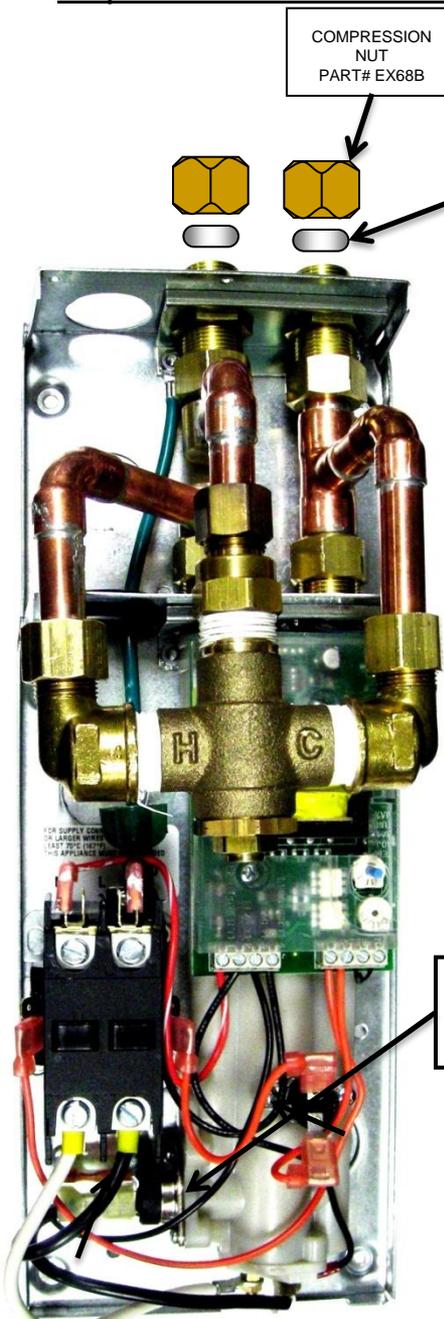


# Replacement Parts for "AccuMix MT" Units



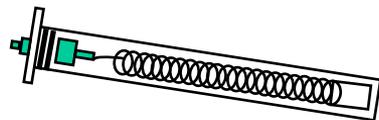
## "ACCUMIX MT"

### ELECTRIC INSTANTANEOUS WATER HEATER WITH ASSE 1070 APPROVED MIXING VALVE INSTALLATION GUIDE AND OWNERS MANUAL



COMPRESSION NUT  
PART# EX68B

COMPRESSION SLEEVE  
PART # EX68C



ELEMENT CARTRIDGE  
HEATER MODEL/ORDER REF. CARTRIDGE REF #

MT004120T	EX410SP
MT005240T	EX1200SP
MT007240T	EX890
MT010240T	EX630
MT004277T	EX1870
MT008277T	EX960
MT010277T	EX760

CONTROL BOARDS  
EX284AB-120AM for 120v  
EX284AB-240AM for 240v & 208v  
EX284AB-277AM for 277v

TRIAC  
PART # EX 18

**CALIFORNIA PROPOSITION 65 WARNING**  
  
**WARNING:** The mixing valve in this product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (California law requires this warning to be given to customers in the State of California)

**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 WATER HEATER 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.

**WARNING**  
THE TEMPERATURE OF THIS WATER HEATER HAS BEEN FACTORY PRE-SET TO 105°F FOR HAND WASHING APPLICATIONS AND MUST NOT BE ADJUSTED. TAMPERING WITH ANY ADJUSTMENTS WILL VOID WARRANTY AND MAY CAUSE A LOSS OF COMPLIANCE TO UNIFORM PLUMBING CODE 413.1. FOR FURTHER INFORMATION PLEASE CONTACT TECHNICAL SUPPORT AT 800-543-6163.

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., 400 Captain Neville Dr. Waterbury, CT. 06705

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

## GENERAL

The Eemax "AccuMix" heater is specifically designed to take in cold water and heat it to temperatures suitable for hand washing and other mild temperature uses up to a maximum of 105<sup>0</sup> F. It is equipped with an ASSE 1070-2004 approved mixing valve for scald protection in the event of a temperature spike.

To obtain optimum performance and energy savings, the unit should be located as close as possible to the point of use. 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 or Teflon tape. Doing so will void the warranty. **DO NOT SOLDER PIPES WHILE THE UNIT IS INSTALLED** as serious damage to the heater 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 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) If possible, 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.

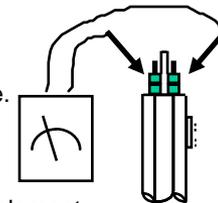
2) Check the Electrical Cut-out Switch (ECO). This normally closed switch opens in the event of high temperatures. It should automatically reset when the temperature drops.

#### 3) NO OR LOW WATER FLOW

Ensure that the minimum flow rate to switch on your heater is met. All AccuMix heaters require a minimum flow rate of 0.3 GPM. Also check that the inlet filter screen is clear from any debris. This is located in the brass inlet boss.

#### 4) WATER CONNECTIONS ARE REVERSED

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



#### 5) ELEMENT BURNED OUT

##### TURN OFF THE CIRCUIT 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 20 ohms. If the resistance is much greater than this value, call Eemax for a replacement element.

### 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 4 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 front cover of the unit and no other.

#### 3) ELEMENT BURNED OUT

##### TURN OFF THE CIRCUIT BREAKER!

Repeat the steps from paragraph 5 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 with water flowing. (see Fig. 1). At this point water temperature will begin to rise to a maximum temperature of 105°F and stabilize.
- 5) 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.
- 6) 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.
- 7) AccuMix heaters are capable of heating water proportionally to their power rating and will heat water to 105°F so long as the flow rate for the desired temperature rise is not exceeded. Since the outlet temperature is 105°F, the temperature rise that is needed depends on the inlet water temperature. For example, if the supply water temperature is 60°F, the temperature rise will be 45°F. Therefore the maximum attainable flow rate can be calculated with a 45°F rise.

MODEL	RATING (kW)	FLOW (GPM)	TEMP. RISE (°F)
MT004120T	3.5	0.53	45°F
MT005240T	4.8	0.73	45°F
MT007240T	6.5	0.99	45°F
MT010240T	9.5	1.44	45°F
MT004277T	4.1	0.60	45°F
MT008277T	8.0	1.21	45°F
MT010277T	10.0	1.52	45°F

## 2) PLUMBING HOOK-UP

NOTE: DO NOT install this heater in a location that is subject to freezing temperatures

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.

**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) This heater must be provided with a **COLD WATER FEED ONLY**. 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 tightened 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.

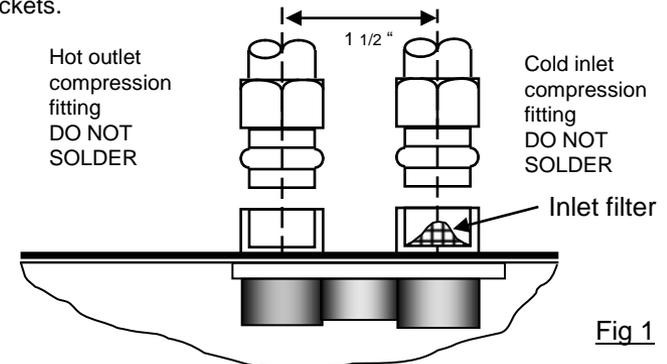


Fig 1

**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 "ACCUMIX MT" UNITS

MODEL	RATED VOLTAGE	MAXIMUM OUTPUT AT RATED VOLTAGE	AMPS DRAWN	* TEMPERATURE RISE (F)		
				0.5 gpm	1.0 gpm	1.5 gpm
MT004120T	120	3,500 W	29	48	24	16
MT005240T	240	4,800 W	20	66	33	22
MT007240T	240	6,500 W	27	89	44	30
MT010240T	240	9,500 W	40	130	65	43
MT004277T	277	4,100 W	15	56	28	19
MT008277T	277	8,000 W	29	109	55	36
MT010277T	277	10,000 W	36	137	68	46

*\*The heaters' actual temperature rises are limited by their thermostatic controls. The theoretical values shown above are only for comparison purposes.*

1) Wire entry into the unit should be made through the upper left hand corner of the backplate via one of the two "knockout" holes provided.

2) The "mains" wires should be connected to the lugs on the relay marked L1 and L2 or N. The ground lead **must** be connected to the slot 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

