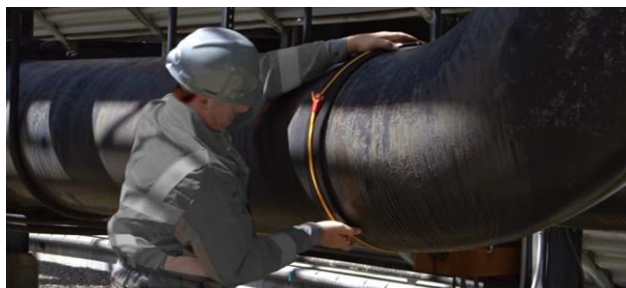# QED
QUALITY EQUIPMENT DISTRIBUTORS, INC.

YOUR COMPLETE SOURCE FOR NDT EQUIPMENT, SUPPLIES AND SERVICE

NDT PRODUCTS CATALOG

RADIOGRAPHY

MAGNETIC PARTICLE

LIQUID PENETRANT

BLACKLIGHTS (UV-A)

ULTRASONIC

VISUAL

LEAK DETECTION

HARDNESS TESTING

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LEAK DETECTION

HARDNESS TESTING

FLAWED TEST SPECIMENS

SERVICE

LOCATIONS

BUFFALO, NY

Quality Equipment Distributors, Inc.
75 Bank Street
Orchard Park, NY 14127

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Email: sales@qeddirect.com

Outside Sales Representative
Tom Sisson
Cell: (716) 907-7045
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HOUSTON, TX

Quality Equipment Distributors, Inc.
4044 Strawberry Road
Pasadena, TX 77504

Telephone: (713) 277-7913
Fax: (713) 588-1804
Email: txsales@qeddirect.com

Outside Sales Representative
CW Collier
Cell: (281) 299-2438
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QUALITY

"As a business, Quality Equipment Distibutors (QED) is committed to excellence by providing superior customer service and support through the sale of QUALITY products to the Non-Destructive Testing industry. This commitment is rooted in the ongoing effort to involve our employees and partner with our suppliers; to continually improve our processes to meet the needs and requirements of our customers."

Certificate is Available for Download on our Website

Please Contact one of our Distribution Centers for Further Assistance

RADIOGRAPHY
INDUSTREX FILM & CHEMISTRY

Carestream

FILM PRODUCTS

Get the T-Grain Emulsion Advantages

T-GRAIN Emulsion offers a state-of-the-art technology that's specifically designed for industrial radiographic testing applications. What does that mean for you?

Outstanding Image Quality

With a cold, clean image tone and low noise, you get a sharp, clear image every time.

Convenient Processing Flexibility

The films work well in standard process cycles—but they're just as effective in longer or shorter process cycles.

Superb Durability

The films are static resistant, more heat resistant than conventional systems, incredibly sturdy, and you'll get fewer artifacts from handling.

Non-Interleaved Film (NIF)
100 Sheets/Box

Size	AA400	T200	MX125	M100	DR50	HS800
3.5" x 8.5"	-	6095772	6046916	5291406	-	-
3.5" x 10"	6046908	5284856	6041552	6041560	6041578	-
3.5" x 17"	1030295	8497711	5087283	6041354	6046619	-
4.5" x 10"	8139503	8385213	5087259	5282611	6041701	-
4.5" x 17"	1447234	8328494	5087275	5258538	6041719	-
5" x 7"	1543628	1921683	5245261	5258553	-	-
7" x 17"	1447655	8280745	5235890	5258504	6045090	-
8" x 10"	1447853	1490606	5245287	5282629	6045082	-
10" x 12"	6095988	6096002	6095970	6095962	6046635	-
11" x 14"	6095996	6095863	6095848	6095855	6046601	-
14" x 17"	6549471	6549463	6549455	8365728	6095533	6095558

Non-Interleaved Film Roll (NIF Roll)

Size	AA400	T200	MX125	M100	HS800
70mm x 492'	5230263	5073465	5058961	5268396	5291687
70mm x 1,000'	6043475	6043392	6043426	-	-
90mm x 492'	5265459	5291992	5262795	8618480	-

Ready Pack II
50 Sheets/Box

Size	AA400	MX125	M100
3.5" x 17"	-	5289434	-
4.5" x 17"	-	5245154	-
5" x 7"	-	5238118	-
7" x 17"	8040552	5245147	-
8" x 10"	8278137	5245139	-
14" x 17"	8460636	5238134	5272844

Ready Pack Roll

Size	AA400	MX125	M100
60mm x 90m	-	6046882	-
70mm x 90m	-	6046874	6046890
5" x 60m	-	5245220	-
14" x 60m	5073523	5245188	-

Lead Contactpak
50 Sheets/Box

Size	AA400	T200	MX125	M100
4.5" x 10"	-	-	5245253	-
4.5" x 17"	5073507	6044978	6046940	5281241
5" x 7"	-	-	5241161	5259106
14" x 17"	5057740	-	5053749	-

Lead Pack Roll

Size	AA400	T200	MX125	M100
60mm x 90m	6046718	6046783	6046759	-
70mm x 90m	6046726	6046791	6046767	6046734
10mm x 90m	6046700	6046775	6046742	-

CHEMICAL PRODUCTS

INDUSTREX Chemicals for manual and automatic processing support the evolving requirements of the non-destructive testing market. Our experience in imaging science spans over one hundred years. But it's an unbreakable commitment to product innovation and customer service that has allowed the INDUSTREX line of products to achieve superiority in the NDT industry.

INDUSTREX Chemicals for use with Automatic Processors

Item No.	Description	Replenishment Rates (m²)	Pack/Size	Makes
8351413	Single Part Developer Starter	N/A	Bottle (39.8 oz)	10 Gallons
5315288	Single Part Developer Replenisher	665 mL	Case (2 x 5L)	10 Gallons
5327903	Single Part Developer Replenisher	665 mL	Drum (55 Gallon)	200 Gallons
5159082	LO Fixer and Replenisher	1200 mL	Case (2 x 5L)	10 Gallons
5327895	LO Fixer and Replenisher	1200 mL	Drum (55 Gallon)	200 Gallons

INDUSTREX Chemicals for use with Manual Processing

Item No.	Description	Replenishment Rates (m²)	Pack/Size	Makes
5320635	Manual Developer	665 mL	Case (2 x 5L)	10 Gallons
1057009	Manual Developer Kit	665 mL	*	
Developer Replenisher (2 x 5L & 1L - Makes 12 Gallons) & Stop Bath (2 x 1L - Makes 10 Gallons)				
1054873	Manual Stop Bath	N/A	Bottle (1L)	5 Gallons
5320643	Manual Fixer	1200 mL	Case (2 x 5L)	10 Gallons
1057017	Manual Fixer Kit	1200 mL	*	
Fixer Replenisher (2 x 5L & 1L - Makes 12 Gallons) & Rinse Solution (2 x 1L - Makes 10 Gallons)				
1057025	Manual Rinse Solution	N/A	Bottle (1L)	5 Gallons

RADIOGRAPHIC AIDS
FILM VIEWING/ MEASURING DEVICES

LED Film Viewers

► QED Viewer Kits Include: Rugged Aluminum Carrying Case with LED Film Viewer, Foot Pedal, Operation Guide and Test Report

► LCNDT Viewer Kits Include: LED Film Viewer, External Mask, Foot Pedal, Manual, Test Report, Warranty Card and Carrying Bag depending on Model

Viewer pictured above has underwent Anti-Corrosion Treatment. See Service Section for More Information

Brand	Model	Viewing Window	Intensity	Max Viewing Density
QED	A2	2.5" x 8"	110,000 Cd/m sq	4.1 D
	A8L	3.14" x 15.7"		4.1 D
LCNDT	FV-2009 Plus *FV-2009T*	2.5" x 8"	120,000 Cd/m sq	4.1 D
	FV-2010 Plus *FV-2010T Plus*	4" x 15.8"	130,000 Cd/m sq	4.2 D
	FV-2018 Iris	0.2" thru 4"	300,000 Cd/m sq	4.5 D
	FV-2014	13" x 16.1"	82,800 Cd/m sq	3.8 D

LCNDT Film Viewer Models ending in "T" include a Built-in Densitometer

A2

A8L

FV-2009 PLUS

FV-2010 PLUS

FV-2018 IRIS

FV-2014

Densitometer & Density Step Tablets

Brand	Model	Measuring/Tablet Range	Description
X-Rite	301	0.00 - 5.00 D	X-Rite Tabletop Densitometer
	331C	0.00 - 4.00 D	X-Rite Portable Densitometer
LCNDT	DT-300	0.00 - 5.00 D	LCNDT Tabletop Densitometer (Replacement for X-Rite 301)
	DT-100	0.00 - 5.00 D	LCNDT Portable Denistometer
Eseco Speedmaster	5009	0.00 - 5.00 D	SM-10 Portable B/W Transmission Densitometer
	5012	0.00 - 4.00 D	SM-12 Compact Densitometer (Built-in Light Source, Limited to a 3" Film Measuring Depth)
	5014	0.00 - 4.00 D	SM-14 Compact Densitometer (Reads Directly from Film Viewers)
	5005	.08 - 4.00	5 Step Transmission Density Tablet (NIST Certified)
	5004	.15 - 5.00	21 Step Transmission Density Tablet (NIST Certified)

LCNDT Densitometers do not include a Transmission Density Tablet

X-Rite

LCNDT

ESECO

WHILE SUPPLIES LAST!

QED QUALITY EQUIPMENT DISTRIBUTORS, INC.

FILM MARKERS

South Lead Figures

Our manufacturing process makes a clean, sharp-edged character, free of flash and porosity. All numbers and letters are pre-packed and sold in quantities as follows:

Item	Style	Quantity
1/4" Lead Figures	Deep "V"	Pack of 100
	Flat Face	
3/8" Lead Figures	Deep "V"	Pack of 50
	Flat Face	Pack of 100
1/2" Lead Figures	Deep "V"	Pack of 50
	Flat Face	Pack of 100
3/4" Lead Figures	High Energy	Each
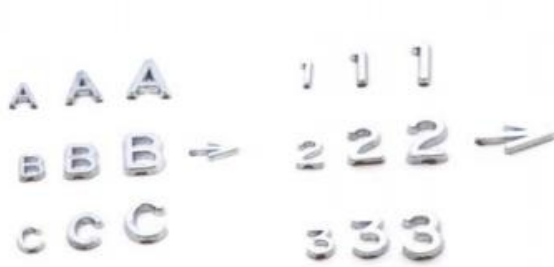
Flat Face Figures & Arrows

Deep "V" Figures

High Energy Figures

Lead Figure Cases

Designed to hold both numbers and letters. These lead number cases are made of ABS high impact plastic and contain a polyethylene sponge inside the cover which prevents accidental mixing of numbers and letters when the cover is closed.

Item	Color	Number of Compartments
LL-CASE	Red	38

ID Printer (Film Flasher)

Item	Description
17104	WOLF Manual ID Printer

1" Reference Standard

Like magic… 1" reference ball attaches itself to any ferromagnetic material, making a radiographers life just a little easier. The ball can be used as a reference for measuring pipe wall.

For accurate measurement, the ball must be put as near as possible to the exact side of the pipe parallel to the image media so that the enlargement of the pipe wall is the same as that of the ball.

If the comparator or ball is not touching the pipe because of insulation, aim the source at the center of the space between the two. This will help insure an equal amount of enlargement to the ball and the pipe wall. (Think of how the source side of an elliptical 2" weld is distorted more than the film side).

Item	Description
SP*001201	1" OD Magnetic Reference Ball (Includes Certificate of Conformance)
SP*001218	1" OD Non-Magnetic Reference Ball (Includes Certificate of Conformance)
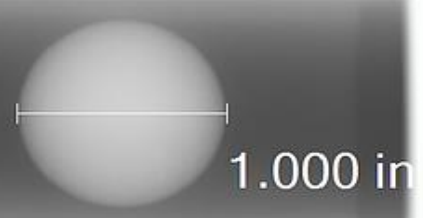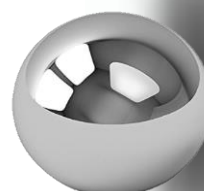
IMAGE QUALITY INDICATORS (IQI's)

South Plaque Type Penetrameters (Group 1)

API 1104, ASME Section V, ASTM E-142 (SE-1025) and MIL-STD 271 penetrameters up to .050" (thickness) are made from 304 Stainless Steel. Penetrameters .060" through .200" (thickness) are made from a high grade Carbon Steel.

Item	Material	Thickness
API 1104	Stainless Steel	#5, #7, #10, #12, #15, #17 and #20
		#25, #30, #35, #40, #45 and #50
ASME SECTION V	Stainless Steel	#5, #7, #10, #12, #15, #17 and #20
		#25, #30, #35, #40, #45 and #50
ASTM E-142 (SE-1025)	Carbon Steel	#60, #70 and #80
		#90, #100, #110, #120, #130, #140 and #160
		#180 and #200
MIL-STD 271	Stainless Steel	.25", .37", .38", .50", .62", .75", .87" and 1.0"
		1.2", 1.5", 1.7", 2.0", 2.2" and 2.5"
	Carbon Steel	3.0", 3.5" and 4.0"
		4.5", 5.0", 6.0", 7.0" and 8.0"
		9.0" and 10.0"

*Additional Codes, Sizes and Material IQI's are available upon request

South Plaque Type Penetrameters (Group 2)

ASME Section V, ASTM E-142 (SE-1025) and MIL-STD 271 penetrameters up to .050" are made from precision rolled Aluminum sheet.

Item	Material	Thickness
ASME SECTION V ASTM E-142 (SE-1025)	Aluminum	#5, #7, #10, #12, #15, #17 and #20
		#25, #30, #35, #40, #45 and #50
MIL-STD 271	Aluminum	.25", .37", .50", .62", .75", .87" and 1.0"
		1.2", 1.5", 1.7", 2.0", 2.2" and 2.5"

*Additional Codes, Sizes and Material IQI's are available upon request

South Standard Penetrameter Shims

Our standard penetrameter shims meet all requirements of ASME Sec. V, par. 6.1, ASTM E-142 (SE-1025), par. 6.1 and API-STD-1104, par. 8.41, for use as simulated weld build-up. Tolerance and finish are well within the ranges required by code. They are available in any quantity and at an economical price. Special sizes are also available upon request.

Item	Size	Thickness	Material
S-1/64-CS-SHIM	¾" W	1/64"	Carbon Steel
S-1/32-CS-SHIM		1/32"	
S-1/16-CS-SHIM	X	1/16"	
S-1/8-CS-SHIM	1¾" L	1/8"	
S-3/16-CS-SHIM		3/16"	
S-1/4-CS-SHIM	X	1/4"	
S-3/8-CS-SHIM	Specified Thickness	3/8"	
S-1/2-CS-SHIM		1/2"	
S-1-CS-SHIM		1"	

Item	Size	Thickness	Material
S-1/64-SS-SHIM	¾" W	1/64"	Stainless Steel
S-1/32-SS-SHIM		1/32"	
S-1/16-SS-SHIM	X	1/16"	
S-1/8-SS-SHIM	1 ¾" L	1/8"	
S-3/16-SS-SHIM		3/16"	
S-1/4-SS-SHIM	X	1/4"	
S-3/8-SS-SHIM	Specified Thickness	3/8"	
S-1/2-SS-SHIM		1/2"	
S-1-SS-SHIM		1"	

*Additional Sizes and Material are available upon request

South Wire Type IQI's

Wire Image Quality Indicators (IQI's) are inspected with instruments calibrated and traceable to the National Institute of Standards and Technology (NIST).
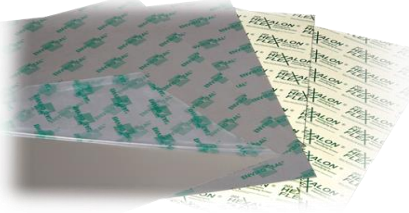
Item	Length	Material Group
SET A	2"	1 (Stainless Steel)
		2 (Aluminum)
	3"	1 (Stainless Steel)
		2 (Aluminum)
	4"	1 (Stainless Steel)
SET B	2"	1 (Stainless Steel)
		2 (Aluminum)
	3"	1 (Stainless Steel)
		2 (Aluminum)
	4"	1 (Stainless Steel)
SET C	2"	1 (Stainless Steel)
		2 (Aluminum)
	3"	1 (Stainless Steel)
	4"	1 (Stainless Steel)
SET D	4"	1 (Stainless Steel)

*Additional lengths and Material Groups are available upon request

FILM HOLDERS

Hexalon (FLEX & ULTRA) Intensifying Screens

Hexalon is the popular industry standard lead intensifying screen when performing radiographic testing. The FLEX screen includes a proprietary fiber 90 backing for greater flex and durability. The ULTRA screen is the best production screen available and offers the greatest flexibility and resistance to crimping than any other screen on the market. Hexalon lead is used for reduction of scatter radiation and image intensification. This is radiographic-quality foil. The Hexalon Enviroseal front coating protects from scratching and oxidizing.

Item	Size	Thickness
FLEX	70mm X 10"	.005" / .010"
	70mm X 17"	.005" / .010"
	3.5" X 10"	.005" / .010"
	3.5" X 17"	.005" / .010"
	4.5" X 10"	.005" / .010"
	4.5" X 17"	.005" / .010"
ULTRA	5" X 7"	.005" / .010"
	7" X 17"	.005" / .010"
	8" X 10"	.005" / .010"
	10" X 12"	.005" / .010"
	11" X 14"	.005" / .010"
	14" X 17"	.005" / .010"
2.75" (approx. 70mm wide)	300' / 180'	.005" / .010"
3.5" (approx. 90mm wide)	300' / 180'	.005" / .010"
4.5" (approx. 115mm wide)	300' / 180'	.005" / .010"
17" (approx. 432mm wide)	95' / 54'	.005" / .010"

*Cut Screens come standard with ½" radius cut corners

QED QUALITY EQUIPMENT DISTRIBUTORS, INC.

Film Cassettes

► SOUTH - This completely flexible film holder (cassette) is easily molded around irregular shapes to ensure proper contact necessary in direct exposure technique. Made from vinyl treated paper with all edges reinforced with tape for durability, this rugged cassette is available in various sizes. Black Only.

► CLOTH - Tough, water resistant, and highly durable. Our cloth cassettes are made with the seam in the center, on the back cassette. One end of the cassettes is sealed with gaffers tape and the other includes a rubber band for easy opening and closing of the cassette.

Custom Sizes are Available Upon Request

► WARREN - "Flexible" Type Film Holders: Outer Cover made of tough vinyl impregnated fiber stock but flexible enough to contour around shapes. Comes in two colors (specify when ordering) Blue or Black. Inner film envelope made of black shoe material for light tight protection.

Also Available Upon Request - WARREN - "Semi-Rigid" or "Rigid" Film Holders. Ideal for Heavy Castings

Item	Size	SOUTH	CLOTH	WARREN
FILM CASSETTES	70mm X 10"	X	X	X
	70mm X 17"	X	X	X
	3.5" X 10"	X	X	X
	3.5" X 17"	X	X	X
	4.5" X 10"	X	X	X
	4.5" X 17"	X	X	X
	5" X 7"	X		X
	7" X 17"	X		X
	8" X 10"	X	N/A	X
	10" X 12"	X		X
	11" X 14"	X		X
	14" X 17"	X		X

Cloth Cassette Material

This product is constructed by bonding a sheet of neoprene rubber between two high grade duct cloths of the finest quality durable fabrics. The combination of our dual chain stitch construction and the rugged light-proof material makes a product that has proven reliable for many years.

Item	Size
BELTING	70mm x 1' 3.5" x 1' 4.5" x 1'

Backing Material

Our .050" and .062" nylon backing is available in rolls, or cut to specified lengths with corners radiused. This flexible material will not buckle or deteriorate under normal use. Therefore, it can be used as support in new cassettes many times.

Item	Size	Thickness
BACKING	70 mm x 1'	.050" .062"
	3.5" x 1'	.050" .062"
	4.5" x 1'	.050" .062"

SOUTH MFG.   **CLOTH**   **WARREN**   **BACKING MATERIAL**

EXPOSURE AIDS

Cassette Holders

Item	Description
SP*001312	Nylon RT Clamp with Rubber Molded Tips, 9 1/2" Length x 5" Opening
SP*001002	Magnetic Film Holders are made of a spring steel arc with a forty (40) lb. pull magnet attached through center of arc. Quick release mechanism allows the cassette to be changed without removing magnet from vessel. Holder end of spring steel is equiped with lead rubber to prevent back scattering exposure of the cassette
PM	Paddle magnets are made of a high-impact plastic with a circular ring magnet at one end and a 3" x 4" flap at the other end
SP*001085	1/4" Black Bungee Cord, 100' Roll

Swivel Clamps, Pipe Jigs & Source Stands

Item	Description
SP*00001793	2.5" Heavy Duty Stainless Steel Grip Head with "T" Top and 5/8" Socket
SP*001153	Swivel Clamp Holder
SP*001305	2" Contact Jig (Standard)
SP*001306	2" Fitting to Fitting Contact Jig
SP*001268	18" Aluminum Source Stick with Built-In Collimator Holder
SP*001575	RT Jig - 11" C-Clamp with Welded Angle Iron and an 18" CS Rod Welded and Painted Black
SP*001577	RT Magnetic Source Stand with (3) 90lb pull magnets including handle and crossbar painted black
SP*001559	Aluminum Magnetic Source Stand with (2) 225lb pull magnets and a 18" x 5/8" rod
SP*001082	Source Stand 8" x 10" Carbon Steel U-Channel Base with Threaded 5/8" Diameter x 36" Long Aluminum Rod

***Custom Items are available upon request**

Mini Beam Collimator

High density collimator machined from solid tungsten bars, supplies a three (3) to five (5) half value layer (HVL) of shielding for IR 192. Customer machined to fit standard source tubes. Beam collimator has an 82 degree cone window that eliminates film cut-off even on short source to film distances.

Item	Size
SP*001313	1.875" Length x 1.5" Diameter

Collimator Clamp

Item	Description
C-CLAMP	Designed to fit 1.5" diameter Collimator. Made of .062" stainless spring steel with slotted ears to accommodate a 6 foot web belt (included) for securing to the pipe

Industrial Tapes

Item	Description	Size	UOM
PM2	Intertape Tan Kraft Flatback Paper Tape	1" x 60 Yards	Case of 36
PC 600	Shurtape Silver Cloth Duct Tape		Case of 48
TAPE-GAFFERS-1	ProTapes Black Cloth Gaffers Tape	1" x 55 Yards	Roll
TAPE-GAFFERS-2		2" x 55 Yards	

Paint Markers

► Since the 1970's, Sakura has been developing markers and pens for use in industrial environments. Extensive research, development and user feedback have kept Sakura in the forefront of meeting the market demand for specific product performance in various industrial applications such as ship building, welding, HVAC, highway construction, aerospace, plumbing, automotive assembly, petrochemical, shipping and electronics.

► Markal Valve Action is a fast-drying liquid paint marker that provides long-lasting, wear- and weather-resistant marks that are safe for almost any surface. As the most versatile liquid paint marker in the world, the xylene-free paint reduces user health risks and is available in 18 bold and fluorescent colors for accurate mark identification.

Brand	Model	Available Colors	Tip Diameter	Temperature Range
SAKURA	Solid Marker Original	11 - White, Black, Blue, Red, Green, Purple, Orange, Yellow, Fl. Lemon, Fl. Orange and Fl. Pink	13mm	14 - 392 °F
	Solid Marker Slim	4 - White, Black, Red and Yellow	10mm	
	SM Low Temperature	6 - White, Yellow, Red, Blue, Green and Black	13mm	-40 - 212 °F
	SM Low Temperaure Slim	5 - White, Yellow, Red, Blue and Black	10mm	
	SM Low Halogen	4 - White, Black, Red and Yellow	13mm	
	Pen-Touch Medium	10 - White, Black, Yellow, Red, Purple, Green, Blue, Gold, Silver and Copper	2mm	41 - 104 °F
Markal	Valve Action	18 - Brown, Purple, White, Yellow, Red, Black, Orange, Blue, Green, Gold, Light Green, Pink, Aluminum, Light Blue, Fl. Yellow, Fl. Green, Fl. Orange, Fl. Pink	3mm	-50 - 150°F

***Additional Brands and Models are Available Upon Request / Markers are Sold per Box of 12**

FILM STORAGE

South Interleave Paper

Interleaves (Yellow in Color) are produced using the alkaline paper making process.

Item	Size	UOM
INT3.5X10-200	3.5" x 10"	
INT3.5X17-200	3.5" x 17"	
INT4.5X10-200	4.5" x 10"	
INT4.5X17-200	4.5" X 17"	**PACK OF 200**
INT5X7-200	5" X 7"	
INT7X17-200	7" X 17"	
INT8X10-200	8" X 10"	
INT10X12-200	10" X 12"	
INT11X14-200	11" X 14"	
INT14X17-200	14" x 17"	

Film Storage Envelopes

High Grade 32 oz. Brownkraft Exposed Film Storage Envelopes. Available in both Unprinted and PRINTED.

Size	UOM
4.5" x 10"	Pack of 100 Case of 500
4.5" X 17"	Pack of 100 Case of 500
5" X 7"	Pack of 100 Case of 1,000
7" X 17"	Pack of 100 Case of 500
8" X 10"	Pack of 100 Case of 500
11" X 14"	Pack of 100 Case of 500
14" X 17"	Pack of 100 Case of 500

Printed Envelopes are Customized as per your Company Design or our Standard Layout
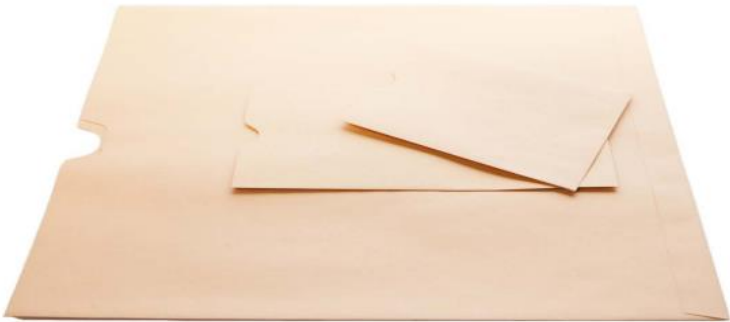
One time Set-Up Fee for all Printed Envelopes for the cost of the Metal Imprint Plate

70mm Film Storage Boxes (100 Count)

Item	Description
70mm x 100 Compartment	The top and bottom of our one-hundred (100) cell film storage box is constructed of heavy (200 BP) white corrugated cardboard. The die cut design with locking tabs is easily assembled by hand without the use of tape or staples. The pre-assembled one-hundred (100) cell divider sets in the bottom of the box, over a numbered grid that automatically denotes a space for each of the one-hundred (100) film. The separate lid is die cut design and printed with spaces allowing for all pertinent information as to the pipeline owner, engineering company, contractor, radiography contractor, job numbers, film numbers, etc. The lid also has a printed grid that allows space to record the disposition of each weld x-rayed. This 17" x 17" x 3" storage container allows an inventory of radiographs to be taken without calculating how many odd number films each box contains.

Sold in Lots of 25 Only

70mm Film Storage Boxes (25 or 49 Count)

Item	Description
70mm x 25 or 49 Compartment	12" x 12" x 3" corrugated cardboard storage box with a pre-assembled forty-nine (49) or twenty five (25) cell egg crate divider can be assembled with tape or a box stapling machine.

Sold in Lots of 10 Only

100mm Film Storage Boxes (100 Count)

Item	Description
100mm x 100 Compartment	15 9/16" x 15 9/16" x 100mm (4") corrugated cardboard box with a pre-assembled 100 cell egg crate divider can be assembled with tape or a box stapling machine.

Sold in Lots of 10 Only

70mm x 100 Compartment Box

70mm x 49 Compartment Box

100mm x 100 Compartment Box

RADIATION SAFETY
WARNING SIGNS & LABELS

Radiation Signs

Our radiation signs, sun fast and sealed in two sheets of .016" vinyl, are manufactured in a variety of types. Our most popular are:

► DANGER – High Radiation Area

► CAUTION - Radiation Area Authorized Personnel Only

Available with Velcro for securing to a barrier rope or grommets on the corners of attachment to a flat surface.

Item	Sign Reads
Radiation Signs	Danger - High Radiation Area
	Caution - Radiation Area Authorized Personnel Only

Barricade Rope & Reel

► SP*001212 - Sun-fast, non-conductive, and reusable, yellow/magenta polypropylene barricade rope is a safe and easy method for marking off radiation areas. Ideal for hanging Velcro secured signed on.

► RR - Made of high impact polyethylene with ABS handle and knob.

Item	Description
SP*001212	Radiation Barricade Rope, 5/16" diameter x 1'
RR	13" Polyethylene Reel (holds both Barricade Rope and Tape)
SP*001261	Storage Wheel with Side-Mounted Handle Allowing you to Quickly Wind and Unwind Barricade Tape or Rope

**Barricade Rope is Sold in 600' Rolls*

Barricade Tape

Yellow/magenta barricade tape is safe, economical, and an easy method of marking a large radiation area quickly. The nylon reinforced tape is sun-fast, non-conductive, and reusable. Available in the following:

Item	Size	Strength
BT-¾"	¾" X 150 ft. Roll	100 lb. Tensile Strength
BT-2"	2" X 150 ft. Roll	300 lb. Tensile Strength
BT-3"	3" X 1000 ft. Roll	500 lb. Tensile Strength

Adhesive Signs & Cones

► Adhesive Backed Vinyl Signs - 7" x 10" made with Outdoor Durable Vinyl.

Item	Description
H1418-AB	Caution Radiation Area Keep Out Sign, 7" x 10", Outdoor Durable Vinyl (Adhesive Backed)
H1402-AB	Caution High Radiation Area Sign, 7" x 10", Outdoor Durable Vinyl (Adhesive Backed)
SP*001252	Caution Radioactive Materials Sign, 7" x 10", Outdoor Durable Vinyl (Adhesive Backed)
OC-18	18" Orange Premium PVC Safety Cones - No Reflective Collar

Transport Labels

Item	Description	UOM
SP*001073	1½" Diameter RQ Circle Labels	
SP*001074	4" x 4" Radioactive II D.O.T. Class 7 Hazard Labels	**500/Roll**
SP*001078	4" x 4" Radioactive III D.O.T. Class 7 Hazard Labels	

QED QUALITY EQUIPMENT DISTRIBUTORS, INC.

PERSONAL DOSIMETRY

Electronic Dosimeters

MIRION TECHNOLOGIES

RAD-60 ELECTRONIC DOSIMETER

RAD-60 Personal Alarm Dosimeter is a precise radiation measuring instrument for reliable detection and registration of radiation in order to ensure the personal safety of the user. It is suitable for a broad range of everyday radiation monitoring purposes in stand alone conditions.

KEY FEATURES:

► Solid state Detector
► Compact (3.1" x 2.6" x 0.8") and Lightweight (2.8 oz)
► Standard AAA Alkaline Battery (1800 Hours of Operation)
► Digital Display for Integrated Dose or Alternatively Dose Rate
► User Selectable Alarm Levels for Both Dose and Dose Rate
► Increased Buzzer Volume
► Ruggedized Clip Fixing / -4 °F to 122 °F operational, humidity up to 90% RH
► Measurement Range: Dose (0.1 mrem - 999 rem) / Dose Rate (0.5 mrem/hr - 300 rem/hr)

ADR-1 DOSIMETER READER

The ADR-1 Reader Head is designed to read and manage RAD-60 series electronic dosimeters in modern PC environment. The Reader can be used with Dose Control l Dosimetry System as well as with ADR-1/50 Dosimeter Configuration software.

DOSIMETER CONFIGURATION SOFTWARE

► Dose and Dose Rate reset
► Dosimeter configuration set-up
► Alarm levels set-up
► ID, Work code and Memo set-up

Item	Description
1233-218	RAD-60R Personal Alarm Dosimeter
1233-156	ADR-1 Dosimeter Reader. Includes: RS-232 cable and 12V power supply (No Software)
1233-163	ADR-1/50 Dosimeter Configuration Kit for RAD-60. Includes: ADR-1 Reader, ADR-1/50 Dosimeter Configuration Software, RS-232 cable and 12V power supply

DMC 3000 PERSONAL ELECTRONIC DOSIMETER

Our DMC 3000 Electronic Dosimeter represents over 25 years of real-world electronic dosimetry experience, continually refined through customer feedback.

The unique, high contrast and backlit LCD display provides a clear indication of wearer's doe and ambient dose rate for deep dose equivalent. More importantly, multiple methods (audible, visual, and tactile) are utilized to alert the wearer of alarm conditions.

The DMC 3000 provides all of this protection, for over 2500 hours of continuous use, with a single AAA alkaline battery.

KEY FEATURES:

► Loud, vibrating and dual ultrabright LED alarm
► Highly visible backlit display
► Simple 2-buttons navigation
► Additional modules (Beta, Neutron, telemetry and PRD)
► Superior X-ray and gamma energy response
► Exceeds applicable IEC and ANSI standards
► Excellent immunity to electromagnetic interference
► Designed for ruggedness and durability

MEASUREMENT RANGE:

► Dose: 0.1 mrem to 1000 rem
► Rate: 0.01 mrem/hr to 2000 rem/hr
► Saturation Indication: above 1000 rem or 1000 rem/hr

MECHANICAL CHARACTERISTICS:

► Case: Rugged, high impact polycarbonate-ABS
► Dimensions: 3.4 x 2.3 x 0.8 in max. without clip
► Weight: 3.1 oz with alkaline battery and clip

ENVIRONMENTAL CHARACTERISTICS:

► Temperature range: 14°F to 122°F
► Relative humidity: < 90% at 108°F
► Storage: -4°F to 160°F
► Shock, vibration and drop resistant (5 feet on concrete)
► Waterproof IP67

ALARM FEATURES:

AUDIBLE & TACTILE

► Alarming speaker with level of 85 dB at 12 in, frequency < 4800 Hz
► Vibrating alarm

VISUAL

► High efficiency red flash LED on front
► 3 top LEDs for Alarming (Red), gamma counting (Green), and Hp (0.07) or Neutron counting (Blue)

HANDS-FREE DOSIMETER READER - LDM 320D & LDM 320W

The LDM 320D and LDM 320W readers operate using software packages installed on computer (PC) and communicate with DMC 3000 dosimeter in hands-free data exchange mode.

When used with the DMC User software, it functions as an interface to read and write the internal data of the DMC 3000 dosimeters.

LDM 320D

LDM 320W

CUSTOMIZE

► Adjustable dose and dose rate alarms
► Adjustable and acknowledgeable dose and dose rate warnings
► Configurable visual and audible alarm chirp

Nuclear Power   Healthcare   Homeland Security & Defense   Labs and Education   Industrial and Manufacturing

Item	Description
153503	DMC 3000 Electronic Dosimeter for Gamma Radiation and X-Rays
150534	LDM 320D Dest Top Reader with USB Connection
150517	LDM 320W Wall Mounted Reader with USB Connection

NDS Products, Inc manufactures nuclear radiation detection instruments. These instruments are used in many fields, such as Industrial Radiography, Health Physics, Nuclear Power Plants, Geology, Medical, Emergency Response and a variety of other areas.

Survey Meter, Rate Alarm and Pencil Type Dosimeter

Item	Description
ND-2000	NDS Products 3 Range (0-1000, 0-100, 0-10 mR/hr) Survey Meter
RA-500	NDS Products 500 mR/hr Audible Rate Alarm
4329	W138, Pencil Type Dosimeter, 0-200 mR

Dosimeter Chargers and Pouches

► 750-6 Piezoelectric Dosimeter Charger can zero a variety of quartz or carbon fiber dosimeters by simply squeezing the lever of the piezoelectric generator. The charger requires absolutely no batteries...ever! By pulling the trigger, a dosimeter is easily placed in or removed from the Charger. The clamping action automatically holds the dosimeter for you. Ideal for using in Field Operations.

► 909B Dosimeter Charger - Easier charging, viewing, dosimeter protection and improved accuracy… these are the biggest reasons that the 909B Dosimeter Charger is the best value on the market today!

Item	Description
750-6	Pistol Grip Piezoelectric Dosimeter Charger
909B	Battery Powered Dosimeter Charger
SP*001221	Multi-Purpose Poly Holder, Fits Rate Alarms, Pencil Type Dosimeters & other Small Tools
RACASE	NDS Products Black Mesh Rate Alarm/Dosimeter Holder

750-6   ***909B***   ***SP*001221***   ***RACASE***

DARKROOM
PROCESSING AIDS

Safelights

Item	Description
PTP760U	Paterson Dome Safelight, with its 4.5" diameter, is designed to stand on a bench, hang on a wall or suspend from the ceiling.
SP*001535	18' LED Rope Safelight, Red (Lasts up to 50,000 hours); Easy to install; Hardware included
19198	The Swivel Safelight is perfect for direct spotlighting. This wall mounted unit swivels to any position. Easy to install via 2 keyholes, the Swivel Safelight includes a GBX Type filter, light bulb, and a 6' cord with a three prong plug.
SP*001674	24" Fixture and LED Tube Safelight (Lasts up to 50,000 hours)
SP*001675	24" LED Tube Safelight Only (Lasts up to 50,000 hours)

*SP*001675*

PTP760U   ***SP*001535***   ***19198***   ***SP*001674***

WOLF Developing Hangers (Clip-Type)

Clip-type hangers for tank development of sheet films. Four clips are attached to a stainless steel frame; the upper two are mounted on a bow string to keep the film taut. The interlock design of the clip results in accurate alignment of pin and hole and permits better washing in the clip areas. Larger sized have loop guides to hold the bow spring and top clips in line to maintain proper tension. Hangers hold two film - Made in the USA!

Item	Description
16317	WOLF Industrial Developing Hanger, Two Film, Clip/Tension Type, Stainless Steel Construction, 4.5" x 10"
16317-S	WOLF Industrial Developing Hanger, Two Film, Clip/Tension Type, Stainless Steel Construction, 4.5" x 10" with 3" Spacer
16319	WOLF Industrial Developing Hanger, Two Film, Clip/Tension Type, Stainless Steel Construction, 4.5" x 17"

Developing Reels and Rod

► Developing Reels are made of durable ABS plastic, designed for the developing of 70mm roll film. Each Developing Reel will hold 13 feel of roll film.

► Developing Rod is constructed with a 24" x 3/4" PVC pipe to ensure minimum contamination of chemicals; not fancy, but effective.

Item	Description
SP*001309	70mm Developing Reel
90MM-DR	90mm Developing Reel
100MM-DR	100mm Developing Reel
4.5"-DR	4.5" Developing Reel
ROD-PVC	Developing Rod, 24"L x ¾" Diameter PVC

Miscellaneous Darkroom Supplies

► The Mini Comparater 7X is a handy and accurate optical measuring instrument composed of a #5 reticle. Compared with conventional magnifiers, the Mini Comparater 7X is smaller, more convenient for carrying and reasonably priced.

► MD-1 is a pocket-sized plastic scale to aid radiographers in the correct size identification of internal gas porosity and rounded indications in welds. Can be used in conjunction with the ASME codes dealing with rounded indications characteristics.

► MD-2 is a pocket-sized plastic scale to aid radiographers in the correct size identification of indications in pipe welds with outside diameters greater than or equal to 60.33 mm (2-3/8 in.). Can be used in conjunction with API 1104.

► Radiation Dose / Distance Calculator - This is a companion tool to the Radiation Exposure Calculators. This calculator estimates the hazard area associated with isotope radiographic operations. Can be used to assist auditors and radiation safety officers when checking the accuracy of radiation survey reports.

► Exposure Calculator - Available in durable plastic, exposure calculators are designed to provide rapid and precise exposure times for gamma radiography of both Cobalt 60 and Iridium 192.

► Carestream NDT Image Guide - This guide is designed to help you identify and understand a wide variety of casting and welding defects that appear on images obtained during Non-Destructive Testing (NDT).

Item	Description
SP*001237	14" x 17" Processor Clean-Up Film, 100/Pack
SP*00001770	Mini Comparater 7X with #5 Reticle and Fabric Pouch
MD-1	Model-1 (ASME) Film Image Scale w/certs
MD-2	Model-2 (API 1104) Film Image Scale w/certs
DDC	Radiation Dose/ Distance Calculator
EXPCALC-EN	Carestream Film Exposure Calculator, Iridium 192 (Same as JEM & other brands)
8924177	Carestream NDT Image Guide
300	GRALAB Model 300 Timer
Squeegee	Squeegee, 4.75" Wiper Length
3150SS	Immersion Heater
SP*001326	28" Plastic Stirring Paddle
SP*001072	7 1/4" Floating Thermometer w/ String Cord & F/C Display (30°F-120°F/ 0°C-50°C)
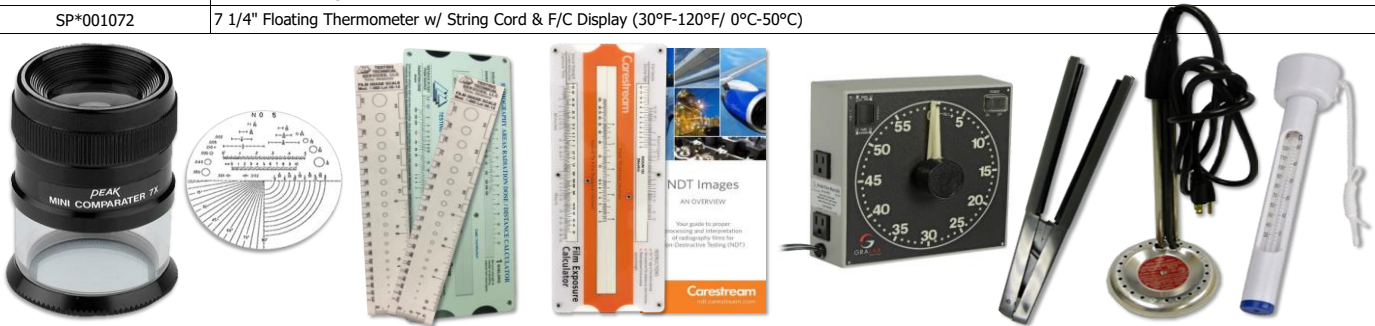
MOBILE DARKROOMS

BWS Aluminum Darkrooms

All of our Darkrooms INCLUDE the following:

► Darkrooms are completely Insulated with Open Shelving in Nose over Developing Tanks

► Stainless Steel Developing Tanks with 5 Removeable Compartments (no plumbing)

► Stainless Steel 24 Hanger Film Dryer Box including Heater/Blower

► Built-in Side Cabinets with Formica Counter-tops

► Bedliner Covering the Floor and Side Walls for a Rough Anti-slip Surface which also helps Prevent Scratching and Chemical Contamination

► Fourteen (14) 120V Wall Sockets - Two (2) Power Strips with Six (6) Sockets/Each and AC Unit has its own Outlet (2) Sockets

► Interior and Exterior 120V Lighting

► White Powder Coated Grab Bar and Awning off Back of Darkroom

► Rear Window unit Air Conditioner with Support Bracket

Item	Description
AD-6	6' Standard Aluminum Darkroom
AD-8	8' Standard Aluminum Darkroom (Full bed width without Generator Compartment)
AD-8-GC	8' Generator Aluminum Darkroom (Generator Storage Compartment on Driver's Side)

*Custom Darkrooms are Available Upon Request

Darkrooms are coated with a DuPont Imron Paint System. This paint system is used on aircraft, heavy duty trucks, specialty vehicles and automobiles. It is considered the best coating system for this application on the market. It provides a long lasting appearance which will prolong your Darkrooms life and create the most brilliant shine.

Darkrooms are constructed using various Aluminum alloys such as 3xxx, 5xxx, and 6xxx. These alloys offer exceptional formability, corrosion resistance, and weldability. Typical ultimate tensile strength ranges between 18 to 58 ksi. These materials are typically used in automotive, transportation, construction, and marine applications. The structural integrity of our units are second to none on the market today!

Our Units are fully Insulated with Closed Cell Foam Insulation both inside the room and in the Nose over the Truck Cab.

ATOMIC Darkrooms

We have three models of darkrooms in our "off the shelf" designs. They are a 6', 8' and 8' Generator. All of our darkrooms are protected with a smooth white LINE-X durable waterproof protective coating. LINE-X can also absorb impact and resist damage by remaining both flexible and strong.

All of our Darkrooms INCLUDE the following:

► Darkrooms are completely Insulated with Open Shelving in Nose over Developing Tanks
► Stainless Steel Developing Tanks with 5 Removeable Compartments (no plumbing)
► 24 Hanger Film Dryer Box including Removable Space Heater/Blower and Exhaust Fan
► Built-in Side Cabinets
► Seven (7) 120V Outlets Exposed in PVC Conduit
► Interior and Exterior 120V Lighting
► White Powder Coated Grab Bar and Awning off Back of Darkroom
► Rear Window unit Air Conditioner with Support Bracket

6' Darkroom

Item	Description
ATOMIC6	6' ATOMIC Darkrooms Standard LINE-X Darkroom
ATOMIC8	8' ATOMIC Darkrooms Standard LINE-X Darkroom (Full bed width without Generator Compartment)
ATOMIC8GEN	8' Generator ATOMIC Darkrooms Standard LINE-X Darkroom (Generator Storage Compartment on Driver's Side)

Custom Darkrooms are Available Upon Request

Miscellaneous Darkroom Products

Item	Description
SP*001711	Atomic Darkrooms 3 Part, 5 Compartment Removable Stainless Steel Developing Tank (No Plumbing)
SP*00001811	Atomic Darkrooms Stainless Steel 10 Gallon Tank Compartment
SP*001499	21" Wide x 3/4" Thick x 1" Long Developing Tank Replacement Seal with Peel off Adhesive (Specify Length When Ordering)
SP*001053	Replacement Low-Profile Darkroom Heater/Blower
SP*001581	Source Overpack Box with Mounting Bracket Fits all OEM's Gamma Ray Projectors (ID: 16"L x 10"W x 10.5"H)
SP*001235	Darkroom Truck Step without Hand Rail, Yellow
SP*001236	Darkroom Truck Step with Hand Rail, Yellow

*SP*001499*   *SP*001053*   *SP*001581*

*SP*001711*
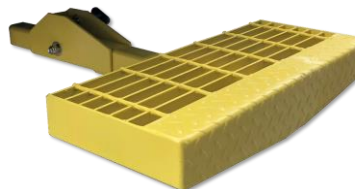
*SP*00001811*   *SP*001235*   *SP*001236*

AUTOMATIC FILM PROCESSORS

Carestream

INDUSTREX PROCESSORS

Quality Images, Efficient Output, Energy and Water Savings

INDUSTREX M37 Plus for space-saving design and mid-volume output or the INDUSTREX M43iC for high-volume output

M37 Plus Film Processor

The tabletop INDUSTREX M37 PLUS is ideal for automatic processing in mid-volume facilities. While compact, it offers the output you need and the excellent image quality and reliability you demand.

The new INDUSTREX M37 Plus film processor incorporates all the experience and features you've come to expect from the INDUSTREX line of products for NDT applications. The processor ensures totally automatic film handling and supports nine programmable-controlled processing channels that allows for flexibility in your day-to-day NDT film production.

Features Include:

- Ease of operation with nine programmable-controlled processing channels
- 17" processing width
- Capacity of 33 sheets/hour (14" x 17") in recommended processing cycle
- Intermediate rinse rack bath system
- Automatic replenishment system for developer and fixer
- Automatic anti-oxidation and anti-crystallization cycles
- Enhanced cold water cooling system
- Unit pre-configured with connection fittings to simplify installation of optional external chiller

Standard Accessories Include:

- Two 8 gallon replenishment storage tanks
- Light tight feed-tray cover
- Table stand
- Re-locatable controller unit for operator convenience
- Spare part kit

M43iC Film Processor

Designed to meet the needs of high-volume Non-Destructive Testing customers, the INDUSTREX M43iC provides multiple processing cycles and dry-to-dry processing in as little as five minutes.

This processor also comes standard with an integrated closed-loop chiller to ensure consistent temperature in hot environments or when water supply is not temperature controlled to further enhance capability and image quality in harsh NDT environments.

Features Include:

- Up to nine programmable-controlled processing channels for maintaining preferred settings such as processing speed, developer temperature, fixer temperature, dryer temperature and replenishment rates
- High processing capacity of up to 58 sheets/hour (14" x 17") in the recommended processing cycle for improved productivity
- An intermediate fix rinse system that enhances process uniformity to both sides of the film
- Feed-tray cover that allows for room light operation
- Integrated chiller unit that maintains developer temperature uniformity in hot environments
- Low level monitoring of all tank solutions

Standard Accessories Include:

- Replenishment storage tanks
- Light tight feed-tray cover
- Re-locatable controller unit for operator convenience
- Spare part kit

QED QUALITY EQUIPMENT DISTRIBUTORS, INC.

COMPUTERIZED RADIOGRAPHY (CR)

Carestream

HPX-PRO Portable Digital CR System

The HPX-*PRO* CR system is built for high image quality, improved productivity and extreme portability. This next-generation system is lightweight (35 lbs.), portable CR imaging solution that is quick to deploy and rapidly produces high-quality images utilizing a new single-pass scan/erase protocol. The HPX-*PRO's* software incorporates a new user interface designed tp get you set-up and imaging fast, with batch mode capacity to keep in pace with extreme process conditions like pipeline imaging. The new software tools also provide quick image analysis and customized reporting for generating unique customer reports in seconds. From hardware to software, to deep in the field and instant image sharing, the HPX-*PRO* is a complete system, designed to improve productivity.

HPX—*PRO*

Carestream spent a considerable amount of time working in the field with mobile x-ray technicians to help improve workflow. The HPX-PRO is only one piece of the total imaging solution. From shot time to final reporting, everything had room for improvement. And we met the NDT industries challange.

• Weighing in at just 35 lbs. and with a less than 12" width can be hand-held with ease.

• Can be operated by using a common 24v power tool battery (4 hour standby/ 45 minutes active scanning and erasing per battery)

• INDUSTREX Custom Reporting tool will help you finish your day a lot sooner, and with more productivity. Once you have all your shots done, with the clikck of a button you can create customer reports in a matter of seconds.

PRO-fessional Workflow for High *PRO*-ductivity

THE HPX-*PRO* WILL CHANGE THE WAY YOU WORK IN A MOBILE ENVIRONMENT FOREVER. EASY TO MOVE, EASY TO SETUP, EASY TO USE, EASY TO ACHIEVE HIGH-PRODUCTIVITY, AND PRICED RIGHT FOR EASY PAYBACK. GOING DIGITAL HAS NEVER BEEN THIS EASY AND AFFORDABLE.

HPX—*PRO* On-the-Go

▶ Rapid Job Setup

Imagine being ready to scan 100 welds and being set up to image in a matter of minutes. With INDUSTREX Software setup of customer parameters, automated electronic FLASH creation on each image and automatic incremental shot numbering make getting ready to shoot fast and easy.

1 ▶ **Portable & Profitable**

Go Anywhere and Save On Overhead

The HPX-PRO is designed for portable industrial applications, from ergonomically engineered handles to the shock- and vibration-resistant engineering. It enables technicians to take Computed Radiography to the next level – anywhere they work – without compromising image resolution, sensitivity, or dynamic range.

Mobile Lab

With the HPX-*PRO* On-Board:
• Eliminate bulky chemicals and tanks taking up space
• Reduce the overhead cost of a large ¾ ton pickup to do field work
• No more need for a generator – lightening the load considerably
• Get deeper in the field with a smaller, more versatile, high-production digital mobile lab

2 Prepare for the day in just minutes with a user-friendly interface. In Batch Mode, define shot parameters and input how many welds to shoot. Set-up the weld numbering and turn on the auto increment feature to name welds as plates process.

The HPX-*PRO* is a Complete Workflow Improvement Tool from Start to Finish.

The system handles a wide range of imaging extremes and is designed to set up fast, operate simply, and deliver the quick results – from the first shot to the final report. At the end of the day upload digital images and reports to the network or e-mail to customers.

For repetitive work, in many cases you can pre-set a custom display filter to be automatically applied to each image as it gets displayed. Improve consistency across shots or define how you want inspectors to view an image. One-click assignment of the interpretation makes the approval or rejection as simple as a mouse click.

3 ▼ **Shot Time Improvement**

Shoot faster, radiate less and keep your source longer.
In certain circumstances, it's possible for CR to reduce exposure time.

5 ▲ **Generate Quick Reports**

Customized Reporting

The HPX-PRO can make customized multi-line or single shot-style reports in a matter of seconds – increasing productivity.

When creating the work report, simply select the welds to be included and click "create report". Generate a custom-made multi-line or single weld-style report within seconds with pre-selected data. No need to transpose data, no worries about making a mistake and no need to spend hours making reports.

4 ◀ **Image, Analyze & Approve in Seconds**

Batch Mode was added to our INDUSTREX software so the HPX-PRO can keep up with film. Unlike other CR systems, the HPX-PRO scans and erases in one pass, thus eliminating wait-time for the plate to come back out during erase.

The HPX-PRO is designed to process a weld a minute*. Including scanning, erasing and image display on the monitor with a pre-set EDGE filter already applied. Highly-skilled, seasoned technicians can even approve a shot during scan preview. *Based on 5-3/4" imaging plate length.

Mobile Lab

HPX-1 Plus Digital CR System

The HPX-1 Plus offers many improvements. Improved optics for better imaging, up to 30% faster throughput on long saturated plates (very high exposure), an improved imaging plate transport system to protect imaging plates, higher mechanical reliability and a more user-friendly DICONDE compliant software for the best experience in digital imaging.

The HPX-1 Plus is a full width CR reader capable of running extra long imaging plates. The system has a wide dynamic range with high sensitivity, making it ideal for almost any type of imaging application. Whether you're using a gamma or X-ray source, the HPX-1 Plus' high sensitivity can help reduce shot time. It shows exceptional performance in weld applications, delivering weld-quality images consistently and dependably.

Carestream's award-winning HPX family of digital products have improved field reliability and enhanced the capabilities in the NDT marketplace. Long plate and multi-plate scanning combined with SmartErase boosts output productivity so you can get more done in a day than ever before. Our exclusive positive pressure filtered air system keeps dust and dirt out for cleaner images in both the laboratory and in remote operations. With a shock and vibration resistant design your team can image in the harshest of environments brining a new level of confidence to digital imaging in the field.

Ultra High Image Quality

Pixel Pitch: 25µm, 35µm, 50µm and 100µm operation

Spatial Resolution: 50 microns or better (12 lp/mm)

Laser Spot Size: 20µm (measured at 85% of peak)

Positive Pressure Fans for Dirty NDT Environments

Let's face it, NDT environments can be dirty. Drum and flat bed style scanners collect contaminants on the surface where they can be transported into the system or into the optical path and be be imaged. HPX-1 Plus is the only CR system on the market that has positive airflow to keep contaminants outside the unit.

Dual Air Filters (including HEPA)

Clean air is critical to keeping the equipment cool and the imaging areas clean. The HPX- 1 Plus is the only system outfitted with dual filters to make sure the environment is kept outside.

Image Plate Flexibility

HPX systems are one of the most flexible CR systems on the market capable of handling raw imaging plates, multiple plates at one time, custom cut sizes (with Plate Carrier), hard cassettes and long Plates (up to 60") without special feed guides.

Plate Transportation System

The HPX-1 Plus plate transport system has always minimized contact with the imaging plate. Unlike magnetic plate drive systems that require uniquely designed imaging plates (which can be costly) or drum systems that advise using plate protective covers to avoid plate damage, the HPX-1 Plus run plates phosphor side up with a proven transport system that won't damage your imaging plates.

Improved Imaging

HPX-1 Plus' improved PMT's improve its sensitivity and reduce unwanted artifacts. CR systems often also make it possible to lower your exposure while still achieving the required sensitivity. Our adjustable PMT and Laser Power allow you fine tune every image for optimum capture every time.

Powerful Software

HPX-1 Plus is operated using our powerful INDUSTREX software that includes a host of features for measurement, custom designed EDGE Image Filters, full DICONDE compliance, and many other tools designed specifically for NDT.

CR IMAGING PLATES

The Carestream INDUSTREX improved Flex GP, HR and XL Blue Digital Imaging Plates are:

• Flexible – Wrap around most shapes
• Sharp – Better resolution than high-speed films, and a suitable replacement for many applications
• Available in Multiple Sizes – To cover a wide range of applications
• Versatile – Use in a rigid or flexible cassette
• Efficient – Phosphor plates can be erased and reused thousands of times, require less exposure than film, and provide faster image access
• Certified – All plates meet requirements for the highest system class per EN 14784-1 and ASTM E 2446

General Purpose (GP)

The general purpose imaging plate is ideal for shots where fine detail is not required. Good for profile shots. It requires the lowest dose, which helps productivity. This plate is best utilized for high energy X-ray or Gamma applications. Typical industries are securtiy, military, and castings.

Item	Size
1008564	14" x 17"

High Resolution (HR)

The high resolution imaging plate is best for applications where the best imaging quality is required. This plate produces weld quality images, and has the best detectability (contrast sensitivity) in the industry. This plate can be used for general X-ray, and Iridium or Selenium applications. Typical industries are oil and gas and aerospace.

Item	Size
8802324	70mm x 10"
8348641	70mm x 17"
8094922	3.5" x 10"
1904267	3.5" x 17"
1680214	4.5" x 10"
1466945	4.5" x 17"
1848688	7" x 17"
1775576	8" x 10"
1174424	10" x 12"
8360521	14" x 17"

HR-PRO (High Resolution - Laminated)

The HR-PRO Plate is designed with improved physical properties for use in HPX-PRO Readers in tough handling environments.

Item	Size
1752955	70mm x 10"
1752971	70mm x 17"
1753110	3.5" x 10"
1753136	3.5" x 17"
1753235	4.5" x 10"
1753243	4.5" x 17"
1753292	6" x 17"

Imaging Plate Cleaner & Wipes

Item	Description
8607020	Carestream X-OMAT Antistatic Cleaning Solution for Intensifying Screens, 8oz Bottle
33390	KIMTECH Pure 100% Polypropylene W4 Dry Wipers 9" x 9", Pack of 100

DIRECT RADIOGRAPHY (DR)

Carestream

HPX-DR Non-Glass DDA Detector

NEW NON-GLASS DR!

Carestream NDT once again introduces breakthrough technology for NDT field imaging with our new non-glass DR detector. The new HPX-DR Non-Glass detector design incorporates a tougher plastic material instead of glass for maximum durability against the rigors of NDT field work.

The HPX-DR Non-Glass detector virtually eliminates costly repairs for broken glass. It comes with a 2-Year warranty and a free loaner program so you can reduce downtime and the expense of purchasing redundant detectors.

The HPX-DR detector is unique in design – coming standard with a rugged, weatherproof enclosure perfect for remote field work. Unlike other panels that claim a weatherproof design when used inside their protective carrying case, this detector has an IP57 enclosure rating without the protective case! With the HPX-DR you can stop wrapping your DDA panel in bags and keep working in rain, snow, mud or whatever Mother Nature throws at you!

• **REDUCED EXPOSURE** - DDA panels are highly sensitive. Combine this with the ability to do frame averaging and you will likely be able to reduce your exposure time and still capture the sensitivity needed for your critical inspection task.

• **FASTER** - Uses no disposable media in the process, eliminating cassette loading and unloading time, developing, processing and reloading for the next shot. The HPX-DR detector offers quick start up and calibration, and rapid image display after acquisition. Produce high quality digital images in seconds for immediate analysis.

• **EASIER** - The HPX-DR detector is lightweight and compact with an all-weather design that is simple to operate. In the lab, it can be operated on a powered tether and in the field it can run 100% on battery. With the 'hot swap' feature the panel can remain on when changing batteries, increasing uptime.

• **WIRELESS** - The HPX-DR detector can operate completely wireless giving the user full freedom of movement and minimizing set-up time on site. This is especially helpful for rope access teams looking for minimal weight, high sensitivity and a powerful wireless connection.

NEW NON-GLASS DR!

- 139µ Pixel Pitch
- 139µ Spatial Resolution
- GOS DRX Standard Scintillator
- Portable at 12.5 lbs (5.7 Kg)
- Heavy Duty Shielding
- Exposure Range up to 3 MeV

2 YEAR WARRANTY SERVICE

HIGH RESOLUTION OUTPUT IN THE LAB OR IN THE FIELD
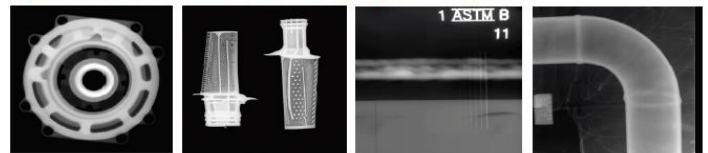
Protective cover for lab use increases detector load limit up to 340 kg. (750 lbs.).
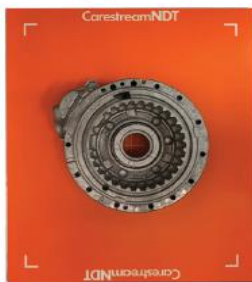
Mount kit with pipe cleats to reduce stress on the detector for pipeline imaging.

QED QUALITY EQUIPMENT DISTRIBUTORS, INC.

X-RAY SYSTEMS & TUBES

Golden Engineering
Portable X-ray Technology

MANUFACTURER OF LIGHTWEIGHT, PORTABLE X-RAY MACHINES

Portable Pulsed X-Ray Generators

Golden Engineering X-ray generators are based on Pulsed X-ray technology. Pulsed X-rays generate a high intensity X-ray burst (pulse) in a very short period of time (10 to 50 nanoseconds depending on the model). The operator varies the overall dose of each exposure by changing the pulse setting. The pulse rate varies from 10 pulses per second to 25 pulses per second depending on the model. The generators can fire up to 200 pulses before a four-minute rest period.

Pulsed X-ray technology has inherent advantages for field operation compared to conventional constant potential X-ray machines or radioactive sources.

Golden X-ray generators are compatible with Conventional Radiographic Film, Computerized Radiography (CR) or Digital Radiography (DR) inspection systems. This provides users with the flexibility to develop a complete radiographic system best suited to their individual needs.

KEY BENEFITS:

► Convenience - Minimal disruption to normal on-going operations

► Portability - Applications often require X-ray be transported and used in remote locations with no access to power

► Safety - May require inspections within a relatively close proximity to personnel. Golden Engineering Pulsed X-ray generators contain no radioactive material. Minimal leakage to side and rear of the machine and minimal exposure time reduces standoff distance around the machine and reduces the possibility of accidental exposure.

► Durability - Rugged design can be used in a variety of environmental conditions and temperatures between -10 to 120 Degrees F°
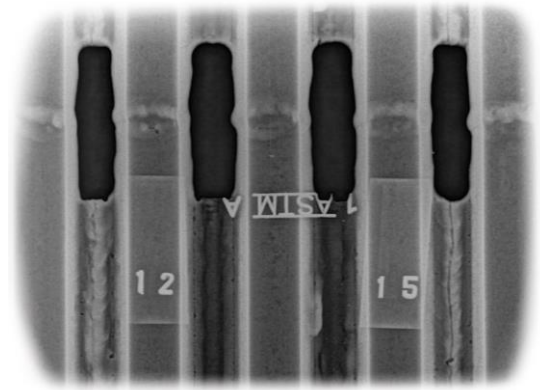
Model	Weight	kV	Penetration in Steel	Avg. Dose mR/Pulse*	Pulse Width	Pulse Rate per Second	Rear Standoff Distance
XR200	11 lbs.	150	0.50"	2.6	50 ns	10	10 Feet
XRS3	11.8 lbs.	270	1.00"	2.6	25 ns	15	10 Feet
XRS4	18.3 lbs.	370	1.75"	4.5 - 7	10 ns	9	20 Feet

*mR per pulse measured 12" from source
**3 pulses per count

XR200 X-RAY GENERATOR

The XR200 is a 150 kV, single-package, pulsed x-ray generator used by military, law enforcement and industrial personnel for radiographic examination of various items.

Item	Model	Descripton
1220230	XR200	XR200 X-Ray (80 Char) 20V Kit 110V - Includes: XR200 Generator, 2 - 20V DeWalt Batteries, 110V Charger, Cable & Case

XRS3 X-RAY GENERATOR

The XRS-3 is a 270 kV, battery powered, pulsed X-ray generator. The XRS-3 is the most versatile unit because it provides exceptional penetrating ability, up to 1" of steel.

The compact design features a battery pack, sturdy glass tube, high voltage head and electronic controls in a single package that weighs less than 13 pounds.

It can withstand extreme environments including arctic and desert conditions.

Item	Model	Descripton
1320230	XRS3	XRS3 X-Ray (80 Char) 20V Kit 110V - Includes: XRS3 Generator, 2 - 20V DeWalt Batteries, 110V Charger, Cable & Case

XRS4 X-RAY GENERATOR

The XRS4 is a 370 kV, battery powered, pulsed X-ray generator.

Two features unique to the XRS-4 include a robust aluminum housing, and a bellows located in the handle. Both of these features improve the durability and longevity of the generator.

Weighing close to 19 pounds the XRS4 is significantly larger and heavier than other Golden Engineering generators. However, a 370 kV generator that penetrates more than 1.5 inches of steel and weighs less than 25 pounds is still considered extremely portable by industry standards.

Item	Model	Descripton
1410230	XRS4	XRS4 X-Ray (80 Char) 20V Kit 110V - Includes: XRS4 Generator, 2 - 20V DeWalt Batteries, 110V Charger, Cable & Case

COMET
Technology with Passion

BUILT TO LAST

Designed and built in Denmark; the PXS EVO systems are comprised of the best components and assembled with the utmost care – making them reliable, long lasting and a sound investment. They are fitted with a high quality metal ceramic X-ray tube and the robust composite casing now protects all vital parts even better. The systems meet the IP65 standard, making them fully operational in dusty and wet conditions.

SMARTER WORKFLOW

The ergonomic design and the low weight makes the PXS EVO systems easy to handle and re-position. A broad temperature range from -4°F to 122°F makes the EVO systems reliable and ensures smooth operation even in extreme environments. The intuitive interface allows for a smarter workflow.

HIGH PERFORMANCE

Built to meet the highest international safety standards, each unit is individually tested and measured for safety and accuracy. The PXS EVO systems features focal spots from 1.0 mm to 3.0 mm and ranges from 750 W to 900 W constant potential X-ray power ensuring high performance, shorter exposure times and high resolution results.

Portable X-ray generators from Comet are light, of high-quality and have been designed for flexible field inspection, in all types of industrial environments. We build our products with years of experience, skilled engineers and components of the highest quality. The combination of our new PXS EVO tube heads and CONTROL EVO is the key to a significantly improved workflow.

PXS EVO DIRECTIONAL

The combination of our new PXS EVO tube heads and CONTROL EVO is the key to a significantly improved workflow. Because the units are lighter, they are faster to handle and reposition.

PXS EVO PANORAMIC

The panoramic 38° x 360° X-ray beam, and the combination of up to 300 kV and 750 W, makes the PXS EVO a perfect choice for weld seem inspection of cylindrical vessels and pipes.

The re-engineered three-part lead belt is easy to mount and has as standard a 38° x 60° slit option allowing for directional use if required.

EVO CONTROL

The ergonomic design and shoulder strap makes the CONTROL EVO easy to handle and re-position. All information is clearly displayed on the 6.5" LCD color screen. The unit features an exposure calculator and has an intuitive interface with a wide range of advanced functionalities – equalling a smarter workflow.

EXPOSURE CALCULATOR

The advanced built-in exposure calculator ensures fast exposure calculations and uniform results. It can calculate the minimum required film focus distance optimising the exposure time. It accommodates the use of a wide range of films, materials and settings.

PXS EVO WATER-COOLED

Special inspection jobs, may require special solutions. The water-cooled PXS EVO directional X-ray systems, offer 24/7 operation in ambient temperatures up to 86°F.

All directional PXS EVO tube heads are available in a hybrid cooled version, based on a water-cooled anode combined with an air cooled cathode end. The EVO series directional tube heads are available in 160-300 kV versions, all available with 1.0 mm small focal spot and the 225-300 kV variants also with 3.0 mm focal spot, in order to cover a broad range of applications.

Model	Height	Weight	Focal Spot Size	kV	mA	Beam Angle	Penetration in Steel
160D	24"	48 lbs.	1.0 mm	20 - 160 kV	0.5 - 7.0 mA	40° x 60°	1.30"
200D	25"	50 lbs.	1.0 mm	30 - 200 kV	0.5 - 6.0 mA	40° x 60°	1.85"
200P	26"	62 lbs.	0.4 x 4.0 mm			38° x 360°	1.59"
225D	28"	57 lbs.	3.0 mm	40 - 225 kV	0.5 - 5.5 mA	40° x 60°	2.15"
225DS			1.0 mm			30° x 60°	
225D/1200	32"	62 lbs.	3.0 mm	25 - 225 kV	0.5 - 10 mA	40° x 60°	
300D	30.5"	64 lbs.	3.0 mm	50 - 300 kV	0.5 - 4.5 mA	40° x 60°	2.75"
300DS			1.0 mm			30° x 60°	
300P	32"	80 lbs.	0.5 x 5.5 mm			38° x 360°	2.60"

Penetration Calculations are based upon 27.5" FFD / AA400-Type Film + Pb / Density = 2.0

COMET

COMET Industrial X-Ray develops and manufactures metal/ceramic X-ray sources, and the related components, for the non-destructive examination of materials in the automotive, aviation pipeline and steel industries, and also for the stationary and mobile inspection of baggage and cargo at airports and borders.

COMET constantly works to improve and simplify X-ray technology and is a trusted engineering partner to well-known companies. COMET 's innovative technology has become the basis for an unprecedented combination of performance and compactness that offers customers a new realm of possibilities in the development of their end systems.

INDUSTRIAL X-RAY TUBES

Comet unipolar and bipolar X-ray tubes are available for different industrial applications. The product range features metal ceramic tubes and ceramic tubes, from the smallest portable unit up to 600kV fixed systems.

UNIPOLAR TUBES

Comet's unipolar tubes are used in demanding industrial applications. The top areas are non-destructive testing, food inspection and thickness gauging.

BIPOLAR TUBES

The advantages of Comet bipolar tubes are high power, small dimensions, low weight, and rugged design.

HIGH VOLTAGE X-RAY GENERATORS

Comet Industrial X-ray generators are built for remarkably stable performance. Our generators are designed to meet the demanding requirements of industrial X-ray applications. They are the ideal workhorse for both film and real-time applications. All generators are factory-configured and pretested.

iVARIO GENERATORS

Our latest future-orientated iVario generators feature an even more flexible, modular design, and have been engineered to serve the tube in the best possible way.

The generator contains the tube library, with optimized tube profiles (ramp-up and ramp-down profiles) that guarantee the longest possible lifespan for the tube and the best module (tube-generator) integration level.

Visualized tube diagrams with power levels allow to actively manage the tube lifetime. The intelligent, fully customizable arc-handling system reacts to the frequency of arcs - this protects the generator, maximizes the tube's lifespan and maximizes potential uptime. In addition, the accurate filament control prevents the filament current overstress.

XRP GENERATORS

COMET Industrial X-ray generators are perfectly matched for highly stable performance. The high-frequency XRP generator has been designed to meet the tough requirements of modern industrial X-ray applications. The XRP generator is the ideal workhorse for both radiographic and real-time applications.

COMET ACCESSORIES

What Comet provides next to main business: Besides tubes and generators, we are pleased to offer all of the necessary components for a customized X-Ray module.

INDUSTRIAL COOLERS / CHILLERS

A top-quality cooler is vital to the safe and reliable operation of your X-ray system. We supply a variety of coolers ideally balanced to work with Comet X-ray tubes.

HIGH-VOLTAGE SPRING LOADED CABLES

Comet supplies high-voltage cables in a variety of rated voltages and lengths. The advantages of the spring-loaded cable are higher up-time, lower installation costs, lower maintenance costs, and reduction in cable failures. The replacement of the elastomeric spring with a mechanical spring ensures constant pressure in the receptacle with a pressure indicator, ease of installation, and a reliable supply of power.

COMET CONTROLLER

The iVario generator can be controlled by the 19'' external controller, which communication is based on the newly developed Ethernet Protocol. It comprises touchscreen panel, key switch, buttons and lamps as well as rotary knob. There can be an emergency stop incorporated into the controller.

MAGNETIC PARTICLE
MPI CONSUMABLES

MAGNAFLUX®

Wet Fluorescent Magnetic Particles

Item	Product	Container Size	Particle Suspension Vehicle
01-0130-71	14A	1 lb. Jar	Petroleum Distillate (Oil), Water
01-0130-75		20 lb. Pail	
01-1725-38	14A Aqua-Glo	Aerosol, Case of 12	Water
01-9130-41	14A Redi-Bath	27 oz. Bottles, Case of 6	Water
01-9130-35		1 Gallon, Case of 4	
01-0145-78	14AM	Aerosol, Case of 12	Petroleum Distillate (Oil)
01-0145-40		5 Gallon Pail	
01-0179-71	20B	1 lb. Jar	Water
01-0179-70		15 lb. Pail	
01-0179-84		30 lb. Pail	
01-0191-73	MG-410	2 lb. Jar, Case of 6	Petroleum Distillate (Oil), Water
01-0196-73	MG-450A	2 lb. Jar, Case of 6	Water

Petroleum Base Suspension Vehicle

This petroleum distillate carrier oil provides excellent particle mobility, good suspension stability and enhanced corrosion protection for reliable, spec-compliant mag particle inspections

Item	Product	Container Size
01-2122-40	Carrier II	5 Gallon Pail
01-2122-30		20 Gallon Drum
01-2122-45		55 Gallon Drum

Water Conditioners and Additives

Item	Product	Description	Container Size
01-2190-40	AX-52	Water-Soluble Corrosion Inhibitor	5 Gallon Pail
01-2148-63	WA-2B	Water Conditioner	5 lb. Pail
01-9410-20	ZAF-2	Non-Silicone Antifoam	1 Gallon Jug

White Contrast Paint

A bright white, opaque NDT contrast paint, WCP-2 provides a high contrast background to improve probability of detection and sensitivity during visible magnetic particle inspections

Item	Product	Container Size
01-2250-78	WCP-2	Aerosol, Case of 12

Wet Visible Magnetic Particles

Item	Product	Container Size	Particle Suspension Vehicle
01-1116-81	7C Black	25 lb. Pail	Petroleum Distillate (Oil), Water
01-1580-78	7HF	Aerosol, Case of 12	Petroleum Distillate (Oil)

Dry Visible Magnetic Particles

Item	Product	Container Size
01-1716-69	#1 Gray	10 lb. Pail
01-1716-87		45 lb. Pail
01-1732-69	#2 Yellow	10 lb. Pail
01-1732-87		45 lb. Pail
01-1780-69	8A Red	10 lb. Pail
01-1780-87		45 lb. Pail

QED QUALITY EQUIPMENT DISTRIBUTORS, INC.

Circle Systems, Inc
Innovators in the Manufacturing of Magnetic Particle Inspection Materials

Mi-Glow®

CircleSafe®

Wet Fluorescent Magnetic Particles

Item	Product	Container Size	Particle Suspension Vehicle
FG-3125	Mi-Glow 834	2 lb. Jar	Water
FG-3126		30 lb. Pail	
FG-3231	Mi-Glow 218X	2 lb. Jar	Water
FG-3238		30 lb. Pail	
FG-3321	Mi-Glow 418	2 lb. Jar	Water
FG-3320		30 lb. Pail	
FG-3590	CircleSafe 778A	Aerosol, Case of 12	Water
FG-3571	Mi-Glow 778	Case of 4-1 Quart	Water
FG-3100	Mi-Glow 800	1 lb. Jar	Oil
FG-3102		12 lb. Pail	
FG-3130	CircleSafe 800A	Aerosol, Case of 12	Oil
FG-3143	Mi-Glow 800L	5 Gallon Pail	Oil
FG-3162	Mi-Glow 920	2 lb. Jar	Oil

Odorless Inspection Oils

A high flashpoint, refined petroleum distillate specifically designed for use in magnetic particle inspection with its high clarity, low fluorescence and no odor characteristics

Item	Product	Container Size
FG-3883	CircleSol M	5 Gallon
FG-3880		55 Gallon

Water Conditioners, Additives & Wetting Agents

Item	Product	Container Size
FG-2950	Anti-Foam 3	Case of 4-1 Quart
FG-3851	Cleaner 500	1 Gallon
FG-3510	Corrosion Inhibitor 7	Case of 4-1 Quart
FG-3515		55 Gallon Drum
FG-2210	Wetting Agent 34	2 lb. Jar
FG-2211		30 lb. Pail
FG-3501	Wetting Agent 771	Case of 4-1 Quart
FG-3506		55 Gallon Drum

Wet Fluorescent & Visible (Dual) Red Magnetic Particles

Item	Product	Container Size	Particle Suspension Vehicle
FG-3661	Mi-Glow 634	2 lb. Jar	Water
FG-3662		30 lb. Pail	
FG-2991	Mi-Glow 601	2 lb. Jar	Oil
FG-2992		12 lb. Pail	
FG-3630	CircleSafe 850A	Aerosol, Case of 12	Water

Circle Systems, Inc

**Innovators in the Manufacturing of
Magnetic Particle Inspection Materials**

Wet Visible (Black) Magnetic Particles

Item	Product	Container Size	Particle Suspension Vehicle
FG-2431	Mi-Glow 106	2 lb. Jar	Oil
FG-2438		30 lb. Pail	
FG-3609	CircleSafe 820AX	Aerosol, Case of 12	Oil
FG-3600	CircleSafe 820A	Aerosol, Case of 12	Water

Mi-Glow Underwater 1 is red particles pre-mixed with a powdered Wetting Agent for use in underwater inspection. The particles are used with visible light, black light and blue light. Designed to be used for a variety of underwater inspections.

Underwater Magnetic Powdered Particles

Item	Product	Container Size	Particle Suspension Vehicle
FG-2701	Mi-Glow	2 lb. Jar	Water
FG-2703	Underwater 1	25 lb. Pail	
FG-2771	Mi-Glow	2 lb. Jar	Water
FG-2773	Underwater 528	25 lb. Pail	

White Contrast Paint

Specially formulated, fast drying white contrast paint, used to create a consistent background on the component surface in a visible magnetic particle inspection

Item	Product	Container Size
FG-3740	Mi-Glow WCP	Aerosol, Case of 12

Dry Visible Magnetic Particle Powder

Item	Product	Container Size
FG-2551	Sir-Chem Dry Powder 61 Gray	10 lb. Jar
FG-2555		50 lb. Pail
FG-2571	Sir-Chem Dry Powder 63 Red	10 lb. Jar
FG-2575		50 lb. Pail
FG-2621	Sir-Chem Dry Powder 66 Yellow	10 lb. Jar
FG-2625		50 lb. Pail
FG-2631	Sir-Chem Dry Powder 68 Blue	10 lb. Jar
FG-2635		50 lb. Pail

Dry Fluorescent & Visible (Dual) Magnetic Particle Powder

Item	Product	Container Size
FG-2601	Sir-Chem Dry Powder 73 Red	10 lb. Jar
FG-2605		50 lb. Pail
FG-2641	Sir-Chem Dry Powder 75 Green	10 lb. Jar
FG-2645		50 lb. Pail

Met-L-Chek®

McGean

Wet Fluorescent Magnetic Particles

Item	Product	Container Size	Particle Suspension Vehicle
M-MPI-1400-bs12		Case, 12 Bath Shots	
M-MPI-1400-1	**MPI-1400**	1 lb. Jar	Oil
M-MPI-100-12		12 lb. Pail	
M-MPI-1400B-16	**MPI-1400B**	Aerosol, Case of 12	Oil
M-MPI-1400B-5		5 Gallon Pail	

Petroleum Bath Vehicle

MPI-Carrier Fluid C2 is a specialty petroleum based magnetic particle bath vehicle designed for high sensitivity fluorescent magnetic particle suspension

Item	Product	Container Size
M-MPI-FluidC2-05	**MPI-Fluid C2**	5 Gallon Pail
M-MPI-FluidC2-55		55 Gallon Drum

Wet Visible (Black) Magnetic Particles

Item	Product	Container Size	Particle Suspension Vehicle
M-MPI-80P-4	**MPI-80P**	4.4 lb. Jar	Oil
M-MPI-80P-10		10 lb. Pail	
M-MPI-80-16	**MPI-80**	Aerosol, Case of 12	Oil
M-MPI-80-5		5 Gallon Pail	

White Contrast Paint

Item	Product	Container Size
M-WCP-81-16		Aerosol, Case of 12
M-WCP-81-1	**WCP-81**	1 Gallon Pail
M-WCP-81-5		5 Gallon Pail

Dry Visible Magnetic Particle Powder

Item	Product	Temp. Range	Container Size
M-MPI-86B-6	**MPI-86B**		6.6 lb. Jar
M-MPI-86B-11		Up to 800° F	11 lb. Pail
M-MPI-86B-50	Dark Blue		50 lb. Pail
M-MPI-86G-6	**MPI-86G**		6.6 lb. Jar
M-MPI-86G-11		Up to 800° F	11 lb. Pail
M-MPI-86G-50	Gray		50 lb. Pail
M-MPI-86R-6	**MPI-86R**		6.6 lb. Jar
M-MPI-86R-11		Up to 250° F	11 lb. Pail
M-MPI-86R-50	Red		50 lb. Pail
M-MPI-86Y-6	**MPI-86Y**		6.6 lb. Jar
M-MPI-86Y-11		Up to 800° F	11 lb. Pail
M-MPI-86Y-50	Yellow		50 lb. Pail

Wet Fluorescent Magnetic Particles

Item	Product	Container Size	Particle Suspension Vehicle
GW-1	**Glo-netic Powder Concentrate**	1 lb. Jar	Oil or Water
GLO-NETIC-16		Aerosol, Case of 9	
GLO-NETIC-1	**Glo-netic Premix**	1 Gallon Pail	Oil
GLO-NETIC-5		2 Gallon Pail	

Contrast Paint

CP-1 Provides a High Contrast Strippable Background Coating.
CP-2 Provides a High Contrast Non Strippable Background Coating.

Item	Product	Container Size
CP-1-16		Aerosol, Case of 9
CP-1-1	**CP-1**	1 Gallon Pail
CP-1-5		5 Gallon Pail
CP-2-16		Aerosol, Case of 9
CP-2-1	**CP-2**	1 Gallon Pail
CP-2-5		5 Gallon Pail

Wet Visible (Black) Magnetic Particles

Item	Product	Container Size	Particle Suspension Vehicle
BLACK-OXIDE-16	**BLACK-OXIDE NO. 1**	Aerosol, Case of 9	Oil

Magnetic Particle Fluid

Item	Product	Container Size
MPF-5	**MPF**	5 Gallon Pail
MPF-55		55 Gallon Drum

QED QUALITY EQUIPMENT DISTRIBUTORS, INC.

MPI CONSUMABLE AIDS
MATERIAL ACCESSORIES
Applicators & Centrifuge Tubes

► Magnaflux Centrifuge Tubes are individually Calibrated to monitor the precise concentration of magnetic particles in suspensions made with Fluorescent and Visible magneticle particles as per ASTM E709, ASTM E1444 or ASME Section V.

► Type 2000 Magnetic Stripe Card is used for instantly evaluating the performance of the fluorescent wet-method bath as per ASTM E-709 & ASTM E-3024. This card can be used to quantitatively evaluate the performance of the fluorescent materials by displaying the number of indications that can be observed after the material has been applied to the stripe.

Item	Description
PB-1	Magnetic Powder Blower provides reliable and controlled application of magnetic inspection powder to areas previously inaccessible
RB-4	Green Rubber Powder Applicator
RB-1	Powder Removal Bulb, Blue
M2400B	SureShot Model M 24 oz. Capacity Black Anodized Aluminum Sprayer w/ Nozzle #602, Adjustable from Extra Fine Mist to Pin Stream
B8100PL	Atomizer Sprayer (Model B) 16 oz. Capacity Electroless Nickel Plated Aluminum Sprayer with Plastic Top
B8100CB	Atomizer Sprayer (Model B) 16 oz. Capacity Electroless Nickel Plated Aluminum Sprayer with Chrome Plated Brass Top
2800	Type 2000 Magnetic Stripe Card
SP*001682	Centrifuge Tube for Fluorescent Magnetic Particles, 0 - 1.0 ml in 0.05 graduations (Certified)
SP*001683	Centrifuge Tube for Visible Magnetic Particles, 0 - 1.5 ml in 0.10 graduations (Certified)
SP*001684	Centrifuge Tube Stand

YOKES
PARKER RESEARCH/ MAGNAFLUX YOKES

Item	Description
B-100	Parker AC Contour Probe, 6.5 lbs.
B-200	Parker AC Contour Probe, 7.0 lbs. *NEW* Slim line Ergonomic Handle and Oversized Operating Switch Provides a Comfortable Grip
B-300	Parker AC Contour Probe, 7.5 lbs.
DA-400	Parker AC/DC Contour Probe, 8.5 lbs.
628554	Magnaflux Y-2 AC Yoke, 4.8 lbs. (Detachable Cord)
625643	Magnaflux Y-7 AC/DC Yoke, 7.4 lbs.

B-100

B-200

B-300

DA-400

Y-2

Y-7

YOKE ACCESSORIES

Item	Description
TB-10	Magnetic 10lb Weight Lift Test Bar (Weight is stamped on each bar and is traceable to NIST)
TB-10S-4	Set of 4 10lb Weight Lift Test Bars (Weight is stamped on each bar and is traceable to NIST)
Y200-1	Parker Y-200 Yoke Light (designed to fit B-200 Contour Probe)
Y300	Parker Y-300 Yoke Light (designed to fit B-300 Contour Probe)
Y400	Parker Y-400 Yoke Light (designed to fit B-100 or DA-400 Contour Probe)
628840	Magnaflux Y-2 LED Yoke Light
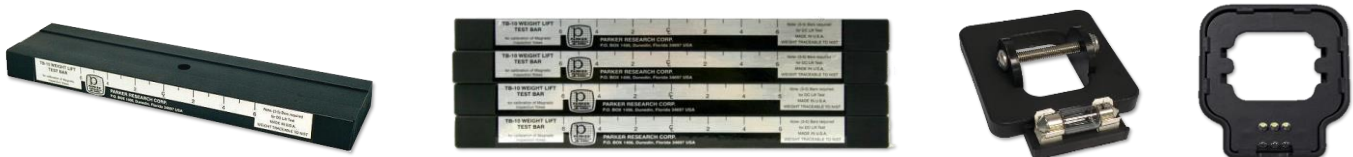
MAGNETIC PARTICLE AIDS
FIELD INDICATORS

| Item	Description
133033	FSM-2, Digital Magnetic Field Strength Meter (Calibrated)
SP*001105	Pie Gauge Magnetic Field indicator with Certification
MG-25-10	Model 25 Magnetic Field Indicator, Range 10-0-10 (Calibrated)
MG-25-20	Model 25 Magnetic Field Indicator, Range 20-0-20 (Calibrated)
SP*001548	Economy Magnetic Field Indicator, Range 10-0-10 (Un-Calibrated)

QUANTITATIVE QUALITY INDICATORS (QQIs)

Quantitative Quality Indicators (QQI) are magnetic particle test piece shims with artificial defects used to verify field direction and relative strength. QQI's are also used to balance multi-directional fields and to increase productivity by minimizing magnetizing shots.

Item	Description
625551	Standard QQI, Model KSC-230, Circle-cross 0.002" shim thickness, 30% notch depth
625552	Miniature QQI, Model KSC-4-230, Mini circle-cross, 4 per shim, 0.002" shim thickness, 30% notch depth
625553	Standard QQI, Model KSC-430, Circle-cross, 0.004" shim thickness, 30% notch depth
625554	Variable QQI, Model KSCT-234, Three circles, 0.002" shim thickness, 20% / 30% / 40% notch depth
625555	Variable QQI, Model KSC4-234, Three circles, 0.004" shim thickness, 20% / 30% / 40% notch depth
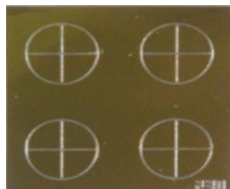
*625551*   *625552*   *625553*   *625554*   *625555*

TEST PIECES

► Magnetic Flux Indicator Strip - Flexible indicators used to detect directional orientation during the magnetic particle testing process. Each indicator contains three milled slots with widths of .0075", .009" and .010" that share a common depth. The indicators are manufactured from permeable magnetic steel sandwiched between two brass plates and designed for repeated use in setting and monitoring magnetic field strength in wet and dry MPI applications.

► Ketos Ring - System Performance Test Piece - The tool steel ring is manufactured to AS-5282 requirements to demonstrate magnetic particle system performance. A progressive series of sub-surface holes are used to verify equipment performance at different amperages using HWDC or FWDC waveforms.

► The Notch Defect Test Bar - System Performance Test Piece - The MPI test bar is a standardized test piece conforming to NAVSEA T907A-AS-GIB-010/271 requirements to demonstrate magnetic particle system performance. The test bar includes both surface and sub-surface defects in two directions to verify both circular and longitudinal fields using AC or DC waveforms.

► The MTU-3 Test Block is used to check the sensitivity of magnetic particle materials.

Item	Description
008M004	Magnetic Flux Indicator Strips (Burma Castrol) Type I (G)eneral, Set of 5
SP*001685	Ketos Ring (AS-5282 Ring), O-1 Tool Steel including Certification Report
NA16	Notch Defect Test Bar (System Performance Test Piece - NAVSEA T907A-AS-GIB-010/271)
MTU-3	Reference Block Type 1 /MTU-3/ EN ISO 9934-2:2002 Magnetic Particle Test Block
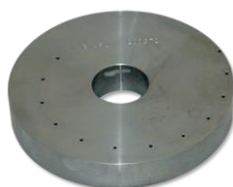
MPI EQUIPMENT & ACCESSORIES
PORTABLE COIL

Parker Portable Coil

The Parker PL-10 Portable Magnetizing Coil (9 7/8" inside diameter) is designed for magnetic particle inspection of ferrous metal parts. The coil allows for the use of either dry powder or wet fluorescent inspection media and may be used for demagnetizing as well.

The coil is molded in a tough black polyurethane material and comes equipped with the standard foot switch or a optional hand switch and 10' yellow neoprene power cord. The sealed electrical connection box has a 2" x 5" flat base allowing the coil to stand in a vertical position.

Item	Description
PL-10H	Parker 10" Portable Magnetizing Coil with Hand Switch, 115VAC with Carrying Case
PL-10F	Parker 10" Portable Magnetizing Coil with Foot Switch, 115VAC with Carrying Case

MAGNAFLUX®

PORTABLE POWER PACK UNITS

The Portable Power Packs are convenient and economical inspection units that are used in a wide range of magnetic particle applications that require only moderate power. They are ideal for large or heavy parts, in-service mobile equipment or job-site welds.

BENEFITS

► Find surface defects with AC current; switch cable connection to half wave DC (HWDC) for near-surface flaws
► Locate defects in any direction using prods, central conductor, coil (wrap part with 3-5 turns of cable)
► Infinitely variable current control

FEATURES

► Demagnetize your parts in AC mode by slowly turing the current dial to zero
► Built-in automatic-reset circuit breaker
► May be used as the main power source for the Magnaflux MAG Kit modular bench inspection system

Magnaflux P-70

SPECIFICATIONS

UNIT		
Model	P-70	P-1500
Foot Print	17.5"L x 9"W x 8"H	22"L x 9.5"W x 9.5"H
Weight	35 lbs.	93 lbs.
Maximum Output*	750 Amps AC or HWDC	1500 Amps AC or HWDC
Current Output* (single phase)	115 VAC 50/60 Hz 230 VAC 50/60 Hz	230 VAC 50/60 Hz 460 VAC 50/60 Hz
Line Current	26 Amps @ 115 VAC 13 Amps @ 230 VAC	42 Amps @ 230 VAC 21 Amps @ 460 VAC
Max Dut Cycle	2 Minutes ON 2 Minutes OFF	2 Minutes ON 2 Minutes OFF
*Current ratings based on use of two 15-foot lengths of 4/0 cable. *Other voltages available.		

Magnaflux P-1500

M-SERIES MOBILE POWER PACKS

The M-Series mobile power pack portable current generators facilitate testing of large and abnormally heavy parts with magnetic particle inspection. Magnaflux understands some parts cannot be moved so the magnetizing station needs to be brought to the part. The M-Series offers a solution by providing an adaptable mobile unit. These units feature AC or Half Wave DC output.

M-Series magnetic power packs are available in three configurations:

M-2030, M-2040 & M-2060

UNIT			
Model	M-2030	M-2040	M-2060
Foot Print	46"L x 23"W x 39"H		
Weight	780 lbs.		
Maximum Output	3,000 Amps AC or HWDC	4,000 Amps AC or HWDC	6,000 Amps AC or HWDC
Available Voltages	380, 415, 460, 575 V	230, 380, 415, 460, 575 V	380, 415, 460, 575 V
Rated With	90' of 4/0 Cables	30' of 4/0 Cables	Two 30' of 4/0 Cables in parallel
Available Frequencies	50 or 60 Hz		

STANDARD FEATURES:

► Digital Meter Display
► 2 Bus bars for connection
► Push button switch for AC output
► Push button switch for HWDC output
► Push button switch for mag
Momentary - mag as long as button is pushed

► Push button switch for demag
One touch auto cycle
Switches to decaying AC automatically
► Push button switch for pulse
1/2 second on, 3 seconds off for 30 seconds
► Infinitely variable current control

► 2 Fixed / 2 Swivel (with locks) Heavy-duty casters
► 115 Volt convenience Outlet (10 amp)
► PLC circuitry and thermal overload for circuitry protection
► Flow through cooling for heat dissipation
► Solid state switching (AC to HWDC)
► 7% Duty cycle (maximum output with 1/2 minute ON time)

MAGNAFLUX WET BENCH

AD-Series
Magnetic Wet Benches w/ AC and DC Magnetization

The AD-Series magnetic benches provide 4,000 amps of Alternating Current and 5,000 amps of Direct Current magnetization for finding surface and sub-surface defects during wet method magnetic particle inspection. The two outputs are independently adjustable to set each magnetic field, circular or longitudinal.

Features:
► 5% duty cycle of 0.5 seconds on, 10 seconds off at maximum ouput
► Allen-Bradley PLC
► Simple touch-screen operator interface
► External pump system for particle bath agitation, circulation and application

MD-Series
Multi-Directional Magnetic Wet Benches for AC, HWDC or 1-Phase FWDC Magnetization

The MD-Series multi-directional magnetic bench offers Alternating Current, Half Wave Direct Current and 1-phase Full Wave Direct Current for time-saving multidirectional magnetization which can find defects in all orientations with one mag-cycle.

The two outputs (contact and Flux Flow coil) each offer AC, HWDC or 1-Phase FWDC, and are independently adjustable to balance the magnet field intensity.

Features:
► 5% duty cycle of 0.5 seconds on, 10 seconds off at maximum ouput
► Allen-Bradley PLC
► Advanced touch-screen operator interface
► External pump system for particle bath agitation, circulation and application
► 1,000 customer-programmable techniques

A-Series
Magnetic Wet Benches w/ AC Magnetization

The A-Series magnetic benches provide Alternating Current magnetization for finding surface defects during wet method magnetic particle inspection. The two outputs are independently adjustable to set each magnetic field, circular or longitudinal.

Features:
► 5% duty cycle of 0.5 seconds on, 10 seconds off at maximum ouput
► Allen-Bradley PLC
► Simple touch-screen operator interface
► External pump system for particle bath agitation, circulation and application

D-Series
Magnetic Wet Benches w/ 3-Phase FWDC Capability

The D-Series is one of our most powerful wet magnetic benches. Providing 3-phase Full Wave Direct Current, this MPI equipment offers maximum magnetization for finding surface and sub-surface defects with clearer indications while using minimal power.

The two outputs are independently adjustable to set each magnetic field, circular or longitudinal.

Features:
► Allen-Bradley PLC
► Simple touch-screen operator interface
► External pump system for particle bath agitation, circulation and application
► Integrated ultra-low frequency, reversing, step-down DC demagnetization 1-touch control
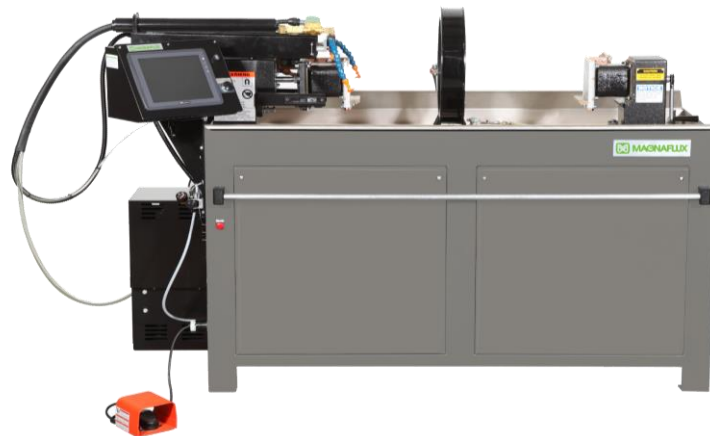
Universal WE
Multi-Directional Magnetic Wet Bench

The Universal WE magnetic wet bench is multi-direction magnetic wet bench designed to completely magnetize the surfaceof parts up to 35 inches long in a single shot. Potentially cutting inspection time in half because the part can inspected in both directions at once. The Universal WE offers 200 - 2,000 Amps AC for contact shots and 1,500 - 15,000 Amp-turns AC for coil shots. The two outputs are independently adjustable to set each magnetic field, circular or longitudinal.

EQUIPMENT ACCESSORIES

4/0 Cables & Connectors

We offer a range of cables and connectors to allow you to outfit your magnetic bench or electromagnetic current generator to suit your specific parts and process. Whether you are testing a large investment casting or doing mag particle inspection in a difficult to reach location, these heavy-duty cables and connectors will help you set-up your MPI machine just the way you need.

4/0 cables are essential for P-series, M-series, and CSV-series power packs. Cables can be used to flow magnetizing current through a large part or structure, or wrapped around pipes and long weldments for longitudinal magnetization. QED 4/0 cables are available in standard welding grade or heavy-duty grade with extra insulation and tinned conductors. Cables are factory terminated in a variety of lengths and a choice of standard lug connections or heavy-duty quick connect fittings.

Prods & Clamps

These handheld electrodes and contact clamps are convenient for conducting sectional magnetic particle inspections, like welds, castings or forgings, or testing parts that cannot be inspected on a wet horizontal bench, such as large fabrications, tubing, bars and tubular assemblies like aircraft mounts and fuselage sections.
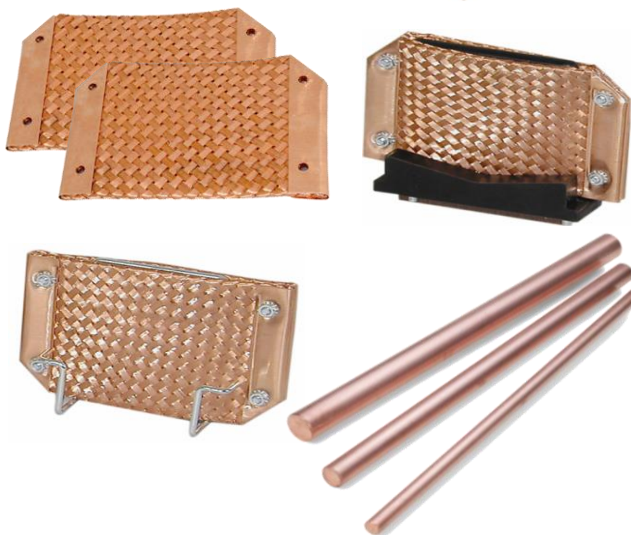
Copper Contact Pads & Conductors

Copper contact pads come in a variety of shapes, sizes and types to make sure your magnetic bench is outfitted correctly for the parts you inspect.

Copper braided contact pads prevent arc burn by helping maintain proper electrical contact between test parts and contact heads. Choose a solid pad if you are inspecting parts with flat ends, pick a braided pad if your parts have rounded or irregular shaped ends.

Central Conductors - Solid Copper Bar Rods provide circular magnetization of hollow parts. Three standard sizes are availble and custom sizes are availble upon request.

Available Copper Contact Pads Include:
► Replacement Copper Braid Contact Pad - 4.75" x 7.50"
► Copper Braid Contact Pad - 4.75" x 10.50"
► Copper Double-Braided Contact Pad wih V-Block. Heavy braid provides contact over greater surface area. Built with neoprene, the V-Block base centers and supports test parts. The pad can be reversed to provide two wear faces. Fits all standard sized MPI units.
► Copper Double-Braided Contact Pad with Clip. Same performance as the V-Block but clips over headstock of smaller MPI units.

Lead Contact Pads

This range of copper and lead contact pads come in a variety of shapes, sizes and types to make sure your magnetic bench is outfitted correctly for the parts you inspect. Contact pads prevent arc burning, and ensure good, reliable electrical contact between the headstock and part.

Choose a solid pad if you are inspecting parts with flat ends, pick a braided pad if your parts have rounded or irregular shaped ends.

Available Lead Contact Pads Include:
► Lead Contact Plate - Duplicates original headstock/tailstock contact plates. The soft lead provides excellent contact with test part - 6.75" x 6.625" x .25" Thick
► Lead Copper Braid Contact Plate - Copper impregnated lead contact plate that lasts 10 times longer than lead contact plates - 6.75" x 6.625" x .25" Thick

Equipment Adapters

Make sure your MPI bench works with every part you need to inspect with this range of equipment adapters. From large, heavy parts to small pieces like bolts, screws, and pins, QED equipment adapters help you get more out of your magnetic bench by helping you make it work for a wide variety of parts.

► Steady Rests - Used to support and stabilize long or heavy parts such as crankshafts during the inspection process.

► Contact Block - Permits remote testing of parts that are too heavy or too large for processing on unit. When clamped between head and tailstock, the block supplies magnetizing current to remote prods or clamps through flexible cable.

► Small Parts Adapters - Permit the use of standard wet horizontal test units for inspection of small parts such as bolts, screws, pins, etc. Mounted directly to either the head or tail stock the solid copper adaptors maintain adequate clearance to proper clamping action.

QED QUALITY EQUIPMENT DISTRIBUTORS, INC.

LIQUID PENETRANT
LPI CONSUMABLES

ZYGLO® PENETRANTS

Fluorescent Penetrant - Type 1
Methods A (Water Washable) & Method C (Solvent Removable)

Item	Product	Sensitivity	Container Size
01-3159-40			5 Gallon Pail
01-3159-30	ZL-15B	Level ½ (Ultra Low)	20 Gallon Drum
01-3159-45			55 Gallon Drum
01-3263-40	ZL-19	Level 1 (Low)	5 Gallon Pail
01-3263-45			55 Gallon Drum
01-3272-78			Aerosol, Case of 12
01-3272-40	ZL-60D	Level 2 (Medium)	5 Gallon Pail
01-3272-30			20 Gallon Drum
01-3272-45			55 Gallon Drum
01-3274-40			5 Gallon Pail
01-3274-30	ZL-67	Level 3 (High)	20 Gallon Drum
01-3274-45			55 Gallon Drum
01-3267-40	ZL-56	Level 4 (Ultra High)	5 Gallon Pail
01-3267-45			55 Gallon Drum

Fluorescent Penetrant - Type 1
Method B (Post-Emulsifiable, Lipophilic), Method C (Solvent
Method D (Post-Emulsifiable, Hydrophilic)

Item	Product	Sensitivity	Container Size
01-3123-40	ZL-2C	Level 2 (Medium)	5 Gallon Pail
01-3123-45			55 Gallon Drum
01-3187-78			Aerosol, Case of 12
01-3187-40	ZL-27A	Level 3 (High)	5 Gallon Pail
01-3187-30			20 Gallon Drum
01-3187-45			55 Gallon Drum
01-3188-78			Aerosol, Case of 12
01-3188-40	ZL-37	Level 4 (Ultra High)	5 Gallon Pail
01-3188-30			20 Gallon Drum
01-3188-45			55 Gallon Drum

Fluorescent Penetrant (Water-Based) - Type 1
Methods A (Water Washable)
No petroleum distillates allowing direct drain disposal

Item	Product	Sensitivity	Container Size
01-3137-40	ZL-4C	N/A	5 Gallon Pail
01-3137-45			55 Gallon Drum
01-3405-45	ZL-405	Level ½ (Ultra Low)	55 Gallon Drum
01-3405-67			275 Gallon Tote
01-3425-45	ZL-425	Level 1 (Low)	55 Gallon Drum
01-3425-67			275 Gallon Tote
01-3440-45	ZL-440	Level 2 (Medium)	55 Gallon Drum
01-3440-67			275 Gallon Tote

Visible Penetrant - Type 2

Item	Product	Method	Container Size
01-5155-78	SKL-SP2	C (Solvent Removable)	Aerosol, Case of 12
01-5155-35			1 Gallon Pail
01-5155-40			5 Gallon Pail
01-5155-45			55 Gallon Drum
01-5190-78	SKL-WP2	A (Water Washable)	Aerosol, Case of 12
01-5190-35			1 Gallon Pail
01-5190-40		C (Solvent Removable)	5 Gallon Pail
01-5190-45			55 Gallon Drum

Visible/Fluorscent Penetrant (Water-Based)
Specially designed for chemically sensitive plastic parts

Item	Product	Method	Container Size
01-5125-40	SKL-4C	A (Water Washable)	5 Gallon Pail
01-5125-45		C (Solvent Removable)	55 Gallon Drum

Remover & Emulsifiers

Item	Product	Method / Class	Container Size
01-5750-78	SKC-S	Class 2	Aerosol, Case of 12
01-5750-35			1 Gallon Pail
01-5750-40		Nonhalogenated	5 Gallon Pail
01-5750-45		(Flammable)	55 Gallon Drum
01-3550-40	ZE-4E	B	5 Gallon Pail
01-3550-30		(Post-Emulsifiable	20 Gallon Drum
01-3550-45		Lipophilic)	55 Gallon Drum
01-3625-40	ZR-10E	D	5 Gallon Pail
01-3625-30		(Post-Emulsifiable	20 Gallon Drum
01-3625-45		Hydrophilic)	55 Gallon Drum

Developer

Item	Product	Form	Container Size
01-3328-69	ZP-4B	Form a	10 lb. Pail
01-3328-75		(Dry Powder)	20 lb. Pail
01-3381-75	ZP-14A	Form b	20 lb. Pail
01-3381-89		(Water Soluble)	50 lb. Pail
01-3341-81	ZP-5B	Form c (Water Suspendible)	25 lb. Pail
01-3354-78	ZP-9F	Form d/e (Nonaqueous Type 1 & 2 - Solvent based)	Aerosol, Case of 12
01-5352-78	SKD-S2	Form d/e	Aerosol, Case of 12
01-5352-35			1 Gallon Pail
01-5352-40		(Nonaqueous Type 1	5 Gallon Pail
01-5352-45		& 2 - Solvent based)	55 Gallon Drum

Fluorescent Penetrant - Type 1
Methods A (Water Washable) & Method C (Solvent Removable)

Item	Product	Sensitivity	Container Size
M-FP-921-1p	FP-921	Level 1 (Low)	1 Pint
M-FP-921-01			1 Gallon Pail
M-FP-921-05			5 Gallon Pail
M-FP-921-55			55 Gallon Drum
M-FP-922-1p	FP-922	Level 2 (Medium)	1 Pint
M-FP-922-01			1 Gallon Pail
M-FP-922-05			5 Gallon Pail
M-FP-922-55			55 Gallon Drum
M-FP-923-16	FP-923	Level 3 (High)	Aerosol, Case of 12
M-FP-923-1p			1 Pint
M-FP-923-01			1 Gallon Pail
M-FP-923-05			5 Gallon Pail
M-FP-923-55			55 Gallon Drum

Fluorescent Penetrant - Type 1
Method B (Post-Emulsifiable, Lipophilic), Method C (Solvent
Method D (Post-Emulsifiable, Hydrophilic)

Item	Product	Sensitivity	Container Size
M-FP-93A(M)-1pt	FP-93A(M)	Level 2 (Medium)	1 Pint
M-FP-93A(M)-01			1 Gallon Pail
M-FP-93A(M)-05			5 Gallon Pail
M-FP-93A(M)-55			55 Gallon Drum
M-FP-95A(M)-16	FP-95A(M)	Level 3 (High)	Aerosol, Case of 12
M-FP-95A(M)-1pt			1 Pint
M-FP-95A(M)-01			1 Gallon Pail
M-FP-95A(M)-05			5 Gallon Pail
M-FP-95A(M)-55			55 Gallon Drum
M-FP-97A(M)-1pt	FP-97A(M)	Level 4 (Ultra High)	1 Pint
M-FP-97A(M)-01			1 Gallon Pail
M-FP-97A(M)-05			5 Gallon Pail
M-FP-97A(M)-55			55 Gallon Drum

Visible Penetrant - Type 2

Item	Product	Method	Container Size
M-VP-30-16	VP-30	*A (Water Washable)* *C (Solvent Removable)*	Aerosol, Case of 12
M-VP-30-1p			1 Pint
M-VP-30-01			1 Gallon Pail
M-VP-30-14			Case, 4-1 Gallon
M-VP-30-05			5 Gallon Pail
M-VP-30-55			55 Gallon Drum
M-VP-31A-16	VP-31A	*B (Post-Emulsifiable, Lipophilic)* *C (Solvent Removable)*	Aerosol, Case of 12
M-VP-31A-1p			1 Pint
M-VP-31A-01			1 Gallon Pail
M-VP-31A-14			Case, 4-1 Gallon
M-VP-31A-05			5 Gallon Pail
M-VP-31A-55			55 Gallon Drum

Visible Penetrant (Bio Degradeable) - Type 2

Item	Product	Method	Container Size
M-VBP-300-1p	VBP-300	*A (Water Washable)* *C (Solvent Removable)*	1 Pint
M-VBP-300-01			1 Gallon Pail
M-VBP-300-05			5 Gallon Pail
M-VBP-300-55			55 Gallon Drum

QUALITY EQUIPMENT DISTRIBUTORS, INC.

Visible High (125° - 350° F) Temperature Penetrant - Type 2

Item	Product	Method	Container Size
M-VP-302-1p			1 Pint
M-VP-302-01	VP-302	C (Solvent Removable)	1 Gallon Pail
M-VP-302-05			5 Gallon Pail

Emulsifiers

Item	Product	Type	Method	Container Size
M-E-50-01			B	1 Gallon Pail
M-E-50-05	E-50	2 (Visible)	(Post-Emulsifiable	5 Gallon Drum
M-E-50-55			Lipophilic)	55 Gallon Drum
M-E-57-05	E-57	1 (Fluorescent)	B (Post-Emulsifiable	5 Gallon Drum
M-E-57-55			Lipophilic)	55 Gallon Drum
M-E-58D-01			D	1 Gallon Pail
M-E-58D-05	E-58D	1 (Fluorescent)	(Post-Emulsifiable	5 Gallon Drum
M-E-58D-55			Hydrophilic)	55 Gallon Drum

Cleaners & Removers

Item	Product	Type	Method	Class	Container Size
M-E-59-16					Aerosol, Case of 12
M-E-59-01	E-59	1 (Fluorescent)	C	2	1 Gallon Pail
M-E-59-14	Remover Only	2 (Visible)	(Solvent Removable)	Nonhalogenated	Case, 4-1 Gallon
M-E-59-05				(flammable)	5 Gallon Drum
M-E-59-55					55 Gallon Drum
M-E-59A-16					Aerosol, Case of 12
M-E-59A-01	E-59A	1 (Fluorescent)	C	2	1 Gallon Pail
M-E-59A-14	Cleaner & Remover	2 (Visible)	(Solvent Removable)	Nonhalogenated	Case, 4-1 Gallon
M-E-59A-05				(flammable)	5 Gallon Drum
M-E-59A-55					55 Gallon Drum
M-R-502-1p	R-502		C	3	1 Pint
M-R-502-01	High Temperature	2 (Visible)	(Solvent Removable)	Special Application	1 Gallon Pail
M-R-502-05	Remover				5 Gallon Drum
M-R-503-16					Aerosol, Case of 12
M-R-503-01	R-503	1 (Fluorescent)	C	2	1 Gallon Pail
M-R-503-14	Cleaner &	2 (Visible)	(Solvent Removable)	Nonhalogenated	Case, 4-1 Gallon
M-R-503-05	Remover			(flammable)	5 Gallon Drum
M-R-503-55	(Petroleum Free)				55 Gallon Drum
M-R-504-16					Aerosol, Case of 12
M-R-504-01	R-504	1 (Fluorescent)	C	2	1 Gallon Pail
M-R-504-14	Cleaner &	2 (Visible)	(Solvent Removable)	Nonhalogenated	Case, 4-1 Gallon
M-R-504-05	Remover (Non			(flammable)	5 Gallon Drum
M-R-504-55	Halogenated)				55 Gallon Drum

Developer

Item	Product	Form	Container Size
M-D-72A-1p		Form a	1 Pint
M-D-72A-10	D-72A		10 lb. Pail
M-D-72A-25		(Dry Powder)	25 lb. Pail
M-D-76B-10		Form b	10 lb. Pail
M-D-76B-25	D-76B		25 lb. Pail
M-D-76B-50		(Water Soluble)	50 lb. Pail
M-D-78B-10		Form c	10 lb. Pail
M-D-78B-25	D-78B		25 lb. Pail
M-D-78B-50		(Water Suspendible)	50 lb. Pail
M-D-70-16			Aerosol, Case of 12
M-D-70-01		Form d/e	1 Gallon Pail
M-D-70-14	D-70	(Nonaqueous Type 1 &	Case, 4-1 Gallon
M-D-70-05		2 - Solvent based)	5 Gallon Pail
M-D-70-55			55 Gallon Drum
M-D-702-1p		Form f	1 Pint
M-D-702-01	D-702		1 Gallon Pail
M-D-702-05		(Special Application)	5 Gallon Pail

QED QUALITY EQUIPMENT DISTRIBUTORS, INC.

SHERWIN INCORPORATED | DUBL-CHEK PENETRANT PROCESS

Fluorescent Penetrant - Type 1
Level ½ (Ultra Low) thru Level 2 (Medium)
Methods A (Water Washable) & Method C (Solvent Removable)

Item	Product	Sensitivity	Container Size
HM-1-1	HM-1	Level ½ (Ultra Low)	1 Gallon Can
HM-1-5			5 Gallon Pail
HM-1-55			55 Gallon Drum
HM-2D-1	HM-2D	Level 1 (Low)	1 Gallon Can
HM-2D-5			5 Gallon Pail
HM-2D-55			55 Gallon Drum
HM-220-1	HM-220	Level 1 (Low)	1 Gallon Can
HM-220-5			5 Gallon Pail
HM-220-55			55 Gallon Drum
HM-3A-1	HM-3A	Level 2 (Medium)	1 Gallon Can
HM-3A-5			5 Gallon Pail
HM-3A-55			55 Gallon Drum
HM-406-16	HM-406	Level 2 (Medium)	Aerosol, Case of 9
HM-406-1			1 Gallon Can
HM-406-5			5 Gallon Pail
HM-406-55			55 Gallon Drum
HM-412-1	HM-412	Level 2 (Medium)	1 Gallon Can
HM-412-5			5 Gallon Pail
HM-412-55			55 Gallon Drum
HM-440-1	HM-440	Level 2 (Medium)	1 Gallon Can
HM-440-5			5 Gallon Pail
HM-440-55			55 Gallon Drum

Fluorescent Penetrant - Type 1
Level 3 (High) thru Level 4 (Ultra High)
Methods A (Water Washable) & Method C (Solvent Removable)

Item	Product	Sensitivity	Container Size
HM-430-1	HM-430	Level 3 (High)	1 Gallon Can
HM-430-5			5 Gallon Pail
HM-430-55			55 Gallon Drum
HM-604-1	HM-604	Level 3 (High)	1 Gallon Can
HM-604-5			5 Gallon Pail
HM-604-55			55 Gallon Drum
HM-607-1	HM-607	Level 3 (High)	1 Gallon Can
HM-607-5			5 Gallon Pail
HM-607-55			55 Gallon Drum
HM-704-1	HM-704	Level 4 (Ultra High)	1 Gallon Can
HM-704-5			5 Gallon Pail
HM-704-55			55 Gallon Drum
HM-707-1	HM-707	Level 4 (Ultra High)	1 Gallon Can
HM-707-5			5 Gallon Pail
HM-707-55			55 Gallon Drum

Fluorescent Penetrant - Type 1
Method B (Post-Emulsifiable, Lipophilic), Method C (Solvent Removable) & Method D (Post-Emulsifiable, Hydrophilic)

Item	Product	Sensitivity	Container Size
RC-29-1	RC-29	Level 1 (Low)	1 Gallon Can
RC-29-5			5 Gallon Pail
RC-29-55			55 Gallon Drum
FP-22B-1	FP-22B	Level 2 (Medium)	1 Gallon Can
FP-22B-5			5 Gallon Pail
FP-22B-55			55 Gallon Drum
RC-50-1	RC-50	Level 2 (Medium)	1 Gallon Can
RC-50-5			5 Gallon Pail
RC-50-55			55 Gallon Drum
RC-65-16	RC-65	Level 3 (High)	Aerosol, Case of 9
RC-65-1			1 Gallon Can
RC-65-5			5 Gallon Pail
RC-65-55			55 Gallon Drum
RC-77-16	RC-77	Level 4 (Ultra High)	Aerosol, Case of 9
RC-77-1			1 Gallon Can
RC-77-5			5 Gallon Pail
RC-77-55			55 Gallon Drum
RC-88-1	RC-88	Level 4 (Ultra High)	1 Gallon Can
RC-88-5			5 Gallon Pail
RC-88-55			55 Gallon Drum

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Visible Penetrant - Type 2

Item	Product	Method	Container Size
DP-40-16	DP-40	C (Solvent Removable)	Aerosol, Case of 9
DP-40-1			1 Gallon Can
DP-40-5			5 Gallon Pail
DP-40-55			55 Gallon Drum
DP-50-16	DP-50	A (Water Washable)	Aerosol, Case of 9
DP-50-1		C (Solvent Removable)	1 Gallon Can
DP-50-5			5 Gallon Pail
DP-50-55			55 Gallon Drum
DP-51-16	DP-51	A (Water Washable)	Aerosol, Case of 9
DP-51-1		C (Solvent Removable)	1 Gallon Can
DP-51-5			5 Gallon Pail
DP-51-55			55 Gallon Drum
DP-54-1	DP-54	A (Water Washable)	1 Gallon Can
DP-54-5		C (Solvent Removable)	5 Gallon Pail
DP-54-55			55 Gallon Drum
KO-17-16	KO-17	A (Water Washable)	Aerosol, Case of 9
KO-17-1		C (Solvent Removable)	1 Gallon Can
KO-17-5			5 Gallon Pail

Removers/ Cleaners

Item	Product	Method / Class	Container Size
DR-60-16	DR-60	Class 2 Nonhalogenated (Flammable)	Aerosol, Case of 9
DR-60-1			1 Gallon Can
DR-60-5			5 Gallon Pail
DR-60-55			55 Gallon Drum
DR-62-16	DR-62	Class 2 Nonhalogenated (Flammable)	Aerosol, Case of 9
DR-62-1			1 Gallon Can
DR-62-5			5 Gallon Pail
DR-62-55			55 Gallon Drum
DR-63-1	DR-63	Class 2 Nonhalogenated (Flammable)	1 Gallon Can
DR-63-5			5 Gallon Pail
DR-63-55			55 Gallon Drum
DR-64-1	DR-64	Class 2 Nonhalogenated (Flammable)	1 Gallon Can
DR-64-5			5 Gallon Pail
KO-19-16	KO-19	Class 2 Nonhalogenated (Flammable)	Aerosol, Case of 9
KO-19-1			1 Gallon Can
KO-19-5			5 Gallon Pail

Emulsifiers

Item	Product	Method / Class	Container Size
ER-85-1	ER-85	B (Post-Emulsifiable Lipophilic)	1 Gallon Can
ER-85-5			5 Gallon Pail
ER-85-55			55 Gallon Drum
ER-83A-1	ER-83A	D (Post-Emulsifiable Hydrophilic)	1 Gallon Can
ER-83A-5			5 Gallon Pail
ER-83A-55			55 Gallon Drum
ER-83B-1	ER-83B	D (Post-Emulsifiable Hydrophilic)	1 Gallon Can
ER-83B-5			5 Gallon Pail
ER-83B-55			55 Gallon Drum
ER-83C-1	ER-83C	D (Post-Emulsifiable Hydrophilic)	1 Gallon Can
ER-83C-5			5 Gallon Pail
ER-83C-55			55 Gallon Drum

Developer

Item	Product	Form	Container Size
D-90G-15	D-90G	Form a (Dry Powder)	15 lb. Pail
D-113G.1-25	D-113G.1	Form b (Water Soluble)	25 lb. Pail
D-110A.1-25	D-110A.1	Form c (Water Suspendible)	25 lb. Pail
D-100-16	D-100	Form d/e (Nonaqueous Type 1 & 2 - Solvent based)	Aerosol, Case of 9
D-100-1			1 Gallon Can
D-100-5			5 Gallon Pail
D-100-55			55 Gallon Drum
D-106-16	D-106	Form d/e (Nonaqueous Type 1 & 2 - Solvent based)	Aerosol, Case of 9
D-106-1			1 Gallon Can
D-106-5			5 Gallon Pail
D-106-55			55 Gallon Drum
D-350-16	D-350	Form d/e (Nonaqueous Type 2 - Solvent based)	Aerosol, Case of 9
D-350-1			1 Gallon Can
D-350-5			5 Gallon Pail

LPI ACCESSORIES
MATERIAL ACCESSORIES

LPI Applicators & Sprayers

► DEMA Injector Kit - For spraying Hydrophilic Emulsifier. The emulsifier is drawn into the water stream by the Dema valve, emitting an emulsifier/water spray. The Dema Injector allows the penetrant user to process parts with the Hydrophilic method without adding large dip tanks.

Item	Description
M2400B	SureShot Model M 24 oz. Capacity Black Anodized Aluminum Sprayer w/ Nozzle #602, Adjustable from Extra Fine Mist to Pin Stream
B8100PL	Atomizer Sprayer (Model B) 16 oz. Capacity Electroless Nickel Plated Aluminum Sprayer with Plastic Top
B8100CB	Atomizer Sprayer (Model B) 16 oz. Capacity Electroless Nickel Plated Aluminum Sprayer with Chrome Plated Brass Top
SP*001693	Dry Developer Sprayer, One Quart Capacity
SP*001694	NDT Rinse/Spray Gun Complete
520090	Magnaflux Water Spray Gun w/ Hose Adapter
SP*001695	244CT DEMA Injector Kit - for emitting an Hydrophilic Emulsifier/Water Spray

Monitoring Devices & Wiping Cloths

► Refractometer - Easy to use device to measure the the concentration of the Hydrophilic Emulsifier remover in water and is required to meet Pratt and Whitney and GE concentration specifications for Hydrophilic removers.

► Hydrometer - Water Based Developers are designed for optimum performacne within a specfic concentration range. To control the concentration, the specific gravity is measured using the Hydrometer. If the reading is high, the concentration is high and water is generally added. If the reading is low, developer is added to the bath.

Item	Description
300	GRALAB Model 300 Timer
513829	Refractometer
5857	Hydrometer (for monitoring developer concentration)
RAGS-50	White Lint Free Rags, 50 lb. Box

TAM PANEL & CLEANING UNIT

Hoffman Precision Star TAM Panels

The Panel is made from a 0.100" stainless steel plate. Half of the test surface is hard coated with 0.003" hard alloy chrome. Five crack centers are evenly spaced in the hard coated strip.   The crack centers are circular patterns forming a star. The un-plated side is grit blasted to Ra = 2.0 roughness for washability / background tests.

Kit Includes:

► Hoffman TAM Panel with Transparent Storage Box
► Calibration Certificate (includes measurements and 5 photos)
► Foil print, glued on the storage box (includes measurements and 5 photos)

TAM Panel Approvals:

► Pratt & Whitney TAM 146060
► Delta Air Lines / MTU Maintenance
► Rolls Royce / General Electric

Item	Description
SP*001637	Hoffmann Polished Precision TAM Panel Standard Kit
SP*001638	Hoffmann Polished Precision TAM Panel Standard Kit plus full size panel photo in Certificate
SP*001639	Hoffmann Grit Precision TAM Panel Standard Kit
SP*001640	Hoffmann Grit Precision TAM Panel Standard Kit plus full size panel photo in Certificate

Ultrasonic Cleaning Unit & Solution

Quickly and professionally clean your test panels with the desktop ultrasonic cleaning unit. It completely removes excess penetrant from indications as well as the surface of the panel. We recommend using Met-L-Chek 300LF or equivalent for proper cleaning.

Includes: Normal Frequency, Sweep & Degas Functions, Operator Temperature Controls, Digital Untrasonic Timer, Basket, Cover and Side Handles

Specifications: Ultrasonic Frequency - 40,000Hz, Tank Material - Stainless Steel, Temperature Controlled Heat for best cleaning performance, Unit Size - 10" L x 6"W x 9.5"H, Tank Dimensions - 9"L x 5.5"W x 4"H, Tank Capacity - 3/4 Gallon

Item	Description
SP*001696	Heated Ultrasonic Cleaning Unit
M-300LF-01	Met-L-Chek 300LF Aqueous Alkaline Concentrate, 1 Gallon Pail

ADDITIONAL LPI PANELS/BLOCKS

NiCr Twin Cracked Test Panels

NiCr Panels are used to compare new and used penetrants and can also be used for comparing performance of different penetrant materials or different processing techniques. Each sets consists of a pair of identical panels marked A and B with manufacturer's Certification and Crack photograph.

These panels are made by plating hard Nickel Chromium alloy on a 2mm thick brass substrate and stressing the panel in tension. The hard NiCr coating is brittle in comparison to the brass substrate so that the cracks created in the plated layer are limited to the thickness of the NiCr layer. The panel is then cut in half perpendicular to the direction of the cracks thus creating a matching pair of virtually identical cracks of controlled depth.

Specification Compliance: ASTM E1417, AMS 2647D, ISO 3452-3 & JIS Z 2343-3

Sensitivity* (Unofficial)	
Crack Depth	Level
50 µm	1, 2, 3, 4
30 µm	2, 3, 4
20 µm	3, 4
10 µm	4

- Fluorescent Penetrant Sensitivity Levels are established by the USAF Laboratory at Wright Patterson AFB under highly controlled conditions.

- Sensitivity testing is not something the penetrant manufacturer or user can do. What you can do is compare samples using appropriate NiCr Cracked Panels.

Item	Description
NiCr-10	NiCr Test Panels, 10µm (0.0004") Flaw Depth
NiCr-20	NiCr Test Panels, 20µm (0.0008") Flaw Depth
NiCr-30	NiCr Test Panels, 30µm (0.0012") Flaw Depth
NiCr-50	NiCr Test Panels, 50µm (0.002") Flaw Depth

Additional LPI Test Panels & Blocks

► WTP-1 SHERWIN Wash Test Panel is used to run monthly removability testing as required by ASTM E1417 and MIL-STD-6866. The panel is made of stainless steel measuring 4" x 6" and 0.090" thick with two parallel, "medium rought" strips, each 6" x 1.5" separated by a smooth 1" strip.

► WTP-2 SHERWIN Wash Test Panel is used to run removability tests. The 1.5" x 2"panel is made from 16 gauge 301 or 302 stainless steel, by grit blasting with 80 mesh aluminum oxide grit and 60 psi of air pressure. The roughened surface that is produced is free of scratches and blemishes.

► ADP-1 SHERWIN Aqueous Developer Test Panel is used to check the fluorescence and coverage of soluble and suspendable aqueous developers as per ASTM E1417. The panel is made of aluminum measureing 3" x 10".

► Cracked Aluminum Test Blocks compare sensitivity of different penetrants or sensitivity of new and used penetrants. This is done by processing one half of the block with used penetrant and the other half with fresh penetrant. A 1/8" wide groove separates the blocks two sides to facilitate side-by-side penetrant comparison.

Item	Description
WTP-1	SHERWIN Wash Test Panel (Removability as per ASTM E1417 & MIL-STD-6866)
WTP-2	SHERWIN Wash Test Panel (Removability)
ADP-1	SHERWIN Aqueous Developer Test Panel (as per ASTM E1417)
CAB	Cracked Aluminum Test Block

Cracked Aluminum Test Blocks are meant for one-time use as once the penetrant gets in the crack it is very difficult to completely clean.

LPI MEASURING AIDS

Crack Comparators

Crack comparators are used to measure the actual size of indications identified during the liquid penetrant inspection process.

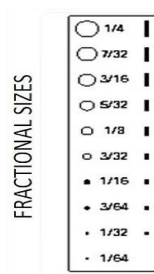| Item	Description
514048	Fluorescent Green General Purpose Crack Comparator, measured in increments 0.005" to 0.125"
514050	Fluorescent Green Pratt & Whitney (TAM 135273) Crack Comparator, measured in increments 0.010" to 0.180"
SP*001697	Fluorescent Green General Electric Crack Comparator, measured in increments 0.005" to 0.125"
SP*001698	Fluorescent Green Fractional Size Crack Comparator, measured from 1/64" to 1/4"
SP*001699	Fluorescent Green Swing Away General Purpose Crack Comparator, measured in increments 0.005" to 0.125"
SP*001481	Fluorescent Green Swing Away (TAM 190466) Crack Comparator, measured in increments 0.005" to 0.180"
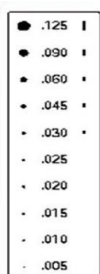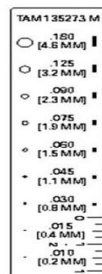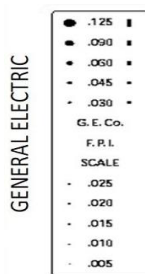
514048   *514050*   *SP*001697*   *SP*001698*   *SP*001699*   *SP*001481*

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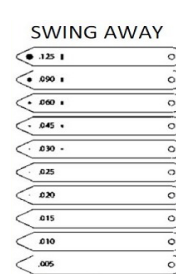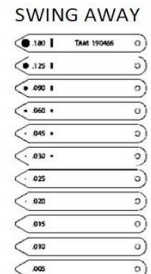
BLACKLIGHTS
HANDHELD LED UV-A LAMPS

uVision 365
Economy & Deluxe Series Available
Standard and Z Models Available

		EV6000	UV-365EH	UV-365HC	UV-365SBLC
Specification Compliance	ISO 3059	X	X	X	X
	ASTM E3022	X		X	X
	RRES 90061	X			X
Penetrant Testing	ASME V	X		X	X
	ASTM E165	X		X	X
	ASTM E1417	X		X	X
Magnetic Particle Testing	ASME V	X		X	X
	ASTM E3024	X		X	X
	ASTM E1444	X		X	X
Product Properties (15")	Max UV Intensity	5,000	7,000	6,000	<5,000
	UV Coverage Area	9"	7"	6.4"	6"

MAGNAFLUX HANDHELD

EV6000 NDT Inspection Lamp

The EV6000 is certified to NDT standards for LED UV lamps and certified for Aerospace Prime and OEM specifications for emission spectrum and beam profile. Each unit is shipped with a manufacturer's certificate of conformance which meets or exceeds all current specifications for use with fluorescent liquid penetrant and magnetic particle testing.

Item	Description
625784	EV6000 Hand-held LED UV lamp

SPECTRO-UV HANDHELD

UVISION 365 Series NDT Inspection Lamps

These lightweight, yet rugged lamps boast an IP65 rating, making them dust-tight and water resistant. Using a state-of-the-art heat sink, the uVision is mechanically cooled without the need for fans. In addition to the three powerful UV-A (365 nm) LEDs, it has a convenient white light LED for illuminating work areas. Compliant versions have embedded microprocessors to keep lamps within specifications. There are multiple power-source options as well.

Item	Series	Model	Description
UV-365EH	**ECONOMY**	Standard	uVision, High intensity, (3) UV-A LEDs, (1) white light LED with FP-600 borofloat filter protector, heavy-duty 8 foot AC cord, UVS-30 spectacles and soft carrying case (100-120V/50-60Hz)
UV-365ZEH	**Meets ISO 3059 Specifications**	Z	uVision, High intensity, (3) UV-A LEDs, (1) white light LED with FP-600 borofloat filter protector, In-handle Lithium-ion Battery, 130448 Charger, 8' AC cord, UVS-30 spectacles & Protective Case (100-120V/50-60Hz)
UV-365HC	**DELUXE**	Standard	uVision, High Intensity, (3) UV-A LEDs, (1) White Light LED w/ 128196 Faceplate w/ UV-A Pass Filters, FP-600 Borofloat Filter Protector, 8' AC Cord, UVS-30 Spectacles & Protective Case (100-120V/50-60Hz)
UV-365ZHC	**Meets ISO 3059 & ASTM E3022 Specifications**	Z	UVision, High Intensity, (3) UV-A LEDs, (1) White Light LED with 128196 Faceplate w/ UV-A Pass Filters, In-Handle Lithium-ion Battery, 130448 Charger, FP-600 Filter Protector, 8' AC Cord, UVS-30 Spectacles & Protective Case (100-120V/50-60Hz)
UV-365SBLC	**DELUXE**	Standard	uVision, Standard Intensity, (3) UV-A LEDs, (1) White Light LED w/ 128196 Faceplate w/ UV-A Pass Filters, FP-600 Borofloat Filter Protector, 8' AC Cord, UVS-30 Spectacles & Protective Case (100-120V/50-60Hz)
UV-365ZSBLC	**Meets ISO 3059, ASTM E3022 & RRES 90061 Specifications**	Z	uVision, Standard Intensity, (3) UV-A LEDs, (1) White Light LED w/ 128196 Faceplate w/ UV-A Pass Filters, In-handle Lithium-ion Battery, 130448 Charger, FP-600 Filter Protector, 8' AC Cord, UVS-30 Spectacles & Protective Case (100-120V/50-60Hz)

FLASHLIGHT LED UV-A LAMP

SPECTRO-UV FLASHLIGHT

Available in both Lithium Ion & Alkaline Battery Models

WHY CLARITY™?

- **LONGEST BATTERY LIFE ON THE MARKET**
- **AUTO SHUT-OFF** Keeps Intensity Above Minimum Output
- **IP68 RATED** WATER-PROOF, DUST-PROOF
- **WIRELESS CHARGER*** Induction Charger Kit Included *Lithium Ion model only

CLARITY Spray Mount Accessory # RP-SM-01

Specially crafted lamp attachment permits lamp and spray can to be mounted together for convenient, single-handed fluorescent yoke inspection.

SPRAY & INSPECT IN ONE SIMPLE STEP!

CLARITY 365 Series Kits

LITHIUM-ION

Flashlight w/ battery, induction charging dock, AC power cord, USB power cord, belt holster, UV-absorbing glasses & carrying case

ALKALINE

Flashlight with 3 C-Cell alkaline batteries, belt holster, UV-absorbing glasses and carrying case

Item	Model	Battery Type	UV-A Intensity	Visible Light	UV-A Coverage
SPN-CLR365-SC	Standard Intensity	Lithium-Ion	4,500 µW/cm²	< 1 foot-candle (11 lux)	4 Inches
SPN-CLR-BA		Alkaline			

FLASHLIGHT ACCESSORIES

Item	Battery Type	Description
RP-SM-01	Lithium-Ion & Alkaline	Spray Can Mount for CLARITY Flashlight
RP-FL-01		Optical Assembly for CLARITY Flashlight
RP-B-01	Lithium-Ion	Li-ion Battery for CLARITY Flashlight
RP-BC-01		Induction Battery Cap for CLARITY Flashlight
RP-C-01		Induction Charging Kit for CLARITY Flashlight
RP-BC-03	Alkaline	Battery Cap for CLARITY (Alkaline) Flashlight

UV-A SAFETY GLASSES

Item	Description
506249	UV-Absorbing Scratch Resistant Safety Glasses with Purple/Green Lens

*Safety Glasses are pictured Above

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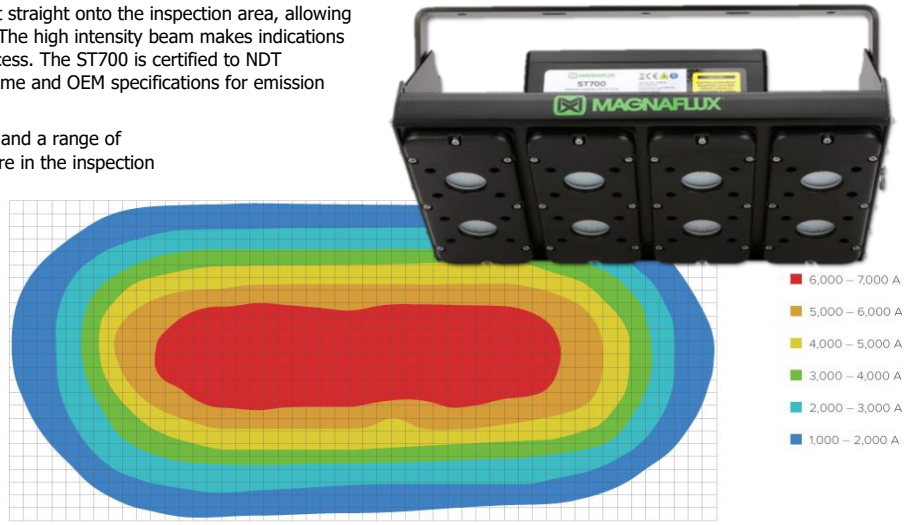
OVERHEAD LED UV-A LAMPS
MAGNAFLUX OVERHEAD

ST700 Stationary Inspection LED UV Lamp

The ST700 projects an ultra-wide, even beam of UV-A light straight onto the inspection area, allowing for quick examination of parts with minimal part handling. The high intensity beam makes indications stand out bright and clear, speeding up the inspection process. The ST700 is certified to NDT standards for LED UV lamps and certified for Aerospace Prime and OEM specifications for emission spectrum and beam profile.

The IP65 aluminum case stands up to harsh environments and a range of mounting and angling options allow it to be set up anywhere in the inspection process; from mag benches to wash stations.

KEY BENEFITS:

► High intensity compliant UV-A illumination

► 20" x 26" wide, uniform beam profile at 36"

► IP65 sealed construction prevents damage from water, vapor or dust

► Angled mouting brackets

► No internal fan necessary

► No hot-spots in the beam profile

► Aerospace prime and OEM certified

► Certified to ASTM (E2297 & E3022), Airbus (AITM6-1001), Rolls Royce (RRES 90061) & NADCAP

Item	Description	UV-A Intensity	Visible Light	UV-A Coverage
628243	ST700 Stationary overhead LED UV lamp	15" - 7,000 µW/cm² 36" - 3,000 µW/cm² 46" - > 1,000 µW/cm²	< 1 fc / 10 lux	15" - 13" x 25" 36" - 20" x 26" 46" - 22" x 25"

SPECTRO-UV OVERHEAD

EDGE 13 SERIES UV-A LED Panel Lamps

UV-A LED PANEL LAMPS

The first overhead LED UV-A lamp to guarantee an IP65 rating, compliance, and gang-ability.

KEY FEATURES:

► Gangable – link lamps together using single power source for greater coverage area

► IP 65 rating: the lamp is dust-proof and water-resistant

► Wide areas of coverage for optimal fluorescent response

► Integral black-light filters (EDG-13SBLC and EDG-13HC)

► Long-lasting UV-A lenses protect against solarization

► Versions Available Certified to ISO 3059, ASTM E3022, Airbus (AITM6-1001) & Rolly Royce (RRES 90061)

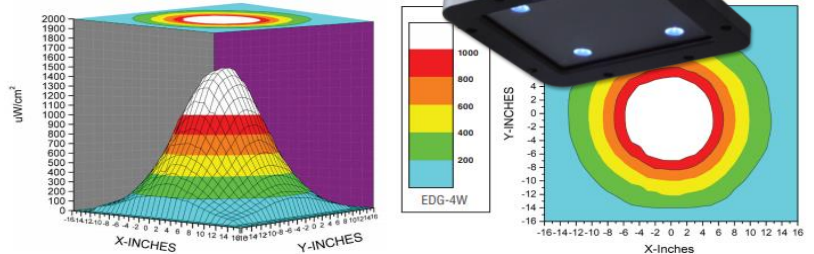| Item	Description	Certified to	UV-A Intensity	Visible Light	UV-A Coverage
EDG-13T		ISO 3059	6,500 µW/cm²	< 1 fc / 11 lux	17" x 15"
EDG-13H	EDGE 13		15,000 µW/cm²	< 2 fc / 22 lux	18" x 16"
EDG-13HC		ISO 3059 & ASTM E3022	8,500 µW/cm²	< 1 fc / 11 lux	24" x 22"
EDG-13SBLC		ISO 3059, ASTM E3022 & RRES 90061	4,700 µW/cm²		14.5" x 13"

UV-A Intensity, Visible Light and UV-A Coverage ratings are all measurements at 15" from light source

EDGE 4 Wash Station Lamp

The EDGE 4 is a flood lamp engineered specifically for wash stations. It provides a very wide area of coverage without a high intensity. The IP65-rated housing allows the lamp to work in wet and dirty environments. Heat sinks keep the lamp cool without the need for a fan, so no dust or water can enter. Four UV-A LEDs provide a wide, uniform beam that is highly consistent and reliable.

KEY FEATURES:

► Ideal for Wash Stations

► IP65 rated – rugged housing is dust-proof and water resistant

► Heat-dissipating housing. Fan-less and cool running

► 4 UV-A LEDs with long-lasting UV-A lense

► Adjustable mounting bracket

► Meets EN ISO 3059 on UV-A output for the removal of excess penetrant

Item	Description	Certified to	UV-A Intensity	UV-A Coverage
EDG-4W	EDGE 4	ISO 3059	1,400 µW/cm²	22" x 22"

UV-A Intensity, Visible Light and UV-A Coverage ratings are all measurements at 48" from light source

QED QUALITY EQUIPMENT DISTRIBUTORS, INC.

LIGHT METERS
SPECTRO-UV LIGHT METERS
AccuPRO Series

The AccuPRO (XP-2000) readout unit features a single dual-wavelength sensor detector designed to measure both ultraviolet and visible light and is compiant with ASTM E2297.

KEY FEATURES:

► Accurate readouts for UV-A irradiance as well as visible illuminance

► Overall accuracy greater than ± 5% per NIST standards

► One-touch PEAK with reset functions

► User-defined power save and automatic shutoff

► Mult-wavelength sensor directly attached to meter

► Convenient on-board recharging

► Powered by four rechargeable "AAA" nickel-metal hydride batteries (Included)

► Comes complete with AC charger and padded carrying case

Item	Description
XP-2000	AccuPRO Dual Sensor (UV-A/VIS), Complete with (4) Rechargeable "AAA" Nickel-Metal Hydride Batteries, AC Charger and Carrying Case

AccuMAX Series
The MOST Advanced, Microprocessor-Controlled Readout System

The AccuMax XRP-3000 is compact, lightweight and battery-operated for convenient use in the factory, field or any other location where measurements need to be taken. Measures both ultraviolet and visible light. Complies with ASTM specifications for MPI and FPI. Specially engineered for NDT applications.

KEY FEATURES:

► Microprocessor-controlled readout unit with dual-wavelength sensor detector

► Superior bandpass interference filter

► Choice of direct or USB connection between sensor detector and readout unit

► Excellent cosine response

► Sealed sensor housing and USB connection with water-resistant adapter

XS-555/L Luminance Sensor

The perfect accessory for the AccuMAX Series meter. Ideal for technicians performing radiographic examinations. Meets ASTM E1742 standard.

The AccuMAX XS-555/L luminance sensor detector measures the brightness of a visible light source and, unlike many competitive units, allows the user the choice of displaying the results in three distinct units of measure: candelas per square meter (cd/m2), candelas per square foot (cd/ft2) and footlamberts (fL).

SPECIFICATIONS

Luminance Range
0 - 1,000,000 cd/m²
0 - 90,000 cd/ft²
0 - 285,000 fL

Item	Description
XRP-3000	AccuMAX NDT Meter Kit, Complete with Digital Readout Unit (XR-1000) and Protective Rubber Boot (XRB-100), Dual UV-A/VIS Sensor (XDS-1000), Water-Resistant USB Connector Cable (XCB-100) and Carrying Case (XCC-100)
XR-1000	Digital Readout Unit for AccuMAX
XDS-1000	Dual UV-A/VIS Sensor detector for AccuMAX
XS-555/L	Luminance Sensor Detector, Visible (555nm)

ECONOMICAL UV-A & VISIBLE LIGHT METERS

Item	Description	Measuring Range
SP*001477	LX1330B Digital Light Meter with Calibration	0 - 20,000 Fc (200,000 Lux)
SP*001197	UV513AB Digital UV-A/B Light Meter with Calibration	0 - 9,999 µW/cm²

SP001477
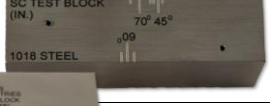
SP001197

ULTRASONIC
CALIBRATION BLOCKS

CURTIS INDUSTRIES, INC.

REFERENCE STANDARDS

Block Type	Description	Alloy	
IIW-Type 1	Used for calibration of shear and longitudinal transducers, and verification of shear wedge exit point and refracted angle. Can also be used for resolution and sensitivity checking. In accordance with: IIW (International Institute of Welding) and ASTM E164.	1018 Steel/ 7075 Aluminum 304 Stainless Steel Wooden Case	
IIW-Type 2	A modified version of the original IIW-Type 1 design. ncludes a 2.0" radius x 0.250" deep cut-out superposed on the 4.0" radius for distance calibration. Also includes numbers 3, 5 and 8 through holes (3/64", 5/64" AND 8/64" diameter) for sensitivity testing or surface wave inspection, and distance calibration marks to the 2.0" hole. In accordance with International Institute of Welding, ASTM E164 and U.S. Air Force NDI Manual T.O. 33B-1-1 specifications.	1018 Steel/ 7075 Aluminum 304 Stainless Steel Wooden Case	
Angle Beam	The Angle Beam Block also known as a "Rompas" block or simply "Angle Beam" is the ASTM and U.S. Air Force substitute for the DSC block for distance, beam index, refracted angle and sensitivity calibration. Block is 1.0" thick, contains a 1.0" radius opposite a 2.0" radius, and a 5/64" diameter x 0.375" deep flat-bottom hole.	1018 Steel/ 7075 Aluminum 304 Stainless Steel Wooden Case	
QED 5-Step Block	This 5-Step block comes in thicknesses of 0.100", 0.200", 0.300", 0.400" and 0.500". NOTE: Variations of this block are available if additional steps are preferred. Also, larger step faces are offered for use with large diameter transducers. In accordance with ASTM E797.	1018 Steel/ 7075 Aluminum 304 Stainless Steel Plastic Case	
4-Step Block	This 4-Step block comes in thicknesses of 0.250", 0.500", 0.750" and 1.000". NOTE: Variations of this block are available if additional steps are preferred. Also, larger step faces are offered for use with large diameter transducers. In accordance with ASTM E797.	1018 Steel/ 7075 Aluminum 304 Stainless Steel Wooden Case	
TIPSY	Special Step Block for thickness and linearity calibration. This versatile block contains eight (8) steps. Set it down on one side and get the 1.0, 2.0, 3.0 and 4.0" steps. Then "TIP" it over and get the 1.5, 2.5, 3.5, and 4.5" steps.	1018 Steel/ 7075 Aluminum 304 Stainless Steel Wooden Case	
DSC	AWS-type block used for shear wave distance and sensitivity calibration. Contains a 1.0" radius opposite a 3.0" radius. The 3.0" radius includes a 0.375" deep x 0.032" wide radiused slot. Also contains a 0° reference point for checking exit point on wedge, and a 0.125" diameter through hole and corresponding markings at 45°, 60°, and 70° for measuring actual refracted angle. In accordance with ASTM E164 and AWS 6.16.1B.	1018 Steel/ 7075 Aluminum 304 Stainless Steel Wooden Case	
NAVSHIP	Used for distance amplitude correction, sensitivity levels and flaw depth information. Contains six 3/64" diameter side-drilled through-holes at distances of 0.25" to 2.75" in 0.25" increments. MTDs are engraved near both scan edges on one face. In accordance with MIL-STD-271G Figure 9, and NAVSHIPS Specification 0900-006-3010/Section 6.	1018 Steel/ 7075 Aluminum 304 Stainless Steel Wooden Case	
AWS Resolution	Also called an RC block, the AWS Resolution Reference Block is used for checking resolution capabilities of angle beam transducers. Contains three sets of 0.0625" diameter through-holes for 45°, 60° and 70°. In accordance with AWS Welding Highway and Railway Bridges specification D2.0, and Structural Welding Code ANSI/AWS D1.1.	1018 Steel/ 7075 Aluminum 304 Stainless Steel Wooden Case	
IOW Beam Profile	Used for beam profile measurement of angle beam transducers and measurement of transducer angles. Contains nine 1.5mm diameter x 22mm deep side drilled holes. In accordance with British Standard 2704 requirements.	1018 Steel/ 7075 Aluminum 304 Stainless Steel Wooden Case	
DC	AWS-type block used for shear wave distance calibration. Contains a 1.0" radius overlaying a 2.0" radius on a 180° segment. In accordance with ASTM E164 and BRR/AWS X-1 specifications.	1018 Steel/ 7075 Aluminum 304 Stainless Steel Wooden Case	
SC	AWS-type block used for shear wave sensitivity calibration. Contains two 0.062" diameter through holes. In accordance with ASTM E164 and BRR/AWS requirements.	1018 Steel/ 7075 Aluminum 304 Stainless Steel Wooden Case	
DS	AWS-type block used for longitudinal distance and sensitivity calibration. Contains a 2.0" high section between two 4.0" sections. In accordance with AWS requirements.	1018 Steel/ 7075 Aluminum 304 Stainless Steel Wooden Case	
ASME Basic ¾" x 6" x 7" Long Version	Used for establishment of primary reference responses for UT examination of welds. Block contains three side-drilled holes at 1.5" deep minimum at 3/32" diameter. Hole locations through the thickness are ¼, ½, and ¾T. Also contains two EDM notches measuring 2%T deep x 1/4" max wide x 1.0" long min. In accordance with ASME Sec V Art. 4 Fig. T-434.2.1.	1018 Steel/ 7075 Aluminum 304 Stainless Steel Wooden Case	

Additional Blocks and/or Custom Standards are Available Upon Request

ULTRASONIC COUPLANT

MAGNAFLUX

NDT technicians trust Magnaflux to supply couplant for ultrasonic testing that enhance sound transmission from the transducer to the test part to produce reliable non-destructive inspection results in flaw detection, thickness gauging, flow metering and acoustic emission testing.

GENERAL PURPOSE

• Echogel® 20 is an economical, basic-use couplant in medium-thick gel viscosity for ultrasonic inspections, like flaw detection/sizing and thickness gauging, where salt cake or metal corrosion salts are present. It provides good corrosion inhibition and resists viscosity breakdown on salt-caked boilers and other corroded materials.

• Ultragel® II is an industry-leading, high-performance, ultrasonic couplant for flaw detection and sizing, thickness gauging, flow metering and acoustic emission testing. This general-purpose medium viscosity gel is known for its outstanding performance, excellent corrosion protection, thixotropic properties and comprehensive range of specifications and approvals.

• UT-X® Powder is a cost-effective couplant powder for flaw detection and thickness gaging applications where ferrous corrosion inhibition is required. UT-X Powder retains viscosity on salt caked boiler tubes, corroded pipe, structural steel, steel billets, welds and ship plate. Mixed with water at the inspection site, its compact and lightweight packets are easy to transport to a job site or to store as an emergency couplant for unanticipated shortages.

Item	Product	Temperature Range	Container Size
48-901	Echogel 20	27 to 140°F	1 Gallon Cubitainer
48-905			5 Gallon Cubitainer
48-955			55 Gallon Drum
25-901	Ultragel II	-10 to 210°F	1 Gallon Cubitainer
25-905			5 Gallon Cubitainer
25-955			55 Gallon Drum
62-110	UT-X Powder	32 to 120°F	1 Gallon Packet
62-510			5 Gallon Packet

HIGH TEMPERATURE

• Sono 600 is a versatile, multi-purpose couplant with a wide operating temperature range for flaw detection, thickness gauging and acoustic emission testing in petrochemical, power generation, automotive, aerospace, food processing equipment and pharmaceutical manufacturing.

• Sono 1100 provides coupling for high-temperature thickness gauging and will maintain acoustic coupling at high temperatures beyond 15 seconds to give ample time to obtain thickness readings. In most cases, the signal strength increases with time to the point of the couplant's thermal decomposition.

Item	Product	Temperature Range	Container Size
45-T04	Sono 600	700 to 775°F	4 oz Tube
45-901			1 Gallon Cubitainer
30-T04	Sono 1100	0 to 700°F	4 oz Tube
30-901			1 Gallon Pail

Additional Couplant Options are Available Upon Request

	Echogel	Ultragel II	UT-X Powder	Sono 600	Sono 1100
Form	Gel	Gel	Powder	Thick Gel	Medium Paste
Viscosity*	5.5	5	Variable	N/A	N/A
Silicone				X	X
Glycerin		X			
Propylene Glycol	X	X		X	
Temperature Range	27 to 140°F	-10 to 210°F	32 to 120°F	700 to 775°F	0 to 700°F
SPECIFICATION COMPLIANCE					
API	X	X		X	X
ASME BPVC	X	X		X	X
ASTM F519	X	X			
ASTM F945		X			
AWS	X	X		X	X
Pratt & Whitney		X			
PWA 36604		X			

Subjective measure on a 0 - 10 scale where 0 = water, 5 = medium gel, 10 = very thick paste

COUPLANT ACCESSORIES

Item	Description
SP*001453	White Cylindrical 8 oz. Couplant Bottle with Flip Top Cap
SP*001537	Translucent 1 Gallon Couplant Jug with Handle & Pump
SP*001492	55 Gallon Drum Pump

INSPECTION POINT SEALS

IPS's patented Inspection Port, is the cost-effective way to access piping and vessels when performing CUI inspections. Our silicone and EPDM rubber ports are made with exacting standards and deliver the quality and craftsmanship you deserve.

Our patented locking ridges keep the sealing flanges secure and keep moisture out. We provide a watertight seal without screws, O-rings or caulk significantly reducing installation time. Unlike some of our competitors, the fastening mechanism does not require bending or subsequent compromising of the fastening materials. Our seals fit smooth, embossed or corrugated jacketing without the use of special tools. Even our caps are well thought out, attaching to the seal flange with a high quality stainless steel, crimped sleeved lanyard to prevent cap loss.

INSPECTION PLUGS

Item	Size	Material	Temp. Rating	Recommended Minimum Pipe Diameter
95E15	1.5"	EPM Rubber Construction	-67°F to 340°F	Small Bore Insulated Piping
95E25	2.5"			Minimum 5"
95E35	3.5"			Minimum 7"
95E50	5"			Large Diameter Piping & Vessels
95S15	1.5"	Silicone Construction	-130°F to 500F	Small Bore Insulated Piping
95S25	2.5"			Minimum 5"
95S35	3.5"			Minimum 7"
95S50	5"			Large Diameter Piping & Vessels

Additional Plug Options are Available Upon Request

INSPECTON LABELS

Inspection labels are specially designed to identify Thickness Measurement Locations (TML's) on non-insulated piping and vessels. Our UTL-2 and 3 inspection labels have protected write-on areas for recording TML numbers, line numbers, etc. All labels are UV stable and resistant to most solvents, oils and household chemicals.

Item	Description	UOM
UTL-1	1 3/4" Elipse with 3/4" Diameter Holes	Roll of 200
UTL-2	3" x 3" Label, 1" Diameter Hole, 1" x 3" Legend Area	Box of 100
UTL-3	1 3/4" x 3" Label, 1" x 3" Write on Legend Area	
UTL-5	1 1/4" Circular with 3/4" Diameter Holes	Roll of 200

UTL-1   * UTL-2*   *UTL-3*   *UTL-5*

MANDREL AND HOLE SAWS

The fastest and easiest way to cut accurate holes for installation of inspection plugs is with powered hole saws, and QED supplies the best. These aren't cheap hardware store saws, but heavy-duty industrial saws by Greenfield Industries. The mandrel separates from the cutting cup so you dont have to throw out the whole thing when the edge wears out; simply thread on a new cup and you're back in business.

► Blu-Mol Bi-Metal Hole Saws are of heavy-duty bi-metal construction for longer service life. 4/6 variable tooth provides faster, smoother cuts. Recommended for aluminum jacketing.

► RemGrit Carbide Grit Edge Hole Saws are made of tungsten carbide particles bonded to alloy steel for cutting extremely hard and abrasive materials. Recommended for stainless steel jacketing. Resists snagging.

Item	Description
ARBOR	1/2" Arbor with mandrel and high speed drill bit

Item	Size	Type
BM15	1.5"	Blue-Mol Bi-Metal Hole Saw Cup (Uses Arbor)
BM25	2.5"	
BM35	3.5"	
BM50	5"	
RG15	1.5"	RemGrit Tungsten Carbide Hole Saw Cup (Uses Arbor)
RG25	2.5"	
RG35	3.5"	

UT EQUIPMENT
THICKNESS GAUGES
EHC-09 "Monochrome" Series Thickness Gauges

Danatronics most popular thickness gauges are those in our EHC-09 series. With thousands of units in the field, our durable, custom molded case with raise rubber keypad is IP54 rated and has proven it can handle your toughest jobs (this is bad help fix). The EHC-09 series is available in 6 models to suit every budget and application. What's best is our simple upgrade path where all gauges are capable of quickly and easily (directly from the keypad) adding any software options. Features include a graphic display with multiple languages, vibrate on alarm, fast minimum, echo to echo to ignore coatings, 100K reading Datalogger with export to excel, B-scan and live A-scan with waveform adjust.

Standard EHC-09 Wave Series includes: Ultrasonic thickness gauge, DKS-537, 5 MHz 0.375 inch diameter potted cable, operational manual, Data XL interface program, couplant, and transport case. See chart below for standard inclusions for each gauge.

*Limited 2 Year Warranty on Parts & Labor

Item	Specification	EHC-09DLW	EHC-09DL	EHC-09	EHC-09B	EHC-09A
Thickness Range:	0.020 - 20" in Steel	X	X	X	X	X
Hold Mode:	Holds display to retain last thickness reading with reverse video display	X	X	X	X	X
Freeze Mode:	Freezes display	X	X	X	X	X
Fast Min/Max Mode:	Simultaneously displays minimum or maximum and actual thickness value at 20 measurements per second	X	X	X	X	O
Units:	Inches/Millimeters/Microseconds	X	X	X	X	X
Alarms:	Minimum/Maximum depth, vibrates, beeps and display flashes as well as keypad illumination and vibration	X	X	X	N/A	O
Illuminating keypad:	F1 = Red, F2 = Yellow and F3 = Green for easy, go/no-go testing	X	X	X	X	O
Gain:	Variable adjustment of gain	X	X	X	O	O
Differential Mode:	Displays the difference from the actual thickness measurement and a user entered reference value	X	X	X	O	O
Velocity Mode:	Displays acoustic sound speed	X	X	X	O	O
Non-Encoded B-Scan:	Displays a cross section of the test piece	X	X	O	O	O
Echo to Echo:	Measures the metal thickness only (ignore paint and coatings)	X	X	X	O	O
Datalogger:	Upgrade to Data Logger Version, 100,000 readings in linear, 2D, 3D grid or boiler alphanumeric files, 20 character file name, file compare, grid review and export to excel via Data XL interface program, also compatible with Ultrapipe	X	O	O	O	O
Carrying Pouch:	Custom molded with belt clip and elastic strap	X	X	O	O	O
Live Waveform (A-Scan)	Full adjustments, for gain in 1db step or AGC, main bang blank, blank after first received echo, range including zoom auto tracking to center echoes independent of material and rectification	X	O	O	O	O

O = Software options that are field upgradeable, no need to return the unit to the factory

Model	Description
EHC-09A	Hand-Held Digital Ultrasonic thickness gage including, NIST Traceable calibration certificate
EHC-09B	Hand-Held Digital Ultrasonic thickness gage including, NIST Traceable calibration certificate
EHC-09	Hand-Held Digital Ultrasonic thickness gage including: Echo to Echo software, NIST Traceable calibration certificate
EHC-09DL	Hand-Held Digital Ultrasonic thickness gage including: Echo to Echo & Datalogger w/ B-Scan software, NIST Traceable calibration certificate
EHC-09DLW	Hand-Held Digital Ultrasonic thickness gage including: Echo to Echo, Datalogger w/ B-Scan & Live Waveform/A-scan software, NIST Traceable calibration certificate

EHC-09 "Color Series" Thickness Gauges

Danatronics offers our EHC-09 Color Wave series as the top of the line gages for corrosion applications. The EHC-09 Color Wave offers many standard and practical features including a sunlight readable color display with live A-Scan, echo to echo to ignore coatings, B-Scan, 100K thickness reading datalogger with interface to Microsoft excel. The Color Wave is available in 4 models including the EHC-09C, EHC-09DLC, EHC-09CW and EHC-09DLCW. The vibrate on alarm is a world's first and is great for loud environments!

Item	Specification	EHC-09DLCW	EHC-09DLC	EHC-09CW	EHC-90C
Thickness Range:	0.020 - 20" in Steel	X	X	X	X
Delay line zero measurement:	Auto at power up with listed numeric value. Ideal for correcting delay line wear/curvature and for transducer acoustic drift at elevated temperatures	X	X	X	X
Scan Mode:	Simultaneously displays minimum or maximum and actual thickness value at 20 measurements per second	X	X	X	X
Differential Mode:	Displays the difference from the actual thickness measurement and a user entered reference value	X	X	X	X
Alarms:	Minimum/Maximum depth, vibrates, beeps and display flashes as well as keypad illumination and vibration	X	X	X	X
Illuminating keypad:	F1 = Red, F2 = Yellow and F3 = Green for easy, go/no-go testing	X	X	X	X
Velocity Mode:	Displays acoustic sound speed	X	X	X	X
Echo to Echo:	Measures the metal thickness only (ignore paint and coatings)	X	X	X	X
Range:	Adjustement of manual range control or auto zoom tracking to center echoes independent of selected range	X	O	X	O
Rectification Modes:	RF, Half Wave Positive, Half Wave Negative and Full Wave Rectification	X	O	X	O
Live Waveform (A-Scan):	Full adjustments, for gain in 1db step or AGC, main bang blank, blank after first received echo, range including zoom auto tracking to center echoes independent of material and rectification	X	O	X	O
B-Scan (Encoded or Non-Encoded):	Displays a cross section of the test piece with optional encoder and factory upgrade	X	X	O	O
Datalogger:	Upgrade to Data Logger Version, 100,000 readings in linear, 2D, 3D grid or boiler alphanumeric files, 20 character file name, file compare, grid review and export to excel via Data XL interface program, also compatible with Ultrapipe	X	X	O	O

O= Software options that are field upgradeable, no need to return the unit to the factory

Model	Description
EHC-09-C	Hand-Held Digital Ultrasonic thickness gage with Color Display including: Echo to Echo software, NIST Traceable calibration certificate
EHC-09-CW	Hand-Held Digital Ultrasonic thickness gage with Color Display including: Echo to Echo & Live waveform/A-Scan software, NIST Traceable calibration certificate
EHC-09DLC	Hand-Held Digital Ultrasonic thickness gage with Color Display including: Echo to Echo & Datalogger w/ B-Scan software, NIST Traceable calibration certificate
EHC-09DL-CW	Hand-Held Digital Ultrasonic thickness gage with Color Display including: Echo to Echo, Datalogger w/ B-Scan & Live waveform/A-Scan software, NIST Traceable calibration certificate

ECHO 9, 8 & 7 Thickness Gauges

The perfect size of fit and function! Hold the ECHO in your hand and you will agree no detail has been overlooked and the ergonomics are unmatched by any thickness gage in the industry! The new ECHO series comes in 3 configurations; ECHO 9, ECHO 8 and ECHO 7. ECHO 9 is our corrosion gauge using dual transducers, ECHO 7 is our precision gage with 1 micron resolution using single element transducers and ECHO 8 is the ultimate unit combining both dual and single element transducers.

The ECHO series has a remarkable sunlight readable 3.5" color display, up to 32 Gb of micro SD memory, built-in rechargeable high capacity Li Ion battery all packaged in a custom case designed for IP67 rating. Not sure which model to choose? Don't worry, the ECHO series is fully capable of field upgrades directly from the keypad so you will never be stuck with an obsolete product or experience any downtime. ECHO Series can measure from .020" to 23" in steel in corrosion mode or as thin as .006" in steel when configured as a precision gauge.

Standard Inclusions: ECHO series ultrasonic thickness gauge, DKS-537, transducer up to 10 MHz, LM-06 cable, 2oz bottle of couplant, operation manual, Data XL interface program, USB cable, Charger Adapter, Transport Case *A transducer is included with each model.

Limited 2 Year Warranty on Parts & Labor

Environmentally Tough!

The ECHO series was designed from the ground up. With more than 85 combined years in designing, manufacturing and usinghand held ultrasonic thickness gauges, Danatronics left no detail uncovered. From its new case designed for IP67, to its easy to read sunlight readable 3.5" color display, you will find the ECHO series combines practical features with a simple, clean design built for years of field service and durability.

Ergonomically Superior!

With its new 3.5" sunlight readable display, The ECHO series offers many display formats to suit any age operator and reduce fatigue. So whether you want to view the largest possible numbers or would prefer more text on screen, ECHO has you covered. ECHO is also perfectly balanced and makes holding it in one hand possible and simple… no clumsy joy sticks or second functions needed. There is even a world's first vibrate on alarm to inform the operator any pre-set thickness threshold has been tripped which is great for tired operators and testing in loud environments.

ECHO 9 - Corrosion Thickness Gauge

Model	Description
ECHO 9	Hand-Held Digital Ultrasonic CORROSION thickness gage including: Echo to Echo software, NIST Traceable calibration certificate
ECHO 9W	Hand-Held Digital Ultrasonic CORROSION thickness gage including: Echo to Echo & Live Waveform/A-Scan software, NIST Traceable calibration certificate
ECHO 9DL	Hand-Held Digital Ultrasonic CORROSION thickness gage including: Echo to Echo & Datalogger w/ B-Scan software, NIST Traceable calibration certificate
ECHO 9DLW	Hand-Held Digital Ultrasonic CORROSION thickness gage including: Echo to Echo, Datalogger w/ B-Scan & Live Waveform/A-Scan software, NIST Traceable calibration certificate

ECHO 8 - Corrosion and Precision Thickness Gauge

Model	Description
ECHO 8	Hand-Held Digital Ultrasonic CORROSION AND PRECISION thickness gage including: Echo to Echo software, NIST Traceable calibration certificate
ECHO 8W	Hand-Held Digital Ultrasonic CORROSION AND PRECISION thickness gage including: Echo to Echo & Live Waveform/A-Scan software, NIST Traceable calibration certificate
ECHO 8DL	Hand-Held Digital Ultrasonic CORROSION AND PRECISION thickness gage including: Echo to Echo & Datalogger w/ B-Scan software, NIST Traceable calibration certificate
ECHO 8DLW	Hand-Held Digital Ultrasonic CORROSION AND PRECISION thickness gage including: Echo to Echo, Datalogger w/ B-Scan & Live Waveform/A-Scan software, NIST Traceable calibration certificate

ECHO 7 - Precision Thickness Gauge

Model	Description
ECHO 7	Hand-Held Digital Ultrasonic PRECISION thickness gage including: Echo to Echo software, NIST Traceable calibration certificate
ECHO 7W	Hand-Held Digital Ultrasonic PRECISION thickness gage including: Echo to Echo & Live Waveform/A-Scan software, NIST Traceable calibration certificate
ECHO 7DL	Hand-Held Digital Ultrasonic PRECISION thickness gage including: Echo to Echo & Datalogger w/ B-Scan software, NIST Traceable calibration certificate
ECHO 7DLW	Hand-Held Digital Ultrasonic PRECISION thickness gage including: Echo to Echo, Datalogger w/ B-Scan & Live Waveform/A-Scan software, NIST Traceable calibration certificate

FLAW DETECTOR
ECHO FD Portable Flaw Detector

ECHO FD is a portable, hand-held ultrasonic flaw detector capable of performing the majority of your flaw detection needs at an extremely low price.

ECHO FD is capable of being your everyday flaw detector for weld inspections, delaminations, disbonds and more.

ECHO FD comes standard with 2 independent gates, DAC, AWS, API 5UE, B-scan software and 2 Gb of datalogging memory, 13 hour battery life with internal rechargeable batteries. ECHO FD also allows for one hand operation with a simple, intuitive user interface all for the price of equal or less than you are paying for your high end thickness gauges.

Mechanically the ECHO FD has been designed from the ground up to offer the latest in ergonomic design. ECHO FD has a convenient rubber boot with stand, 4 point chest harness, padded strap and even a finger hole for the ultimate in instrument balance. We even designed in the ability to use a magnetic pipe stand. All keys can easily be reached with your thumb and the keys are raised rubber keypad with superior tactile feedback. The "F" keys light up for alarm and charging conditions.

ECHO FD also allows for one hand operation with a simple, intuitive user interface and long battery life (13 Hours).

Standard Inclusions: ECHO FD including 2 GB SD card, li-ion battery, battery charger, transport case, manual with Data XL, USB cable, DAC, AWS software, API 5U, 2 gates, B-Scan, 2oz bottle of couplant and rubber booth with padded wrist strap and stand.

Limited 2 Year Warranty on Parts & Labor

Model	Description
ECHO FD	Hand-Held Digital Ultrasonic FLAW DETECTOR including: 2 Independent Gates, DAC, AWS & Datalogger w/ B-Scan software, NIST Traceable calibration certificate
ECHO 9FD	Hand-Held Digital Ultrasonic FLAW DETECTOR with CORROSION thickness gage mode including: 2 Independent Gates, DAC, AWS & Datalogger w/ B-Scan software, NIST Traceable calibration certificate
ECHO 7FD	Hand-Held Digital Ultrasonic FLAW DETECTOR with PRECISION thickness gage mode including: 2 Independent Gates, DAC, AWS, Datalogger w/ B-Scan software, NIST Traceable calibration certificate
ECHO 8FD	Hand-Held Digital Ultrasonic FLAW DETECTOR with CORROSION AND PRECISION thickness gage modes including: 2 Independent Gates, DAC, AWS, Datalogger w/ B-Scan software, NIST Traceable calibration certificate

TRANSDUCERS AND WEDGES
Brands Include: Dakota, Danatronics, Olympus, Sonatest and Technisonic

QED offers a complete range of high performance, high technology ultrasonic transducers for thickness measurement, general flaw detection and Phased Array applications. Each transducer is made to exact standards regarding acoustical, electronic and mechanical properties. Our transducers are tested thoroughly, typcially at three stages of manufacture. A complete range of transducer types are available with a variety of connector styles, case configurations, frequencies and element sizes.

Item	Manufacturer	Description
D790-SM	OLYMPUS	Dual Transducer, 5 MHz, 0.434" Tip Diameter, Straight Microdot Connector, to be used with the LCMD-316-5B Cable
LCMD-316-5B		Dual Molded LEMO 00 to Microdot cable, 5 ft, for use with D790-SM

CABLES

We offer a complete line of transducer cables. These cables are designed for optimum performance and durability.

Item	Description	Cable Type	Length
MB-6	Microdot/BNC	RG 174	
ML00-6	Microdot/Lemo 00	RG 174	
DML00-6	Dual Microdot/Lemo 00	RG 174	
DMB-6	Dual Microdot/BNC	RG174	6'
BB-58-6	BNC/BNC	RG 58	
SP*001647	BNC/BNC	RG 174	
BL1-6	BNC/Lemo 1	RG 58	
BL00-6	BNC/Lemo 00	RG 174	

*Custom Configurations and Lengths are Available Upon Request

BNC   Lemo 00 (0.25")   Lemo 01 (0.50")   Microdot

VISUAL
MEASURING DEVICES
WELDING GAUGES

► Hi-Lo Welding Gauge - Measures root weld space, eliminates rejects - improves productivity

► Bridge Cam Gauge - Angle of preparation, 0-60 degree. Measuring: excess weld capping, depth of undercut, pitting, fillet weld length & throat size and misalignment

► V-WAC - Undercuts/Pits to 1/4 Inch, Crowns to 1/4 Inch by 1/64 Inch Increments (Tolerance .006")
► Pipe Pit Gauge - Range is 0 to 1/2" in 1/64" & .010 Increments. Arm can be locked in place at any dimension
► Automatic Weld Size Gauge - for accurate measurement of butt fillet type welds. Check reinforcement, throat and determine the leg size of the fillet weld
► 7-Piece Fillet Weld Gauge Set - Check Fillet Leg and Throat size, 1/8" to 1"

Item	Description
SP*001144	Economy Single Purpose Hi-Lo Welding Gauge (Inch)
SP*001145	V-WAC Welding Gauge (Inch)
SP*001146	Bridge Cam Gauge Welding Gauge (Inch & Metric)
SP*001147	Pipe Pit Welding Gauge (Inch)
SP*001148	Automatic Weld Size Welding Gauge (Inch)
SP*001149	7-Piece Fillet Weld Gauge Set (Inch & Metric)

VIDEO INSPECTION SYSTEM
WOHLER VIS 350 Series Inspection System & Accessories

The Wohler VIS 350 Push Camera Inspection System helps users analyze and inspect internal pipe damage and corrosion.

With a variety of applications, inspectors can use the VIS 350 push camera to visually inspect hard to reach areas such as pipelines, waste water lines, ventilation systems, hollow spaces and shafts. With years of proven development, the VIS 350 is an essential tool to identify problems before they occur.

A number of useful features are included such as a home function that will align the camera automatically, an indicator of the camera head's position, and built-in wireless location transmitter. Users can control the camera eye with 360° pan, and 180° tilting camera eye.

The VIS 350 push camera inspection system is waterproof and can flexibly negotiate 90° bends in pipes 2" in diameter. It also comes with video recording, save and output capabilities and provides 1.5 hours of continuous battery operation.

Kits Include:

Wohler VIS 350 NTSC Service Camera with digital meter counter in heavy duty carrying case, video recording function, either attached or detachable pan and tilt color camera head 1.5" dia V2 NTSC, 4 GB SD card and mini USB cable, 7" TFT color monitor, 6' connection cable (removable monitor), 100' push rod 0.26" dia., 5 plastic domes, 1 anti-slide mat, 2 NiMH batteries with charger.

Item	Description	Kit Difference
7354	VIS 350 Service Camera	Perminately Attached 1.5" Camera Head
6352	VIS 350 Service Camera	Detachable 1.5" Camera Head
8927	VIS 350PLUS Service Camera	Detachable 1.5" & 1" Camera Head
8931	VIS 350 Service Camera with L 200 Locator	Detachable 1.5" & 1" Camera Head w/ Locator

Item	Description
8926	1.5" Pan and Tilt Color Camera Head
8934	1" Color Camera Head
3675	Replacement Plastic Domes (10 pcs.)
4715	Battery 12V NiMh 2600 mAh
4798	Power Supply for VIS 3XX

QED QUALITY EQUIPMENT DISTRIBUTORS, INC.

LEAK DETECTION
VACUUM BOX TESTING
VACUUM BOXES, ACCESSORIES & SOLUTION

Used for leak testing in building of ships, barges, tanks, or any seal weld application. All Vacuum Boxes come with a complete Venturi and Non-Certified Gauge.

Item	Design	Size
VB18	Flat	18"
VB30		30"
VB18C	Corner	18"
VB30C		30"
VB30FX	Flexible	30"
VB3WIC	3 Way Inside Corner	Triangle - 9.9" x 8.6" with .25" Radius
VB24BT	Boat Tail Flat	24"

Pricing is Based off a Non-Certified Gauge, Call for Pricing if a Certified Gauge is Required

Item	Design
VB-PUMP	Vacuum Pump - Air Flow 26.5" Mercury; 110 Volt; 13 PSI
VB-Venturi	Venturi made of steel with inlet thread of 3/8" NPT outlet and vacuum ports are ½" NPT able to Vacuum up to 23 Hg (Used with Compressed Air)
VB-Gauge	2" Steel gauge with brass ¼" NPT range is 0-30 Hg VAC (Non-Certified)
VB-Gauge-C	2" Steel gauge with brass ¼" NPT range is 0-30 Hg VAC (NIST Certified)
SP*001550	Type 1 SHERLOCK 5-Second Leak Detector, 1 Gallon

HARDNESS TESTING
TELEWELD

BRINELL HARDNESS TESTING

Telebrineller hardness measurements are a direct comparison to a known physical reference and therefore, measurements are not subject to inaccuracies due to; alloy, thickness, geometry, position, etc., that are common with many other portable testers.

Item	Description
BHNTS	Telebrineller Complete Set; Includes five (5) bars of selected hardness; Microscope; Computer; Bar Holder; Calculation Pad, all inside Carrying Case
BHNXXX	Telebrineller Test Bars (Available in 145-350 Hardness)
239-24	Halteman Filletester (Designed for Brinell Hardness Testing of fillet welds and other hard to reach areas)

PHASE II

PORTABLE HARDNESS TESTER

State of the art, digital portable hardness tester is designed to test the hardness of large hard metal parts. Loaded with useful functions only found on high priced models the PHT-1800 portable hardness tester is clearly setting a new industry standard by being the most accurate, economically priced portable hardness tester on the market today. Fast test speeds coupled with memory and output, this unit is a hand's down winner whether you are out in the field or in the QC shop.

Item	Description
PHT-1800	Digital Portable Hardness Tester which can perform tests that easily convert to the most popular hardness scales (Rockwell, Brinell, Vickers, Shore, etc.). Includes: Base instrument, Impact device D, Calibrated test block, Custom carry case, Cleaning brush and Operation manual

FLAWED TEST SPECIMENS

STANDARD SPECIMEN KITS

FlawTech Standard Kit Specimens are designed to enhance the training and development of new and veteran technicians. Kits will assist with basic flaw detection and sizing of real flaws found in common weld geometries.

Item	NDT Method	Specimens/Kit	Discontinuities
DK-1	NDT Demonstration Kit (Includes x-ray film for RT pipe specimen)	5 (3 Plates, 1 Tee and 1 Pipe)	11 (2 each plates & tee, 3 in pipe)
RK-1	Radiography Kit (Includes x-ray film for each specimen)	10 (8 Plates, 1 Pipe and 1 Tee)	20 (2 each specimen)
VK-1	Visual Kit	10 (7 Plates and 3 Tees)	20 (2 each specimen)
UK-1	Ultrasonic Kit	10 (8 Plates, 1 Pipe & 1 Tee)	20 (2 each specimen)
MK-1	Magnetic Particle/ Liquid Penetrant Kit	10 (8 Plates and 2 Tees)	20 (2 each specimen)
RR-1	Reference Radiograph Set	16 Radiographs	20 (Incl. 6 Processing Defects)

PRACTICAL EXAM SPECIMENS

► Practical exam specimens are larger than our "standard" kit specimens

► 12 UT and 12 MT / PT specimens to choose from

► Each specimen will contain 3 randomly placed "real" flaws

► Designed to enhance the training and qualification of level I & II personnel with regards to ISO9712, PCN & TC - 1A

► Purchase any combination of specimens to make your set

► Custom specimens are available upon request

UT THICKNESS SPECIMENS

Corrosion, Erosion, and Lamination UT Thickness Training & Certification Plates

Specimen Type	Plate Size - 8" x 8"	Thickness	Discontinuities
Four (4) Section Plate		0.25"	2
		0.375"	
		0.50"	
		0.75"	
		1.0"	
Sixteen (16) Section Plate		0.25"	4
		0.375"	
		0.50"	
		0.75"	
		1.0"	

SERVICE

QED provides comprehensive repair services for equipment across all NDT modalities and manufacturers. Our team of qualified technicians will restore your equipment to working order in accordance with manufacturer standards quickly and efficiently, saving you time and money. We also provide onsite repairs, calibrations, and installations.

EQUIPMENT EVALUATION & REPAIR

WHAT WE REPAIR

► UV Lights
► Magnetic Particle Machines
► Yokes
► LED Film Viewers
► Densitometers
► X-Ray Controllers, Generators & Tubes
► Radiation Survey Equipment
► Film Processors
► UT Flaw Detectors (Call for specific brands)

Item	Description
SP*001437	In-House Equipment Evaluaiton Fee
ROC	Rush Order Charge for Laboratory Service Repair or Calibration
ISTL	In-House Service Technican Labor (Hour)
SP*001512	Manufacturer Equipment Evaluaiton Fee
MSTL	Manufacturer Service Technician Labor (Hour)

***In-House Evaluation Fee (Per piece of Equipment) will be waived if Equipment is Repaired or New Equipment is Purchased**

EQUIPMENT CALIBRATION/CERTIFICATION

QED provides professional calibration services in compliance with the National Institute of Standards and Technology (NIST) for a wide range of meters, gauges, and other NDT equipment used in various industries. Implementing a scheduled calibration program for your company's testing equipment ensures that you continue to operate according to manufacturer standards and provides consistent and accurate data when evaluating the quality and safety of a product or machine component.

RADIOGRAPHY

Item	Code	Frequency	Description
SP*001263	State & NRC	6 Months	Radiation Survey Meters
SP*001264	State & NRC	12 Months	Alarming Rate Meters
SP*001353			Pocket Dosimeters
SP*001580	State & NRC	12 Months	Tracerco PED
SP*001709			Mirion PED (DMC 3000 & RAD-60R)
SP*001503	ASME Sec. V	90 Days	Densitometer
SP*001557	ASTM E1390	Upon Repair	Certification of Light Intensity on Film Viewers per ASTM E1390
SP*001504	ASME Sec. V	12 Months	Certification of Density Step Tablet (All Brands)

BLACKLIGHTS & LIGHT METERS

Item	Code	Frequency	Description
SP*001650	Customer	6 Months	Certification of UV-A Light Intensity
SP*001335	ASTM E1444 & E1417	6 Months	Calibration of a Dual Sensor Light Meter (Non-Programable)
SP*001336			Calibration of a Single Sensor Light Meter (Non-Programable)
SP*001527	ASME Sec. V, ASTM E3024 & E165	12 Months	Calibration of a Dual Sensor Light Meter (Non-Programable)
SP*001528			Calibration of a Single Sensor Light Meter (Non-Programable)

***Call for Pricing on Calibration of Spectroline (AccuMAX & AccuPRO) Programable Light Meters and Sensors**

MAGNETIC PARTICLE

Item	Code	Frequency	Description
SP*001026	ASTM E1444 & E3024	6 Months	Yokes (All Makes & Models)
SP*001262	Customer	12 Months	Certification of 10 lb. Test Weight
SP*001021	ASTM E1444 & E3024	6 Months	Magnetic Particle Calibration (Bench or Portable Unit)
SP*001529	ASME Sec. V	12 Months	
SP*001154	ASTM E1444 & E3024	6 Months	Analog Magnetometer/Gaussmeter Calibration
SP*001645	ASTM E1444	6 Months	Electronic (Digital) Gaussmeter Calibration
SP*001646	ASTM E3024	12 Months	

***Pricing does not include applicable travel expenditures if Calibration is required at Customer's location**

ULTRASONIC

Item	Code	Frequency	Description
SP*001500	ASTM E317	12 Months	Calibration of an Ultrasonic Thickness Gauge
SP*001562			Calibration of an Ultrasonic Flaw Detector
SP*001505	ASTM E797		Certification of Ultrasonic Thickness Step Wedges

SPECIAL SERVICES

Anti-Corrosion Treatment

LED FILM VIEWER MODIFICATION

Item	Description
SP*001710	Anti-Corrosion Treatment to LED Film Viewer (Includes a 6 Month Guarentee)

Modification is available for most make and model LED Film Viewers

PREVENTATIVE MAINTENANCE (PM)

QED offers customized Preventative Maintenance Services to minimize downtime and ensure quality inspections. Our detailed electronic PM records allow us to not only identify unusal machine wear but also operator misuse that could cause premature equipment failure or safety concerns.

FILM PROCESSORS

Item	Brand	Model	Description
SP*001510	CARESTREAM	M37 Plus	*Clean Racks/Tanks with Systems Cleaners and Replace Filters - Check Racks, Drive, Dryer and Pumps for Missing or Worn Parts*
SP*001455		M43iC	
SP*001359	GE (AGFA)	NOVA	
SP*001337		M-ECO	
SP*001348		NDT-U	
SP*001454		NDT-Si	

Above pricing is based upon PM being performed at Customer's location and does not include applicable travel expenditures

FIELD SERVICE

CALL-OUT RATES

QED also provides on-site Field Repairs and Calibration services. Please call your local branch for more details.

Item	Description
STT	Service Technician Travel
STL	Service Technician Labor
ESTL	Emergency (Rush) Service Technician Labor

The above rates are based off work being performed Monday - Friday (8AM-5PM). If work is needed to be performed outside of this time, then an Estimate will be provided

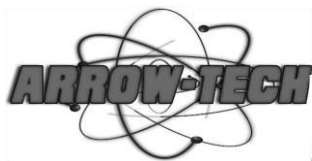***A Four (4) Hour Labor (On-Site) Minimum applies for all local call-outs in addition to applicable Travel Time***