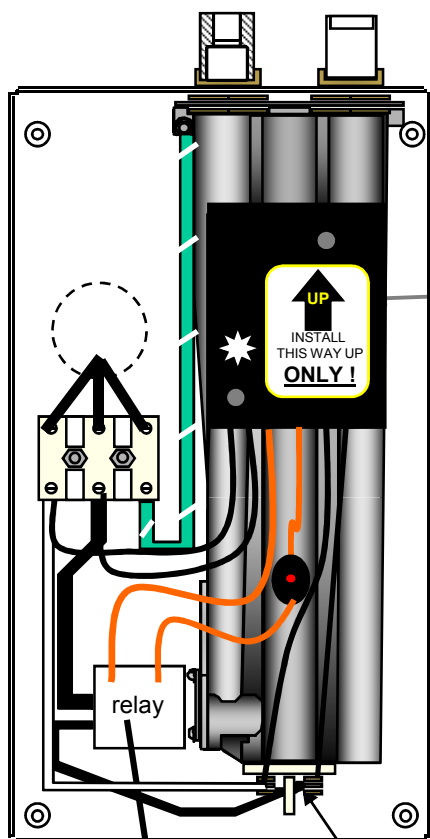


Replacement Parts for "Single Point" Units

1/2" PIPE
(5/8"OD)COMPRES
SION NUT AND
SLEEVE
PART# EX16, EX17

3/8" COMPRESSION
ADAPTOR WITH NUT
AND SLEEVE
PART#EX68A,B,C

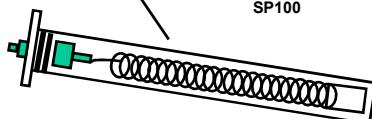


CONTROL BOARD
EX182DP
SPECIFY VOLTAGE
AND MODEL

ELEMENT CARTRIDGE
HEATER MODEL/ORDER REF. CARTRIDGE REF #

SP2412 (120V)	EX610SP
SP3012	EX480SP
SP3512	EX410SP
SP3208 (208V)	EX1440SP
SP4208	EX1050SP
SP8208	EX520SP
SP35 (240V)	EX1650SP
SP55	EX1050SP
SP65	EX890SP
SP75	EX770SP
EX95	EX630SP
SP3277 (277V)	EX260SP
SP4277	EX1870SP
SP60	EX1280SP
SP80	EX960SP
SP90	EX850SP
SP100	EX760SP

RELAY
PART # EX250-
255

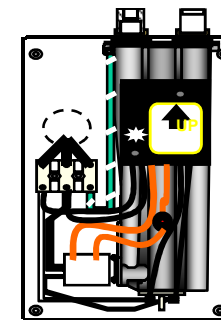


Eemax®

INSTANT COMFORT...ENDLESS SAVINGS

"Single Point"

ELECTRIC INSTANTANEOUS WATER HEATER INSTALLATION GUIDE AND OWNERS MANUAL



WARNING

BEFORE ATTEMPTING INSTALLATION OF THIS UNIT OR MAKING ANY ADJUSTMENTS TO THE UNIT, ALWAYS BE SURE CIRCUIT BREAKER IS OFF TO PREVENT DANGER OF SERIOUS ELECTRIC SHOCK. FAILURE TO GROUND THE SYSTEM MAY RESULT IN SERIOUS INJURY OR DEATH

INSTALLER/ CONSUMER RESPONSIBILITIES

READ THIS MANUAL CAREFULLY BEFORE ATTEMPTING TO INSTALL OR OPERATE THIS WATER HEATER. IF THE SAFETY RULES ARE NOT FOLLOWED, THE UNIT WILL NOT OPERATE PROPERLY AND IT COULD CAUSE DEATH, SERIOUS BODILY INJURY AND/OR PROPERTY DAMAGE.

WARRANTY OF THIS WATERHEATER WILL DEPEND ON PROPER INSTALLATION AND OPERATION. THE WARRANTY WILL BE VOID IF THE DESIGN HAS BEEN ALTERED IN ANY WAY WHATSOEVER. THE MANUFACTURER OF THIS HEATER WILL NOT BE LIABLE FOR ANY DAMAGES BECAUSE OF FAILURE TO COMPLY WITH THE INSTALLATION AND OPERATING INSTRUCTIONS OUTLINED ON THE FOLLOWING PAGES.

THE INSTALLATION MUST CONFORM WITH THE INSTRUCTIONS IN THIS MANUAL AND LOCAL CODES, OR IN THE ABSENCE OF LOCAL CODES, WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE. THIS PUBLICATION IS AVAILABLE FROM YOUR LOCAL GOVERNMENT, ELECTRIC CO., PUBLIC LIBRARY, OR BY WRITING UNDERWRITERS LABORATORIES, 333 PFINGSTEN RD., NORTHBROOK, IL. 60062

IF YOU REQUIRE HELP OR HAVE ANY QUESTIONS RELATING TO THE INSTALLATION OR PERFORMANCE OF THIS HEATER, PLEASE CALL OUR TECHNICAL SERVICE DEPARTMENT TOLL FREE: 1-800-543-6163. HAVE THE INFORMATION LISTED BELOW BEFORE CALLING:
MODEL NO. _____ SERIAL NO. _____ INSTALLATION DATE _____

Eemax Inc., 353 Christian Street Oxford, CT 06478

TEL: 1-800-543-6163, 203-267-7890, FAX: 203-267-7975, e-mail: eemaxinc@aol.com

GENERAL

The Eemax "Single Point" heater is specifically designed to be installed "under sink" feeding a SINGLE faucet(5.5kW and lower) It is designed to take in cold water ONLY and heat it to temperatures suitable for hand washing. To obtain optimum performance and energy savings, the unit should be located as near as possible to the point of use. The heater incorporates a constant flow device and should only be used with the faucet aerator supplied with this heater by Eemax. The unit is supplied with compression rings and nuts suitable for direct coupling to 3/8" copper or plastic piping. Do not use additional screwed fittings or pipe dope. Doing so will void the warranty. **DO NOT SOLDER PIPES WHILE THE UNIT IS INSTALLED/ DO NOT USE PIPE DOPE OR TEFLON TAPE** (serious damage to the electronic flow switch will result).

This heater must have its own independent circuit, using a correctly rated breaker and wires suitable for at least 75 °C operation.

Failure to ground this system may result in death or serious injury.

1) MOUNTING THE UNIT

- 1) The unit should be mounted as close to the point of use as possible.
- 2) This unit must only be mounted in the vertical position with the water fittings at the top of the unit. Mounting other than in the vertical upright position WILL cause element burn out.
- 3) The cold water inlet is on the right hand side and the hot water outlet is on the left hand side. Under NO circumstances can these be reversed.
- 4) Leave a minimum of 8" below the unit for easy replacement of the element.
- 5) The heater should be fixed to the wall using the four mounting holes at each corner of the backplate.

NOTE: The heater should be installed below the level of all hot water outlets serviced by this heater.

NOTE: PRESSURE RELIEF DEVICE

This unit is not required by UL to have a Pressure and Temperature safety relief valve (PTRV). You should check with local codes to find out if one is required in your area.

If local codes require the use of temperature and pressure relief valve it should be installed on the outlet hot water pipe before the outlet ball valve.

TROUBLE SHOOTING

SYMPTOM: NO HEAT INDICATOR LIGHT OFF

1) ELECTRIC SUPPLY IS OFF

Turn on the main breaker.

2) NO OR LOW WATER FLOW

Ensure that the minimum flow rate to switch on your heater is met.

Models minimum flow rate = 0.75 gallons per minute

"SP8208, 80, 90, 100, 75, 95"

Models minimum flow rate = 0.6 gallons per minute

"SP60,65"

Models minimum flow rate = 0.5 gallons per minute

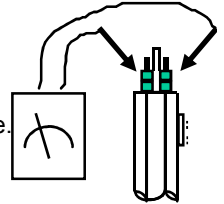
"SP2412, 3012, 3512, 3208, 4208, 3277, 4277, 35, 55"

Also check that the inlet filter screen is clear from any debris. This is located in the brass inlet boss.

3) WATER CONNECTIONS ARE REVERSED

The correct plumbing configuration is

Cold water inlet = right side, hot water outlet = left side.



4) ELEMENT BURNED OUT

TURN OFF THE breaker!

Using an ohmmeter test the resistance of the heating element across the two threaded termination rods on top of the element. The resistance reading should be under 10 ohms.

If the resistance is much greater than this value, call Eemax for a replacement element.

5) ECO TRIPPED (High Limit Thermostat)

TURN OFF THE FOUR MAIN CIRCUIT BREAKERS!

Reset by pushing in red button on each heater module.

SYMPTOM: NO HEAT OR LOW TEMPERATURE WITH INDICATOR LIGHT ON

1) WATER FLOW TOO HIGH

Reduce the water flow by using an outlet ball valve. See page 3 for temperature rise at various flow rates.

2) INCORRECT POWER SUPPLY

Make sure that the unit is connected to the voltage supply specified on the rating label on the the front cover of the unit and no other.

3) ELEMENT BURNED OUT

TURN OFF THE breaker!

Repeat the steps from paragraph 4 above.

4) COMMISSIONING YOUR HEATER

IMPORTANT

Before switching “on” the power at the breaker make sure that the hot water circuit is free of air pockets or premature failure of the heating element will occur. To do this open all hot water faucets one at a time for a minute or two until the water flow is continuous and free from “gulping” and from visible air pockets.

- 1) With inlet and outlet BALL VALVES fully open, turn on all hot water outlets.
- 2) Run for 5 minutes, turning faucet “on” and “off” repeatedly.
- 3) Switch on electric supply at breaker.
- 4) The power indicator light should now come on (see Fig. 1).
NOTE: At this point water temperature may not be very hot.
- 5) Using the OUTLET BALL VALVE slowly reduce water flow until desired temperature is achieved at hot water outlet.

NOTE: The water temperature is proportional to the flow through the heater. The lower the flow the higher the temperature and vice versa.

- 6) Check performance of flow switch by opening and closing outlet valve a few times. The power indicator light should be on **ONLY** when water is flowing through the unit. For expected temperature rise at various rates of flow see chart.

NOTE: An SP55 (5.5 kW) unit at 240 V will deliver 0.5 gallon per minute at 75°F temperature rise. For example, with incoming water temperature at 45°F the unit will produce 0.5 gallon per minute at $(45+75)=120^{\circ}\text{F}$.

- 7) It is possible that drawing off cold water at comparatively high rates of flow elsewhere in the building at the same time that the heater is working, could cause premature element failure. Care should be taken not to starve the unit of cold water. To prevent this from happening, open fully the main valve on the cold supply to the building and throttle back the control valves to the other cold water outlets.

Note: “Single Point” units comes with a faucet mounted aerators, these should be mounted on the faucets served by this unit.

2) PLUMBING HOOK-UP

1) The unit is supplied with compression fittings. **USE THESE: DO NOT USE THREADED PIPE FITTINGS. DO NOT USE PIPE DOPE OR TEFLON TAPE ON THIS INSTALLATION.** Ensure the inlet filter supplied with this unit is in place.

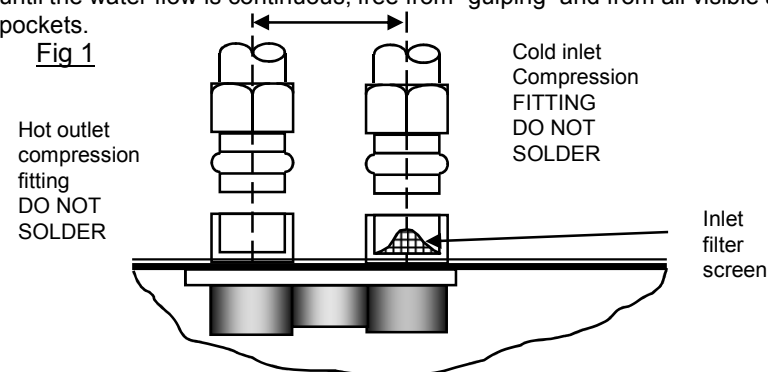
2) Take care to ensure that the pipes are correctly aligned with the inlet and outlet bosses in order to avoid excessive stress on the heater body molding.

NOTE: Run water through the supply pipe to remove all debris from the pipe before connecting the heater. Failure to do so could damage the flow switch.

3) Install isolating valves (full flow ball valve type) on both inlet and outlet pipes. This allows unit to be isolated for maintenance purposes. (Fig. 2)

4) When all plumbing is complete, fully check the system for water leaks at all plumbing connections. If leak is present take corrective action. If leak is at the compression fitting, slowly tighten compression nut until it stops. Ensure compression fittings are tighten to 18FT.LB. Fully open both inlet and outlet ball valves. Run all hot water outlets fed by this heater one at a time for a minute or two until the water flow is continuous, free from “gulping” and from all visible air pockets.

Fig 1



NOTE:
ALL PLUMBING MUST BE COMPLETED BEFORE YOU PROCEED WITH THE ELECTRICAL HOOK-UP.

TEST THE INSTALLATION FOR LEAKS BEFORE CONNECTING THE ELECTRICAL SUPPLY.

3) ELECTRICAL HOOK-UP

WARNING
BEFORE BEGINNING ANY WORK ON THE INSTALLATION
BE SURE THAT THE BREAKER IS "OFF"
TO AVOID ANY DANGER OF SHOCK.

Your Eemax heater must have its own independent circuit using insulated, UL listed, 3 wire cable of the appropriate size suitable for use up to 75 °C protected by the correctly rated circuit breaker.

RATINGS OF "SP" UNITS

MODEL	VOLTS	KW	AMPS	0.5 gpm	0.6 gpm	0.7 gpm
SP2412	120	2.4	20	33	-	-
SP3012	120	3.0	25	41	34	29
SP3512	120	3.5	29.2	48	40	34
SP3208	208	3.0	14.4	41	34	29
SP4208	208	4.1	19.7	56	47	40
SP8208	208	8.3	40	-	-	81
SP3277	277	3.0	10.8	41	34	29
SP4277	277	4.1	14.8	56	47	40
SP60	277	6.0	22	-	68	58
SP80	277	8.0	29	-	-	78
SP90	277	9.0	33	-	-	88
SP100	277	10.0	36	-	-	97
SP35	240*	3.5	14.6	48	40	34
SP55	240*	5.5	22.9	75	63	54
SP65	240*	6.5	27	-	73	63
SP75	240*	7.5	32	-	-	73
SP95	240*	9.5	40	-	-	92

* The heaters are rated at 240 Volts. If the actual voltage supplied is lower (220, 208V) there will be a proportional drop in output.

- 1) Wire entry into the unit should be made through the lower right hand corner of the backplate via one of the two "knockout" holes provided.
- 2) The "mains" wires should be connected to the slots in the terminal block marked L1 and L2 or N. The ground lead **MUST** be connected to the marked.  Failure to ground the system may result in death or serious injury.

WARNING:
This water heater must not be switched "on" if there is
a **possibility** that the water in the heater is frozen.

FIGURE 2

