

Operation and Maintenance Manual

MNL90009  
08/31/05 Rev. F

# MODEL 218A/228A

Heat Seal Machines



**PUT IT ON!**®

# THIS MACHINE IS DESIGNED TO BE OPERATED BY ONE OPERATOR ONLY

## Congratulations!

Your selection of the Insta Graphic Systems (IGS) heat seal machine is a sound business decision. IGS equipment is the result of the highest quality engineering and time-tested design. Your new machine combined with IGS's reputation of innovation in the heat-sealing field, insures the continuing capability of delivering the best-decorated substrates possible.

This manual describes installation, operation, and maintenance procedures for your new 200 series machine, as well as easy to use instructions for on-the-spot maintenance.

Your 200 series machine will have a long, trouble free life. Read this manual. Keep it with your machine; it's your key to proper operation and lasting service.

## Installation



### DOMESTIC

Use a **separate** 15 amp AC circuit. Only industrial extension cords with proper wire size should be used: size 16/3 wire for distances up to 25 feet, and size 14/3 for distances up to 50 feet.



### INTERNATIONAL

Use a **designated** 16 amp AC circuit. Only industrial extension cords with proper wire size (2.5 sq. mm) shall be used.

## Limited Machine Warranty

Insta Graphic Systems (IGS) warrants this heat seal machine, when operated under normal conditions, to be free from manufacturing defects in material and workmanship for a period of one year on parts (lifetime on the heating element) and 90 days on labor from the invoice date.

This warranty will be effective only when IGS authorizes the original purchaser to return the product to the factory in Cerritos, California, freight prepaid, and only when the product upon examination has proven to be defective.

This warranty does not apply to any machine that has been subjected to misuse, negligence or accident.

IGS shall not be liable for the injury, loss or damage, direct or consequential, arising out of the use or the inability to use the product.

No claim of any kind shall be greater in amount than the sale price of the product or part to which claim is made.

*This is the sole warranty given by the company, it is in lieu of any other warranties, expressed or implied, in law or in fact, including the warranties of merchantability and fitness for a particular use, and is accepted as such by the purchaser in taking delivery of this product.*

## Specifications

|            |                         |             |
|------------|-------------------------|-------------|
| Voltage    | <b>115/120 Volts AC</b> | 50/60 Hertz |
| Model 218A | 12.5 Amps               | 1500 Watts  |
| Model 228A | 14.6 Amps               | 1750 Watts  |

|            |                         |             |
|------------|-------------------------|-------------|
| Voltage    | <b>230/240 Volts AC</b> | 50/60 Hertz |
| Model 218A | 6.25 Amps               | 1500 Watts  |
| Model 228A | 9.6 Amps                | 2200 Watts  |

|                   |                     |
|-------------------|---------------------|
| Weight Model 218A | 75 Pounds (34.1 KG) |
| Weight Model 228A | 94 Pounds (42.7 KG) |

## THIS MACHINE IS DESIGNED TO BE OPERATED BY ONE OPERATOR ONLY

### Operation

1. It is recommended that you review the "How to Apply Instructions" (on our Product Information Sheet) before beginning heat sealing operations.
2. Turn the power on by pressing the **POWER** button on the controller.
3. Set desired temperature and time. Swing the upper platen arm to its fully open position, away from lower platen.
4. Allow the machine to warm up until the selected temperature is reached.
5. Set the desired pressure by adjusting the pressure adjust lever on the top of the machine. To increase pressure, pull lever forward.
6. Place the substrate on lower platen, smoothing out all wrinkles.
7. Position transfer or lettering on substrate.
8. Swing the upper arm into position directly over the lower platen.
9. Close machine by pulling handle down into locked position.
10. The timer will start automatically and a buzzer will beep at the end of the time cycle.
11. Lift safety lock and pull handle up slowly and move upper platen handle to its full open position. This technique will avoid transfer paper (cover) from being pulled off prematurely due to suction from the separating platens.

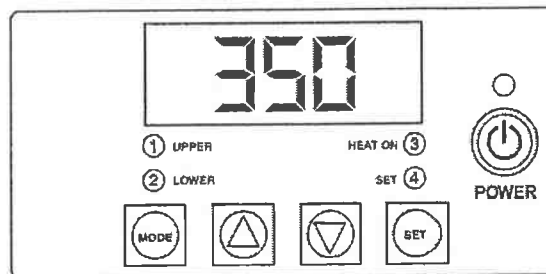


#### NOTE

*For safety purposes, it is necessary to push the handle into the locked position after it is lifted. This will eliminate the accidental lowering of the heat platen handle.*

12. Swing away arm to the extreme right hand position and remove substrate.

### Operation Timer/Temperature Control



### Solid State Controller

This controller has three (3) control features:

1. Temperature - Temperature may be set from 225-450°F (107-232°C).
2. Time - Time may be set from 1 second to 10 minutes.
3. Counter - Cycle counter counts the number of applications from 1 to 9999 (see additional Notes - Counter).

### Controller Operation

1. If the temperature is not being displayed, press the **MODE** button until temperature is displayed.
2. Push and hold **SET** button and simultaneously push UP (↑) or DOWN (↓) arrow buttons to the desired temperature setting.
3. Press the **MODE** button until time is displayed.
4. Push and hold **SET** button and simultaneously push UP (↑) or DOWN (↓) arrow buttons to the desired timer setting.

# THIS MACHINE IS DESIGNED TO BE OPERATED BY ONE OPERATOR ONLY

## ADDITIONAL NOTES:

### Temperature



#### NOTE

#### *Fahrenheit/Centigrade (Celsius) Conversion*

*The temperature controller can be programmed to display either °F or °C.*

*To change:*

*Press the **MODE** button until the temperature is displayed, then push and hold the **SET** button for 10 seconds.*

### Timer

- The controller has a count down timer that automatically activates a buzzer at the completion of the application.
- Timer display is minutes:seconds. Range is **00:00** to **10:00**, Colons (:) flash while timer is running.

#### NOTE



*The timer or buzzer may be stopped while the handle is in the down position by pressing both the DOWN (↓) arrow button and the UP (↑) arrow button simultaneously. The timer will automatically reset after the handle is raised.*


### Counter


The controller has a built in cycle counter.


- Press **MODE** button until the counter is displayed.
- Counter display range is 0000 to 9999.
- To reset the cycle counter, display the counter reading, then push and hold both UP (↑) and DOWN (↓) arrow buttons for 3 seconds until the counter resets to zero (**0000**) on the display.


**THIS MACHINE IS DESIGNED TO BE OPERATED BY ONE OPERATOR ONLY**

**Safety Summary**



- 

**WARNING**  
In case of power cord damage, do not attempt to repair or replace the power cord. Contact the manufacturer or the local distributor.
- 

**WARNING**  
Avoid touching hot surfaces while operating the machine.
- 

**CAUTION**  
During normal operation, the base of the machine needs to be installed or placed above the wall socket.
- 

**CAUTION**  
When servicing or cleaning the machine, make sure that the power cord is removed from the wall socket.

**Insta** <sup>®</sup> **CE**

**HEAT SEAL MACHINE**

MODEL NO. \_\_\_\_\_ VOLTS \_\_\_\_\_

WATTS \_\_\_\_\_ MFG. \_\_\_\_\_ S/N \_\_\_\_\_

INSTA MACHINE CORP. • 5642 BORWICK AVE. • SOUTH GATE, CA. 90280

**International Symbols**

- 

**Power Off**
- 

**Power On**
- 

**Hot Surface**
- 

**Risk of Electrical Shock**
- 

**Protective Earth Terminal**
- 

**Ground**
- 

**Caution - Warning**

# THIS MACHINE IS DESIGNED TO BE OPERATED BY ONE OPERATOR ONLY

## Preventive Maintenance Suggestions

The IGS heat seal machines are relatively maintenance free. For long trouble-free life, the following preventive maintenance should be followed:

1. Do not heat seal items such as buttons, pins, snaps, or zippers that tend to cut the silicone rubber pad or scratch the Teflon heat platen.
2. Periodically clean the Teflon-coated heat platen with a non-abrasive piece of cloth. Stubborn stains may be cleaned, **when platen is cool**, with mineral spirits.
3. When the heat platen is hot and not in use, keep in open position (away from the silicone rubber pad).
4. To prevent soiling of substrate, periodic wiping of the entire exterior machine, including platens, with a clean rag is recommended. If necessary, use mineral spirits for cleaning a **cold** machine. Since mineral spirits are flammable, use precautions and keep away from sparks, flame, or hot heat platen.
5. The Model 218/228 machines require periodic lubrication with a high-temperature, non-melting grease (MPPL023).
  - A. Lubricate the post, handle and cam assembly depending upon usage. (Once every month if used continuously.)
  - B. There are four (4) points of lubrication:
    - a) Post
    - b) Lower Cam
    - c) Guide Post
    - d) Upper Pin Area

In addition, occasionally apply a few drops of heavy machine oil to the upper portion of the cam assembly. To lubricate the pressure adjustment, raise cover an inch or two and apply heavy machine oil to slide mechanism.

## General Maintenance

It is recommended that you have the following items available:

- A. Regular screw driver
- B. Phillips head screw driver
- C. Small adjustable wrench
- D. Needle nose pliers with insulated handle
- E. Set of Allen wrenches
- F. Grease gun
- G. Special high temperature grease MPPL023

With the above items you should be able to accomplish most repairs.

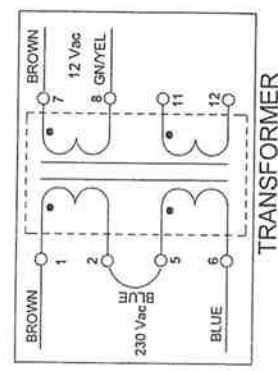
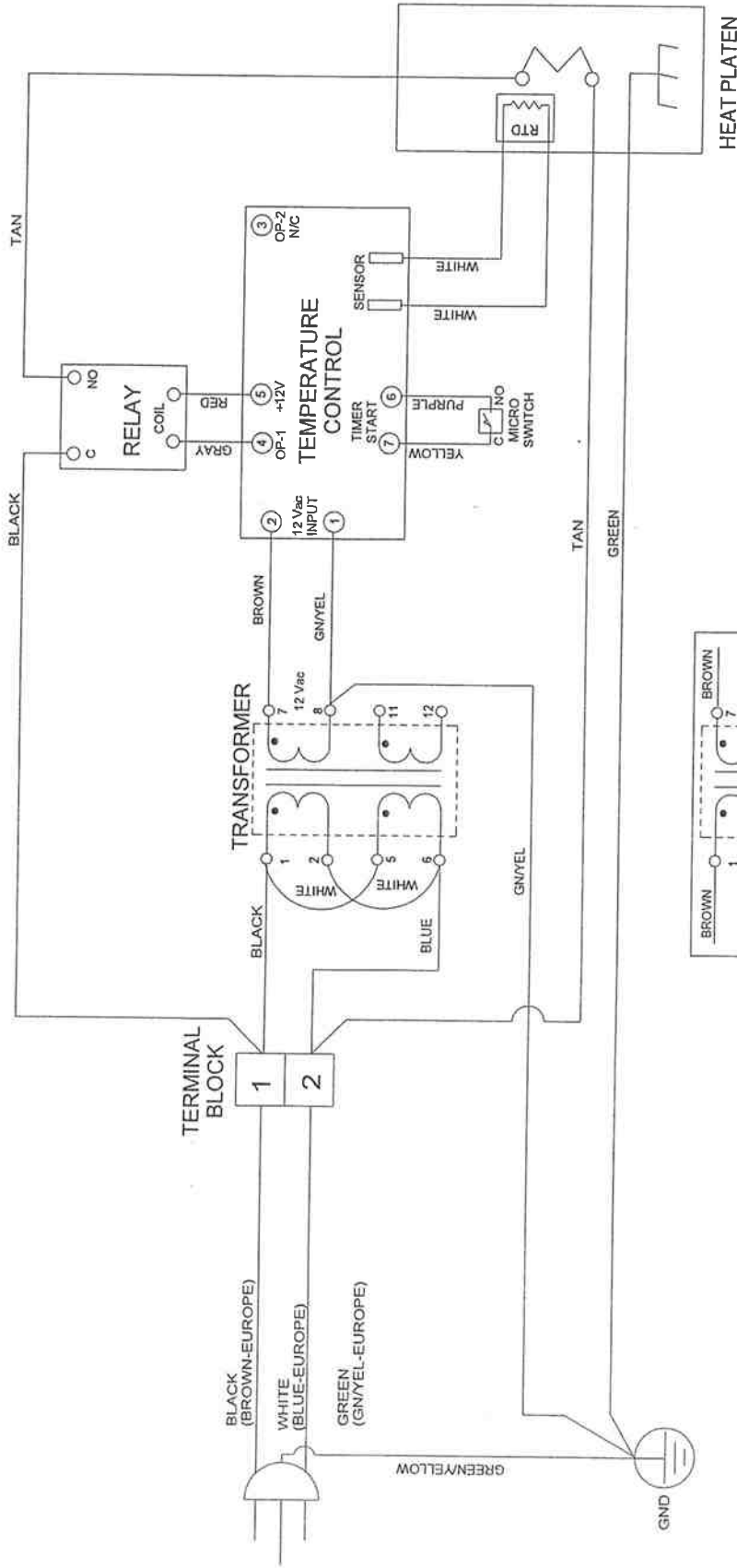


### WARNING

*Power cord replacement should be from the manufacturer only (because it requires a specially prepared cord).*

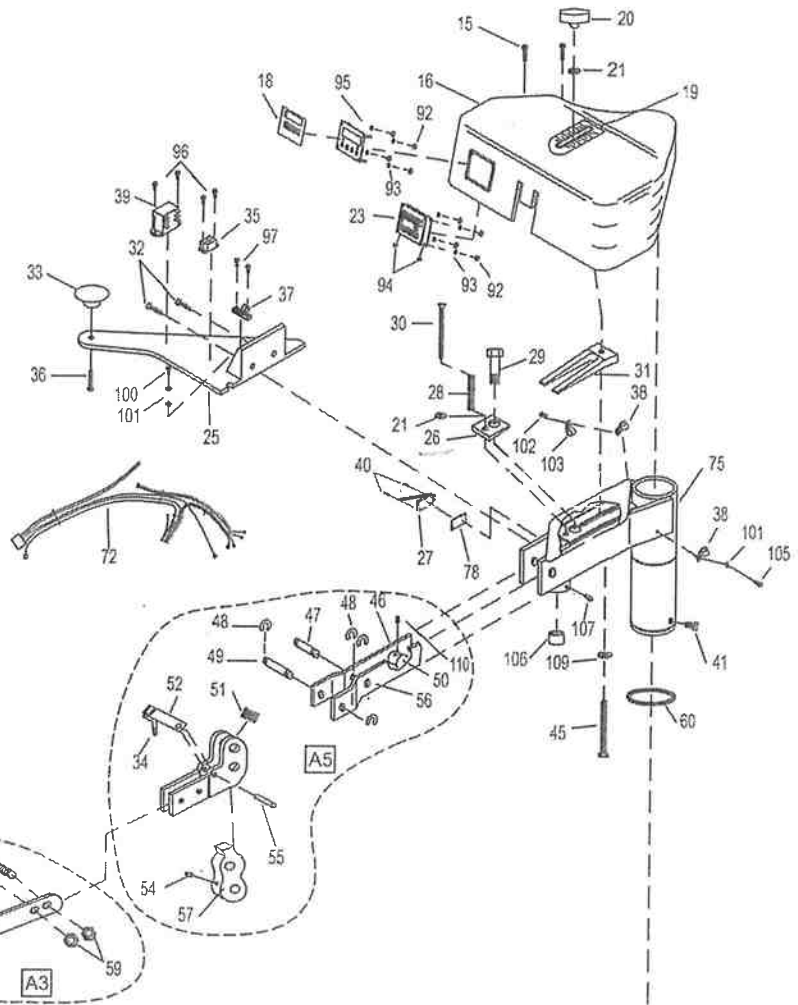
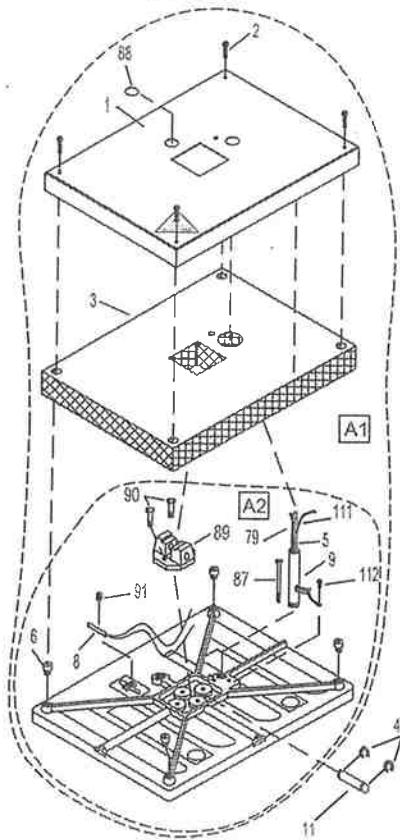
## Replacement of Silicone Rubber Pads

1. Make sure heat platen is cool.
2. Use tube of MPPC006 adhesive to bond silicone rubber pad to metal platen.  
**NOTE:** *Read instructions on the tube package.*
3. Be sure that the surface of the silicone platen is clean. Use a **mild** solvent such as **mineral spirits**.
4. The pad and metal must be thoroughly dry and clean, before starting the bonding operation.
5. Apply adhesive sealant to the metal platen. Spread a thin even coat and apply pad immediately. Apply pressure and position pad making sure that there is no air entrapment.  
**NOTE:** *A serrated blade such as used for laying down rubber floor tiles would be helpful.*
6. Allow to cure overnight under low pressure at normal room temperature.

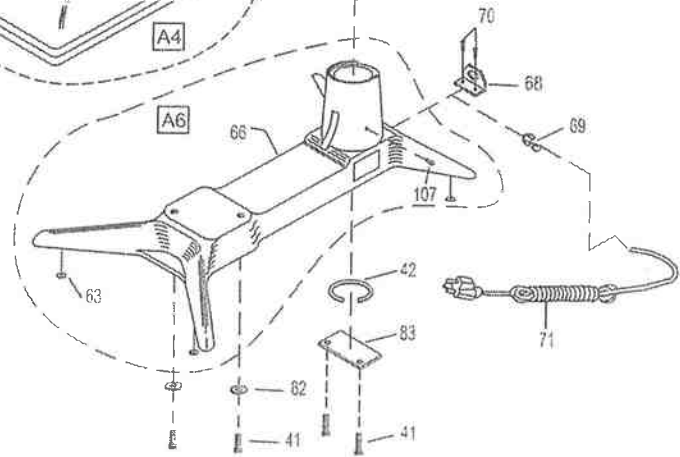
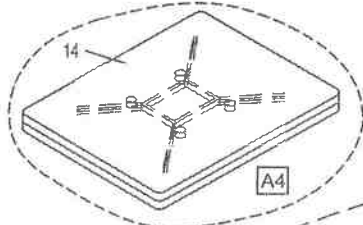
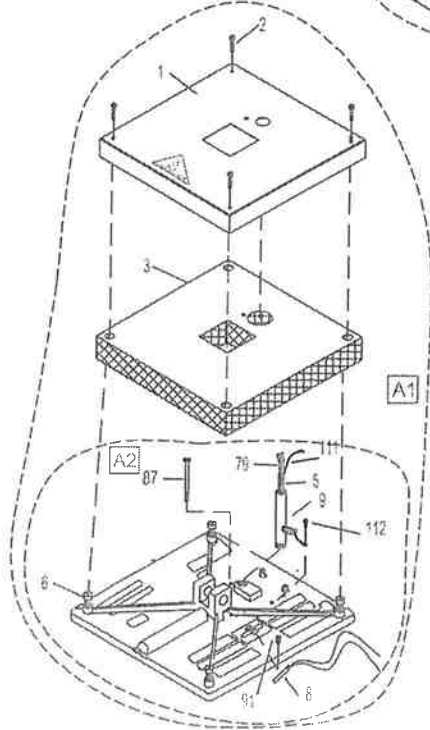


218A 228A Wiring Diagram - 10/08/04

228A



218A



218A / 228A EXPLOSION - 08/16/05

| NO  | PART NAME                                  | MODEL        | MODEL        | MODEL        | MODEL        |
|-----|--|--------------|--------------|--------------|--------------|
|     |  | 218A         | 218A         | 228A         | 228A         |
|     |  | 120V AC      | 240V AC      | 120V AC      | 230V AC      |
| 1   | SHROUD, HEAT                               | MPSS218      | MPSS218      | MPSS228      | MPSS228      |
| 2   | SCREW, PAN HD #10 x 1.00 LG                | MPSS143      | MPSS143      | MPSS143      | MPSS143      |
| 3   | INSULATION, FIBERGLASS                     | MPSP251      | MPSP251      | MPSP254      | MPSP254      |
| 5   | TUBING, SHRINK TFE AWG7                    | MPPS131      | MPPS131      | MPPS131      | MPPS131      |
| 6   | INSULATORS, SPACER (4/SET)                 | MPSI089      | MPSI089      | MPSI089      | MPSI089      |
| 8   | SENSOR, TEMPERATURE REPLACEMENT KIT        | MPPS210      | MPPS210      | MPPS210      | MPPS210      |
| 9   | POST, GUIDE                                | MPSP085      | MPSP085      | MPSP085      | MPSP085      |
| 11  | PIN, PIVOT PLATEN                          | MPP0139      | MPP0139      | MPP0139      | MPP0139      |
| 14  | PAD, SILICONE RUBBER                       | MPPP030      | MPPP030      | MPPP031      | MPPP031      |
| 15  | SCREW, PHILLIP PAN HEAD 10-24 x 0.5 LONG   | MHSP102412   | MHSP102412   | MHSP102412   | MHSP102412   |
| 16  | HOUSING, INSTRUMENT                        | MBAH90000    | MBAH90000    | MBAH90000    | MBAH90000    |
| 18  | LABEL, CONTROLLER OVERLAY                  | MPSL128      | MPSL128      | MPSL128      | MPSL128      |
| 19  | LABEL, SCALE OVERLAY (PRESSURE ADJ.)       | MPLLO12      | MPLLO12      | MPLLO12      | MPLLO12      |
| 20  | KNOB, PRESSURE ADJUST                      | MPPK019      | MPPK019      | MPPK019      | MPPK019      |
| 21  | WASHER, SAE 5/16" I.D.                     | MHWSAE516    | MHWSAE516    | MHWSAE516    | MHWSAE516    |
| 23  | CONTROLLER, DIGITAL                        | MPC90003     | MPC90003     | MPC90003     | MPC90003     |
| 25  | HANDLE, SWING AWAY                         | MPH90002     | MPH90002     | MPH90002     | MPH90002     |
| 26  | WASHER, WEDGE                              | MPSP010      | MPSP010      | MPSP010      | MPSP010      |
| 27  | SWITCH, MICRO                              | MPPS043      | MPPS043      | MPPS043      | MPPS043      |
| 28  | SPRING, TENSION                            | MPSS200      | MPSS200      | MPSS200      | MPSS200      |
| 29  | SCREW, BOLT HEX 1/2-13 x 3.00 LONG         | MHBH12133    | MHBH12133    | MHBH12133    | MHBH12133    |
| 30  | SCREW, FLAT HD 5/16-18 x 2.00 LONG         | MHSF516182   | MHSF516182   | MHSF516182   | MHSF516182   |
| 31  | CAM WEDGE                                  | MPSP001      | MPSP001      | MPSP001      | MPSP001      |
| 32  | SCREW, SOCKET HD 1/4-20 x 0.5 LONG         | MHSSH142012  | MHSSH142012  | MHSSH142012  | MHSSH142012  |
| 33  | KNOB, HANDLE (MUSHROOM)                    | MPPK017      | MPPK017      | MPPK017      | MPPK017      |
| 34  | CAP, VINYL BLACK 5/16" x .281 LONG         | MPC90006     | MPC90006     | MPC90006     | MPC90006     |
| 35  | RELAY                                      | MPPR200      | MPPR200      | MPPR200      | MPPR200      |
| 36  | SCREW, BUTTON HD 1/4-20 x 0.875 LONG       | MHSB142078   | MHSB142078   | MHSB142078   | MHSB142078   |
| 37  | BLOCK, TERMINAL                            | MH11096914   | MH11096914   | MH11096914   | MH11096914   |
| 38  | CLAMP, CABLE 5/16 IN                       | MHCC516      | MHCC516      | MHCC516      | MHCC516      |
| 39  | TRANSFORMER                                | MPPT700      | MPPT700      | MPPT700      | MPPT700      |
| 40  | SCREW, ROUND HEAD 4-40 x 0.75 LONG         | MHSR44034    | MHSR44034    | MHSR44034    | MHSR44034    |
| 41  | SCREW, SOCKET HD 5/16-18 x 0.75 LONG       | MHSSH5161834 | MHSSH5161834 | MHSSH5161834 | MHSSH5161834 |
| 42  | RING, SNAP                                 | MPSR268      | MPSR268      | MPSR268      | MPSR268      |
| 45  | SCREW, CARRIAGE BOLT 5/16-18 x 2.750 LONG  | MHBC51618234 | MHBC51618234 | MHBC51618234 | MHBC51618234 |
| 46  | PRESSURE ADJUST LEVER (LH)                 | MPSP2201     | MPSP2201     | MPSP2201     | MPSP2201     |
| 47  | PIN, PIVOT (LOWER)                         | MPSP2211     | MPSP2211     | MPSP2211     | MPSP2211     |
| 48  | CLIPS, "E"                                 | MPSC240      | MPSC240      | MPSC240      | MPSC240      |
| 49  | PIN, CAM PIVOT (UPPER)                     | MPSP262      | MPSP262      | MPSP262      | MPSP262      |
| 50  | NUT, PRESSURE ADJUSTMENT                   | MPSP2209     | MPSP2209     | MPSP2209     | MPSP2209     |
| 51  | SPRING, CAM                                | MPSS201      | MPSS201      | MPSS201      | MPSS201      |
| 52  | SAFETY LOCK                                | MPSL241      | MPSL241      | MPSL241      | MPSL241      |
| 54  | FITTING, GREASE (SHORT)                    | MPSF145      | MPSF145      | MPSF145      | MPSF145      |
| 55  | PIN, ROLL (SAFETY LOCK)                    | MPSR141      | MPSR141      | MPSR141      | MPSR141      |
| 56  | PRESSURE ADJUST LEVER (RH)                 | MPSP2200     | MPSP2200     | MPSP2200     | MPSP2200     |
| 57  | CAM  | MPSC218      | MPSC218      | MPSC218      | MPSC218      |
| 58  | SCREW, BUTTON HD 5/16-18 x 1.00 LONG       | MHSB516181   | MHSB516181   | MHSB516181   | MHSB516181   |
| 59  | NUT, HEX JAM 5/16-18                       | MHNHJ51618   | MHNHJ51618   | MHNHJ51618   | MHNHJ51618   |
| 60  | RING, "O" POST                             | MPSS273      | MPSS273      | MPSS273      | MPSS273      |
| 63  | FEET, RUBBER (6/SET)                       | MPF90004     | MPF90004     | MPF90004     | MPF90004     |
| 68  | BRACKET, POWER CORD                        | MPSS163      | MPSS163      | MPSS163      | MPSS163      |
| 69  | STRAIN, RELIEF                             | MPSS168      | MPSS168      | MPSS168      | MPSS168      |
| 70  | SCREW, PHILLIP PAN HEAD 10-24 x 0.375 LONG | MHSP102438   | MHSP102438   | MHSP102438   | MHSP102438   |
| 71  | POWER CORD (USA MODEL)                     | MPPW141      | MPPW142      | MPPW141      | MPPW142      |
| 71A | POWER CORD (EUROPEAN MODEL)                | N/A          | MPPW202      | N/A          | MPPW202      |
| 71B | POWER CORD (UK MODEL)                      | N/A          | MPPW203      | N/A          | MPPW203      |
| 72  | WIRE HARNESS                               | MPW90011     | MPW90011     | MPW90011     | MPW90011     |
| 75  | POST, ARM ASSEMBLY                         | MPSP235A     | MPSP235A     | MPSP235A     | MPSP235A     |
| 78  | INSULATION, MICRO SWITCH                   | MH700214     | MH700214     | MH700214     | MH700214     |
| 79  | WIRE, HEATER                               | MPPW700      | MPPW700      | MPPW700      | MPPW700      |
| 82  | WASHER, SAE 5/16 I.D.                      | MHWSAE516    | MHWSAE516    | MHWSAE516    | MHWSAE516    |
| 83  | PLATE, REAR POST                           | MPSP2303     | MPSP2303     | MPSP2303     | MPSP2303     |
| 87  | SCREW, SOCKET HD 1/4-20 x 4.0 LONG         | MHSSH14204   | MHSSH14204   | MHSSH14204   | MHSSH14204   |
| 88  | PLUG, BUTTON 7/8 IN                        | MHPB78       | MHPB78       | MHPB78       | MHPB78       |
| 89  | CLEVIS, UPPER PLATEN                       | N/A          | N/A          | MPS221       | MPS221       |
| 90  | BOLT, HEX 5/16-18 x 1 IN LG STAINLESS      | N/A          | N/A          | MH51618S     | MH51618S     |
| 91  | SCREW, SET 3/8-16 x 0.5 IN                 | MHSST381612  | MHSST381612  | MHSST381612  | MHSST381612  |

| NO  | PART NAME                             | MODEL           | MODEL           | MODEL           | MODEL           |
|-----|---------------------------------------|-----------------|-----------------|-----------------|-----------------|
|     |                                       | 218A<br>120V AC | 218A<br>240V AC | 228A<br>120V AC | 228A<br>230V AC |
| 92  | NUT, HEX 6-32                         | MHNH632         | MHNH632         | MHNH632         | MHNH632         |
| 93  | WASHER, SHIM #6 (.031)                | MH311150019     | MH311150019     | MH311150019     | MH311150019     |
| 94  | SPACER, LG NYLON 0.166 ID x 1/4 IN    | MH110969111     | MH110969111     | MH110969111     | MH110969111     |
| 95  | PLATE, CONTROLLER                     | MPP90011        | MPP90011        | MPP90011        | MPP90011        |
| 96  | SCREW, PAN HEAD 8-32 x 0.25 IN        | MHSP83214       | MHSP83214       | MHSP83214       | MHSP83214       |
| 97  | SCREW, PAN HEAD 8-32 x 0.5 IN         | MHSP83212       | MHSP83212       | MHSP83212       | MHSP83212       |
| 100 | SCREW, PAN HD 8-32 x 0.375 IN         | MHSP83238       | MHSP83238       | MHSP83238       | MHSP83238       |
| 101 | WASHER, #8 SAE                        | MHWSAE8         | MHWSAE8         | MHWSAE8         | MHWSAE8         |
| 102 | SCREW, SOCKET HD 1/4-20 x 0.5 IN LONG | MHSSH142012     | MHSSH142012     | MHSSH142012     | MHSSH142012     |
| 103 | CLAMP, CABLE METAL 3/8 IN             | MHCC38          | MHCC38          | MHCC38          | MHCC38          |
| 105 | SCREW, PAN HEAD 8-32 x 0.375 IN       | MHSP83238       | MHSP83238       | MHSP83238       | MHSP83238       |
| 106 | BUSHING, GUIDE POST                   | MPSB070         | MPSB070         | MPSB070         | MPSB070         |
| 107 | FITTING, GREASE (LONG)                | MPSF144         | MPSF144         | MPSF144         | MPSF144         |
| 109 | WASHER, WAVE 0.5 IN                   | MH5806282       | MH5806282       | MH5806282       | MH5806282       |
| 110 | SCREW, SET 8-32 x 0.1875 IN LG        | MHSST832316     | MHSST832316     | MHSST832316     | MHSST832316     |
| 111 | WIRE, GROUND                          | MPW90125        | MPW90125        | MPW90125        | MPW90125        |
| 112 | SCREW, PAN HD 6-23 x 0.25 LG          | MHSP63214       | MHSP63214       | MHSP63214       | MHSP63214       |
| A1  | PLATEN, HEAT ASS'Y                    | MPP218A1A       | MPP218A2A       | MPP228A1A       | MPP228A2A       |
| A2  | PLATEN, HEAT (WIRING ONLY)            | MPP218A1W       | MPP218A2W       | MPP228A1W       | MPP228A2W       |
| A3  | HANDLE, PRESSURE ASS'Y                | MPSH515         | MPSH515         | MPSH515         | MPSH515         |
| A4  | PLATEN, LOWER ASS'Y                   | MASP010         | MASP010         | MASP007         | MASP007         |
| A5  | CAM / PRESSURE LEVER ASS'Y            | MPSC201         | MPSC201         | MPSC201         | MPSC201         |
| A6  | BASE ASS'Y                            | MPSB204A        | MPSB204A        | MPSB204A        | MPSB204A        |

# **INSTA GRAPHIC SYSTEMS®**

13925 E. 166th Street • Cerritos CA USA 90702-7900

Service: (800) 426-3609 • (562) 861-2566 • Sales: (800) 421-6971 (562) 404-3000 • Fax: (562) 404-3010 • <http://www.instagramh.com>