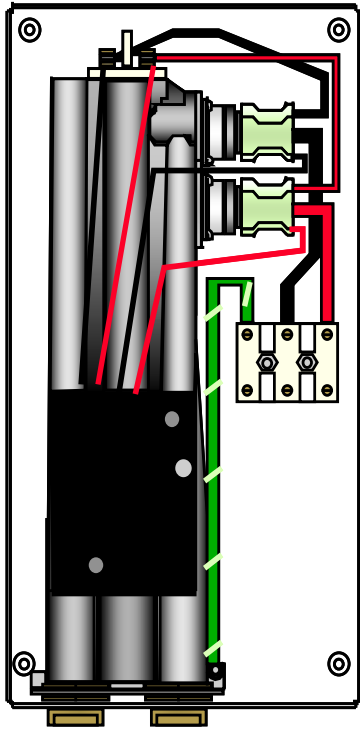


# TROUBLESHOOTING GUIDE

## ELECTRIC INSTANTANEOUS TANKLESS WATER HEATER



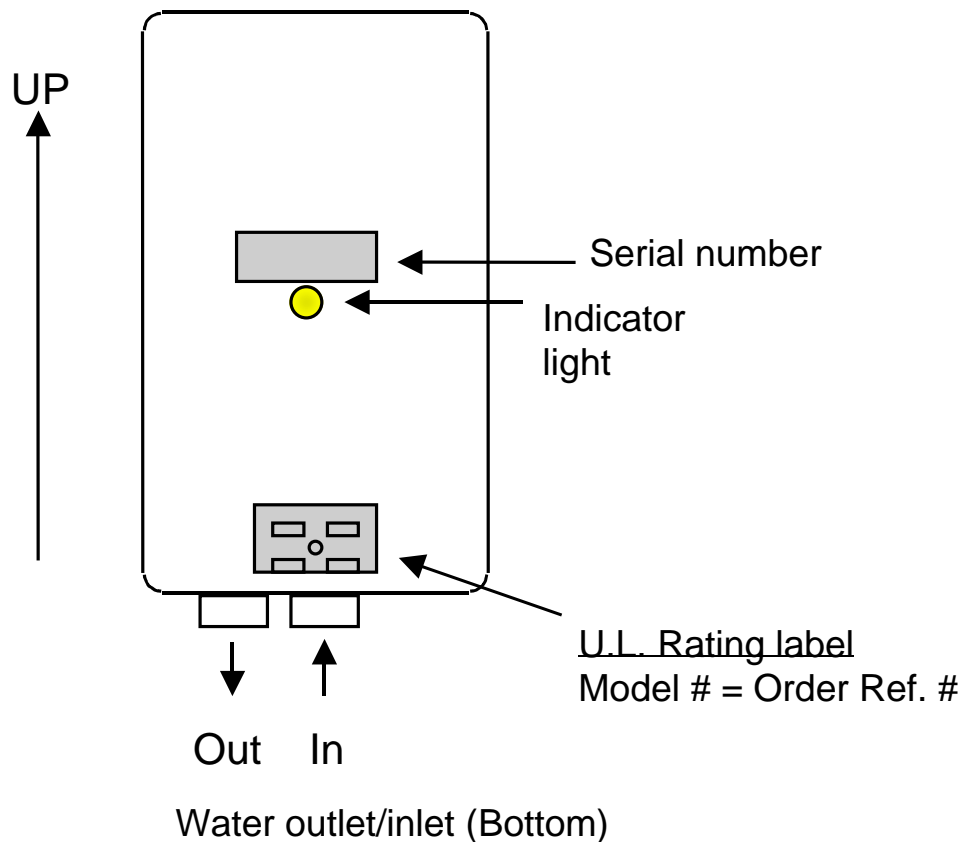
### Flow Controlled “EFC” - MODELS

EFC-5500-4-S-10	240V
EFC-6500-4-S-10	240V
EFC-7500-4-S-10	240V
EFC-9500-4-S-10	240V
EFC-8300-2-S-10	208V
EFC-6000-5-S-10	277V
EFC-8000-5-S-10	277V
EFC-9000-5-S-10	277V
EFC-10000-5-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 “EFC” model should look when mounted correctly on the wall. Refer to the U.L. rating label on the front cover of the unit to verify the unit is an “EFC” model before continuing.

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

If the unit is mounted correctly and still does not produce hot water, 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

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

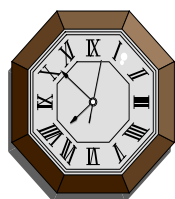
NO →



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 unit will not heat 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 outlet, 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:

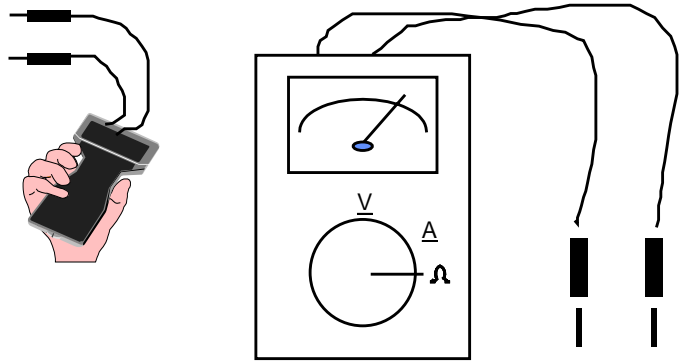
Flow rate (gpm) =  $v/t \times 60 = 1 \text{ gal.}/87 \text{ sec.} \times 60 \text{ sec.}/1 \text{ min.} = .69 \text{ gpm}$

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
EFC-5500-4-S-10, EFC-6500-4-S-10	0.55 GPM
EFC-7500-4-S-10, EFC-8000-5-S-10, EFC-8300-2-S-10	0.65 GPM
EFC-9000-5-S-10, EFC-9500-4-S-10, EFC-10000-5-S-10	0.75 GPM

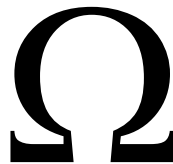
### STEP THREE:

A multimeter / voltmeter is required to perform the following test.



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

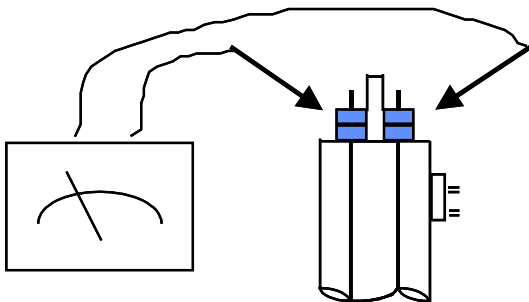
Set the meter to the single ohms setting  
Do not measure continuity, this will not work.



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 the figure 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 replacement elements (Please write down the resistance value, before contacting Technical Service, this will be very helpful to us. Also have the order ref. and the serial numbers of the 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 rate 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:

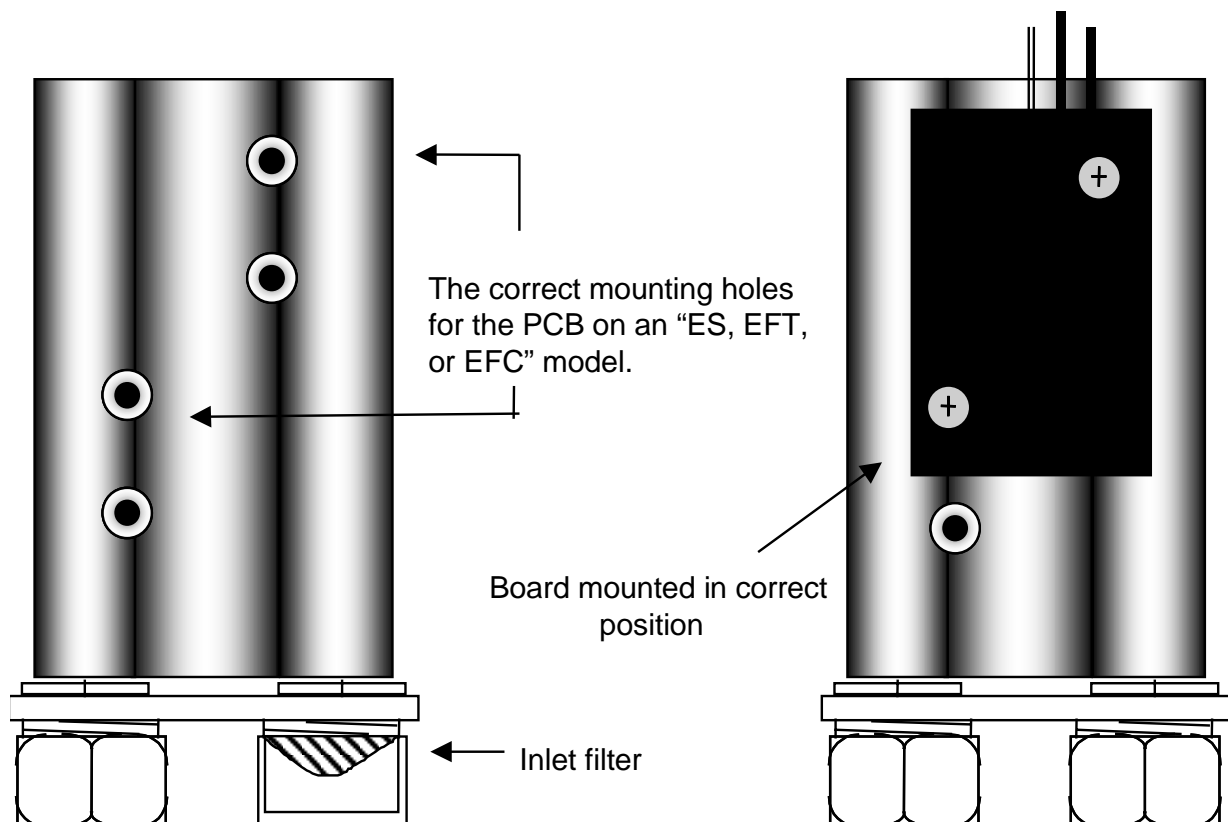
Proceed to page 4 and follow STEP THREE.

## Other possible solutions:

### STEP ONE:

Note: Be sure electricity is turned “OFF” before proceeding.

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 the 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, which may prevent adequate water flow.

IF HAVING CARRIED OUT ALL THE TESTS LISTED ABOVE AND THE 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).