



# Non-Destructive Testing Catalog

for North America

---

- Magnetic Particle Testing Materials, Equipment, & Accessories
- Magnetic Yokes
- Penetrant Testing Materials, Equipment, & Accessories
- UV Lamps
- Ultrasonic Couplants
- Aqueous Cleaners



Your Complete Source for  
Testing Equipment Since 1969!

[www.BergEng.com](http://www.BergEng.com)  
Berg Engineering & Sales Company, Inc.

1-847-577-3980  
Info@BergEng.com



Lightweight,  
Heavy Duty,  
Durable

## Y-2 Yoke

Ergonomic design  
features swappable cord  
and a sealed trigger.

 **MAGNAFLUX**



Your Complete Source for  
Testing Equipment Since 1969!

[www.BergEng.com](http://www.BergEng.com)  
Berg Engineering & Sales Company, Inc.

1-847-577-3980  
[Info@BergEng.com](mailto:Info@BergEng.com)

<b>Magnetic Particle Testing Materials</b>	<b>2</b>
Fluorescent Magnetic Particles	4
Non-fluorescent / Colored Magnetic Particles for Dry Method	8
Non-fluorescent / Colored Magnetic Particles for Wet Method	9
White Contrast Paint	11
Suspension Vehicle	12
Water Conditioners & Additives	13
<b>Magnetic Particle Testing Equipment</b>	<b>14</b>
<b>Magnetic Yokes</b>	<b>22</b>
<b>Magnetic Particle Testing Accessories</b>	<b>26</b>
<b>Penetrant Testing Materials</b>	<b>36</b>
Water Washable Fluorescent Penetrants	38
Post Emulsifiable Fluorescent Penetrant	41
Water-Based Fluorescent Penetrant	43
Emulsifiers	47
Developers	48
Visible / Color-Contrast Penetrants	51
Remover / Testing Kit	53
<b>Penetrant Testing Equipment</b>	<b>54</b>
<b>Penetrant Testing Accessories</b>	<b>56</b>
<b>UV Lamps</b>	<b>58</b>
<b>Ultrasonic Couplants</b>	<b>62</b>
General Purpose Couplants	63
High Temperature Couplants	65
<b>Aqueous Cleaners</b>	<b>67</b>
Neutral Industrial Parts Cleaners	69
Alkaline Industrial Parts Cleaners	70
Heavy-Duty Industrial Parts Cleaners	71



# Magnetic Particle Testing Materials

NDT  
NDT  
NDT  
NDT



	14A	14A Aqua-Glo	14A Redi-Bath	14AM	20B	MG-410	MG-450A
<b>Description</b>	Particles	Ready-to-use liquid	Concentrated liquid	Ready-to-use liquid & aerosol	Powder premix	Particles	Powder premix
<b>Product Type</b>	Fluorescent	Fluorescent	Fluorescent	Fluorescent	Fluorescent	Fluorescent	Fluorescent
<b>Method</b>	Wet	Wet	Wet	Wet	Wet	Wet	Wet
<b>Suspension Vehicle</b>	Water or oil	Water	Water	Oil	Water	Water or oil	Water
<b>Sensitivity*</b>	8 – 9	8 – 9	8 – 9	8 – 9	8 – 9	8 – 9	8 – 9
<b>AMS 3044</b>	✓	✓	✓		✓	✓	✓
<b>AMS 3045</b>				✓ Bulk			
<b>AMS 3046</b>				✓ Aerosol			
<b>ASTM E709</b>	✓	✓	✓	✓	✓	✓	✓
<b>ASTM E1444</b>	✓	✓	✓	✓	✓	✓	✓
<b>ASME BPVC Section V</b>	✓	✓	✓	✓	✓	✓	✓
<b>Boeing PS 21201</b>	✓						
<b>ISO 9934</b>	✓			✓			
<b>MIL-STD-2132</b>	✓	✓	✓	✓	✓	✓	✓
<b>NAVSEA 250-1500-1</b>	✓	✓	✓	✓	✓	✓	✓
<b>NAVSEA T9074-AS-GIB-010/271</b>	✓	✓	✓	✓	✓	✓	✓
<b>SAFRAN IN 5300</b>	✓					✓	

	7C Black	7HF	MV-740	#1 Gray	#2 Yellow	#8A Red	Carrier II	WCP-2
<b>Description</b>	Particles	Liquid aerosol	Ready-to-use liquid	Particles	Particles	Particles	Suspension vehicle	Contrast paint
<b>Product Type</b>	Visible	Visible	Visible	Visible	Visible	Visible	Fluorescent and Visible	Visible
<b>Method</b>	Wet	Wet	Wet	Dry	Dry	Dry	Wet	Wet
<b>Suspension Vehicle</b>	Water or oil	Oil	Water	N/A	N/A	N/A	N/A	N/A
<b>Sensitivity*</b>	> 6	> 6	> 6	> 8	> 8	> 8	N/A	N/A
<b>AMS 3040</b>				✓	✓	✓		
<b>AMS 3042</b>	✓							
<b>AMS 3043</b>		✓						
<b>ASTM E709</b>	✓	✓	✓	✓	✓	✓	✓	
<b>ASTM E1444</b>	✓	✓	✓	✓	✓	✓	✓	
<b>ASME BPVC Section V</b>	✓	✓	✓	✓	✓	✓	✓	
<b>Boeing PS 21201</b>		✓	✓					
<b>ISO 9934</b>		✓				✓	✓	✓
<b>MIL-STD-2132</b>	✓	✓	✓	✓	✓	✓	✓	
<b>NAVSEA 250-1500-1</b>	✓	✓	✓	✓	✓	✓	✓	
<b>NAVSEA T9074-AS-GIB-010/271</b>	✓	✓	✓	✓	✓	✓	✓	
<b>Pratt &amp; Whitney</b>							✓	

\* Representative of the number of indications on a tool steel ring as defined in ASTM E1444.



## 14A

### Wet Method Fluorescent Magnetic Particles

A highly sensitive magnetic particle powder, 14A fluorescent mag particles are engineered to locate very fine discontinuities in critical parts and applications.

Designed with strong fluorescent properties, 14A magnetic powder is made with a carefully optimized range of particle sizes & shapes to ensure particles move quickly and easily to indications, while minimizing background and particle clumping. The result is faster inspections with better reliability and greater confidence.

#### Benefits

- Increases indication detection
- Minimizes inspection time
- Improve inspection consistency and reliability

#### Part Numbers

**01-0130-71:** 1 lb / 453 g jar (case of 6) (P)  
**01-0130-75:** 20 lb / 9.07 kg pail (P)

#### Features

- Can be suspended in water or petroleum distillate (oil) vehicle
- High sensitivity
- Excellent fluorescent contrast
- Excellent particle mobility
- Optimized particle size and shape distribution
- Easily dispersed



## 14A Aqua-Glo

### Water-Based Fluorescent Magnetic Particle Suspension

14A Aqua-Glo is a highly sensitive water-based magnetic particle suspension aerosol for locating very fine discontinuities in critical applications and difficult to reach areas. 14A Aqua-Glo offers the benefits of a water bath and the convenience of an aerosol. It is ideal for spot inspections and difficult to process situations where bulk processing is impractical.

#### Benefits

- Clear, bright indications under UV light
- Ready-to-use
- High sensitivity
- Easy post-testing clean up
- Excellent fluorescent contrast for quick identification
- Excellent particle mobility
- Even surface coverage for higher probability of detection

#### Part Number

**01-1725-35:** 1 gal / 3.78 L (case of 4) (P)



## 14A Redi-Bath

### Water-Based Fluorescent Magnetic Particle Concentrate

14A Redi-Bath is a highly sensitive water-based magnetic particle liquid for locating very fine discontinuities in critical parts during fluorescent mag particle inspection.

A concentrated liquid with the best-in-industry 14A magnetic particles with water conditioners and corrosion inhibitors, 14A Redi-Bath is designed to be diluted with water to make magnetic particle water bath. The ultra-sensitive 14A particles provide clear, bright, fluorescent green indications under ultra-violet black light for unbeatable inspection quality and accuracy, with superior corrosion protection.

#### Benefits

- Increases indication detection with 14A particles
- Minimizes inspection time
- Improve inspection consistency and reliability

#### Part Numbers

- 01-9130-41:** 27 fl oz / 798 mL bottle (case of 6) (P)
- 01-9130-35:** 1 gal / 3.78 L (case of 4) (P)

#### Features

- Liquid particle concentrate for fast bath prep
- High sensitivity
- Excellent fluorescent contrast
- Excellent particle mobility
- Optimized particle size and shape distribution
- Easily dispersed
- Great concentration consistency
- Superior corrosion protection
- Non-foaming
- Easy post-testing clean up
- Even surface coverage and higher probability of detection



## 14AM

### Oil-Based Fluorescent Magnetic Particle Suspension

14AM is a ready-to-use magnetic particle suspension liquid for locating very fine discontinuities in critical parts and applications by providing clear, bright, fluorescent green indications for excellent inspection quality and accuracy.

#### Benefits

- Increases indication detection with optimized particle size and shape distribution of 14A particles
- Minimizes inspection time
- Improve inspection consistency and reliability
- Decreases maintenance
- Convenient & versatile

#### Part Numbers

- 01-0145-78:** Aerosol can (case of 12) (P)
- 01-0145-40:** 5 gal / 18.9 L (P)

#### Features

- Ready-to-use
- Low maintenance, oil-based suspension
- High sensitivity
- Excellent fluorescent contrast
- Excellent particle mobility
- Optimized particle size and shape distribution
- Durable particles
- Good dispersion stability
- Available in a variety of different formats
- Protects parts and equipment against corrosion
- Provides superior wetting and surface coverage
- Low maintenance oil-based suspension
- Very low toxicity
- High flash point





## 20B

### Fluorescent Magnetic Particle Premix

20B is a highly-sensitive magnetic particle premix powder for locating fine discontinuities in high volume applications, such as forging, casting, stamping and welding.

#### Benefits

##### Increases indication detection with 14A particles

- Find smaller, finer indications in critical applications using the highly sensitive, strong ferromagnetic 14A particles
- Optimized particle size and shape help particles move freely to stick to a wide variety of discontinuities with less particle clumping

##### Minimizes inspection time

- Clear, bright fluorescent indications form quickly due to the highly fluorescent, highly mobile 14A mag particles
- Minimal background fluorescence help indications stand out more so inspectors need to spend less time examining each part

##### Improve inspection consistency and reliability

- Maintain magnetic particle system performance over greater periods of time thanks to the highly-durable, easily-dispersed 14A fluorescent particles
- Reduced particle clumping helps maintain particle concentration in the suspension bath for dependable inspections

##### Convenient to use

- Fast, reliable particle bath prep with the easy-to-use premix of 14A magnetic particles, water conditioners and corrosion preventatives
- Designed to mix with water in low concentrations for an ideal balance of performance and economy

#### Features

- Premix powder for quick, reliable bath prep
- High sensitivity
- Excellent fluorescent contrast
- Excellent particle mobility
- Optimized particle size and shape distribution
- Durable particles
- Easily dispersed
- Great concentration consistency
- Corrosion protection
- Non-foaming
- Easy post-testing clean up
- Good dispersion stability
- Good surface wetting

#### Part Numbers

**01-0179-71:** 1 lb / 453 g jar (case of 6)

**01-0179-70:** 15 lb / 6.8 kg pail

**01-0179-84:** 30 lb / 13.6 kg pail (P)





### MG-410

#### Fluorescent Magnetic Particles

MG-410 is an ultra-bright fluorescent magnetic particle powder for locating small, medium, and large discontinuities. These particles provide clear, ultra-bright, fluorescent green indications under UV light with minimal background. MG-410 is designed for use in water or oil baths for wet method fluorescent magnetic particle testing.

#### Benefits

- Clear, ultra-bright indications under UV light
- Provides excellent discontinuity definition
- Can be suspended in water or oil vehicle
- Minimal background

#### Part Number

**01-0191-73:** 2 lb / 907 g jar (case of 6)



### MG-450A

#### Fluorescent Magnetic Particle Premix

MG-450A is a borax-free ultra-high fluorescence magnetic particle premix for locating small, medium and gross discontinuities in high-volume applications using wet method magnetic particle testing.

#### Benefits

- Improves indication detection
- Decreases maintenance
- Advanced corrosion protection

#### Part Number

**01-0196-73\*:** 2 lb / 907 g jar (case of 6)  
*\*Special Order! Four (4) week lead time*

#### Features

- Clear, ultra-bright indications under UV light
- Patent-pending water conditioner and corrosion inhibitor package
- Ultra-high fluorescence particles
- Very low background for easy indication detection
- Good surface wetting
- High indication contrast
- Strong corrosion protection
- Low foam



## #1 Gray

### Colored Non-fluorescent Magnetic Particles

#1 Gray provides strong contrast on most metal surfaces during dry method mag particle testing in visible light. It is ready-to-use for visible light flaw detection of surface and slightly subsurface discontinuities in ferrous metals.

#### Benefits

- Sharp, color-contrast indications on high reflective surfaces
- Ready-to-use
- Good particle buildup for quick detection
- Highly refined for optimal particle shape and size combination
- Minimal dust build-up
- Does not require a black light or darkened inspection area

#### Part Numbers

**01-1716-69:** 10 lb / 4.53 kg pail  
**01-1716-87:** 45 lb / 20.4 kg pail (P)



## #2 Yellow

### Colored Non-fluorescent Magnetic Particles

#2 Yellow provides strong contrast on most metal surfaces during dry method mag particle testing in visible light. It is ready-to-use for visible light flaw detection of surface and slightly subsurface discontinuities in ferrous metals.

#### Benefits

- Sharp, color-contrast indications on high reflective surfaces
- Ready-to-use
- Good particle buildup for quick detection
- Highly refined for optimal particle shape and size combination
- Minimal dust build-up
- Does not require a black light or darkened inspection area

#### Part Numbers

**01-1732-69:** 10 lb / 4.53 kg pail  
**01-1732-87:** 45 lb / 20.4 kg pail



## #8A Red

### Colored Non-fluorescent Magnetic Particles

#8A Red provides strong contrast on most metal surfaces during dry method mag particle testing in visible light. It is ready-to-use for visible light flaw detection of surface and slightly subsurface discontinuities in ferrous metals.

#### Benefits

- Sharp, color-contrast indications on highly reflective surfaces
- Ready-to-use
- Good particle buildup for quick detection
- Highly refined for optimal particle shape and size combination
- Minimal dust build-up
- Does not require a black light or darkened inspection area

#### Part Numbers

**01-1780-69:** 10 lb / 4.53 kg pail (P)  
**01-1780-87:** 45 lb / 20.4 kg pail (P)



## 7C Black

### Wet Method Colored Visible Magnetic Particles

7C Black is a highly-sensitive magnetic particle powder for non-fluorescent (visible) wet method magnetic particle testing. Particle suspensions prepared with 7C Black provide clear, strong indications and are ideal for locating fine and medium discontinuities on finished parts.

#### Benefits

- Clear indications under visible light
- Heavy particle buildup for quick detection
- Can be suspended in water or petroleum distillate (oil) vehicle
- Great particle mobility

#### Part Number

**01-1116-81:** 25 lb / 11.34 kg pail



## 7HF

### Oil-Based Visible Magnetic Particle Suspension

A highly-sensitive oil-based magnetic particle aerosol for nonfluorescent (visible) wet method magnetic particle testing to locate fine and medium discontinuities on finished parts.

7HF provides clear, strong indications due to the heavy buildup of the highly magnetic particles. The convenient aerosol packaging is ideal for field testing, spot inspections and places where bulk processing is impractical, and the wide spray pattern makes it easy to cover large areas for faster processing during remote inspections of tubing, piping and large structures.

#### Benefits

- Maximize indication detection
- Convenient to use
- Wide application versatility

#### Part Number

**01-1580-78:** Aerosol can (case of 12) (P)

#### Features

- Clear indications under visible light
- Heavy particle buildup
- Great particle mobility
- Protects parts and equipment against corrosion
- Broad spray pattern provides even surface coverage over large areas
- Superior surface wetting
- Very small particle size
- Works in visible light
- Oil-based formula
- Very low toxicity
- Low odor



## MV-740

### Water-Based Visible Magnetic Particle Suspension

A highly-sensitive water-based magnetic particle fluid for non-fluorescent (visible) wet method magnetic particle testing to locate fine and medium discontinuities on finished parts.

MV-740 provides clear, strong indications due to the heavy buildup of the highly magnetic particles. The product is ready-to-use, so no dilution is required.

MV-740 is often used with WCP-2 white contrast paint to improve contrast and inspection sensitivity.

#### Benefits

##### Eco-friendly profile

- Environmental-friendly water-based formula
- Packaging made from post-consumer recycled plastic and can be recycled after use
- Non-aerosol format reduces disposal hassle and cost, and does not contribute hydrocarbon chemicals to the atmosphere

##### Maximize Application Versatility & Indication Detection

- Heavy build-up of highly magnetic particles around all leakage fields make for heavy-contrast indications, especially when used with WCP-2 contrast paint
- Inspect a wide range of components without fear of corrosion or specification non-conformance
- Inspect in all conditions without the need for darkness or UV lights, including at temperatures below freezing
- Use with various applicators, choose the sprayer that works best for your application - no dilution required

#### Features

- Ready-to-use solution
- Clear indications under visible light
- Heavy particle buildup
- Great particle mobility
- Protects parts and equipment against corrosion
- Optimized surface wetting
- Works in visible light
- Water-based formula
- Low odor

#### Part Number

**01-9140-35:** 1 gal / 3.78 L (case of 4)





## WCP-2

### 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.

This fast-drying paint aerosol sprays on evenly, without flaking, before inspection so when non-fluorescent / colored magnetic particles are applied, the indications appear clearly against the opaque white background.

#### Benefits

##### Maximize indication detection

- See indications more easily with bright white, opaque surface which highlights indications while minimizing glare/reflections

##### Increase inspection speed

- Speed up inspections by applying a clean coat on the first pass, without bubbles or flakes
- Dries evenly and quickly to create an optimal surface for faster indication formation

##### Application versatility

- Comes in a convenient aerosol to take it with you wherever you go
- Can be used with wet or dry method magnetic particles on virtually any part
- Conforms to ISO 9934 specifications

#### Features

- Bright white color
- High opacity
- Provides good background contrast
- Fast drying
- Convenient, ready to use formula
- Controlled application
- Strong surface adhesion
- Matte coating
- Very low toxicity

#### Part Number

**01-2250-78:** Aerosol can (case of 12) (P)

**01-2250-35:** 1 gal / 3.78 L (case of 4) (P)



## Carrier II

### NDT-Approved Petroleum Base Suspension Vehicle

Carrier II is a high-purity NDT-approved suspension vehicle developed specifically for wet method magnetic particle testing.

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

#### Benefits

##### Faster, more reliable inspections

- Increases inspection speed and reliability by quickly wetting the entire test surface
- Helps 14A particles to move at top speed to discontinuities

##### Decreases maintenance

- Magnetic particle baths last longer due to slow evaporation, and is less susceptible to contamination from bacteria or fungus
- Protects magnetic particles like 14A from wear and tear and keeps them evenly dispersed throughout the bath

##### Improves operator comfort

- Made with a highly refined oil to reduce skin irritations and eliminate strong odors for a nicer work environment

##### More inspection flexibility

- Can be used for virtually all magnetic particle inspections with conformance to all major international magnetic particle testing specifications
- Prevents corrosion of most alloys and eliminates post-inspection processing for corrosion protection

##### Safer to use

- Reduces EHS concerns with high flash point and low toxicity
- Reduce worry about fire or biological hazards

##### Increases equipment life-span

- Protects magnetic particle equipment from internal rust and corrosion to keep expensive machines running longer with less downtime

#### Features

- Odorless
- Provides excellent particle mobility
- Good dispersion stability
- Protects parts and equipment against corrosion
- Provides superior wetting and surface coverage
- Low maintenance oil-based suspension
- Very low toxicity
- Non-fluorescent
- High flash point
- Not considered a flammable liquid according to 29 CFR 1910.106
- Low volatility
- Wide temperature stability

#### Part Numbers

**01-2122-40:** 5 gal / 18.9 L (P)

**01-2122-30:** 20 gal / 75.7 L drum

**01-2122-45:** 55 gal / 208 L drum (P)



## AX-52 Water-Soluble Corrosion Inhibitor

AX-52 is a water-soluble corrosion inhibitor developed specifically for water-based magnetic particle suspensions. It provides excellent corrosion inhibition to protect parts and equipment from rusting.

### Benefits

- Protects parts and equipment against corrosion
- Mixes quickly into water
- Great for areas with hard water

### Part Number

**01-2190-40:** 5 lb / 2.26 kg pail



## WA-2B Water Conditioner

WA-2B is a general-purpose water-conditioning powder to enhance surface wetting and magnetic particle dispersion stability in water-based magnetic particle suspensions. Its unique blend of wetting agents, corrosion inhibitors and anti-forming agents eliminates the need for additional water conditioning agents.

### Benefits

- Provides excellent surface wetting
- Improves magnetic particle dispersion
- Superior short-term corrosion inhibition
- Enhanced antifoam characteristics

### Part Number

**01-2148-63:** 5 lb / 2.26 kg pail



## ZAF-2 Non-Silicone Antifoam

ZAF-2 is an excellent general-purpose defoaming additive to eliminate and prevent foaming in water-based magnetic particle suspensions, aqueous penetrant developer baths, hydrophilic penetrant remover baths and aqueous cleaning solutions. A few drops of ZAF-2 are enough to eliminate foaming in most water-based solutions.

### Benefits

- Easy to use
- Effective, concentrated formula
- Silicone free

### Part Number

**01-9410-20\*:** 1 gal / 3.78 L

*\* Special Order! Two (2) week lead time*

# Magnetic Particle Testing Equipment

NDT  
NDT  
NDT  
NDT  
NDT





## A-Series

### Magnetic Wet Benches with 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.

#### Benefits

- Faster part processing
- Real-world dependability for minimal downtime
- Easy to use and maintain

#### Features

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

#### Ordering Information

**Magnaflux magnetic particle equipment is built to order:** Please contact us for a detailed quote.



## AD-Series

### Magnetic Wet Benches with 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.

#### Benefits

- Faster part processing
- Real-world dependability for minimal downtime
- Easy to use and maintain

#### Features

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

#### Ordering Information

**Magnaflux magnetic particle equipment is built to order:** Please contact us for a detailed quote.





## D-Series

### Magnetic Wet Benches with 3-Phase FWDC Capability

The D-Series is one of our most powerful magnetic wet 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.

#### Benefits

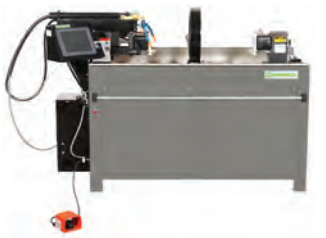
- Meets aerospace specifications
- Faster part processing
- Real-world dependability for minimal downtime
- Easy to use and maintain

#### 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 with 1-touch control

#### Ordering Information

**Magnaflux magnetic particle equipment is built to order:** Please contact us for a detailed quote.



## 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.

#### Benefits

- Maximize part throughput
- Advanced process control
- Real-world dependability for minimal downtime
- Easy to use and maintain

#### Features

- 5% duty cycle of 0.5 seconds on, 10 seconds off at maximum output
- Allen-Bradley PLC
- Advanced touch-screen operator interface
- 1,000 customer-programmable techniques

#### Ordering Information

**Magnaflux magnetic particle equipment is built to order:** Please contact us for a detailed quote.



## Universal WE Multi-Directional Magnetic Wet Bench

The Universal WE magnetic wet bench is multi-direction magnetic wet bench designed to completely magnetize the surface of parts up to 35 inches long in a single shot. Potentially cutting inspection time in half because the part can be 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.

### Benefits

#### Faster part processing

- Double your inspection speed by magnetizing parts in a single shot
- Fully inspect longer parts, up to 35.4 in / 90 cm, without requiring an auxiliary coil
- Speed up part processing with a large automated surface shower

#### Advanced process control

- Maximize consistency between tests with 1,000 customer-programmable techniques
- Prevent accidental and unauthorized alterations with multiple user profiles and varying tiers of control for a range of operator experience levels
- Receive visual alerts when produced amperage is 90% or less than set amperage

#### Real-world dependability for minimal downtime

- Siemens PLC provides reliable controls and off-the-shelf replacements
- Rely on our industry leading warranty with best in-class service delivered by a global network of trained Magnaflux authorized service centers
- Minimize downtime with standard spare parts package

#### Easy to use and maintain

- Make quick operational adjustments using the simple, user-friendly operator interface with touch-screen controls
- External pump system provides fast access for easy cleaning and service

### Features

- 60% duty cycle at 50% power output with a max of 6 seconds on and 4 seconds off
- Large surface shower to bathe entire part automatically with mag shot
- Siemens PLC
- Advanced touch-screen operator interface

### Ordering Information

**Magnaflux magnetic particle equipment is built to order:** Please contact us for a detailed quote.



## CD-Series

### Power Pack Electromagnetic Current Generators with 3-Phase FWDC Magnetization

The CD-Series is our line of magnetic power packs for magnetic particle inspection. These stationary magnetizing current generators are power pack versions of our wet bench units to effectively magnetize parts while keeping power requirements to a minimum. CD-Series units are ideal for large parts which will not fit on a wet bench or for parts that require special handling.



## M-Series

### Mobile Power Packs Electromagnetic Current Generators for AC or HWDC Magnetization

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.



## CMD-Series

### Power Pack Electromagnetic Current Generators with AC, HWDC and FWDC Magnetization

The CMD-Series is our line of multi-directional stationary power packs for mag particle testing. These current generators can easily be integrated with custom handling equipment or used to update old horizontal wet bench units. CMD-Series units come with 2 or 3 outputs. The multi-directional magnetization feature finds defects in all orientations with just one cycle and the outputs can be independently adjusted to balance the magnetic field intensity.



## CSV-Series

### Power Pack Electromagnetic Current Generators with 3-Phase FWDC Magnetization

Some parts will not lend themselves to traditional units as they are too large, some need special handling, and some are better processed dry. The CSV-Series offers a solution to the parts that are too large for normal systems. Three independent outputs help to speed up processing time, and a pulse feature allows development of larger areas. These units feature 3-phase rectified to full-wave DC output.





## Enclosures

### Magnetic Bench Enclosure Hoods

Our durable equipment hood or curtains are used to darken the inspection area to levels well below the common standards and create a very functional inspection environment while keeping operator comfort and convenience in mind. The easy access to the unit is improved by the front “theater style” curtain mechanism which can be folded in half and hung to allow better ventilation in warmer environments.

#### Features

- EV6000 hand-held LED UV lamp with mounting bracket
- Theater-style easy access front curtain
- Adjustable length curtains
- Flame resistant curtains
- Ventilation fan with on/off switch on operator interface
- Visible light with control on operator interface

#### Ordering Information

**Magnaflux magnetic particle equipment is built to order:** Please contact us for a detailed quote.



## XG-Series

### Conveyor Inspection Booth for Faster NDT Through-Put

The XG-Series conveyor inspection booth is ideal for customers who require high throughput or who want to separate part processing (magnetization) from part inspection; available for A-Series, AD-Series, D-Series and MD-Series magnetic particle wet benches.

#### Benefits

- Ergonomic environment for the operator; limits lifting, twisting and turning.
- Faster part processing; operators spend more time inspecting parts instead of moving parts in and out of the unit.

#### Ordering Information

**Magnaflux magnetic particle equipment is built to order:** Please contact us for a detailed quote.

#### Features

- Multiple conveyor width options: 12 in or 18 in
- Adjustable speed, 4-40 ft/min / 0.02-0.2 m/s
- ST700 overhead LED inspection UV Lamps, qty. 2
- EV6000 hand-held LED UV lamps, qty. 2
- E-stop in-booth emergency power cut-off for additional safety control
- Demagnetizer with 8,500 A turns and internal diameter of 15 x 15 in (38 x 38 cm)



S-66



S-1212

## S-Series Demagnetizers

### Table-top demagnetizers

Demagnetization units remove any residual magnetism remaining after conducting magnetic particle inspection. Demagnetization of ferromagnetic parts and materials often requires a requisite to final finishing or to ready an item for its ultimate use. Industrial demagnetizing is not an easy task, unless an effective demagnetizing system is used. It is especially difficult when the magnetic field must be reduced to a very low level.

#### Features

- Compact table-top demagnetization system
- Waterproof and oilproof by virtue of their plastic-impregnated glass coating
- Compact size fits into most existing test or production systems
- Base of the coil opening may be mounted flush with the work surface using the angle support supplied, making part insertion fast and easy on the operator

#### Part Numbers

**197250:** S-66, 115V

**197251:** S-66, 230V

**197252:** S-66, 460V

**197260\*:** S-1212, 230V or 460V

**600615-01:** S-1515, 460V

*\* Must Specify Voltage*

## SB-Series Demagnetizers

### Stand alone, intermittent duty demagnetizers

Demagnetization units remove any residual magnetism remaining after conducting magnetic particle inspection. Demagnetization of ferromagnetic parts and materials often requires a requisite to final finishing or to ready an item for its ultimate use. Industrial demagnetizing is not an easy task, unless an effective demagnetizing system is used. It is especially difficult when the magnetic field must be reduced to a very low level.



#### Features

- Durable construction
- Heavy-duty, industrial protective coating
- User-friendly control panel with one touch demag
- Adjustable demag timer

#### Ordering Information

**Magnaflux magnetic particle equipment is built to order:** Please contact us for a detailed quote.



P-70



P-1500

## P-Series

### Economical Power Pack Magnetic Current Generators

P-Series portable power packs are convenient and economical inspection units that are used in a wide range of magnetic particle inspection applications that require only moderate power.

#### 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
- Demagnetize parts in AC mode by slowly turning the current dial to zero
- Built-in automatic-reset circuit breaker
- May be used as the main power source for the mag kit modular bench inspection system
- Quick connects provide fast, easy, and secure connection

#### Part Numbers

- 628822:** P-70, 115V
- 628826:** P-70, 230V
- 628824:** P-1500, 230V
- 628825:** P-1500, 460V

#### Recommended Products For Start-Up

- 628833-180:** 4/0 cable, 15 ft / 4.6 m, Quick Connects QC-M to QC-F
- 628833-240:** 4/0 cable, 20 ft / 6 m, Quick Connects QC-M to QC-F



## Mag Kit

### Modular Magnetic Particle Inspection System

The mag kit is a sectional magnetic particle testing system for low volume non-destructive testers with the benefits of an operational magnetic wet bench but without the investment of a production-level mag bench.

#### Benefits & Features

- Economical wet magnetic bench alternative
- Great for low-volume processing
- Easy to switch magnetizing current from head/tail to coil
- Modular design for versatility
- Uses a P-Series power pack as the power source
- Detects flaws in any direction
- Optional recirculating Mag Kit Spray System to apply magnetic particle bath pump
- Optional Mag Kit Hood for fluorescent magnetic particle inspections

#### Part Numbers

- 628834:** Mag Kit with Quick Connectors
- 623830:** Hood Assembly for Mag Kit
- 169621:** Remote palm switch for Mag Kit

#### Recommended Products For Start-Up

- 628822:** P-70 115 V / 60 Hz, Quick Connectors
- 628826:** P-70 230 V / 50 Hz, Quick Connectors
- 69390:** Mag Kit Spray System, 5 gal / 18.9 L capacity, 115 V / 60 Hz
- 69395:** Mag Kit Spray System, 5 gal / 18.9 L capacity, 230 V / 50 Hz
- 628833-180:** 4/0 Cable Assembly, 15 ft / 4.6 m, Quick Connect Terminals QC-M to QC-F

# Magnetic Particle Testing Magnetic Yokes

NDT  
NDT  
NDT  
NDT  
NDT







## Y-2

### AC Electromagnetic Ergonomic Yoke

The Y-2 is an AC electromagnetic yoke, ergonomically designed to improve productivity and reduce operator arm and wrist fatigue. The yoke generates a strong AC magnetic field for the detection of surface indications during magnetic particle testing.

#### Benefits

##### Increase inspector productivity and reduce physical fatigue

- Less arm strain, wrist fatigue and physical stress help operators get more done due to the lightweight and ergonomic design
- Easily position the yoke in any direction with lightweight, heavy-duty and powerful electronics components

##### Keep tools in service with a design that's built to last

- Cords and triggers can be easily replaced, so work doesn't stop and tools aren't scrapped due to accidental damage.
- Prevent dust and dangerous water damage with an IP54 o-ring sealed housing

#### Features

- Ergonomic, light-weight design
- IP54 sealed housing resists dust and water
- Field-swappable power cord
- Isolated, replaceable trigger switch
- Steel shields for contact (pole) protection
- Exceeds ASTM lifting specifications
- Convenient carrying case supplied with all yoke shipments
- Optional LED yoke light lasts longer and is more intense compared to traditional bulbs

#### Part Numbers

**628554:** 110-115 V, US Type B plug (P)

**628555:** 220-230 V, EU Type F plug / UK Type G adapter (P)

**628556:** Y-2 MV Kit (P)

- Y-2 AC Yoke (110-115 V / 50-60 Hz)
- US Type B plug
- #1 Gray and #8A Red Powders
- Yellow paint marker & shop cloth

**628557:** Y-2 MV Kit (P)

- Y-2 AC Yoke (220-230 V / 50-60 Hz)
- EU Type F plug & UK Type G adapter
- #1 Gray and #8A Red Powders
- Yellow paint marker & shop cloth





## Y-7 AC/DC Electromagnetic Yoke

The Y-7 is a durable, high-strength AC/DC magnetic yoke designed to detect surface and sub-surface indications in the most rugged applications.

### Benefits & Features

- Sealed, durable construction
- Chemical and abrasion resistant
- AC and HWDC waveforms for surface and sub-surface inspection
- Exceeds ASTM lifting specifications

### Part Numbers

**625643:** 115 V / 50-60 Hz (P)

**625644:** 230 V / 50-60 Hz (P)

**43509:** Y-7 MV Kit (P)

- Y-7 AC/DC Yoke (115 V / 50-60 Hz)
- #1 Gray and #8A Red Powders
- Yellow paint marker & shop cloth

**620741:** Y-7 MV Kit (P)

- Y-7 AC/DC Yoke (230 V / 50-60 Hz)
- #1 Gray and #8A Red Powders
- Yellow paint marker & shop cloth



## Y-8 MV Kit DC Battery-Powered Electromagnetic Yoke Kit

The Y-8 is a battery-powered, DC electromagnetic yoke designed to stand up to the most rugged applications. True portability for magnetic particle inspection in the field and remote locations is achieved through a compact battery pack which provides a full 8-hour shift of inspection power.

### Benefits & Features

- Sealed, durable construction
- Chemical and abrasion resistant
- True portability with compact battery pack
- Exceeds ASTM lifting specifications
- Individual serial number for each yoke
- Convenient carrying case
- Great for job sights and field inspections
- Has everything needed for non-fluorescent / colored mag particle testing

### Part Numbers

**628994:** N. America Version

- Y-8 DC Yoke
- Sealed lead-acid battery (6V, 12 A-hr)
- Battery charger, CEC compliant (115V / 60 Hz)
- #1 Gray Powder
- Yellow paint marker & shop cloth

**630540:** Global Version

- Y-8 DC Yoke
- Sealed lead-acid battery (6V, 12 A-hr)
- Battery charger, global voltages (100/ 240V, 50/60 Hz)
- #1 Gray Powder
- Yellow paint marker & shop cloth



## Yoke Light

### Add-on Light for Y-2 Yokes

The LED yoke light is an add-on accessory for the Y-2 AC yoke which provides focused, visible light to the yoke inspection area when the yoke is activated. The high brightness light is designed to enhance visible detection of flaws and discontinuities under low conditions and in difficult to reach areas not accessible to a secondary light source.

#### Benefits

- No wiring connection necessary
- Automatically activated when yoke is energized
- Snap on assembly, no tools required for installation

#### Part Number

**628840:** Y-2 Yoke Light (P)



## Yoke Test Weight

### Use With AC Electromagnetic Yokes

The yoke test weight is a certified 10 lb / 4.5 kg weight designed specifically for AC magnetic yokes to confirm the yoke has sufficient strength to perform magnetic particle inspections. Each yoke test weight has a built-in leg positioning guide to assure balanced distribution and operator safety.

#### Benefits

- General purpose
- Balanced weight of 10 lb / 4.5 kg
- Leg positioning guide
- Serialized and certified
- Dimensions are 9 x 2 x 2 in (23 x 5 x 5 cm)

#### Part Number

**624115:** 10 lb / 4.5 kg Test Weight (P)



## L-10 Coil

### Portable Magnetic Coil, For Magnetic Particle Inspection

This handy portable AC magnetic coil is great for field applications to magnetize a variety of part sizes and shapes for magnetic particle inspection. The L-10 can also be used as a portable demagnetization coil for intermittent duty.

#### Features

- Coil ID: 10 in / 25 cm
- Coil OD: 15 in / 38 cm
- Flexible 10 ft / 3 m power cord
- 2,800 amp turns
- Palm / foot switch to energize

#### Part Numbers

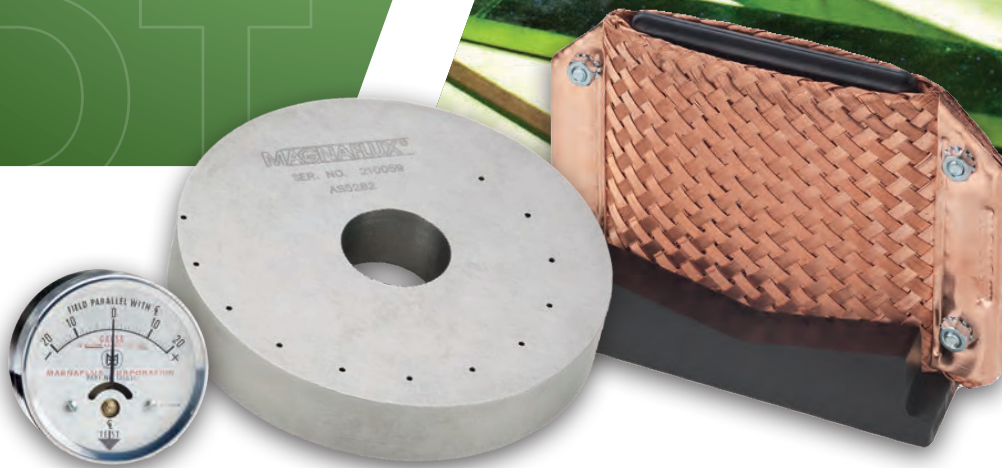
**630533:** 115V, 60 Hz, 12A

**630516:** 230V, 50 Hz, 8A

Coil operates on 115V, step-down transformer included.

# Magnetic Particle Testing Accessories

NDT  
NDT  
NDT  
NDT







## QB2- Plus Quick Break Tester

The QB2-Plus provides a quantitative verification of quick break function and measures the duration of the magnetizing shot. The QB2-Plus can verify the correct function of AC, HWDC, and FWDC equipment, and verify quick break function on 3-phase FWDC units. Shot time and quick break voltage are alternately shown on the LCD display after each reading.

### Benefits & Features

- Simultaneous measurement of shot time and quick break
- Can be used with coils and cable wraps over 25 in (64 cm) diameter
- Quantitative results provide true verification of equipment

### Part Number

**628989:** QB-2 Plus (P)



## Ammeter Shunt Kit For Magnetic Particle Inspection

The ammeter shunt kit is used to verify magnetizing current output of magnetic particle inspection equipment up to 10,000 amps on half-wave DC, 1-phase full-wave DC and 3-phase full-wave DC output, and up to 6,000 amps on AC current output.

### Benefits

- Measures AC current up to 6,000 amps
- Measures HWDC, 1-Phase FWDC and 3-Phase FWDC up to 10,000 amps
- Includes calibrated shunt and interconnect cable
- Accuracy DC +/-2% or 30 A, AC +/-3% or 30 A
- Portable storage case

### Part Number

**622350:** Ammeter Shunt Kit (P)



## FSM-2 Magnetic Field Strength Meter

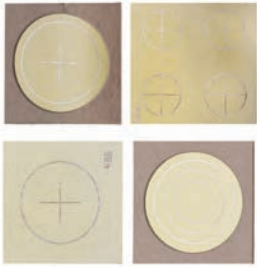
The FSM-2 is used for tangential measuring of the magnetic field strength in DC and AC fields. A tangential field probe is attached to the workpiece's surface during magnetization, and the hall sensor measures the voltage change produced by the magnetic field. This meter measures the true RMS of asymmetric magnetic fields.

### Features

- Equipped with a RS 232 interface and background display lighting
- With closed cover, the housing meets protection class IP65
- Supplied with a mains adapter and a tangential field probe

### Part Number

**133034:** FSM-2 and Reference Block Kit



## QQIs

### Quantitative Quality Indicator Test Piece Shims

QQIs, also known as standard notched shims, are manufactured to AS-5371 requirements and are used to verify the strength and orientation of magnetic fields within parts under test. 5 pieces per QI part number.

#### Part Numbers

- 625551:** Standard QI, CX-230 (KSC-230) (P)
- 625552:** Miniature QI, CX4-230 (KSC4-230) (P)
- 625553:** Standard QI, CX-430 (KSC-430) (P)
- 625554:** Variable QI, 3C2-234 (KSCT-234) (P)



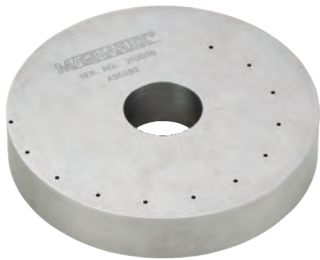
## Magnetic Flux Indicator Strips

### Magnetic Field Verification Test Piece

Flexible laminated strips used to verify the presence and direction of magnetic fields during the magnetic particle testing process. General use (Type 1 / Type G) strips contain three slots in the steel core: 0.0075 in / 0.1905 mm, 0.009 in / 0.1016 mm, and 0.010 in / 0.127 mm. Brass cladding on both sides of the strip provides protection against corrosion and allows the strips to be re-used multiple times.

#### Part Number

- 008M004:** Magnetic Flux Indicators, 5 pieces (P)



## Tool Steel Ring

### Magnetic Particle 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.

#### Part Number

- 159999:** Tool Steel Ring (P)



## Magnetic Particle Test Bar

### Magnetic Particle System Performance Test Piece

The MPI test bar is a standardized test piece conforming to NAVSEA T9074-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.

#### Part Number

- 189838:** Magnetic Particle Test Bar (P)



## Pie Gauge

### Magnetic field indicator

The magnetic particle pie gauge is used as an aid in determining the direction of magnetic fields for detection of discontinuities in ferrous metals.

#### Part Number

**169799:** Pie Gauge (P)



## 10 Gauss Field Gauge, Non-Calibrated

### Magnetic field indicator gauge / Magnetometer

Rugged, pocket-size meters used to indicate residual magnetism remaining in part after magnetization, or to verify demagnetization. Inexpensive and disposable with no certification to maintain.

#### Part Number

**2480:** 10 Gauss Field Meter, Non-Calibrated (P)



## 10 Gauss Field Gauge, Calibrated

### Magnetic field indicator gauge / Magnetometer

Rugged, pocket-size meters used to indicate residual magnetism remaining in part after magnetization or to verify demagnetization. Accurate to +/- 0.5 gauss with scale range of 10-0-10. Certification is provided.

#### Part Number

**505056:** 10 Gauss Field Meter, Calibrated (P)



## 20 Gauss Field Gauge, Calibrated

### Magnetic field indicator gauge / Magnetometer

Rugged, pocket-size meters used to indicate residual magnetism remaining in part after magnetization or to verify demagnetization. Accurate to +/- 1 gauss with scale range of 20-0-20. Certification is provided.

#### Part Number

**105645:** 20 Gauss Field Meter, Calibrated (P)



## Centrifuge Tube For Magnetic Particle Inspection

This line of centrifuge tubes is to help you easily and accurately measure the magnetic particle concentration of your mag particle bath as part of your regular system performance checks for ASTM E709, ASTM E1444 or ASME BPVC.

### Part Numbers

**8493:** Centrifuge tube for 14A, 14AM, 20B particles (P)

**2461:** Centrifuge tube for 7C or 7HF particles

**507923:** Centrifuge tube for MG-410 or MG-450A particles

**1837A:** Centrifuge tube stand



## Magnetic Particle Applicators Magnetic Particle Spray System

To help you optimize your magnetic particle inspections, these magnetic particle applicators provide a convenient method for applying an even, adjustable flow of magnetic particles across large test parts or in situations where only spot particle application is required. The coverage speed and consistency provided by these applicators can dramatically improve application uniformity and part processing time.

### Benefits & Features

- Continuously agitated bath keeps particles suspended and uniform through the tank
- Fully portable unit equipped with casters for easy mobility
- May be used for water or oil based solutions

### Part Numbers

**69390:** Mag Kit spray system, 5 gal / 19 L capacity, 115V / 60 Hz

**69395:** Mag Kit spray system, 5 gal / 19 L capacity, 230V / 50 Hz

**621778, Shown in image:** Portable Spray System, 30 gal / 113 L capacity, specify 115V or 230V when ordering





## 4/0 Cable Connectors For Magnetic Particle Inspection Equipment

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 Magnaflux machine just the way you need.

### Part Numbers

**626342:** Standard 4/0Z Lug Cable Termination

**628828:** QC-F Female Quick Connect 4/0 Cable Termination (used with QC-M)

**628829:** QC-M Male Quick Connect 4/0 Cable Termination (used with QC-F)



## 4/0 Cables For Magnetic Particle Inspection Equipment

Pre-assembled 4/0 cables are the easiest way to deliver magnetizing current to the weldment or casting under test. Available in standard or heavy-duty diesel locomotive grade, with lug or quick connect terminations to fit your equipment and application needs.

### Part Numbers

**626350-180:** 15 ft / 4.57 m, Standard 4/0 Cable, lugs at both ends

**628833-180:** 15 ft / 4.6 m Standard 4/0 Cable, QC-F to QC-M

**628833-240:** 20 ft / 6.1 m Standard 4/0 Cable, QC-F to QC-M

**628832:** Lug to Quick Connect Adapter Set, includes 1 each Lug to QC-M and Lug to QC-F adapters  
Custom-length cables are also available – please contact Magnaflux Customer Service for quotation.



## Prods & Clamps For Magnetic Particle Inspection

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.

Standard Prod Sets

### Part Numbers

**157662:** Standard Prod Sets P-series 4/0 lug connections

**622088\*:** Standard Prod Sets M-series 4/0 lug connections

**1865A:** Spring-Loaded Contact Clamps 4/0 lug connections

**14710:** Replacement Copper Braid for 1865A

**169802:** Heavy-Duty "C" Contact Clamp 4/0 lug connections

*\* Not for use with old M-500 Series Units*



Spring-Loaded  
Contact Clamps



## Copper Contact Pads For Magnetic Particle Inspection Equipment

This range of 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. Magnaflux contact pads prevent arc burning, and ensure good, reliable electrical contact between the headstock and part.

### Part Numbers

**1848:** Replacement Copper Pad, standard size contacts (4.75 x 7.50 in) (P)

**18948:** Double-Braided Pad with V-Block, standard size contacts (4.75 x 7.50 in) (P)

**18949:** Double-Braided Pad with Clip, standard size contacts (4.75 x 7.50 in)

**14818:** Copper Braid Contact Pad, large size contacts (4.75 x 10.50 in)



## Lead Contact Pads For Magnetic Particle Inspection Equipment

Lead contact pads are long-lasting without the risk of damage to expensive parts. Heavy duty braided lead pads are reinforced with copper braid to combine solid, reliable contact with the part with extreme durability.

### Part Numbers

**114184:** Heavy Duty Braided Lead Pad, legacy equipment

**605647:** Lead Contact Plate, standard size contacts (12 x 10.50 in) (P)

**605657:** Heavy Duty, standard size contacts (0.25 x 6.75 x 6.625 in)

**624789:** Heavy Duty Braided Lead Pad, large size contacts (0.25 x 6.75 x 6.63 in)

**69393:** Heavy Duty Braided Lead Pad, Mag Kit (12 x 10.5 in)



Central Conductors

## Equipment Adapters For Magnetic Particle Inspection

Make sure your Magnaflux magnetic 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, Magnaflux equipment adapters help you get more out of your magnetic bench by helping you make it work for a wide variety of parts.

### Part Numbers

**622639:** Central Conductors set of 3: 0.50 in / 1.3 cm, 0.75 in / 1.9 cm, 1.0 in / 2.5 cm diameter

**1857:** Steady Rest, Rail Mounted

**605750:** Steady Rest, Headstock Mounted, roller-type

**621658:** Steady Rest, Tailstock Mounted, roller-type

**1830:** Contact Block 4/0 lug connections

**28470\*:** Small Parts Headstock Adapter

**28471\*:** Small Parts Tailstock Adapter

*\* Only to be used with standard contacts. Do not use with 12 x 12 in contacts.*



Steady Rests



Contact Block



Small Parts Adapters



## Fixed Coil

### Magnetic Coil, For Magnetic Particle Inspection Benches

Ensure your magnetic inspection bench fits every part you test with this fixed magnetizing coil by outfitting your wet bench to match your range of parts, and optimize magnetic field application. Whether you are testing a large pieces or small bolts, this heavy-duty magnetic coil will help you set-up your Magnaflux machine just the way you need.

#### Part Numbers

**28501:** 12 in / 30 cm

**28511:** 16 in / 41 cm

**28531:** 20 in / 51 cm

**28541:** 25 in / 64 cm



## Flat Magnetic Coil

### Portable Magnetic Coil, For Magnetic Particle Inspection

For non-contact magnetic particle inspection of small parts such as fasteners and ring-like parts. Can be used with any magnetic particle unit or power pack to allow for quick, easy processing of several small parts at one time.

#### Features

- 20 in / 51 cm long, 6.75 in / 17 cm wide
- 44 lb / 20 kg
- Includes 2 handles for loading and unloading

#### Part Number

**611700:** Flat Magnetic Coil





## Magnetic Wet Bench Startup Kit MPI Materials and Accessories

To perform magnetic particle inspections, you need equipment to magnetize the parts, materials to find indications, and accessories to support the system. These startup kits include all you need to commission your new magnetic wet bench equipment, whether you will be using Carrier II or water bath.

### Benefits

- Superior fluorescent inspection performance
- Extends new equipment warranty

### Features

- MPI materials to fill a standard-length bench unit



### Part Numbers

- 621452:** Startup Kit, Oil Bath
- Centrifuge Tube (14A)
  - Centrifuge Tube Stand
  - 10 Gauss Magnetic Field Gauge
  - Pie Gauge
  - UV Spectacles
  - Double Braided Pad with V-Block, Quantity: 2
  - Carrier II
  - 14A

- 621453:** Startup Kit, Water Bath
- Centrifuge Tube (14A)
  - Centrifuge Tube Stand
  - Gauss Magnetic Field Gauge
  - Pie Gauge
  - UV Spectacles
  - Double Braided Pad with V-Block, Quantity: 2
  - 14A Redi-Bath



# Penetrant Testing Materials

NDT  
NDT  
NDT  
NDT



	ZL-2C	ZL-4C	ZL-15B	ZL-19	ZL-27A	ZL-37	ZL-56	ZL-60D	ZL-67	ZL-405	ZL-425	ZL-440
<b>Penetrant Type</b>	Type 1	Type 1	Type 1	Type 1	Type 1	Type 1	Type 1	Type 1	Type 1	Type 1	Type 1	Type 1
<b>Level</b>	Level 2	N/A	Level ½	Level 1	Level 3	Level 4	Level 4	Level 2	Level 3	Level ½	Level 1	Level 2
<b>Removal Type</b>	Post emulsifiable	Water washable	Water washable	Water washable	Post emulsifiable	Post emulsifiable	Water washable	Water washable	Water washable	Water washable	Water washable	Water washable
<b>Method(s)</b>	B / C / D		A / C	A / C	B / C / D	B / C / D	A / C	A / C	A / C	A	A	A
<b>QPL Qualified Product</b>	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓
<b>AECL</b>	✓		✓	✓	✓	✓	✓	✓	✓			
<b>AMS 2644</b>	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓
<b>ASME</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
<b>ASTM E1417</b>	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓
<b>ASTM E165</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
<b>Boeing PS-21202</b>	✓		✓	✓	✓	✓	✓	✓	✓			
<b>GE P3TF2</b>	✓		✓	✓	✓	✓	✓	✓	✓			
<b>GE P50YP107</b>								✓				
<b>Honeywell EMS 52309</b>	✓		✓	✓	✓	✓	✓	✓	✓			
<b>ISO 3452-2</b>	✓				✓	✓		✓	✓	✓	✓	✓
<b>MIL-STD-2132</b>	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓
<b>NAVSEA 250-1500-1</b>												
<b>NAVSEA T9074-AS-GIB-010/271</b>	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓
<b>Pratt &amp; Whitney</b>	✓				✓	✓		✓	✓			

	SKL-SP2	SKL-WP2	SKL-4C	ZP-4D	ZP-5B	ZP-9F	ZP-14A	SKD-S2	ZE-4E	ZR-10E	SKC-S
<b>Product Type</b>	Type 2 Penetrant	Type 2 Penetrant	Type 2 Penetrant	Developer	Developer	Developer	Developer	Developer	Emulsifier	Emulsifier	Cleaner
<b>Classification</b>	Methods B / C / D	Methods A / C	Methods A / C	Form a	Form c	Form d and e	Form b	Form d and e	Method B	Method D	Class 2
<b>QPL Qualified Product</b>	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
<b>AECL</b>	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
<b>AMS 2644</b>	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
<b>ASME</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>ASTM E1417</b>	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
<b>ASTM E165</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Boeing PS-21202</b>		✓		✓	✓	✓	✓	✓	✓	✓	
<b>GE P3TF2</b>	✓	✓		✓	✓	✓	✓	✓		✓	✓
<b>GE P50YP107</b>	✓	✓						✓			✓
<b>Honeywell EMS 52309</b>	✓	✓		✓	✓	✓	✓	✓		✓	
<b>ISO 3452-2</b>	✓	✓		✓				✓			✓
<b>MIL-STD-2132</b>	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
<b>NAVSEA 250-1500-1</b>	✓							✓			✓
<b>NAVSEA T9074-AS-GIB-010/271</b>	✓	✓			✓	✓	✓	✓	✓	✓	✓
<b>Pratt &amp; Whitney</b>				✓		✓				✓	



### ZL-15B

#### Level ½ Water Washable Fluorescent Penetrant

ZL-15B water washable penetrant is a low-sensitivity penetrant that features excellent washability. It is used to find open surface flaws such as cracks and porosity in seams, laps, cold shuts, and laminations on castings, forgings, extrusions, and parts with rough surfaces.

#### Features

- Excellent washability
- QPL approved

#### Part Numbers

**01-3159-40:** 5 gal / 18.9 L  
**01-3159-30:** 20 gal / 75.7 L drum  
**01-3159-45:** 55 gal / 208 L drum

#### Product Properties

NDT Type	Penetrant Type	Sensitivity	Penetrant Methods	Removal Type	Required Equipment
Fluorescent Penetrant Testing	Type 1	Level ½ - Very Low Sensitivity	Method A, Method C	Water Washable	UV light source



### ZL-19

#### Level 1 Water Washable Fluorescent Penetrant

A water-removeable level 1 penetrant, ZL-19 is designed for use on rough or unmachined surfaces such as castings and forgings to find larger discontinuities in non-safety critical components. It is ideal for inspecting automotive and general industrial components such as engine blocks, power train components, rocker arms, pistons, steering knuckles, and more.

#### Benefits

- Increase indication detection on cast parts & rough surfaces
- Speed up your inspection process
- Performance value
- Maximize operator comfort and safety

#### Part Numbers

**01-3263-40:** 5 gal / 18.9 L  
**01-3263-45:** 55 gal / 208 L drum (P)

#### Features

- Level 1 sensitivity
- Water washable
- Excellent rough surface washability
- Bright, high contrast indications
- Clean rinsing on cast parts
- Will not clog spray nozzles in automated systems
- Good surface wetting
- High flash point
- Easy washability
- Less time to rinse
- Use less penetrant per part

#### Product Properties

NDT Type	Penetrant Type	Sensitivity	Penetrant Methods	Removal Type	Required Equipment
Fluorescent Penetrant Testing	Type 1	Level 1 - Low Sensitivity	Method A, Method C	Water Washable	UV light source





## ZL-60D

### Level 2 Water Washable Fluorescent Penetrant

Developed for testing rough machined surfaces, ZL-60D fluorescent water-removeable penetrant is ideal for finding indications in castings, forgings, extrusions and rough surfaces.

#### Benefits

##### Improve indication detection

- Makes indications stand out more by easily washing excess penetrant off with water
- Reduces background fluorescence, even on rough surfaces

##### Maximize application versatility

- Ideal for an extensive variety of part types due to level 2 sensitivity
- Universal specification conformance and fast, even surface wetting

##### Affordable performance

- Drives value at each step of the inspection process
- Quickly apply penetrant with high surface wetting
- Easily wash off with water
- Use less penetrant over time because of lower drag-out and slower evaporation

#### Features

- Bright, high-contrast indications
- Good removability
- Excellent rough surface washability
- Water washable
- Level 2 medium sensitivity
- High flash point
- Very low odor
- Better surface wetting
- Alloy compatibility
- High thermal resistance
- High UV stability
- Very low toxicity
- Low volatility
- Optimized capillary action
- QPL SAE AMS 2644 Qualified Product List
- Approved for use by Pratt & Whitney

#### Part Numbers

**01-3272-35:** 1 gal / 3.78 L (case of 4)

**01-3272-40:** 5 gal / 18.9 L (P)

**01-3272-30:** 20 gal / 75.7 L drum

**01-3272-45:** 55 gal / 208 L drum (P)

#### Product Properties

NDT Type	Penetrant Type	Sensitivity	Penetrant Methods	Removal Type	Required Equipment
Fluorescent Penetrant Testing	Type 1	Level 2 - Medium Sensitivity	Method A, Method C	Water Washable	UV light source



## ZL-67

### Level 3 Water Washable Fluorescent Penetrant

A high-sensitivity level 3 penetrant, ZL-67 fluorescent water removeable penetrant is designed to find smaller, finer indications in safety-critical components common to aerospace and engineering applications. ZL-67 penetrant is often used to find flaws in investment castings, jet engine components, and highly machined surfaces.

#### Benefits

- Improve indication detection
- Wide range of inspections
- Maximize operator comfort and safety
- More reliable, consistent inspections

#### Part Numbers

- 01-3274-40:** 5 gal / 18.9 L  
**01-3274-30:** 20 gal / 75.7 L drum  
**01-3274-45:** 55 gal / 208 L drum (P)

#### Features

- Level 3 high sensitivity
- Water washable
- Bright, high-contrast indications
- High flash point
- Wide range of application methods
- Controlled washability
- Low odor
- Very low toxicity
- Alloy compatibility
- High water tolerance
- High thermal resistance
- High UV stability
- Optimized capillary action
- Low volatility
- QPL SAE AMS 2644 Qualified Product List
- Approved for use by Pratt & Whitney

#### Product Properties

NDT Type	Penetrant Type	Sensitivity	Penetrant Methods	Removal Type	Required Equipment
Fluorescent Penetrant Testing	Type 1	Level 3 - High Sensitivity	Method A, Method C	Water Washable	UV light source



## ZL-56

### Level 4 Water Washable Fluorescent Penetrant

An ultra-high sensitivity penetrant (level 4), ZL-56 fluorescent water-washable penetrant is safe for use on alloys in engineering and aerospace use, including aluminum, steel, nickel, and titanium. ZL-56 is designed for non-porous and highly machined components.

#### Benefits

- Bright, high-contrast indications
- Ideal for critical part inspection
- Ultra-high sensitivity for aerospace inspections
- QPL SAE AMS 2644 Qualified Product List

#### Part Numbers

- 01-3267-40:** 5 gal / 18.9 L (P)  
**01-3267-45:** 55 gal / 208 L drum

#### Product Properties

NDT Type	Penetrant Type	Fluorescent Penetrant Sensitivity	Penetrant Methods	Removal Type	Required Equipment
Fluorescent Penetrant Testing	Type 1	Level 4 - Ultra-High Sensitivity	Method A, Method C	Water Washable	UV light source



### ZL-2C

#### Level 2 Post Emulsifiable Fluorescent Penetrant

A medium sensitivity penetrant (level 2), ZL-2C fluorescent post-emulsifiable penetrant is designed to be removed from the part surface by emulsifiers or solvent. With a UV-A light source, indications will appear as a bright green-yellow fluorescence. ZL-2C has a high flash point, and is designed to be used in open dip tanks.

#### Benefits

- Bright indications
- Minimal background fluorescence
- High flash point
- QPL SAE AMS 2644 Qualified Product List
- Approved for use by Pratt & Whitney

#### Part Numbers

**01-3123-40:** 5 gal / 18.9 L  
**01-3123-45:** 55 gal / 208 L drum

#### Product Properties

NDT Type	Penetrant Type	Sensitivity	Penetrant Methods	Removal Type	Required Equipment
Fluorescent Penetrant Testing	Type 1	Level 2 - Medium Sensitivity	Method B, Method C, Method D	Post Emulsifiable	UV light source



### ZL-27A

#### Level 3 Post Emulsifiable Fluorescent Penetrant

Post-emulsifiable ZL-27A is a level 3, high-sensitivity Type 1 penetrant designed for inspections which require maximum process control and reliability, such as safety-critical aerospace testing.

#### Benefits

- Improve indication detection
- Maximize penetrant inspection process control
- Wide range of inspections
- Maximize operator comfort and safety

#### Part Numbers

**01-3187-35:** 1 gal / 3.78 L (case of 4)  
**01-3187-40:** 5 gal / 18.9 L  
**01-3187-30:** 20 gal / 75.7 L drum  
**01-3187-45:** 55 gal / 208 L drum (P)

#### Features

- Level 3 high sensitivity
- Post emulsifiable
- Bright indications
- Resists over-washing or over-removal
- High flash point
- Wide range of application methods
- Low odor
- Very low toxicity
- Alloy compatibility
- High thermal resistance
- High UV stability
- QPL SAE AMS 2644 Qualified Product List
- Approved for use by Pratt & Whitney

#### Product Properties

NDT Type	Penetrant Type	Sensitivity	Penetrant Methods	Removal Type	Required Equipment
Fluorescent Penetrant Testing	Type 1	Level 3 - High Sensitivity	Method B, Method C, Method D	Post Emulsifiable	UV light source



## ZL-37

### Level 4 Post Emulsifiable Fluorescent Penetrant

Essential for critical component applications, ultra-high sensitivity ZL-37 post-emulsifiable penetrant is designed for detecting fine, tight discontinuities in safety-critical components, such as titanium turbine components, and in high-stress parts, such as investment castings.

#### Benefits

##### Improve indication detection in the most critical applications

- Creates the clearest, brightest indications for even the finest flaws due to very strong UV and thermal stability
- Highest fluorescent brightness of any level 4 penetrant for high-contrast indications that are easy for inspectors to see – even when the indications are very small
- Indications stand out more since background fluorescence is minimized; emulsifiers only remove surface penetrant without the risk of over-washing

##### Maximize penetrant inspection process control

- Prevents over-washing since ZL-37 cannot be removed with water (unless combined with an emulsifier)
- Post Emulsifiable penetrant system is less susceptible to human error since only surface penetrant is removed in the final rinse stage

##### Wide range of inspections

- Inspect a wide range of high-value components without fear of corrosion or specification non-conformance
- Meets all major industry and NDT specification requirements, including Aerospace Prime and OEM specs, AMS 2644 and ISO 3452

#### Features

- Level 4 ultra-high sensitivity
- Post emulsifiable
- Bright, high-contrast indications
- Resists over-washing or over-removal
- High flash point
- Wide range of application methods
- Low odor
- Very low toxicity
- Alloy compatibility
- Very high thermal resistance
- Very high UV stability
- High dye content
- QPL SAE AMS 2644 Qualified Product List
- Approved for use by Pratt & Whitney

#### Part Numbers

**01-3188-35:** 1 gal / 3.78 L (case of 4)

**01-3188-40:** 5 gal / 18.9 L

**01-3188-30:** 20 gal / 75.7 L drum

**01-3188-45:** 55 gal / 208 L drum (P)

#### Product Properties

NDT Type	Penetrant Type	Sensitivity	Penetrant Methods	Removal Type	Required Equipment
Fluorescent Penetrant Testing	Type 1	Level 4 - Ultra-High Sensitivity	Method B, Method C, Method D	Post Emulsifiable	UV light source





### ZL-405

#### Level ½ Water-Based Fluorescent Penetrant

ZL-405 is a water-based, water-washable fluorescent penetrant used for finding indications in castings, forgings, extrusions and other materials with rough surfaces commonly found in automotive part applications. ZL-405 is an ideal solution when waste water produced during the inspection process is a concern for the operation. ZL-405 is water based and contains no petroleum distillates, which may allow its rinse water to be disposed of directly into the sewage system depending on local regulations.

The penetrant features excellent rinse removability and is self-developing which means that separate developer may not be necessary depending on the application. ZL-405 is designed to be environmentally sensitive while meeting EN ISO 3452-2, and can be used in place of any conventional water-washable fluorescent penetrant.

#### Benefits

##### Reduce environmental footprint and waste-water pollutants

- Reduce water treatment costs and discharge waste process water directly into the sewage system (depending on local regulations) due to minimal water-based contaminants.
- Meet or exceed local discharge regulations with low Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) levels.
- Support a healthy environment with water-based penetrants that have minimal occupational health and safety impacts.

##### Reliably speed up inspection and wash processes

- Identify bright indications with superior sensitivity and low fluorescent background interference.
- Increase throughput and reduce costs by eliminating the developer step of inspection processes depending on procedures and requirements.
- Rapid rinse and post inspection washing of parts thanks to excellent washability properties, due to trade secret chemistry.

#### Features

- Level ½, very low sensitivity
- Hydrocarbon-free
- Biodegradable
- Excellent water wash removability
- Developer is not required

#### Part Numbers

**01-3405-45:** 55 gal / 208 L drum

#### Product Properties

NDT Type	Penetrant Type	Sensitivity	Penetrant Method	Removal Type	Required Equipment
Fluorescent Penetrant Testing	Type 1	Level ½ - Very Low	Method A(W)	Water Washable (Water Based)	UV light source



## ZL-425

### Level 1 Water-Based Fluorescent Penetrant

ZL-425 is a water-based, water washable fluorescent penetrant used for finding indications in castings, forgings, extrusions and other materials with rough surfaces commonly found in automotive part applications. ZL-425 is an ideal solution when waste water produced during the inspection process is a concern for the operation. ZL-425 is water based and contains no petroleum distillates allowing it to drain directly into the sewage system depending on local regulations.

ZL-425 has been specifically developed for use within the automotive sector and can also be used in applications where traditional petroleum solvent-based penetrants may attack the surface, such as plastics. The penetrant features great rinse characteristics allowing it to be self-developing, so you may not need to use a separate developer depending on the application.

ZL-425 is designed to be environmentally sensitive while meeting industry approvals, including EN ISO 3452-2 and AMS 2644, and can be used in place of any conventional water-washable fluorescent penetrant.

#### Benefits

##### Reduce environmental footprint and waste-water pollutants

- Reduce water treatment costs and discharge waste process water directly into the sewage system (depending on local regulations) due to minimal water-based contaminants.
- Meet or exceed local discharge regulations with low Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) levels.
- Support a healthy environment with water-based penetrants that have minimal occupational health and safety impacts.

##### Reliably speed up inspection and wash processes

- Identify bright indications with superior sensitivity and low fluorescent background interference.
- Increase throughput and reduce costs by eliminating the developer step of inspection processes depending on procedures and requirements.
- Rapid rinse and post inspection washing of parts thanks to excellent washability properties, due to trade secret chemistry.

#### Features

- Level 1, low sensitivity
- Hydrocarbon-free
- Biodegradable
- Excellent water wash removability
- Developer is not required

#### Part Numbers

**01-3425-45:** 55 gal / 208 L drum

#### Product Properties

NDT Type	Penetrant Type	Sensitivity	Penetrant Method	Removal Type	Required Equipment
Fluorescent Penetrant Testing	Type 1	Level 1 - Low	Method A(W)	Water Washable (Water Based)	UV light source



### ZL-440

#### Level 2 Water-Based Fluorescent Penetrant

ZL-440 is a water-based, water washable fluorescent penetrant used for finding indications in castings, forgings, extrusions and other materials with rough surfaces commonly found in automotive part applications. ZL-440 is an ideal solution when waste water produced during the inspection process is a concern for the operation. ZL-440 is water based and contains no petroleum distillates allowing it to drain directly into the sewage system depending on local regulations.

ZL-440 has been specifically developed for use within the automotive sector and can also be used in applications where traditional petroleum solvent-based penetrants may attack the surface, such as plastics. The penetrant features great rinse characteristics allowing it to be self-developing, so you may not need to use a separate developer depending on the application.

ZL-440 is designed to be environmentally sensitive while meeting industry approvals, including EN ISO 3452-2 and AMS 2644, and can be used in place of any conventional water-washable fluorescent penetrant.

#### Benefits

##### Reduce environmental footprint and waste-water pollutants

- Reduce water treatment costs and discharge waste process water directly into the sewage system (depending on local regulations) due to minimal water-based contaminants.
- Meet or exceed local discharge regulations with low Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) levels.
- Support a healthy environment with water-based penetrants that have minimal occupational health and safety impacts.

##### Reliably speed up inspection and wash processes

- Identify bright indications with superior sensitivity and low fluorescent background interference.
- Increase throughput and reduce costs by eliminating the developer step of inspection processes depending on procedures and requirements.
- Rapid rinse and post inspection washing of parts thanks to excellent washability properties, due to trade secret chemistry.

#### Features

- Level 2, medium sensitivity
- Hydrocarbon-free
- Biodegradable
- Excellent water wash removability
- Developer is not required

#### Part Numbers

**01-3425-45:** 55 gal / 208 L drum

#### Product Properties

NDT Type	Penetrant Type	Sensitivity	Penetrant Method	Removal Type	Required Equipment
Fluorescent Penetrant Testing	Type 1	Level 2 - Medium	Method A(W)	Water Washable (Water Based)	UV light source



## ZL-4C

### Water-Based Fluorescent Penetrant

Developed for testing materials that can be affected by petroleum-based penetrants, ZL-4C water-based fluorescent penetrant contains no petroleum derivatives and is harmless to materials that can be attacked by petroleum-based solvents, such as plastics. It is also safe for use on ceramics, and it can be used as a leak detector. It is always recommended that the inspection material is tested for compatibility with ZL-4C prior to use.

#### Benefits

- Water-based for specialty applications
- Safe for use on ceramics
- Can be used for leak detection
- Can be diluted with water

#### Part Numbers

**01-3137-40:** 5 gal / 18.9 L

**01-3137-45:** 55 gal / 208 L drum

#### Product Properties

NDT Type	Penetrant Type	Required Equipment
Fluorescent Penetrant Testing	Type 1	UV light source





### ZR-10E

#### Hydrophilic Emulsifier

Designed to remove excess surface penetrant, ZR-10E minimizes surface background during method D fluorescent penetrant testing while protecting indication integrity in critical component inspections. ZR-10E provides long tank life and excellent solution consistency for dependable, long-lasting performance in a variety of applications.

#### Benefits

- Maximize penetrant inspection process control
- Wide range of inspections
- Maximize operator comfort and safety

#### Part Numbers

- 01-3625-40:** 5 gal / 18.9 L
- 01-3625-30:** 20 gal / 75.7 L drum
- 01-3625-45:** 55 gal / 208 L drum (P)

#### Features

- Hydrophilic emulsifier
- Reduces bleed-out on hollow parts
- Lower concentration required
- Resist degradation from bacteria, fungus or other contaminants
- QPL SAE AMS 2644 Qualified Product List
- Approved for use by Pratt & Whitney



### ZE-4E

#### Lipophilic Emulsifier

A method B lipophilic emulsifier, ZE-4E diffuses into the penetrant to clear the penetrant from the surface of the part being inspected. It is rinsed from the part by water, carrying penetrant off the part's surface. Designed to be used with post-emulsifiable penetrants level 2 ZL-2C, level 3 ZL-27A or level 4 ZL-37. Benefits include low volatility and a high flash point, so ZE-4E can be used in open immersion tanks.

#### Features

- Low volatility
- High flash point

#### Part Numbers

- 01-3550-40:** 5 gal / 18.9 L
- 01-3550-30:** 20 gal / 75.7 L drum
- 01-3550-45:** 55 gal / 208 L drum (P)



## ZP-4D Dry Powder Developer

ZP-4D is a noncombustible dry powder developer for form A penetrant testing that is ideal for highly sensitive fluorescent penetrant processes. ZP-4D is applied to oven dried parts following the use of penetrants and forms a thin film on parts that enhances the visibility of ultra-fine discontinuities.

### Benefits & Features

- Even, thin developer coverage
- Enhances visibility of ultra-fine discontinuities
- Non-combustible powder
- QPL SAE AMS 2644 Qualified Product List
- Approved for use by Pratt & Whitney

### Part Numbers

**01-3381-75:** 10 lb / 4.53 kg pail

**01-3381-89:** 50 lb / 22.6 kg pail

### Product Properties

NDT Type	Penetrant Type	Developer Type
Fluorescent Penetrant Testing, Visible Penetrant Testing	Type 1, Type 2	Form B



## ZP-14A Water Soluble Developer

ZP-14A is a water-soluble developer for the enhancing penetrant indications during liquid penetrant inspections. It produces a uniform white porous coating when dry which is easily removed in post inspection cleaning by a water spray. Advantages include bright and highly defined indications, and can be cleaned with water.

### Benefits & Features

- Bright, highly-defined indications
- Can be cleaned off with water
- Even, uniform coverage
- QPL SAE AMS 2644 Qualified Product List

### Part Numbers

**01-3381-75:** 10 lb / 4.53 kg pail

**01-3381-89:** 50 lb / 22.6 kg pail

### Product Properties

NDT Type	Penetrant Type	Developer Type
Fluorescent Penetrant Testing, Visible Penetrant Testing	Type 1, Type 2	Form B



## ZP-5B Water Suspendible Developer

ZP-5B forms an opaque white coating that makes a contrasting background for indications. This white powder developer is mixed with water for use and disperses quickly to form an opaque white suspension, but must be continually agitated during use to ensure uniformity of mix as developer will settle out on standing.

### Benefits & Features

- Non-flammable
- QPL SAE AMS 2644 Qualified Product List

### Part Number

**01-3341-81:** 25 lb / 11.3 kg pail

### Product Properties

NDT Type	Penetrant Type	Developer Type
Fluorescent Penetrant Testing, Visible Penetrant Testing	Type 1, Type 2	Form C



## ZP-9F Solvent Based Developer

ZP-9F is a non-aqueous developer made of organic particles, used often in aerosol cans. It produces a fast-drying, opaque white coating and contrasting background for fluorescent and visible penetrant inspections.

### Benefits

- Provides excellent background contrast
- Fast drying
- Thin opaque coating masks surface blemishes
- QPL SAE AMS 2644 Qualified Product List

### Part Numbers

**01-3354-78:** Aerosol can (case of 12) (P)

### Product Properties

NDT Type	Penetrant Type	Developer Type
Fluorescent Penetrant Testing, Visible Penetrant Testing	Type 1, Type 2	Form D, Form E



## SKD-S2 Solvent Based Developer

A bright white, non-aqueous developer, SKD-S2 creates an opaque white background for high-contrast penetrant testing and quickly draws penetrant out to create stronger, clearer indications for better inspection reliability and sensitivity.

### Benefits

#### Increases indication visibility

- Improves indication detection by creating an optimal surface for penetrant indication formation
- Bright white, opaque coverage blocks all underlying surface color and quickly draws penetrant to the surface for stronger, clearer indications

#### Application versatility

- Can be used with a variety of Type 2 and Type 1 penetrants in many different situations without measuring or diluting
- ISO 3452 conformance allows SKD-S2 to be used to inspect a wide range of parts

#### Faster cleaning

- Reduces inspection process time by minimizing post-inspection cleaning
- Easy-to-apply formula goes on cleanly, dries quickly and promotes faster indication formation to shave time off each step of the inspection process

### Features

- Bright white color
- Provides good background contrast
- Nonfluorescent
- Wicks penetrant out of indications
- Fast drying
- Easy to apply
- Convenient, ready to use formula
- Very low toxicity
- Matte, opaque coating
- Easy to clean

### Part Numbers

**01-5352-78:** Aerosol can (case of 12) (P)

**01-5352-35:** 1 gal / 3.78 L

**01-5352-40:** 5 gal / 18.9 L

**01-5352-45:** 55 gal / 208 L drum (P)

### Product Properties

NDT Type	Penetrant Type	Developer Form
Fluorescent Penetrant Testing, Visible Penetrant Testing	Type 1, Type 2	Form D, Form E





## SKL-SP2 Solvent Removable Visible Dye Penetrant

SKL-SP2 is a solvent removable penetrant for portability, especially for welding operations, and is post emulsifiable for greater resolution of flaw indications. SKL-SP2 dependably locates surface flaws and discontinuities with a simple three-step process that is ideal for basic industrial NDT and for people looking to get into nondestructive testing. It produces a visible red color contrast, and features outstanding penetrating characteristics.

### Benefits

#### Fastest inspection processing

- Reliable, simple 3-step process is a convenient and easy-to-use solution for preventative maintenance and control checks
- Quickly and completely covers the entire test surface due to high surface wetting
- Remove excess penetrant without water to eliminate the need to dry parts before applying developer

#### Dependable and convenient to use

- Easy to carry and use in the field with the convenient aerosol cans which are carefully designed for consistent, even coverage and maximum test area coverage
- Use in all conditions without the need for darkness or UV lights

#### Maximum indication detection

- Produces strong, vibrant indications thanks to the bright, vibrant red color, especially when used with SKD-S2 solvent-based developer

#### Wide application versatility

- Inspect a wide range of components without fear of corrosion or specification non-conformance
- Meets AMS 2644 and is NDT-approved for professional industrial applications

### Features

- Solvent removable
- ISO 3452 sensitivity level #2
- Can be used for method B, method C and method D
- Simple, easy-to-use process
- Vivid, high-contrast red color
- Superior flaw resolution
- Good surface wetting
- Optimized capillary action
- Works in visible light
- Very low toxicity
- Low odor
- NDT-spec compliant

### Part Numbers

**01-5155-78:** Aerosol can (case of 12) (P)

**01-5155-35:** 1 gal / 3.78 L

**01-5155-40:** 5 gal / 18.9 L

**01-5155-45:** 55 gal / 208 L drum

**01-5920-48:** SK-816 (P)

- SKC-S, 4 aerosol cans
- SKL-SP2, 2 aerosol cans
- SKD-S2, 2 aerosol cans



### Product Properties

NDT Type	Penetrant Type	Penetrant Methods	Removal Type
Visible Penetrant Testing	Type 2	Method B, Method C	Solvent Removable

# Penetrant Testing Materials

Visible / Color-Contrast Penetrants



## SKL-WP2

### Water Washable Visible Dye Penetrant

Developed for large surface areas and rough surfaces where excess penetrant is difficult to remove with a solvent removable cleaner or emulsifier, SKL-WP2 is a water-removeable dye penetrant for type 2 penetrant testing in visible white light.

#### Benefits

- Dependable and convenient to use
- Maximum indication detection
- Wide application versatility
- Maximize operator comfort and safety

#### Part Numbers

- 01-5190-78:** Aerosol can (case of 12) (P)
- 01-5190-35:** 1 gal / 3.78 L
- 01-5190-40:** 5 gal / 18.9 L
- 01-5190-45:** 55 gal / 208 L drum (P)

#### Features

- Easy, water-wash removal
- Can be used with method A or method C
- Vivid, high-contrast red color
- Superior flaw resolution
- Good surface wetting
- Optimized capillary action
- Works in visible light
- Very low toxicity
- Low odor
- NDT-spec compliant

#### Product Properties

NDT Type	Penetrant Type	Penetrant Methods	Removal Type
Visible Penetrant Testing	Type 2	Method A, Method C	Water Washable



## SKL-4C

### Water-Based Visible/Fluorescent (Dual-Purpose) Penetrant

Specially designed for chemically sensitive plastic parts, and for leak detection, SKL-4C is a red dye visible penetrant that is water based and water washable. As with most plastic parts, it is recommended that a trial application be used to confirm compatibility.

#### Benefits

- Water based
- Can be used for leak detection
- Can be used in visible and UV light inspections

#### Part Numbers

- 01-5125-40:** 5 gal / 18.9 L
- 01-5125-45:** 55 gal / 208 L drum

#### Product Properties

NDT Type	Penetrant Type	Penetrant Methods
Visible Penetrant Testing	Type 2	Method A, Method C



Your Complete Source for  
Testing Equipment Since 1969!

[www.BergEng.com](http://www.BergEng.com)  
Berg Engineering & Sales Company, Inc.

1-847-577-3980  
Info@BergEng.com



## SKC-S NDT Cleaner & Remover

SKC-S is an NDT-approved solvent cleaner/remover for pre-cleaning before non-destructive testing and for removing excess surface penetrant from an inspection area before applying developer during liquid penetrant testing.

### Benefits

#### Maximize range of inspections

- Inspect a wide range of components without worry
- Conforms to AMS 2644 Class 2, ASME BPVC and all major aerospace requirements

#### Application versatility

- Use a single cleaner throughout the entire penetrant testing process
- Comes in both bulk and aerosol forms, or as part of a kit for convenience

#### Minimize risk of missing a flaw

- Inspect reliably by cleaning only the surface without flushing penetrant out of discontinuities
- Dries quickly without leaving residue to prevent false indications

### Features

- AMS 2644 Class 2 nonhalogenated remover
- Fast drying
- Leaves no residue
- Suitable for use at low temperatures
- Alloy compatibility
- Bulk or aerosol form
- Does not over clean

### Part Numbers

**01-5750-78:** Aerosol can (case of 12) (P)

**01-5750-35:** 1 gal / 3.78 L

**01-5750-40:** 5 gal / 18.9 L

**01-5750-45:** 55 gal / 208 L drum



## SK-816 Kit Visible Dye Penetrant Testing Kit

SK Kits are a convenient collection of three Magnaflux dye penetrant testing consumable products that come in an easy-to-use aerosol form for Type 2 penetrant non-destructive testing.

Each penetrant testing kit comes with SKC-S, SKL-SP2, and SKD-S2.

### Benefits

- A convenient and easy-to-use solution that provides everything needed for dye penetrant testing
- Simple 3-step process for preventative maintenance and control checks
- Vivid, high-contrast color
- Superior flaw resolution
- Excellent reliability
- AMS 2644 QPL approved

### Part Numbers

**01-5920-48:** SK-816 (P)

- SKC-S, 4 aerosol cans
- SKL-SP2, 2 aerosol cans
- SKD-S2, 2 aerosol cans

### Product Properties

NDT Type	Penetrant Type	Penetrant Methods	Removal Type
Visible Penetrant Testing	Type 2	Methods B / C	Solvent-removable

# Penetrant Testing Equipment

NDT  
NDT  
NDT  
NDT







## ZA-1227 Fluorescent Penetrant Testing Equipment System

ZA-1227 systems are compact fluorescent penetrant inspection systems for batch and low volume inspection of small to medium size parts, including aerospace fasteners, automotive parts and surgical implant inspection.

### Features

- Compact Size
- 304 Stainless Steel Tanks (16 Gauge)
- Durable Welded Steel Frame
- EV6000 UV lamp
- Adaptable To Multiple Applications

### Part Numbers

**621792:** Method A for water washable penetrant testing has five stations

**622036:** Method B post-emulsifiable, lipophilic has six stations

**622103:** Method D post-emulsifiable, hydrophilic has seven stations

**522143:** Dynamic Cloud Developer Upgrade Kit for ZA-1227 Developer Tank

**609178RE:** Lid for ZA-1227 Tank



## ZA-1633 Fluorescent Penetrant Testing Equipment System

ZA-1633 systems are stand-alone fluorescent penetrant inspection systems for light volume inspection of small to medium size parts, including aerospace fasteners, automotive parts and surgical implant inspection.

### Features

- 304 stainless steel tanks (16 gauge)
- Durable welded steel frame
- Digitally calibrated dryer control
- EV6000 UV lamps
- Stand-alone inspection booth
- Visible light in inspection hood
- Ventilation fan in inspection hood

### Part Numbers

**621791:** 230V, Method A for water washable penetrant testing has 6 stations

**621791-01:** 460V, Method A for water washable penetrant testing has 6 stations

**522092:** Method B post-emulsifiable, lipophilic has 8 stations

**522109:** 230V, Method D post-emulsifiable, hydrophilic has 9 stations

**522094:** 460V, Method D post-emulsifiable, hydrophilic has 9 stations

**522084:** Dynamic Cloud Developer Upgrade Kit for ZA-1633 Developer Tank

**609178-P:** Lid for ZA-1633 Tank

# Penetrant Testing Accessories

NDT  
NDT  
NDT  
NDT





## NiCr Test Panels For Liquid Penetrant Testing NDT

NiCr test pieces for liquid penetrant inspection will help you maintain your PT testing process by verifying penetrant sensitivity and performance. Use to check for penetrant deterioration, to compare different penetrants or to verify sensitivity or visibility. NiCr test panels are ideal penetrant sensitivity comparators. They come in pairs, with panel set crack depths available in 20 microns.

### Part Number

**506252:** NiCr Test Panels, 20 micron, set of two (P)



## Portable Pressure Sprayer Penetrant Testing Applicator

The portable pressure sprayer is easy to use, light-weight pressure sprayer for spot application of penetrants, developers and cleaners. It is easy to disassemble for cleaning, has a 1 quart capacity and a maximum pressure of 200 psi.

### Benefits

- Easy to disassemble for cleaning
- 1 quart capacity
- Maximum pressure of 200 psi

### Part Number

**625773:** Portable Pressure Sprayer



## Water Spray Gun Penetrant Testing Applicator

The water spray gun is designed for pre and post rinsing of water-wash or post-emulsifiable penetrant system parts, provides optimal coarse spray to help prevent part over-washing.

### Part Number

**520090:** Water Spray Gun with hose adapter (P)



# UV Lamps

NDT  
NDT  
NDT  
NDT  
NDT







## EV6000 Hand-Held LED UV Lamp

The EV6000 LED UV lamp is a portable, hand-held UV lamp for fluorescent non-destructive testing applications like fluorescent penetrant testing and fluorescent magnetic particle inspections. Includes certification to all aerospace specifications, including ISO 3059, ASTM E3022, RRES 90061, and AITM6-1001, and meets all Nadcap requirements.

### Benefits

- Minimizes time to inspect parts
- Maximize range of inspections
- Improves operator comfort
- Increases real-world reliability

### Features

- 5,000  $\mu\text{W}/\text{cm}^2$  maximum irradiance at 15 in / 38 cm
- 9 in / 23 cm wide, uniform circular beam
- Light weight at only 2 lb / 0.9 kg
- No hot-spots in the beam profile
- IP65 rated, rugged, durable design
- No internal fan
- Low energy consumption
- Aerospace prime and OEM certified
- Improved operator and environmental safety
- Certified to ASTM / RRES / AITM / NADCAP

### Part Numbers

**625784:** EV6000 (North America) (P)

**628785:** EV6000 Canada (CSA)

**626779:** EV6000 MG Kit

- EV6000 Aerospace Lamp
- SKC-S Cleaner/Remover Aerosol (qty 2)
- 14AM Magnetic Particle Aerosol (qty 2)
- Yellow paint marker & shop cloth



## EV6500 High-Intensity, Dual-Light LED UV Lamp

The EV6500 is a hand-held, portable LED UV lamp with built-in white light LEDs for non-destructive testing applications like fluorescent penetrant testing and fluorescent magnetic particle inspections. Includes high intensity UV-A and white light modes, with manufacturer certification of peak wavelength and intensity.

### Benefits

- Minimizes time to inspect parts
- Improves visibility & versatility
- Increases real-world reliability
- Safer working conditions

### Features

- 7,000  $\mu\text{W}/\text{cm}^2$  high intensity UV-A illumination
- 10 in / 25 cm wide, uniform beam
- No hot-spots in the beam profile
- Built-in LED white light
- Single push-button operation for UV and white light

### Part Number

**626803:** EV6500 (North America) (P)

- Rugged, durable design
- No internal fan
- Low energy consumption
- Improved operator and environmental safety





## ST700

### Stationary Inspection LED UV Lamp for Fluorescent NDT

The ST700 is an inspection-grade overhead LED UV flood lamp with high-intensity UV-A illumination for non-destructive testing examinations such as fluorescent penetrant and magnetic particle testing. Modular control cable mounts separately in the inspection area, allowing the operator to select between UV-A and white light modes. Includes certification to all aerospace specifications, including ISO 3059, ASTM E3022, RRES 90061, AITM6-1001, and meets all Nadcap requirements.

#### Benefits

##### Speed up the inspection process

- Inspect more of the part at once thanks to the ultra-wide beam
- Eliminate additional steps and equipment involved with using a secondary hand-held inspection lamp

##### Minimize risk of missing indications

- Indications stand out bright and clear due to high intensity LED technology
- Mount the light out of the way, up to 46 in / 117 cm above the inspection surface while still maintaining inspection level intensity

##### Real-world reliability

- Fully sealed construction prevents dust and water damage
- Maintain UV intensity and coverage over time with non-clouding, proprietary lenses
- Rugged, impact resistant metal construction designed for NDT environments

##### Work in comfort

- Keeps inspection booths cool thanks to the fan-less, LED technology
- Eliminates hazardous mercury vapor for safer working conditions and better EHS compliance
- Easily maintain and changeover equipment with built-in white light

#### Features

- High intensity compliant UV-A illumination
- 20 x 26 in (50 x 66 cm) wide, uniform beam on standard model at 36 in (90cm)
- IP65 sealed construction prevents damage from water, vapor or dust
- Angled mounting brackets
- No hot-spots in the beam profile
- Aluminum body in a rugged, durable design
- No internal fan necessary
- Aerospace prime and OEM certified
- Certified to ASTM, AITM, RRES and Nadcap

#### Part Number

**628243:** North American Model (P)



## Magnetic Bench Mounting Adapters For Fluorescent Non-Destructive Testing

Magnaflux UV lamp and black light mounting hardware and accessories allow stabilized, hands-free use of portable black lights and LED UV lights during fluorescent non-destructive testing such as fluorescent liquid penetrant testing or fluorescent magnetic particle inspection.

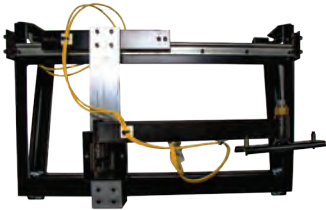
### Part Numbers

**623365:** Wet Bench Mounting System

**623367:** Black Light Ceiling Mount Assembly

**622596:** Modular Black Light 5.5 Extension

**623365:** Modular Black Light 7.5 Extension



## ST700 Hood Mount For Fluorescent Magnetic Particle Testing

The ST700 hood mount is designed for use with standard magnetic wet bench hoods. Four directions of movement allow the operator to position the ST700 anywhere within the hood for full part inspection. For large and heavy parts, overhead crane loading and unloading is made easy. The ST700 can be moved out of the way and hood can be retracted giving free access to the equipment bench.

### Part Number

**628388:** ST700 Mount



## UV-A Radiometer Measures UV-A Irradiance

The UV-A meter is a compact, rugged, easy to operate, digital radiometer for measuring and calibrating UV-A black light sources used in fluorescent penetrant testing and fluorescent magnetic particle inspections for non-destructive testing.

### Part Number

**625024:** UV-A Light Meter (P)



## Visible Light Meter Measures visible light in foot-candles or lux

The visible light meter accurately measures visible light in either foot-candles or lux and includes a permanently affixed visible light sensor specially constructed to measure visible white light for non-destructive testing.

### Part Number

**622338:** Visible Light Meter

# Ultrasonic Couplants

NDT  
NDT  
NDT  
NDT







### Ultrigel II

#### High Performance Ultrasonic Couplant

Ultrigel® II is an industry-leading, high-performance, ultrasonic couplant for flaw detection and sizing, thickness gauging, flow metering and acoustic emission testing.

#### Benefits

- Clings well to vertical and overhead surfaces
- Fills in depressions in rough surfaces
- Highest corrosion protection
- Slow drying for longer inspection time
- Provides good transducer lubrication
- Increased acoustic impedance reduces surface noise
- Wide range of specifications and approvals
- Thixotropic gel
- Great surface wetting
- Nuclear grade
- Aerospace approvals
- Hydrogen embrittlement testing

#### Part Numbers

- 25-912:** 12 fl oz / 354 mL bottles (case of 12)
- 25-901:** 1 gal / 3.78 L cubitainer
- 25-905:** 5 gal / 18.9 L cubitainer
- 25-955:** 55 gal / 208 L drum

#### Product Properties

NDT Type	Comparative Viscosity	Compatibility
Ultrasonic Testing	5.0	Most composites and metals



### Soundsafe

#### High Performance Ultrasonic Couplant

Soundsafe® is a high-performance, general-purpose ultrasonic couplant for flaw detection and sizing, thickness gauging, flow metering and acoustic emission testing.

#### Benefits

- Wide range of specifications and approvals
- Great surface wetting for fast, even coverage
- Thixotropic gel
- Non-toxic, non-irritating formula
- Increased acoustic impedance reduces surface noise
- Clings well to most vertical and overhead surfaces
- Highest corrosion inhibition
- Provides good transducer lubrication
- Slower drying for extended inspection time
- Nuclear grade
- Aerospace approvals
- Hydrogen embrittlement testing

#### Part Numbers

- 20-901:** 1 gal / 3.78 L
- 20-905:** 5 gal / 18.9 L
- 20-955:** 55 gal / 208 L drum

#### Product Properties

NDT Type	Comparative Viscosity	Compatibility
Ultrasonic Testing	5.25	Most composites and metals



## Sonotrace 30

### General-Purpose Ultrasonic Couplant

Sonotrace® 30 is a general-purpose ultrasonic couplant in medium-thick gel viscosity for flaw detection and thickness gauging applications. This glycerin-free couplant is a great choice for applications requiring minimum halogens, sulfur and low melting point metals, and offers good performance at a lower price point.

#### Part Numbers

**42-901:** 1 gal / 3.78 L  
**42-905:** 5 gal / 18.9 L  
**42-955:** 55 gal / 208 L drum

#### Product Properties

NDT Type	Comparative Viscosity	Compatibility
Ultrasonic Testing	4.5	Most composites and metals



## Echogel 20

### Economical Ultrasonic Couplant

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.

#### Part Numbers

**48-901:** 1 gal / 3.78 L  
**48-905:** 5 gal / 18.9 L  
**48-955:** 55 gal / 208 L drum

#### Product Properties

NDT Type	Comparative Viscosity	Compatibility
Ultrasonic Testing	5.5	Most composites and metals



## UT-X Powder

### Ultrasonic Couplant Powder

UT-X® Powder is a cost-effective couplant powder for flaw detection and thickness gaging applications where ferrous corrosion inhibition is required.

#### Part Numbers

**62-110:** 1 gal / 3.78 L  
**62-510:** 5 gal / 18.9 L

#### Product Properties

NDT Type	Viscosity	Compatibility
Ultrasonic Testing	Variable	Most composites and metals



### Sono 600

#### High-Temperature Ultrasonic Couplant

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.

#### Benefits

- Economical high-temperature couplant
- Excellent corrosion inhibition
- Very slow drying for extended inspection time or long-term coupling
- Non-toxic, biodegradable formula

#### Part Numbers

**45-6XT04:** 4 fl oz / 118 mL tubes (case of 6)  
**45-901:** 1 gal / 3.78 L

#### Product Properties

NDT Type	Comparative Viscosity	Compatibility
Ultrasonic Testing	Thick Gel	Most composites and metals



### Sono 1100

#### High-Temperature Ultrasonic Couplant

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.

#### Benefits

- Extended open time window for longer inspections or to optimize thickness readings at high temperatures
- Medium viscosity paste
- Non-toxic, non-irritating formula
- Excellent corrosion inhibition

#### Part Numbers

**30-6XT04:** 4 fl oz / 118 mL tubes (case of 6)  
**30-901\*:** 1 gal / 3.78 L  
*\* One (1) week lead time. Minimum order quantity is two (2) 1 gallon jugs.*

#### Product Properties

NDT Type	Comparative Viscosity	Compatibility
Ultrasonic Testing	Medium Paste	Most metals



## Pyrogel 100

### Wide Temperature Range Ultrasonic Couplant

Pyrogel® is a broad temperature range couplant for thickness gauging, flow metering, acoustic emissions testing and flaw detection/sizing. These products contain no polymers and resists drying, making them an excellent choice for long term flow metering applications.

#### Benefits

- Broadest temperature range
- Non-drying for long-term coupling or extended inspection time
- Good choice for long-term flow metering
- Excellent long-term corrosion inhibition
- Pyrogel 100 clings well to vertical and overhead surfaces

#### Part Numbers

**24-6XT04:** 4 fl oz / 118 mL tubes (case of 6)

**24-901\*:** 1 gal / 3.78 L

*\* One (1) week lead time. Minimum order quantity is two (2) 1 gallon jugs.*

#### Product Properties

NDT Type	Comparative Viscosity	Compatibility
Ultrasonic Testing	Thick Gel	Most composites and metals



## Pyrogel 7

### Wide Temperature Range Ultrasonic Couplant

Pyrogel® is a broad temperature range couplant for thickness gauging, flow metering, acoustic emissions testing and flaw detection/sizing. These products contain no polymers and resists drying, making them an excellent choice for long term flow metering applications.

#### Benefits

- Broadest temperature range
- Non-drying for long-term coupling or extended inspection time
- Good choice for long-term flow metering
- Excellent long-term corrosion inhibition

#### Part Number

**21-901\*:** 1 gal / 3.78 L

*\* One (1) week lead time. Minimum order quantity is two (2) 1 gallon jugs.*

#### Product Properties

NDT Type	Comparative Viscosity	Compatibility
Ultrasonic Testing	Thin Liquid	Most composites and metals



# Aqueous Cleaners

NDT  
NDT  
NDT  
NDT



# Aqueous Cleaners

## Specifications



	Daraclean 212	Daraclean 235	Daraclean 236	Daraclean 282	Daraclean 282GF	Daraclean 283
pH Level	Neutral	Neutral	Neutral	Alkaline	Alkaline	High-alkaline
Foam Level	High	Low	Moderate	Low	Low	Low
AQMD Certified					✓	
AMS 1551				✓		✓
ARP 1512				✓		
ARP 1755B					✓	
ASTM F495				✓		
ASTM F519				✓		
ASTM F945					✓	
ASTM F1110	✓					
Boeing BAC 5749						✓
Boeing BAC 5763	✓	✓		✓		
Boeing D6-48809				✓		
CSS 253				✓	✓	
GEAE Method 22, 51145				✓	✓	
Honeywell ARP 4992	✓	✓		✓		
Pratt & Whitney			✓	✓	✓	✓
PWA 407					✓	
PWA 36604				✓	✓	
PWA K231				✓		
RR CSS 204 Type A				✓	✓	





### Daraclean 212

#### Neutral Aqueous Cleaner

A foaming, all-purpose neutral cleaning solution meant for a broad spectrum of soils. Daraclean® 212 is formulated with a blend of surfactants, emulsifiers, and corrosion inhibitors, and is safe to use on most metals, while being non-aggressive with aluminum and titanium alloys.

#### Part Numbers

**01-6030-40:** 5 gal / 18.9 L

**01-6030-45:** 55 gal / 208 L drum (P)

#### Product Properties

pH Level	Foam Level	Silicates	Hard Water Tolerance	Aerospace Compliant	SCAQMD Certified
Neutral	High	No	Moderate	Yes	No



### Daraclean 235

#### Neutral Aqueous Cleaner

Daraclean® 235 is a low-foaming, neutral cleaning solution for general use on a broad spectrum of soils and safe to use on most metals, non-aggressive on aluminum, brass, copper, titanium and zinc alloys. Soil-rejecting properties suspend soils in the solution and can be filtered and skimmed to extend the life of the cleaner much further than emulsion cleaners.

#### Part Number

**01-6050-45:** 55 gal / 208 L drum

#### Product Properties

pH Level	Foam Level	Silicates	Hard Water Tolerance	Aerospace Compliant	SCAQMD Certified
Neutral	Low	No	Low	Yes	No



### Daraclean 236

#### Neutral Aqueous Cleaner

Daraclean® 236 is a moderate-foaming, all-purpose neutral cleaner for a wide range of soils and safe to use on most metals and removes tarnish from brass, bronze, and copper alloys. Excellent soil-rejecting properties keep soils suspended until solids settle and oil and grease coalesce and float, to be removed by filtering or skimming, which extends the life of the cleaner much further than emulsion-type solutions.

#### Part Number

**01-6040-45:** 55 gal / 208 L drum (P)

#### Product Properties

pH Level	Foam Level	Silicates	Hard Water Tolerance	Aerospace Compliant	SCAQMD Certified
Neutral	Moderate	No	High	Yes	No



## Daraclean 282

### Alkaline Aqueous Cleaner

A low-foaming, all-purpose alkaline cleaning solution for Aerospace, Daraclean® 282 is an excellent cleaner for a broad spectrum of soils.

#### Benefits

- Maximize range of use
- Maximize operator comfort and safety

#### Part Numbers

**01-6000-40:** 5 gal / 18.9 L  
**01-6000-45:** 55 gal / 208 L drum (P)

#### Features

- Multi-purpose alkaline cleaner
- Low foam level
- Aerospace compliant
- Works on a wide range of materials
- Cleans a broad spectrum of soils
- Multi-metal safe
- Low silicates
- Low residue

#### Product Properties

pH Level	Foam Level	Silicates	Hard Water Tolerance	Aerospace Compliant	SCAQMD Certified
High-alkaline	Low	Yes	Moderate	Yes	No



## Daraclean 282GF

### Alkaline Aqueous Cleaner

Daraclean® 282GF is a high-performance cleaner for a broad spectrum of soils. A low-foaming all-purpose glycol-free alkaline cleaning solution with a unique blend of surfactants and corrosion inhibitors, it meets or exceeds the specifications for most aerospace applications for aqueous and alkaline cleaners.

#### Benefits

- Alkaline cleaner
- SCAQMD Clean Air Certified
- Aerospace approved cleaner
- Low foam level
- Rust inhibitor
- Works on a wide range of materials
- Cleans a broad spectrum of soils

#### Part Number

**01-6010-45:** 55 gal / 208 L drum (P)

#### Product Properties

pH Level	Foam Level	Silicates	Hard Water Tolerance	Aerospace Compliant	SCAQMD Certified
Alkaline	Low	Yes	Moderate	Yes	Yes





### Daraclean 283

#### Alkaline Aqueous Cleaner

Daraclean® 283 is a low-foaming, powerful alkaline cleaning solution formulated for use on a broad spectrum of soils, composed of surfactants, emulsifiers, and corrosion inhibitors. It is safe to use on most metals and is non-aggressive towards titanium alloys.

#### Benefits

- Heavy-duty, high alkaline cleaner
- Low foam level
- Corrosion inhibitor
- Soil rejecting properties
- Aerospace approved

#### Part Number

**01-6060-45:** 55 gal / 208 L drum

#### Product Properties

pH Level	Foam Level	Silicates	Hard Water Tolerance	Aerospace Compliant	SCAQMD Certified
High-alkaline	Low	Yes	High	Yes	No