

Operation and Maintenance Manual

700 Series

Heat Seal Machines



PUT IT ON!™

THIS MACHINE IS DESIGNED TO BE OPERATED BY ONE OPERATOR ONLY

Congratulations!

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

This manual describes installation, operation, and maintenance procedures for your new 700 series machine, as well as easy to use instructions for on the spot maintenance. Proper heat sealing instructions and helpful hints are included in a separate brochure.

Your 700 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 date of shipment.

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 which 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, 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.

Operation

1. It is recommended that you review the "How to Apply Instructions" (in our Product Catalog) before beginning heat sealing operations.
2. Push on/off switch to **ON** position.
3. Set desired temperature and swing the upper platen arm to its fully open position, away from lower platen.
4. Allow the machine to warm up for approximately 30 minutes. When the selected temperature is reached, the **green heater lamp** above the temperature selector knob will cycle on and off.



NOTE

The thermometer indicates the internal temperature of the heat platen and will indicate a temperature approximately 25F° (14C°) higher than the actual heat platen surface. The temperature control is calibrated at the factory and

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indicates the **TRUE** surface temperature of the heat platen.

5. Set the desired pressure by adjusting the air pressure regulator.
6. Select the desired timing cycle.
7. Place the garment on lower platen, smoothing out all wrinkles.
8. Position transfer or lettering on garment.
9. Swing the upper arm into position directly over the lower platen.

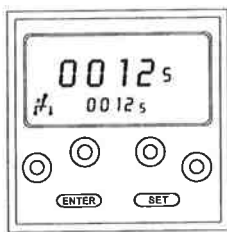
NOTE



For operator safety the machine is designed not to operate unless the upper arm is in the extreme left hand position

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 garment, and then releases automatically at the end of the selected timing cycle.
11. Swing away upper arm to the extreme right hand position and remove garment.
12. The red **STOP** button may be pushed at any time to deactivate the machine.

Digital Timer Adjustment



The setpoint may be changed using the four round keyboard switches. Each button corresponds to one of the four digits.

WARNING



Do **not** reprogram the timer. Consult factory if reprogramming is necessary.

Preventive Maintenance Suggestions

The Insta Graphic 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 which 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 garment, 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 700 series machines require periodic lubrication with a high-temperature, non-melting grease, such as Lubramatic SM-111 or equivalent. Lubricate the post and heat platen pivot pin depending upon usage. (Once every month if used continuously.)
6. The Cylinder should be lubricated approximately ones every six months (depending on usage). Use a lubricant such as Parker Hanifin **Lub-A-Cyl**.
Lubrication is accomplished as follows:
 - A. Remove air hose from rear of machine.
 - B. Carefully turn machine on its side.
 - C. Remove the plug fitting in bottom of cylinder.
 - D. Squeeze approximately two inches of lubricant out of the tube.

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- E. Replace the plug in cylinder. Make sure it is tight to eliminate the possibility of an air leak.
- F. Turn the machine right side up and reconnect air hose to machine.



CAUTION

The operation may be terminated by pressing the switch marked.
NOT AUS - EMERGENCY OFF

Specifications

Voltage **115 Volts AC** 50/60 Hertz
Model 716 Wattage 1500 Watts
Model 721 Wattage 1750 Watts

Voltage **230 Volts AC** 50/60 Hertz
Model 716 Wattage 1500 Watts
Model 721 Wattage 2200 Watts

Weight Model 716 132 Pounds (59.9 KG)
Weight Model 721 142 Pounds (64.5 KG)

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



Fuse F1 is replaceable and must be replaced with the same rating and type (T250 ma/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.

International Symbols



Power Off



Power On



Hot Surface



Risk of Electrical Shock



Protective Earth Terminal



Start Action



Ground



Caution - Warning

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700 series 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

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).

Micro Switch Adjustment

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 front panel) to expose the micro switch and electrical circuitry. Reconnect power supply.

NOTE

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).

Move in desired direction to bring switch to **JUST CLOSED** condition and re tighten screw.

5. To test for proper timing, swing upper platen away from stop, 3-4 inches (7-10 cm), and then holding both **START** buttons down, swing back to operating position. When micro switch closes, the solenoid will close momentarily, indicated by a **CLICK**. At this point, again check alignment of shroud to lower platen as in step #3.

Replacement of Silicone Rubber Pads

1. Make sure heat platen is cool.
2. Use tube of RTV-106 (or RTV-108) 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 (10-20 psi) at normal room temperature.
7. The machine may be locked into position by placing a jumper between terminals #1 and #2 (**BLACK** and **RED** wires) on the quick disconnect terminal strip on the upper arm assembly, provided that the heat platen is **COOL** and the pressure setting is **not above 30 psi**.

FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY

Temperature Control Replacement



NOTE

Disconnect Power Supply

1. Remove knob
2. Remove the two screws which secure the control to the front panel.
3. Disconnect the wires going to the control.



NOTE

*There is only one wire going to the terminal (this is the **HOT** side of the line). The other terminal has two wires--one from the heating elements and one from the lamp*

4. Carefully remove the capillary tube clamp and temperature sensing bulb from the rear of the upper heat platen.



NOTE

Do not squeeze or sharply bend the thin capillary tube which connects the temperature control of the sensing bulb.

5. Make sure that the temperature sensing bulb on the new control is straight. Carefully straighten if necessary.
6. Carefully insert the new sensing bulb into the upper heat platen. If necessary, the sensing bulb (**NOT THE CAPILLARY BULB**) may be grasped **GENTLY** with a pair of pliers to aid in installation.



NOTE

*Do **not** grasp capillary tube with pliers.*

7. Reconnect the three (3) wires to temperature control as stated in Step 3.
8. Insert the two screws which secure the control to the front panel.
9. Replace the knob with the pointer indexed to the **OFF** position.

Heat Platen Removal

1. Remove temperature control as explained in the **Temperature Control Replacement** section.
2. Disconnect the two heat platen wires which come up through the guide post, **one from the terminal block and one from the lamp**.
3. Remove the heat platen wire clamps.
4. Place some padding on the base of the machine to protect the Teflon coating on the heat platen during disassembly.
5. Using an Allen wrench, loosen the two lower pivot pin set screws.
6. Using a long, thin punch or screw driver, drive the lower pivot pin from the platen.
7. Swing the arm to the extreme right and slowly lower the heat platen until the guide post clears the bushing. The wires may then be pulled free.
8. Reverse this procedure to install.

Piston Removal and Replacement



NOTE

Disconnect Power Supply

1. Remove air line from cylinder head (#66).
2. Remove 12 screws (#64).
3. Lift off cylinder head and gasket (#62 & #63).



NOTE

Use caution--the springs may cause piston to pop out. If piston does not pop out, push gently on piston rod until piston slides free of cylinder

4. Clean all parts with mineral spirits. Wipe out the cylinder bore and check for damage.

FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY

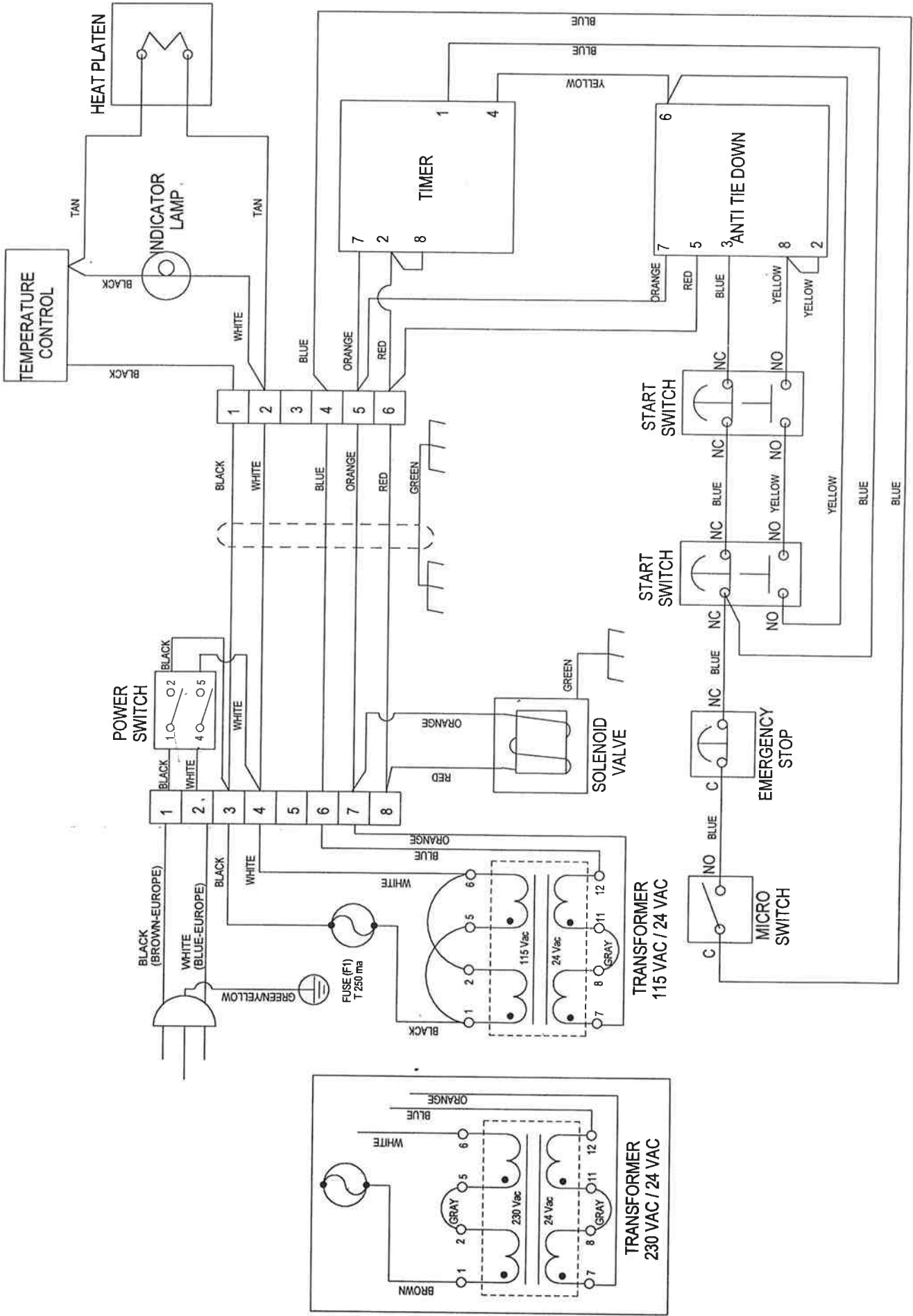
5. Replace worn or broken parts and assemble as follows.
6. Apply Lub-A-Cyl to ring grooves. Install "O" rings in grooves and cover them with Lub-A-Cyl. Put a thin film of Lub-A-Cyl on cylinder wall and on piston rod.
7. Snap 3 springs (#57) to mounts in upper cylinder cavity.
8. Place gasket in position and lay cylinder head in place. Align the zero index stamped on both the cylinder head and casting. Insert 1 screw in hole next to index, about 5 or 6 turns. Now carefully swing gasket and cylinder head around on this bolt so that the piston may be inserted into the cylinder.
9. Install piston into cylinder so that the piston guide post (#59) inserts smoothly into the piston guide post bushing (#65) and the springs (#57) are properly seated in the piston.
10. Push piston into cylinder using hand pressure only. Watch to see that "O" rings (#58) enter piston bore properly and do not pinch. If the piston will not enter with hand pressure only, something is wrong and must be corrected.

NOTE

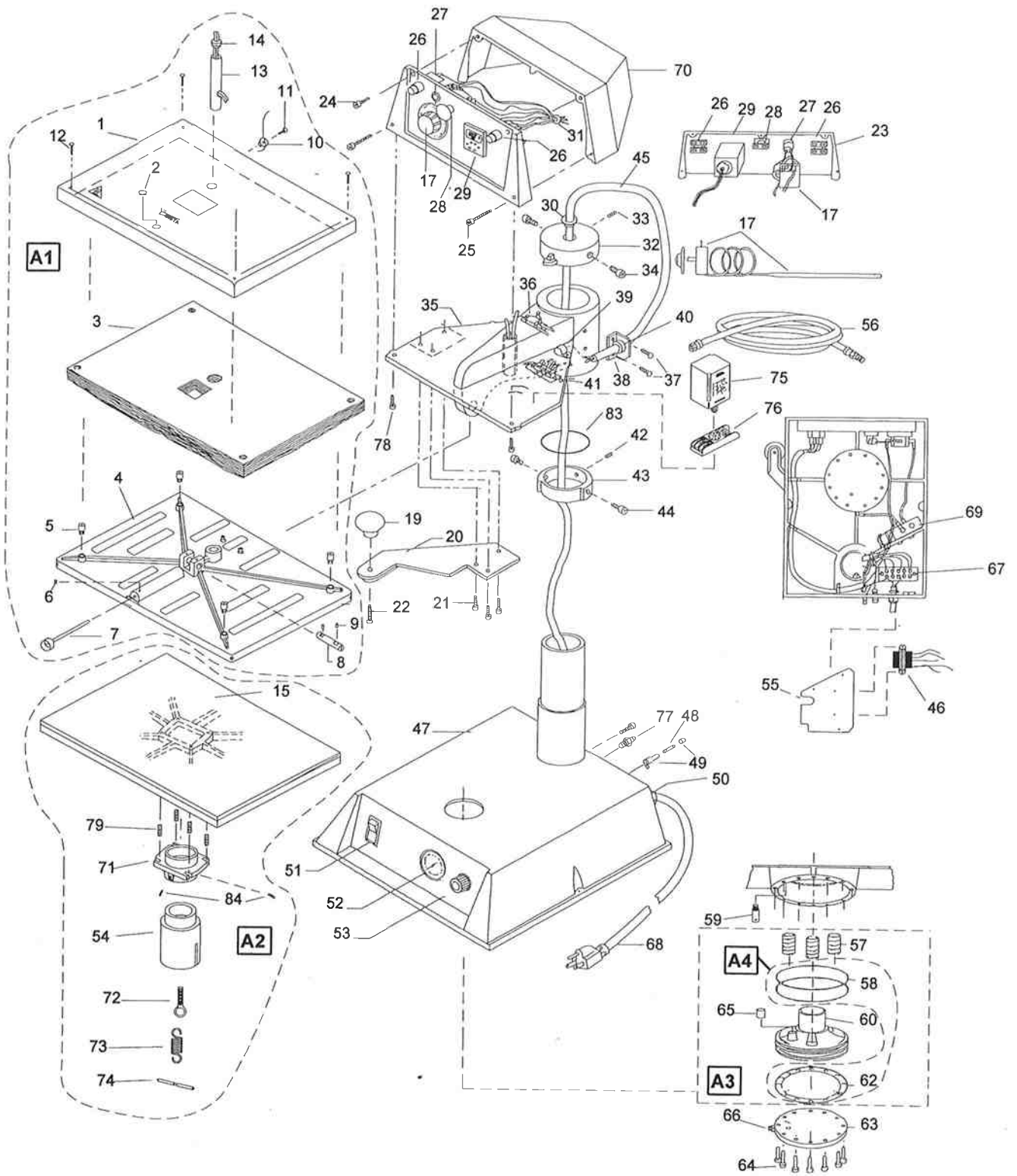


Do not use tool, hammers, etc., to assist in this installation.

11. When piston has been pushed in flush with end of cylinder, hold with one hand and rotate gasket into place. Rotate cylinder head over piston until nearly in position, release hand pressure and rotate cylinder head into position. Install a screw opposite first screw installed. Tighten until about even with the first screw. Start balance of screws and when all are started pull cylinder head down evenly until it seats on the gasket. Continue to tighten screws using a cross pattern, until all are tight.
12. Connect air line and test for leaks.



WIRING DIAGRAM MODEL 716/721



EXPLODED VIEW MODEL 716/721

		MODEL	MODEL	MODEL	MODEL
		716	716	721	721
NO	PART NAME	115V AC	230V AC	115V AC	230V AC
1	HEAT SHROUD	MPSS215	MPSS215	MPSS146	MPSS146
2	PLUG, BUTTON	MHPB12	MHPB12	MHPB12	MHPB12
3	FIBERGLASS INSULATION	MPSP251	MPSP251	MPSP254	MPSP254
4	UPPER PLATEN	MPSP074	MPSP075	MPSP076	MPSP077
5	SHROUD, INSULATORS (4/SET)	MPSI089	MPSI089	MPSI089	MPSI089
6	SET SCREW, THERMOMETER	MHST142038	MHST142038	MHST142038	MHST142038
7	THERMOMETER	MPPT056	MPPT056	MPPT056	MPPT056
8	PIVOT PIN, PLATEN	MPSP083	MPSP083	MPSP083	MPSP083
9	SET SCREW, LUG PIN	MHST142038	MHST142038	MHST142038	MHST142038
10	STRAIN RELIEF, CAPILLARY	MPPT052RB	MPPT052RB	MPPT052RB	MPPT052RB
11	SCREW, CAPILLARY STRAIN RELIEF	MHSF632516	MHSF632516	MHSF632516	MHSF632516
12	SCREW, SHROUD (4/SET)	MPSS143	MPSS143	MPSS143	MPSS143
13	GUIDE POST	MPSP084	MPSP084	MPSP084	MPSP084
14	INSULATOR, GUIDE POST	MPSP2310	MPSP2310	MPSP2310	MPSP2310
15	SILICONE RUBBER PAD	MPPP030	MPPP030	MPPP031	MPPP031
17	TEMPERATURE CONTROLLER ASS'Y	MPPT052	MPPT052	MPPT052	MPPT052
19	MUSHROOM KNOB	MPPK017	MPPK017	MPPK017	MPPK017
20	SWING AWAY HANDLE	MH70025	MH70025	MH70025	MH70025
21	SCREW, SWING AWAY HANDLE	MHSH142058	MHSH142058	MHSH142058	MHSH142058
22	SCREW, SWING AWAY KNOB	MHSH142034	MHSH142034	MHSH142034	MHSH142034
23	INSTRUMENT HOUSING (FRONT)	MPSP726	MPSP726	MPSP726	MPSP726
24	SCREW, FRONT PANEL (TOP)	MHSP10241	MHSP10241	MHSP10241	MHSP10241
25	SCREW, FRONT PANEL (BOTTOM)	MHP1024134	MHP1024134	MHP1024134	MHP1024134
26	START SWITCH ASS'Y	MPPS701	MPPS701	MPPS701	MPPS701
27	LAMP, HEATER INDICATOR	MPPL230	MPPL230	MPPL230	MPPL230
28	STOP SWITCH (EMERGENCY) ASS'Y	MPPS712	MPPS712	MPPS712	MPPS712
29	TIMER ASSEMBLY	MPPT724	MPPT724	MPPT724	MPPT724
30	BUSHING, POWER DIST. CABLE	MPSB072	MPSB072	MPSB072	MPSB072
31	WIRE HARNESS	MPPW730	MPPW730	MPPW730	MPPW730
32	CAP, POST	MPSP104	MPSP104	MPSP104	MPSP104
33	SET SCREW, CAP	MHT5161834	MHT5161834	MHT5161834	MHT5161834
34	SCREW, CAP	MHH516181D	MHH516181D	MHH516181D	MHH516181D
35	ARM	MH70021	MH70021	MH70021	MH70021
36	MICRO SWITCH	MPPS044	MPPS044	MPPS044	MPPS044
37	SCREW, STRAIN RELIEF BRACKET	MHSP83238	MHSP83238	MHSP83238	MHSP83238
38	STRAIN RELIEF BRACKET	MPSS161	MPSS161	MPSS161	MPSS161
39	CABLE CLAMP	MHCC12	MHCC12	MHCC12	MHCC12
40	STRAIN RELIEF (PLASTIC)	MPSS164	MPSS164	MPSS164	MPSS164
41	TERMINAL BLOCK (6 POSITION)	MPPT706	MPPT706	MPPT706	MPPT706
42	SET SCREW, COLLAR	MHT5161834	MHT5161834	MHT5161834	MHT5161834
43	COLLAR	MH72023	MH72023	MH72023	MH72023
44	SCREW, COLLAR	MHSH516181	MHSH516181	MHSH516181	MHSH516181
45	POWER DISTRIBUTION CABLE	MPPW722	MPPW723	MPPW722	MPPW723
46	TRANSFORMER ASS'Y	MPPT700	MPPT700	MPPT700	MPPT700
47	BASE ASSEMBLY	MPSB721	MPSB721	MPSB721	MPSB721

		MODEL	MODEL	MODEL	MODEL
		716	716	721	721
NO	PART NAME	115V AC	230V AC	115V AC	230V AC
48	FUSE F1 (T 250ma 250V)	MPPF705	MPPF705	MPPF705	MPPF705
49	FUSE HOLDER ASSEMBLY	MPPF706	MPPF706	MPPF706	MPPF706
50	STRAIN RELIEF, BASE	MH3231	MH3231	MH3231	MH3231
51	POWER SWITCH (ON/OFF) ASS'Y	MPPS730	MPPS730	MPPS730	MPPS730
52	AIR GAUGE ASS'Y	MPPA001	MPPA001	MPPA001	MPPA001
53	AIR PRESSURE REGULATOR ASS'Y	MPPA006	MPPA006	MPPA006	MPPA006
54	STEM, LOWER PLATEN	MH70035	MH70035	MH70035	MH70035
55	PLATE, ELECTRICAL COVER	MPSP715	MPSP715	MPSP715	MPSP715
56	AIR HOSE	MPPA005	MPPA005	MPPA005	MPPA005
57	SPRINGS, PISTON (3/SET)	MPSS137	MPSS137	MPSS137	MPSS137
58	O'RINGS (2/SET)	MPSR138	MPSR138	MPSR138	MPSR138
59	GUIDE POST, PISTON	MH11072	MH11072	MH11072	MH11072
62	GASKET, PISTON	MPSG140	MPSG140	MPSG140	MPSG140
63	COVER, PISTON	MPSH141	MPSH141	MPSH141	MPSH141
64	SCREW, PISTON COVER	MHSSH14201	MHSSH14201	MHSSH14201	MHSSH14201
65	BUSHING, PISTON GUIDE	MPSB070	MPSB070	MPSB070	MPSB070
66	AIR FITTING, PISTON	MHAQ69P4X2	MHAQ69P4X2	MHAQ69P4X2	MHAQ69P4X2
67	TERMINAL BLOCK (8 POSITION)	MPPT708	MPPT708	MPPT708	MPPT708
68	POWER CORD (USA MODEL)	MPPW141	MPPW142	MPPW141	MPPW142
68A	POWER CORD (EUROPEAN MODEL)	N/A	MPPW202	N/A	MPPW202
69	AIR SOLENOID VALVE ASS'Y	MPPA024	MPPA024	MPPA024	MPPA024
70	HOUSING	MPSP722	MPSP722	MPSP722	MPSP722
71	LOWER PLATEN BREAK-AWAY CASTING	MH70034	MH70034	MH70034	MH70034
72	EYE BOLT	MHBE14201	MHBE14201	MHBE14201	MHBE14201
73	SPRING, BREAK-AWAY	MH70002	MH70002	MH70002	MH70002
74	PIN, BREAK-AWAY ATTACHMENT	MH700126	MH700126	MH700126	MH700126
75	ANTI-TIEDOWN DEVICE	MPPA701	MPPA701	MPPA701	MPPA701
76	SOCKET, ANTI-TIEDOWN	MPPS400	MPPS400	MPPS400	MPPS400
77	AIR FITTING INLET	MPPF085	MPPF085	MPPF085	MPPF085
78	SCREW ARM/FRONT PANEL	MHSB142058	MHSB142058	MHSB142058	MHSB142058
79	SCREW, BREAKAWAY PLATEN 4/SET	MHST516181	MHST516181	MHST516181	MHST516181
83	O-RING, POST	MPSS062	MPSS062	MPSS062	MPSS062
84	SCREWS, SET	MHST381612	MHST381612	MHST381612	MHST381612
A1	UPPER PLATEN ASS'Y	MPSP036	MPSP037	MPSP039	MPSP040
A2	LOWER PLATEN ASS'Y	MASP008	MASP008	MASP009	MASP009
A3	PISTON ROD ASS'Y	MPSP139	MPSP139	MPSP139	MPSP139
A4	PISTON ROD REBUILD KIT	MPSP712	MPSP712	MPSP712	MPSP712