





Recommended Probe Capability Matrix for Surfaces, Welds, Holes

Flaw Type / Probe Type (Model)	Surf-X (XPSC)	Pencil (DPT/DPTU)	Blade (BLD)	Slide (SLD)	Ring (RNG)	Spot (SPT)	Weld (WSPPP, WSPXP)	Conductivity (T/D)	Bond Tester (1) (SP3L)	Rotating (AFRTP, ARTP, CRTP, RTP)	Manual Bolt Hole / Countersink (MBHP, MCSP)
Crack detection and characterization	✓	✓	✓	✓	✓	✓	✓	—	—	✓	✓
Corrosion	✓	✓	✓	✓	✓	✓	✓	—	—	✓	✓
Pitting	✓	✓	✓	✓	✓	✓	✓	—	—	✓	✓
Ferrous Weld	✓	—	—	—	—	—	✓	—	—	—	—
Nonferrous Weld	✓	○	○	—	—	—	✓	—	—	—	—
C-Scan / 3D Resolution	✓	—	—	—	—	—	—	—	—	✓	✓
Countersinks	—	—	—	—	—	—	—	—	—	✓	✓
Paint Thickness	✓	○	○	—	—	○	○	✓	—	—	—
Conductivity	—	—	—	—	—	—	—	✓	—	—	—

(1) Bond tester probes currently supported only for MIZ-21SR already in the field.

-  Best method for speed and flaw characterization
-  The test method has proven results for the specific application
-  The test results obtained from the test method can be interpreted reasonably
-  Test method is not suitable or non-reliable in terms of repeatability

Probe Connector Pictures



Microdot



Triax



3 Pin

4 pin Amphenol

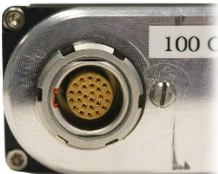


4 Pin LEMO



4 Pin Fischer

BNC



26 pin surface array

Rotating scanner probe connectors



4 Pin Step LEMO



4 Pin Fischer

Rotating scanner to MIZ-21C connectors

		
MIZ-21C 18Pin to Zetec 18Pin PN 111A810-00	MIZ-21C 18Pin to GE 12Pin PN 111A802-00	MIZ-21C 18Pin to Olympus 16Pin PN 111A803-00

MIZ-21C Instrument Connectors



26 pin surface array

18Pin for Handheld and rotating scanners

Probe Handles / Cables for MIZ-21C Array Surf-X Probe

Part Number	MIZ-21C Array connector	Cable Length	Probe Head / Scanner Connector
111A801-00	26-PIN	6ft (1.8m)	26-PIN_SURF-X_ARRAY_PROBES

Probe Handles / Cables for MIZ-21C for Probe Heads

Part Number	MIZ-21C connector	Handle Length	Cable Length	Probe Head Connector
111A804-00	18-PIN	No Handle	6ft (1.8m)	MICRODOT
111A805-00	18-PIN	No Handle	6ft (1.8m)	TRIAx
111A806-00	18-PIN	2.5in (63mm)	6ft (1.8m)	3-PIN
111A807-00	18-PIN	No Handle	1ft (0.9m)	4-PIN FISCHER
111A814-00	18-PIN	No Handle	6ft (1.8m)	4-PIN FISCHER
111A815-00	18-PIN	No Handle	1ft (1.8m)	BNC
111A816-00	18-PIN	No Handle	1ft (0.9m)	4-PIN Amphenol
111A817-00	18-PIN	No Handle	6ft (1.8m)	5-Pin Cannon
111A820-00	18-PIN	No Handle	6ft (1.8m)	4-PIN Female LEMO (GE Probes)
111A822-00	18-PIN	No Handle	6ft (1.8m)	4 PIN MICROTECH
111A824-00	18-PIN	No Handle	6ft (1.8m)	Dual (2) MICRODOT

Probe Cables for MIZ-21C for Rotating Scanners

Part Number	MIZ-21C connector	Cable Length	MIZ-21C to Scanner Connector
111A802-00	18-PIN	6ft (1.8m)	12-PIN GE SCANNER (MiniDrive)
111A803-00	18-PIN	6ft (1.8m)	16-PIN OLYMPUS SCANNER (MiniMite); 16-PIN OLYMPUS (SpitFire 2000); RA 2000
111A810-00	18-PIN	6ft (1.8m)	18-PIN ZETEC SCANNER (PN: 169A901-00)
111A818-00	18-PIN	6ft (1.8m)	8-PIN LEMO For use with Zetec 2000-02-01 or 10013082 (Rotating Scanner); 2000-02-05 or (Indexing Scanner)
111A819-00	18-PIN	6ft (1.8m)	12-PIN LEMO For use with Zetec 2100-02-10 or 10015217 (ZS-4)
111A821-00 Not supported	18-PIN	6ft (1.8m)	16-PIN UniWest ECS-1; UniWest JF-15 (Keyed different than 111A803-00 and 24V)
111A823-00	18-PIN	6ft (1.8m)	8 PIN Rohmann

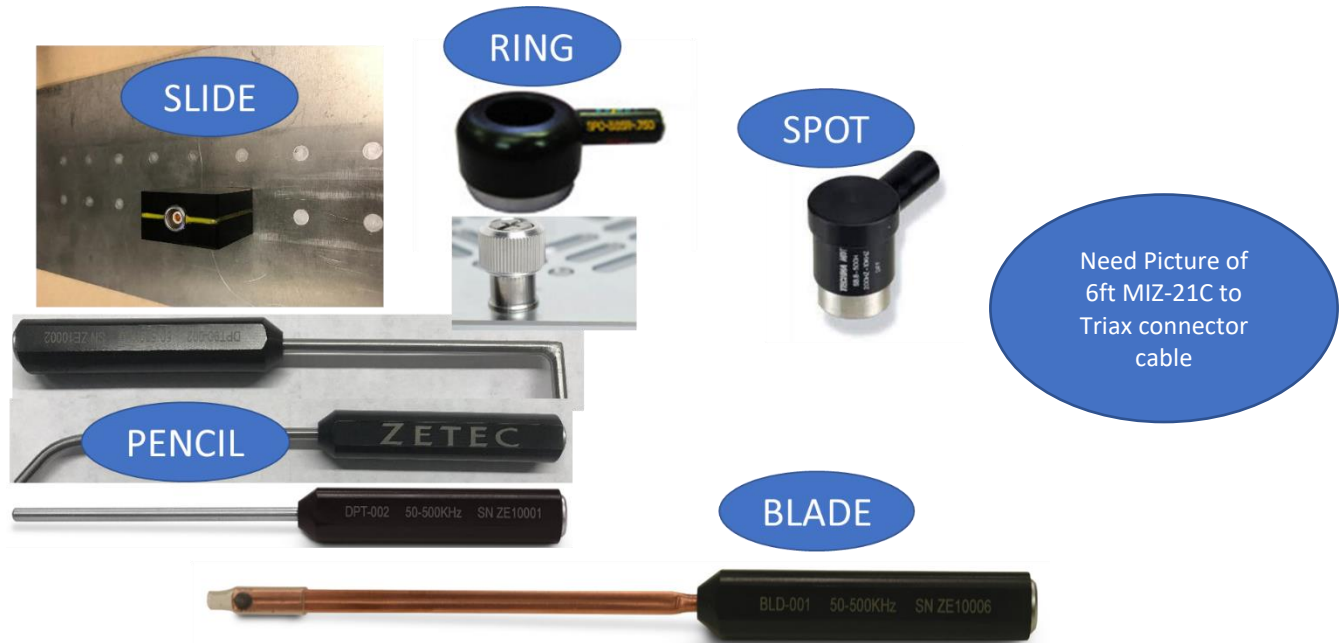
Probe Handles / Cables for Other Zetec Instruments

Instrument	Cable Part Number	Handle Length	Cable Length	Instrument connector	Probe Head Connector
MIZ-21A/B/SR	10025251	2in (51mm)	6ft (1.8m)	4 pin Fischer	3 PIN
MIZ-20/22/40/50	10026386	2in (51mm)	6ft (1.8m)	4 pin Amphenol	3 PIN
MIZ-21 A/B/SR	999A800-00	No Handle	6ft (1.8m)	4 pin Fischer	MICRODOT
MIZ-20/22/40/50	999A801-00	No Handle	6ft (1.8m)	4 pin Amphenol	MICRODOT
MIZ-21 A/B/SR	999A802-00	No Handle	1ft (1.8m)	4 pin Fischer	BNC
MIZ-21 A/B/SR		No Handle		4 pin Fischer	(2) BNC
MIZ-20/22/40/50	999A803-00	No Handle	1ft (1.8m)	4 pin Amphenol	BNC
MIZ-21 A/B/SR	10003552-1	No Handle	6ft (1.8m)	4 pin Fischer	TRIAx
MIZ-20/22/40/50	999A805-00	No Handle	6ft (1.8m)	4 pin Amphenol	TRIAx
MIZ-27	10007562-1	No Handle		12P Bendix	TRIAx
MIZ-21 A/B/SR	999A806-00 10008165-1?	N/A	6ft (1.8m)	4 pin Fischer	4 PIN Fischer
MIZ-20/22/40/50	999A807-00	N/A	6ft (1.8m)	4 pin Amphenol	4 PIN Fischer
MIZ-21 A/B/SR	999A810-00	N/A	6ft (1.8m)	4 pin Fischer	5-Pin Cannon
MIZ-21 A/B/SR	999A811-00	N/A	6ft (1.8m)	4 pin Fischer	4 PIN LEMO (GE Probes)
MIZ-20/22/40/50	999A812-00	N/A	6ft (1.8m)	4 pin Amphenol	4 PIN MICROTECH

Probe Cables for MIZ-xxx for Rotating Scanners

Instrument	Part Number	Instrument connector	Cable Length	Scanner Connector
MIZ-21B	10013790-6	?	6ft (1.8m)	ZS-4 (16 pin Fischer?)
			6ft (1.8m)	
			6ft (1.8m)	

Aerospace Probe Starter Kit



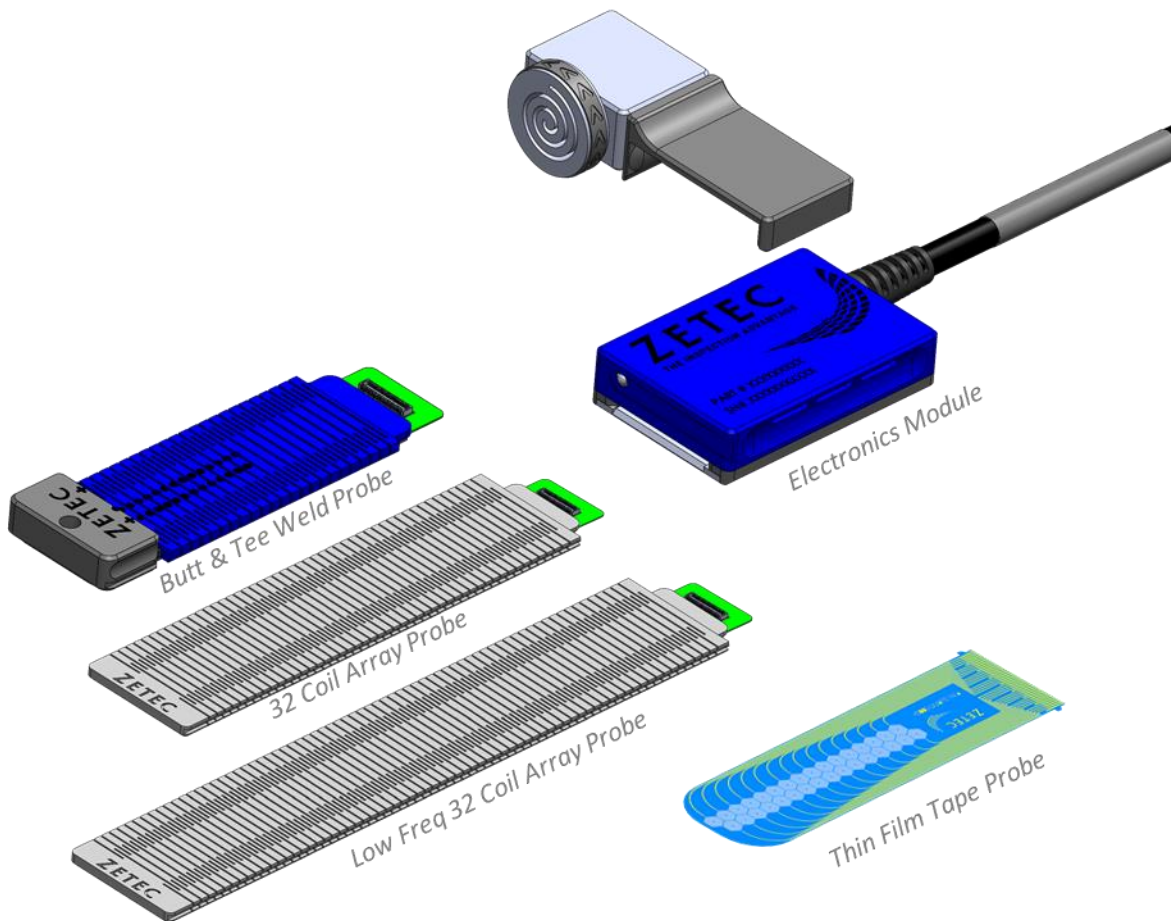
Part Number: PROBEKIT-001

Part Number	Full Description
BLD-001	BLD = Detachable Blade Probe Straight (for Blade Probes, Probe Diameter is the blade thickness); Item Diameter: 0.060in (1.5mm); Coil: 250= 50-500 kHz; Length: 6in (152mm); Connector: 1 Pin Female Triaxial Connector Handheld
SLD-001	SLD = Detachable Sliding Probe with Reflection (Driver Pick-up Coils); Item Diameter: 0.500in (12.7mm); Coil: 0049= .3-10 kHz; Length: No cable; Connector: 1 Pin Female Triaxial Connector Handheld; MIZiD: No; Coil Diameters 0.500" (12.7mm)
SPT-001	SPT = Detachable Spot Probe with Reflection (Driver Pick-up Coils); Item Diameter: 0.400in (10.2mm); Coil: 049= 1-100 kHz; Length: No cable; Connector: 1 Pin Female Triaxial Connector Handheld; MIZiD: No; Coil Diameters 0.400" (10.2mm)
RNG-001	RNG = Detachable Ring Probe with Reflection (Driver Pick-up Coils); Item Diameter: 0.670in (17mm); Coil: 047= .1-100 kHz; Length: No cable; Connector: 1 Pin Female Triaxial Connector Handheld; MIZiD: No; Coil Diameters: 0.670" (25.5mm) Internal Diameter, 1.100" (17.0mm) outer diameter
DPT90-002	DTP90 = Detachable Pencil Tip Probe 90 Degree Shielded; Item Diameter: 0.125in (3.2mm); Coil: 250= 50-500 kHz; Length: 5in (127mm); Connector: 1 Pin Female Triaxial Connector Handheld; MIZiD: No; Drop is 0.5 inch (12.7mm)
DPT45-002	DTP45 = Detachable Pencil Tip Probe 45 Degree Shielded; Item Diameter: 0.125in (3mm); Coil: 250= 50-500 kHz; Length: 5in (127mm); Connector: 1 Pin Female Triaxial Connector Handheld; MIZiD: No; Drop is 0.5 inch (12.7mm)
DPT-002	DTP = Detachable Pencil Tip Probe Straight Shielded; Item Diameter: 0.125in (3mm); Coil: 250= 50-500 kHz; Length: 5in (127mm); Connector: 1 Pin Female Triaxial Connector Handheld
111A805-00	6ft MIZ-21C to Triax Probe Connector

Eddy Current Surface Array Probes

Eddy current surface array probes allow for fast inspection of surfaces with varying materials and geometries utilizing the eddy current technique. Surface preparation is not necessary as compared to penetrant inspection methods. Additionally, there are no chemical usage or environmental concerns as compared to Magnetic Particle or penetrant inspection methods.

XPSC Surf-X™ Flexible Array Probe Family



Ultimate Probe Flexibility

Introducing the Surf-X family of flexible Eddy Current array probes. Featuring unique multiple coil sets and proprietary X-PROBE™ technology, Surf-X array probes can quickly and accurately test a wide range of materials and geometries.

With interchangeable electronics module, cable, detachable encoder and coil sets, Surf-X array probes provide flexibility and cost efficiencies like never before.

FEATURES & BENEFITS

Save Time and Money

- ▶ Electronics module, cable and detachable encoder can be used interchangeably and re-used with any subsequent Surf-X array probe coil sets
- ▶ Field interchangeable coil sets easily adapt to different materials and surface geometries at the inspection site
- ▶ Detachable handles to accommodate different applications and complex geometries
- ▶ Preset test configurations
- ▶ Ability to revise filters to optimize results

Fast Inspection, No Chemicals

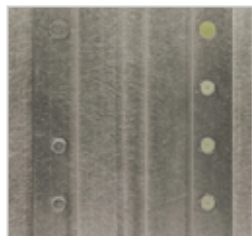
- ▶ **Chemical Testing Replacement:**
Surface array probes are a cost-effective, chemical free replacement for Liquid Penetrant Testing (PT) and Magnetic Particle Testing (MT)
- ▶ **Single Sensor Probe Replacement:**
The surface array option can reduce inspection time by up to 95% versus traditional pencil probes

Accurate, High Quality Results

- ▶ Better coverage vs. traditional handheld probes
- ▶ Rotatable Encoder is standard, providing easy identification of flaw locations and dimensions
- ▶ Position indicators on the probe help with alignment and ensure the entire area of interest is inspected
- ▶ Patented and proven X-PROBE technology-based coil set delivers added dependability and accuracy
- ▶ Operates in absolute and multiple modes of driver pickup

For a lower total cost, excellent data quality and reduced inspection time compared to other methods, consider Surf-X array probes from Zetec.

Inspect Complex Geometries with Ease



Smart Options

Interchangeable Surf-X Coil Sets

A key advantage of the Surf-X array probe family is the highly flexible design featuring interchangeable multiple coil sets. With Surf-X array probes, users in the field can change a coil set in less than a minute enabling the probe to easily adapt to different materials and surface geometries at the inspection site.

Surf-X Weld Array Probe: Innovative and patent pending mix of array and +point™ coils. The +point coils find indications in the hard to inspect weld toes and while the array coils quickly inspect the remaining weld and heat affected zones. Handles have been designed to make inspecting ship board Butt and T-welds a breeze.

Surf-X Flex Array Probe: Flexible probe allowing detailed inspection on all materials and many geometries. Ideal for testing rows of flush rivets, replacing handheld probes. Replace your die penetrant testing on helicopter spars, train wheels or mining drums.



Surf-X Weld Array Probe

Surf-X Flex Array Probe

Wear Surface Options

All Surf-X interchangeable coil sets come with three wear surface options:

- **No wear surface** for inspecting small indications on smooth materials.
- **Cloth wear surface** for protecting the array coils and smooth or polished surfaces. Ideal for airplane skins or smooth curved surfaces.
- **Super fabric** for protecting array coils on rough surfaces like Butt and T-Welds.



Super Fabric

New Levels of Probe Versatility

Versatile Electronics Module and Cable

The Surf-X array probe's electronics module and cable design offers breakthrough inspection efficiencies. These components can be used interchangeably across probe coil sets delivering material cost savings after initial purchase.

With subsequent Surf-X array probe purchases, the module and cable can be re-used saving time and money.



Detachable Encoder

Surf-X array probes come with a highly versatile, detachable encoder that can connect in multiple locations on both the handle and electronics module providing maximum versatility when it comes to dealing with multiple positions as you probe.

For cost efficiency, the encoder can be used and re-used interchangeably with all Surf-X array probe coil sets.



Complete Eddy Current Array Inspection Solution

A Surf-X array probe is a fast, accurate, chemical-free alternative to penetrant testing (PT) that, when used with the Zetec MIZ®-21C handheld eddy current array instrument, is one of the most cost-effective portable surface array solutions on the market.

Recently updated, the Zetec MIZ-21C is a sealed unit with IP-66 rating and features increased operating temperature range, increased internal memory storage, off-the shelf battery charging and more.



Probe Options to Meet Your Specific Needs

	Surf-X T & Butt Weld Probe	Surf-X Flexible Probe
Applications	High crown T & Butt Welds	1/2" radius surfaces airplane skins, mining equipment, train wheels
Materials	Ferrous, non-ferrous	Ferrous, non-ferrous
Subsurface	Non-ferrous	Non-ferrous
Surface	Ferrous, non-ferrous	Ferrous, non-ferrous
Freq Range	50 - 2800kHz	50 - 2800kHz
Penetration	0.25" (6.3mm)	0.25" (6.3mm)
Coverage 32 coil 2x16	1.7" (43mm)	1.7" (43mm)
Coil diameter	0.079" (2mm) 2+points	0.079" (2mm)
Bend radius	0.500" (12.7MM)	0.500" (12.7MM)

General Specifications

Shipping Dimensions: 10in. x 8in. x 6in. (25.4cm x 20.3cm x 15.2cm)

Shipping Weight: < 2 lbs (0.9kg)

Operational Temperature: 40°F to 113°F (4°C to 45°C)

Recommended Storage Temperature: 55°F to 75°F (13°C to 24°C)



Recommended Eddy Current Instruments

MIZ®-21C Array: (PN 111A903-00)

MIZ-200 Array: (PN 10048501 – 128 coil array; PN 10048500 – 64 coil array)

Ordering Information

Complete Probe Electronics Module, Encoder & Coil Set

Mode (MIZ-21C/MIZ-200)	Model Description	Electronics Module Coll Count	PN Suffix	Wear Surface	PN Suffix/Tape	Cable Length ft	PN Suffix
XPSWC/ XPSW	Flexible Array Weld	32	Sxx	None	x00/x0000	6	06
		64	Mxx	Cloth	x01/x0001	13	13
XPSFC/ XPSF	Flexible Array	128	Lxx	Super Fabric	x02/x0002	33	33

Electronics Module

Component	PN	Description
MIZ-21C 32 Coil	SURFXCEM-S00-06	SURF-X Electronics Module MIZ-21C 32 Coil
MIZ-200 32 Coil	SURFXEM-S00-13	SURF-X Electronics Module MIZ-200 32 Coil

Detachable Encoder

Component	PN	Description
Detachable Encoder	SURFXEN-001	Detachable Encoder with 18" USBM Cord

Interchangeable Coil Sets (32 Coil)

Wear Surface	T & Butt Weld	Flexible
None	SURFXW-S00	SURFX-S00
Cloth	SURFXW-S01	SURFX-S01
Super Fabric	SURFXW-S02	SURFX-S02

Zetec: A Leading Supplier of Probes Worldwide

For 50 years, Zetec has manufactured over 10,000 probe designs to meet the changing needs of the nondestructive testing (NDT) market. We are a leading supplier of probes worldwide covering most applications and techniques. With world-class manufacturing facilities, Zetec probes deliver the best results for our customers



Zetec holds ISO 9001 and ISO/IEC 17025 certifications



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Pencil Probes

DPT Detachable Tip Pencil Probe Straight Shielded

DPTU Detachable Tip Pencil Probe Straight Unshielded



DPT45 Detachable Tip Pencil Probe 45 degree Shielded

DPT45U Detachable Tip Pencil Probe 45 degree Unshielded



DPT90 Detachable Tip Pencil Probe 90 degree Shielded

DPT90U Detachable Tip Pencil Probe 90 degree Unshielded



Applications / Standard Features

- Designed for general crack detection.
- **Microdot** connectors are absolute with no internal balance coil
- **Triax** connectors are absolute bridge with internal balance coil
- ****Shielded** (for 1MHz and lower frequencies)
- Drop is 0.5" (12.7mm). Other drops upon request.

Probe Shaft Diameter	Probe Coil Outside Diameter	Connector to tip length options	Frequencies Options	Connector Options
0.072" (1.8mm)	0.062" (1.6mm)	4" (mm)	*50-500kHz	Microdot
0.093" (2.4mm)		*5" (mm)	500kHz-1MHz	* Triax
*0.125" (3.2mm)		6" (mm)	**1-3MHz (0.125 shaft only)	

* most common

Custom options are available for all items

** 1-3MHz uses unshielded models DPTU, DPT45U and DPT90U to provide a better response

Pencil probes can detect indications down to approximately ½ the coils diameter.

Supporting Instruments

MIZ-21C (all Versions)

Cable adapters: Match connector to applicable adapter. [Quick Link](#)

DPTTAP Detachable Tip Pencil Probe Tapered Shielded

Applications / Standard Features

- Designed for general crack detection.

Probe Shaft Diameter	Probe Coil Outside Diameter	Connector to tip length options	Frequencies Options	Connector Options
N/A	0.062" (1.6mm)	4" (mm)	*50-500kHz 500kHz-1MHz **1-3MHz (0.125 shaft only)	Microdot Triax
* most common Custom options are available for all items ** 1-3MHz uses unshielded models DPTU, DPT45U and DPT90U to provide a better response				

Pencil probes can detect indications down to approximately ½ the coils diameter.

Pencil Probe Tip Protection

Protect the materials you are inspecting and the probe coils.

From 33B-1-2: NONDESTRUCTIVE INSPECTION GENERAL PROCEDURES AND PROCESS CONTROLS

4.1.1.4: Teflon tape: It is required that teflon tape be applied to the contact surface of the probes to protect the probe tip from excessive wear and damage and to reduce probe noise. P/N 3M 5480 or equivalent, maximum thickness 0.005".

or

TapeCase ¾-5-423-x UHMW Tape Roll ¾ in. (W) x 15 ft. (L) - Abrasion Resistant High Tack Acrylic Adhesive.

Part Number	Thickness
¾-5-423-3	0.005"
¾-5-423-5	0.007"
¾-5-423-10	0.010"

Blade Probes

BLD Detachable Tip Pencil Probe Straight Shielded



BLD45 Detachable Tip Blade Probe 45 degree Shielded

BLD60 Detachable Tip Blade Probe 60 degree Shielded

BLD90 Detachable Tip Blade Probe 90 degree Shielded

Applications / Standard Features

- Designed for surface detection in narrow slots or gaps. Both sides of the probe will detect defects.
- **Shielded
- Drop is 0.5" (12.7mm) for any angled probes. Other drops upon request.

Shaft Thickness (Width of the shaft)	Connector to tip length Options	Frequencies Options	Connector Options
0.030" (0.8mm) 0.045" (1.1mm) *0.060" (1.5mm) 0.090" (2.3mm)	6" (mm)	*50-500kHz **1-3MHz (0.125 coil only)	Triax
* most common Custom options are available for all items ** 1-2MHz uses unshielded models BLDU, BLD45U, BLD60U, BLD90U to provide a better response Note: Microdot connectors are not used because Triax provides a better response			

Supporting Instruments

MIZ-21C (all Versions)

Cable adapters: Match connector to applicable adapter. [Quick Link](#)

Slide Probes

SLD Detachable Tip Sliding Probe with Reflection (Reflection / Driver Pick-up Coils)

For detection of near side to far side indications near fasteners. For faster inspections ask about Zetec's Surf-X probes.



Probe Coil outside diameter	Frequencies Options	Connector Options
Customer recommended coil diameter or coverage width	Provide Frequency	Triax
Custom options are available for all items		

Coil diameter should be sized to find flaws of interest.

Applications / Standard Features

- Inspecting rows of flush fasteners

Example of commonly used probe

Part Number	Description	Probe Coil Outside Diameter	Coil operation	Frequencies	Connector
SLD-001	ZHHD-SLD-E00.500-0049-00Z0000	0.500" (12.7mm)	Reflection (Driver Pick-up)	0.3-10 kHz	Triax

Supporting Instruments

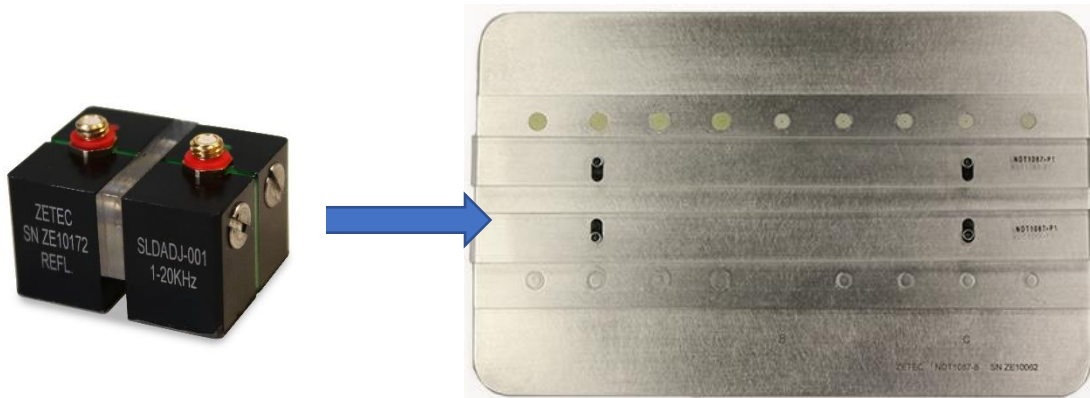
MIZ-21C (all Versions)

Cable adapters: Match connector to applicable adapter. [Quick Link](#)

Adjustable Slide Probes

SLDADJ Detachable Tip Sliding Probe with Reflection (Reflection / Driver Pick-up Coils)

For detection of near side to far side indications over protruding fasteners.



Probe Coil outside diameter	Frequencies Options	Connector Options
Customer recommended coil diameter or coverage width	Provide Frequency	Triax
Custom options are available for all items		

Coil diameter should be sized to find flaws of interest.

Applications / Standard Features

- Inspecting rows of protruding fasteners
- Includes 0.10" and 0.05" spacers

Example of commonly used probe

Part Number	Description	Probe Coil Outside Diameter	Coil operation	Frequencies	Connector
SLDADJ-001	ZHHD-SLDADJ-E00.500-#-00D0000	0.500" (12.7mm)	Reflection (Driver Pick-up)	1.0-20 kHz	Triax

Supporting Instruments

MIZ-21C (all Versions)

Cable adapters: Match connector to applicable adapter. [Quick Link](#)

Ring Probes

RNG Detachable Tip Ring Probe with Reflection (Driver Pick-up Coils)

For examination the body surface of protruding fasteners



Probe Coil inside diameter	Frequencies Options	Connector Options
Customer recommended coil inside diameter or coverage width	Provide Frequency	Triax
Custom options are available for all items		

Applications / Standard Features

- Inspecting protruding fasteners for surface and subsurface cracks in the material or multilayer structure

Example of commonly used probe

Part Number	Description	Probe Coil Inside / Outside Diameter	Coil operation	Frequencies	Connector
RNG-001	ZHHD-RNG-E00.670-047-00Z0000	0.670" (17.0mm) / 1.100" (27.9mm)	Reflection (Driver Pick-up)	0.1-100 kHz	Triax

Supporting Instruments

MIZ-21C (all Versions)

Cable adapters: Match connector to applicable adapter. [Quick Link](#)

Spot Probes

SPT Detachable Tip Spot Probe with Reflection (Driver Pick-up Coils)

SPTU Detachable Tip Spot Probe with Reflection (Driver Pick-up Coils) Unshielded



Probe Coil outside diameter	Frequencies Options	Connector Options
Customer recommended coil diameter or coverage width	Provide Frequency	Triax
Custom options are available for all items		

Applications / Standard Features

- Inspecting deep and far side flaws

Example of commonly used probe

Part Number	Description	Probe Coil Outside Diameter	Coil operation	Frequencies	Connector
SPT-001	ZHHD-SPT-E00.400-049-00Z0000	0.400" (10.2mm)	Reflection (Driver Pick-up)	1-100 kHz	Triax
SPTU-001	ZHHD-SPTU-E00.250-#-00Z0000	0.250" (6.4mm)	Reflection (Driver Pick-up)	100-500 kHz	Triax

Minimum outside coil diameter is 0.250"

Supporting Instruments

MIZ-21C (all Versions)

Cable adapters: Match connector to applicable adapter. [Quick Link](#)

Weld Probes

WSPPP Weld Scan Probe with Differential Plus Point Coil



Applications / Standard Features

- Inspection of Raised Weld Beads
- Operating in Differential Mode

WSPXP Weld Scan Probe with Driver Pickup Cross Point Coil



Applications / Standard Features

- Inspection of Flush Ground Welds (better for flat surfaces)
- Operating in Driver-Pickup Mode

Part Numbers	Coil Diameter Options	Probe Tip Diameter Options	Handle Length	Frequencies	Connector
WSPPP-001	0.245" (6.22mm)	0.312" (7.92mm)	5.0" (127mm)	30-300kHz +point	Triax
10025177			NA	30-300kHz +point	3 Pin
WSPXP-001			5.0" (127mm)	30-300kHz Xpoint	Triax
10025328			NA	30-300kHz Xpoint	3 Pin

Custom options are available for all items

Supporting Instruments

MIZ-21C (all Versions)

Cable adapters: Match connector to applicable adapter. [Quick Link](#)

T/D Conductivity Probe



Example of commonly used probe

Part Numbers	Description	Cable Length	Adapter to MIZ-21C	Frequency	Connector
10025934	ZHHP-T/D-375-SP-6-4PA	6ft	111A816-00	60kHz – 500kHz	4 pin Amphenol
10025171	ZHHD-T/D-375-SP-6-4PF	6ft	111A807-00	60kHz – 500kHz	4 pin Fischer
SPT-015	ZHHD-SPT-E00.329-250-00Z0000	None	111A805-00	60kHz – 500kHz	Triax

Applications / Standard Features

- Determining conductivity of metals and thickness of coatings
- Probe receive coil is 0.329" (8.4mm). The probe body at the coil is 0.500" (12.7mm)
- MIZ-21C is set up to run conductivity with these probe coils.

Supporting Instruments

MIZ-21C (all Versions)

Cable adapters: Match connector to applicable adapter. [Quick Link](#)

Probes for Rotating Scanners

RTP Rotating Probe for Mini Scanners, Reflection D coils (Driver Pick-up)



Hole Size	Frequencies Options	Connector Options
Customer recommended hole diameter range	Provide Frequency Range	4 Pin Fischer (Zetec / GE Scanners) 4 Pin Step LEMO (Most Olympus Scanners)
Custom options are available for all items		

Applications / Standard Features

- Inspecting flaws on the ID of a fastener hole
- Reflection (Driver Pick-up D coils)

Commonly used probes

Part Number	Hole Diameter Range	Working Length	Connector type	Frequency Range
RTP-013	0.125-0.156in (3.18-3.96mm)	1.75" (44mm)	4 Pin Fischer	100-2000 kHz
RTP-014	0.156-0.187in (3.96-4.75mm)	1.75" (44mm)	4 Pin Fischer	100-2000 kHz
RTP-001	0.187-0.218in (4.75-5.54mm)	1.75" (44mm)	4 Pin Fischer	100-2000 kHz
RTP-003	0.218-0.250in (5.54-6.35mm)	2.0" (51mm)	4 Pin Fischer	100-2000 kHz
RTP-004	0.250-0.281in (6.35-7.14mm)	2.0" (51mm)	4 Pin Fischer	100-2000 kHz
RTP-005	0.281-0.312in (7.14-7.92mm)	2.0" (51mm)	4 Pin Fischer	100-2000 kHz
RTP-006	0.312-0.375in (7.92-9.53mm)	2.0" (51mm)	4 Pin Fischer	100-2000 kHz
RTP-002	0.375-0.437in (9.53-11.1mm)	2.0" (51mm)	4 Pin Fischer	100-2000 kHz
RTP-007	0.437-0.500in (11.1-12.7mm)	2.0" (51mm)	4 Pin Fischer	100-2000 kHz
RTP-008	0.500-0.562in (12.7-14.27mm)	2.0" (51mm)	4 Pin Fischer	100-2000 kHz
RTP-009	0.562-0.625in (14.27-15.88mm)	2.0" (51mm)	4 Pin Fischer	100-2000 kHz
RTP-010	0.625-0.687in (15.88-17.45mm)	2.0" (51mm)	4 Pin Fischer	100-2000 kHz
RTP-011	0.687-0.750in (17.45-19.05mm)	2.0" (51mm)	4 Pin Fischer	100-2000 kHz
RTP-012	0.750-0.812in (19.05-20.62mm)	2.0" (51mm)	4 Pin Fischer	100-2000 kHz

Supporting Instruments

MIZ-21C (PN: 111A902-00) and MIZ21C Array (PN: 111A903-00)

Rotating Scanners: Zetec (PN: 169A901-00), GE or Olympus

Scanner Cable Adapters: Match scanner connector to applicable adapter. [Quick Link](#)

ARTP Adjustable Rotating Probe for Mini Scanners, Reflection D coils (Driver Pick-up) Y-Type



Hole Size	Frequencies Options	Connector Options
Customer recommended hole diameter range	Provide Frequency Range	4 Pin Fischer (Zetec / GE Scanners) 4 Pin Step LEMO (Most Olympus Scanners)
Custom options are available for all items		

Applications / Standard Features

- Inspecting flaws on the ID of a fastener hole. Adjustable probe tips coverage a large range of diameters than non-adjustable probe tips.
- Reflection (Driver Pick-up D coils) Y-Type

Commonly used probes

4Pin Fischer PN	4 Pin Step LEMO PN	Hole Diameter Range	Working Length	Frequency Range
ARTP-002	ARTP-016	0.125-0.156in (3.18-3.96mm)	1.75" (44mm)	100-2000 kHz
ARTP-003	ARTP-017	0.156-0.187in (3.96-4.75mm)	1.75" (44mm)	100-2000 kHz
ARTP-001	ARTP-018	0.187-0.218in (4.75-5.54mm)	1.75" (44mm)	100-2000 kHz
ARTP-004	ARTP-019	0.218-0.250in (5.54-6.35mm)	2.0" (51mm)	100-2000 kHz
ARTP-005	ARTP-020	0.250-0.281in (6.35-7.14mm)	2.0" (51mm)	100-2000 kHz
ARTP-006	ARTP-021	0.281-0.312in (7.14-7.92mm)	2.0" (51mm)	100-2000 kHz
ARTP-007	ARTP-022	0.312-0.375in (7.92-9.53mm)	2.0" (51mm)	100-2000 kHz
ARTP-008	ARTP-023	0.375-0.437in (9.53-11.1mm)	2.0" (51mm)	100-2000 kHz
ARTP-009	ARTP-024	0.437-0.500in (11.1-12.7mm)	2.0" (51mm)	100-2000 kHz
ARTP-010	ARTP-025	0.500-0.562in (12.7-14.27mm)	2.0" (51mm)	100-2000 kHz
ARTP-011	ARTP-026	0.562-0.625in (14.27-15.88mm)	2.0" (51mm)	100-2000 kHz
ARTP-012	ARTP-027	0.625-0.687in (15.88-17.45mm)	2.0" (51mm)	100-2000 kHz
ARTP-013	ARTP-028	0.687-0.750in (17.45-19.05mm)	2.0" (51mm)	100-2000 kHz
ARTP-014	ARTP-029	0.750-0.875in (19.05-22.23mm)	2.0" (51mm)	100-2000 kHz
ARTP-015	ARTP-030	0.875-1.000in (22.23-25.4mm)	2.0" (51mm)	100-2000 kHz

Supporting Instruments

MIZ-21C (PN: 111A902-00) and MIZ21C Array (PN: 111A903-00)

Rotating Scanners: Zetec (PN: 169A901-00), GE or Olympus

Scanner Cable Adapters: Match scanner connector to applicable adapter. [Quick Link](#)

Rotating Probe Kits for RTP and ARTP Probes



Kit Includes

Carrying case

21 RTP (rotating bolt hole) or 21 ARTP (adjustable rotating bolt hole) probes for the ZM-5 rotating scanner

All 21 probes have 4 pin Fischer connectors and will work with other scanners using this connector

Probe sizes run in 1/32" (0.794mm) increments from 1/8" (3.175mm) to 3/4" (19.050mm). Sizes match holes on the NRK standards.

Part Number	Description	Sizes	Working Length	Connector type	Frequency Range
RTP-KIT01	21 RTP (rotating bolt hole probes)	1/8" (3.175mm)			
ARTP-KIT01	21 ARTP (Adjustable rotating bolt hole probes)	to 3/4" (19.050mm)	1.75" (44mm) to 2.00" (51mm)	4 Pin Fischer	100-2000 kHz

Supporting Instruments

MIZ-21C (PN: 111A902-00) and MIZ21C Array (PN: 111A903-00)

Rotating Scanners: Zetec (PN: 169A901-00), GE or Olympus

Scanner Cable Adapters: Match scanner connector to applicable adapter. [Quick Link](#)

ARTPX Adjustable Rotating Probe for Mini Scanners, Reflection D coils (Driver Pick-up) X-Type



Hole Size	Frequencies Options	Connector Options
Customer recommended hole diameter range	Provide Frequency Range	4 Pin Fischer (Zetec / GE Scanners) 4 Pin Step LEMO (Most Olympus Scanners)
Custom options are available for all items		

Applications / Standard Features

- Inspecting flaws on the ID of a fastener hole. Adjustable probe tips coverage a large range of diameters than non-adjustable probe tips.
- Reflection (Driver Pick-up D coils) X-Type

Commonly used probes

4Pin Fischer PN	4 Pin Step LEMO PN	Hole Diameter Range	Working Length	Frequency Range
ARTPX-002	ARTPX-016	0.125-0.156in (3.18-3.96mm)	1.75" (44mm)	100-2000 kHz
ARTPX-003	ARTPX-017	0.156-0.187in (3.96-4.75mm)	1.75" (44mm)	100-2000 kHz
ARTPX-001	ARTPX-018	0.187-0.218in (4.75-5.54mm)	1.75" (44mm)	100-2000 kHz
ARTPX-004	ARTPX-019	0.218-0.250in (5.54-6.35mm)	2.0" (51mm)	100-2000 kHz
ARTPX-005	ARTPX-020	0.250-0.281in (6.35-7.14mm)	2.0" (51mm)	100-2000 kHz
ARTPX-006	ARTPX-021	0.281-0.312in (7.14-7.92mm)	2.0" (51mm)	100-2000 kHz
ARTPX-007	ARTPX-022	0.312-0.375in (7.92-9.53mm)	2.0" (51mm)	100-2000 kHz
ARTPX-008	ARTPX-023	0.375-0.437in (9.53-11.1mm)	2.0" (51mm)	100-2000 kHz
ARTPX-009	ARTPX-024	0.437-0.500in (11.1-12.7mm)	2.0" (51mm)	100-2000 kHz
ARTPX-010	ARTPX-025	0.500-0.562in (12.7-14.27mm)	2.0" (51mm)	100-2000 kHz
ARTPX-011	ARTPX-026	0.562-0.625in (14.27-15.88mm)	2.0" (51mm)	100-2000 kHz
ARTPX-012	ARTPX-027	0.625-0.687in (15.88-17.45mm)	2.0" (51mm)	100-2000 kHz
ARTPX-013	ARTPX-028	0.687-0.750in (17.45-19.05mm)	2.0" (51mm)	100-2000 kHz
ARTPX-014	ARTPX-029	0.750-0.875in (19.05-22.23mm)	2.0" (51mm)	100-2000 kHz
ARTPX-015	ARTPX-030	0.875-1.000in (22.23-25.4mm)	2.0" (51mm)	100-2000 kHz

Supporting Instruments

MIZ-21C (PN: 111A902-00) and MIZ21C Array (PN: 111A903-00)

Rotating Scanners: Zetec (PN: 169A901-00), GE or Olympus

Scanner Cable Adapters: Match scanner connector to applicable adapter. [Quick Link](#)

AFRTP Adjustable Flexible Rotating Probe for Mini Scanners, Reflection D coils (Driver Pick-up)



Hole Size	Frequencies Options	Connector Options
Customer recommended hole diameter range	Provide Frequency Range	4 Pin Fischer (Zetec / GE Scanners) 4 Pin Step LEMO (Most Olympus Scanners)
Custom options are available for all items		

Applications / Standard Features

- Inspecting flaws on the ID of a fastener hole where a slight bend occurs for entering the hole
- Reflection (Driver Pick-up D coils)

Commonly used probes

Part Number	Hole Diameter Range	Working Length	Connector type	Frequency Range
AFRTP-001	0.187-0.250in (4.75-6.35mm)	6.0" (152mm)	4 Pin Fischer	100-2000 kHz
AFRTP-002	0.250-0.312in (6.35-7.92mm)	6.0" (152mm)	4 Pin Fischer	100-2000 kHz
AFRTP-003	0.312-0.375in (7.92-9.53mm)	6.0" (152mm)	4 Pin Fischer	100-2000 kHz
AFRTP-004	0.375-0.437in (9.53-11.1mm)	6.0" (152mm)	4 Pin Fischer	100-2000 kHz
AFRTP-005	0.437-0.500in (11.1-12.7mm)	6.0" (152mm)	4 Pin Fischer	100-2000 kHz
AFRTP-006	0.500-0.625in (12.7-15.88mm)	6.0" (152mm)	4 Pin Fischer	100-2000 kHz
AFRTP-007	0.625-0.687in (15.88-17.45mm)	6.0" (152mm)	4 Pin Fischer	100-2000 kHz
AFRTP-008	0.687-0.750in (17.45-19.05mm)	6.0" (152mm)	4 Pin Fischer	100-2000 kHz
AFRTP-009	0.750-0.875in (19.05-22.23mm)	6.0" (152mm)	4 Pin Fischer	100-2000 kHz

Supporting Instruments

MIZ-21C (PN: 111A902-00) and MIZ21C Array (PN: 111A903-00)

Rotating Scanners: Zetec (PN: 169A901-00), GE or Olympus

Scanner Cable Adapters: Match scanner connector to applicable adapter. [Quick Link](#)

C RTP Counter Sink Rotating Probe for Mini Scanners, Reflection D coils (Driver Pick-up)



Hole Size	Frequencies Options	Connector Options
Customer recommended hole diameter range	Provide Frequency Range	4 Pin Fischer (Zetec / GE Scanners) 4 Pin Step LEMO (Most Olympus Scanners)
Custom options are available for all items		

Applications / Standard Features

- Inspecting counter sinks
- Standard probes are for 100 degree counter sink.
- Reflection (Driver Pick-up D coils)

Example of commonly used probe

Part Number	Hole Diameter	Countersink Angle	Connector type	Frequency Range
CRTP-003	0.156in (4mm)	100°	4 Pin Fischer	100-2000 kHz
CRTP-001	0.187in (5mm)	100°	4 Pin Fischer	100-2000 kHz
CRTP-002	0.250in (6mm)	100°	4 Pin Fischer	100-2000 kHz

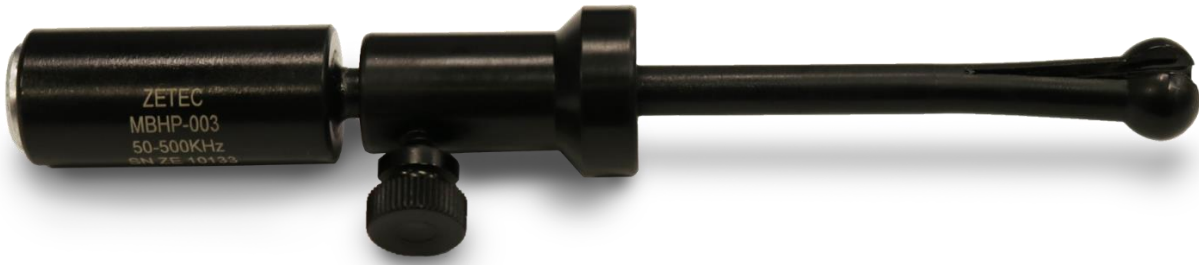
Supporting Instruments

MIZ-21C (PN: 111A902-00) and MIZ21C Array (PN: 111A903-00)

Rotating Scanners: Zetec (PN: 169A901-00), GE or Olympus

Scanner Cable Adapters: Match scanner connector to applicable adapter. [Quick Link](#)

MBHP Manual Bolt Hole Probe, Absolute Coils



Applications / Standard Features

- Inspecting flaws on the ID of a fastener hole
- Absolute coils

Frequency Selection

50kHz-500kHz for aluminum

500kHz-1MHz for steel

1MHz-3MHz for titanium

Example of commonly used probe

Part Number	Hole Diameter Range	Working Length	Connector type	Frequency Range
MBHP-001	0.250-0.281in (6.35-7.14mm)	1.50" (38mm)	Triax	50-500 kHz
MBHP-002	0.281-0.312in (7.14-7.92mm)	1.50" (38mm)	Triax	50-500 kHz
MBHP-003	0.312-0.375in (7.92-9.53mm)	2.0" (51mm)	Triax	50-500 kHz

Supporting Instruments

MIZ-21C

Cable adapters: Match connector to applicable adapter. [Quick Link](#)

MCSP Manual Counter Sink Probe, Absolute Coils



Applications / Standard Features

- Inspecting counter sinks
- Standard probes are for 100 degree counter sink.

Frequency Selection

50kHz-500kHz for aluminum

500kHz-1MHz for steel

1MHz-3MHz for titanium

Example of commonly used probe

Part Number	Hole Diameter	Countersink Angle	Connector type	Frequency Range
MCSP-001	0.250in (6mm)	100°	Triax	50-500 kHz
MCSP-002	0.312in (8mm)	100°	Triax	50-500 kHz

Supporting Instruments

MIZ-21C

Cable adapters: Match connector to applicable adapter. [Quick Link](#)

Calibration Standards

Navy Reference Kits



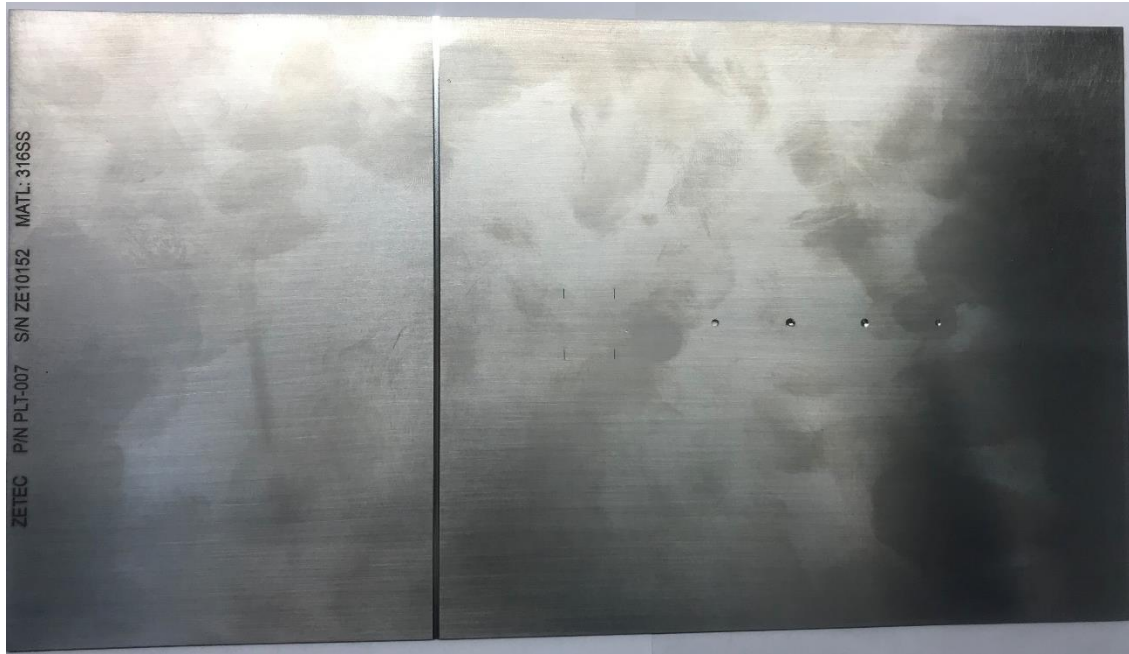
Navy Eddy Current Reference Standard Kit. Contains 20 fasteners holes (.156-.750) with a total of 71 EDM notches. Includes Test Report and Certificate of Conformance.

Price is material dependent

PN	Material
NRK-001	400 STAINLESS STEEL
NRK-002	17-4PH STAINLESS STEEL
NRK-003	17-7PH STAINLESS STEEL
NRK-004	304 STAINLESS STEEL
NRK-005	6526 Nickel Cobalt Steel
NRK-006*	7075-T6 Aluminum
NRK-007	6AL-4V Titanium
NRK-008	718 Inconel
NRK-009	AZ 31 Magnesium
NRK-010	4340 Cres Steel

* Most common

Surf-X Calibration Plate



PN	Material	Plate Thickness
PLT-007	Stainless Steel 316	0.048"
PLT-009	ALUMINUM 7075-T6	0.050"
PLT-012	Customer Provided 11" x 6" Plate	Customer Provided

Reference Plate for Surf-X Probe

Plate Size: 11.00" long x 6.00" wide x approximately 0.050" deep

Ⓐ Calibration groove (6.00" +/- 0.050" long x 0.0625" +/- .0050" wide x 40% deep)

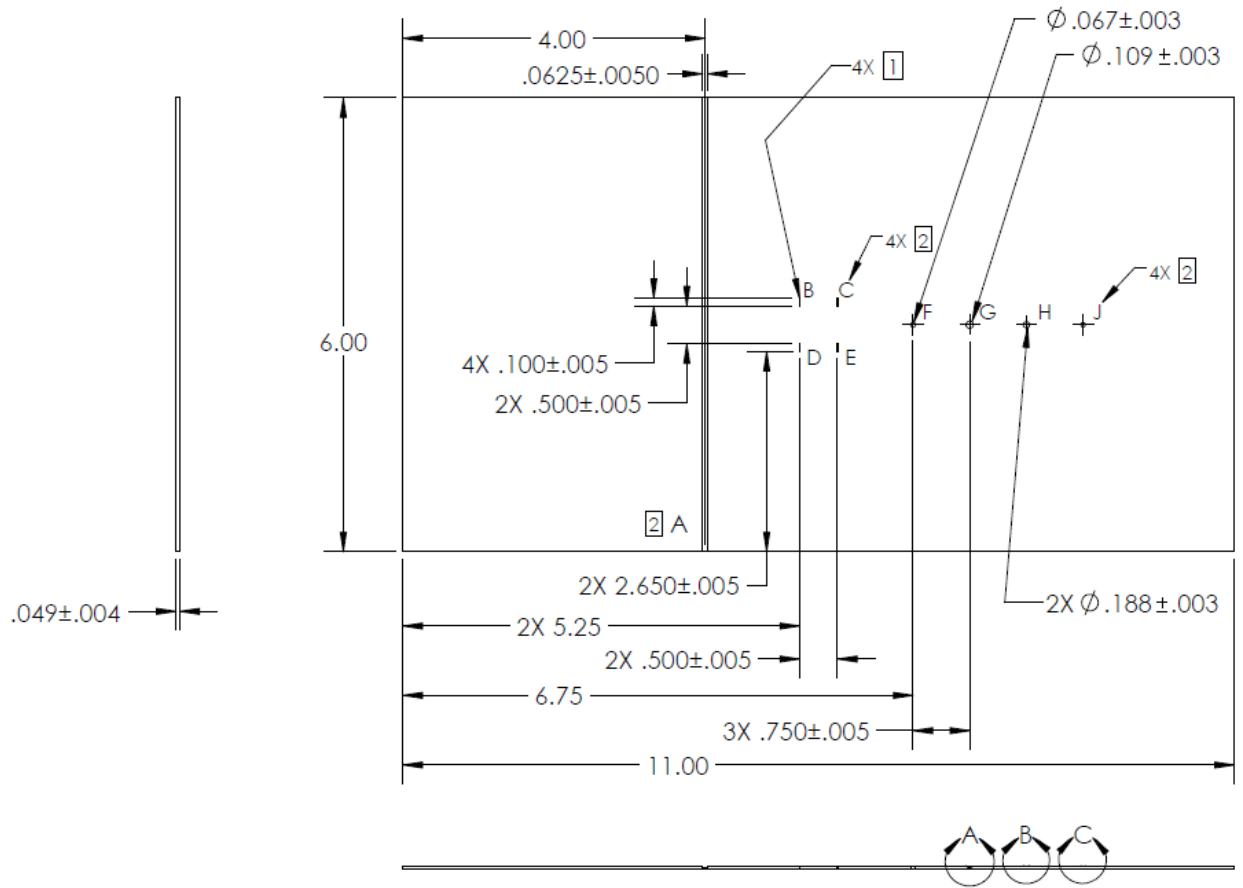
4 EDM notches at varying depths Ⓒ100%, Ⓒ60%, Ⓒ20%, Ⓒ10% (all 0.100" +/- 0.005" long and 0.005" +/- 0.002" wide)

Ⓔ 1 Through Wall Hole 100% x 0.067" diameter,

3 Round Bottom Holes at varying depths and diameter Ⓒ60% x 0.109", Ⓒ20% x 0.188", Ⓒ10% x 0.188"
% depths have a tolerance of +/-0.003"

Includes as built indications report and serialized plate

Surf-X Calibration Plate Details

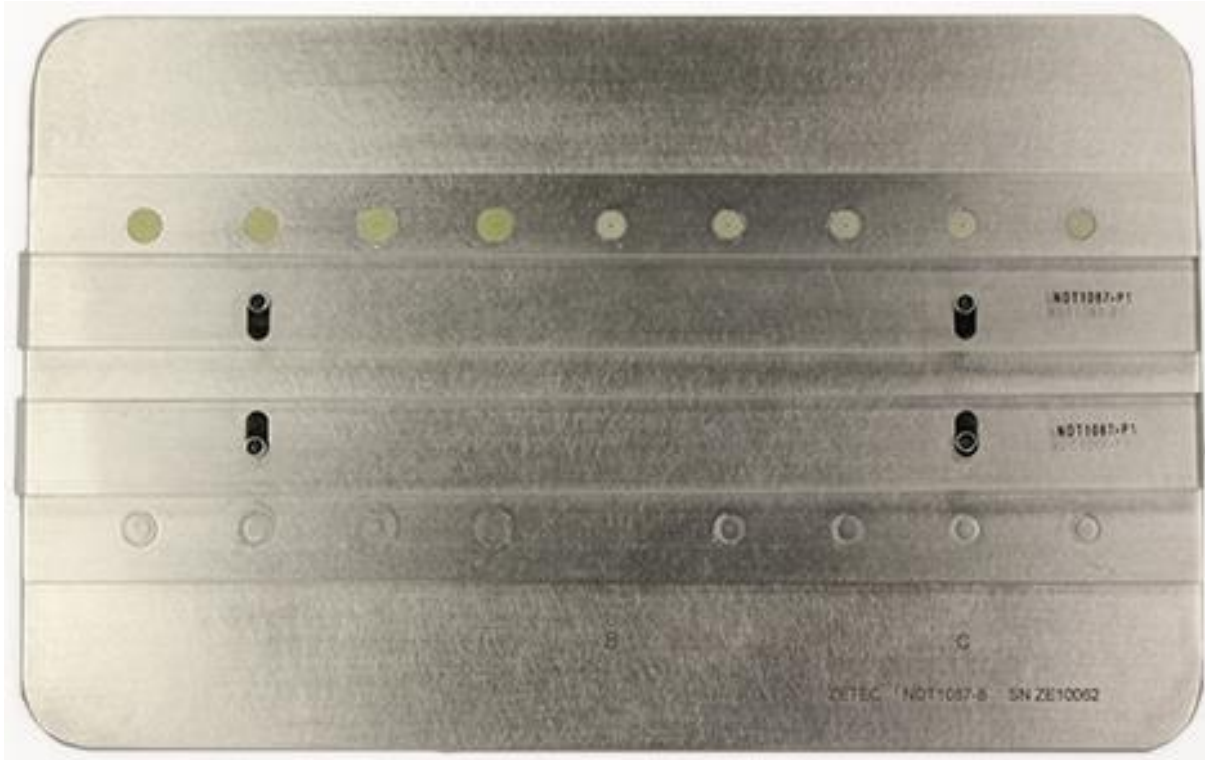


LOCATION	A	B	C	D	E	F	G	H	J
DEPTH OF FLAW	▽ 40%	▽ 100%	▽ 60%	▽ 20%	▽ 10%	▽ 100%	▽ 60%	▽ 20%	▽ 10%
LENGTH/DIA. OF FLAW	.0625 W.	.100 Lg.	.100 Lg.	.100 Lg.	.100 Lg.	$\phi .067$	$\phi .109$	$\phi .188$	$\phi .188$
DESCRIPTION	GROOVE	EDM	EDM	EDM	EDM	TWH	RBH	RBH	RBH

Boeing Reference Standard (NDT1087-X)

“-X” are for varying plate thicknesses.

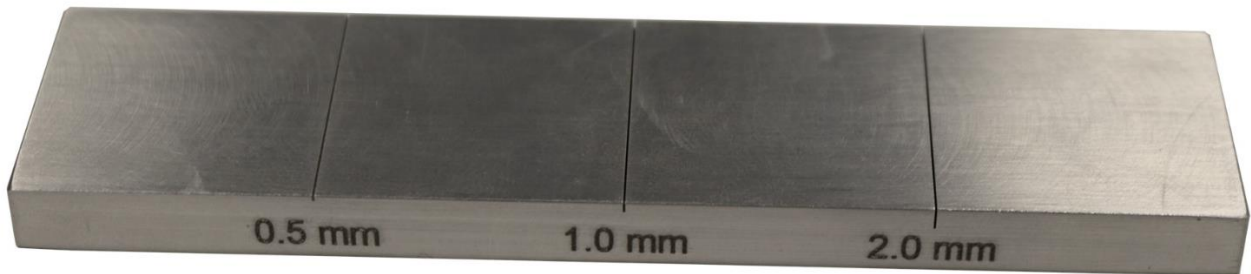
- BOEING REFERENCE STANDARD 737 PT 6 53-30-00 & 777 PT6 53-30-09
- FASTENER (NAS1097D6-6DM NAS1097D5-6D, ALL ALDORIZED) (BACR15GF6D7, BACRGF5D6, ALL ALODINED).
- Includes Test Report and Certificate of Conformance.



Part Numbers

Part Number	Top Plate Thickness (inch)	Bottom Plate Thickness (inch)	EDM Notch Length (inch)
NDT1087-1	0.050	0.040	0.200
NDT1087-2	0.071	0.040	0.200
NDT1087-3	0.080	0.040	0.180
NDT1087-4	0.090	0.040	0.200
NDT1087-5	0.100	0.050	0.200
NDT1087-6	0.071	0.063	0.250
NDT1087-7	0.090	0.080	0.250
NDT1087-8	0.100	0.900	0.250
NDT1087-9	0.036	0.036	

Crack Flaw Standards



Block Size: 4.0"(101.6mm)L x 1.0"(25.4mm)D x 0.25"(6.35mm)H.

Includes 3 EDM Flaws of the following sizes:

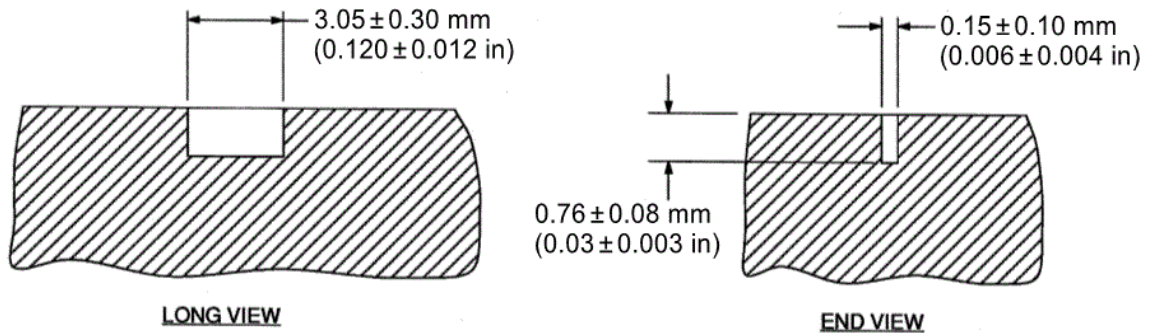
- 1.) 0.02" (0.5mm)D x 0.1" (0.25mm)W x 1.0" (25mm)L
- 2.) 0.04" (1.0mm)D x 0.1" (0.25mm)W x 1.0" (25mm)L
- 3.) 0.08" (2.0mm)D x 0.1" (0.25mm)W x 1.0" (25mm)L

Includes Test Report and Certificate of Conformance.

Price is material dependent

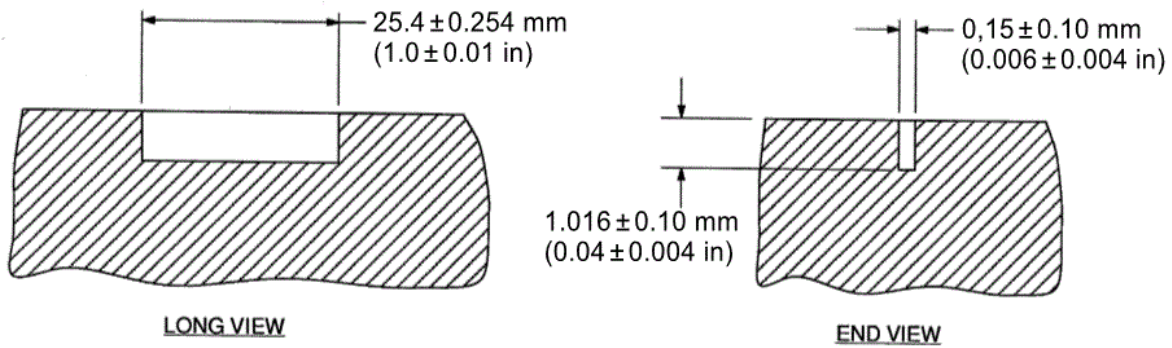
PN	Sales Note
NDT-3025CS	Eddy Current 3 Crack Surface Standard 4340 Carbon Steel
NDT-3025INC	Eddy Current 3 Crack Surface Standard 718 Inconel
NDT-3025AL	Eddy Current 3 Crack Surface Standard 7075-T6 Aluminum
NDT-3025SS	Eddy Current 3 Crack Surface Standard 304 Stainless Steel
NDT-3025TI	Eddy Current 3 Crack Surface Standard 6Al 4V Titanium

Aircraft Braking Systems Reference Standard



MAIN WHEEL
(FORGED ALUMINIUM ALLOY)

PN	Sales Note
NDT-2008F	AIRCRAFT BRAKING SYSTEMS REFERENCE STANDARD PT 3 32-42-05, PROCEEDURE 1, FIGURE 11, PAGE 15 ALUMINUM 2014-T6 CONDUCTIVITY RANGE 35-40 IACS.

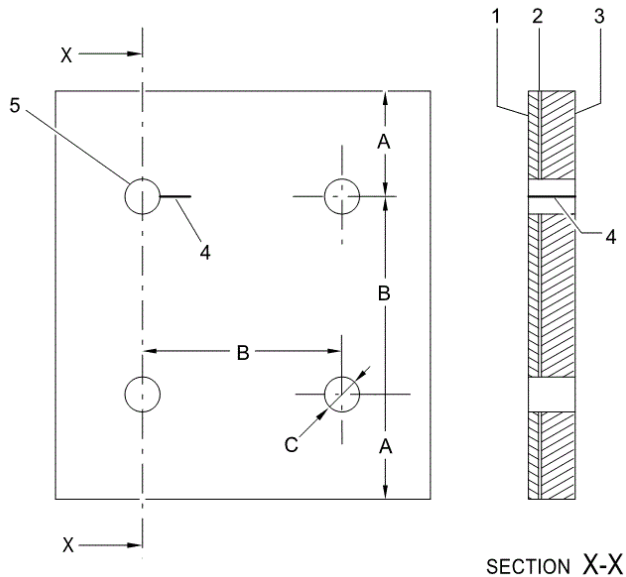


NOSE WHEEL
(CAST ALUMINIUM ALLOY)

PN	Sales Note
NDT-2008C	AIRCRAFT BRAKING SYSTEMS REFERENCE STANDARD PT 3 32-42-05, PAGES 1-7 FIGURE 2 and 3 CAST ALUMINUM

Main landing gear backup structures calibration block

DIMENSIONS:
 A = 22 mm (0.87 in)
 B = 38 mm (1.50 in)
 C = 6.35 mm (0.171 in)



1. AISI 301-1/4 HARD STEEL SHEET (AMS5517)
1.02 mm (0.040 in) THICK
2. TEFLON TAPE
0.1 mm (0.004 in) MINIMUM THICK
3. SERIE 7 ALUMINUM ALLOY PLATE
3.5 mm (0.138 in) THICK
4. 5 mm (0.2 in) REFERENCE NOTCH
MADE NOTCH BY ELECTRO-DISCHARGING MACHINING
5. ATTACH PARTS WITH FOUR HL21PB-6-6 PINS
AND HL86PB-6 COLLARS (HI-LOK FASTENERS)

PN	Sales Note
	AIRCRAFT BRAKING SYSTEMS REFERENCE STANDARD PT 3 32-42-05, PROCEEDURE 1, FIGURE 11, PAGE 15 ALUMINUM 2014-T6 CONDUCTIVITY RANGE 35-40 IACS.
	AIRCRAFT BRAKING SYSTEMS REFERENCE STANDARD PT 3 32-42-05, PAGES 1-7 FIGURE 2 and 3 CAST ALUMINUM

Conductivity Standards



- Includes serialized coupon and letter of certification.
- Zetec does not provide a service to re-certify conductivity standards.

PN	Description
CONDSTD-01.0-TI	Conductivity Standard Titanium 1.0% IACS
CONDSTD-03.4-AL	Conductivity Standard 3.4% IACS
CONDSTD-04.0-MA	Conductivity Standard Manganin 4.0% IACS
CONDSTD-06.8-CUNIAG	Conductivity Standard Alloy Copper, Nickel, Silver 6.8% IACS
CONDSTD-08.1	Conductivity Standard 8.1% IACS
CONDSTD-15.5-BRO	Conductivity Standard Bronze 15.5% IACS
CONDSTD-16.5-NG	Conductivity Standard Nordic Gold 16.5% IACS
CONDSTD-26.0-BRA	Conductivity Standard Brass 26.0% IACS
CONDSTD-29.0	Conductivity Standard 29.0% IACS
CONDSTD-30.0-AL	Conductivity Standard Aluminum 30.0% IACS
CONDSTD-39.0-AL	Conductivity Standard Aluminum 39.0% IACS
CONDSTD-43.0-ALMGSi	Conductivity Standard Alloy Aluminum, Magnesium, Silicon 43.0% IACS
CONDSTD-58.6-AL	Conductivity Standard 99% Pure Aluminum 58.6% IACS
CONDSTD-100-CU	Conductivity Standard Copper 100.0% IACS
CONDSTD-KIT01	Conductivity Standard Kit of 5, 1%, 3.4%, 8.1%, 29%, 100% IACS
CONDSTD-KIT02	Conductivity Standard Kit of 3, 8.1%, 29%, 100% IACS

Supporting Instruments

MIZ-21C

Recommended Probe: SPT-015 with 6ft cable 111A805-00