

**Operation and maintenance manual  
for models 715 and 720 heat seal machines**

**INSTA  
ATSM**

## **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. Our new machine combined with Insta's reputation of innovation in the heat sealing field, insures you the continuing capability of delivering the best lettered garments possible.

This manual describes installation and operation procedures for your new model 715 (or 720) machine, as well as an easy to use table for on the spot maintenance. Proper heat sealing instructions and helpful hints are included in a separate brochure.

Your model 715 (or 720) 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.

## **Warranty**

Insta Graphic Systems guarantees its machines to be free of defects in material and workmanship under normal use and service for one (1) year, from date of purchase. In order for the warranty to be effective, DO NOT RETURN ANY MACHINES OR PARTS WITHOUT PRIOR FACTORY AUTHORIZATION. The compressor sold with the machine is similarly guaranteed by its manufacturer.

## **Installation**

Use a separate 115 volt, 20 AMP, AC circuit for model 715 (115/230 volt for model 720). Only industrial weight extension cords with proper wire size should be used. For model 715, size 14/3 wire for distances up to 25 feet, and size 12/3 wire for distances up to 50 feet. (For model 720, size 14/4 wire for distances up to 25 feet, and size 12/4 wire for distances up to 50 feet.)

1. Utilize the bolt holes on each side of the machine and secure the unit to the work table.
2. Connect the air line to the rear of the machine (1/4" male pipe thread) using air filling supplied. See figure 7.

## **Portable stand**

A specially constructed portable stand is converted from the original shipping crate. This portable stand on casters accommodates both compressor and machine. It was designed to allow installation of the equipment in an area which will attract customers.

## **Operation**

It is recommended that you review the "How to apply Insta heat transfers and die cut letters" manual before beginning heat sealing operations. Also refer to figure 1.

2. Push circuit breaker 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 neon lamp above the temperature selector knob will cycle on and off. Note that the thermometer usually reads 20 to 35 degrees higher than the actual platen surface temperature.
5. Set the desired pressure setting by adjusting the air pressure regulator.
6. Set timer for the desired timing cycle.
7. Place the garment on the 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.  
(For operator safety the machine is designed not to operate unless the upper arm is in the extreme left hand position.)
10. Depress both green 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 the 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.

## **General maintenance**

A maintenance chart has been prepared to assist you in locating and correcting problems when the equipment is not operating properly. To locate the problem area it may be necessary to refer to more than one symptom listed in the chart. The table directs your attention to the fault. It does not rule out other possibilities.

The following accessories are included with the purchase of your machine:

- Fuses (model 720 only)
- Hose fittings
- Allen wrench

It is also recommended that you have the following tools available:

- A. Regular screw driver
- B. Phillips head screw driver
- C. Small adjustable wrench

## Removal and replacement of piston

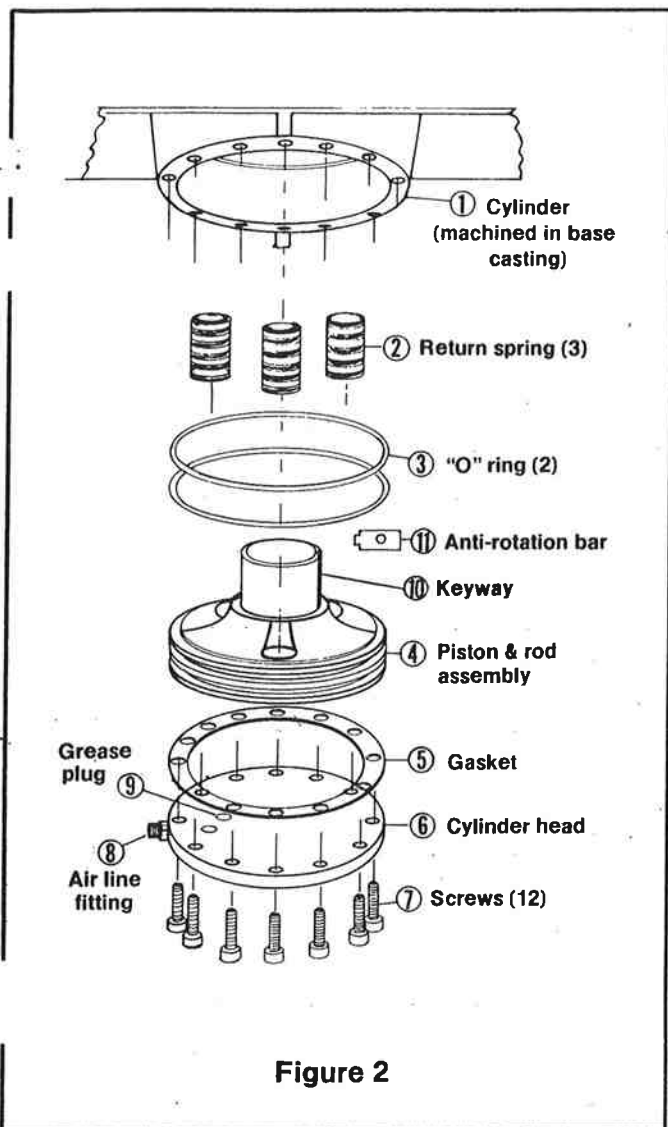


Figure 2

1. Remove air line from cylinder head (8).
2. Remove 12 screws (7).
3. Lift off cylinder head and gasket (5 & 6). 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 cylinder bore and check for damage.
5. Replace worn or broken parts and assemble as follows.
6. Plate ring grooves with Lub-A-Cyl. Install "O" rings in grooves and cover them with Lub-A-Cyl. Put thin film of Lub-A-Cyl on cylinder wall and on piston rod.
7. Snap springs (2) 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 on screw in hole next to index, about 5 or 6 turns. Now carefully swing gasket and cylinder head around on this bolt so that piston may be inserted into the cylinder.

9. Install piston into cylinder so that anti-rotation bar (11) lines up with keyway (10) in piston rod and springs enter seats in piston.

10. Push piston into cylinder using hand pressure only. Watch to see that "O" rings enter bore properly and do not pinch. Do not use tools, hammers, etc., to assist in this installation. If the piston will not enter with hand pressure only, something is wrong and must be corrected.

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 first screw. Start balance of screws and when all are started pull cylinder head down evenly until it seats on gasket. Continue to tighten screws using a cross pattern, until all are tight.

12. Connect air line and test for leaks.

## Temperature control replacement

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 that there is only one wire going to one 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. *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 tube) may be grasped *gently* with a pair of pliers to aid in installation. *Do not grasp capillary tube with pliers.*
7. Reconnect the three wires to temperature control as stated in Step 3.
8. Insert the two screws which secure the control to the front panel.
9. Put on the knob with the pointer indexed to the off position.

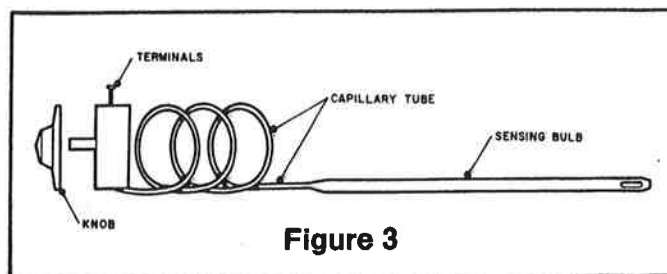
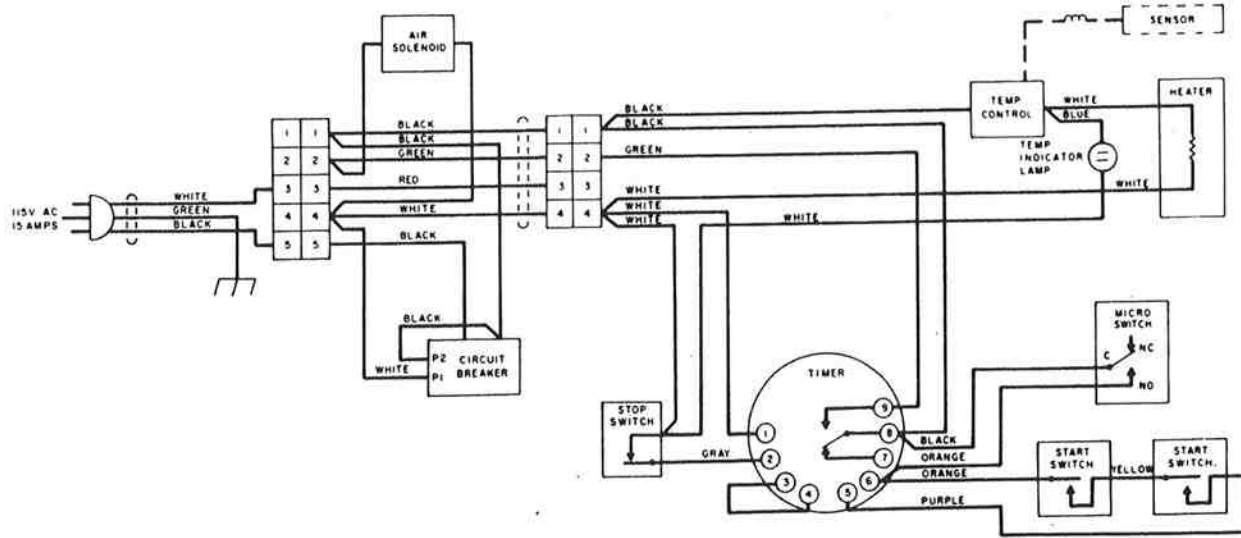


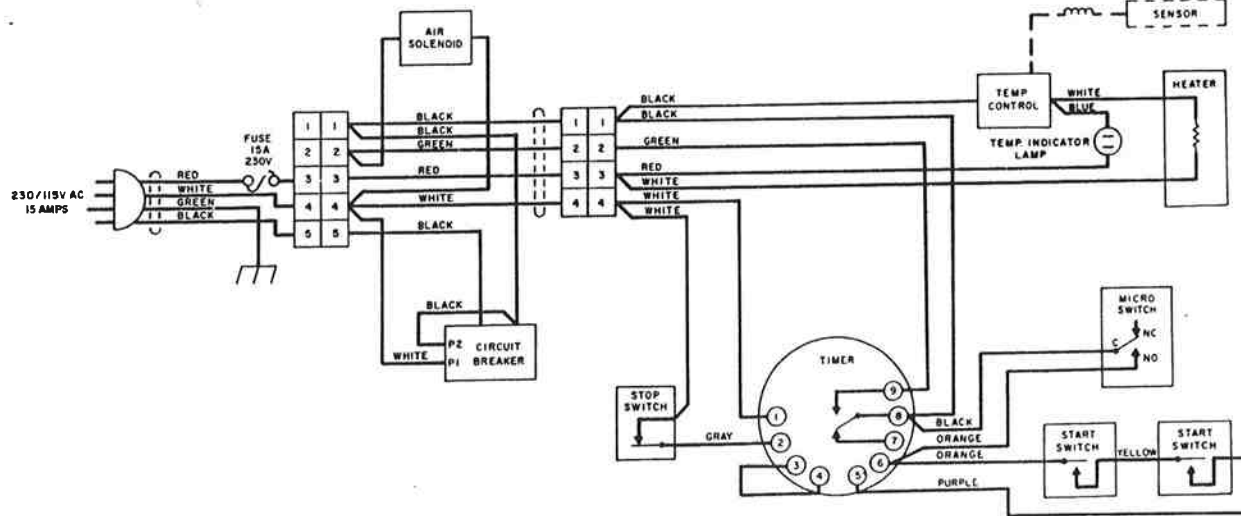
Figure 3

**Wiring diagram model 715**



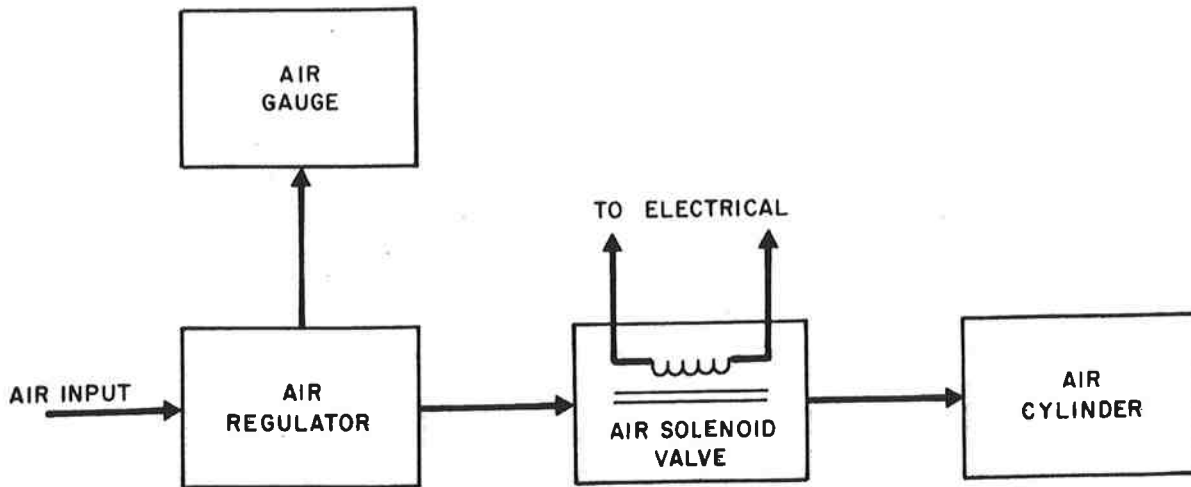
**Figure 4**

**Wiring diagram model 720**



**Figure 5**

**Air flow diagram**



**Figure 6**

## Replacement of silicone rubber pads

1. Use RTV-106 adhesive to bond silicone rubber pad to metal platen (read instructions on the tube package).
2. Be sure to remove the powdery substance from the silicone pad. Use a solvent such as MEK, acetone, lacquer thinner, or benzine.
3. Pad must be thoroughly dry and metal clean, before starting the bonding operation.
4. Apply RTV-106 sealant to the metal platen. Spread an even coat and apply pad immediately (a serrated blade such as used for laying down rubber floor tiles would be helpful). Apply pressure and position pad making sure that there is no air entrapment.
5. Allow to cure overnight under pressure.
6. The machine may be locked into position by placing a jumper between terminals #1 and #2 (green and black 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.

## Micro switch adjustment

Adjustment of the micro switch must be accomplished with the power on. The air may also be on, but this is incidental.

1. Remove instrument housing (5 screws in front panel), to expose micro switch and electrical circuitry. (Avoid touching exposed terminals.)
2. Set timer to 1 second interval.
3. Swing upper platen into working position until stop is reached. Back up just enough to align outside of front corner of shroud with edge of lower platen (near swing away handle). See figure 7. Micro switch must be adjusted to "just close," as upper platen swings to this position.
4. To change micro switch setting, loosen pan head screw (A) on slotted end of micro switch mounting base (B). Move in desired direction to bring switch to "just closed" condition and retighten screw.
5. To test for proper alignment, swing upper platen away from stop, 3 or 4 inches, and then holding both green 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.

## List of principal components

Part name	Model 715 stock no. (serial no's below 7200)	Model 715 stock no. (serial no's above 7200)	Model 720 stock no.
Air pressure gauge	MP-PA-0001	MP-PA-0001	MP-PA-0001
Air pressure regulator	MP-PA-0002	MP-PA-0002	MP-PA-0002
Air solenoid valve	MP-PA-0003	MP-PA-0003	MP-PA-0003
Base casting with post	MP-SB-0136	MP-SB-0136	MP-SB-0136
Cement, RTV-106	MP-PC-0006	MP-PC-0006	MP-PC-0006
Fitting, air cylinder head	MP-SF-0144	MP-SF-0144	MP-SF-0144
Fitting, air input	MP-PC-0082	MP-PC-0082	MP-PC-0082
Fuse, 15A/3AB	MP-PF-0008	—	MP-PF-0008
Fuse holder assembly	MP-PF-0009	—	MP-PF-0009
Gasket, cylinder head	MP-SG-0140	MP-SG-0140	MP-SG-0140
Handle, swing-away arm	MP-SH-0072	MP-SH-0072	MP-SH-0072
Head cylinder	MP-SH-0141	MP-SH-0141	MP-SH-0141
Heater strip	MP-PH-0012	—	MP-PH-0012
Heater strip hardware kit	MP-PH-0014	—	MP-PH-0014
Knob, handle	MP-PK-0017	MP-PK-0017	MP-PK-0017
Lamp assembly	MP-PL-0019	MP-PL-0019	MP-PL-0019
Lubricant, cylinder	MP-PL-0022	MP-PL-0022	MP-PL-0022
Lubricant, post	MP-PL-0023	MP-PL-0023	MP-PL-0023
O ring, piston (set)	MP-SR-0138	MP-SR-0138	MP-SR-0138
Pad, foam — 15" x 15"	MP-PP-0025	MP-PP-0025	MP-PP-0025
Pad, silicone rubber — 6" x 15"	MP-PP-0028	MP-PP-0028	MP-PP-0028
Pad, silicone rubber — 10" x 15"	MP-PP-0029	MP-PP-0029	MP-PP-0029
Pad, silicone rubber — 15" x 15"	MP-PP-0030	MP-PP-0030	MP-PP-0030
Pad, silicone rubber — 15" x 20"	—	—	MP-PP-0031
Pin pivot, platen mount	MP-SP-0083	MP-SP-0083	MP-SP-0083
Piston & rod assembly	MP-SP-0139	MP-SP-0139	MP-SP-0139
Plate, machine identification	MP-PP-0032	MP-PP-0032	MP-PP-0032
Plate, name	MP-PP-0033	MP-PP-0033	MP-PP-0033
Platen, heat	MP-SP-0074	MP-SP-0074	MP-SP-0147
Plug, grease	MP-SP-0143	MP-SP-0143	MP-SP-0143
Post guide, heat platen	MP-SP-0084	MP-SP-0084	MP-SP-0084
Screw, cylinder head	MP-SS-0142	MP-SS-0142	MP-SS-0142
Spring, piston return (set)	MP-SS-0137	MP-SS-0137	MP-SS-0137
Switch, circuit breaker assembly	—	MP-PS-0043	MP-PS-0043
Switch, micro.	MP-PS-0044	MP-PS-0044	MP-PS-0044

## List of principal components (cont'd)

Part name	Model 715 stock no. (serial no's below 7200)	Model 715 stock no. (serial no's above 7200)	Model 720 stock no.
Switch, start assembly	MP-PS-0045	MP-PS-0045	MP-PS-0045
Switch, stop assembly	MP-PS-0046	MP-PS-0046	MP-PS-0046
Shroud, heat	MP-SS-0145	MP-SS-0145	MP-SS-0146
Temperature control assembly	MP-PT-0052	MP-PT-0052	MP-PT-0052
Terminal block, QD assembly	MP-PT-0053	MP-PT-0053	MP-PT-0053
Terminal block, screw assembly	MP-PT-0054	MP-PT-0055	MP-PT-0055
Thermometer	MP-PT-0056	MP-PT-0056	MP-PT-0056
Timer assembly	MP-PT-0059	MP-PT-0059	MP-PT-0059
Wire, harness	MP-PW-0064	MP-PW-0064	MP-PW-0064
Wire, power cord	MP-PW-0065	MP-PW-0065	MP-PW-0066
Wire, power distribution	MP-PW-0068	MP-PW-0068	MP-PW-0068
Wire, heat platen assembly	MP-PW-0069	MP-PW-0069	MP-PW-0069

## List of principal accessories

Part name	Model 715 stock no. (serial no's below 7200)	Model 715 stock no. (serial no's above 7200)	Model 720 stock no.
Compressor	MA-PC-0006	MA-PC-0006	MA-PC-0006
Crate, special	MA-PC-0008	MA-PC-0008	MA-PC-0008
Decorating tray	MA-ST-0005	MA-ST-0005	—
Grease gun	MA-PG-0010	MA-PG-0010	MA-PG-0010
Jumper, test lead	MA-PJ-0016	MA-PJ-0016	MA-PJ-0016
Platen, lower — 6" x 15"	MA-SP-0001	MA-SP-0001	MA-SP-0001
Platen, lower — 10" x 15"	MA-SP-0002	MA-SP-0002	MA-SP-0002
Platen, lower — 15" x 15"	MA-SP-0003	MA-SP-0003	MA-SP-0003
Platen, lower — 15" x 20"	—	—	MA-SP-0004
T handle key	MA-PK-0015	MA-PK-0015	MA-PK-0015
Test lamp	MA-PT-0014	MA-PT-0014	MA-PT-0014