Operation and Maintenance Manual MNL90002 03/03/04 Rev. F

# **MODEL** 718/728/828 Heat Seal Machines



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#### 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 model machine, as well as easy to use instructions for on-the-spot maintenance.

Your 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 - 700 SERIES

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



#### DOMESTIC - 800 SERIES

Use a **separate** 230/240 20-amp AC circuit. Only industrial extension cords with proper wire size should be used: size 14/3 wire for distances up to 25 feet, and size 12/3 for distances up to 50 feet.



**INTERNATIONAL - 800 SERIES** Use a **designated** 20-amp AC circuit. Only industrial extension cords with proper wire size (3.3 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 upper 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 115	/120 V	olts AC	50/60	) Hertz
Model 718	Wattag	e	1500	Watts
Model 728	Wattag	e	1750	Watts
Voltage 230	/240 V	olts AC	50/60	) Hertz
Model 718	Wattag	e	1500	Watts
Model 728	Wattag	e	2200	Watts
Model 828	Wattag	e	3300	Watts
Weight Model	718	132 Pot	ınds (	59.9 KG)
Weight Model	728			64.5 KG)
Weight Model	828	215 Pot	inds (	97.6 KG)

#### Operation

- 1. It is recommended that you review the "How to Apply Instructions" (in our Product Information Sheet) before beginning heatsealing operations.
- 2. Push **ON/OFF** switch to **ON** position.
- 3. Set desired temperature.
- 4. Allow the machine to warm up until the selected temperature is reached.
- 5. Set the desired pressure by adjusting the air pressure regulator.
- 6. Select the desired timing cycle.
- 7. Place the substrate on lower platen, smoothing out all wrinkles.
- 8. Position transfer or lettering on substrate.
  - 9. Swing the upper platen into position directly over the lower platen.

#### NOTE



For operator safety the machine is designed not to operate unless the upper platen is in the extreme left hand or right hand position.

10. Depress both start buttons, one on each side of the machine, simultaneously. At this point the machine operation is fully automatic. The upper platen moves downward, seals the transfer to the substrate and then releases automatically at the end of the selected timing cycle.

## $\triangle$

#### CAUTION

Do not place hands between the platens after activating.

11. Swing away the upper platen to the opposite side and remove substrate.

NOTE

Another substrate may be prepared on the unused platen during the sealing operation of the used platen.

12. The **DISENGAGE** button may be pushed at anytime to deactivate the machine.

#### **Solid State Controller**



This controller has four (4) control features:

- 1. Temperature Temperature may be set from 125-450°F (52-232°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)
- 4. Presets Five (5) presets that can be programmed by the user. Each preset will retain a temperature and time setting, i.e. Program #1 could be set for 325°F and 10 seconds while Program #2 could be set for 375°F and 15 seconds. Once the five presets have been programmed, the user need only press the **PGM** button several times until the desired program is selected. The lit LED above the PGM button indicates the selected program. *Note: there is also a sixth setting that is indicated by no lit LED's.*

#### **Controller Operation**

- 1. Select the desired preset program by pressing the **PGM** button until the LED above the **PGM** button indicates the desired setting.
- 2. If a setting other than the programmed presets are desired, press the **PGM** button until **none** of the LED's above the **PGM** button are lit.
- 3. Changing Temperature
  - Press the **MODE** button until temperature is displayed.
  - Press and hold SET button in while pressing the UP (↑) or DOWN (↓) arrow buttons to the desired temperature setting.

#### 4. Changing Time

- Press the **MODE** button until time is displayed.
- Press and hold SET button in while pressing the UP (↑) or DOWN (↓) arrow buttons to the desired timer setting.

NOTE



The **DISENGAGE** switch (located in the center of the instrument panel) may be pushed at any time to deactivate the machine. The cycle will stop immediately, and the timer will reset.

- 5. Allow the machine to warm up until the selected temperature is reached.
- 6. Set the desired pressure by adjusting the air pressure regulator.
- 7. Place the substrate on lower platen.
- 8. Position transfer or lettering on substrate.
- 9. Swing the upper arm into position directly over the lower platen.

#### NOTE



For operator safety the machine is designed not to operate unless the upper arm is directly over one of the lower platens.

- 10. Depress both start buttons simultaneously. At this point the machine operation is fully automatic. The lower platen moves upward, seals the transfer to the substrate, and then releases automatically at the end of the selected timing cycle.
- 11. Swing the upper platen away from the lower platen and remove the substrate.

#### NOTE



When the machine is operating with **none** of the LED's lit, i.e. no presets, the time and temperature **WILL BE SAVED** even if the power is turned off. The presets will also be saved when the power is turned off

#### **Setting the Presets**

- 1. Push and hold both the **MODE** and **PGM** buttons for 3-5 seconds until one of the programs LED's starts to blink. This is the **programming mode**.
- 2. A blinking LED above the **PGM** button indicates which preset is active.

3. Select a program (1,2,3,4,or 5) by pressing the **PGM** button.

#### 4. Setting Temperature

- Press the **MODE** button until temperature is displayed.
- Press and hold SET button in while pressing the UP (↑) or DOWN (↓) arrow buttons to the desired temperature setting.

#### NOTE



If a Fahrenheit/Celsius change is desired, see **Additional Notes** -**Temperature.** 

#### 5. Setting Time

- Press the **MODE** button until time is displayed.
- Press and hold SET button in while pressing the UP (↑) or DOWN (↓) arrow buttons to the desired timer setting.
- 6. Repeat steps 3-5 until all five (5) presets have the desired preset (temperature/time cycle).
- 7. Push and hold both the **MODE** and **PGM** buttons for 3-5 seconds to exit the

#### programming mode. NOTE



When in the **normal mode**, none of the five program LED's will be **blinking** and the user cannot change the time and temperature for any of the five presets.

#### **ADDITIONAL NOTES:**

#### Temperature

#### Fahrenheit/Centigrade (Celsius) Conversion

- 1. Push and hold **MODE** and **PGM** buttons for 3 seconds to enter the **programming mode.**
- Push the Mode button until the temperature is displayed, with the SET button depressed, push and hold the MODE button for 3-5 seconds. To exit the programming mode, push and hold MODE and PGM buttons for 3-5 seconds.

#### Timer

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



The **DISENGAGE** switch (located in the center of the instrument panel) may be pushed at any time to deactivate the machine. The cycle will stop immediately, and the timer will reset.

#### Counter

The controller has a built in cycle counter.

- Press **MODE** button until the counter is displayed.
- Counter display range is 0000 to 9999.
- Reset Cycle Counter
  - Press **MODE** button to display the counter reading.
  - Push and hold both UP (↑) and DOWN (↓) arrow buttons for three seconds until the counter resets to zero (0000) on the display.

#### **Preventive Maintenance Suggestions**

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

- 1. Do not heat seal items such as buttons, pins, snaps, or zippers, which tend to cut the silicone rubber pad or scratch the Teflon heat platen.
- 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 pads).
- 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 machines require periodic lubrication with a high-temperature, non-melting grease (MPPL023). Lubricate the post and heat platen pivot pin depending upon usage. (Once every month if used continuously.) **NOTE** 



Wipe off any excess oil or grease.

#### **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 supplied from the manufacturer only (because it requires a specially prepared cord).

#### **Micro Switch Adjustment**

NOTE

Adjustment of the micro switch must be accomplished with the power **ON**. The air may be on or off but this is incidental.

1. Disconnect power supply; remove instrument housing (5 screws in font panel) to expose the micro switch and electrical circuitry. Reconnect power supply.



Avoid touching exposed terminals

- 2. Set timer for a one (1) second interval.
- 3. Swing upper platen into working position until stop is reached. Back up just enough to align the outside of front corner of shroud with edge of lower platen (near swing away handle). The micro switch must be adjusted to **JUST CLOSE**, as upper platen swings to this position.
- 4. To change micro switch setting, loosen the screw on slotted end of micro switch (#36) and move in desired direction to bring switch to **JUST CLOSED** condition (listen for an audible click from micro switch) and re tighten screw.



#### **Safety Summary**

#### **WARNING** In case of p

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



#### WARNING

Fuse F1 is replaceable and must be replaced with the same rating and type (1 amp/250V).



#### 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

The recommended input pressure shall not exceed 100 psi. The operating pressure is from 30-100psi.



#### CAUTION

The operation may be terminated by pressing the **DISENGAGE** switch.



#### CAUTION

The machine is to be operated by one person only.



#### CAUTION

When moving, servicing, or cleaning the machine make sure the power cord is removed from the wall socket and sufficient time has been allowed for the machine to cool down.

#### **International Symbols**





Model 718 / 728 / 828

### Model 718 728 828



	-	18 728 828		-		
		MODEL	MODEL	MODEL	MODEL	MODEL
		718	718	728	728	828
NO	PART NAME	115V AC	230V AC	115V AC	230V AC	230V AC
1	SHROUD, HEAT	MPSS218	MPSS218	MPSS728	MPSS728	MPSS148
2	SCREW, PAN HD #10 x 1.00 IN LG	MPSS143	MPSS143	MPSS143	MPSS143	MPSS143
3	INSULATION, FIBERGLASS	MPSP251	MPSP251	MPSP254	MPSP254	MPSP254 (2)
5	INSULATORS, SPACER (4/SET)	MPSI089 MPSP084	MPSI089 MPSP084	MPSI089	MPSI089 MPSP084	MPSI089 MPSP084
6 8	POST, GUIDE LIMITER, HI-TEMP.	MPSP084 MPPT046	MPSP084 MPPT046	MPSP084 MPPT046	MPSP084 MPPT046	MPSP084 MPPT046
9	SENSOR, TEMP. REPLACEMENT KIT	MPPS210	MPPS210	MPPS210	MPPS210	MPPS210
10	PIN, PIVOT PLATEN	MPSP083	MPSP083	MPSP083	MPSP083	MPSP083
11	SCREW, SET 1/4-20 x .375" LG	MHSST142038	MHSST142038	MHSST142038	MHSST142038	MHSST142038
12	PAD, SILICONE RUBBER	MPPP030	MPPP030	MPPP031	MPPP031	MPPP825
13	SCREW, SET 5/16-18 x I.00" LG (4/SET)	MHSST516181	MHSST516181	MHSST516181	MHSST516181	N/A
14	BREAK-AWAY, LOWER PLATEN	MPSP70034	MPSP70034	MPSP70034	MPSP70034	N/A
15	SCREW, SET 3/8-16 x .500" LG	MHSST381612	MHSST381612	MHSST381612	MHSST381612	MHSST381612
16	STEM, LOWER PLATEN	MH70035	MH70035	MH70035	MH70035	MH70035
17	BOLT, EYE 1/4-20 x 1.00" LG	MHBE14201	MHBE14201	MHBE14201	MHBE14201	N/A
18	SPRING, BREAKAWAY	MH70002	MH70002	MH70002	MH70002	N/A
19	PIN, BREAKAWAY	MH700126	MH700126	MH700126	MH700126	N/A
20	PANEL, FRONT INSTRUMENT	MPSP728 MPSP722	MPSP728 MPSP722	MPSP728 MPSP722	MPSP728 MPSP722	MPSP728 MPSP722
21 22	HOUSING, INSTRUMENT SWITCH, START ASS'Y	MPSP722 MPPS703	MPSP722 MPPS703	MPSP722 MPPS703	MPSP722 MPPS703	MPSP722 MPPS703
22	SWITCH, START ASS T	MPPS703 MPPS713	MPPS703 MPPS713	MPPS703 MPPS713	MPPS703 MPPS713	MPPS703 MPPS713
23 24	CONTROLLER, TEMPERATURE (DIGITAL)	MPPT752	MPPT752	MPPT752	MPPT752	MPPT752
25	RELAY, SOLID STATE	MPSR2450	MPSR2450	MPSR2450	MPSR2450	MPSR2450
26	SCREW, PAN HEAD 10-24 x 1.75" LG	MHSP1024134	MHSP1024134	MHSP1024134	MHSP1024134	MHSP1024134
27	WIRE HARNESS	MPPW731	MPPW732	MPPW731	MPPW732	MPPW732
28	ARM, ASSEMBLY	MPSA72821	MPSA72821	MPSA72821	MPSA72821	MPSA82821
29	TRANSFORMER	MPPT700	MPPT700	MPPT700	MPPT700	MPPT700
30	COVER, MICRO SWITCH	N/A	N/A	N/A	N/A	MPSP800
31	BUSHING, POWER DIST. CABLE	MPSB072	MPSB072	MPSB072	MPSB072	MPSB073
32	CAP, POST	MPSP104	MPSP104	MPSP104	MPSP104	MPSP106
33	SCREW, SOCKET SET 5/16-18 x .750" LG	MHSST5161834	MHSST5161834	MHSST5161834	MHSST5161834	MHSST516183
34	SCREW, SOCKET HEAD 5/16-18 x 1.00" LG	MHSSH516181	MHSSH516181	MHSSH516181	MHSSH516181	MHSSH51618
35		MHCC12	MHCC12	MHCC12	MHCC12	MHCC34
36 37	STRAIN RELIEF SCREW, PAN HEAD 8-32 x .375" LG	MPSS164 MHSP83238	MPSS164 MHSP83238	MPSS164 MHSP83238	MPSS164 MHSP83238	MH1237 MHSP83238
38	BRACKET, STRAIN RELIEF	MPSS161	MPSS161	MPSS161	MPSS161	MPSS162
39	TERMINAL BLOCK (6 POSITION)	MPPT705	MPPT705	MPPT705	MPPT705	MPPT705
40	SWITCH, MICRO	MPPS044	MPPS044	MPPS044	MPPS044	MPPS044
41	SCREW, BUTTON HEAD 1/4-20 x .625" LG	MHSB142058	MHSB142058	MHSB142058	MHSB142058	MHSB142058
42	SCREW, SOCKET SET 5/16-18 x .750" LG	MHSST5161834	MHSST5161834	MHSST5161834	MHSST5161834	MHSST516183
43	COLLAR	MPSC72023	MPSC72023	MPSC72023	MPSC72023	MPSC72023
44	SCREW, SOCKET HEAD 5/16-18 x 1.00" LG	MHSSH516181	MHSSH516181	MHSSH516181	MHSSH516181	MHSSH51618
45	FUSE (1 AMP 250V)	MPPF701	MPPF701	MPPF701	MPPF701	MPPF701
46	FUSE HOLDER	MPPF708	MPPF708	MPPF708	MPPF708	MPPF708
47	O-RING, POST COLLAR	MPSS062	MPSS062	MPSS062	MPSS062	MPSS062
48	WIRE, DISTRIBUTION	MPPW728	MPPW728	MPPW728	MPPW728	MPPW828
49	HANDLE, SWING AWAY	MPSH072	MPSH072	MPSH072	MPSH072	MPSH825
50 51	SCREW, SOCKET HEAD 1/4-20 x .625" LG KNOB, HANDLE (MUSHROOM)	MHSSH142058 MPPK017	MHSSH142058 MPPK017	MHSSH142058 MPPK017	MHSSH142058	MHSSH142058
51 52	SCREW, SOCKET HEAD 1/4-20 x .750" LG	MHSSH142034	MHSSH142034	MPPK017 MHSSH142034	MPPK017 MHSSH142034	N/A MHSSH142034
5∠ 53	BASE ASSEMBLY	MPSB721	MHSSH142034 MPSB721	MPSB721	MPSB721	MPSB826
53 54	SWITCH, POWER	MPPS060	MPPS060	MPPS060	MPPS060	MPPS060
55	GAUGE, AIR ASS'Y	MPPA001	MPPA001	MPPA001	MPPA001	MPPA001
56	REGULATOR, PRESSURE ASS'Y	MPPA006	MPPA006	MPPA006	MPPA006	MPPA006
57	FITTING, AIR	MPPF085	MPPF085	MPPF085	MPPF085	MPPF085
58	STRAIN RELIEF, BASE	MH3231	MH3231	MH3231	MH3231	MH3231
59	CORD, POWER (USA MODEL)	MPPW141	MPPW142	MPPW141	MPPW142	MPPW142
9A	CORD, POWER (EUROPEAN MODEL)	N/A	MPPW202	N/A	MPPW202	MPPW202
9B	CORD, POWER (GREAT BRITIAN)	N/A	MPPW203	N/A	MPPW203	MPPW203
65	HOSE, AIR ASSY	MPPA005	MPPA005	MPPA005	MPPA005	MPPA005
66	SOLENOID, AIR ASS'Y (24V)	MPPA024	MPPA024	MPPA024	MPPA024	MPPA024
67	TERMINAL BLOCK BASE (8 POSITION)	MPPT709	MPPT709	MPPT709	MPPT709	MPPT709
68	PLATE, ELECTRICAL COVER	MPSL716	MPSL716	MPSL716	MPSL716	MPSL717
69 70	GUIDE POST, PISTON	MH11072	MH11072 MPSS137	MH11072 MPSS137	MH11072 MPSS137	MH11072 MPSS137
70 71	SPRINGS, PISTON (3/SET) O'RINGS, PISTON (2/SET)	MPSS137 MPSR138	MPSS137 MPSR138	MPSS137 MPSR138	MPSS137 MPSR138	MPSS137 MPSR139
71 72	BUSHING, GUIDE POST	MPSR136 MPSB070	MPSR136 MPSB070	MPSR138 MPSB070	MPSB070	MPSB070
73	GASKET, PISTON CYL HEAD	MPSG140	MPSG140	MPSG140	MPSG140	MPSG141
74	FITTING, AIR 90° 1/4x1/8	MHAQ69P4X2	MHAQ69P4X2	MHAQ69P4X2	MHAQ69P4X2	MHAQ69P4X2

		MODEL	MODEL	MODEL	MODEL	MODEL
		718	718	728	728	828
10	PART NAME	115V AC	230V AC	115V AC	230V AC	230V AC
75	COVER, PISTON	MPSH141	MPSH141	MPSH141	MPSH141	MPSA82513
76	SCREW, SOCKET HEAD 1/4-20 x 1.00" LG	MHSSH14201	MHSSH14201	MHSSH14201	MHSSH14201	MHSSH14201
77	LABEL, CONTROL PANAL OVERLAY	MPPL013	MPPL013	MPPL013	MPPL013	MPPL013
A1	PLATEN, HEAT ASS'Y	MPSP700	MPSP701	MPSP081	MPSP080	MPSP829
A2	PLATEN, LOWER ASS'Y	MASP008	MASP008	MASP009	MASP009	MASP825
A3	PISTON ROD ASS'Y	MPSP139	MPSP139	MPSP139	MPSP139	MPSP149
A4	PISTON REBUILD KIT	MPSP712	MPSP712	MPSP712	MPSP712	MPSP812
A5	UPPER PLATEN (WIRING ONLY)	MPSP078	MPSP079	MPSP068	MPSP069	MPSP828

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