

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


NDT
NDT
NDT



NEW
PRODUCT

Introducing the
Lightweight, Heavy
Duty, and Durable
Y-2 Yoke

New ergonomic design
features swappable cord
and a sealed trigger.

 **MAGNAFLUX**

Y-2, 115 V / 50/60 Hz / 6.3 A Max

Part No. 628954

Serial No. N1005

PATENT PENDING

 **MAGNAFLUX**

magnaflux.com/Y-2

Magnetic Particle Testing Materials	2
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	10
Suspension Vehicle	11
Water Conditioners & Additives	12
Magnetic Particle Testing Equipment	13
Magnetic Yokes	21
Magnetic Particle Testing Accessories	25
Penetrant Testing Materials	35
Water Washable Fluorescent Penetrants	37
Post Emulsifiable Fluorescent Penetrant	40
Water-Based Fluorescent Penetrant	42
Emulsifiers	43
Developers	44
Visible / Color-Contrast Penetrants	47
Remover	49
Penetrant Testing Equipment	50
Penetrant Testing Accessories	52
UV Lamps	54
Ultrasonic Couplants	58
General Purpose Couplants	60
High Temperature Couplants	62
Aqueous Cleaners	64
Neutral Industrial Parts Cleaners	66
Alkaline Industrial Parts Cleaners	67
Heavy-Duty Industrial Parts Cleaners	68

Magnetic Particle Testing Materials

NDT
NDT
NDT
NDT



	14A	14A Aqua-Glo	14A Redi-Bath	14AM	20B	MG-410	MG-450A	7C Black	7HF	#1 Gray	#2 Yellow	#8A Red
Description	Particles	Ready-to-use aerosol	Concentrated liquid	Ready-to-use liquid & aerosol	Powder premix	Particles	Powder premix	Particles	Liquid aerosol	Particles	Particles	Particles
Product Type	Fluorescent	Fluorescent	Fluorescent	Fluorescent	Fluorescent	Fluorescent	Fluorescent	Visible	Visible	Visible	Visible	Visible
Method	Wet method	Wet method	Wet method	Wet method	Wet method	Wet method	Wet method	Wet method	Wet method	Dry method	Dry method	Dry method
Suspension Vehicle	Water or oil	Water	Water	Oil	Water			Water or oil	Oil			
Sensitivity*	8 – 9	8 – 9	8 – 9	8 – 9	8 – 9			> 6	> 6	> 8	> 8	> 8
AMS 2641			✓									
AMS 3040										✓	✓	✓
AMS 3042								✓				
AMS 3043									✓			
AMS 3044	✓	✓	✓		✓	✓	✓					
AMS 3045				✓ Bulk								
AMS 3046				✓ Aerosol								
ASTM E709	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ASTM E1444	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ASME BPVC Section V	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Boeing PS 21201	✓								✓			
ISO 9934	✓			✓		✓			✓			
MIL-STD-2132	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MIL-STD-271	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓
NAVSEA 250-1500-1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NAVSEA T9074-AS-GIB-010/271	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAFRAN IN 5300	✓					✓						

* 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 ultra-violet 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

01-1725-38: Aerosol can (case of 12) (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 (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



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)



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





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 500 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 Yokes





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
- 611710:** Global Version
- Y-8 DC Yoke
 - Sealed lead-acid battery (6V, 12 A-hr)
 - Battery charger, global voltages (115/230 V, 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

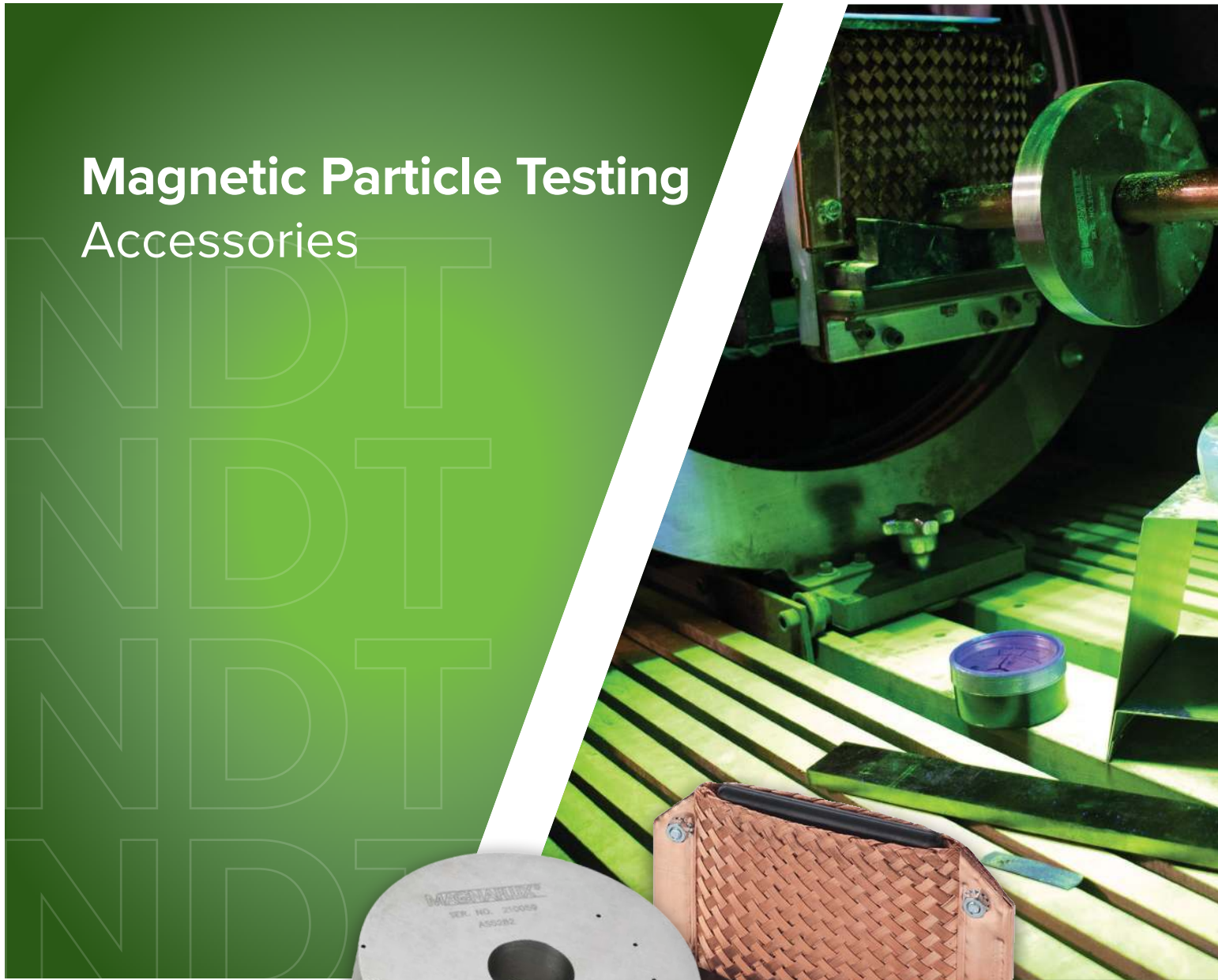
Part Numbers

50651: 115V, 60 Hz, 12A

620983: 230V, 50 Hz, 8A

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

Magnetic Particle Testing Accessories





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

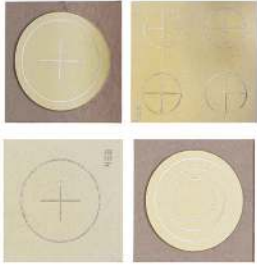
The FSM-2 is used for tangential measuring of the magnetic field strength in DC and AC fields. A tangential field probe is attached to the workpiece's surface during magnetization, and the hall sensor measures the voltage change produced by the magnetic field. This meter measures the true RMS of asymmetric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

133033: FSM-2



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, Un-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, Un-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)
- 626342:** 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 (P)

605657: Heavy Duty, standard size contacts

624789: Heavy Duty Braided Lead Pad, large size contacts

69393: Heavy Duty Braided Lead Pad, Mag Kit



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

621658: Steady Rest, Tailstock Mounted

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



Penetrant Testing Materials Specifications



	ZL-2C	ZL-4C	ZL-15B	ZL-19	ZL-27A	ZL-37	ZL-56	ZL-60D	ZL-67	SKL-SP2	SKL-WP2	SKL-4C
Penetrant Type	Type 1	Type 1	Type 1	Type 1	Type 1	Type 1	Type 1	Type 1	Type 1	Type 2	Type 2	Type 2
Level	Level 2	N/A	Level 1/2	Level 1	Level 3	Level 4	Level 4	Level 2	Level 3	N/A	N/A	N/A
Removal Type	Post emulsifiable	N/A	Water washable	Water washable	Post emulsifiable	Post emulsifiable	Water washable	Water washable	Water washable	Solvent Removable	Water Washable	N/A
Classification	Method B / C / D		Method A / C	Method A / C	Method B / C / D	Method B / C / D	Method A / C	Method A / C	Method A / C	Method B / C / D	Method A / C	Method A / C
QPL Qualified Product	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
AECL	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
AMS 2644	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
ASME	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ASTM E1417	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
ASTM E165	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Boeing BAC 5423 PSD 6-46 or 8-4	✓		✓	✓	✓	✓	✓	✓	✓		✓	
Boeing PS-21202	✓		✓	✓	✓	✓	✓	✓	✓		✓	
GE P3TF2	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
GE P50YP107								✓		✓	✓	
Honeywell EMS 52309	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
ISO 3452-2	✓				✓	✓		✓	✓	✓	✓	
MIL-STD-2132	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
MIL-STD-271	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
NAVSEA 250-1500-1										✓		
NAVSEA T9074-AS-GIB-010/271	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	
Pratt & Whitney	✓			✓	✓	✓		✓				

	ZP-4B	ZP-5B	ZP-9F	ZP-14A	SKD-S2	ZE-4E	ZR-10E	SKC-S
Product Type	Developer	Developer	Developer	Developer	Developer	Emulsifier	Emulsifier	Cleaner
Classification	Form a	Form c	Form d for Type 1 / Form d for Type 2	Form b	Form e for Type 2 / Form d for Type 1	Method B	Method D	Class 2
QPL Qualified Product	✓	✓	✓	✓	✓	✓	✓	
AECL	✓	✓	✓	✓	✓	✓	✓	✓
AMS 2644	✓	✓	✓	✓	✓	✓	✓	✓
ASME	✓	✓	✓	✓	✓	✓	✓	✓
ASTM E1417	✓	✓	✓	✓	✓	✓	✓	✓
ASTM E165	✓	✓	✓	✓	✓	✓	✓	✓
Boeing BAC 5423 PSD 6-46 or 8-4	✓	✓	✓	✓	✓	✓	✓	✓
Boeing PS-21202	✓	✓	✓	✓	✓	✓	✓	
GE P3TF2	✓	✓	✓	✓	✓		✓	✓
GE P50YP107	✓				✓			✓
Honeywell EMS 52309	✓	✓	✓	✓	✓		✓	
ISO 3452-2	✓				✓			✓
MIL-STD-2132	✓	✓	✓	✓	✓	✓	✓	✓
MIL-STD-271	✓	✓	✓	✓	✓	✓	✓	✓
NAVSEA 250-1500-1					✓			✓
NAVSEA T9074-AS-GIB-010/271	✓	✓	✓	✓	✓			
Pratt & Whitney							✓	



ZL-15B

Level 1/2 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 1/2 - 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

01-3272-78: Aerosol can (case of 12)

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

01-3187-78: Aerosol can (case of 12)
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

01-3188-78: Aerosol can (case of 12)

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-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-4B

Dry Powder Developer

ZP-4B is a free flowing, white, fluffy powder used as a high sensitivity dry powder developer for penetrant inspection. It is supplied ready to use and forms a thin film on parts which enables it to enhance indications of ultra-fine discontinuities.

Benefits & Features

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

Part Numbers

01-3328-69: 10 lb / 4.53 kg pail
01-3328-75: 20 lb / 9.07 kg pail (P)

Product Properties

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



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

As a complementary developer for penetrant inspections, 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)
01-3354-40: 5 gal / 18.9 L

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

01-59-70-48: SK-416 (P)

- SKC-S, 2 aerosol cans
- SKL-SP2, 1 aerosol can
- SKD-S2, 1 aerosol can
- SCRUBS® hand cleaner towels, 3 towels
- Yellow paint marker, 1 pen
- Shop Cloth, 1 towel

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

- SKC-S, 4 aerosol cans
- SKL-SP2, 2 aerosol cans
- SKD-S2, 2 aerosol cans
- SCRUBS® hand cleaner towels, 3 towels
- Yellow paint marker, 1 pen
- Shop Cloth, 1 towel



SK-416



SK-816

Product Properties

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



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-removable 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



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

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 lamp
- 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:** 260V, 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





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)

626776: EV6000 ZP Kit

- EV6000 Aerospace Lamp
- SKC-S Cleaner/Remover Aerosol (qty 2)
- ZL-27A Penetrant Aerosol
- ZP-9F Developer Aerosol
- Yellow paint marker & shop cloth

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)

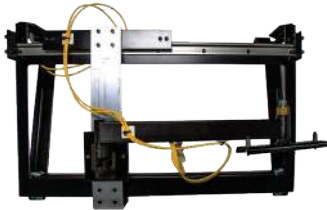


Magnetic Bench Mounting Adapters For Fluorescent Non-Destructive Testing

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



	Echogel	Sonotrace	Soundsafe	Ultrigel II	UT-X Powder	Sono 600	Sono 1100	Pyrogel 7	Pyrogel 100
Form	Gel	Gel	Gel	Gel	Powder	Thick gel	Medium paste	Thin liquid	Thick gel
Viscosity*	5.5	4.5	5.25	5	Variable	N/A	N/A	N/A	N/A
Silicone						✓	✓	✓	✓
Glycerin			✓	✓					
Propylene Glycol	✓	✓	✓	✓		✓			
Temperature Range	27 to 140°F (-3 to 60°C)	25 to 175°F (-4 to 79°C)	0 to 200°F (-18 to 93°C)	-10 to 210°F (-23 to 99°C)	32 to 120°F (0 to 49°C)	700 to 775°F (371 to 413°C)	0 to 700°F (-18 to 371°C)	-50 to 730°F (-45 to 388°C)	-50 to 805°F (-45 to 429°C)
API	✓	✓	✓	✓		✓	✓	✓	✓
ASME BPVC	✓	✓	✓	✓		✓	✓	✓	✓
ASTM F519	✓		✓	✓					
ASTM F945			✓	✓					
AWS	✓	✓	✓	✓		✓	✓	✓	✓
Pratt & Whitney			✓	✓					
PWA 36604		✓	✓	✓					

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



Ultrage II

High Performance Ultrasonic Couplant

Ultrage® 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



	Daraclean 200	Daraclean 212	Daraclean 235	Daraclean 236	Daraclean 282	Daraclean 282GF	Daraclean 283
pH Level	High-alkaline	Neutral	Neutral	Neutral	Alkaline	Alkaline	High-alkaline
Foam Level	Low	High	Low	Moderate	Low	Low	Low
Silicates	✓				✓	✓	✓
Phosphates							
AQMD Certified	✓					✓	
Immersion Application	✓	✓	✓	✓	✓	✓	✓
Ultrasonic Application	✓	✓	✓	✓	✓	✓	✓
Spray Application	✓		✓	✓	✓	✓	✓
Steam Application		✓	✓	✓	✓	✓	
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 SOP 209						✓	
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



Daraclean 200

Heavy-Duty Industrial Cleaner

Daraclean® 200 is a low-foaming high-alkaline cleaner for heavy-duty use on most metals, and it is not aggressive on brass, copper and titanium alloys. It is designed for immersion, spray, and ultrasonic applications.

Benefits

- General purpose
- Alkaline cleaning
- Low-foaming
- Corrosion inhibitor

Part Number

01-6020-45: 55 gal / 208 L drum

Product Properties

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



155 Harlem Avenue,
Glenview, Illinois 60025 USA
+1 847-657-5300
www.magnaflux.com

Rev: 080919