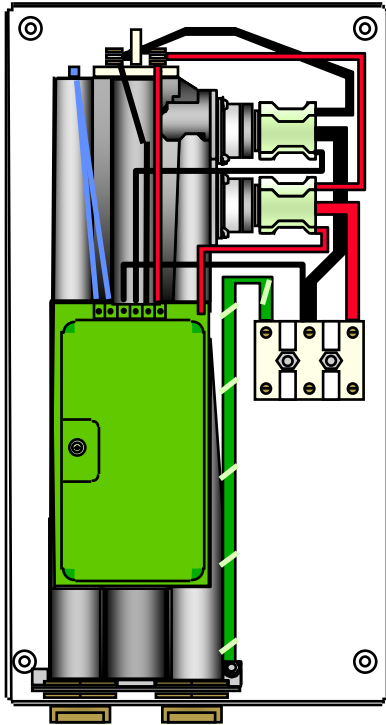


TROUBLESHOOTING GUIDE
ELECTRIC INSTANTANEOUS TANKLESS WATER HEATER



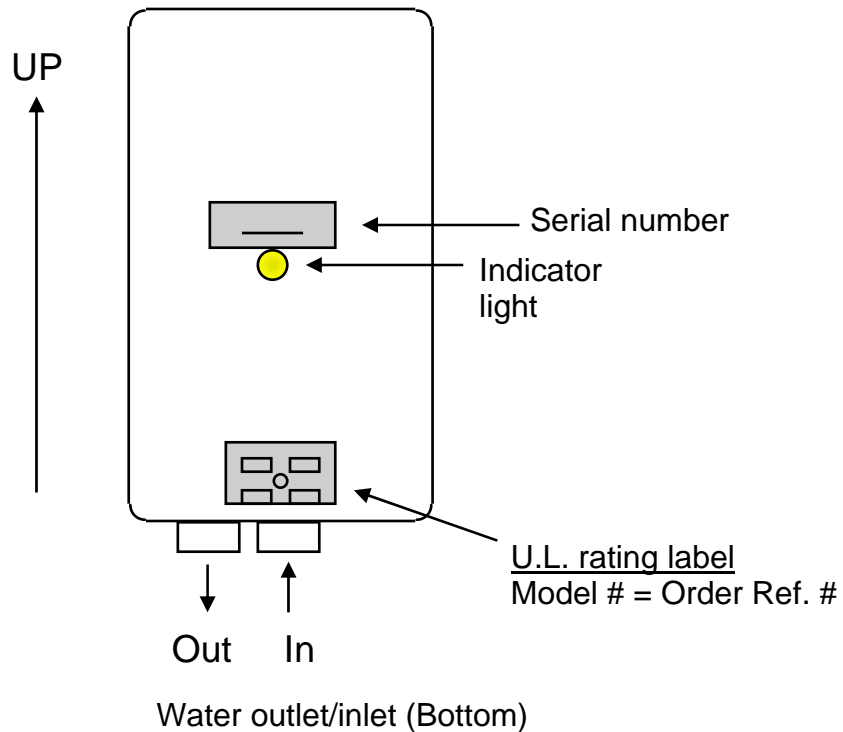
“THERMOSTATIC”
EFT MODELS

EFT-5500-4-S-10	240V
EFT-7500-4-S-10	240V
EFT-9500-4-S-10	240V
EFT-8300-4-S-10	208V
EFT-6000-4-S-10	277V
EFT-8000-4-S-10	277V
EFT-9000-4-S-10	277V
EFT-10000-4-S-10	277V

All information necessary to troubleshoot this water heating unit is contained in this fully illustrated guide. If problems still exist after reading and carrying out the instructions in this manual, contact Technical Service at the toll free number below for assistance

PHONE TOLL FREE
1-800-334-3393

GENERAL



This is how your EFT thermostatic model should look when mounted correctly on the wall.

Any other mounting configuration will prevent the unit from operating properly.

If the unit is mounted correctly and still does not produce hot water, then look to see if the indicator light illuminates when the hot water faucet is fully opened.

If the indicator light illuminates, turn to page 5.

If the indicator light does not illuminate, turn to page 3.

If the indicator light flashes once very quickly as you turn the water "ON", turn to page 7.

If the indicator light is pulsing, refer to the bottom of page 5.

All other possible situations turn to page 6.

The indicator light does not illuminate (When the hot water faucet is fully opened):

STEP ONE:

Is the circuit breaker switched on at the main circuit breaker panel?

YES → Go to Step two

NO →



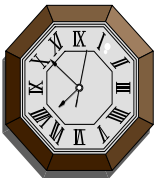
Run water at the hot water faucet, for a couple of minutes, before turning on the circuit breaker. Then turn on the circuit breaker at the main circuit breaker panel.

STEP TWO:

The heating elements will not energize unless sufficient water is flowing through the unit.

The minimum acceptable flow rate is 0.55 gallons per minute. Some models require a higher flow rate, see chart below for specific model flow rates. Measure the flow rate using the following procedure:

Fill a 1-gallon “milk” container and, using only water from the hot water faucet, record the time (In seconds) required to fill. To calculate the flow rate, divide the number of gallons the container holds (In this case one gallon) by the time required to fill.



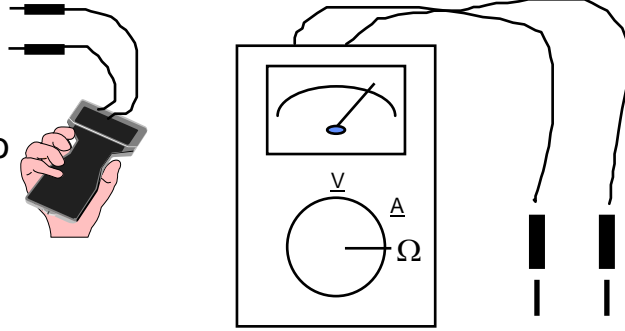
e.g. If it takes 87 seconds to fill the container, then the flow rate would be:
Flow rate (gpm) = $v/t \times 60 = (1 \text{ gal./} 87 \text{ sec}) \times (60 \text{ sec./} 1 \text{ min.}) = 0.69 \text{ gpm.}$

Open all water valves completely. If the indicator light still does not illuminate then proceed to STEP THREE.

MODEL TYPE / ORDER REF#	MINIMUM FLOW RATE
EFT-5500-4-S-10, EFT-6000-4-S-10	0.55 GPM
EFT-7500-4-S-10, EFT-8000-4-S-10, EFT-8300-4-S-10	0.65 GPM
EFT-9000-4-S-10, EFT-9500-4-S-10, EFT-10000-4-S-10	0.75 GPM

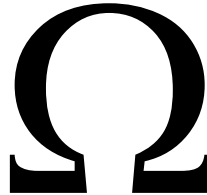
STEP THREE:

A multimeter / voltmeter is required to perform the following test



WARNING!
**TURN OFF THE CIRCUIT BREAKER BEFORE
PROCEEDING WITH THE NEXT TESTS.**

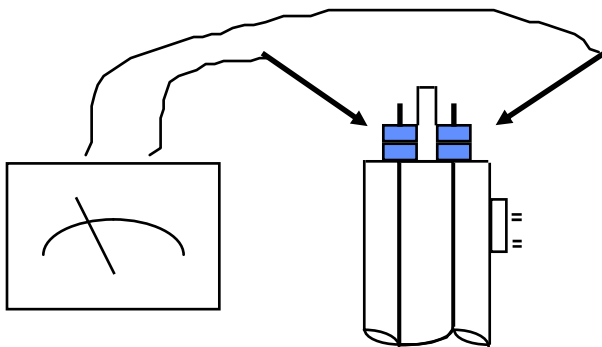
Set the meter to the **single ohms setting**.
Do not measure continuity, this will not work.



The Ohm Symbol
(The upside down horseshoe)

NOTE: BE SURE THE ELECTRICITY IS TURNED OFF TO THE UNIT

Remove the front cover of the unit. At the end of the black heater body, there are two threaded silver rods with brass nuts on them (Where the wires connect). Take a reading of the ohms value between these two rods and write it down (See diagram below).



If the reading is less than 20 ohms on the single (Rx1) scale or the (Rx10) scale, then the element is good, if it is much greater e.g. 10,000 ohms or if you get a reading on the Rx1k, you will need to replace the element. To do this, contact Technical Service at 1-800-334-3393 for the replacement elements. (Please write down the resistance value, before contacting Technical Services. This will be very useful to us. Also have the order ref. and serial number for your unit available for Technical Service.)

The indicator light illuminates but water is not heated or the water temperature is too low:

STEP ONE:

The water flow is too high. Reduce the water flow using the faucet. With experimentation, an increase in water temperature should be observed. BE CAREFUL, THE WATER EXITING THE FAUCET IS HOT. SCALD INJURY CAN OCCUR FROM THE HOT WATER.

STEP TWO:

Make sure the unit is connected to the voltage supply specified on the U.L. rating label located on the front cover of the unit.

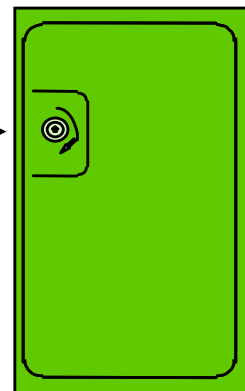
STEP THREE:

Proceed to page four and follow STEP THREE.

Indicator light is pulsing and the water temperature is too low

Turn the temperature adjustment screw on the printed circuit board clockwise. Turn the screw very gently; the maximum position is approximately 5 o'clock. At this point the light should stop flashing and should be illuminated continuously when water is flowing.

Temperature adjustment
screw

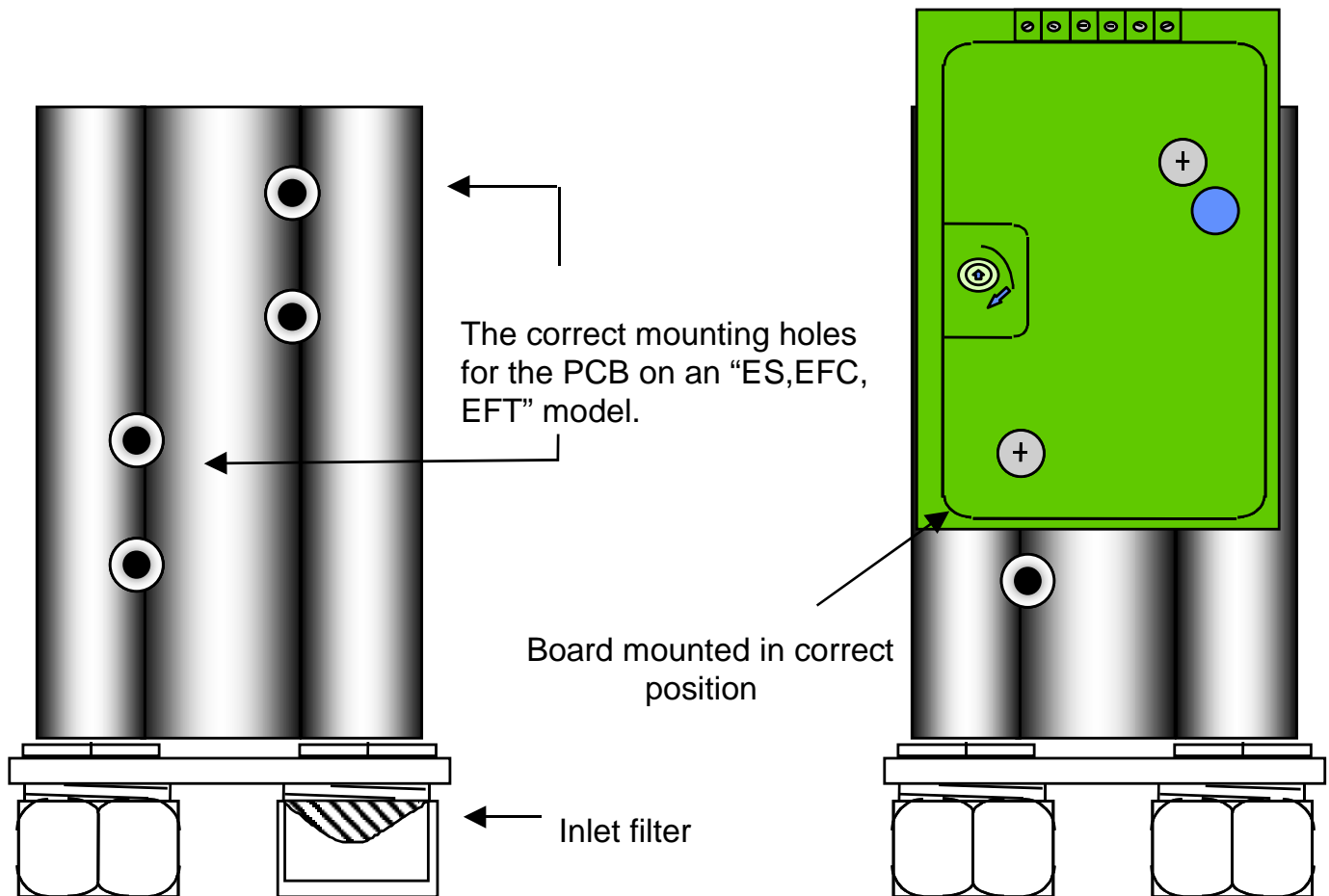


Other possible solutions:

NOTE: BE SURE ELECTRICITY IS TURNED OFF BEFORE PROCEEDING

STEP ONE:

Make sure the printed circuit board is mounted in the correct position. This is the top set of mounting holes (See diagram below). Failure to mount PCB in the correct position will cause element burn out and may cause further damage to the unit (This board may have been incorrectly positioned if serviced previously).



STEP TWO:

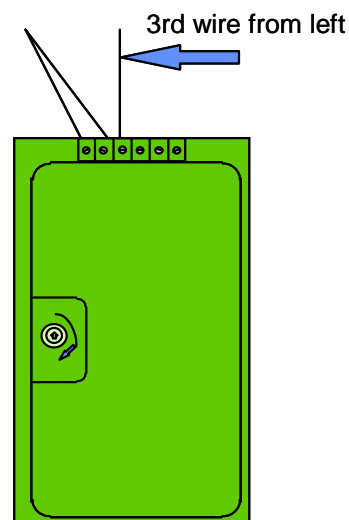
Inspect the inlet filter (See diagram above for location). Make sure the inlet filter screen is free from debris, pipe dope or any other foreign materials that may prevent adequate water flow.

WARNING!
**TURN OFF THE CIRCUIT BREAKER BEFORE
PROCEEDING WITH THE NEXT TESTS.**

CHECKING THERMOSTATIC CIRCUIT BOARD

If the LED on the circuit board flashes one time very quickly when the water is switched ON then:

- 1) Turn “**OFF**” the power to this unit and all other units that may feed hot water to this unit.
- 2) Be sure that this unit is fed with cold water only. This unit must not be fed with pre-heated water when performing this test.
- 3) There are six thin leads connected to the printed circuit board. Disconnect the third wire from the left, from the top of the PCB (As indicated below) and tape off the end with insulating tape.
- 4) Run water from hot water faucet for 30 seconds and then switch power “**ON**” to the unit, **with the water flowing @ 0.75 GPM**. If the light illuminates steadily then call Technical Service and request a replacement printed circuit board (Part # EX 100). If the light still does not illuminate, contact Technical Service and consult with a technician.



WARNING

Do not use this unit with any pre-heated water feed if the light has illuminated steadily having performed the above test. The unit in this state must only be fed with cold water.

IF HAVING CARRIED OUT ALL THE TESTS LISTED ABOVE AND THE WATER HEATING UNIT IS STILL NOT FUNCTIONING, PLEASE CALL TECHNICAL SERVICE AT 1-800-334-3393.

PLEASE HAVE THE FOLLOWING INFORMATION AVAILABLE:

- 1) ORDER REF. NUMBER (Located on U.L. rating label on the front cover of unit).
- 2) SERIAL NUMBER (Inside unit on back plate).