

MAGNETIC PARTICLE EQUIPMENT



Selection Guide



MAGNAFLUX[®]

A Division of Illinois Tool Works Inc.

INTRODUCTION

Whether you're testing a small bolt, a large turbine rotor or anything in between, Magnaflux offers a complete selection of high-quality magnetic particle inspection (MPI) equipment for every application.

Value-engineered and manufactured to meet government and industry specifications, Magnaflux MPI equipment provides many advantages:

- Simple, fast, reliable operation
- Versatility to locate both surface and near-surface defects
- Economical operation for high-volume inspection rates
- Durability for industrial environments
- Little or no size limitations of parts being tested
- No elaborate pre-cleaning of parts is required

For optimum inspection performance, Magnaflux supplies a complete line of wet and dry method materials and accessories designed specifically for magnetic particle inspection. For more information regarding these quality products, visit our website at www.magnaflux.com.

SELECTION GUIDELINES

1. Types of Defects

For surface defects, an AC model is generally sufficient. To locate near-surface flaws, HWDC or FWDC models are recommended. Use contact shot to inspect for longitudinal defects, use coil shot to inspect for transverse/radial flaws.

2. Part Length

CONVENTIONAL MPI UNITS

If part length is ≤ 42", use A-1025S

If part length is ≤ 54", use A-940, AD-945, D-2060

If part length is ≤ 102", use A-940L, AD-945L, D-2060L, D-990LR

If part length is ≤ 146", use D-960XL, D-990XLR

Note: If part length is greater than those listed, contact Magnaflux.

If part length is ≤ 29", use MD-2030S

If part length is ≤ 41", use MD-2060, MD3-2060

If part length is ≤ 89", use MD-2060L, MD3-2060L

If part length is ≤ 133", use MD-2060XL, MD3-2060XL

Note: If part length is greater than those listed, contact Magnaflux.

3. Processing Rate

If your production rate is *low*, a "conventional" MPI unit that requires one contact shot *and* one coil shot is sufficient. If your production rate is *high*, a "multi-directional" unit is recommended because it magnetizes parts in all directions in one cycle/shot, thus reducing processing time dramatically.

4. Magnetizing Field Strength

Proper magnetizing field strength depends on the material, size and geometry of the part, plus the type and location of defects being sought. One way to determine adequate field strength is testing with artificial QOI defects adhered to critical inspection areas. If this cannot be done, the general rule for contact shots is 100-500 amps/inch of part diameter.

OTHER MPI EQUIPMENT

- **Inspection Hoods:** After parts are magnetized in an MPI unit, they must be inspected. When you use fluorescent magnetic particles in the MPI bath, an inspection hood (or darkened environment) and a black light are required. Magnaflux offers a wide variety of inspection hoods that include a 100-watt black light, white light and ventilation fan; these accessories easily mount to the equipment.
- **Inspection Booths with Conveyors:** For applications requiring very high production rates, Magnaflux offers a conveyor/inspection booth system that allows parts to be magnetized and then moved into a separate inspection area for multiple operator inspection. The system is integrated into the equipment and includes the booth with a 10'L x 8"W conveyor, two ZB100F black lights, white light, ventilation fan, drip pan and E-stops.
- **Demagnetization Coils:** Many applications require that parts be demagnetized after inspections. Magnaflux offers a wide variety of AC demag coils that accommodate almost any part size and allow for simple demagnetization.
- **Induced Current and Split Coils:** These units are suited for inspection of disk-like parts with an I.D. The induced current unit is used to find circumferential defects and the split coil unit detects radial defects.

Visit our website at www.magnaflux.com.

TABLE OF CONTENTS

For information about a particular machine, refer to the pages listed below.

To compare different wet horizontal equipment models, consult the Selection Matrix on pages 9-10.

PAGE

Introduction — Selection Guidelines	1
MD-2030S . . . 3000 amp FW/HWDC/2500 amp AC multi-directional.	2
MD-2060 . . . 6000 amp FW/HWDC/5000 amp AC multi-directional.	3
MD3-2060 . . . 6000 amp FW/HWDC/5000 amp AC multi-directional.	4
MD3-6629 . . . 6000 amp FW/HWDC/5000 amp AC multi-directional.	5
A-940 4000 amp AC.	6
AD-945 4000 amp AC/5000 amp single phase FWDC	7
A-1025S 2500 amp AC.	8
Equipment Selection Matrix	9 - 10
ADH-2045 . . . 6000 amp FW/HWDC/5000 amp AC multi-directional.	11
D-2060 6000 amp three phase FWDC	12
D-990LR 10,000 amp three phase FWDC.	13
Power Packs	14
MAG Kit	14
Mobile Power Packs	15
CMD Power Pack	16
CSQ Power Pack	16
Accessories	17
Black Light	18
Inspection Hood	18
Magnetic Particle Materials	18

MD EQUIPMENT



MD-2030S

The MD-2030S provides surface and near-surface detection with substantial savings in time and money compared to conventional MPI units. Offering both multi-directional and conventional magnetization, this unit is best suited for inspection of small to medium sized parts.

FEATURES

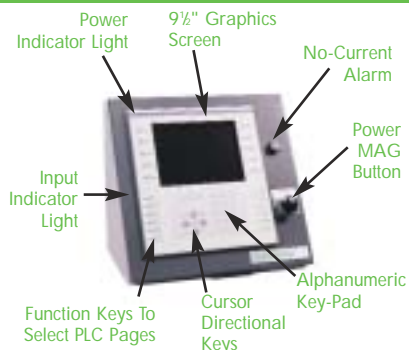
- 3000 amp FWDC/HWDC and 2500 amp AC multidirectional output
- Multi-directional power supply—two phases (contacts and Flux-Flo™ coils.)
- Programmable Logic Controller (PLC) and Graphics Display Control Panel
- Large Illuminated Display with Digital Amperage Readout
- Pushbutton controls on one adjustable panel
- Two independent variable current controls keypad entry
- Visual/Audible current assurance alarms with alarm log lets operator know the current did not pass through or magnetic field was not set up in test piece
- Quick disconnect wiring
- Modular solid state circuitry
- 50 customer programmable recipes
- Automatic piece parts counter
- Security systems (password protection, supervisor locks)
- Footswitch-operated pneumatic headstock
- Stainless steel tank
- Magnetization shot duration adjustment
- Hand hose
- Front and Hardwood Grilles: impervious to oils and water, forgiving surface for parts that may be accidentally dropped
- Push Bar initiates mag cycle, frees up two hands for part handling and inspection
- Adjustable Tailstock facilitates movement back and forth on rail to accommodate various lengths of your test pieces

SPECIFICATIONS

Dimensions without hood	72" L x 34"W x 58½" H (182.9 cm x 86.4 cm x 148 cm)
Net weight	1500 lbs (680 kg)
Input	230/460 VAC, 50/60 Hz, three phase
Line current	240/120 amperes
Recommended line fuse	200/100 amperes
Recommended wire size	#4/#6 AWG
Duty cycle	0.5 seconds ON, 10 seconds OFF
Part length capacity	29" (73.7 cm)
Part weight capacity	1500 lbs (680 kg) with optional steady rests
Tank capacity	7 gallons (26.5 liters)
Convenience outlets (2)	115 VAC, 5 amperes
Air supply	60–100 psi (4.2–7.0 kg/cm ²) ¼ NPT pipe connection

PROGRAMMABLE LOGIC CONTROLS

- Increase Reliability and Speed
- Reduce Operator Errors
- Write Reports
- Count Parts
- Maintain Cycle Repeatability
- Store and Recall Application Setup



OPTIONS

- Decaying AC and Reversing FW demagnetization to help reduce gauss level in part and enhance post operations like drilling, grinding, welding
- Inspection hood with ZB-100F, white light and ventilation fan
- Automatic bath for parts up to 20" in length (for longer parts, contact Magnaflux)
- Dual palm buttons (in lieu of footswitch operation)
- Powered 10' x 8" conveyor with two-person inspection booth, two ZB-100F black lights, white light and ventilation fan
- Special paint
- Special voltage transformers:

208 VAC/60Hz	415 VAC/50Hz
380 VAC/50Hz	575 VAC/60Hz

ADVANCED OPTION PACKAGE: MD-2030S

- Current set point options (over current/under current)
- Dot matrix printer for record keeping
- Additional 50 customer programmable recipes
- Interface to material handling systems

MD EQUIPMENT



**MAGNAFLUX
MODEL MD-2060**

OTHER MODELS

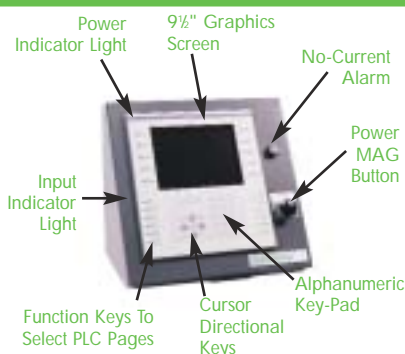
MD-2060L
- Length = 132½" —(336.6cm)
- Part length capacity = 89" — (226.1cm)
MD-2060XL
- Length = 176½" —(448.3cm)
- Part length capacity = 133" — (337.8cm)

SPECIFICATIONS

Dimensions without hood	84½" L x 41"W x 60¾" H (224.8 cm x 104.1 cm x 153 cm)
Net weight	1700 lbs (861 kg)
Input	460 VAC, 50/60 Hz, three phase (other voltages available)
Line current	400 amperes
Recommended line fuse	200 amperes
Recommended wire size	#2/0 AWG
Duty cycle	0.5 seconds ON, 10 seconds OFF
Part length capacity	41" (104.1 cm)
Part weight capacity	1500 lbs (680 kg) with optional steady rests
Tank capacity	10 gallons (37.9 liters)
Convenience outlets (1)	115 VAC, 5 amperes
Air supply	60–100 psi (4.2–7.0 kg/cm ²) ¼" NPT pipe connector
PLC	Modular Design
Display screen size	9½" (24.13 cm)

PROGRAMMABLE LOGIC CONTROLS

- Increase Reliability and Speed
- Reduce Operator Errors
- Write Reports
- Count Parts
- Maintain Cycle Repeatability
- Store and Recall Application Setup



MD-2060

The MD2060 multi-directional magnetic particle inspection unit features the capability to magnetize with 6,000 amps full wave DC (FWDC) and half wave DC (HWDC), or 5,000 amps alternating current (AC) in any combination. This unit is best suited for surface and near-surface defect detection of small to large parts.

FEATURES

- 6000 amp FWDC/HWDC and 5000 amp AC multidirectional output
- Multi-directional power supply — two phases (contacts and Flux-Flo™ coils.)
- Programmable Logic Controller (PLC) and Graphics Display Control Panel
- Large Illuminated Display with Digital Amperage Readout
- Two independent, infinitely variable current controls with Keypad entry.
- Modular solid state circuitry
- Quick disconnect wiring for ease of serviceability
- 50 customer programmable recipes (Parameters for magnetization/demagnetization)
- Automatic piece parts counter, (for quality control reporting)
- Security systems (password protection, supervisor locks). Reduces the risk of error in setup and inspection by ensuring proper magnetic fields.
- Current Assurance Indicator lets operator know the current did not pass through or magnetic field was not set up in test piece
- Front and Hardwood Grilles: impervious to oils and water, forgiving surface for parts that may be accidentally dropped
- Push Bar initiates mag cycle, frees up two hands for part handling and inspection
- Footswitch-operated pneumatic headstock
- Adjustable Tailstock facilitates movement back and forth on rail to accommodate various lengths of your test pieces

OPTIONS: MD-2060

- Decaying AC and Reversing FWDC demagnetization to help reduce gauss level in part and enhance post operations like drilling, grinding, welding
- Inspection hood with one ZB-100F, 100 watt black light, white light and ventilation fan (please specify 50 or 60 Hz)
- Powered conveyor, 10' (3 m) L x 8" (20 cm) W, with two person inspection booth including two ZB-100F black lights, white light, and ventilation fan
- Motorized tailstock kit
- Special paint
- Special voltage transformers: 380v/50Hz, 415v/50Hz, 575v/60Hz
- Automatic bath for parts up to 20" in length (for longer parts contact Magnaflux)
- Dual palm buttons (in lieu of footswitch operation)

ADVANCED OPTION PACKAGE: MD-2060

- Current set point options (over current/under current)
- Dot matrix printer for record keeping
- Additional 50 customer programmable recipes
- Interface to material handling systems

MD EQUIPMENT



MAGNAFLUX MODEL MD3-2060

OTHER MODELS

MD3-2060L
- Length = 132½" —(336.6cm)
- Part length capacity = 89" — (226.1cm)

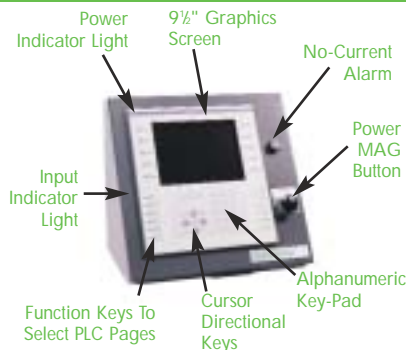
MD3-2060XL
- Length = 176½" —(448.3cm)
- Part length capacity = 133" — (337.8cm)

SPECIFICATIONS

Dimensions without hood	88½" L x 41" W x 60¼" H (224.8 cm x 104.1 cm x 153 cm)
Net weight	1900 lbs (861 kg)
Coil diameter	16" (40.6 cm)
Input	460 VAC, 50/60 Hz, 3 PH (other volt-ages available)
Line current	400 amperes
Recommended line fuse	200 amperes
Recommended wire size	#2/0 AWG
Duty cycle	0.5 seconds ON, 10 seconds OFF
Part length capacity	41" (104.1 cm)
Part weight capacity	1500 lbs (680 kg) with optional steady rests
Tank capacity	10 gallons (37.9 liters)
Convenience outlets (1)	115 VAC, 5 amperes
Air supply	60–100 psi (4.2–7.0 kg/cm ²) ¼" NPT pipe connector
PLC	Modular Design
Display screen size	9½" (24.13 cm)

PROGRAMMABLE LOGIC CONTROLS

- Increase Reliability and Speed
- Reduce Operator Errors
- Write Reports
- Count Parts
- Maintain Cycle Repeatability
- Store and Recall Application Setup



ADVANCED OPTION PACKAGE: MD3-2060

- Current set point options (over current/under current)
- Dot matrix printer for record keeping
- Additional 50 customer programmable recipes
- Interface to material handling systems

MD3-2060

The MD3-2060 is our most versatile, powerful standard multidirectional unit. It offers timesaving multidirectional magnetization for detecting defects in all directions with one cycle, or conventional two-cycle operation. It provides alternating current (AC), full wave DC (FWDC), and half wave DC (HWDC) magnetization for surface or near-surface flaws. It provides enough amperage for a wide range of parts. A programmable logic controller (PLC) and a user-friendly graphical operator interface accomplishes superior control of the units operation.

FEATURES

- 6000 amp FWDC/HWDC and 5000 amp AC multi-directional output
- Multidirectional power supply — three phases: contacts, Flux-Flo™ coils and auxiliary coil
- Programmable Logic Controller (PLC) and Graphics Display Control Panel
- Large Illuminated Display with Digital Amperage Readout
- Three independent variable current controls with keypad entry
- Modular solid state circuitry
- Stainless steel tank
- Magnetization shot duration adjustment
- Ensures Cycle Repeatability by Controlling Mag Shots and Bath Applications
- Security System (password protection, supervisor locks) reduces the risk of error in set up and inspection by ensuring proper magnetic fields
- 50 Customer Programmable menus for pre-programming of inspection setups. (Parameters for Magnetization/Demag)
- Automatic Piece Parts counter for quality control reporting
- Quick Disconnect Wiring installed for ease of serviceability
- Current Assurance Indicator lets operator know the current did not pass thru or magnetic field was not set up in test piece
- Front and Hardwood Grilles: impervious to oils and water, forgiving surface for parts that may be accidentally dropped
- Push Bar initiates mag cycle, frees up two hands for part handling and inspection
- Adjustable Tailstock facilitates movement back and forth on rail to accommodate various lengths of your test pieces
- Footswitch-operated pneumatic headstock

OPTIONS: MD3-2060

- Decaying AC and Reversing FWDC demagnetization to help reduce gauss level in part and enhance post operations like drilling, grinding, welding
- 20" and 25" coil with raising block
- Inspection hood with one ZB-100F, 100 watt black light, white light and ventilation fan (please specify 50 or 60 Hz)
- Powered conveyor, 10' (3 m) L x 8" (20 cm) W, with two person inspection booth including two ZB-100F black lights, white light, and ventilation fan
- Motorized tailstock kit
- Special paint
- Special voltage transformers: 380/415/575 VAC
- Automatic bath for parts up to 20"
- Dual palm buttons (in lieu of footswitch operation)

MD EQUIPMENT

MAGNAFLUX MODEL MD3-6629

MD3-6629



The MD3-6629 works in the same manner as the rest of the Multi-directional Magnetic Particle Machines manufactured by Magnaflux. The unit will magnetize a part in all three dimensions simultaneously. A changing field vector is created by switching between output within the unit. The vector will change at the frequency of the line output, normally 50 or 60 hertz. With the three dimensional magnetization applied to the part defects can be detected in all planes. Designed to use CMD style power pack (see CMD Feature/Options).

FEATURES

Traditional vs. Multidirectional Coil

Most traditional units will magnetize a part with a direct contact shot (for a circular field) and a longitudinal coil shot in order to inspect all planes of a part. The direct current shot will magnetize the part of the planes while the coil will cover the third plane.

The Multi-directional Coil induces the field in the part in the same way as the coil shot on a traditional unit. The coil can only induce a field in one direction so the Multi-directional Coil is made up of a three coil system. Each part of the coil system induces a field in a different plane.

Advantages of the Multi-directional Coils

Since the fields are all included into the part, chance of contact damage from arcing or clamping are eliminated. The no contact method also allows all surfaces to be inspected in one step since the contact surfaces are now free from interference. The coil system can be set up to handle multiple parts at once increasing productivity, or set up to allow any part orientation to decrease handling time, loading and unloading.

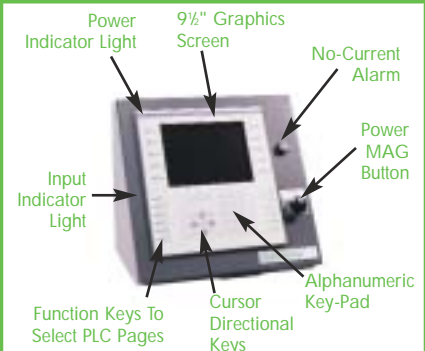
- Controlled Break Circuitry/Quick Break which ensures magnetic field wraps around ends of test piece (crucial to final inspection)
- Current Assurance Indicator lets operator know the current did not pass thru or magnetic field was not set up in test piece

Magnaflux Conveyor MPI System XG-6572

- Stainless steel frame and tank
- 16" wide Stainless steel belt conveyor system
- Magnetizing coils in three axes 16" x 19" window
- Adjustable speed conveyor
- Multi-directional, AC/HWDC/FWDC power pack
- Illuminated pushbutton control panel
- Individual, infinitely variable current controls for three outputs
- Three digital ammeters with hold feature
- Over-all length of system (233 inches)
- S-1224 demagnetization coil at the end of the conveyor
- Automatic bath application, with recirculating/agitating system
- Inspection hood with 400W flood black light, white light and ventilating fan
- Two ZB-100F black lights in booth
- Amperage level at each coil (peak)

PROGRAMMABLE LOGIC CONTROLS

- Increase Reliability and Speed
- Reduce Operator Errors
- Write Reports
- Count Parts
- Maintain Cycle Repeatability
- Store and Recall Application Setup



A SERIES

4000 AMP AC UNIT



MODEL SHOWN IS
MAGNAFLUX MODEL A-940L

OTHER MODELS

A-940L
- Length = 120½" —
(306.1 cm)
- Part length capacity =
102" — (259 cm)

SPECIFICATIONS

Dimensions without hood	72½" L x 37" W x 70" H (184.2 cm x 94 cm x 177.8 cm)
Net weight	1600 lbs (726 kg)
Coil diameter	12" (30.5 cm)
Input	230/460 VAC, 50-60 Hz, single phase
Line current	170/85 amperes
Recommended line fuse	125/70 amperes
Recommended wire size	#2/#6 AWG
Duty cycle	0.5 seconds ON, 2 seconds OFF
Part length capacity	54" (137.2 cm)
Part weight capacity	1500 lbs (680 kg) with optional steadyrests
Tank capacity	10 gallons (37.9 liters)
Convenience outlets (1)	115 VAC, 5 amperes
Air supply	60-100 psi (4.2-70 kg/cm ²)¼" NPT pipe connection

A-940

The mid-sized A-940 wet horizontal unit is best suited for MPI of medium to large parts for surface defects.

FEATURES

- 4000 amp AC output
- Footswitch-operated pneumatic headstock
- Infinitely variable, self-regulating current control
- Digital ammeter
- Decaying AC Demagnetization to help reduce gauss level in part and enhance post operations like drilling, grinding, welding
- Controlled Break Circuitry
- Current Assurance Indicator lets operator know the current did not pass through or magnetic field was not set up in test piece
- Adjustable shot timer
- Remote palm button
- Stainless steel tank
- Hand hose
- Bath agitating pump
- Hardwood Grilles: impervious to oils and water, forgiving surface for parts that may be accidentally dropped
- Push Bar initiates mag cycle, frees up two hands for part handling and inspection
- Adjustable Tailstock facilitates movement back and forth on rail to accommodate various lengths of your test pieces

OPTIONS

- Inspection hood with ZB-100F black light, white light, and ventilation fan
- Tailstock crank
- Split push bar with separate current control
- Automatic magnetization
- 16"/20"/25" coil with raising block
- Rotating head and tailstock (for maximum 100-lb. part)
- Heavy-duty frame (increases load capacity to 4000 lbs when used with optional rail-mounted steadyrests)
- Large head or tailstock contact assembly (8" x 10") with or without shelves
- Low current option
- Special paint
- Special voltage transformers:

208 VAC/60 Hz	415 VAC/50 Hz
380 VAC/50 Hz	575 VAC/60 Hz

A SERIES

4000 AMP AC; 5000 AMP
SINGLE-PHASE FWDC UNIT



MAGNAFLUX MODEL AD-945

OTHER MODELS

AD-945L
- Length = 120½" —
(306.1cm)
- Part length capacity =
120" — (259 cm)

SPECIFICATIONS

Dimensions without hood	72½" L x 37" W x 70" H (184.2 cm x 94 cm x 177.8 cm)
Net weight	1600 lbs (726 kg)
Coil diameter	12" (30.5 cm)
Input	230/460 VAC, 50-60 Hz, single phase
Line current	300/150 amperes
Recommended line fuse	250/125 amperes
Recommended wire size	#1/#4 AWG
Duty cycle	0.5 seconds ON, 5 seconds OFF
Part length capacity	54" (137.2 cm)
Part weight capacity	1500 lbs (680 kg) with optional steadyrests
Tank capacity	10 gallons (37.9 liters)
Convenience outlets (1)	115 VAC, 5 amperes
Air supply	60-100 psi (4.2–70 kg/cm ²) ¼" NPT pipe connection

AD-945

The AD-945 is one of the most flexible, cost effective systems available for magnetic particle inspection. Because it offers both alternating current (AC) and full wave DC (FWDC) single-phase power supplies, parts may be inspected for both surface and near-surface defects.

FEATURES

- 4000 amp AC and 5000 amp single-phase FWDC output
- Infinitely variable, self-regulating current control
- Digital ammeter
- Adjustable shot timer
- Stainless steel tank
- Hand hose
- Bath agitating pump
- 230 or 460 volt (specify one), 50/60, hertz, single phase facility power
- Decaying AC Demagnetization to help reduce gauss level in part and enhance post operations like drilling, grinding, welding
- Current Assurance Indicator lets operator know the current did not pass through or magnetic field was not set up in test piece
- Hardwood Grilles: impervious to oils and water, forgiving surface for parts that may be accidentally dropped
- Push Bar initiates mag cycle, frees up two hands for part handling and inspection
- Footswitch-operated pneumatic headstock
- Adjustable Tailstock facilitates movement back and forth on rail to accommodate various lengths of your test pieces

OPTIONS

- Inspection hood with ZB-100F black light, white light, and ventilation fan
- Tailstock crank
- Split push bar with separate coil current control
- Automatic magnetization
- 16"/20"/25"/30"/36" coil with raising block
- Rotating head and tailstock (for maximum 100-lb. part)
- Heavy-duty frame (increases load capacity to 4000 lbs when used with optional rail-mounted steadyrests)
- Large head or tailstock contact assembly (8" x 10") with or without shelves
- Low current option
- Special paint
- Special voltage transformers:

208 VAC/60 Hz	415 VAC/50 Hz
380 VAC/50 Hz	575 VAC/60 Hz

A SERIES



MAGNAFLUX MODEL A-1025S

A-1025S

The A-1025S is our 2500 amp alternating current (AC) wet horizontal unit, suitable for MPI of small to medium sized parts up to 42 inches long. Because of its AC power supply, the A-1025S is designed to locate surface defects.

FEATURES

- 2500 amp AC magnetizing current capability at contacts
- 3500 amps AC at peak
- 230 or 460 volt (specify one). 50/60 hertz, single phase facility power.
- Contact current ratings are based on the maximum current through a 1" diameter x 18" long copper bar
- 12" (30 cm) diameter coil
- 42" (106.7 cm) headstock/tailstock capacity
- Footswitch-operated pneumatic headstock
- Illuminated pushbutton control panel
- Infinitely variable current control
- Digital ammeter
- Stainless steel tank
- Hand hose
- Bath agitating pump
- Decaying AC Demagnetization to help reduce gauss level in part and enhance post operations like drilling, grinding, welding
- Current Assurance Indicator lets operator know the current did not pass through or magnetic field was not set up in test piece
- Hardwood Grilles: impervious to oils and water, forgiving surface for parts that may be accidentally dropped
- Push Bar initiates mag cycle, frees up two hands for part handling and inspection
- Adjustable Tailstock facilitates movement back and forth on rail to accommodate various lengths of your test pieces

SPECIFICATIONS

Dimensions without hood	69" L x 31¼" W x 63" H (175.3 cm x 79.4 cm x 160.7 cm)
Net weight	980 lbs (445 kg)
Coil diameter	12" (30.5 cm)
Input	230/460 VAC, 50-60 Hz, single phase
Line current	90/45 amperes
Recommended line fuse	70/35 amperes
Recommended wire size	#8/#10 AWG
Duty cycle	0.5 seconds ON, 5 seconds OFF
Part length capacity	42" (106.7 cm)
Part weight capacity	1500 lbs (680 kg) with optional steadyrests
Tank capacity	7 gallons (26.5 liters)
Convenience outlets (2)	115 VAC, 5 amperes
Air supply	60-100 psi (4.2-7.0 kg/cm ²) ¼" NPT pipe connection

OPTIONS

- Inspection hood with ZB-100F black light, white light, and ventilation fan
- Remote palm button
- Push bar
- 16"/20" coil with raising block
- Rotating head and tailstock
- Special paint
- Special voltage transformers:

208 VAC/60 Hz	415 VAC/50 Hz
380 VAC/50 Hz	575 VAC/60 Hz

MAGNAFLUX WET HORIZONTAL MAGNETIC PARTICLE INSPECTION

FEATURES AND OPTIONS Model Number	A-1025S	A-940	A-940L	AD-945	AD-945L	ADH-2045	D-2060	
CAPACITIES								
Maximum magnetizing current (amperes)	2500	4000	4000	4000/5000	4000/5000	4000/5000	6000	
Power supply	AC	AC	AC	AC/FWDC	AC/FWDC	AC/HWDC	FWDC	
Part length capacity, inches (cm)	42 (106.7)	54 (137.2)	102 (259)	54 (137.2)	102 (259)	54 (137.2)	54 (137.2)	
Duty cycle	0.5 seconds ON 5 seconds OFF	0.5 seconds ON 2 seconds OFF	0.5 seconds ON 2 seconds OFF	0.5 seconds ON 5 seconds OFF	0.5 seconds ON 5 seconds OFF	0.5 seconds ON 5 seconds OFF	0.5 seconds ON 10 seconds OFF	
Part weight capacity with optional steadyrests, lbs (kg)	1500 (680)	1500 (680)	1500 (680)	1500 (680)	1500 (680)	1500 (680)	1500 (680)	
Tank capacity, gallons (liters)	7 (26.5)	10 (37.9)	15 (56.8)	10 (37.9)	15 (56.8)	10 (37.9)	10 (37.9)	
Net weight, dry lbs (kg)	980 (445)	1600 (726)	1825 (828)	1600 (726)	1825 (828)	1600 (726)	1600 (726)	
DIMENSIONS								
Length, inches (cm)	69 (175.3)	72 ¹ / ₂ (184.2)	120 ¹ / ₂ (306.1)	72 ¹ / ₂ (184.2)	120 ¹ / ₂ (306.1)	72 ¹ / ₂ (184.2)	72 ¹ / ₂ (184.2)	
Width, inches (cm)	31 ³ / ₄ (79.4)	37 (94)	37 (94)	37 (94)	37 (94)	37 (94)	37 (94)	
Height, inches (cm)	63 (160.7)	70 (177.8)	70 (177.8)	70 (177.8)	70 (177.8)	70 (177.8)	70 (177.8)	
MAGNETIZATION/DEMAGNETIZATION								
Number of magnetizing circuits	2	2	2	2	2	2	2	
Type of magnetizing circuits	Contacts, Coil	Contacts,Coil	Contacts,Coil	Contacts, Coil	Contacts, Coil	Contacts, Coil	Contacts, Coil	
Multi-directional magnetization								
Conventional magnetization	x	x	x	x	x	x	x	
Automatic magnetization		o	o	o	o	o	o	
Decaying AC demagnetization	x	x	x	x	x	x		
Reversing DC demagnetization (3 phase)							o	
Rapid reversing DC demagnetization (1 phase)								
MOD 4: 4000 amp AC magnetization/demagnetization								
MOD 6: 6000 amp AC magnetization/demagnetization								
12" coil (30.5 cm) (5-turn)	x	x	x	x	x	x	x	
16"/20"/25"/30"/36" coil with raising block (5-turn)	o (16" and 20" only)	o (16", 20", 25" only)	o (16", 20", 25" only)	o	o	o (16", 20", 25" only)	o	
POWER REQUIREMENTS								
Input, VAC/Hz/phase	230/460/50-60/1	230/460/50-60/1	230/460/50-60/1	230/460/50-60/1	230/460/50-60/1	230/460/50-60/1	230/460/50-60/3	
Line current, amperes	90/45	170/85	220/110	300/150	300/150	220/110	160/80	
Recommended line fuse, amperes	70/35	125/70	175/90	250/125	250/125	175/90	125/60	
Recommended wire size, AWG	#8/10	#2/6	#2/6	#1/4	#1/4	#2/6	#2/6	
Special voltage transformers:								
208VAC/60Hz;380VAC/50Hz;415VAC/50Hz; 575VAC/60Hz	o	o	o	o	o	o	o	
Convenience outlets, 115 VAC, 5 amperes	2	1	1	1	1	1	1	
Air supply, psi (kg/cm ²)	60-100 (4.2-7)	60-100 (4.2-7)	60-100 (4.2-7)	60-100 (4.2-7)	60-100 (4.2-7)	60-100 (4.2-7)	60-100 (4.2-7)	
HEADSTOCK/TAILSTOCK								
Footswitch-operated, pneumatic headstock	x	x	x	x	x	x	x	
Adjustable tailstock	x	x	x	x	x	x	x	
Tailstock crank	o	o	o	o	o	x	x	
Rotating head and tailstock (for maximum 100-lb. part)	o	o	o	o	o	o	o	
Motorized tailstock	o	o	o	o	o	o	o	
Large headstock or tailstock assembly:								
8" x 10" with shelves		o	o	o	o	o	o	
8" x 10" without shelves		o	o	o	o	o	o	
CONTROLS								
Illuminated pushbutton control panel	x					x		
Infinitely variable current control	x	Self-regulating	Self-regulating	Self-regulating	Self-regulating	Self-regulating	Self-regulating	
Digital ammeter	1	1	1	1	1	1	1	
Break circuitry	Controlled break	Controlled break	Controlled break	Controlled break	Controlled break	Solid State	Quick break	
Current assurance indicator	x	x	x	x	x	x	x	
Adjustable shot timer/duration		x	x	x	x	x	x	
Remote palm button	o	x	x			x		
Dual palm button (in lieu of footswitch)						o		
ADDITIONAL FEATURES								
Push bar	o	o	o	x	x	x	x	
Split push bar with separate current controls		o	o	o	o	o	o	
Stainless steel tank	x	x	x	x	x	x	x	
Front hardwood grilles	x	x	x	x	x	x	x	
Rear hardwood grilles	x	x	x	x	x	x	x	
Hand hose (for manual bath applications)	x	x	x	x	x	x	x	
Bath agitating pump	x	x	x	x	x	x	x	
Automatic bath (for parts up to 20" in length)**								
Inspection hood with 100 watt black light, mounting white light, and ventilation fan	o	o	o	o	o	o	o	
Powered 10' x 8" conveyor with inspection booth, two black lights, white light, and ventilation fan								
Heavy-duty frame for loads up to 4000 lbs (with rail-mounted steadyrests)		o	o	o	o	o	o	
Special paint	o	o	o	o	o	o	o	

"x" indicates standard feature. "o" indicates option. No entry indicates not available.

**For parts longer than 20", contact Magnaflux.

EQUIPMENT SELECTION MATRIX



	D-2060L	D-2060XL	D-990LR	D-990XLR	MD-2030S	MD-2060	MD-2060L	MD-2060XL	MD3-2060	MD3-2060L	MD3-2060XL
	6000	6000	10,000	10,000	3000/2500	6000/5000	6000/5000	6000/5000	6000/5000	6000/5000	6000/5000
	FWDC	FWDC	FWDC	FWDC	FWDC/HWDC/AC	FWDC/HWDC/AC	FWDC/HWDC/AC	FWDC/HWDC/AC	FWDC/HWDC/AC	FWDC/HWDC/AC	FWDC/HWDC/AC
	102 (259)	146 (370.8)	102 (259)	146 (370.8)	29 (73.4)	41 (104.1)	89 (226.1)	133 (337.8)	41 (104.1)	89 (226.1)	133 (337.8)
	0.5 seconds ON 10 seconds OFF	0.5 seconds ON 10 seconds OFF	0.5 seconds ON 20 seconds OFF	0.5 seconds ON 20 seconds OFF	0.5 seconds ON 10 seconds OFF	0.5 seconds ON 10 seconds OFF	0.5 seconds ON 10 seconds OFF	0.5 seconds ON 10 seconds OFF	0.5 seconds ON 10 seconds OFF	0.5 seconds ON 10 seconds OFF	0.5 seconds ON 10 seconds OFF
	1500 (680)	1500 (680)	1500 (680)	1500 (680)	1500 (680)	1500 (680)	1500 (680)	1500 (680)	1500 (680)	1500 (680)	1500 (680)
	15 (56.8)	25 (94.6)	15 (56.8)	25 (94.6)	7 (26.5)	10 (37.9)	15 (56.8)	25 (94.6)	10 (37.9)	15 (56.8)	25 (94.6)
	1825 (828)	2050 (950)	2380 (1079)	2675 (1212)	1500 (680)	1700 (771)	1925 (873)	2150 (975)	1900 (861)	2125 (963)	2350 (1065)
	120 ¹ / ₂ (306.1)	164 ¹ / ₂ (417.8)	120 ¹ / ₂ (306.1)	164 ¹ / ₂ (417.8)	72 (182.9)	84 ¹ / ₂ (214.6)	132 ¹ / ₂ (336.6)	176 ¹ / ₂ (448.3)	88 ¹ / ₂ (224.8)	136 ¹ / ₂ (346.7)	180 ¹ / ₂ (458.5)
	37 (94)	37 (94)	37 (94)	37 (94)	34 (86.4)	41 (104.1)	41 (104.1)	41 (104.1)	41 (104.1)	41 (104.1)	41 (104.1)
	70 (177.8)	70 (177.8)	70 (177.8)	70 (177.8)	58 ¹ / ₂ (148)	60 ¹ / ₄ (153)	60 ¹ / ₄ (153)	60 ¹ / ₄ (153)	60 ¹ / ₄ (153)	60 ¹ / ₄ (153)	60 ¹ / ₄ (153)
	2	2	2	2	2	2	2	2	3	3	3
	Contacts, Coil	Contacts, Coil	Contacts, Coil	Contacts, Coil	Contacts, Flux-Flo	Contacts, Flux-Flo	Contacts, Flux-Flo	Contacts, Flux-Flo	Contacts, Coil, Flux-Flo	Contacts, Coil Flux-Flo	Contacts, Coil Flux-Flo
					x	x	x	x	x	x	x
	x	x	x	x	x	x	x	x	x	x	x
	o	o	o	o	o	o	o	o	o	o	o
	o	o	x	x	o	o	o	o	o	o	o
	o	o	o	o	o	o	o	o	o	o	o
	o	o	o	o	o	o	o	o	o	o	o
	x	x	x	x					16" Std.	16" Std.	16" Std.
	o	o	o	o					o (20" & 25" only)	o (20" & 25" only)	o (20" & 25" only)
	230/460/50-60/3	230/460/50-60/3	230/460/50-60/3	230/460/50-60/3	230/460/50-60/3	460/50-60/3	460/50-60/3	460/50-60/3	460/50-60/3	460/50-60/3	460/50-60/3
	160/80	160/80	400/200	400/200	240/120	400	400	400	400	400	400
	125/60	125/60	300/150	300/150	200/100	200	200	200	200	200	200
	#2/6	#2/6	#1/0/4	#1/0/4	#4/6	#2/0	#2/0	#2/0	#2/0	#2/0	#2/0
						except no 208VAC/60Hz					
	o	o	o	o	o	o	o	o	o	o	o
	1	1	1	1	2	2	2	2	2	2	2
	60-100 (4.2-7)	60-100 (4.2-7)	60-100 (4.2-7)	60-100 (4.2-7)	60-100 (4.2-7)	60-100 (4.2-7)	60-100 (4.2-7)	60-100 (4.2-7)	60-100 (4.2-7)	60-100 (4.2-7)	60-100 (4.2-7)
	x	x	x	x	x	x	x	x	x	x	x
	x	x	x	x	x	x	x	x	x	x	x
	x	x	x	x	x	x	x	x	x	x	x
	o	o	o	o	o	o	o	o	o	o	o
	o	o	o	o	o	o	o	o	o	o	o
	o	o	o	o	o	o	o	o	o	o	o
	o	o	o	o	o	o	o	o	o	o	o
					LCD	LCD	LCD	LCD	LCD	LCD	LCD
	Self-regulating	Self-regulating	Self-regulating	Self-regulating	2 Self-regulating	2 Self-regulating	2 Self-regulating	2 Self-regulating	3 Self-regulating	3 Self-regulating	3 Self-regulating
	1	1	1	1	2	2	2	2	3	3	3
	Quick break	Quick break	Quick break	Quick break	Modular Solid State Alarm	Modular Solid State Alarm	Modular Solid State Alarm	Modular Solid State Alarm	Modular Solid State Alarm	Modular Solid State Alarm	Modular Solid State Alarm
	x	x	x	x	x	x	x	x	x	x	x
	x	x	x	x	x	x	x	x	x	x	x
					o	o	o	o	o	o	o
	x	x	x	x	x	x	x	x	x	x	x
	o	o	o	o	o	o	o	o	o	o	o
	x	x	x	x	x	x	x	x	x	x	x
	x	x	x	x	x	x	x	x	x	x	x
	x	x	x	x	x	x	x	x	x	x	x
	o	o	o	o	o	o	o	o	o	o	o
	o	o	o	o	o	o	o	o	o	o	o
	o	o	o	o	o	o	o	o	o	o	o
	o	o	o	o	o	o	o	o	o	o	o

A SERIES

4000 AMP AC; 5000 AMP HWDC UNIT



MAGNAFLUX MODEL ADH-2045

OTHER MODELS

ADH-2045L
- Length = 120½" —
(306.1 cm)
- Part length capacity =
120" — (259 cm)

SPECIFICATIONS

Dimensions without hood	72½" L x 37" W x 70" H (184.2 cm x 94 cm x 177.8 cm)
Net weight	1600 lbs (726 kg)
Coil diameter	12" (30.5 cm)
Input	230/460 VAC, 50-60 Hz, single phase
Line current	300/150 amperes
Recommended line fuse	250/125 amperes
Recommended wire size	#1/#4 AWG
Duty cycle	0.5 seconds ON, 10 seconds OFF
Part length capacity	54" (137.2 cm)
Part weight capacity	1500 lbs (680 kg) with optional steadyrests
Tank capacity	10 gallons (37.9 liters)
Convenience outlets (1)	115 VAC, 5 amperes
Air supply	60-100 psi (4.2–70 kg/cm ²) ¼" NPT pipe connection

ADH-2045

The AD-2045 is one of the most flexible, cost effective systems available for magnetic particle inspection. Because it offers alternating current (AC) single-phase power supplies, parts may be inspected for surface defects.

FEATURES

- 4000 amp AC and 5000 amp single-phase HWDC output
- Infinitely variable, self-regulating current control
- Digital ammeter
- Illuminated push button controls on one adjustable panel
- Adjustable shot timer
- Stainless steel tank
- Hand hose
- Bath agitating pump
- 230 or 460 volt (specify one), 50/60, hertz, single phase facility power
- Decaying AC Demagnetization to help reduce gauss level in part and enhance post operations like drilling, grinding, welding
- Controlled Break Circuitry/Quick Break which ensures magnetic field wraps around ends of test piece (crucial to final inspection)
- Fused Disconnecter Provided
- Hardwood Grilles: impervious to oils and water, forging surface for parts that may be accidentally dropped
- Push Bar initiates mag cycle, frees up two hands for part handling and inspection
- Footswitch-operated pneumatic headstock
- Adjustable Tailstock facilitates movement back and forth on rail to accommodate various lengths of your test pieces

OPTIONS

- Inspection hood with ZB-100F black light, white light, and ventilation fan
- Split push bar with separate coil current control
- Automatic magnetization
- Flux Style 16"/20"/25" coil with raising block
- Rotating head and tailstock (for maximum 100-lb. part)
- Heavy-duty frame (increases load capacity to 4000 lbs when used with optional rail-mounted steadyrests)
- Large head or tailstock contact assembly (8" x 10") with or without shelves
- Low current option
- Special paint
- Special voltage transformers:

208 VAC/60 Hz	415 VAC/50 Hz
380 VAC/50 Hz	575 VAC/60 Hz

D SERIES

MAGNAFLUX MODEL D-2060



OTHER MODELS

- D-2060L
 - Length = 120½" (306.1 cm)
 - Part length capacity = 102" (259 cm)
- D-2060XL
 - Length = 164½" (417.8 cm)
 - Part length capacity = 146" (370.8 cm)

New Upgrades

D-2060 NEW UPGRADES

- New pushbar design with adjustable sensitivity and operator disable control switch.
- Independent contact and coil current controls.
- Ergonomic operator control panel.
- Microprocessor control system.
- Improved coil base.
- Dual location rail for ergonomic operator interface.
- Submersible pump system in the stainless steel tank.
- Improved pneumatic controls.

SPECIFICATIONS

Dimensions without hood	72½" L x 37" W x 70" H (184.2 cm x 94 cm x 177.8 cm)
Net weight	1600 lbs (726 kg)
Coil diameter	12" (30.5 cm)
Input	230/460 VAC, 50/60 Hz, three phase
Line current	160/80 amperes
Recommended line fuse	120/60 amperes
Recommended wire size	#2/#6 AWG
Duty cycle	0.5 seconds ON, 10 seconds OFF
Part length capacity	54" (137.2 cm)
Part weight capacity	1500 lbs (680 kg) with optional steady rests
Tank capacity	10 gallons (37.9 liters)
Convenience outlets (1)	115 VAC, 5 amperes
Air supply	60–100 psi (4.2–7.0 kg/cm ²) ¼" NPT pipe connection

D-2060

The D-2060 is a powerful three phase, full wave DC (FWDC) MPI unit, best suited for locating near-surface defects on large, heavy parts such as crank shafts, aircraft landing gears, and forgings.

FEATURES

- 6000 amp three-phase FWDC output
- Footswitch-operated pneumatic headstock
- Infinitely variable, self-regulating current control
- Digital ammeter
- Adjustable shot timer
- Current Assurance Indicator lets operator know the current did not pass through or magnetic field was not set up in test piece
- Quick Break which ensures magnetic field wraps around ends of test piece (crucial to final inspection)
- Front and Hardwood Grilles: impervious to oils and water, forgiving surface for parts that may be accidentally dropped
- Push Bar (initiates mag cycle, frees up two hands for part handling and inspection)
- Adjustable Tailstock facilitates movement back and forth on rail to accommodate various lengths of your test pieces
- Stainless steel tank
- Hand hose
- Bath agitating pump

OPTIONS

- Inspection hood with ZB-100F black light, white light and ventilation fan
- Reversing FWDC demagnetization to help reduce gauss level in part and enhance post operations like drilling, grinding, welding
- Reversing DC demagnetization
- MOD 4AC 4000 amp AC magnetization/demagnetization (decaying AC)
- MOD 6AC 6000 amp AC magnetization/demagnetization (decaying AC)
- Split push bar with separate coil current control
- 16"/20"/25"/30"/36" coil with raising block
- Automatic magnetization
- Rotating head and tailstock (for maximum 100-lb. part)
- Heavy-duty frame (increases load capacity to 4000 lbs when used with optional rail-mounted steady rests)
- Large head or tailstock contact assembly (8" x 10") with or without shelves
- Low current
- Special paint
- Special voltage transformers:

208 VAC/60 Hz	415 VAC/50 Hz
380 VAC/50 Hz	575 VAC/60 Hz

D SERIES

10,000 AMP THREE-PHASE FWDC UNIT

D-990

The D-990 is the most powerful three-phase, full wave DC (FWDC) wet horizontal unit available. This unit is suitable for very heavy, large parts requiring near-surface defect detection. This unit has reversing DC demagnetization as a standard feature.



MODEL SHOWN IS
MAGNAFLUX MODEL D-990XL

OTHER MODELS

D-990XLR
- Length = 164½" (417.8 cm)
- Part length capacity = 146"
(370.8 cm)

SPECIFICATIONS

Dimensions without hood	102½"L x 37"W x 70"H (306.1 cm x 94 cm x 177.8 cm)
Net weight	2380 lbs (1079 kg)
Coil diameter	12" (30.5 cm)
Input	230/460 VAC, 50-60 Hz, three phase
Line current	400/200 amperes
Recommended line fuse	300/150 amperes
Recommended wire size	#1/#0/#4 AWG
Duty cycle	0.5 seconds ON, 20 seconds OFF
Part length capacity	102" (259 cm)
Part weight capacity	1500 lbs (680 kg) with optional steadyrests
Tank capacity	15 gallons (56.8 liters)
Convenience outlets (1)	115 VAC, 5 amperes
Air supply	60-100 psi (4.2–7.0 kg/cm ²) ¼" NPT pipe connection

OPTIONS

- Inspection hood with ZB-100F black light, white light, and ventilation fan
- MOD 4AC 4000 amp AC magnetization/demagnetization (decaying AC)
- MOD 6AC 6000 amp AC magnetization/demagnetization (decaying AC)a
- Split push bar with separate current control
- 16"/20"/25"/30"/36" coil with raising block
- Rotating head and tailstock (for maximum 100-lb. part)
- Automatic magnetization
- Heavy-duty frame (increases load capacity to 4000 lbs when used with optional rail-mounted steadyrests)
- Large head or tailstock contact assembly (8" x 10") with or without shelves
- Special paint
- Special voltage transformers:

208 VAC/60 Hz	415 VAC/50 Hz
380 VAC/50 Hz	575 VAC/60 Hz

POWER PACKS

750-1500 AMP
AC/HWDC UNITS



MODEL P-1500

OTHER
MODELS
P-70

P-SERIES

For convenient, economical inspection in a wide range of magnetic particle applications that require only moderate power. For large or heavy parts, in-service mobile equipment, or job-site welds, portable power packs are the ideal choice.

FEATURES

- Find surface defects with AC current; switch cable connection to halfwave DC (HWDC) for near-surface flaws
- Locate defects in any direction using prods, central conductor, or coil (wrap part with 3-5 turns of cable)
- Infinitely variable current control
- Demagnetize part in AC mode by slowly turning the current dial to zero
- Built-in automatic-reset circuit breaker

SPECIFICATIONS

	MODEL P-70	MODEL P-1500
Length	17 1/2" (44.5 cm)	21 1/2" (54.9 cm)
Width	9 1/8" (23 cm)	9 1/2" (23.7 cm)
Height	7 1/8" (19.8 cm)	9 1/2" (24.2 cm)
Maximum output*	750 amps, AC or HWDC	1500 amps, AC or HWDC
Current input, single phase	115 VAC, 50/60 Hz; 230 VAC, 50/60 Hz (other voltages available)	230 VAC, 50/60 Hz; 460 VAC, 50/60 Hz (other voltages available)
Line current	26 amps @ 115 VAC; 13 amps @ 230 VAC	42 amps @ 230 VAC; 21 amps @ 460 VAC
Maximum duty cycle	2 minutes ON 2 minutes OFF	2 minutes ON 2 minutes OFF
Unit weight	35 lbs (15.9 kg)	93 lbs (42.2 kg)

* Current ratings based on the use of two 15-foot lengths of 4/0 cable.

RECOMMENDED OPERATING ACCESSORIES

4/0 Cable Assemblies*, Prods Sets* Powder Spray Bulb (#501232), Pie Field Indicator (#169799), Flat Magnetizing Coil (#611700), Remote Control Cable (#157657), 5' Cable with Eitherends (#11308) and Remote Palm Button (#169621)

* Various sizes/styles available — check out our website

MAG KIT



OPTIONS

- P-70 or P-1500 Power Packs
- Recirculating Pump with hose and nozzle (115v or 230v 1ph)
- Energizing remote palm button
- 16" coil in lieu of standard 11" coil
- Hood assembly with ZB-100F black light

MAG KIT

An inexpensive, modular system that offers the convenience of a bench unit for low production testing applications. You can order the MAG KIT as basic or as fully equipped as your needs dictate. The benefits are minimum cost and maximum operating flexibility.

FEATURES

- Base unit includes bench, headstock, tail stock and coil (portable power pack sold separately).
- Switch the magnetizing current easily from head/tail to coil by changing two plug-in cable connections.

SPECIFICATIONS

Overall dimensions	50 1/2" L x 20 1/2" W x 50 1/4" H (128.3 cm x 52.1 cm x 127.6 cm)
Table height	36" (91.4 cm)
Coil diameter	11" I.D. (28.0 cm)
Max. part size	39 1/4" (99.7 cm)
Max. part weight	350 lb. (159 kg)
Weight	300 lb. (136 kg)

POWER PACKS

3000-6000 AMP AC/HWDC UNIT



MAGNAFLUX MODEL M-530

OTHER MODELS

M-500
M-530S

M-SERIES

For magnetic particle inspections that demand portability and high magnetizing output, M-Series power packs offer versatility, operating convenience and durability.

FEATURES

- Two heavy-duty fixed casters and two swivel casters with brakes for easy, safe movement
- Find surface defects with AC current; switch one cable connection to HWDC for near-surface defects
- Set current with power pack dial or remote dial
- Locate defects in any direction using prods, central conductor, or coil (wrap part with 3-5 turns of cable)
- "Dial Amps" self-regulating current control compensates for cable length, electrical resistance and prod placement
- M-530S unit designed to work with long cable lengths necessary for inspecting large parts (i.e. power generator parts)
- Dimensions: 40" L x 29½" W x 35¾" H
- Weight: 670 lbs.
- Input: 230 or 460 volt (specify one), 50-60 hertz, single phase facility power (special voltages available)
- Line current: 300 amps @ 230 volt; 150 amps @ 460 volt
- Recommended wire size: #2 for 230 volt (100' run); #6 for 460 volt (100' run)
- Connectors; either-ended connectors
- Infinitely variable; self-regulating current control

ACCESSORIES

- #157660 standard prod set, 4 PTL plug
- #157780 dual horizontal prod assembly, 4 PTL plug
- #601845 remote control cable, 15' (457 cm), 4PTL plug
- #11308 cable with etherends on both ends, 15 feet (457 cm)
- #1574 either lug adapter 4/0
- #600004 black light, ZB-100F, portable, 100 watt light with sealed transformer and carrying base for storage of cords (115v/60hz/1ph)

SPECIFICATIONS

	MODEL M-500	MODEL M-530	MODEL M-530S
Length	40" (102 cm)	40" (102 cm)	40" (102 cm)
Width	29½" (75 cm)	29½" (75 cm)	29½" (75 cm)
Height	35¾" (91 cm)	35¾" (91 cm)	35¾" (91 cm)
Magnetizing current	AC or HWDC	AC or HWDC	AC or HWDC
Open circuit output	17 volts	17 volts	34 volts
Current control	Infinitely variable	Infinitely variable	Infinitely variable
Maximum output*	4000 amps AC/HWDC	6000 amps AC/HWDC	3000 amps AC/HWDC
Line current	300 amps @ 230 VAC; 150 amps @ 460 VAC	225 amps @ 460 VAC	225 amps @ 460 VAC
Recommended wire size (100' run)	#2 for 230 VAC; #6 for 460 VAC	#1 for 460 VAC	#1 for 460 VAC
Cable req. ≤ 4000 amps*	2 single 15-ft 4/0 cables	2 single 15-ft 4/0 cables	2 single 45-ft 4/0 cables
Cable req. > 6000 amps*	N/A	2 double 15-ft 4/0 cables	N/A
Recommended line fuse	250 amps for 230 VAC; 150 amps for 460 VAC	175 amps for 460 VAC	175 amps for 460 VAC
Connectors	Eitherend	Heavy-duty copper lug	Heavy-duty copper lug
Net weight	670 lbs (340 kg)	900 lbs (408 kg)	900 lbs (408 kg)

*Current ratings based on use of specified 4/0 cable lengths.

POWER PACKS

3000-6000 AMP FWDC/HWDC;
2500-5000 AMP AC UNITS



← Programmable Logic Controls

**MAGNAFLUX
MODEL
CMD3-2060**

OTHER MODELS

CMD-2060

OPTIONS

- Rapidly Reversing FWDC and Decaying AC Demagnetization to help reduce gauss level in part and enhance post operations like drilling, grinding, welding

CMD-SERIES

CMD-2000 Series power packs, our newest generation of stationary units, allow you to choose conventional or multi-directional processing and AC/HWDC/ FWDC magnetizing current for surface and near-surface flaws. They produce enough power for a wide range of part sizes, and the easy-to-read push-button controls improve operator convenience.

FEATURES

- 6000 amp FWDC/HWDC, 5000 amp AC
- Modular solid state circuitry
- 460 volt, 50/60 hertz, 3 phase facility power
- Inspection time reduced in half
- Multi-directional power supply with two independent outputs. CMD3 adds third output.
- AC/HWDC/FWDC conventional or multidirectional processing
- Illuminated pushbutton control panel
- Independent, variable current control for each circuit output
- Digital ammeter for each circuit output
- Current Assurance Audio and Visual Alarm lets operator know the current did not pass through or magnetic field was not set up in test piece

6000-10,000 AMP FWDC UNITS



**MAGNAFLUX
MODEL
CSQ-10R**

**15,000 AND 20,000
AMP POWER PACKS
AVAILABLE UPON REQUEST**

OTHER MODELS

CSQ-10

FEATURES

- Infinitely variable with patented self-regulating circuitry
- Digital readout ammeter with memory hold between current shots
- Optional built-in reversing DC demagnetization
- Solid state controls
- For inspection of large, heavy parts for near-surface defects
- 10,000 amp maximum output-DC
- 230 or 460 volt (specify one), 50/60 hertz, 3 phase facility power

CSQ-SERIES

Magnaflux CSQ-Series power packs are high-amperage, full wave direct current (FWDC) units for use in magnetic particle inspection systems. They are constructed for long life in industrial environments.

OPTIONS

- Reversing DC demagnetization

SPECIFICATIONS

	CSQ-6	CSQ-10
Length	42" (106.7 cm)	54" (137.2 cm)
Width	30" (76.2 cm)	45" (114.3 cm)
Height	42" (106.7 cm)	48" (121.9 cm)
Maximum output	6000 amps FWDC	10,000 amps FWDC
Current control	Infinitely variable	Infinitely variable
Input	230/460 VAC, 50-60 Hz, three phase	230/460 VAC, 50-60 Hz, three phase
Line current	200 amps @ 230 VAC 100 amps @ 460 VAC	400 amps @ 230 VAC 200 amps @ 460 VAC
Recommended wire size (AWG)	#4 for 230 VAC #6 for 460 VAC	#2/0 for 230 VAC #4 for 460 VAC
Recommended line fuse	150 amps for 230 VAC 80 amps for 460 VAC	300 amps for 230 VAC 150 amps for 460 VAC
Net weight	1600 lbs (726 kg)	1800 lbs (816.8 kg)

MAGNETIC PARTICLE ACCESSORIES



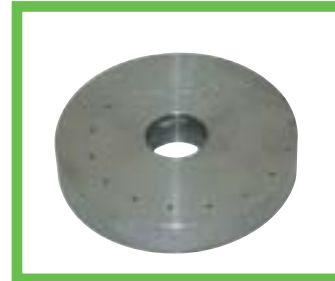
#18948 COPPER PAD

- Heavy copper braid over neoprene base
- Molded-in V-block centers and supports test parts
- Flexibility provides contact over greater surface area and helps to protect parts from arcing
- Reversible — two wear faces



#2480 FIELD INDICATOR

- Rugged, pocket-size non-calibrated meter used to indicate residual magnetism remaining in part after demagnetization
- Inexpensive unit cannot be calibrated



#159999 TEST RING WITH CERTIFICATION

- Drilled holes simulate subsurface discontinuities
- Form surface indications at various magnetizing current levels
- Meets ASTM E 1444 requirements
- Certified to AS 5282



#105645 CALIBRATED FIELD INDICATOR, 20 GAUSES

- Accurate to ± 0.5 gauss. Scale range of 20-0-20



#505056 CALIBRATED FIELD INDICATOR, 10 GAUSES

- Accurate to ± 0.5 gauss. Scale range of 10-0-10



#507320 MEDIUM BASE BULB, 100 WATT

- 100 watt Spotlight bulb, replacement for ZB-100 and ZB-100F models and all other MAGNAFLUX 100 watt lamps made after May 1982



#519227 SMOOTH FILTER GLASS

- For use with ZB-100 and ZB-100F models and all other 100 watt lamps



#506249 UV ABSORBING SPECTACLES

- Reduces eye fatigue from exposure to UV light emission

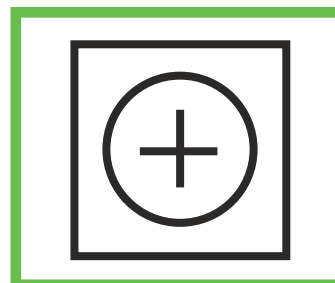


#8493 CENTRIFUGE TUBE

- 100 ml, 0–1.0 ml in 0.05 increments
- For use with #14A, #14AM and #20B MAGNAGLO fluorescent materials

#1837A CENTRIFUGE TUBE STAND

- Safely holds centrifuge tubes when mixing bath concentrations



#519630 STANDARD QOI MODEL KSC 230

- Basic circular and crossed bar flaw configuration suitable for longitudinal and circular fields
- .0006" flaw depth amounts to 30% of shim thickness, .002" thick

MAGNETIC PARTICLE ACCESSORIES



ZB-100F
FAN COOLED BLACK LIGHT
(P/N 600004)

TECHNICAL SPECIFICATIONS:

Power Supply	115V/60Hz/1PH
Current Draw	1.9 amps
UV Intensity	meets industry and military standards
Typical Visible Light	< 10 Lux or @ 15" (38 cm) 1 ft. candle
Bulb	100 watt
Running Temperature	< 85°F (30°C) @ 70°F
Weight—Hand Lamp Only	3 lbs. (1.4 kg)
Weight—	
Lamp and Control Unit	12.5 lbs. (5.7 kg)
Lamp to Control	
Cable Unit	15 ft. (4.6 m)
Main Cable Supply	12 ft. (3.7 m)
	with Ground Fault Protection



INSPECTION HOOD

- Inspection hood with one ZB-100F black light, white light (please specify 50 or 60 Hz) and ventilation fan.

MAGNETIC PARTICLE MATERIALS

MATERIAL CONSIDERATIONS: WATER BATH VERSUS OIL BATH

oil bath only



CARRIER II OIL VEHICLE

- 20 gallon drum, **for oil bath only**



14A WET METHOD MAGNETIC PARTICLES

- Six 1 lb. bottles, **for oil or water baths**

water bath only



14A REDI-BATH

- Six 27 oz. bottles, **for water bath only**

Advantages to Oil Bath

- Stable concentration since evaporation is negligible
- Essentially no electrical conductivity
- Excellent wetting
- No detrimental foaming
- Capable of some rust inhibition of processed parts
- Simple bath maintenance

Advantages to Water Bath

- Low Cost (includes water conditioner)
- Nonflammable
- No exhaust required
- Odorless
- More rapid forming of indications
- Faster settling test
- Less effect on skin than oil bath

MAGNAFLUX[®]

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