	.64	1.15	SPO-1743	9214027
100Hz-1Khz	.65	1.40	SPO-2839	9214028
100Hz-1Khz	.75	1.40	SPO-1238	9203394
100Hz-1Khz	.80	1.40	SPO-1274	9202956
100Hz-1Khz	.87	1.40	SPO-2235	9214029

Reflection Ring/ Donut Probes

Frequency Range	I.D.	O.D.	Description	Part Number
100Hz-10Khz	.30	.80	SPO-2031	9216702
100Hz-10Khz	.40	.80	SPO-2131	9216703
100Hz-10Khz	.50	1.25	SPO-2030	9216704
100Hz-10Khz	.54	.88	SPO-2434	9216705
100Hz-10Khz	.54	1.15	SPO-2432	9216706
100Hz-10Khz	.62	1.40	SPO-2032	9216707
100Hz-10Khz	.62	1.56	SPO-2433	9216708
100Hz-10Khz	.80	1.40	SPO-2064	9216709
100Hz-10Khz	.87	1.40	SPO-2435	9216710

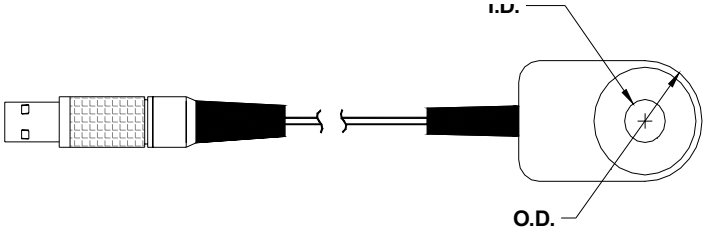
* Probes in two halves for limited access area.

Ring/ Donut Probes

Nortec® PowerLink™ Ring/ Donut Probes (SPO Series)

Ring/ Donut (encircling) probes are made to fit various fastener head diameters. They are mostly used for subsurface crack detection with the fastener in place. These probes are supplied with a built-in small low noise cable. They are available in both bridge or reflection configurations.

Probes will be supplied with a Lemo 16 pin connector. Other sizes and frequencies are available to meet specific requirements. Contact the Sensors department at Staveley Instruments for more details.



Nortec® Standard Ring/ Donut Probes (SPO Series)

How to Order:

Provide part number, description.

Example:

9230154 Part Number — **SPO-996L Ring/ Donut Probe** SPO Number

Bridge Ring/ Donut Probes

Frequency Range	I.D.	O.D.	Description	Part Number
500Hz-5Khz	.30	.75	SPO-996L	9230154
100Hz-1Khz	.33	.83	SPO-1589L	9230315
100Hz-1Khz	.33	1.00	SPO-1747L	9230316
100Hz-1Khz	.34	1.00	SPO-731L	9230317
100Hz-1Khz	.38	1.00	SPO-1746L	9230318
200Hz-1Khz	.40	.80	SPO-1074L	9230319*
200Hz-1Khz	.42	.80	SPO-2352L	9230320
100Hz-1Khz	.46	1.00	SPO-1745L	9230321
100Hz-1Khz	.50	1.00	SPO-2733L	9230322
100Hz-1Khz	.50	1.25	SPO-783L	9230323
100Hz-1Khz	.56	1.15	SPO-1744L	9230324
100Hz-1Khz	.62	1.12	SPO-1240L	9230325*
100Hz-1Khz	.62	1.40	SPO-1154L	9230326
100Hz-1Khz	.64	1.15	SPO-1743L	9230327
100Hz-1Khz	.65	1.40	SPO-2839L	9230328
100Hz-1Khz	.75	1.40	SPO-1238L	9230329
100Hz-1Khz	.80	1.40	SPO-1274L	9230330
100Hz-1Khz	.87	1.40	SPO-2235L	9230331

Reflection Ring/ Donut Probes

Frequency Range	I.D.	O.D.	Description	Part Number
100Hz-10Khz	.30	.80	SPO-2031L	9230076
100Hz-10Khz	.40	.80	SPO-2131L	9230332
100Hz-10Khz	.50	1.25	SPO-2030L	9230333
100Hz-10Khz	.54	.88	SPO-2434L	9230334
100Hz-10Khz	.54	1.15	SPO-2432L	9230335
100Hz-10Khz	.62	1.40	SPO-2032L	9230336
100Hz-10Khz	.62	1.56	SPO-2433L	9230337
100Hz-10Khz	.80	1.40	SPO-2064L	9230338
100Hz-10Khz	.87	1.40	SPO-2435L	9230339

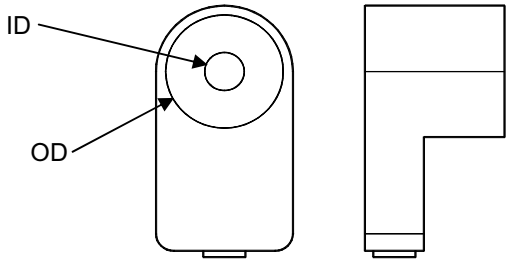
* Probes in two halves for limited access area.

Ring/ Donut Probes

Nortec® Detachable Ring/ Donut Probes

Ring/ Donut (encircling) probes are made to fit various fastener head diameters. They are mostly used for subsurface crack detection with the fastener in place. They are available in both bridge or reflection configurations.

These probes include a high quality quick release connector. Cables sold separately.



Nortec® Detachable Ring/ Donut Probes

How to Order:

Provide part number, description.

Example:

9215653	**R**	**/100HZ-1KHZ**	**/.50**	**1.00**
Part Number	Surface, (RR if reflection)	Frequency range	Internal Diameter	External Diameter

Bridge Ring/ Donut Probes

Frequency Range	I.D.	O.D.	Description	Part Number	Equivalent to Non-Detachable SPO probes
500Hz-5Khz	.30	.75	R/500Hz-5Khz/.30-.75	9215650	SPO-996
100Hz-1Khz	.33	1.00	R/100Hz-1Khz/.33-1.00	9215651	SPO-1747
100Hz-1Khz	.34	1.00	R/100Hz-1Khz/.34-1.00	9215652	SPO-731
100Hz-1Khz	.50	1.00	R/100Hz-1Khz/.50-1.00	9215653	SPO-2733
100Hz-1Khz	.50	1.25	R/100Hz-1Khz/.50-1.15	9215654	SPO-783
100Hz-1Khz	.56	1.15	R/100Hz-1Khz/.56-1.15	9215655	SPO-1744
100Hz-1Khz	.62	1.40	R/100Hz-1Khz/.62-1.40	9215656	SPO-1154
100Hz-1Khz	.75	1.40	R/100Hz-1Khz/.75-1.40	9215657	SPO-1238
100Hz-1Khz	.80	1.40	R/100Hz-1Khz/.80-1.40	9215658	SPO-1274

Reflection Ring/ Donut Probes

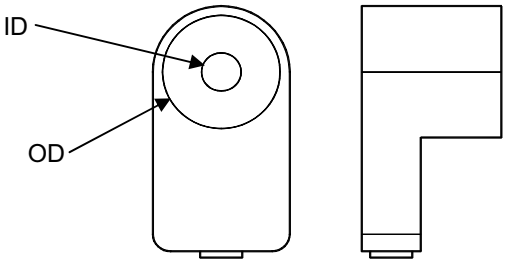
Frequency Range	I.D.	O.D.	Description	Part Number	Equivalent to Alcoprobe or SPO probes
100Hz-10Khz	.30	.80	RR/100Hz-10Khz/.30-.80	9215659	ARP/8/22P SPO-2031
100Hz-10Khz	.40	.80	RR/100Hz-10Khz/.40-.80	9215660	ARP/9.5/22P SPO-2131
100Hz-10Khz	.50	1.25	RR/100Hz-10Khz/.50-1.25	9215661	ARP/12.5/31P SPO-2030
100Hz-10Khz	.54	.88	RR/100Hz-10Khz/.54-.88	9215662	ARP/13.5/24P SPO-2434
100Hz-10Khz	.54	1.15	RR/100Hz-10Khz/.54-1.15	9215663	ARP/13.5/29P SPO-2432
100Hz-5Khz	.62	1.40	RR/100Hz-5Khz/.62-1.40	9215664	ARP/16/36P SPO-2032
100Hz-5Khz	.62	1.56	RR/100Hz-5Khz/.62-1.56	9215665	ARP/16/40P SPO-2333
100Hz-5Khz	.80	1.40	RR/100Hz-5Khz/.80-1.40	9215666	ARP/20/36P SPO-2064
100Hz-5Khz	.87	1.40	RR/100Hz-5Khz/.87-1.40	9215667	ARP/23/36P SPO-2435

For bridge probes use cables “C/SC/6” (P/N 9113016) or “C/RA/6” (P/N 9113017). For reflection probes use cables “CR/SC/6” (P/N 9113429) or “CR/RA/6” (P/N 9113430).

Ring/ Donut Probes

Nortec® PowerLink™ Detachable Ring/ Donut Probes

Ring/ Donut (encircling) probes are made to fit various fastener head diameters. They are used mostly for subsurface crack detection with the fastener in place. They are available in both bridge or reflection configurations. Common cable compatibility among most PowerLink™ eddy current probes allows one cable to operate probes in either bridge or reflection configuration. All Nortec® PowerLink™ eddy current probes are backward compatible to Nortec® NDT-19 and NDT-24 instruments. Cables "CL/SC/6" for Nortec 2000 series and "C/SC/6 7P" for NDT-19 and NDT-24 instruments, are sold seperately.



Nortec PowerLink™ Ring/ Donut Probes

How to Order:

Provide part number, description.

Example:

9222233	**RL**	**/500HZ-5KHZ**	**/.30-**	**.75**
Part Number	Surface, (RRL if reflection)	Frequency range	Internal Diameter	External Diameter

Bridge Ring/ Donut Probes

Frequency Range	I.D.	O.D.	Description	Part Number	Equivalent to Non-Detachable SPO probes
500Hz-5Khz	.30	.75	RL/500Hz-5Khz/.30-.75	9222233	SPO-996
100Hz-1Khz	.33	1.00	RL/100Hz-1Khz/.33-1.00	9222479	SPO-1747
100Hz-1Khz	.34	1.00	RL/100Hz-1Khz/.34-1.00	9222480	SPO-731
100Hz-1Khz	.50	1.00	RL/100Hz-1Khz/.50-1.00	9222481	SPO-2733
100Hz-1Khz	.50	1.25	RL/100Hz-1Khz/.50-1.25	9222482	SPO-783
100Hz-1Khz	.56	1.15	RL/100Hz-1Khz/.56-1.15	9222483	SPO-1744
100Hz-1Khz	.62	1.40	RL/100Hz-1Khz/.62-1.40	9222484	SPO-1154
100Hz-1Khz	.75	1.40	RL/100Hz-1Khz/.75-1.40	9222485	SPO-1238
100Hz-1Khz	.80	1.40	RL/100Hz-1Khz/.80-1.40	9222486	SPO-1274

Reflection Ring/ Donut Probes

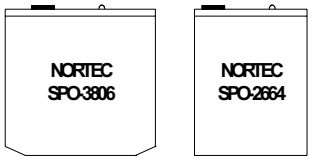
Frequency Range	I.D.	O.D.	Description	Part Number	Equivalent to Alcoprobe or SPO probes
100Hz-10Khz	.30	.80	RRL/100Hz-10Khz/.30-.80	9222237	ARP/8/22P SPO-2031
100Hz-10Khz	.40	.80	RRL/100Hz-10Khz/.40-.80	9222487	ARP/9.5/22P SPO-2131
100Hz-10Khz	.50	1.25	RRL/100Hz-10Khz/.50-1.25	9222238	ARP/12.5/31P SPO-2030
100Hz-10Khz	.54	.88	RRL/100Hz-10Khz/.54-.88	9222488	ARP/13.5/24P SPO-2434
100Hz-10Khz	.54	1.15	RRL/100Hz-10Khz/.54-1.15	9222489	ARP/13.5/29P SPO-2432
100Hz-5Khz	.62	1.40	RRL/100Hz-5Khz/.62-1.40	9222490	ARP/16/36P SPO-2032
100Hz-5Khz	.62	1.56	RRL/100Hz-5Khz/.62-1.56	9222491	ARP/16/40P SPO-2333
100Hz-5Khz	.80	1.40	RRL/100Hz-5Khz/.80-1.40	9222492	ARP/20/36P SPO-2064
100Hz-5Khz	.87	1.40	RRL/100Hz-5Khz/.87-1.40	9222493	ARP/23/36P SPO-2435

Other sizes and frequencies are available to meet specific requirements. Contact the Sensors department at Staveley Instruments for more details. Probes use CL/SC/6 cable (9122083).

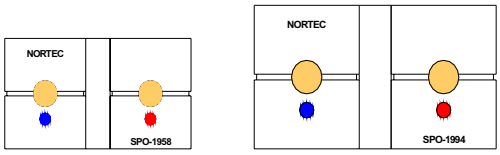
Sliding Probes

Nortec® Standard Sliding Probes

Fixed and adjustable types are available. Operating in the reflection mode, they allow inspection of fastener rows for surface and subsurface cracks. Sliding probes are directionally sensitive and feature engraved green lines to assist scan orientation to the expected direction of the cracks. Fixed types are mostly used in riveted joints to detect cracks emanating from holes. Penetration is sufficient for fuselage thickness' up to.15" (4mm). Adjustable types are used for thicker structures up to .75" (19mm). They operate satisfactorily with various fasteners including magnetic types.



Fixed type



Adjustable type

Nortec® Standard Sliding Probes

How to Order:

Provide part number, description.

Example:

9211636	**SPO-3806**
Part Number	Description

Fixed Types

SPO Number	Part Number	Frequency Range	Cable Type	Probe Size L x W x H	Application
SPO-2210	9206409	1Khz-100Khz	Microdot (Dual)	1.5" x .5" x 1.0"	For surface cracks and second layer near surface cracks.
SPO-3806	9211636	1Khz-100Khz	CR/SC/6 (Detachable)	1.5" x .8" x 1.0"	For surface and second layer cracks.
SPO-3993	9216183	1Khz-100Khz	CR/SC/6 (Detachable)	1.7" x 1.0" x 1.2"	Same as SPO-3806 but will accept larger fastener heads.
SPO-2664	9222060	1Khz-100Khz	CR/SC/6 (Detachable)	1.5" x .5" x 1.0"	For surface cracks and second layer near surface cracks.

Adjustable Types

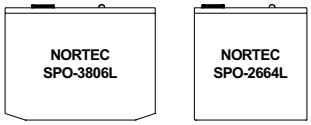
SPO Number	Part Number	Frequency Range	Cable Type	Probe Size L x W x H	Application
SPO-1958	9206405	100Hz-50Khz	Microdot (Dual)	1.8" x 1.0" x .7"	Penetration up to .5"
SPO-1994	9206406	100Hz-20Khz	Microdot (Dual)	2.3" x 1.0" x .8"	Penetration up to .5"
SPO-1957	9206404	100Hz-10Khz	Microdot (Dual)	2.8" x 1.3" x .9"	Penetration up to .7"

Cable	Part Number	Description	Cable	Part Number	Description
For Microdot type	9116184	SPO-2182	For detachable type	9113429	CR/SC/6
For Microdot type (right angle)	9116185	SPO-4139	For detachable type (right angle)	9113430	CR/RA/6

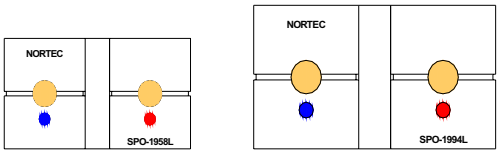
Sliding Probes

Nortec® PowerLink™ Sliding Probes

Fixed and adjustable types are available. Operating in the reflection mode, they allow inspection of fastener rows for surface and subsurface cracks. Sliding probes are directionally sensitive and feature engraved green lines to assist scan orientation to the expected direction of the cracks. Fixed types are mostly used in riveted joints to detect cracks emanating from holes. Penetration is sufficient for fuselage thickness up to.15" (4mm). Adjustable types are used for thicker structures up to .75" (19mm). They operate satisfactorily with various fasteners including magnetic types.



Fixed type



Adjustable type

Nortec® PowerLink™ Sliding Probes

How to Order:

Provide part number, description.

Example:

9222242	**SPO-3806L**
Part Number	Description

Fixed Types

SPO Number	Part Number	Frequency Range	Cable Type	Probe Size L x W x H	Application
SPO-2210L	9222241	1Khz-100Khz	16 pin to MD's	1.5" x .5" x 1.0"	For surface cracks and second layer near surface cracks.
SPO-3806L	9222242	1Khz-100Khz	CL/SC/6	1.5" x .8" x 1.0"	For surface and second layer cracks.
SPO-3993L	9222243	1Khz-100Khz	CL/SC/6	1.7" x 1.0" x 1.2"	Same as SPO-3806 but will accept larger fastener heads.
SPO-2664L	9230101	1Khz-100Khz	CL/SC/6	1.5" x .5" x 1.0"	For surface cracks and second layer near surface cracks.

Adjustable Types

SPO Number	Part Number	Frequency Range	Cable Type	Probe Size L x W x H	Application
SPO-1958L	9222244	100Hz-50Khz	16 pin to MD's	1.8" x 1.0" x .7"	Penetration up to .5"
SPO-1994L	9222245	100Hz-20Khz	16 pin to MD's	2.3" x 1.0" x .8"	Penetration up to .5"
SPO-1957L	9222246	100Hz-10Khz	16 pin to MD's	2.8" x 1.3" x .9"	Penetration up to .7"

Cable	Part Number	Description	Cable	Part Number	Description
16 pin to MD's	9122096	16 pin Lemo to 3 pin and micro-dot PowerLink	CL/SC/6	9122083	16 pin Lemo to 7 pin Lemo

Conductivity Probes

Nortec® Standard Conductivity Probes

Conductivity probes are designed for sorting metals and aluminum alloys, determining heat-treatment condition or damage. These probes were developed for Nortec conductivity instruments. Standard frequency of the probes for the NDT-5 and 5A is 100 KHz (60 KHz manufactured at customer request).

These probes are supplied only with connectors for the instruments specified, and are not interchangeable with other instruments.

Probes require instrument to be calibrated by Staveley Instruments' Service Department for accurate operation.

Nortec® Standard Conductivity Probes

How to Order:

Provide part number, type and frequency.

Example:

9202932	**3049A**	**100Khz**
Part Number	Type	Frequency

For Use with NDT-5 (8% to 110% IACS)

Part Number	Probe	Frequency	Diameter	Length
9202932	3049A	100KHZ	.75"	2.75"
9202935*	3049E	100KHZ	.75"	2.75"
9216635	SPO-3897	100KHZ	.31"	2.75"

For Use with NDT-5A (26% to 65% IACS)

Part Number	Probe	Frequency	Diameter	Length
9202933	3049C	100KHZ	.75"	2.75"
9202934*	3049D	100KHZ	.75"	2.75"
9216634	SPO-887	100KHZ	.31"	2.75"

For Use with NDT-17 (24% to 65% IACS)

Part Number	Probe	Frequency	Diameter	Length
9206106(1)	SPO-2460	60KHZ	.75"	1.00"
9206414(2)	SPO-1688	60KHZ	.31"	2.75"

(1) Probe includes LED, (2) Probe **does not** include LED.

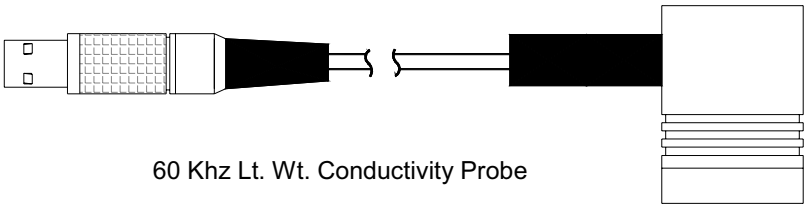
***Heavy Duty Cable**

Conductivity Probes

Nortec® PowerLink™ Conductivity Probes

Nortec® PowerLink™ conductivity probes are designed to be used with Nortec® 1700, 2000, 3000, and WorkStation instruments. They are designed for sorting metals and aluminum alloys, determining heat-treatment condition or damage. Standard frequencies of the probes is 60 Khz and 480 Khz.

These probes are supplied with a 16 pin Lemo connector and are not interchangeable with other instruments.



60 Khz Lt. Wt. Conductivity Probe

Nortec® PowerLink™ Conductivity Probes

How to Order:

Provide part number, type and frequency.

Example:

9222340	**Lt. Wt. Conductivity probe**	**60Khz**
Part Number	Type	Frequency

For Use with N1700, 2000, 3000 and WorkStation (8% to 110% IACS)

Part Number	Descripiton	Frequency	Diameter	Height
9222340	Lt. Wt. 60Khz Conductivity probe	60Khz	.75”	1.0”
9222341*	Lt. Wt. 480Khz Conductivity probe	480Khz	.75”	1.0”
9222360	SPO-887L 60Khz Conductivity probe	60Khz	.31”	2.75”
9222361*	SPO-887L 480Khz Conductivity probe	480Khz	.31”	2.75”

*** Not for use with N3000 instrument.**

ID Probes

Nortec® ID Probes

These probes have a circumferential wound coil available in three coil configurations and two body styles. Probes are available with or without PowerLink™ technology.

1) **Absolute style**- these detect changes in conductivity and is used to check for heat treating and monitoring wall thickness.
2) **Differential style**- primarily used to detect pits, cracks and inclusions inside tubes.
3) **Switchable**- these can be used in either mode.

There is no charge for cable lengths up to 40'. Poly shafts are included on all cables unless otherwise specified. Due to the wide variety of sizes and frequencies, ID probes are built to customer specifications when ordered.

ID Probe Housing Styles (order using example charts)
- **Straight Delrin**- low cost all plastic ID probes, good for use with clean tubes.
- **Stainless Steel**- long lasting heavy duty, can be pushed or pulled.

Note: Diameters ordered will be the size manufactured without undersizing. Diameter ordered should be approximately 10% smaller than the tube's internal diameter. Standard sizes range from .280" to 1.500". Specify operating frequency when ordering. Any frequency from 1 KHZ to 2 MHZ can be manufactured. Special sizes* can be built, down to .100" diameter.

*Contact the Sensors Department at Staveley Instruments for more details and reference standard availability.

Nortec® ID Probes

How to order

Straight Delrin:

ID/ Probe Type	**D/** Delrin	**5Khz/** Frequency	**A/** Coil Type **A**bsolute-(**A**) **D**ifferential-(**D**) **S**witchable-(**S**)	**.500/** Probe Diameter	**35** Length of poly-covered cable

Stainless Steel

ID/ Probe Type	**SS/** Stainless Steel	**5Khz/** Frequency	**A/** Coil Type **A**bsolute-(**A**) **D**ifferential-(**D**) **S**witchable-(**S**)	**.500/** Probe Diameter	**35** Length of poly-covered cable

PowerLink™ Technology Probes:

IDL/ Probe Type	**SS/** Housing Type **S**tainless **S**teel-(**SS**) **D**elrin-(**D**)	**5Khz/** Frequency	**A/** Coil Type **A**bsolute-(**A**) **D**ifferential-(**D**) **S**witchable-(**S**)	**.500/** Probe Diameter	**35** Length of poly-covered cable

OD Probes

Nortec® OD Probes

These probes have encircling type coils to surround rods or tubes. OD probes are available in three different coil configurations.

1) **Absolute style**– These detect changes in conductivity and are also used in monitoring the heat treating process. The absolute coil can also be used to monitor wall thickness to detect thinning in tube walls.

2) **Differential style**– Primarily used for pit and crack detection.

3) **Switchable**– These can be used in either mode.

OD coils are manufactured with long wearing stainless steel faceplates. Standard probe hole sizes range from .015" to 1.50". Due to the wide variety of sizes and frequencies, OD coils are manufactured to customer specifications when ordered.

Nortec® OD Probes

How to order

Example:

OD(1) Probe Type	**/10Khz** Frequency	**/.525** Actual Probe Diameter(2)	**A** Coil Type **A**bsolute-(**A**) **D**ifferential-(**D**) **S**witchable-(**S**)

(1) To order the PowerLink™ version of this probe order as "ODL"

(2) The amount of clearance needed is dictated by the frequency and material to be inspected. If you are unsure please contact the Sensors Department at Staveley Instruments for more details.

Probes are manufactured for easy mounting. Probe size, L=3.0" x W=1.2" x H=3.1".

The standard probes are fitted with a detachable Lemo triaxle connector. PowerLink™ probes will be fitted with a 7 pin Lemo connector. Cables are sold seperately. For standard probes (Lemo triaxle) use the standard detachable cable C/SC/6 (P/N 9113016).

For PowerLink™ probes use the detachable cable CL/SC/6 (P/N 9122083).

General Purpose Probe Kits

General Purpose Kits

The Nortec® probe kits contain five of our most widely used probes, an aluminum crack standard and a block of six conductivity samples. The kits are available in either the standard probe series with integral 6' cables with 8 pin Burndy connectors, or the detachable series with a C/SC/6 cable included (8 pin Burndy)

Detachable Training Kit

This kit contains two surface probes (covering a wide frequency range), two pencil and two bolt hole probes (absolute and differential), one right angle pencil probe, two detachable bridge cables (straight and right angle), and one SPO-3806 sliding reflection probe with cable. Also included are a set of plastic shim stocks, an aluminum crack standard, a thinning standard, a second layer crack standard, a TB-16 hole standard, and one set of six conductivity samples. This kit is available with Detachable Probes only.

How to Order

Provide part number and description

Example: 9216632 Standard Probe Kit

Standard Probe Kit – Stock Part No. 9216632

Includes:	1)9204899	SP-10A 10 KHz Surface Probe
	1)9204903	SP-100 100KHz Surface Probe
	1)9204905	SP-500 500KHz Surface Probe
	1)9204915	3551F 500KHz Pencil Probe
	1)9213428	3551DF 2 MHz Pencil Probe
	1)1902474	Set of Six Conductivity Samples
	1)1902510	TB-SI Aluminum Crack Standard Carrying Case

Detachable Probe Kit – Stock Part No. 9216633

Includes:	1)9213011	S/300KHz-10KHz/.62 Surface Probe
	1)9213012	S/1 KHz-50KHz/.31 Surface Probe
	1)9213013	P/100KHz-500KHz/A/90.5/6 Right Angle Pencil probe
	1)9213014	P/500KHz-1MHz/A Pencil Probe
	1)9213015	P/500KHz-2MHz/D Pencil Probe
	1)9113016	C/SC/6 6' Cable Straight Connector
	1)1902474	Set of Six Conductivity Samples
	1)1902510	TB-S1 Aluminum Crack Standard Carrying Case

Detachable Training Kit - Stock Part No. 9216655

Includes:	1)9213011	S/300KHz-10KHz/.62 Surface Probe
	1)9213012	S/1KHz-50KHz/.31 Surface Probe
	1)9213013	P/100KHz-500KHz/A/90.5/6 Right Angle Pencil probe
	1)9213014	P/500KHz-1MHz/A Pencil Probe
	1)9213015	P/500KHz-2MHz-D Pencil Probe
	1)9113016	C/SC/6 6" Cable Straight Connector
	1)1902474	Set of Six Conductivity Samples
	1)1902510	TB-SI Aluminum Crack Standard
	1)5319540	Set of Plastic Shims
	1)1902477	TB-16 Hole Standard
	1)9216156	B/100KHz-500KHz/A.250 Bolt Hole Probe
	1)9216171	B/500KHz-2MHz/D.250 Bolt Hole Probe
	1)9113017	C/RA/6 6' Cable Right Angle Connector
	1)9211636	SPO-3806 Sliding Probe
	1)1916914	SPO-4304 Thinning Sample .039" to .164"
	1)1916915	SPO-3932 Second Layer Crack Standard (1/16" on 1/16" Aluminum w/fasteners) Carrying Case

Probe Kit 9216632

Documentation

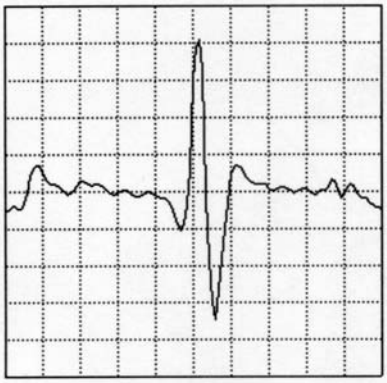
Probe Documentation

A ***Test Documentation Form*** is supplied with all standard Eddy Current Probes. Each probe is tested on a sample or standard relevant to the probe diameter and frequency, for proper signal response. In addition a *Certificate of Conformance* is available upon request.

STAVELEY INSTRUMENTS, INC.
A Subsidiary of Staveley NDT Technologies, Inc.

TECHNICAL DATA SHEET

STAVELEY INSTRUMENTS
TEST DATA



FREQUENCY 1	2000	FREQUENCY 2	OFF
GAIN1 HORZ	71.4	GAIN2 HORZ	40.0
GAIN1 VERT	71.4	GAIN2 VERT	40.0
PHASE 1	7	PHASE 2	0
FILTER LO	500	FILTER HI	200
POSN HOR	50.0	POSN VER	50.0
DISPLAY	F1	SWEEP	EXTERNAL
MEM2	OFF	CONT. NULL	OFF
CAPTURE	10.0	PROBE DRIVE	MID
PERSISTENCE	0	SWEEP ERASE	ON
BACKLIGHT	OFF	CRT ERASE	0
HORN	OFF	GRATICULE	ON

CALIBRATION INFORMATION

INSTRUMENT	NORTEC-19eII
INSTRUMENT SERIAL #	335DC
PRODUCTION ORDER #	M20026/1
PROBE TYPE	SPO-5000 .244
PROBE SERIAL #	G03171
STOCK NUMBER	9218881
FREQUENCY	2000KHZ
TEST STANDARD	INCONEL 718 S/N 9A1
NOTCH SIZE	.030X.015X.003

COMMENTS:

TECHNICIAN _____ QA ACCEPTANCE _____

DATE _____

Special Product Requests

Contact Information:

Name:_____

Company:_____

Address:

_____
_____
_____
_____

Telephone: (_____)
_____

Fax: (_____)
_____

E-mail: _____

Is there a similar probe to the one you require in the probe catalog? △ Yes △ No (CHECK ONE)
If yes please indicate page number and part number if applicable,_____

If there is a similar probe in this catalog what alterations would you require?

_____
_____
_____
_____

Type of flaw:

Material to be tested:_____

Is the flaw located on the surface, subsurface or both?_____

Depth of penetration required?_____ What is the typical flaw size (L X W X D*)? _____

What is the maximum flaw size to be detected (L X W X D*)?_____

What is the orientation of the flaw?

*L= length
W= width
D= depth

Instrument or connection:

What instrument do you wish this probe to connect with (CHECK ONE)?

△ Nortec 1000
△ Nortec 2000S, 2000D
△ Nortec 3000
△ WorkStation
△ PowerStation
△ Nortec 19e, 19eII
△ Nortec 24
△ Other

If other please specify:

You may mail your request to: Staveley Instruments, Inc. , 421 N. Quay St., Kennewick WA 99336
You may fax your request to: (509) 735-4672 or e-mail your request to: sndt1@staveleyndt.com

Special Product Requests

What type of probe would you like to use (CHECK AS MANY AS APPLY)?

- △ Absolute
- △ Differential
- △ Bridge
- △ Reflection
- △ Pencil probe
- △ Surface probe
- △ I/D probe
- △ O/D probe
- △ Other

Use the area below to sketch your requirements.

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