

# MAGNETIC PARTICLE TESTING MATERIALS



MPI Fluorescent  
Materials



MPI Non-Fluorescent  
(Visible) Materials



"MAGNAFLUX Magnaglo® fluorescent and Magnavis® visible magnetic particle testing materials provide vivid, superior indications under black light and daylight inspection conditions."

# brilliant



Magnaflux® certified fluorescent and visible magnetic particle inspection materials offer NDT professionals superior detection capabilities in the identification of surface and slightly subsurface discontinuities in ferrous materials under daylight and black light conditions.

*Vivid Performance*

# MAGNAGLO® FLUORESCENT PARTICLE INSPECTION MATERIALS

## FLUORESCENT WET METHOD PARTICLES

### Magnaglo® 14A Fluorescent Magnetic Powder

Magnaglo® 14A is intended for use in high sensitivity, wet method magnetic particle inspection and may be suspended in either a petroleum-based vehicle (oil) such as Carrier II or water.

**Specification Compliance:** ASTM E 1444, ASME B&PV Code, Sec. V, NAVSEA 250-1500-1, ASTM E-709 (E-138), MIL-STD-271, AMS-3044, Cummins IS-16048-13, MIL-STD-2132, Boeing PS 21201, British Std. B.S. 4069.

**Applications:** Magnaglo® 14A is used to locate fine surface and slightly sub-surface discontinuities such as inclusions, seams, shrink cracks, tears, laps, flakes, welding defects, grinding cracks, quenching cracks, and fatigue cracks.

#### Part Number & Container Size:

- 01-0130-57 1 lb. Plastic Jar
- 01-0130-71 1 lb. Plastic Jar (6)
- 01-3130-69 20 lb. Plastic Pail



### Magnaglo® 14AM Prepared Oil Bath

Magnaglo® 14AM is a fluorescent prepared bath of 14A powder mixed with Carrier II (a high flash point petroleum vehicle). It comes ready to use without measuring and mixing.

**Specification Compliance:** ASTM E 1444, ASTM E 709 (E-138), Cummins IS-16048-13, MIL-STD-2132, Boeing PS 21201, British Std. B.S. 4069, DOD-F-87935, AMS-3045, AMS-3046 (aerosol package only).

**Applications:** Magnaglo® 14AM is used to locate fine surface and slightly subsurface discontinuities such as inclusions, seams, shrink cracks, tears, laps, flakes, welding defects, grinding cracks, quenching cracks and fatigue cracks.

#### Part Number & Container Size:

- 01-0145-40 5 Gal. Pail
- Also available in 16 oz. aerosol cans.



## MAGNETIC PARTICLE TESTING MATERIALS

Magnaflux Magnaglo® fluorescent and Magnavis® visible magnetic particle testing materials are two of the industry's most widely used and trusted NDT product lines. Their superior, finely controlled particles deliver maximum sensitivity to produce vivid indications that are unmatched in their detection of surface and slightly subsurface discontinuities across a range of ferrous materials. Backed by more than 80 years of magnetic particle experience and an expansive line-up of accessories and equipment, Magnaglo® and Magnavis® products are designed to support your NDT inspection process both in the field and in the shop with the level of performance that only Magnaflux® can provide.

## Magnaglo® 14A Redi-Bath

Magnaglo® 14A Redi-Bath is a prepared liquid concentrate of 14A Fluorescent Powder, wetting agents, anti-foaming agents, and long lasting rust inhibitors.

**Specification Compliance:** ASTM E 1444, ASTM E 709, NAVSEA 250-1500-1, MIL-STD-271, MIL-STD-2132, ASME B & PV Code, Sec. V.

**Applications:** Magnaglo® 14A Redi-Bath is used to locate fine surface and slightly subsurface discontinuities such as inclusions, seams, shrink cracks, tears, laps, flakes, welding defects, grinding cracks, quenching cracks and fatigue cracks.

### Part Number & Container Size:

- 01-9130-35 Case of (4) 1 Gal. Jugs
- 01-9130-41 Case of (6) 27 oz. Containers



## Magnaglo® 14A Aqua-Glo®

Magnaglo® 14A Aqua-Glo® is a prepared liquid solution of 14A Fluorescent Powder, water, conditioning agents, corrosion inhibitors and carbon dioxide propellant. It is designed to offer the benefits of a water bath in a convenient ready to use aerosol form. Magnaglo® 14A Aqua-Glo® is ideally suited for applications where portability is required, and flammability is a concern.

**Specification Compliance:** ASTM E 1444, ASTM E 709, NAVSEA 250-1500-1, ASME.

**Applications:** Magnaglo® 14A Aqua-Glo® is used to locate fine surface and slightly subsurface discontinuities such as inclusions, seams, shrink cracks, tears, laps, flakes, welding defects, grinding cracks, quenching cracks and fatigue cracks.

### Part Number & Container Size:

Available in 16 oz. aerosol cans.



## Magnaglo® 20B

Magnaglo® 20B is a dry mix formula of 14A Fluorescent Powder and WA-2B water conditioner containing wetting agents and corrosion inhibitors designed to be added to a water bath.

**Specification Compliance:** ASTM E 1444, ASTM E 709 (E-138), NAVSEA 250-1500-1, MIL-STD-271, MIL-STD-2132, ASME B & PV Code, Sec. V.

**Applications:** Magnaglo® 20B is used to locate fine surface and slightly subsurface discontinuities such as inclusions, seams, shrink cracks, tears, laps, flakes, welding defects, grinding cracks, quenching cracks and fatigue cracks.

### Part Number & Container Size:

- 01-0179-71 Case of (6) 1 lb. Containers
- 01-0179-70 15 lb. Pail
- 01-0179-84 30 lb. Pail





## Magnaglo® MG-410 Wet Method Fluorescent Magnetic Powder

Magnaglo® MG-410 Wet Method Fluorescent Magnetic Powder is a dry, free flowing magnetic powder that fluoresces bright yellow-green under black light (wavelength of 365 nm). Its fluorescent yellow-green color provides a vivid contrast against metal parts when viewed under black light in a darkened area but does not require total darkness for viewing.

MG-410 is closely controlled to assure optimum batch to batch consistency and inspection reliability and can be used with either water or oil vehicles.

**Specification Compliance:** ASME B & PV Code, Sec. V, NAVSEA 250-1500-1, MIL-STD-2132, ASTM E 709, NAVSEA T9074-AS-GIB-010/271.

**Applications:** Magnaglo® MG-410 is used for general purpose wet method magnetic particle inspection of inclusions, seams, cracks, tears, laps, flakes and welding defects.

### Part Number & Container Size:

01-0191-59 2 lb. Jar



## OIL VEHICLE

### Magnaglo® Carrier II Oil

Magnaglo® Carrier II Oil is used to suspend wet (oil) method magnetic particles when water is not used as a suspension vehicle. It has virtually no odor or fluorescence and possesses a flash point in excess of 200°F allowing it to meet OSHA requirements for a Class III B liquid.

**Specification Compliance:** ASTM E 1444, ASTM E 709, Pratt & Whitney PMC 1887, A-A-59230, ASME B & PV Code, Sec. V, AMS-2641.

### Part Number & Container Size:

01-2122-40 5 Gal. Pail

01-2122-30 20 Gal. Drum

01-2122-45 55 Gal. Drum



## WATER BATH ADDITIVES

### Magnaglo® AX-52 Corrosion Inhibitor

Magnaglo® AX-52 is a pale yellow to amber colored liquid corrosion inhibitor that mixes in and quickly dissolves in the water bath. It is an outstanding corrosion inhibitor for wet method magnetic particle inspection.

### Part Number & Container Size:

01-2190-40 5 Gal. Jug



### Magnaglo® WA-2B Water Conditioner

Magnaglo® WA-2B is a white granular powder water conditioner used in wet method magnetic particle testing when water is used as the bath vehicle. It is an excellent general-purpose water conditioner that gives a water bath good surface wetting and magnetic particle dispersion capabilities, along with a blend of wetting agents, corrosion inhibitors and anti foaming agents.

### Part Number & Container Size:

01-2148-63 5 lb. Pail



## Magnaglo® WC-1 Water Conditioner

Magnaglo® WC-1 is used in wet method magnetic particle testing when water is used as the bath vehicle. It is more rapidly dispersed than powdered conditioners and its unique blend of wetting agents, corrosion inhibitors and anti foaming agents eliminates the need for additional water conditioners. WC-1 provides good surface wetting and magnetic particle dispersion capabilities.

### Part Number & Container Size:

01-2173-40 5 Gal. Pail



## Magnaglo® ZAF-2 Non-Silicone Anti-Foam

Magnaglo® ZAF-2 Non-Silicone Anti-Foam is a clear, colorless liquid used to eliminate foaming in aqueous developer baths, water based magnetic particle baths and hydrophilic remover baths. A few drops of ZAF-2 sprinkled around on the surface of a bath is all that is required to eliminate most foaming.

### Part Number & Container Size:

01-9410-20 1 Gal. Plastic Bottle



## PORTABLE FLUORESCENT INSPECTION KITS

### Magnaglo® Portable Fluorescent Inspection Kits

Magnaglo® Portable Fluorescent Inspection Kits come with a ZB-100F Ultraviolet Black Light and materials used to perform magnetic particle inspection. (No magnetic yoke is included with kit.)

### Part Number:

#### 600088 - Magnaglo® Kit with 115V - 60 Hz ZB-100F Black Light

Each kit contains:\*

- (1) ZB-100F Fan-Cooled Ultraviolet Black Light
- (2) Cans of 14AM
- (2) Cans of SKC-S Cleaner
- Paint Marker
- SCRUBS® Hand Towels
- Plastic Carrying Case and Instructions

#### 600089 - Magnaglo® Kit with 230V - 60 Hz ZB-100F Black Light

Each kit contains:\*

- (1) ZB-100F Fan-Cooled Ultraviolet Black Light
- (2) Cans of 14AM
- (2) Cans of SKC-S Cleaner
- Paint Marker
- SCRUBS® Hand Towels
- Plastic Carrying Case and Instructions

\* Note: No magnetizing device is supplied with this kit.



600088



## MAGNAVIS® VISIBLE PARTICLE INSPECTION MATERIALS

### VISIBLE WET METHOD PARTICLES

#### Magnavis® 7C Black Visible Wet Method Dry Powder Concentrate

Magnaglo® 7C Black Visible Wet Method Dry Powder Concentrate is ideally suited for use on light colored surfaces where optimum color contrast is needed. Magnaglo® 7C is composed of compounded magnetic powder and may be suspended in either Carrier II Oil Vehicle or in water.

**Specification Compliance:** ASME B & PV Code, Sec. V, ASTM E 709 (E-138), ASTM E 1444, AMS 3042, MIL-STD-271, MIL-STD-2132, NAVSEA 250-1500-1.

**Applications:** Magnaglo® 7C Black Visible Wet Method Dry Powder Concentrate is used to locate inclusions, seams, shrink cracks, tears, laps, flakes, welding defects, grinding cracks, quenching cracks and fatigue cracks.

#### Part Number & Container Size:

01-1116-66 8 lb. Pail



#### Magnavis® 7HF Black Visible Magnetic Particle Wet Method Prepared Bath

Magnavis® 7HF Black Visible Magnetic Particle Wet Method Prepared Bath is designed for spot inspections of parts that, because of their size or location, must be inspected in the field.

Magnavis® 7HF is composed of 7C Black Magnaflux® magnetic powder suspended in a low volatility mineral oil. It offers significant advantages in situations where bulk processing is found to be impractical and is often used in combination with WCP-2 White Contrast Paint.

**Specification Compliance:** ASME B & PV Code, Sec. V, ASTM E 709, ASTM E 1444, AMS 3041, AMS 3043, Boeing PS-21201, MIL-STD-2132.

**Applications:** Magnavis® 7HF is ideal for remote inspection of tubes, piping, and other large structures.

#### Part Number & Container Size:

Available in 16 oz. aerosol cans.



## WHITE CONTRAST PAINT

### Magnavis® WCP-2 Contrast Paint

Magnavis® WCP-2 Contrast Paint provides a white background that enhances magnetic particle indications. It is composed of acetone and inorganic pigments and utilizes a carbon dioxide aerosol propellant for ease of application.

**Specification Compliance:** BS 5044.

**Applications:** Magnavis® WCP-2 is designed for use in applications where the contrast in color between the part being tested and the magnetic particles being used is insufficient for reliable identification of flaws. WCP-2 can be used with both dry and wet-method magnetic particles.

**Part Number & Container Size:**

Available in 16 oz. aerosol cans.



## NON-FLUORESCENT (Visible) INSPECTION KITS

### Magnavis® Non-Fluorescent Inspection Kit

Magnavis® Non-Fluorescent Inspection Kits come with all materials (Yoke not included) required to perform in-field or in-shop non-fluorescent NDT inspections.

**Applications:** Portable non-fluorescent NDT inspections.

**Part Number:**

45295 - Each Magnavis® Non-Fluorescent Inspection Kit Contains:\*

- 1 lb. #1 Gray Magnetic Powder
- 1 lb. #8A Red Magnetic Powder
- 1 lb. #3A Black Magnetic Powder
- (2) Cans (16 oz.) 7HF
- (1) Can (16 oz.) WCP
- (2) Cans (16 oz.) SKC-S Cleaner/Remover
- Powder Spray Bulb
- Field Indicator (2480)
- Paint Marker
- SCRUBS® Hand Towels
- Plastic Carrying Case and Instructions

\* Note: No magnetizing device is supplied with this kit.



45295



## VISIBLE DRY METHOD PRODUCTS

### Magnavis® Dry Method Non-Fluorescent Magnetic Powders

Magnavis® Dry Method Non-Fluorescent Magnetic Powders produce clear, sharp indications across a variety of surfaces and background colors. Available in #1 Gray, #2 Yellow, #3A Black and #8A Red, Magnavis® magnetic powders are ready to use, free flowing, general purpose magnetic powders designed to produce, superior indications of surface and slightly subsurface discontinuities in ferrous materials.

**Specification Compliance:** ASME B & PV Code, Sec. V, ASTM E 709, NAVSEA 250-1500-1, NAVSEA T9074-AS-GIB-010/271, MIL-STD-2132, AMS-3040.

**Applications:** Magnavis® Dry Method Non-Fluorescent Magnetic Powders are used to identify indications in welds, large forgings and castings.

#### Part Number & Container Size:

- 01-1716-69 #1 Gray Magnetic Powder - 10 lb. Pail
- 01-1716-87 #1 Gray Magnetic Powder - 45 lb. Pail
- 01-1732-69 #2 Yellow Magnetic Powder - 10 lb. Pail
- 01-1732-87 #2 Yellow Magnetic Powder - 45 lb. Pail
- 01-1748-87 #3A Black Magnetic Powder - 45 lb. Pail
- 01-1780-69 #8A Red Magnetic Powder - 10 lb. Pail
- 01-1780-87 #8A Red Magnetic Powder - 45 lb. Pail





# SPECIFICATIONS

## MAGNAGLO® MAGNETIC PARTICLES

Magnaglo® Fluorescent Wet Method Magnetic Particles									
SPECIFICATIONS	14A	14AM	14 Aqua Glo	14A Redi-Bath	208	MG-410	7C Black	7HF Black	Carrier II
NAVSEA T9074-AS-GIB-010/271	X		X	X	X	X	X	X	X
MIL-STD-2132	X	X	X	X	X	X	X	X	X
AMS 2641									X
AMD 3041								X	
AMS 3042							X		
AMS 3043								X	
AMS 3044	X		X	X	X				
AMS 305		X							
AMS 3046		X							
ASME B & PV Code, Sec. V	X	X	X	X	X	X	X	X	X
ASTM E 709	X	X	X	X	X	X	X	X	X
ASTM E 1444	X	X	X	X	X		X	X	X
A-A-59230		X							X
Boeing PS-21201	X	X	X	X	X		X	X	X
NAVSEA 250-1500-1	X		X	X	X	X	X		
Pratt & Whitney PMC 1887									X

## MAGNAVIS® MAGNETIC PARTICLES

Magnavis® Visible Dry Method Magnetic Particles				
SPECIFICATIONS	1 Gray	2 Yellow	8A Red	3A Black
NAVSEA T9074-AS-GIB-010/271	X	X	X	X
MIL-STD-2132	X	X	X	X
NAVESEA 250 -1500-1	X	X	X	X
AMS 3040	X	X	X	X
ASME B & PV Code, Sec. V	X	X	X	X
ASTM E 709	X	X	X	X
ASTM E 1444	X	X	X	X



# MAGNETIC PARTICLE TESTING ACCESSORIES



MPI Accessories

"MAGNAFLUX® Magnetic Particle Testing Accessories have allowed us to streamline and simplify our NDT process, while simultaneously boosting inspection speed and reducing cost."

simplify



Magnaflux® Magnetic Particle Testing Accessories are designed to help improve the speed, detection capabilities, and cost effectiveness of your MPI system.

*Simplifying Inspection*

## CABLES, CONNECTORS & REMOTE DEVICES

### Cables

Rubber covered flexible cables are available in standard lengths of 15 ft. (4.57m) and 20 ft. (6.09m) with a choice of either-end or lug connectors. Custom cables and replacement connectors are also available.

#### Part Number:

- 11306 15 ft. (4.57m) lugs at both ends
- 11307 15 ft. (4.57m) lug and either-end
- 11308 15 ft. (4.57m) either-ends at both ends
- 11312 20 ft. (6.09m) lugs at both ends
- 11313 20 ft. (6.09m) lug and either-end
- 11314 20 ft. (6.09m) either-ends at both ends



11306



1238

### Connectors

Connectors for attaching 4/0 cables to Magnaflux® magnetizing equipment, including wet benches, powerpacks and mobile units.

#### Part Number:

- 1238 Either-end connector (allows quick cable disconnect for maximum flexibility)
- 1238A Connector boot only
- 1574 Either-end lug adapter (changes lug terminal to either-end terminal)
- 1576 90° either-end lug adapter (same as lug adapter 1574 but 90°)
- 2590 4/0 lug for permanent attachment to magnetizing equipment



2590



1576

### Remote Control Cable

15' (4.57m) cable allows for remote energizing of portable power packs. Comes standard with 3 PTL plug.

#### Part Number:

- 157657 Remote Control Cable



157657

### Remote Palm Button

Remote palm button that mounts on side of Mag Kit for energizing current from power pack. Comes standard with 3 PTL plug.

#### Part Number:

- 169621 Mag Kit Remote Palm Button



169621

## MAGNETIC PARTICLE TESTING ACCESSORIES

Quality experts the world over count on Magnaflux® Magnetic Particle Testing Accessories to maintain their manufacturing standards and to help simplify, expand and improve their magnetic particle inspection processes. If you are looking to add to, or replace outdated MPI test components, you will find that Magnaflux offers an impressive line-up of accessories designed to meet your exact needs. From coils and prod sets, to field indicators, monitoring devices and spray applicators, Magnaflux® brand MPI accessories will help keep your process control operations performing at peak productivity and quality levels.

## CENTRIFUGE TUBES & STANDS

Magnaflux® centrifuge tubes are individually calibrated to monitor the precise concentrations of Magnaglo® and Magnavis® particles in baths, as well as the contamination levels of their solutions.

**Part Number: 8493 - Centrifuge Tube for Magnaglo® 14A, 14AM and 20B Fluorescent Particles.** Measures in increments between 0 and 1.0 ml in 0.05 increments.

**Part Number: 507923 - Centrifuge Tube for Magnaglo® MG-410 Fluorescent Particles.** Measures in increments between 0 and 0.2 ml in 0.01 increments.

**Part Number: 2461 - Centrifuge Tube for Magnavis® 7C and 9C Visible Particles.** Measures in increments between 0 and 1.5 ml in 0.10 increments.

**Part Number: 1837A - Aluminum Centrifuge Stand.** Safely holds centrifuge tubes when checking bath concentrations.



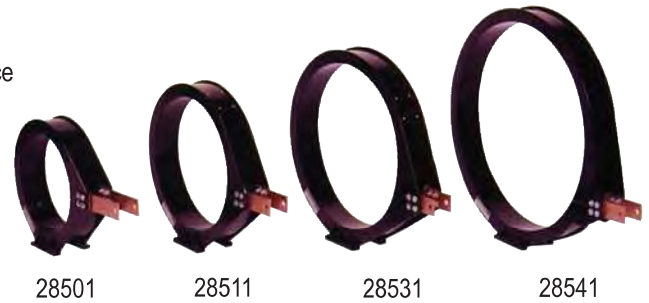
## COILS

### Coils for Bench Units

Five-turn coils in sizes from 12" to 25" that conform to most parts and produce optimal magnetic field applications.

**Part Number:**

- 28501 12" (30 cm) Coil
- 28511 16" (41 cm) Coil
- 28531 20" (51 cm) Coil
- 28541 25" (64 cm) Coil



### Flat Magnetic Coil

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 the quick, easy processing of multiple parts at one time.

**Part Number:**

- 611700 Flat Magnetic Coil



611700

### L-10 Coil

Portable AC coil for use in the detection of surface cracks.

**Part Number:**

- 50651 Coil size 10" (25 cm) I.D. / 15" (38 cm) O.D. Comes with durable carrying case, flexible 10' (3 m) power cord. 115v, 50/60hz, 1-phase power source required to operate. 2,800 amp. turns.
- 620983 Coil size 10" (25 cm) I.D. / 15" (38 cm) O.D. Comes with durable carrying case, flexible 10' (3 m) power cord. 230V, 50/60hz, 1-phase power source required to operate. 2,800 amp. turns.



50651

### Clam Shell Coil Assembly

Three-turn split coil that allows for examination of large parts.

**Part Number:**

- 623031 19.7" (50 cm) Clam Shell Coil Assembly



623031



## CONDUCTORS & ADAPTERS

### Central Conductors

Solid copper rods in diameters of .50" to 1.00" that provide circular magnetization of hollow parts.

**Part Number:**

- 622632 0.50" Diameter x 15.875" Length
- 622633 0.75" Diameter x 15.875" Length
- 622634 1.00" Diameter x 15.875" Length



### Small Parts Adapters

Magnaflux® small part adapters allow standard wet horizontal MPI test units to be used for inspecting small parts such as bolts, screws and pins. *Not for use with 12 x 12 contacts.*

**Part Number: 28470 - Headstock Adapter.** Made of solid copper and mounts directly to headstock.

**Part Number: 28471 - Tailstock Adapter.** Made of solid copper and mounts directly to tailstock.



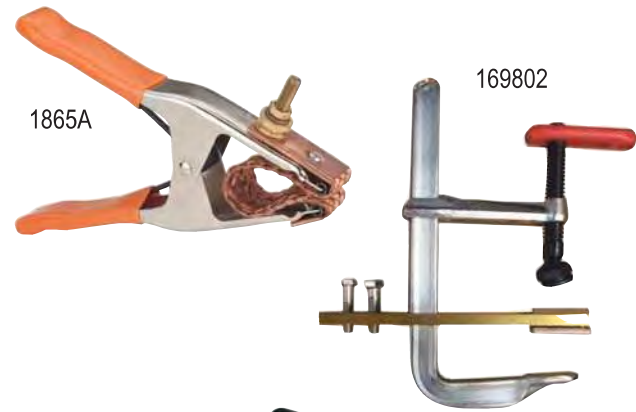
## CONTACT CLAMPS

Magnaflux® spring-loaded and heavy-duty contact clamps facilitate the easier, more accurate inspection of tubing, bars, and tubular assemblies such as aircraft engine mounts, fuselage sections and large welded structures.

**Part Number: 1865A - Spring-Loaded Contact Clamp.** For 1.25" to 2.50" diameter parts. Replacement copper braid (Part Number: 14710) also available.

**Part Number: 169802 - Heavy-Duty Contact Clamp.** For parts up to 7.00" diameter.

**Part Number: 54975 - Magnetic Leech.** Permanent magnet with 4/0 either end connector for attaching to parts.



## CONTACT PADS & PLATES

Magnaflux® long lasting copper braided contact pads and lead contact plates prevent arc burn by helping to maintain proper electrical contact between test parts and contact heads. Available in a variety of sizes to fit most MPI units.

**Part Number: 1848 - Replacement Copper pad for 18948 and 18949.** 4.75" (120.65mm) x 7.5" (190.5mm).

**Part Number: 18948 - Double-Braided Pad with V-Block.** Heavy copper braid provides contact over a larger surface area. Built with neoprene, the V-Block base centers and supports test parts. Can be reversed to provide two wear faces. Fits all units except A-915 and smaller Mag Series units.

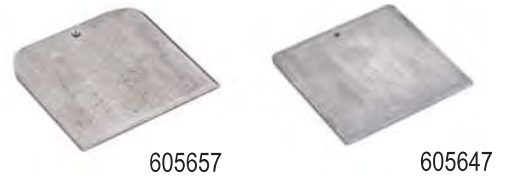
**Part Number: 18949 - Double-Braided Pad with Clip.** Offers the same performance features as the 18948 but clips over the headstocks of A-915 and smaller Mag Series units.



## Contact Pads & Plates Continued -

**Part Number: 605647 - Lead Contact Plate.** Soft lead plate provides excellent contact with test parts and duplicates original headstock/tailstock contact plates. Fits all units except the A-915 and smaller Mag Series units. Size: 6.75" (171.45mm) x 6.635" (168.275mm) x .25" (6.35mm) thick.

**Part Number: 605657 - Heavy Duty Lead Contact Plate.** Copper impregnated lead contact plate that lasts 10 times longer than standard lead contact plates. Fits all units except A-915 and smaller Mag Series units.



## FIELD INDICATORS

### Field Indicators

Magnaflux® rugged, pocket-size 10 and 20 gauss field indicators are used to measure residual magnetism remaining in parts after de-magnetization.

**Part Number: 2480 - Field Indicator.** Inexpensive and disposable non certified 10 gauss field indicator.

**Part Number: 505056 - 10 Gauss Calibrated Field Indicator.** 10 gauss certified field indicator accurate to  $\pm 0.5$  gauss with a scale range of 10-0-10. Certification is provided with meter.

**Part Number: 105645 - 20 Gauss Calibrated Field Indicator.** 20 gauss certified field indicator accurate to  $\pm 1$  gauss with a scale range of 20-0-20. Certification is provided with meter.



### Digital Hall Effect Meter Probe Gaussmeter

Magnaflux® digital hall effect meter measures AC and DC field strength. Includes meter, traverse probe, zero gauss chamber, batteries, manual, and case.

**Part Number:**

- 622604 Hall Effect Meter
- 622606 Axial Probe for Digital Hall Effect

622604



### Pie Field Indicator

The Magnaflux® magnetic particle pie gauge is used as an aid in determining the direction of magnetic fields used in the detection of discontinuities in ferrous metal parts.

**Part Number:**

- 169799 Pie Field Indicator

169799



## PORTABLE HAND SPRAYERS

### Magnetic Particle Spray System

30 Gallon portable MPI spray system with 15 ft. recirculation hose and fan-pattern spray gun for inspection of large parts. May be used with water or oil based solutions. Continuous agitation for even particle suspension and fully portable with casters for easy mobility.

**Part Number:**

- 621778 Magnetic Particle Spray System

621778





## Portable Pressure Sprayer

Easy to use, heavy-duty pressure sprayer for spot application of magnetic particle bath.

- 1 quart capacity
- Easy disassembly for cleaning
- Pressurize with compressed air to 80 - 200 psi

**Part Number:**

625774 Portable Pressure Sprayer



625774

## Powder Spray Bulb

Lightweight, easy to use spray bulb for applying Magnavis® dry powders. Cap removes for easy refilling.

**Part Number:**

501232 Powder Spray Bulb



501232

## MONITORING DEVICES

### Quick Break Tester (QB-1)

The Magnaflux Quick Break Tester (QB-1) quickly and accurately confirms function status of "quick break" circuitry in the three phase FWDC magnetic particle units.

**Part Number:**

148335 Quick Break Tester (QB-1)



148335

### Quick Break Tester (QB-2) + Shot Timer

The Magnaflux® Quick Break Tester (QB-2) and Shot Timer displays peak quick break voltage in a quantitative way to facilitate detection of possible degradation of quick break.

**Part Number:**

622646 Quick Break Tester (QB-2) + Shot Timer

### Shot Timer

The Magnaflux® Shot Timer provides universal shot time detection for all MPI equipment.

- Reads shot time with 10ms resolution on digital display
- Microprocessor controlled for accurate signal capture and peak detection
- Low battery detection

**Part Number:**

622901 Shot Timer



622646

622901

### Digital Amperage Meter Kit

The Magnaflux® Digital Amperage Meter Kit is designed for NDT applications and will certify the amperage on all MPI equipment manufactured by Magnaflux® up to 10,000 amps. Checks AC, HWDC, 1 Phase FWDC, and 3 Phase FWDC.

**Part Number:**

622350 Digital Amperage Meter Kit



622350



## PROD SETS

Magnaflux® prod sets are convenient handheld electrodes used for conducting sectional inspections of welds, casting, forgings and other large and complex part shapes. Comfortable, pistol style grips and out-of-the-way cable hookups make it easy for testing parts that are not wet-bench friendly.

### Standard Prod Sets

**Part Number: 622088** - For use with M-2000 Series units

**Part Number: 157662** - For use with P-70 and P-1500 units

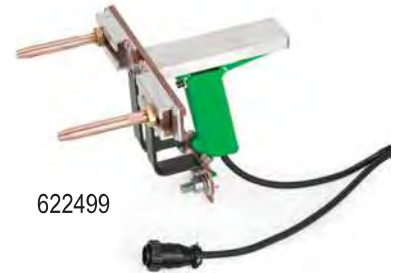


157662

### Dual Horizontal Prod Assemblies

**Part Number: 622499** - For use with M-2000 Series units

**Part Number: 157781** - For use with P-70 and P-1500 units



622499

## STEADYRESTS & CONTACT BLOCKS

### Steadyrests

Used to support and stabilize long or heavy parts during the inspection process.

**Part Number: 1857 - Rail Mounted Roller Type Steadyrest.** Mounts and moves on rails with adjustable height to accommodate various part lengths. Fits all units except A-915 and small Mag Series units. Weight capacity up to 1,500 lbs.

**Part Number: 605750 - Headstock Mounted Roller Type Steadyrest.** Mounts on headstock to support one end of part (use rail-mounted Part Number 1857 to support other end). Speeds up part loading as coil may be retracted past the headstock. Fits all units except A-915, small Mag Series units and units with oversized contact plates.

**Part Number: 621658 - Tailstock Steadyrest.** Designed for mounting on the tailstock and will work with either headstock or rail mounted steadyrests.



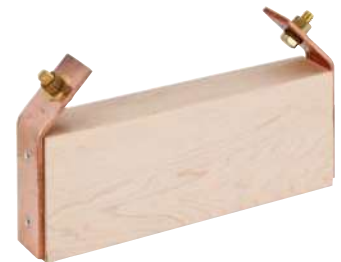
1857

### Contact Block

Permits remote testing of parts that are too heavy for processing on a unit. When clamped between head and tailstock, the block supplies magnetizing current to remote prods or clamps through flexible cables (cables not included, see cables & connectors).

**Part Number:**

1830 Contact Block



1830

## TEST BLOCKS

### Continuous Method Test Block

The Magnaflux® Continuous Method Test Block is used to check for proper magnetizing techniques on wet horizontal MPI units. Crack indications form on the test block when current flow and bath concentrations are at proper levels.

**Part Number:**

75130 Continuous Method Test Block



75130



## TEST PIECES

### Magnetic Particle Test Bar

The Magnaflux® Magnetic Particle Test Bar contains coarse and fine surface and subsurface defects in both directions. It meets or exceeds most industry and military standards for artificial test specimens.

**Part Number:**

189838 Magnetic Particle Test Bar



189838

### Quantitative Quality Indicator Test Pieces

Quantitative Quality Indicators (QI) are magnetic particle test pieces with artificial defects that are used to verify field direction and relative strength. They are also used to balance multi-directional fields and to increase productivity by minimizing magnetizing shots.

**Part Number: 625551 - Shim Type #CX-230 (Set of 5).** Basic circular and cross bar flaw configuration suitable for longitudinal and circular fields. Flaw depth of 30% of shim thickness, .002" thick.

**Part Number: 625552 - Shim Type #CX4-230 (Set of 5).** Similar to CX-230 except miniature design for small areas on test part. The 4 circles may be cut apart for individual use. Flaw depth of 30% of shim thickness, .002" thick.

**Part Number: 625553 - Shim Type #CX-430 (Set of 5).** Basic circular and cross bar flaw configuration suitable for longitudinal and circular fields. Flaw depth of 30% of shim thickness, .004" thick.

**Part Number: 625554 - Shim Type #3C2-234 (Set of 5).** Used for more quantitative work, the 3C2-234 contains 3 concentric circular flaws of varying depths. Flaw depths of 20%, 30% and 40% of shim thickness, .002" thick.

**Part Number: 625555 - Shim Type #3C4-234 (Set of 5).** Used for more quantitative work, the 3C4-234 contains 3 concentric circular flaws of differing depth. Flaw depths of 20%, 30% and 40% of shim thickness, .004" thick.

625551



625552



625553



625554



625555



### Tool Steel Test Ring

The Magnaflux® AS 5282 Tool Steel Test Ring is a magnetic particle test piece with pre-drilled holes to simulate subsurface discontinuities. It provides a reliable method of verifying magnetic particle system performance when actual test parts with discontinuities are not available. Meets AS 5282.

**Part Number:**

159999 Tool Steel Test Ring

159999



### Magnetic Flux Indicators

Magnaflux® Type G (General use) magnetic flux indicators come in a packet of 5 and are used to detect appropriate levels of magnetic field strength. These flexible indicators also assist in determining directional orientation of the magnetic field.

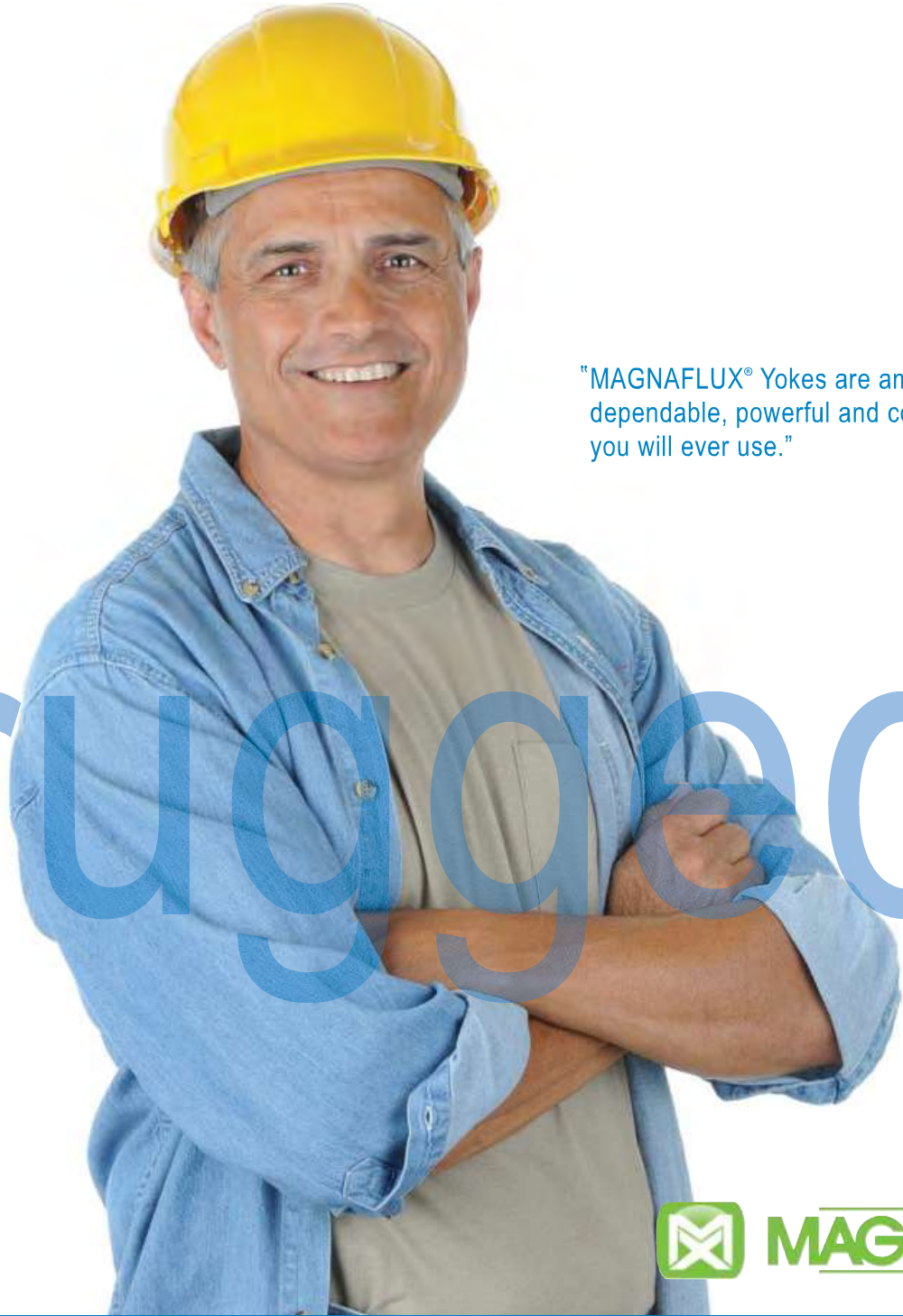
**Part Number:**

008M004 Magnetic Flux Indicators (set of 5)

**Specifications Compliance:** ASTM E709-08, E1444-11.

008M004





"MAGNAFLUX® Yokes are among the most dependable, powerful and comfortable yokes you will ever use."

rugged



Magnaflux® Magnetic Yokes are built rugged to withstand years of shop and field inspection abuse, yet are among the most ergonomically and technically advanced yokes on the market today.

*Technology Driven*

## MAGNETIC YOKES

### Y-1 AC Magnetic Yoke

The Magnaflux® Y-1 AC Magnetic Yoke is a new generation of lightweight, ergonomic yoke designed to improve job performance and productivity by reducing operator arm and wrist fatigue when testing for prolonged periods or in tight, confined spaces. The Y-1 is easier and more comfortable to operate than standard yokes and comes with a rugged chemical and impact resistant outer shell that will stand up to years of inspection abuse. Each unit is individually serial numbered and certified for performance prior to shipment.

- 25% increase in lift strength
- Improved cord strength
- Wider legs for better contact
- Shields for better leg protection
- Sealed core to resist corrosion
- Durable, rugged construction

#### General Specifications:

- Elec. Requirements - 115V/50-60hz/1ph or 230V/50-60hz/1ph
- Max. Line Current Draw - 3.7 amp 115V or 1.6 amp 230V
- Weight - 5.35 lb. (2.43 kg)
- Leg Span - Up to 11in. (20 cm)
- Cord Length - 10 ft. (3.05 m)
- Warranty - 1 year

#### Part Number:

- 623502 Y-1 115V Yoke
- 623503 Y-1 230V Yoke



### Y-1 AC Magnetic Yoke Kit

The Magnaflux® Y-1 AC Magnetic Yoke Kit contains all key elements necessary to perform visible magnetic particle inspections:

- Y-1 Magnetic Yoke 115V/50-60hz/1ph or 230V/50-60hz/1ph
- 1 lb. #1 Gray Magnetic Powder
- 1 lb. #8A Red Magnetic Powder
- Powder Spray Bulb
- Paint Marker
- SCRUBS™ Hand Cleaner
- Portable Carrying Case and Instructions

#### Part Number:

- 623529 Y-1 115V Yoke Kit
- 623530 Y-1 230V Yoke Kit



## MAGNETIC YOKES

Magnaflux Magnavis® brand magnetic yokes lead the industry in design innovation and magnetic particle inspection performance. From the lightweight ergonomic design and increased lifting power of our recently enhanced Y-1 AC Yoke to the 100% field portability of the battery powered Y-8, you will find every yoke we manufacture to be built as tough as you work.

## Y-7 AC/DC Magnetic Yoke

The Magnaflux® Y-7 AC/DC Magnetic Yoke is designed for portable testing of ferrous parts and is ideal for the inspection of welds and other remote testing applications.

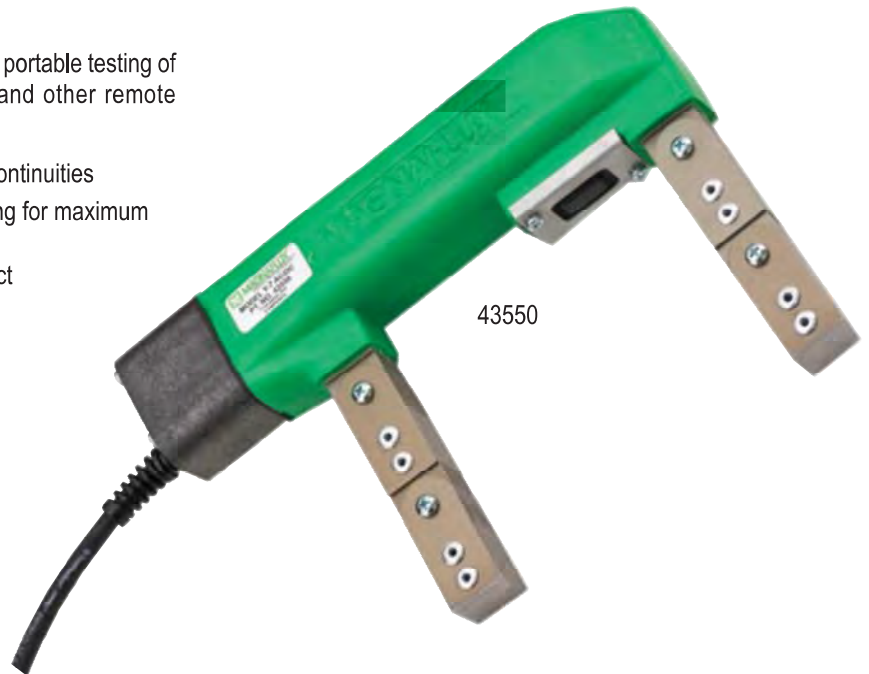
- Can be used to find both surface and near-surface discontinuities
- Solid state controls located in the interior of yoke housing for maximum safety and reliability
- Articulating, double-jointed legs assure good part contact

### General Specifications:

- Elec. Requirements - 115V/50-60hz or 230V/50-60hz
- Max. Line Current Draw - 9 amp 115V AC or 4 amp 230V
- Weight - 7.4 lb. (3.36kg) 115V or 7.2 lb. (3.27kg) 230V
- Leg Span - 0" - 12" (0 - 30cm)
- Cord Length - 12 ft. (3.66 m)
- Warranty - 1 year

### Part Number:

- 43550 Y-7 AC/DC Magnetic Yoke 115V/50-60hz
- 43560 Y-7 AC/DC Magnetic Yoke 230V/50-60hz



## Y-7 AC/DC Magnetic Yoke Kit

The Magnaflux® Y-7 AC/DC Magnetic Yoke Kit contains all key elements necessary to perform visible magnetic particle inspections:

- Y-7 AC/DC Magnetic Yoke 115V/50-60hz or 230V/50-60hz
- 1 lb. #1 Gray Magnetic Powder
- 1 lb. #8A Red Magnetic Powder
- Powder Spray Bulb
- Paint Marker
- SCRUBS™ Hand Cleaner
- Portable Carrying Case and Instructions

### Part Number:

- 43509 Y-7 AC/DC Magnetic Yoke Kit 115V/50-60hz
- 620741 Y-7 AC/DC Magnetic Yoke Kit 230V/50-60hz





## Y-8 Battery Operated Magnetic Yoke Kit

The Magnaflux® Y-8 Battery Operated Magnetic Yoke Kit is ideal for remote testing applications. The kit allows for 100% portability in field inspections of ferrous parts with the use of the battery operated Y-8 Yoke.

- 100% portable for field inspections
- Battery pack comes with convenient shoulder strap
- Solid state controls located in the interior of yoke housing for maximum safety and reliability
- Articulating, double-jointed legs assure good part contact

### General Specifications:

- Yoke Current Draw - 1.4 amp @ 6 Volts
- Weight - 7.75 lb. (3.52kg)
- Leg Span - 0" - 12" (0 - 30cm)
- Cord Length - 12 ft. (3.66 m)
- Warranty - 1 year
- Battery:
  - 6V, 12 amp hr.
  - 5.25 lb. (2.38kg)
  - 4.25" x 2.75" x 5.5" (10.8cm x 7cm x 14cm)
  - Battery Operating Temp. Range -40°C to 60°C (-40°F to 140°F)
- Battery Charger Current Draw - 0.2 amp @ 115V or 230V

### Kit Part Number:

- 611710 Y-8 Magnetic Yoke Kit 115V
- 611710-01 Y-8 Magnetic Yoke Kit 230V

611710



## YOKE ACCESSORIES

### Yoke Light Kits

The Magnaflux® Yoke Light Kits provide enhanced visible method detection of flaws and discontinuities under low and no light conditions.

**Part Number: 623745** - Light Kit for Y-1 AC Yoke

**Part Number: 621785** - Light Kit for Y-6/Y-7 Yokes



623745

### 10 lb. Test Weight for Y-1 Yoke

The Magnaflux® 10 lb. Test Weight is designed specifically for use with the Y-1 Yoke. It provides balanced weight distribution and comes with a built-in leg positioning guide to assure accurate test results every time. Each weight measures 9" x 2" x 2", is individually serialized, and comes with a certificate stating that it meets ASTM E1444.

### Part Number:

- 624115 10 lb. Y-1 Yoke Test Weight



624115

# MAGNETIC PARTICLE INSPECTION EQUIPMENT



MPI Equipment

"MAGNAFLUX® Magnetic Particle Testing Equipment was completely scalable to our needs, allowing us to start small and add more capabilities as our business grew."

scalable



Magnaflux® Magnetic Particle Testing Equipment has been value engineered to meet or exceed government and industry inspection standards while remaining sensitive to the operating cost, speed and volume requirements of NDT customers.

*Modular Capabilities*

## P-SERIES

The Magnaflux® P-Series is an extremely compact, lightweight portable magnetizing unit designed for use in a wide range of magnetic particle inspection applications that require only moderate power to perform.

Perfect for in-service inspections demanding maximum portability, the P-Series is built tough to take job-site abuse and offers many of the features and convenience of our larger units.

The current control potentiometer of P-Series P-70 and P-1500 units provides infinitely variable magnetizing and demagnetizing current control. A power transformer, supported by fan cooled silicon diodes, transforms the high voltage, low amperage line input to low voltage, high amperage half-wave D.C. for magnetizing. Low voltage, high amperage A.C. is also provided for magnetizing and demagnetizing.

### P Series Features:

- Locate surface discontinuities using AC current. Switch cable connections to halfwave DC (HWDC) to locate near surface defects
- Locate discontinuities in any direction using prods, central conductor or coil wrap
- Infinitely variable current control
- Demagnetize parts in AC mode by slowly turning current dial to zero
- Built-in automatic-reset circuit breaker

### P Series Benefits:

- Either-end terminals for quick changeover
- Unit comes with control cable with activation button

### General Specifications:

	MODEL P-70	MODEL P-1500
Dimensions	17.5"L x 9"W x 8"H 44.5 x 22.9 x 20.3 cm	22"L x 9.5"W x 9.5"H 55.8 x 24.1 x 24.1 cm
Weight	35 lbs (15.9 kg)	93 lbs (42.2 kg)
Max Output <sup>1</sup>	750 Amps AC or HWDC	1500 Amps AC or HWDC
Current Input <sup>2</sup> (single phase)	115 VAC 50/60 hz 230 VAC 50/60 hz	230 VAC 50/60 hz 460 VAC 50/60 hz
Line Current	26 Amps @ 115 VAC 13 Amps @ 230 VAC	42 Amps @ 230 VAC 21 Amps @ 460 VAC
Max Duty Cycle	2 Minutes ON 2 Minutes OFF	2 Minutes ON 2 Minutes OFF

<sup>1</sup>Current ratings based on use of two 15-foot lengths of 4/0 cable.

<sup>2</sup>Other voltages available.



## MAGNETIC PARTICLE INSPECTION EQUIPMENT

NDT professionals rely on Magnaflux to provide the best solution in Magnetic Particle Inspection Equipment for the detection of surface and near surface discontinuities in manufactured parts of all shapes and sizes. Built to stand up to tough industrial environments, Magnaflux equipment is prized for its ease of operation, rugged dependability and economical performance.



## MAG KIT

### Magnaflux Mag Kit

The Magnaflux® Mag Kit is a modular mag particle inspection system that allows lower volume NDT users to tailor a fully operational bench unit to their personal application needs by adding only the components that they currently require.

Using a portable power pack as a power supply, the Mag Kit is an economical, easy to operate alternative to more expensive, higher volume bench units when volume processing is not required. It provides the same level of inspection dependability in a lower volume, lower cost equipment package.

**Dimensions:** 50.5" L x 20.5" W x 50.25" H (Table Height 36")  
128cm L x 52.1cm W x 127.6cm H (Table Height 91.4 cm)

#### Flexibility Features:

- Purchase just the base unit (bench, headstock, tailstock and coil) if you already have a portable power pack
- Purchase the base unit with portable power pack
- Specify recirculating pump spray system with original purchase or add it later (not needed if aerosols are used)
- Conveniently switch magnetizing current from head/tail to coil by changing 2 plug-in cable connections
- Conduct remote inspections of large, heavy parts with the same portable power pack by using cables and prods

#### General Specifications:

- Coil Diameter - 11" I.D. (28.0cm)
- Max Part Weight - 350 lb. (159kg)
- Max Part Length - 39" (99.1cm)
- Mag Kit Weight - 300 lb. (136kg)

*Mag Kit Hood Assembly is available in 115v only - 623830*

*Shown with optional power pack, pump and ZB-100F UV Black Light.*





## Mag Kit Pump

The Magnaflux® Mag Kit Pump has been developed for use with Magnaflux Mag Kit units to provide continuous spray and recapture of the Magnaglo® bath. The pump includes hose, nozzle, fittings and 5-gallon pail.

### Part Number:

69390 Mag Kit Pump 115V

69395 Mag Kit Pump 230V



69390

## DEMAG EQUIPMENT

### S-66 Demagnetizing Coil

The Magnaflux® S-66 Demagnetization Coil is a compact tabletop unit designed to be conveniently integrated into existing mag particle inspection systems. Oil and waterproof by virtue of its plastic-impregnated glass coating, the S-66 can be flush mounted to the work surface with supplied angle supports to facilitate easy part insertion by the operator.

**Dimensions:** 15.5" L x 9.4" W x 14.4" H (39.4cm L x 23.9cm W x 36.6cm H)

### General Specifications:

- Elec. Requirements - 115V -12 amp  
230V - 6 amp  
460V - 3 amp
- Opening Size - 6" x 6" (15.2cm x 15.2cm)
- Shipping Weight - 85 lb. (38.6kg)



### S-1212 Demagnetizing Coil

The Magnaflux® S-1212 Demagnetization Coil is a compact tabletop unit designed to be conveniently integrated into existing mag particle inspection systems. Oil and waterproof by virtue of its plastic-impregnated glass coating, the S-1212 can be flush mounted to the work surface with supplied angle supports to facilitate easy part insertion by the operator.

**Dimensions:** 24" L x 11.75" W x 24" H (61cm L x 29.8cm W x 61cm H)

### General Specifications:

- Elec. Requirements - 230V - 30 amp  
460V - 14 amp
- Opening Size - 12" x 12" (30.5cm x 30.5cm)
- Shipping Weight - 285 lb. (129.3kg)



# UV BLACK LIGHTS & ACCESSORIES



UV Black Light  
Equipment



UV Black Light  
Accessories



"MAGNAFLUX® UV Black Lights and Accessories helped us stay on budget by improving the detection capabilities of our magnetic particle and liquid penetrant inspection process."

better



Magnaflux® UV Black Lights and Accessories are built to help maximize the detection capabilities of your magnetic particle and liquid penetrant inspection processes by providing UV equipment that performs better, lasts longer and costs less to operate than more conventional UV lights.

*Built-in Efficiency*

## UV BLACK LIGHTS

### Vibrance® EV5000 UV LED Black Light

The Vibrance® EV5000 UV LED Black Light may not only be the best UV LED black light you ever buy, but the last as well. Individually tested and certified to a wavelength between 365 - 370 nm, the Vibrance® EV5000 Black Light offers an average LED life of up to 50,000 hours, a radical new lightweight ergonomic design that is 30% lighter and 90% more energy efficient than traditional mercury vapor UV lights.

- Lightweight ergonomic design reduces muscle fatigue and stress
- Average LED life of up to 50,000 hours
- Individually serial numbered and certified to wavelength between 365-370 nm
- Electronically stabilized and certified UV intensity with <10 Lux or 1 ft-candle visible emission
- Rugged aluminum housing assures years of NDT inspection performance

#### General Specifications:

- Weight - Approximately 2lbs. (1kg)
- Dimensions - 9.5" x 6.5" x 4" (24 x 16.5 x 10 cm)
- UV Source - 4x high performance UV-LED cluster
- UVA Intensity - 5000  $\mu\text{w}/\text{cm}^2$  at 15 in. (38 cm)
- UV LED Life - Approximately 50,000 hrs.
- Wavelength - Certified 365 - 370 nm
- No UVB or UVC radiation generated
- Operating Voltage - 24V DC
- Power Supply - 110-240V AC/50-60Hz/1 Phase
- Power Consumption <15W
- Duty Cycle - Relative duty cycle: 100%

#### Part Number:

624673 Vibrance® EV5000 UV LED Black Light



Magnaflux® brand UV Black Lights and Accessories provide improved detection and design features not offered by other UV manufacturers, while simultaneously delivering one of the industry's lowest operating cost and longest LED life. Our new Vibrance® EV5000 UV LED Black Light weighs in a full 30% lighter than conventional mercury vapor UV lights, costs considerably less to operate, has a projected LED life of up to 50,000 hrs., and comes with a warranty that includes the use of a FREE loaner light during any warranty approved repairs.<sup>1</sup>

## ZB-100F® Fan-Cooled UV Black Light

The Magnaflux ZB-100F® Portable Black Light System produces ultraviolet light at 365 nm. A built-in, quiet operating fan located at the rear of the ZB-100F® lamp housing dramatically reduces operating temperatures to under 85°F, for improved operator safety and comfort, while simultaneously expanding bulb life.

- Cool running for increased safety and comfort
- Extended bulb life for greater operating efficiency
- Polycarbonate bezel shields operator hands from lens
- Recessed lens for improved bulb protection
- Rugged aluminum housing assures years of NDT inspection performance

### General Specifications:

- Weight - Hand lamp 3 lbs. (1.36 kg), hand lamp with transformer 12 lbs. (5.44 kg)
- Typical Output - 5000  $\mu\text{w}/\text{cm}^2$
- Current Draw - 1.9 amps
- Typical Visible Light - 10 Lux or 1 ft. candle @ 15" (38cm)
- Bulb- 100 Watt
- Running Temperature - 85°F (30°C)
- Cord Length - 10ft. (3.05m) lamp to transformer
- Main Cable Supply - 12ft. (3.66m)

**Specification Compliance:** Industry and Military Standards @ 15" (38cm).

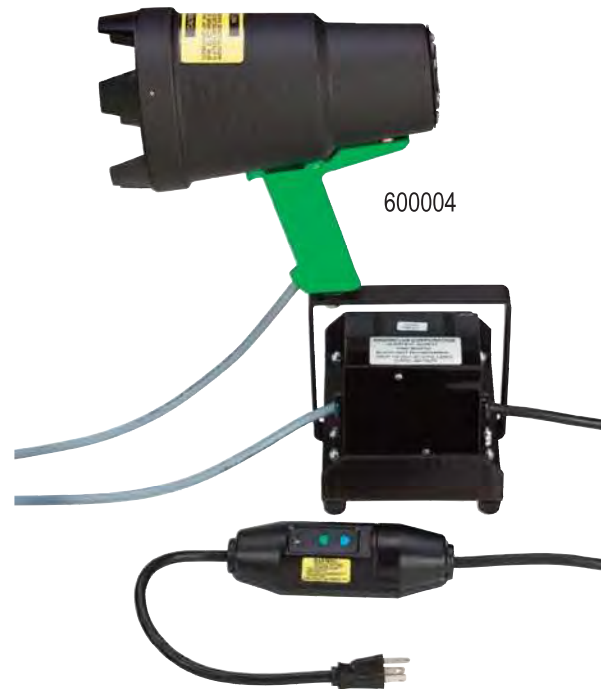
### Part Number:

600005	ZB-100F® 100 Watt, 115V/60Hz/1Phase
621254	ZB-100F® 100 Watt, 220V/50Hz/1Phase
600004	ZB-100F® 100 Watt, 115V/60Hz/1Phase with Portable Cart
621311	ZB-100F® 100 Watt, 220V/50Hz/1Phase with Portable Cart
621312	ZB-100F® 100 Watt, 230V/60Hz/1Phase with Portable Cart

## ZB-100F-MB® Remote Mag Shot UV Black Light

The Magnaflux ZB-100F-MB® Remote Mag Shot UV Black Light adds the benefit of being able to energize power packs and wet bench units remotely from your black light, when checking for discontinuities in extra long parts. The ZB-100F-MB® has a remote button integrated into the handle of the black light to eliminate the need for continuously returning to the MPI unit to initiate a mag shot.

- Offers the ability to operate MPI unit remotely
- Cool running for increased safety and comfort
- Extended bulb life for greater operating efficiency
- Polycarbonate bezel shields operator hands from lens
- Recessed lens for improved bulb protection
- Rugged aluminum housing assures years of NDT inspection performance





ZB-100F-MB® Remote Mag Shot UV Black Light Continued.

**General Specifications:**

- Weight - Hand lamp 3lbs. (1.36kg), hand lamp with transformer - 12.5lbs. (5.67kg).
- Typical Output - 5000µw/cm<sup>2</sup>
- Current Draw - 1.9 amps
- Typical Visible Light - 10 Lux or 1 ft. candle @ 15" (38cm)
- Bulb- 100 Watt
- Running Temperature - 85°F (30°C)
- Cord Length - 10ft. (3.05m) lamp to transformer
- Main Cable Supply - 12ft. (3.66m)

**Specification Compliance:** Industry and Military Standards @ 15" (38cm).

**Part Number:**

600086 ZB-100F-MB® 100 Watt, 115V/60Hz/1Phase

**ZB-150F-SB® Self-Ballasted UV Black Light**

The Magnaflux ZB-150F-SB® Self-Ballasted UV Black Light offers the same outstanding performance as our popular ZB-100F® fan cooled UV black light but is self-ballasted to avoid the need to pull along a transformer as inspections are being performed.

- No bulky transformer to pull along
- Cool running for increased safety and comfort
- Extended bulb life for greater operating efficiency
- Polycarbonate bezel shields operator hands from lens
- Recessed lens for improved bulb protection
- Rugged aluminum housing assures years of NDT inspection performance

**General Specifications:**

- Weight - Hand lamp 2.7lbs. (1.22kg)
- Typical Output - 5000µw/cm<sup>2</sup>
- Current Draw - 1.9 amps
- Typical Visible Light - 10 Lux or 1 ft. candle @ 15" (38cm)
- Bulb- 150 Watt
- Running Temperature - 85°F (30°C)
- Main Cable Supply - 12ft. (3.66m)

**Specification Compliance:** Industry and Military Standards @ 15" (38cm).

**Part Number:**

621135 ZB-150F-SB® 150 Watt, 115V/60Hz/1Phase



## UV BLACK LIGHT ACCESSORIES

### Replacement Bulbs for Standard UV Black Lights

Magnaflux maintains a full inventory of high quality replacement bulbs for all of its standard black light equipment.

**Part Number: 507320 - 100 Watt Medium Base Black Light Bulb.** Replacement bulb for ZB-100F® and ZB-100F-MB® UV Black Lights. (Single bulb sold only to USA, Canada and Mexico.)

**Part Number: 625550 - Case of 12 100 Watt Medium Base Black Light Bulbs.** Replacement bulb for ZB-100F® and ZB-100F-MB® UV Black Lights. (International customers must order case quantity.)

**Part Number: 519296 - 150 Watt Built-In Ballast Bulb.** Replacement built-in ballast bulb for ZB-150F-SB® UV Black Lights.



507320



519296

### UV Black Light Filter

Magnaflux offers a smooth output filter designed to improve the operating range and performance of its UV black lights.

**Part Number: 519227 - Smooth Filter Glass.** Used with ZB-100F®, ZB-100F-MB®, and ZB-150F-SB® UV Black Lights.



519227

### UV Black Light Ceiling Mount Assembly

The Magnaflux Ceiling Mount Assembly® comes with hardware to permanently attach hand-held black lights, such as the ZB-100F®, ZB-100F-MB® and ZB-150F-SB®, to the solid roof of an inspection area.

When it is important to bring a black light closer to the inspection area, you may purchase one of the extensions shown below.

**Part Number: 623367 - Black Light Ceiling Mount Assembly**

**Part Number: 622596 - Modular Black Light 5.5 Extension**

**Part Number: 622597 - Modular Black Light 7.5 Extension**



623367

### UV Black Light Flat Surface Mount Assembly

The Magnaflux Surface Mount Assembly® provides an adjustable angle for affixing hand-held black lights, such as the ZB-100F®, ZB-100F-MB® and ZB-150F-SB®, to any flat surface.

**Part Number: 623366 - Black Light Surface Mount Assembly**

**Part Number: 622596 - Modular Black Light 5.5 Extension**

**Part Number: 622597 - Modular Black Light 7.5 Extension**



623366

### UV Black Light Wet Bench Mounting System

The Magnaflux Wet Bench Mounting System® provides an adjustable mounting system for affixing hand-held black lights, such as the ZB-100F®, ZB-100F-MB® and ZB-150F-SB®, to Magnaflux wet bench units.

**Part Number: 623365 - Black Light Wet Bench Mounting System**

**Part Number: 622596 - Modular Black Light 5.5 Extension**

**Part Number: 622597 - Modular Black Light 7.5 Extension**



623365



## EV5000 UV LED Black Light Mounting Assembly Adaptor

This mounting assembly adaptor allows the EV5000 to be used with all Magnaflux® black light mounting assemblies.

**Part Number:**

625667 EV5000 Mounting Assembly Adaptor



625667

## UV-A Light Meter

The Magnaflux® UV-A Digital Light Meter is a compact, rugged, easy to operate, multi-function UV meter proven to be highly effective for measuring and calibrating UV-A light sources used in fluorescent magnetic particle and liquid penetrant NDT inspections. It comes with a detachable remote sensor, high-contrast digital LCD display, 9V battery and carrying case.

**Part Number:**

625024 UV-A Light Meter



625024

## White Light Meter

The Magnaflux® White Light Meter accurately measures visible light by foot candles and Lux, and includes white light meter, permanently affixed white light sensor with UV filter, battery and carrying case.

**Part Number:**

622338 White Light Meter



622338

## UV Absorbing Safety Glasses

Magnaflux® UV Absorbing Safety Glasses are designed to protect black light users from repeated, day-long exposure to ultraviolet light sources.

**Part Number:**

506249 UV Absorbing Safety Glasses



506249



## ZB-12® UV Black Light Accessories

Keep your Magnaflux ZB-12® Hands-Free, Portable Battery Powered UV Black Light systems running at peak performance with these long-lasting replacement bulbs, lens filters, battery packs and chargers.

**Part Number: 623469 - ZB-12® Replacement Bulb**

**Part Number: 623470 - ZB-12® Replacement Battery Pack**

**Part Number: 623471 - ZB-12® Replacement 110/120V Battery Charger**

**Part Number: 623478 - ZB-12® Replacement Filter Lens/Bezel**



## UV Absorbing Safety Glasses

Magnaflux® UV Absorbing Safety Glasses are designed to protect black light users from repeated, day-long exposure to ultraviolet light sources.

**Part Number:**

506249 UV Absorbing Safety Glasses

# Magnetic Field Indicator



NONDESTRUCTIVE TESTING EQUIPMENT



## Pie Gauge

### Magnetic Field Indicator

The Model D250 is intended for use as an aid in the determination of the presence and direction of magnetic fields.

This quality product comes with a sturdy brass handle and leather case with belt clip. It is manufactured to meet the requirements of MIL-STD 271 & 1949, NAVSHIPS 250-1500-1, ASTM E-1444 & E-709, ASME Section V and others.



## DETEK

6805 Coolridge Drive  
Temple Hills, MD 20748-6940  
301-449-7300 FAX 301-449-7011  
[www.detek.com](http://www.detek.com) email: [sales@detek.com](mailto:sales@detek.com)

# MAGNETIC PARTICLE INSPECTION ACCESSORIES



MA7000 - Prod Sets, Prod Replacements, Cables  
For all Portable Mag Machines



MG01/MG02 - Magnetic Field Strips  
Type 1 (G) and Type 2 (A)



KS100A - Ketos Ring - AS5282  
Certified



NA16 - Notch Defect Test Bar.  
For Compliance with MIL-STD-271  
and NAVSEA-TB-T9074...



MG25 - Magnetometers  
(20-0-20), (10-0-10) and  
others. W/Certs



PM50 - Permanent Magnet Set.  
Available with Optional Kit.



MG50 - Magnetic Pie Gauge W/Certs



Y300/Y400 - Parker Induction Yoke Lights.  
Fits Parker B100, B300 and DA400 Contour Probes.



TB10 - Magnetic Weight Lift Test Bars. W/Certs  
Available in Single, 3, 4 or 5 Bar Sets.  
TB10-SP - 10-Lb Bar with artificial defects



PB5 - Magnetic Powder Blower  
Self contained with internal Five Pound  
Powder Reservoir and Compressor.  
Apply powder evenly to all surfaces.



PB1 - Magnetic Powder  
Blower Apply Mag Powder in  
any direction.

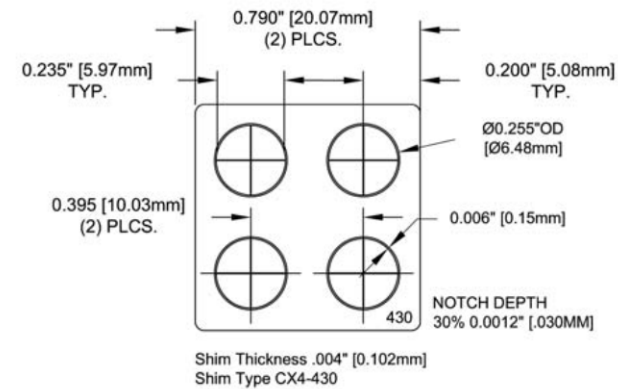
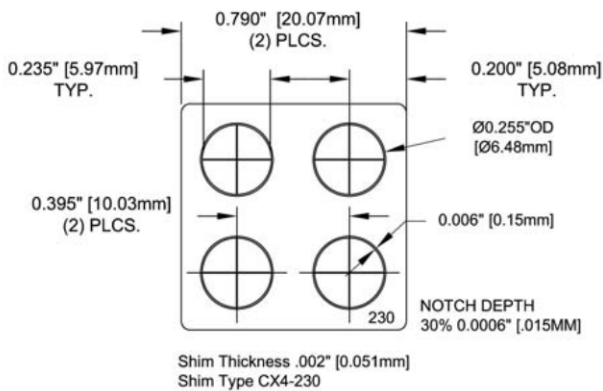
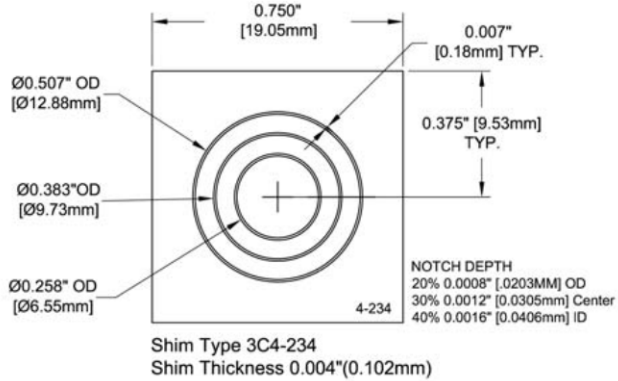
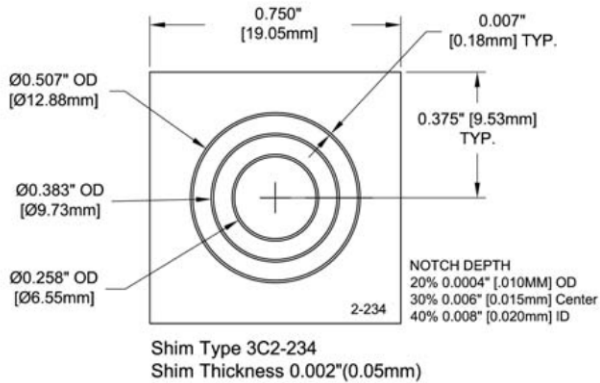
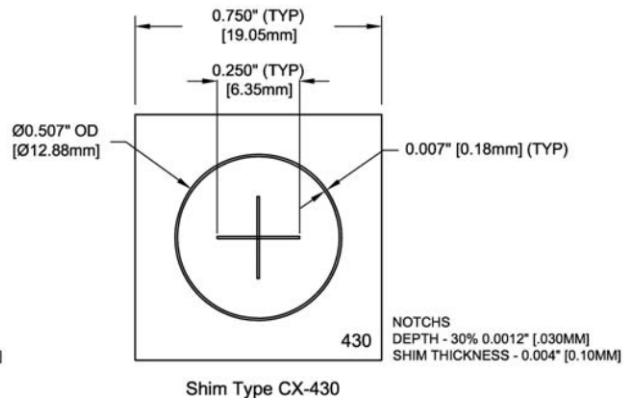
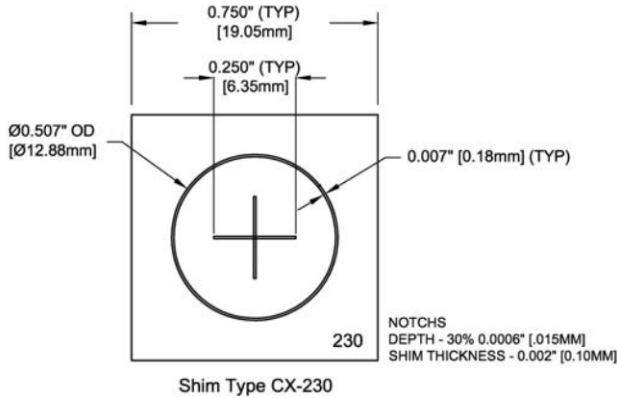


5170 & 5180 Gauss/Tesla Meters



# NONDESTRUCTIVE TESTING EQUIPMENT

## QQI DATA SHEET



QQI ID	Part No.	DESCRIPTION
CX-230	MFI-301-5	.002" Thick Standard Circle and Cross
CX-430	MFI-304-5	.004" Thick Circle and Cross
3C2-234	MFI-306-5	.002" Thick Standard Triple Circle
3C4-234	MFI-307-5	.004" Thick Triple Circle
CX4-230(CM230)	MFI-305-5	.002" Thick Standard Miniatures

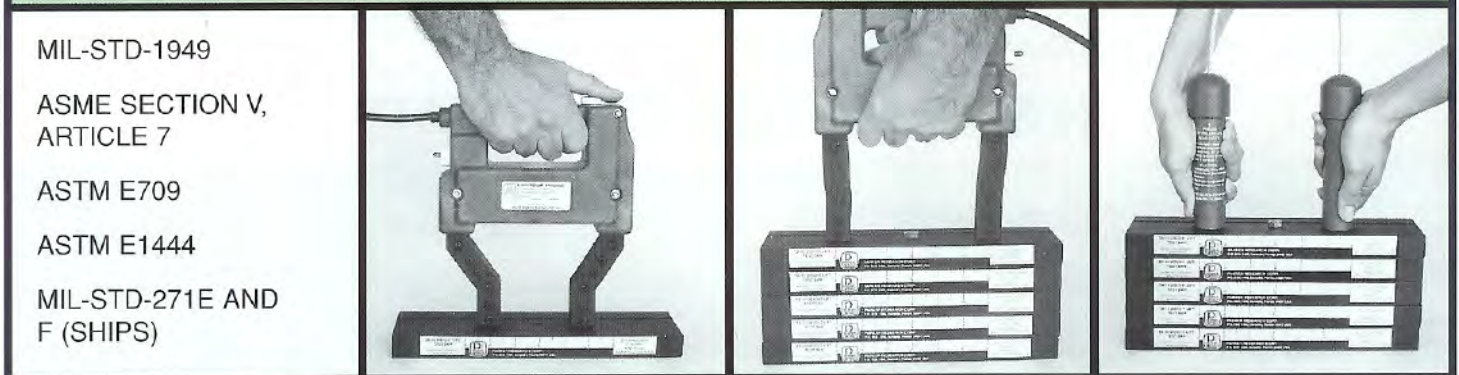
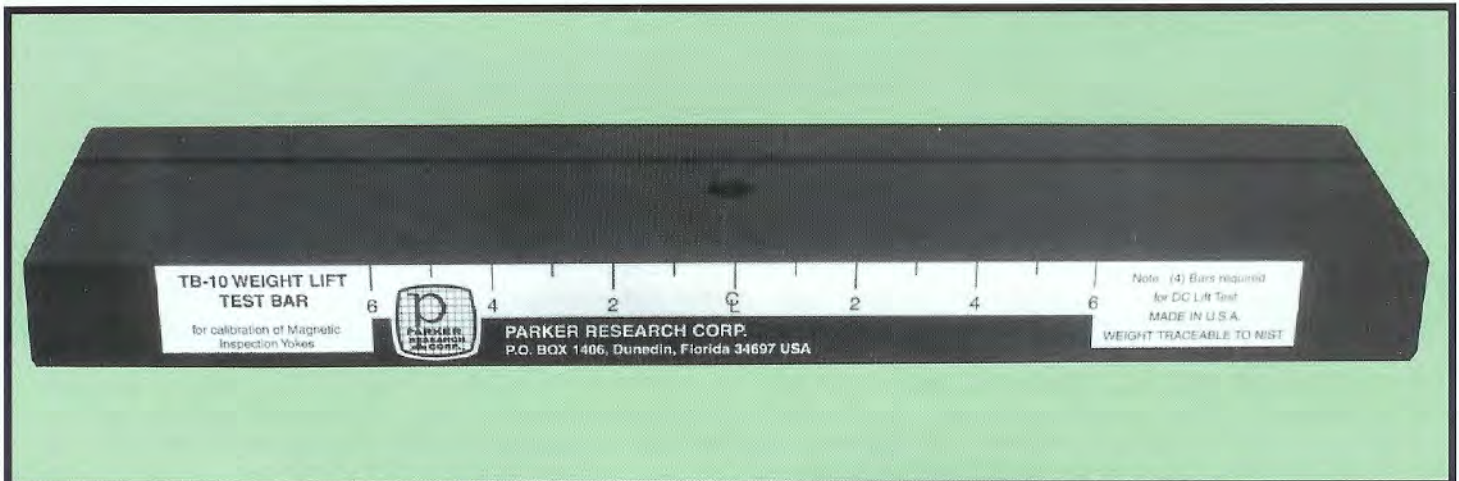
- QQI's are sold in sheets of 5

**6805 COOLRIDGE DR ■ TEMPLE HILLS MD 20748**  
**301-449-7300 ■ 800-638-0554 ■ FAX 301-449-7011**

EMAIL: [sales@detek.com](mailto:sales@detek.com)

# PARKER

## TB-10 (10-POUND) WEIGHT LIFT TEST BARS



MIL-STD-1949  
 ASME SECTION V,  
 ARTICLE 7  
 ASTM E709  
 ASTM E1444  
 MIL-STD-271E AND  
 F (SHIPS)

### SPECIFICATIONS

### AC TEST

### DC TEST

### PERM. MAGNET TEST

The TB-10 Magnetic Weight Lift Test Bar provides for the calibration and certification of Magnetic Particle Inspection Yokes to the following specifications. Bar weight is stamped on each bar and is traceable to NIST.

**INSTRUCTIONS:** Place Yoke legs on the test bar at the recommended spacing. In the AC mode, energize Yoke and lift the test bar (10 pounds). For the DC lift test, (30 to 50 pounds) 3 to 5 test bars must be bolted together through the hole located in the center of each bar. With the Yoke set in the DC mode follow the procedure as described above.

All Parker Research Contour Probes (Yokes) comply with and exceed the requirements of these specifications.

Governing Specification	MIL-STD-1949		ASME V ART 7		ASTM E 709		ASTM E1444		MIL-STD-271	
	Weight	Space	Weight	Space	Weight	Space	Weight	Space	Weight	Space
AC Field	10 lb	2-4 in	10 lb	*	10 lb	2-4 in	10 lb	2-4 in	10 lb	3-6 in
DC Field or Permanent Magnet (when allowed)	30 lb	2-4 in	40 lb	*	30 lb	2-4 in	30 lb	2-4 in	40 lb	3-6 in
	50 lb	4-6 in			50 lb	4-6 in	50 lb	4-6 in		
Max Verification Interval	6 months		1 year		6 months		6 months		3 months	

NOTE: Pole spacing is measured from the center line of the pole legs

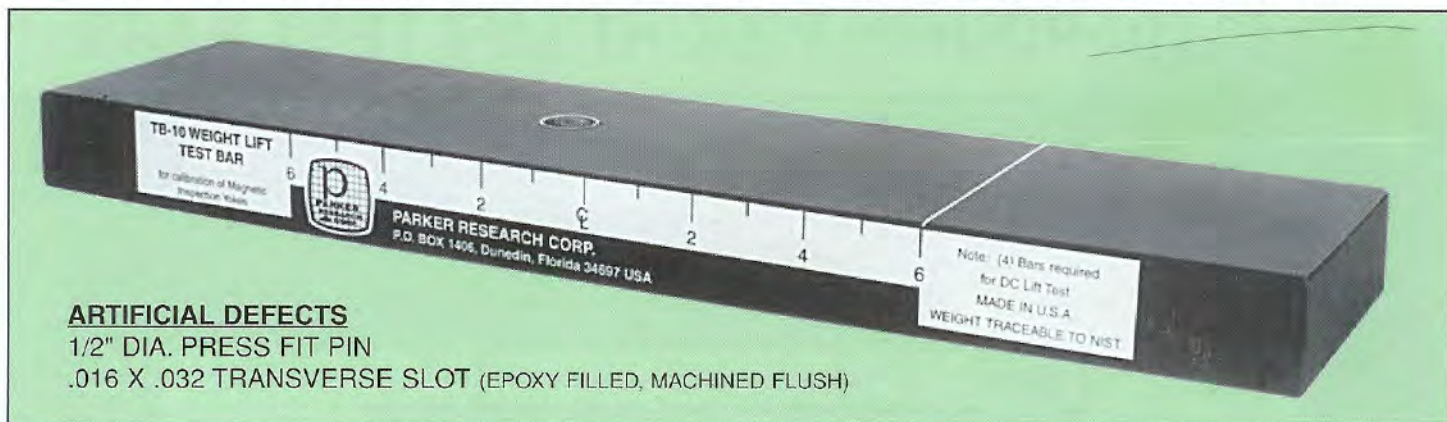
\* Maximum pole spacing that will be used.



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**301-449-7300 ■ 800-638-0554 ■ FAX 301-449-7011**

**EMAIL: sales@detek.com**

# TB10-SP WEIGHT LIFT/DEFECT TEST BAR



## ARTIFICIAL DEFECTS

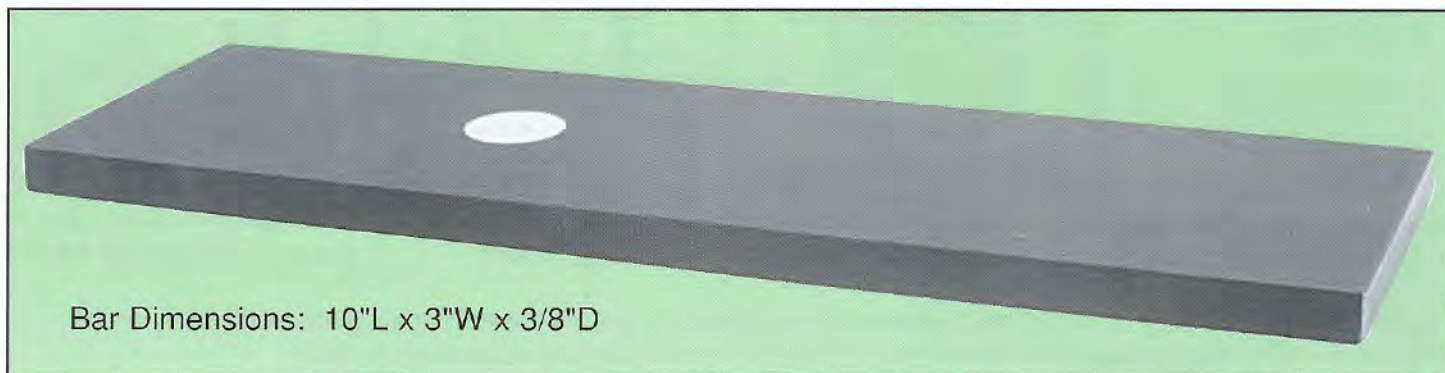
1/2" DIA. PRESS FIT PIN

.016 X .032 TRANSVERSE SLOT (EPOXY FILLED, MACHINED FLUSH)

The NEW **TB10-SP Magnetic Weight Lift / Defect Test Bar** provides for the 10 pound AC weight lift calibration of Magnetic Particle Inspection Yokes, as shown on page 1. Bar weight is certified and traceable to NIST standards. In addition, the reverse side of the TB10-SP bar contains artificial defects as indicated above. Demonstration of actual defect indications is very useful for visual and operational performance purposes.

NOTE: The TB10-SP bar has no center bolt hole for mating with additional TB10 bars.

# NA-16 NOTCH TEST BAR



Bar Dimensions: 10"L x 3"W x 3/8"D

The NA16 Notch Test Bar complies with the requirements of MIL-STD-271 E and F (Ships), paragraph 4.3.1.2. The requirement reads as follows.

4.3.1.2. PROCEDURE. Magnetic Particle inspection shall be performed in accordance with a written procedure which has proven ability to detect the smallest rejectable surface defects, artificial or natural, in a test specimen. The Yoke and Prod methods shall have the proven ability to detect a 1/16-inch long by 0.006-inch wide by 0.02-inch deep notch (maximum dimensions) oriented 90 degrees to the magnetic flux. The notch shall be cut in a 3/8-inch low alloy metal steel plate and it shall be filled flush to the surface with a non-conducting material, such as epoxy, to prevent the mechanical holding of the indicating medium. Each activity shall certify the procedure in accordance with this standard, and upon request by the Government inspector, shall make the procedure available and demonstrate its validity by performing inspection on the test specimen.

**TESTING:** Place the Yoke or Prods upon the test side of the NA16 test bar, indicated by the unpainted circle. Energize the magnetic field and apply the inspection medium.

The test defects as described above are located within the circle. One notch is oriented 90 degrees to the bar parallel for Yoke tests. The second notch is located longitudinally with the bar parallel for Prod tests.

**NOTE:** Unless specified otherwise, test should be performed with the Yoke or Prods in the AC mode. If Prods are used it may be necessary to remove paint from the test bar at contact points.



**6805 COOLRIDGE DR ■ TEMPLE HILLS MD 20748**  
**301-449-7300 ■ 800-638-0554 ■ FAX 301-449-7011**  
**EMAIL: sales@detek.com**



## Description

The 5100 Series Hall effect portable gaussmeters represent the most recent design from the world leader in magnetic measuring equipment. This new design incorporates the use of digital signal processing technology making it the world's first hand-held gaussmeter to have a digital signal processor (DSP) on board. F.W. Bell's exclusive Dynamic Probe Connection allows measurements from 0 to 30 kG with a basic accuracy of 1%.

Key features include Auto Zero, Min./Max./Peak Hold, Auto Range and Relative Mode. Both models allow the user to select Gauss or Tesla readings. The Model 5180 also has a selection for readings in Ampere/Meters and features a corrected analog output ( $\pm 3V$  FS) and a USB communications port.

The 5100 Series Hand-Held Gaussmeter's built-in software eliminates the need for complex calibration procedures. User prompts on the custom formatted LCD allow fast, simple push button operation. All models come equipped with a detachable transverse probe, zero gauss chamber, instruction manual, hard carrying case, and four AA batteries. Axial and other style probes are available as options.

Applications for the 5100 Series range from the most sensitive laboratory environment to the most rugged industrial setting. All instruments are CE compliant.

## Features

- The best accuracy in it's class
- Data logging capability
- 20X lower resolution
- Frequency Response 2X better than competitor
- The only handheld meter with DSP (Digital Signal Processing)
- Auto Zero
- Min/Max/Peak Hold
- Auto Range
- Relative Mode
- Universal Serial Bus Interface



## DETEK

6805 Coolridge Drive  
 Temple Hills, MD 20748-6940  
 301-449-7300 FAX 301-449-7011  
[www.detek.com](http://www.detek.com) email: sales@detek.com



Rev. date 09/2004

# 5100 Series Specifications

Model	5170	5180
<b>Basic Accuracy</b>	2%	1%
<b>Frequency Bandwidth</b>	DC-20 kHz	DC-40 kHz
<b>Sampling Rate</b>	5/sec	5/sec
<b>Ranges</b>		
Low Range	200 G	300 G
Mid Range	2 kG	3 kG
High Range	20 kG	30 kG
<b>Resolution</b>		
Low Range	0.1 G (10 $\mu$ T)	0.1 G (10 $\mu$ T)
Mid Range	1.0 G (100 $\mu$ T)	1.0 G (100 $\mu$ T)
High Range	10 G (1 mT)	10 G (1 mT)
<b>Display</b>	LCD	LCD
<b>Digits</b>	3 1/2	3 1/2
<b>Readings</b>	Gauss Tesla    Amps / Meters	Gauss Tesla    Amps / Meters
<b>Analog Output</b>	-	$\pm$ 3V FS
<b>Communication Port</b>	-	USB

## General Information

### All Models

<b>Temperature</b>	
Operating	0°C to 50°C
Storage	-25°C to 70°C
<b>Power</b>	4 AA batteries
<b>Size</b>	6.9 in x 3.9 in x 1.44 in.

## Probes and Accessories

Model Number	Description
<b>Model 5180 Probes</b>	
HTD18-0604	4" Transverse Probe
STD18-0404	4" Transverse Probe (incl. w/5180)
STD18-0402	2" Transverse Probe
SAD18-1904	4" Axial Probe
SAD18-1902	2" Axial Probe
<b>Model 5170 Probes</b>	
HTH17-0604	4" Transverse Probe
STH17-0404	4" Transverse Probe (incl. w/5170)
STH17-0402	2" Transverse Probe
SAH17-1904	4" Axial Probe
SAH17-1902	2" Axial Probe
<b>Models 5170/5180 Gaussmeter Probes</b>	
STB1X-0201	Ultra Thin Transverse Probe (0.020")
MOS51-3204	Low Field Probe (0.020")

### Shipping Weight

Domestic 12 lbs 5.5 kgs  
 International 17 lbs 8.0 kgs  
 Net 11 lbs 5.0 kgs  
 International 16 lbs 7.5 kgs

Note: Due to continuous process improvement, specifications subject to change without notice.



Rev. date 09/2004



## DETEK

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Hall Effect Gaussmeters





## POCKET MAGNETOMETERS

# NONDESTRUCTIVE TESTING EQUIPMENT



**MAGNETISM IS EVERYWHERE-** It is most commonly evident as residual magnetism in iron or steel objects. Determination of the degree of such magnetism is becoming more important for many critical components. Alloy steels, those that are heavily cold worked or heat treated, are especially prone to retain magnetism after having been subjected to strong magnetic fields, such as those created by magnetic chucks, magnetic conveyors, spot welding, magnetized machine tools, or magnetic analysis testing, etc.

**RESIDUAL MAGNETISM** in steel parts may be readily determined in a few seconds time by checking with a Pocket Magnetometer. Place the lower (test) edge of the Magnetometer Case near or against the object being tested. The Pointer Instantly Deflects to a reading on the scale proportional to the magnetism in the object at that point. The higher the reading, the stronger the magnetic field is. This reading can be compared directly with that produced by other similar objects which are known to be acceptable from a residual magnetism standpoint. Are your parts satisfactorily demagnetized?

**MAGNETIC POLARITY** of the field being measured is indicated by the direction of pointer deflection on the center zero scale. A plus (+) deflection indicates the test edge of the Magnetometer has been presented to a North (seeking) magnetic pole.

**IS DEMAGNETIZING OKAY** – Steel components such as video and sound take recorder capstans and guides, that become magnetized, add to background noise and loss of recorded high frequencies. A Pocket Magnetometer will indicate when they are demagnetized to safe levels.

**ACCURATE QUANTITATIVE MEASUREMENTS** are possible, even under widely varying temperature conditions. As a matter of convenience, instrument calibration is correct at normal room temperatures, but when the occasion demands, readings may be taken at extremes of temperature by applying the indicated percentage corrections to the readings for ambient (instrument) temperature in accordance with the straight-line graph.

**CARE SHOULD BE EXERCISED** in handling your Pocket Magnetometer; it should not be dropped. Although quite stable under reasonable conditions of handling, scale calibration can be changed by accidental exposure to strong A.C. magnetic fields or by strong unidirectional fields that would tend to deflect the pointer considerably off scale.

**CALIBRATION IS TRACEABLE TO N.B.S. and N.I.S.T.** on all of our instruments. Serialization and certification is available at an additional cost.

**POCKET MAGNETOMETERS ARE HANDY** – fast and easy to use, as well as being relatively inexpensive. The quantitative information secured can be extremely valuable to personnel in the tool room, stock room, inspection, engineering and laboratory, as well as in many production processes.

**6805 COOLRIDGE DR ■ TEMPLE HILLS MD 20748**  
**301-449-7300 ■ 800-638-0554 ■ FAX 301-449-7011**  
**EMAIL: [sales@detek.com](mailto:sales@detek.com)**



## NONDESTRUCTIVE TESTING EQUIPMENT

### **DRY MAGNETIC PARTICLE POWDER**

DETEK offers dry magnetic particle powders in a choice of five colors to enhance any application. Dry powders are generally used on parts with a rough surface or for field inspection. Each color is available in an easy to use 5 pound plastic container with a resealable top or in 100 pound kegs. Quantity pricing is available beginning with 25 pounds.

All powders are sieve tested and certified to meet the following specifications:

- I. ASME Boiler and Pressure Vessel Code, Section V, Articles 7 and 25**
- II. ASTM E 709**
- III. MIL-STD 2132A (SH)**
- IV. MIL-STD 271 E & F (SH)**
- V. SAE – Aerospace Materials Specification – AMS 3040**
- VI. NAVSEA 250-1500-1**
- VII. NTR-1E**
- VIII. MIL-STD 1949A**

We further certify that this material does not contain mercury as a basic element and no mercury bearing equipment was used in its manufacture.

#### **COLORS AVAILABLE ARE:**

MPW-110 SERIES	BLUE/BLACK
MPW-210 SERIES	RED
MPW-310 SERIES	GREY
MPW-410 SERIES	YELLOW
MPW-510 SERIES	WHITE

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# GLO-NETIC™ Spray Cans

## FLUORESCENT MAGNETIC PARTICLES



## PRODUCT INFORMATION

**Description:** Glo-Netic™ spray is used in the magnetic particle crack detection process by critical industries, including nuclear power, aerospace, shipbuilding and construction. Glo-Netic™ spray cans contain suspended fluorescent magnetic particles in a highly refined light petroleum oil. The particles respond to magnetic leakage fields created by cracks and other flaws. They rapidly collect at such fields and when viewed under black light, they reveal and profile flaws as bright, glowing yellow-green marks.

Glo-Netic™ spray cans save time and labor. Particles are pre-mixed in proper concentration for high sensitivity inspection. Particle concentration of the pre-mixed suspension gives a 0.25 to 0.30 ml settling (centrifuge) tube reading. Glo-Netic™ is ready when needed, no time-consuming weighing and mixing.

Glo-Netic™ spray cans are a useful and valuable NDT tool. They offer convenience and improve reliability since the pressure spray evenly disperses the particles in a uniform, light oil coating. The coating is free of "clumps".

**Companion Materials:** Sherwin DR-60 (Class 2)

**Container Sizes:** case of 12 aerosol cans

**Basic Instructions:** These instructions describe the basic process. They may need to be amended by the user to comply with applicable specifications and/or inspection criteria provided by the contracting agency.)

1. Clean the test surface with Sherwin DR-60 cleaner-remover or equivalent.  
Magnetize the area.  
Shake spray can well and spray a generous amount of Glo-Netic™ SC925 over the surface with magnetic equipment in contact. Allow excess oil to run off surface.
2. Inspect surface under ultraviolet lighting. Collections of fluorescent magnetic particles will reveal defects at leakage fields.  
Clean and repeat process, changing magnetizing equipment by 90°.

### Applicable Specifications:

MIL-STD-271  
MIL-STD-2132  
ASME B & PV Code, Sec. V

ASTM E 709  
AMS3045  
NAVSEA 25-1500-1

ASTM E 1444  
ASME 3046

### PRECAUTIONARY INFORMATION

Glo-Netic™ spray can propellant is flammable. Caution must be used if the Prod Method of magnetism is used as this is a source of ignition

revised Sept 2003

**SHERWIN**  
INCORPORATED

5530 Borwick Ave.  
South Gate, CA 90280  
(562) 861-6324  
FAX (562) 923-8370



# Circle Systems, Inc.

## Magnetic Particle Inspection



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**Offering the CircleSafe<sup>®</sup>, Mi-Glow<sup>®</sup> & Sir-Chem<sup>®</sup> Product Lines**

**Better products through chemistry.**

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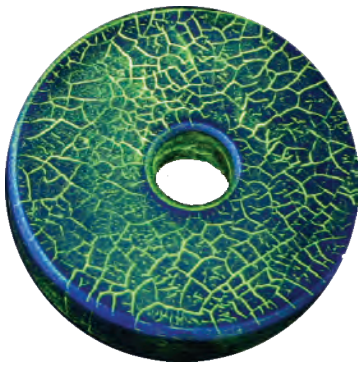
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## CIRCLE SYSTEMS, INC.

**Manufacturer of the MiGlow® and  
CircleSafe® line of MPI Products.**

Circle Systems, Inc. has been a leading manufacturer of magnetic particles for nondestructive testing for forty-nine years. Starting as a chemical company, its roots are in the chemistry of particle manufacture, wetting agents, anti-foamers, corrosion inhibitors and pH adjusters. From these roots have grown



and developed the first magnetic particles designed specifically for underwater inspection; the first water-based aerosol magnetic particle inspection package; the first magnetic stripe card for quick bath inspection; dual inspection particles; wetting agents and water base carriers that retain all the dispersion benefits of oil, while providing non-toxic and environmentally safe application -- just to name a few.

In addition to the proprietary line, Circle is also a laboratory specialist -- recognizing the need for unique requirements that go beyond its proprietary line. For this reason, Circle has developed special products for the

particular needs of the railroads, underwater inspection and the steel, automotive and aerospace industries. Circle's chemists, technicians and sales personnel stand ready to provide you with the formulations, fluorescent and non-fluorescent, that will meet your individual requirements.

Also, in an ongoing effort to emphasize Circle's commitment to provide high quality products and services to its customers, Circle has been certified to ISO 9001:2000. This certification ensures that Circle meets or exceeds industry recognized quality standards.

All Circle products are certified to Military, ASTM, AMS and other pertinent standards.

With a network of representatives now international in scope Circle can serve you quickly and professionally. Please contact your local distributor or Circle Systems for quantity pricing.



## Featured Product



<u>Item #</u>	<u>Package Size</u>
3100	1 pound jar
3102	12 pound pail

### MI-GLOW® 800

Ultra-bright, ultra-sensitive, fluorescent yellow particles designed for use in solvent media or for water-base applications when combined with specially formulated conditioners. Long-life particles display sharp, low-background/high contrast indications. These particles target fine, critical defects. Certified to be compliant with the following specifications: AMS 3044; ASME SE-709, B&PV Code, § V, Article 25; ASTM E 709; ASTM E 1444; MIL-STD-2132(SH).

**WET METHOD PARTICLE INSPECTION**

**MI-GLOW® 778**

A liquid concentrate with fluorescent yellow Mi-Glow 800 particles and liquid wetting agent, designed for water system use. Contains special corrosion inhibitors, anti-foaming agents, wetting agents and pH buffering agents. For critical applications requiring superior wetting and corrosion resistance. One quart of concentrate, when combined with water, makes ten gallons of suspension agent.



<u>Item #</u>	<u>Package Size</u>
3571	4-1 quart bottles/case



**MI-GLOW® 810**

Mi-Glow 800 fluorescent yellow particles premixed with dry wetting agent for use in a water-based system. An environmentally friendly and economic solution when wetting and corrosion inhibition are not as critical.

<u>Item #</u>	<u>Package Size</u>
3111	2 pound jar
3114	35 pound pail

**MI-GLOW® 820**

A liquid concentrate with non-fluorescent black Mi-Glow 106 particles and liquid wetting agent, designed for water system use. Contains special corrosion inhibitors, anti-foaming agents, wetting agents and pH buffering agents.



<u>Item #</u>	<u>Package Size</u>
3611	4 - 1 quart bottles/case



**MI-GLOW® 106**

Non-fluorescent black particles designed for use in an oil media system with white light.

<u>Item #</u>	<u>Package Size</u>
2431	2 pound jar





**MI-GLOW® 600**

Dual-light red particles for use in oil. Designed to be used in visible light for revealing defects found in structural fabrications. Ultra-violet light may be used to further highlight defect indications in either a well-lit or darkened area. Preferred for outdoor inspection and on parts too large to hood.

<u>Item #</u>	<u>Package Size</u>
2880	1 pound jar
2882	12 pound pail

**MI-GLOW® 850**

Dual method Mi-Glow 600 red particles premixed with a dry conditioning agent for use in a water-based system. Can be viewed outdoors in daylight, enhanced with UV lamp, or in hooded area with ultraviolet light.



<u>Item #</u>	<u>Package Size</u>
3641	2 pound jar
3648	30 pound pail



**MI-GLOW® 218X**

A pre-mix of fluorescent yellow particles and dry wetting agent designed to reveal defects such as those found in billet inspection. For use in a water-based system.

<u>Item #</u>	<u>Package Size</u>
3231	2 pound jar
3238	30 pound pail

**MI-GLOW® 800**

Ultra-bright, ultra-sensitive, fluorescent yellow particles designed for use in solvent media or for water-base applications with the addition of specially formulated conditioners. Long-life particles display sharp, low-background/high contrast indications. These particles target fine, critical defects.



<u>Item #</u>	<u>Package Size</u>
3100	1 pound jar
3102	12 pound pail

**DRY METHOD PARTICLE INSPECTION**

**SIR-CHEM® DUSTING POWDER 61**

Highly refined gray magnetic powder for use in natural light. Detects minute discontinuities on fabricated or welded surfaces such as bridges, pipes, tanks, machinery and equipment.



<u>Item #</u>	<u>Package Size</u>
2551	10 pound jar
2555	50 pound pail



**SIR-CHEM® DUSTING POWDER 63**

Highly refined red magnetic powder for use in natural light. Detects minute discontinuities on fabricated or welded surfaces such as bridges, pipes, tanks, machinery and equipment.

<u>Item #</u>	<u>Package Size</u>
2571	10 pound jar
2575	50 pound pail

**SIR-CHEM® DUSTING POWDER 66**

Highly refined yellow magnetic powder for use in natural light. Detects minute discontinuities on fabricated or welded surfaces such as bridges, pipes, tanks, machinery and equipment.



<u>Item #</u>	<u>Package Size</u>
2621	10 pound jar
2625	50 pound pail



**SIR-CHEM® DUSTING POWDER 68**

Highly refined blue magnetic powder for use in natural light. Detects minute discontinuities on fabricated or welded surfaces such as bridges, pipes, tanks, machinery and equipment.

<u>Item #</u>	<u>Package Size</u>
2631	10 pound jar
2635	50 pound pail

**SIR-CHEM® DUSTING POWDER 73**

Highly refined dual light red magnetic powder for use in natural and ultraviolet light. Under natural light this powder appears purple and under black light it fluoresces red. Detects minute discontinuities on fabricated or welded surfaces such as bridges, pipes, tanks, machinery and equipment.



<u>Item #</u>	<u>Package Size</u>
2601	10 pound jar
2605	50 pound pail



**SIR-CHEM® DUSTING POWDER 75**

Highly refined dual light yellow-green magnetic powder for use in natural and ultraviolet light. Under natural light this powder appears yellow-green and under black light it fluoresces yellow-green. Detects minute discontinuities on fabricated or welded surfaces such as bridges, pipes, tanks, machinery and equipment.

<u>Item #</u>	<u>Package Size</u>
2641	10 pound jar
2645	50 pound pail

**SIR-CHEM® DUSTING POWDER 93**

Highly refined dual light bonded magnetic powder for use with a blue light. Detects minute discontinuities on fabricated or welded surfaces such as bridges, pipes, tanks, machinery and equipment.



<u>Item #</u>	<u>Package Size</u>
2671	10 pound jar
2675	50 pound pail

**AEROSOLS**

**CIRCLESAFE® 778A**

A pre-proportioned combination of Mi-Glow 800 fluorescent particles and a specifically formulated wetting agent in water, packaged in carbon dioxide charged aerosol cans. Designed to detect very fine defects found in finished products and other critical applications. Environmentally safe, non-flammable and user friendly.



<u>Item #</u>	<u>Package Size</u>
3590	12 - 12 oz. cans/case



**CIRCLESAFE® 800A**

A pre-proportioned combination of Mi-Glow 800 fluorescent particles and an odorless inspection oil vehicle, packaged in carbon dioxide charged aerosol cans. Designed to detect very fine defects found in finished products and other critical applications.

<u>Item #</u>	<u>Package Size</u>
3130	12 - 12 oz. cans/case

**CIRCLESAFE® 820A**

A pre-proportioned combination of non-fluorescent black particles and a specifically formulated wetting agent in water, packaged in carbon dioxide charged aerosol cans. Designed to be used in white light inspection for detecting very fine defects found in finished products and structural fabrications. Environmentally safe, non-flammable and user friendly.



<u>Item #</u>	<u>Package Size</u>
3600	12 - 12 oz. cans/case



**CIRCLESAFE® 850A**

A pre-proportioned combination of Mi-Glow 600 red dual light particles and a specifically formulated wetting agent in water, packaged in carbon dioxide charged aerosol cans. Designed to be used in white light inspection for detecting defects found in structural fabrications. Ultra-violet light may be used to further highlight defect indications in either a well-lit or darkened area. Environmentally safe, non-flammable and user friendly.

<u>Item #</u>	<u>Package Size</u>
3630	12 - 12 oz. cans/case



### CIRCLESafe® 820AX

A pre-proportioned combination of non-fluorescent black particles and an odorless inspection oil vehicle, packaged in carbon dioxide charged aerosol cans. Designed to be used in white light inspection for detecting very fine defects found in finished products and structural fabrications.

<u>Item #</u>	<u>Package Size</u>
3609	12 - 16 oz. cans/case

### MI-GLOW® WCP

A specially formulated white contrast paint, packaged as an aerosol, used to create a consistent background on the component surface in a visible magnetic particle inspection scenario. When dry, the white contrast paint is resistant to the wet method baths used for inspection, but is easily removed from the demagnetized component surface with acetone.



<u>Item #</u>	<u>Package Size</u>
3740	12 - 16oz. cans/case

**READY-TO-USE SPRAYS**

**MI-GLOW® 778S RTU**

A Ready-to-Use water bath used for magnetic particle inspection, packaged in a hand-held spray bottle. The water bath contains fluorescent particles and special water chemistry, which consists of corrosion inhibitors, anti-foaming agents, wetting agents and pH buffering agents. Designed for revealing very fine defects on both machined and unfinished ferro-magnetic materials.



**Item #**

**Package Size**

3572

6-1 quart bottles/case



**MI-GLOW® 820S RTU**

A Ready-to-Use water bath used for magnetic particle inspection, packaged in a hand-held spray bottle. The water bath contains non-fluorescent particles and special water chemistry, which consists of corrosion inhibitors, anti-foaming agents, wetting agents and pH buffering agents. Designed for revealing very fine defects on both machined and unfinished ferro-magnetic materials.

**Item #**

**Package Size**

3612

6-1 quart bottles/case

**MI-GLOW® 850S RTU**

A Ready-to-Use water bath used for magnetic particle inspection, packaged in a hand-held spray bottle. The water bath contains fluorescent particles and special water chemistry, which consists of corrosion inhibitors, anti-foaming agents, wetting agents and pH buffering agents. This is a red water system used for visible and fluorescent magnetic particle inspection. Designed to be used in visible light for revealing defects found in structural fabrications and with ultra-violet light to further enhance defects in a well-lit or darkened area.



**Item #**

**Package Size**

3642

6-1 quart bottles/case



**MI-GLOW® 600LS RTU**

A Ready-to-Use oil bath used for magnetic particle inspection, packaged in a hand-held spray bottle. The red oil system is used for visible and fluorescent magnetic particle inspection. Designed to be used in visible light for revealing defects found in structural fabrications and with ultra-violet light to further enhance defects in a well-lit or darkened area.

<u>Item #</u>	<u>Package Size</u>
2890	6-1 quart bottles/case

**MI-GLOW® 800LS RTU**

A Ready-to-Use pre-proportioned combination of fluorescent particles and odorless inspection oil vehicle, packaged in a hand-held spray bottle. Designed for revealing very fine defects, such as those found in finished products for the aerospace industry and other critical applications.



<u>Item #</u>	<u>Package Size</u>
3145	6-1 quart bottles/case



**MI-GLOW® 820LS RTU**

A Ready-to-Use pre-proportioned combination of non-fluorescent black particles and odorless inspection oil vehicle, packaged in a hand-held spray bottle. Designed for revealing very fine defects on both machined and unfinished ferro-magnetic materials.

<u>Item #</u>	<u>Package Size</u>
3622	6-1 quart bottles/case

**WATER BATH SUPPLEMENTS**

**WETTING AGENT 771**

Contains special corrosion inhibitors, anti-foaming agents, wetting agents and pH buffering agents.



<u>Item #</u>	<u>Package Size</u>
3501	4 - 1 quart bottles/case



**ANTI-FOAM 3**

A concentrated foam reducing agent.

<u>Item #</u>	<u>Package Size</u>
2950	4 - 1 quart bottles/case

**CORROSION INHIBITOR 7**

An additive used to boost the corrosion inhibition properties of the MPI bath.



<u>Item #</u>	<u>Package Size</u>
3510	4 - 1 quart bottles/case
3515	55 gallon drum



**CLEANER 500**

Mild alkaline cleaner excellent for use in cleaning out an oil-base or water-base system prior to going to the water-based system or in between baths.

<u>Item #</u>	<u>Package Size</u>
3851	1 gallon bottle



**MAGNETIC STRIPE CARDS**



**TYPE 2000**

A Magnetic Stripe Card used for instantly evaluating the performance of magnetic particle inspection materials. This card can be used to quantitatively evaluate the performance of MPI materials by displaying the number of indications that can be observed after the material has been applied to the stripe. Magnetic Stripe Cards are recognized as a tool for evaluation of magnetic particle inspection materials in ASTM E-709-01 “Standard Guide for Magnetic Particle Examination”, Paragraph 20.6.8 and Appendix X2.

<b>Item #</b>	<b>Package Size</b>
2800	Each

**TYPE A**

A high coercivity magnetic stripe card that assists in evaluating the quality of magnetic particle baths, suspension and dry powders. The card acts as a test piece and supplement to the ASTM D-96 settling tube, Ketos ring and other tests for MPI Materials.



<b>Item #</b>	<b>Package Size</b>
2850	Each

**UNDERWATER MAGNETIC PARTICLE INSPECTION**



**MI-GLOW® UNDERWATER 1**

This product is a premix of dual-light red particles and wetting agent for use in underwater inspection. Designed to be used in a variety of underwater applications, including offshore structural welds, pipeline inspection and ship husbandry in shallow as well as deep water. It is a versatile particle with a broad particle size range and the ability to be used in both black light and natural light systems.

<b>Item #</b>	<b>Package Size</b>
2701	2 pound jar
2703	25 pound pail

**MI-GLOW® UNDERWATER 528**

A combination of water conditioners and fluorescent magnetic particles that fluoresces orange-red under black light and is visible red under white light. Designed for use in a variety of underwater inspections, including offshore structural welds, pipeline inspection and ship husbandry. Especially designed to enhance photographic recording of underwater inspections.



<b>Item #</b>	<b>Package Size</b>
2771	2 pound jar
2773	25 pound pail

**CARRIER SOLUTIONS**

**CIRCLESOL M**

A solvent specifically designed for use in magnetic particle inspection. Its high clarity, low fluorescence and no odor combination make it ideal for use as a carrier media in a variety of applications.



<u>Item #</u>	<u>Package Size</u>
3880	55 gallon drum
3883	5 gallon pail



**MI-GLOW® 800L**

A pre-proportioned combination of Mi-Glow 800 fluorescent particles and odorless inspection oil vehicle packaged ready-for-use in five-gallon cans. Designed for revealing very fine defects, such as those found in finished products for the aerospace industry and other critical applications.

<u>Item #</u>	<u>Package Size</u>
3143	5 gallon pail

## Specification Guide

### Wet Method Magnetic Inspection Particles

SPECIFICATION COMPLIANCE	MI-GLOW® 800	MI-GLOW® 810	MI-GLOW® 778	MI-GLOW® 820	CIRCLESOL M
AMS 2641					X
AMS 3042				X	
AMS 3044	X	X	X		
AMS 3161					X
API RP 5A5	X	X	X		
ASME B&PV	X	X	X	X	
ASTM E709	X	X	X	X	
ASTM E1444	X	X	X	X	X
DOD-F-87935					X
MIL-STD-271	X	X	X	X	X
MIL-STD-1949	X	X	X	X	X
MIL-STD-2132	X	X	X	X	
NAVSEA 250-1500-1	X	X	X	X	
NTR-1E	X	X	X	X	
Bell Helicopter-Textron	X	X	X		
Boeing Aircraft BAC 5424	X	X	X		
Boeing (Douglas Aircraft)	X	X	X		
General Electric Aircraft	X	X	X		
Pratt & Whitney MPM	X	X	X		
Pratt & Whitney PMC-1887					X

## Specification Guide cont.

## Aerosol Magnetic Inspection Particles

SPECIFICATION COMPLIANCE	CIRCLESAFE® 800A	CIRCLESAFE® 778A	CIRCLESAFE® 820A	CIRCLESAFE® 820AX	CIRCLESAFE® 850A
AMS 2641	X			X	
AMS 3042			X	X	X
AMS 3044	X	X			
AMS 3045	X				
AMS 3161	X			X	
ASME B&PV	X	X	X	X	X
ASTM E709	X	X	X	X	X
ASTM E1444	X	X	X	X	X
DOD-F-87935	X			X	
MIL-STD-271	X	X	X	X	X
MIL-STD-1949	X	X	X	X	X
MIL-STD-2132	X	X	X	X	X
NTR-1E	X	X	X	X	X

## Dry Method Magnetic Inspection Particles

SPECIFICATION COMPLIANCE	DP 61 Gray	DP 63 Red	DP 66 Yellow	DP 68 Blue-Black	DP 73 Fluorescent Red	DP 75 Fluorescent Yellow	DP 93 Blue Light Red
AMS 3040	X	X	X	X	X	X	X
API RP 5A5	X	X	X	X	X	X	X
ASME B&PV	X	X	X	X	X	X	X
ASTM E709	X	X	X	X	X	X	X
ASTM E1444	X	X	X	X	X	X	X
MIL-STD-271	X	X	X	X	X	X	X
MIL-STD-1949	X	X	X	X	X	X	X
MIL-STD-2132	X	X	X	X	X	X	X
NAVSEA 250-1500-1	X	X	X	X	X	X	X
NTR-1E	X	X	X	X	X	X	X