

QUALITY
PRACTIX
MFG. - U.S.A.
THROUGH INNOVATION

**4400 Cantrell Road
Acworth, Georgia 30101
Phone: (770) 974-1480
Fax: (770) 974-1584**

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WARRANTY

Practix Mfg. LLC will replace free of charge, F. O. B. Purchaser's plant, within 365 days (1 year) from time of shipment to the original purchaser, any mechanical part, within six (6) months any electronic component, and within six months (6) on a prorated basis any belt found in our judgment to be defective. This Warranty is based on an eight (8) hour per day work/operating schedule.

This Warranty does not cover damage to the Machine or any part thereof found in our judgment to be the result of accident, negligence, or misuse. This warranty shall become ineffective if the product or component is altered by anyone other than Practix employees. Damage incurred in shipment should be reported to the designated carrier. It is his responsibility to ensure arrival in perfect condition.

This Warranty covers only labor and material. Expenses will be charged at cost. This warranty does not include installation of the product or component.

This Warranty is registered in the name of the original Purchaser and is non-transferable.

Practix Mfg. LLC will, in no case and under no circumstances, be liable for special or consequential damages, loss of profit or commission or for loss or delay in production.

Warranty will be non-redeemable if the balance on the Purchaser's account for the product is delinquent.

PRACTIX MFG. LLC
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I have received and read this manual.

Signature

Mechanical Warranty Begins _____ through _____

Electrical Warranty Begins _____ through _____

WARNING!

At no time during the operation of the machine should any beverages or liquids be placed anywhere on the top of the Machinery to prevent injury from electric shock.

It is the responsibility of the Purchaser of this Machinery to train his personnel in the proper manner of operation.

It is further understood that Practix Mfg. assumes no responsibility for injuries, disabilities, or death resulting from the improper operation of, removal from the Machinery, or bypassing of any electrical or mechanical safety devices incorporated in the design and manufacture of this Machinery.

NOTE: During the first few hours of operation the Machinery will release fumes due to the normal curing of coating materials.

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We at Practix Mfg. appreciate your purchase of our product. Your new machine is built to perform flawlessly for years to come.

This Operations Manual should be referred to for the installation, operation, and maintenance of this machine. Regular maintenance will ensure a long and trouble-free service life.

Design and development of Practix Machines are subject to constant improvement. There is no obligation on our part to carry out improvements, free of charge, on machines already delivered.

If you need to procure parts or services for you machinery please contact us:

P R A C T I X M F G . L L C

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INSTALLATION

Position the machine on a solid, level section of the floor before removing it from the skid.

NOTE: Leave sufficient clearance around the machine for material movement and maintenance personnel.

1. The electrical connections should be made by a certified electrician in accordance with local standards and electrical codes for 240 Volt- 3 Phase industrial equipment
2. Bring the power supply to the wall adjacent to the machine. Install a breaker and disconnect switch.
3. Run conduit and wire to the main connection box on the machine.
4. Bring air supply to the machine-using pipe (3/4" diameter or larger). Using a smaller diameter hose will not inflate the cylinders rapidly and therefore produce low quality prints.

In case of problems or questions, please contact Practix Mfg.

Leveling and squaring

1. Use a spirit level.
2. Place the level first on the top of the machine across the longer side of the frame. Adjust the legs as necessary
3. Place the level on the top of the machine platen across the shorter side of the machine. Adjust the legs as necessary.
4. Repeat steps 2 and 3 on the other section of the machine.

OPERATION

To energize the Practix OK-04, move the main disconnect switches marked TOP HEAT and BOTTOM HEAT to the "ON" position. Make sure to turn on air to the machine.

Adjust the large pressure regulator/filter on the left side of the machine on the left side of the machine. The large pressure regulator controls the platen pressure in the heat chamber, regulated up to 30 tons.

To start the machine, turn the switch marked "MAIN SWITCH" on the main control panel to the "ON" position. The light should illuminate. Next move the switches next to the temperature controllers to the "ON" position. The temperature controllers will illuminate. Set the desired temperature on all temperature controllers. Each platen has one controller. As each platen affects the other, the temperature set point between controllers should not be more than five (5) degrees different. For example, the top platen temperature should not be set more than five degrees higher or lower than the bottom platen temperature.

This machine is equipped with high technology solid-state temperature control. The temperature controller has been "tuned" for your specific machine to give the best-controlled temperature allowable on the machine. To set the temperature on the machine, press either the up or down arrow on the temperature controller to raise or lower the temperature. The indicator light on the temperature controller will turn on when the heaters are energized and stay on until the machine reaches its full temperature.

NOTE: FOR MORE DETAILED INSTRUCTION ON THE TEMPERATURE CONTROLLER, SEE THE TEMPERATURE CONTROLLER SECTION IN THE BACK OF THIS MANUAL.

This machine is also equipped with a relay fault indicator. Located on the main control, solid-state relay function is displayed with the use of LEDs. Each LED is wired directly to a corresponding bank of solid-state relays. Neither LED should be illuminated during normal operation. If a LED is illuminated, this indicates a solid-state relay is burnt out and needs to be replaced. In the large panel box, a red LED on the relay module will indicate the faulty solid-state relay.

When the machine reaches full temperature, the temperature controller indicator light will cycle on and off to maintain the desired temperature. If the heaters or temperature controllers do not energize properly consult the TROUBLESHOOTING section. After the machine has reached full temperature it is ready to be used for fusing.

To set the dwell time for printing, adjust the timer. ***The first letter on the timer should be an "A" or a "B"***. After the desired dwell time has been set, you are ready to start.

With one reciprocating tray all the way in the heat chamber and the other all the way out, depress the start button in the middle of the machine and one on either the left or right sides of the loading system. The machine will automatically press for the amount of time set on the temperature controller and release. To remove the tray, push the one in and the other will slide into the heat chamber.

If at any time one of the emergency stop buttons is pressed, the machine will stop its current operation.

OPERATIONAL TESTING

The variety of production speeds available with the OK-04 offers a higher production potential. The temperature should be adapted to the dwell time. Heat and pressure settings must be varied in proportion with the dwell time to obtain the proper printing quality. Although most printing papers come with manufacturer's suggested pressing specifications, a higher production rate and a more consistent product is usually obtainable with thorough testing.

A digital thermometer is designed to give an accurate reading of actual temperature on the pressure platen. If there is a discrepancy between the actual platen temperature and the temperature controller shown temperature, then please refer to the OMRON Temperature Controller Section of this manual. Temperature Strips are also designed to provide a temperature test. Below are listed several options for measuring temperature of the platen.

Temp Strips Selection Chart

Type	Temperature Range (°C)	Order NO.
0	41-104	30/520SQ
1	104-143	30/521SQ
2	143-182	30/522SQ
3	182-224	30/523SQ
4	224-260	30/524SQ

SHUTTING OFF THE MACHINE

To shut off the machine, switch off the temperature controllers. Next turn the main switch to the off position. Finally, switch the main disconnect switches to the off position. At the end of each working day when the machine is to be turned off, remember to disconnect power to the machine to prevent any accidental damage to the machine.

TEFLON COVER REPLACEMENT

1. **DISCONNECT POWER TO THE MACHINE!**
2. Unlatch the springs from one side of the cover.
3. Unlatch the springs from the other side of the cover. Pull the cover out of the machine. Remove the rods from the sewn ends of the cover.
4. Pull the new cover into place.

HEATER REPLACEMENT

UPPER PLATEN

- 1. DISCONNECT POWER TO THE MACHINE!**
2. Remove the outside heater covers from both sides of the platen.
3. Remove the cover from the top of the machine.
4. Place two long wooden blocks in between the heating platens.
5. Remove the four ½” bolts from the top of the machine holding up the heating assembly. Disconnect and mark all wires going to the heaters. Loosen the conduit clamps on flexible steel conduit.
6. Remove the top heating assembly from the machine and place it on a table out side of the machine. This will require the use of several people.
7. Loosen the heater hold down strips in the area of the heater to be changed. It may be necessary to loosen additional screws that hold down heaters close to the one that is to be changed.
8. Disconnect the wires from the heater.
9. Slide the heater out and replace with a new replacement heater strip from Practix Mfg. It is also necessary to reapply a thin layer heat conducting paste on the bottom of the heater to be replaced.
10. Replace everything using the reverse of the above instructions. **When replacing the support plate onto the heater platen, do not over tighten the locknuts. The washers under the nuts should be able to be moved freely. Likewise, the bolts holding the heater assembly to the machine should also be loosely tightened so that the washers can be moved when the machine in the press cycle.**

LOWER PLATEN

1. Remove the four ½” bolts connecting the heating assembly to the machine.
- 2. DISCONNECT POWER TO THE MACHINE!**
3. Remove the outside heater covers from both sides of the platen.
4. Disconnect and mark all wires going to the heaters. Disconnect the flexible conduit clamps from the flexible conduit.
5. Remove the heating assembly from the machine. This will require the assistance of several people and a forklift. With the forklift remove the lower heating assembly from the machine.
6. Again with the help of at least four other people, flip the platen so that it can be worked on. Loosen the locknuts holding the heating assembly together. Remove the leveling platen from the heating platen. This will also require the assistance of several people.
7. Loosen the heater hold down strips that hold down the heater that is to be changed. It may be necessary to loosen additional screws that hold down heaters close to the one that is to be changed.
8. Slide the heater out and replace with a new replacement heater strip from Practix Mfg. Apply a thin layer heat conductive paste onto the bottom of the heater before replacing it onto the platen.
9. Replace everything using the reverse of the above instructions. **When replacing the locknuts onto the heater assembly, do not over tighten the nuts. They should be loose to allow for the expansion due to heat. Also when replacing the four mounting bolts that hold the heating assembly to the machine, pay special care not to over tighten these bolts, as they should also be loose to allow for heat expansion.**

MAINTENANCE

NOTE: We recommend a regular maintenance plan as outlined below. These maintenance points are considered a very minimum. Additional maintenance is left to the Owner's discretion.

1. Daily Maintenance/Cleaning

- ✓ Vacuum or blow off any visible dust and lint.

2. Weekly Maintenance

A. Cleaning

- ✓ Remove any visible accumulation of dust, lint, or resin.

B. Spot-check electrical and mechanical components.

3. Monthly Maintenance

A. Spot check the pull wire. Make sure it is tight and operating properly.

B. Cleaning

- ✓ Remove thread and lint deposits
- ✓ Remove dust and lint accumulation from pivot points.

TROUBLESHOOTING

This section is provided for the identification and repair of items considered as field serviceable and are part of the maintenance of any machine. Problems falling outside the areas covered in this Manual should be first isolated as far as possible, and then repaired only after consultation with your Dealer or our service department.

<u>Problem</u>	<u>Check List</u>
1. Main controls fail to energize	a. Electrical power supply b. Control fuses c. Incomplete circuit
2. Heaters fail to energize with main controls energized	a. Main fuses b. Solid State Relay c. Thermocouple probe d. Temperature controller e. Incomplete circuit
3. Heaters energize but fail to come up to temperature	a. Incorrect line voltage b. Thermocouple probe c. Temperature controller faulty d. Temperature controller calibration off e. Heater elements f. Incomplete circuit
4. Temperature fluctuate +/-20 ⁰	a. Auto tune the controller(s)
5. Temperature shown differs from actual platen temperature	a. Calibrate the controller(s)

TEMPERATURE CONTROLLER – OMRON E5GN

This machine has a special high technology temperature control system. The Omron E5GN controls mercury contactors instead of contactors to provide power to the heaters. This system allows the power to be switched on and off to the heaters much more frequently than with regular contactors, thus allowing the machine to maintain a more consistent temperature value.

To Set the Temperature Desired on the Controller

To set your desired temperature, press either the up or down arrow button until the desired temperature is reached. After the temperature controller turns on, a small LED will illuminate on the upper right corner of the controller. Remember this machine has a two zone heating system, left and right. Both controllers must be set to the same temperature to ensure proper operation.

Tuning the Temperature Controller

The OMRON E5GN has been tuned to your specific machine. It is good practice to tune the temperature controller once a week so that the controller can keep the most accurate temperature possible without varying up or down around the setpoint. For complete instructions on this process, refer to the end of this manual for original instructions from the manufacturer. Here is a simplified version of how to do this. The best way to tune your machine is tune at the setpoint. Let the machine heat up to the setpoint. Enter the program mode by pressing the left gray once. The controller will display AT ON and the display will begin to flash on and off until finished with its computation. The controller will do this for approximately ten to fifty minutes. When the controller has finished its auto tune process, the controller will display AT OFF. To display the process temperature again, press the left gray button once. The controller is now auto tuned and ready to be used. After this procedure is finished, the controller will switch back to displaying the current temperature. This process will set all the values in the temperature controller, except the control period for the process.

Calibrating a Difference between Display Temperature and Actual Temperature

Eventually, due to wear or other influences, the actual temperature on the platen may differ from the temperature displayed by the temperature controller. To adjust the controller difference, first the controller must be in the program mode. To do this, press the left gray button once. Once in the program mode, press the

continuous oval button once. The controller will display "iN S". Press the up or down arrow keys until the read value has an increase or decrease corresponding to the difference in the actual and display temperature. For example, if the plate temperature is 400 degrees and the controller display temperature is 350 degrees. The value for the "iN S" should 50. Wait ten minutes and repeat this process until there is no difference between the temperature displayed and the actual temperature.

OMRON E5GN

To Set Temperature Desired on the Controller

Depress up or down arrow keys. Setpoint temperature is in the lower right corner.

To Recalibrate Controller (i.e. controller display temperature is different than actual temperature.

Press  (gray button) once. AT OFF is displayed

Press  until in5 is displayed. Input value of the difference with up and down arrow keys.

Press  once to return to display temperature.

To Tune Controllers

Press  once. AT OFF is displayed.

Press up arrow once. AT ON is displayed. Allow machine to run. It will take 10 minutes to 1 hour.

AT OFF is displayed when the controller is finished.

Press  once to return to display temperature.

TEMPERATURE CONTROLLER INITIAL PROGRAM

Press and hold the gray button for approximately 4 seconds to get into program mode.

To toggle through the program, use the circular button.

Below is listed a parameter value chart of all required parameters needed for the Practix OK-04TB.

in-t.....2

d-U.....F

SL-H.....450

SL-L.....50

CntL.....Pid

St.....oFF

CP.....15

orEu.....or-r

To return to the temperature display screen, press and hold the gray for approximately three seconds.

**THE ABOVE PROCEDURE SHOULD ONLY BE PERFORMED
AFTER CONSULTING PRACTIX MFG.**

