



## INSTALLATION GUIDE AND OWNER'S MANUAL

LavAdvantage™, AccuMix II™, & FlowCo™



### ELECTRIC INSTANTANEOUS WATER HEATERS



#### **WARNING**

***BEFORE ATTEMPTING ANY INSTALLATION, MODIFICATION OR SERVICE OF THE HEATER, MAKE SURE THE ELECTRICAL POWER IS DISCONNECTED.***

Read and understand the instructions thoroughly before attempting the installation or service of the water heater. Failure to follow the instructions can result in serious injury, death and/or property damage. The warranty of the water heater will depend upon proper installation according to the instructions. Some heaters come supplied with separate faucet aerators. If supplied, the aerator must be installed in the faucet for optimum performance. The heater must only be used to heat water and must be installed in a location where it is not subject to freezing temperatures. The manufacturer is not liable for any damages resulting from improper installation or misuse.

The installation must conform to the latest requirements of the National Electrical Code and all applicable state and local codes. This information is available through local authorities. You must fully understand the requirements before beginning this installation.

This water heater is not required by UL 499 to employ a temperature and pressure relief valve (T&P). Check with local codes to find out if one is required. If it is, the T&P valve must be installed in the outlet hot water pipe between the heater and the isolation valve.

# IMPORTANT SAFETY INSTRUCTIONS

When using electrical equipment, basic safety precautions should always be followed, including the following:

## READ AND FOLLOW ALL INSTRUCTIONS

Supply the water heater only from a grounded system. A green terminal (or a wire connector marked “G”, “GR”, “Ground”, or “GROUNDING”) is provided for wiring the appliance. To reduce the risk of electric shock, connect this terminal, or connector, to the grounding terminal of the electric service or supply panel with a continuous copper wire. Connection should be made in accordance with the electrical installation code.

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<b>⚠ CAUTION</b>	<b>DO NOT INSTALL IN A BATH ENCLOSURE OR SHOWER STALL OR CONNECT TO A SALT-REGENERATED WATER SOFTENER OR A WATER SUPPLY OF SALT WATER. ATTENTION: NE PAS INSTALLER DANS UNE BAIGNOIRE OU UNE CABINE DE DOUCHE ET NE PAS BRANCHER À UN ADOUCISSEUR D’EAU RÉGÉNÉRÉ AVEC DU SEL OU À UN APPROVISIONNEMENT EN EAU SALÉE.</b>
<b>⚠ CAUTION</b>	<b>(CANADIAN INSTALLATIONS ONLY) CONNECT ONLY TO A CIRCUIT PROTECTED BY A CLASS A GROUND FAULT CIRCUIT INTERRUPTER. ATTENTION: BRANCHER UNIQUEMENT À UN CIRCUIT PROTÉGÉ PAR UN DISJONCTEUR DE FUITE DE TERRE DE CLASSE A.</b>
<b>⚠ CAUTION</b>	<b>(CANADIAN INSTALLATIONS ONLY) USE COPPER CONDUCTORS ONLY. USE BONDING CONDUCTOR IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE PART I. UTILISEZ DES CONDUCTEURS EN CUIVE UNIQUEMENT. UTILISEZ DES CONDUCTEURS DE MIZE À LA MASSE CONFORMEMENT AU CODE CANADIEN DE L’ÉLECTRICITÉ, PARTIE I.</b>

## SAVE THESE INSTRUCTIONS

<b>⚠ DANGER</b>	<p>Hot water can be dangerous, especially for infants or children, the elderly, or infirm. There is hot water scald potential if the thermostat is set too high.</p> <p>Water temperatures over 125° F (51° C) can cause severe burns or scalding resulting in death.</p> <p>Hot water can cause first degree burns with exposure for as little as:</p> <ul style="list-style-type: none"> <li>3 seconds at 140° F (60° C)</li> <li>20 seconds at 130° F (54° C)</li> <li>8 minutes at 120° F (48° C)</li> </ul> <p>Test the temperature of the water before placing a child in the bath or shower.</p> <p>Do not leave a child or an infirm person in the bath unsupervised.</p>
	

## 1. GENERAL

Eemax® offers thermostatic, thermostatic with an integrated mixing valve, and non-thermostatic tankless electric water heaters.

To obtain optimum performance and energy savings, the water heater 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 PEX™ piping. Do not use additional screwed fittings, 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 and the warranty will be voided.

LavAdvantage™, thermostatic heaters are designed to accept cold or preheated water and heat it to temperatures suitable for normal domestic usage up to a maximum temperature setpoint of 140°F. Models featuring the "S" option can be used as a temperature booster for sanitation applications up to maximum temperature setpoint of 180°F. "ML" option units are factory set to a maximum temperature setpoint of 110°F and are recommended for multi-lavatory handwashing applications – refer to section 2 for supplied aerator details. The "EE" option units are factory set to a maximum temperature setpoint of 90°F, making them suitable for emergency eyewash applications.

AccuMix II™, thermostatic heaters with an integrated mixing valve, are designed to take in cold water and heat it to temperatures suitable for handwashing and other mild temperature uses up to a factory preset of 105°F. The heaters are also equipped with an ASSE 1070-2004 approved mixing valve to meet UPC 407.3 and similar plumbing codes for public handwashing applications.

FlowCo™, non-thermostatic heaters, are designed to take in cold water and heat it to temperatures suitable for handwashing and other fixed-flow applications.

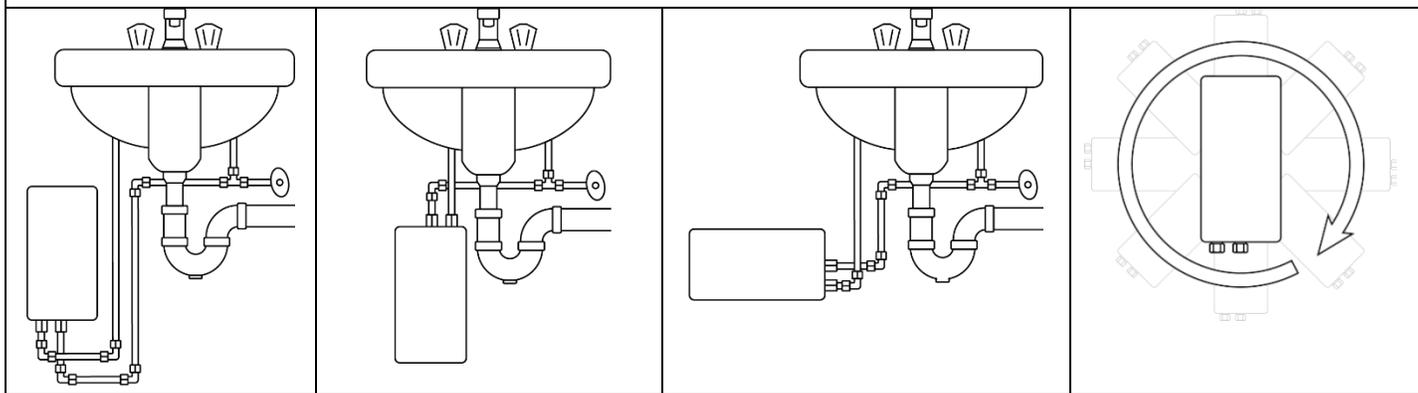
## 2. MOUNTING THE UNIT TO THE WALL



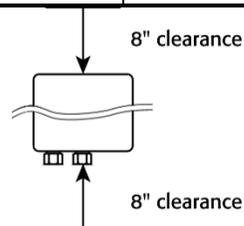
**THIS HEATER MUST BE INSTALLED IN A LOCATION WHERE IT IS NOT SUBJECT TO FREEZING TEMPERATURES.**

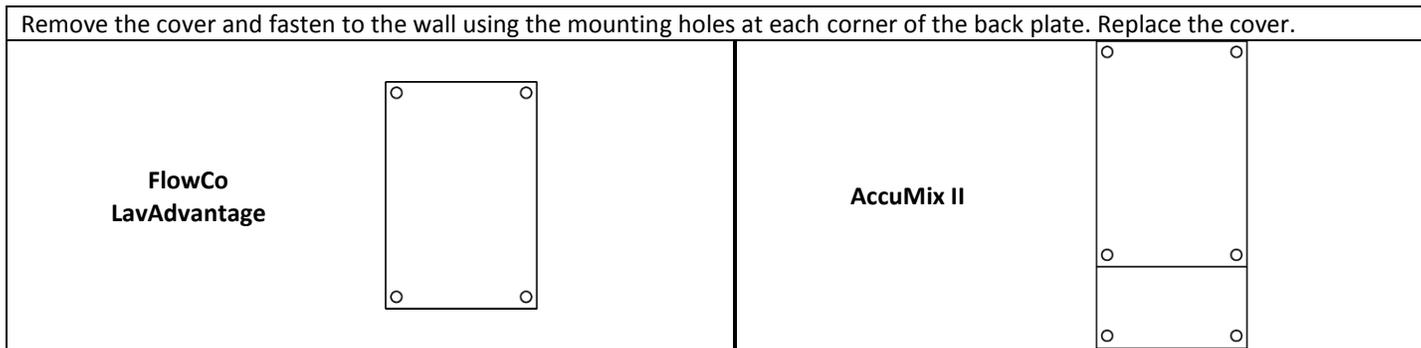
The heater should be mounted on the wall under the sink, as close to the point-of-use as possible. Ideal position is fittings pointed down; however, the heater may be mounted in any orientation.

Note: a logo decal has been provided to ensure branding is clearly displayed in any mounting orientation.



Make sure to leave a minimum of 8 inches service clearance at the end **OPPOSITE** the fittings.





### 3. PLUMBING HOOK-UP

The water heater is supplied with 3/8” brass compression fittings that are compatible with either copper or plastic pipes. Make sure these fittings are used for this installation. Contact your Eemax representative for further information.

**CAUTION** NEVER SUBSTITUTE THREADED PIPE FITTINGS USING PIPE DOPE OR TEFLON TAPE AND NEVER SOLDER ANY PIPE CONNECTIONS WHILE ATTACHED TO THIS HEATER BECAUSE DAMAGE TO THE HEATER WILL RESULT. DOING THIS WILL VOID THE WARRANTY!

Eemax strongly recommends that the heater be supplied directly from the main cold water trunk line when possible. This helps to avoid a potential water flow interruption to the water heater which could lead to a failure of the heating element.

**System Requirements:**

- Minimum turn on flow rates are family dependent:
  - *LavAdvantage: 0.2 GPM*
  - *AccuMix II: 0.3 GPM*
  - *FlowCo: vary by model (refer to the table below)*
- Minimum/maximum working pressure: 30 PSI/150 PSI
- Optimal operating pressure range: 35 to 80 PSI

Base Model*	Turn On Flow Rate, GPM (LPM)						
	0.2 (0.76)	0.25 (0.95)	0.3 (1.14)	0.4 (1.51)	0.5 (1.89)	0.7 (2.65)	0.8 (3.03)
SPEX1812	•						
SPEX2412		•					
SPEX3012		•					
SPEX3512			•				
SPEX35			•				
SPEX48				•			
SPEX55					•		
SPEX65						•	
SPEX75						•	
SPEX95							•
SPEX3208		•					
SPEX4208				•			
SPEX8208						•	
SPEX3277		•					
SPEX4277				•			
SPEX60						•	
SPEX80						•	
SPEX90						•	
SPEX100							•

\*Special suffixed models (i.e. CA, etc.), will have identical temperature rises as their base model

For optimum performance, Eemax recommends the use of isolation valves (full flow ball type) on the inlet and outlet pipes and a 40 mesh Y-Strainer on the inlet of the heater.

Clean screen periodically for best performance.



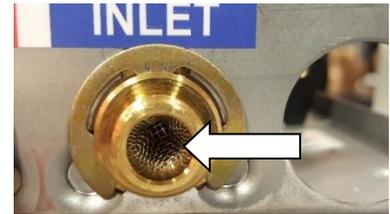
**BEFORE ATTEMPTING ANY INSTALLATION, MODIFICATION OR SERVICE OF THIS HEATER, MAKE SURE THE ELECTRICAL POWER IS DISCONNECTED.**

The heater's water INLET and OUTLET are labeled. Install full flow ball valves to the inlet and outlet pipes and run water through the inlet pipe into a bucket to purge it of any debris. Close the inlet ball valve.

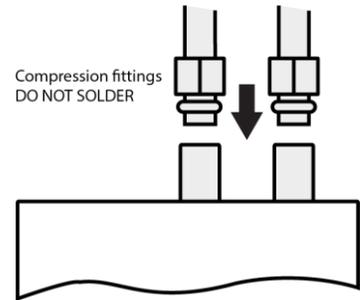
\*Failure to do so may clog the inlet water screen.



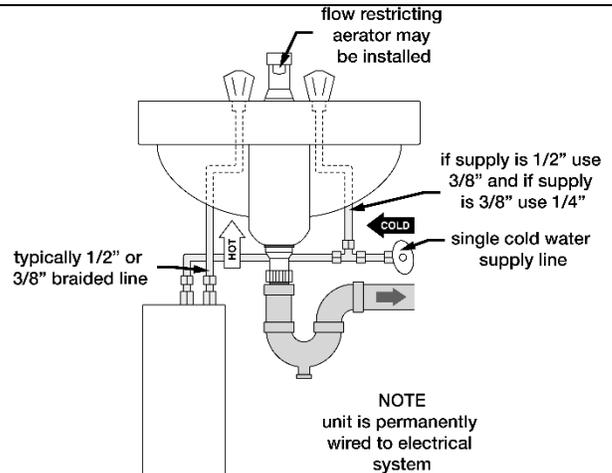
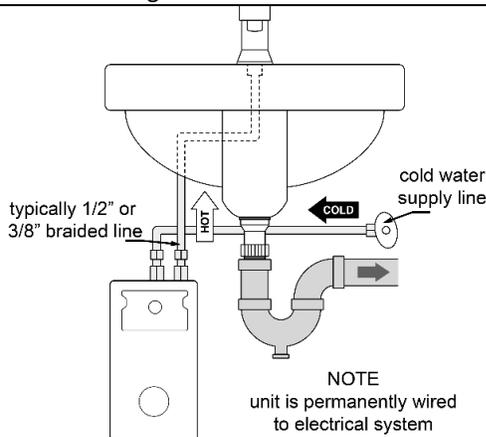
Make sure the inlet filter screen is present in the inlet fitting and the inlet and outlet pipes are correctly aligned with the heater connections to minimize stress on the heater.



Remove the cover. Connect the pre-assembled inlet and outlet pipes to the heater (**do not overtighten compression fittings**) and fully open the inlet and outlet ball valves. Check the system for water leaks at all plumbing connections. If a leak is present at the compression fitting, **slowly** tighten compression nut until it stops – **do not overtighten**.



Sample installation diagrams:



**Note: LavAdvantage and AccuMix II only**

Open the hot water faucet and run water for a minimum of 60 seconds and until the flow is continuous and free of air pockets. Close the faucet and install the aerator (if supplied).

Failure to install aerator will result in less-than-favorable heater performance.

MODEL	# OF AERATORS
LAVADVANTAGE**	
SPEX3512T ML	2
SPEX35T ML	2
SPEX48T ML	2
SPEX55T ML	2
SPEX65T ML	2
SPEX75T ML	2
SPEX95T ML	3
SPEX012240T ML	3

MODEL	# OF AERATORS
LAVADVANTAGE**	
SPEX3208T ML	2
SPEX4208T ML	2
SPEX3277T ML	2
SPEX4277T ML	2
SPEX8208T ML	3
SPEX60T ML	2
SPEX80T ML	2
SPEX90T ML	3
SPEX100T ML	3

MODEL	# OF AERATORS
ACCUMIX II	
AM004120T	1
AM005240T	1
AM007240T	2
AM010240T	3
AM012240T	4
AM004277T	1
AM008277T	2
AM010277T	3

\*\*ML thermostatic models are designed to deliver a flow of 0.35 GPM to each lavatory. Please install the supplied aerators to ensure maximum heating performance.

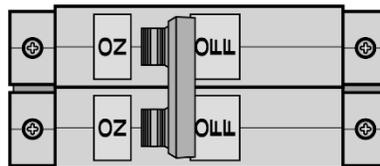


### 4. ELECTRICAL HOOK-UP



**WARNING**  
INSTRUCTIONS.

**BEFORE BEGINNING ANY WORK ON THIS INSTALLATION, CONFIRM THE ELECTRICAL BREAKER IS "OFF" AND THAT ALL MOUNTING AND PLUMBING WORK HAS BEEN COMPLETED PER THE STATED**

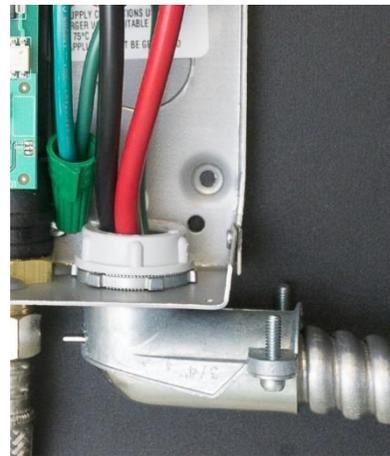


**For use on an individual branch circuit only.** The heater shall be installed using insulated, UL listed, 2 wire cable (2 wire plus ground) of the appropriate size suitable for up to 75°C and protected by the correctly rated circuit breaker.

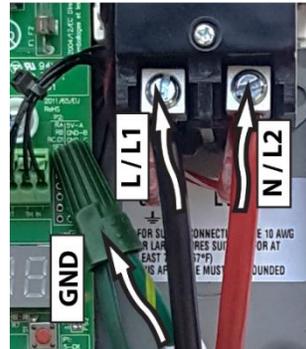
Refer to the chart below for recommended copper wiring for conductors with a temperature rating of 75°C:

FlowCo	LavAdvantage	AccuMix II	Voltage (VAC)	Max power (kW)	Max current (A)	Minimum wire size (AWG) @75°C
SPEX1812	SPEX1812T	-	120	1.8	15	14
SPEX2412	SPEX2412T	-	120	2.4	20	14
SPEX3012	SPEX3012T	-	120	3	25	12
SPEX3512	SPEX3512T	AM004120T	120	3.5	29	10
SPEX35	SPEX35T	-	240	3.5	15	14
SPEX48	SPEX48T	AM005240T	240	4.8	20	14
SPEX55	SPEX55T	-	240	5.5	23	12
SPEX65	SPEX65T	AM007240T	240	6.5	27	10
SPEX75	SPEX75T	-	240	7.5	32	10
SPEX95	SPEX95T	AM010240T	240	9.5	40	8
-	SPEX012240T	AM012240T	240	11.5	48	8
SPEX3208	SPEX3208T	-	208	3	15	14
SPEX4208	SPEX4208T	-	208	4.1	20	14
SPEX8208	SPEX8208T	-	208	8.3	40	8
SPEX3277	SPEX3277T	-	277	3	11	14
SPEX4277	SPEX4277T	AM004277T	277	4.1	14.8	14
SPEX60	SPEX60T	-	277	6	22	12
SPEX80	SPEX80T	AM008277T	277	8	29	10
SPEX90	SPEX90T	-	277	9	33	10
SPEX100	SPEX100T	AM010277T	277	10	36	8

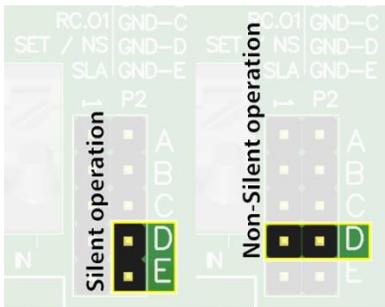
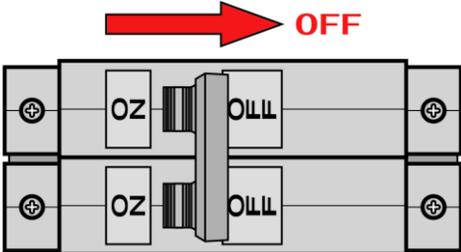
Power cable entry to the heater should be made through one of the knock-out holes located on the back plate or top/bottom ends of the unit. Use the appropriate strain relief fitting.



The power leads are to be secured to the L1 and L2 or L and N connectors on the terminal block or relay. The ground lead is to be secured to the GND connector on the block or the green ground wire with the provided wire nut.

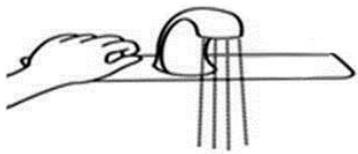
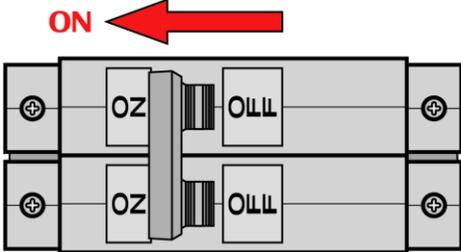


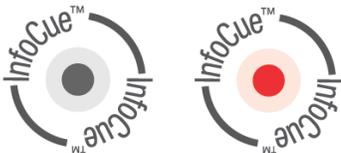
**WARNING** FAILURE TO GROUND THE SYSTEM MAY RESULT IN SERIOUS INJURY, DEATH AND/OR PROPERTY DAMAGE.

<p><b>Optional:</b> AccuMix II heaters comes preset in silent mode. If silent mode is the intended use, please proceed to step 4. To switch between silent and non-silent operation place the jumper on the control board in position “D”.</p>	
<p>Leave the breaker in the “OFF” position. Proceed to the next section: <b>COMMISSIONING THE HEATER</b></p>	

## 5. COMMISSIONING THE HEATER

**CAUTION** BEFORE SWITCHING THE ELECTRICAL BREAKER “ON”, VERIFY THE INLET AND OUTLET BALL VALVES ARE FULLY OPEN AND WATER IS FLOWING THROUGH THE HOT WATER FAUCET FOR A MINUTE OR TWO UNTIL THE FLOW IS CONTINUOUS AND FREE FROM AIR POCKETS. DO NOT SWITCH THE BREAKER “ON” IF THERE IS A POSSIBILITY THE WATER IN THE HEATER IS FROZEN.

<p>Verify water is flowing through the faucet.</p>	
<p>Switch “ON” the electric power supply at the breaker.</p>	
<p>The following steps are dependent on the water heater, please be sure to read all instructions to best commission the appropriate model.</p>	
<p>LAVADVANTAGE &amp; ACCUMIX II</p>	
<p>Keep water flowing through the faucet for the next step. The display on the circuit board should come “ON”. With the flow running, the heater will go through the 60 seconds startup/self-calibration procedure. The display will count down from 60 to 0. When the display timer reaches 45, the unit starts heating and continues counting down to 0.</p>	

<p>After the 60 seconds in step 4, the display will show the temperature setpoint. See <b>The heater is commissioned at this point.</b> Faucet can be turned off and used as needed.</p> <p>Note: the temperature display will turn off after 5 minutes of inactivity. Display turns on when water flows through heater.</p>	
FLOWCO	
<p>The InfoCue™ will flash rapidly while water flows through the unit. Maintain flow. After 15 seconds, the InfoCue will turn solid red and there will be an audible click. <b>The heater is commissioned at this point.</b> The faucet can be turned off and used as needed.</p> <p><i>Note: with no flow, the unit will flash every 4 seconds, indicating normal stand-by mode.</i></p>	

## Congratulations!

**Your Eemax tankless electric water heater is installed and ready for use!**

For temperature rise at specified flow rate, please consult the table below:

BASE MODEL*		FLOW RATE, GPM (LPM)													
		0.35	(1.33)	0.5	(1.89)	1	(3.79)	1.5	(5.68)	2	(7.58)	2.5	(9.48)	3	(11.37)
LavAdvantage    AccuMix II		TEMPERATURE RISE, °F (°C)													
<b>SPEX1812T</b>	-	35	(19)	25	(14)	12	(7)	8	(4)	6	(3)	5	(3)	4	(2)
<b>SPEX2412T</b>	-	47	(26)	33	(18)	16	(9)	11	(6)	8	(4)	7	(4)	5	(3)
<b>SPEX3012T</b>	-	59	(33)	41	(23)	20	(11)	14	(8)	10	(6)	8	(4)	7	(4)
<b>SPEX3512T</b>	<b>AM004120T</b>	68	(38)	48	(27)	24	(13)	16	(9)	12	(7)	10	(6)	8	(4)
<b>SPEX35T</b>	-	68	(38)	48	(27)	24	(13)	16	(9)	12	(7)	10	(6)	8	(4)
<b>SPEX48T</b>	<b>AM005240T</b>	94**	(52)	66	(37)	33	(18)	22	(12)	16	(9)	13	(7)	11	(6)
<b>SPEX55T</b>	-	107**	(59)	75	(42)	38	(21)	25	(14)	19	(11)	15	(8)	13	(7)
<b>SPEX65T</b>	<b>AM007240T</b>	127**	(71)	89	(49)	44	(24)	30	(17)	22	(12)	18	(10)	15	(8)
<b>SPEX75T</b>	-	146**	(81)	102**	(57)	51	(28)	34	(19)	26	(14)	20	(11)	17	(9)
<b>SPEX95T</b>	<b>AM010240T</b>	185**	(103)	130**	(72)	65	(36)	43	(24)	32	(18)	26	(14)	22	(12)
<b>SPEX012240T</b>	<b>AM012240T</b>	224**	(124)	157**	(87)	79	(44)	52	(29)	39	(22)	31	(17)	26	(14)
<b>SPEX3208T</b>	-	59	(33)	41	(23)	20	(11)	14	(8)	10	(6)	8	(4)	7	(4)
<b>SPEX4208T</b>	-	80	(44)	56	(31)	28	(16)	19	(11)	14	(8)	11	(6)	9	(5)
<b>SPEX8208T</b>	-	162**	(90)	113**	(63)	57	(32)	38	(21)	28	(16)	23	(13)	19	(11)
<b>SPEX3277T</b>	-	59	(33)	41	(23)	20	(11)	14	(8)	10	(6)	8	(4)	7	(4)
<b>SPEX4277T</b>	<b>AM004277T</b>	78	(43)	56	(31)	28	(16)	19	(11)	14	(8)	11	(6)	9	(5)
<b>SPEX60T</b>	-	117**	(65)	82	(46)	41	(23)	27	(15)	20	(11)	16	(9)	14	(8)
<b>SPEX80T</b>	<b>AM008277T</b>	156**	(87)	109**	(61)	55	(31)	36	(20)	27	(15)	22	(12)	18	(10)
<b>SPEX90T</b>	-	176**	(98)	123**	(68)	61	(34)	41	(23)	31	(17)	25	(14)	20	(11)
<b>SPEX100T</b>	<b>AM010277T</b>	195**	(108)	137**	(76)	68	(38)	46	(26)	34	(19)	27	(15)	23	(13)

\*\*Note: the heaters' actual temperature rises are limited by their thermostatic controls (max 90°F, max 110°F, max 140°F, max 180°F, based on model suffix). The theoretical values shown above are only for comparison purposes.

BASE MODEL*	FLOW RATE, GPM (LPM)									
	0.2 (0.76)	0.25 (0.95)	0.3 (1.14)	0.4 (1.51)	0.5 (1.89)	0.7 (2.65)	0.8 (3.03)	1 (3.79)		
	TEMPERATURE RISE, °F (°C)									
SPEX1812	61 (34)	49 (27)	41 (23)	31 (17)	25 (14)	18 (10)	15 (8)	12 (7)		
SPEX2412	82 (46)	66 (37)	55 (31)	41 (23)	33 (18)	23 (13)	20 (11)	16 (9)		
SPEX3012	- -	82 (46)	68 (38)	51 (28)	41 (23)	29 (16)	26 (14)	20 (11)		
SPEX3512	- -	- -	80 (44)	60 (33)	48 (27)	34 (19)	30 (17)	24 (13)		
SPEX35	- -	- -	80 (44)	60 (33)	48 (27)	34 (19)	30 (17)	24 (13)		
SPEX48	- -	- -	- -	82 (46)	66 (37)	47 (26)	41 (23)	33 (18)		
SPEX55	- -	- -	- -	- -	75 (42)	54 (30)	47 (26)	38 (21)		
SPEX65	- -	- -	- -	- -	- -	63 (35)	55 (31)	44 (24)		
SPEX75	- -	- -	- -	- -	- -	73 (41)	64 (36)	51 (28)		
SPEX95	- -	- -	- -	- -	- -	- -	81 (45)	65 (36)		
SPEX3208	- -	82 (46)	68 (38)	51 (28)	41 (23)	29 (16)	26 (14)	20 (11)		
SPEX4208	- -	- -	- -	70 (39)	56 (31)	40 (22)	35 (19)	28 (16)		
SPEX8208	- -	- -	- -	- -	- -	81 (45)	71 (39)	57 (32)		
SPEX3277	- -	82 (46)	68 (38)	51 (28)	41 (23)	29 (16)	26 (14)	20 (11)		
SPEX4277	- -	- -	- -	70 (39)	56 (31)	40 (22)	35 (19)	28 (16)		
SPEX60	- -	- -	- -	- -	82 (46)	59 (33)	51 (28)	41 (23)		
SPEX80	- -	- -	- -	- -	- -	78 (43)	68 (38)	55 (31)		
SPEX90	- -	- -	- -	- -	- -	- -	77 (43)	61 (34)		
SPEX100	- -	- -	- -	- -	- -	- -	- -	68 (38)		

Note: the values shown above are only for comparison purposes.

\*Special suffixed models (i.e. CA, etc.), will have identical temperature rises as their base model

“-“Flow rate below turn on flow for this model

## 6. LAVADVANTAGE UNIT OPERATION

Factory temperature setpoints/maximum adjustable range:

Suffix		Default Setpoint (°F)	Minimum Setpoint (°F)	Maximum Setpoint (°F)
Base Model	<4kW	105	70	140
	>4kW	120		
S (Sanitation)		120	70	180
ML (Multi-Lavatory)		110	70	110
EE (Emergency Eyewash)		90	70	90

### CHANGING SETPOINT TEMPERATURE

To INCREASE temperature, tap the “+” button repeatedly, or hold the “+” down to INCREASE the temperature quickly. To DECREASE temperature, tap the “-” button repeatedly, or hold the “-” down to DECREASE the temperature quickly.

### ADVANCED FUNCTIONS

With the display showing the current setpoint temperature, press BOTH “+” AND “-” buttons simultaneously for 3 seconds.

Screen Info	Title	Units	Description
Flow Rate	FLO	GPM or LPM	Current water flow rate through unit
Inlet temperature	IN	°F or °C	Cold water temperature
Outlet temperature	OUT	°F or °C	Hot water temperature
Power Factor	PF	%	How hard the heater is working
Software Revision	SR	-	For Technical Support assistance

Hold “-“ to display the current screen title.

Press “+” to advance to the next screen.

Holding both “+” and “-“ at any time for 3 seconds returns the display to the temperature set point, or just let the heater return to set point display on its own after a period of time.

**ERROR CODES & UNITS**

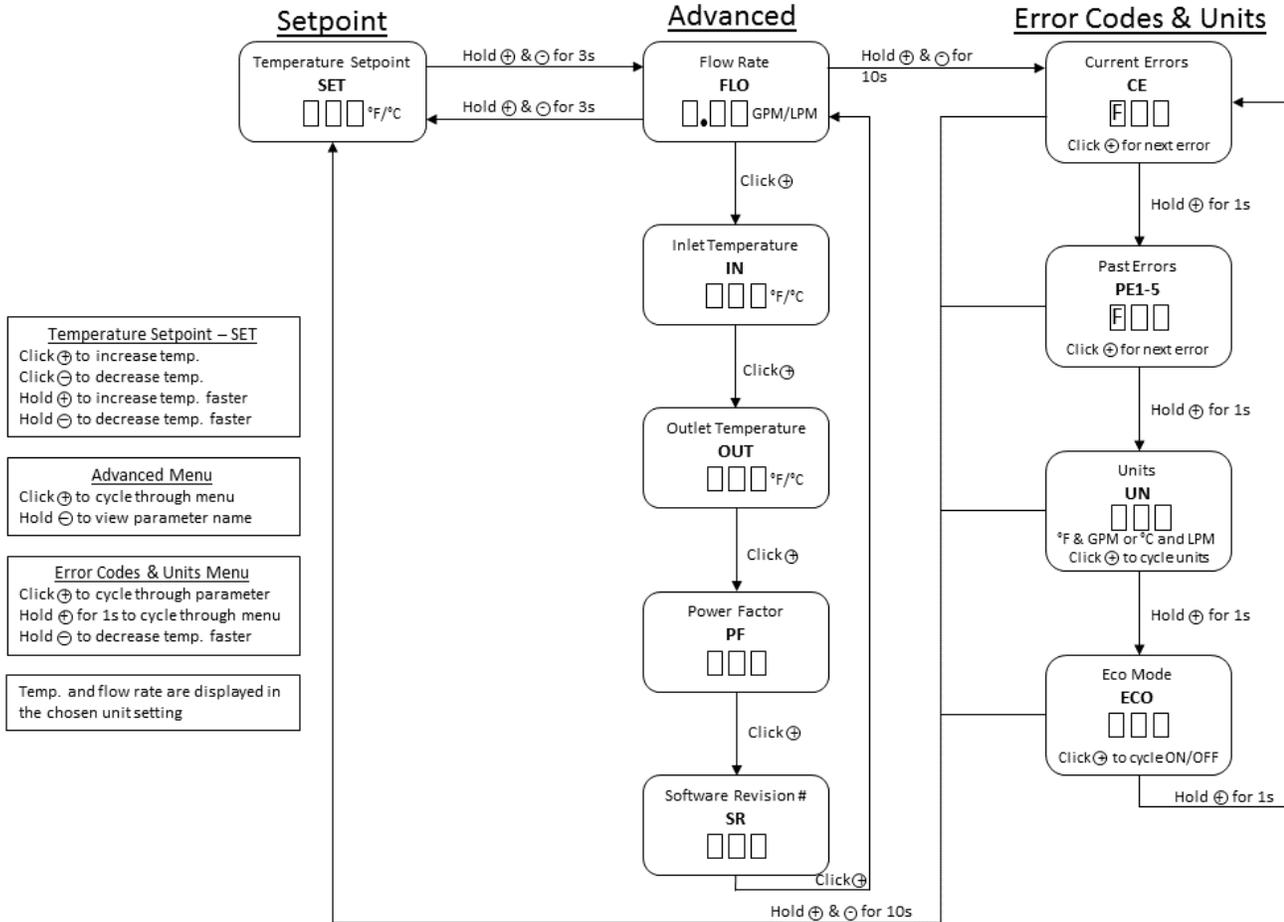
From Advanced Menu, press and hold the “+” and “-” buttons for 10 seconds.

Screen Info	Title	Description
Current Error(s)	CE	Any errors currently present (F0 displays if no errors are present)
Past Errors	PE	Previous 5 errors and faults
Units	UN	Choose between °F/GPM and °C/LPM
Non-Silent Mode	NS	Toggle non-silent operation

Pressing “-” at any time will display screen title (CE, PE1-5, UN, ECO).

Press the “+” button for 1 second to cycle through the following screens:

To return to setpoint hold “+” and “-” for 10 seconds, or just let the heater return to setpoint display or display turn-off on its own after a period of time.



## 7. TROUBLESHOOTING



**ENSURE POWER TO THE UNIT IS "OFF" BEFORE REMOVING THE PROTECTIVE COVER FOR ANY REASON.**

For status resolution, please consult the table for your heater model below.

LAVADVANTAGE & ACCUMIX II				
Code	Name	Possible causes	Heater response	Possible solutions
F23	No heat	- element failure - ECO tripped/malfunctioning - triac(s) failed open - relay/contacter malfunctioning - control board failure - inlet water supply out of spec	Heating will be disabled after 30 seconds of continuous no heat condition.	- measure element resistance with the unit completely turned off
F24	Low heat	- undervoltage - triac(s) failed open - control board failure - inlet/outlet thermistor(s) failure	Heating enabled, reduced performance (lower outlet temperature).	- verify power supply (voltage) while heater is running
F33	Residual heat	- internal water temperature elevated without flow - both triacs failed closed	Heating disabled until outlet temperature falls below the reactivation temperature (see default parameters table).	- run water through the unit
F34	Overvoltage	- inlet voltage is too high compared to the stated heater specifications	Heating enabled, reduced performance (higher outlet temperature).	- have certified personnel verify the inlet voltage - provide voltage within specified range
F36	Undervoltage	- inlet voltage is too low compared to the stated heater specifications	Heating enabled, reduced performance (lower outlet temperature).	- have certified personnel verify the inlet voltage - provide voltage within specified range
F38	High flow	- flow is too high to heat the water to setpoint temperature	Heating enabled, unit operates as intended (lower outlet temperature possible).	- reduce flow (outlet flow restrictor, faucet aerator)
F47	Inlet thermistor failure	- inlet thermistor interrupted or disconnected	Heating enabled based on default inlet temperature setting (see default parameters table; higher/lower outlet temperature possible).	- inspect connections/wiring of inlet thermistor
F48	Outlet thermistor failure	- outlet thermistor interrupted or disconnected	Heating enabled, auto calibration disabled.	- inspect connections/wiring of outlet thermistor
F64	Freeze warning	- inlet temperature is too low (below 35°F)	Heating disabled while condition is present.	- increase inlet water temperature above 35°F

LAVADVANTAGE & ACCUMIX II DEFAULT PARAMETERS			
Status code	Model suffix	Default values	
F33	T, ML	Trip	170°F
		Reactivation	140°F
	EE	Trip	100°F
		Reactivation	95°F
	S	Trip	195°F
		Reactivation	165°F

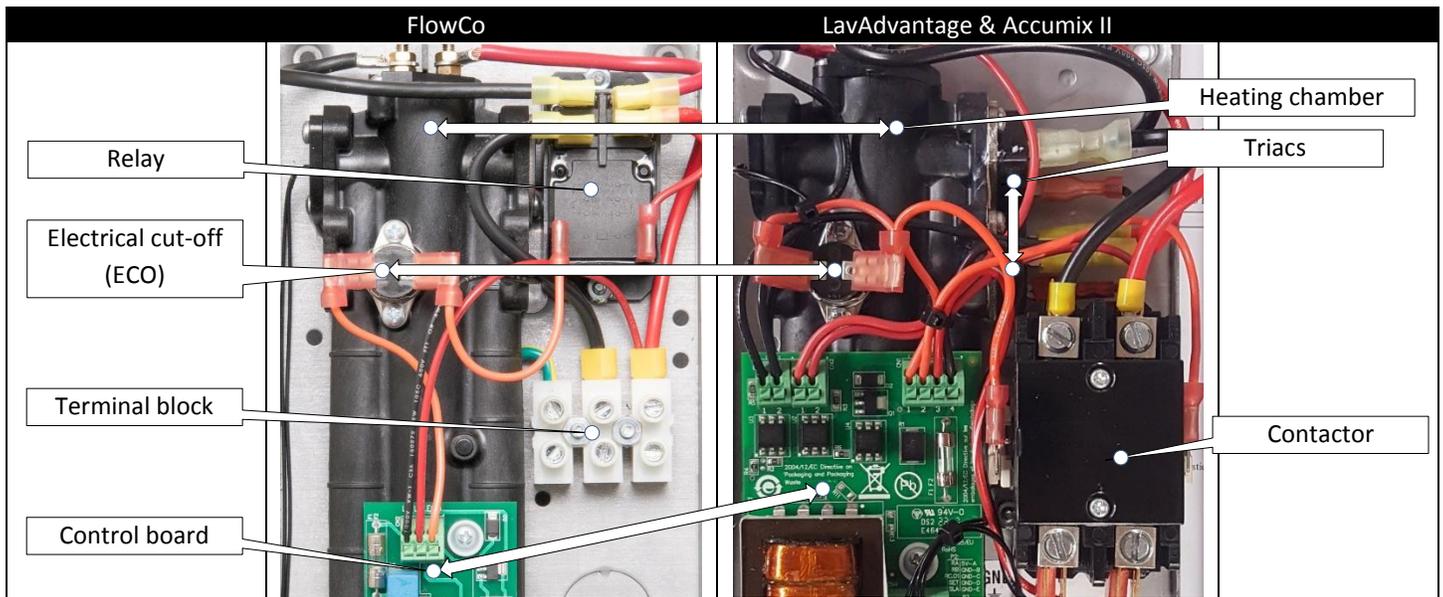
FLOWCO				
LED Pattern	Status/Problem	Possible causes	Heater response	Possible solutions
Solid light	Heating	N/A	N/A	N/A
One flash every four seconds	Idle	N/A	- unit waits for flow	N/A

<b>Two flashes once, three second pause</b>	Low heat	- outlet temperature below 90°F/32°C for 5 seconds of flow - element failure - ECO tripped/malfunctioning - relay/contactor malfunctioning - control board failure - inlet water supply out of spec	- unit keeps running, LED flashes a warning pattern	- reduce flow through unit
<b>Two flashes twice, three second pause</b>	Outlet thermistor failure	- outlet thermistor interrupted or disconnected	- unit keeps running, LED flashes a warning pattern	- inspect connections/wiring of outlet thermistor
<b>Two flashes three times, three second pause</b>	Over-temperature Warning	- outlet temperature exceeds 110°F/38°C	- unit keeps running, LED flashes a warning pattern	-increase flow through unit. If this temperature is desired no action is required
<b>Three flashes once, three second pause</b>	Over-temperature Protection	- outlet temperature exceeds 150°F/65°C	- unit stops heating until outlet temperature falls below preset minimum	- increase flow through unit to decrease the overall temperature rise
<b>Three flashes twice, three second pause</b>	Freeze warning	- inlet temperature is too low (below 35°F/2°C)	- heating disabled	- increase temperature of inlet water to meet product specifications

### 8. PERIODIC MAINTENANCE

The heater is designed for many years of carefree use. In order to maintain consistent water flow, it may be necessary to periodically clean the faucet aerator or the filter screen located in the brass inlet fitting at the heater.

<p>Element cartridge installs inside heating chamber of all heaters</p>	
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## 9. REPLACEMENT PART NUMBERS

COMPRESSION FITTINGS	
3/8" NUT	EX68B
3/8" SLEEVE	EX68C

AERATORS	
0.35 GPM	EX0061-0.3-AER
0.5 GPM	EX0061-0.5-AER

Energy Cut-Off (ECO)	
LavAdvantage (by suffix)	
Base, ML	EX278A-KIT
EE	EX278E-KIT
S	EX278D-KIT
AccuMix II	
Base	EX278A-KIT
FlowCo	
Base	EX278A-KIT
CA	EX08100-03-KIT

PLUMBING ADAPTORS	
MALE 13/16"-27 X MALE 55/64"-27	EX61-339
FEMALE 3/4"-27 X MALE 55/64"-27	EX61-341
FEMALE 13/16"-24 X MALE 55/64"-27	EX61-349
MALE 15/16"-27 X MALE 55/64"-27	EX61-336
MALE 11/16"-27 X MALE 55/64"-27	EX61-344
MALE M24X1/FEMALE M22X1 X MALE 55/64"-27	EX61-387

## 10. REPAIR PARTS

### LavAdvantage & AccuMix II

MODEL NUMBER*		ELEMENT CARTRIDGE	CONTROL BOARD	RELAY
LAVADVANTAGE	ACCUMIX II			
SPEX1812T	-	EX800 PRT	EX384-120	EX259B
SPEX2412T	-	EX610	EX384-120	EX259B
SPEX3012T	-	EX480	EX384-120	EX259B
SPEX3512T	AM004120T	EX410	EX384-120	EX259B
SPEX35T	-	EX1650	EX384-240	EX255B
SPEX48T	AM005240T	EX1200	EX384-240	EX255B
SPEX55T	-	EX1050	EX384-240	EX255B
SPEX65T	AM007240T	EX890	EX384-240	EX255B
SPEX75T	-	EX770	EX384-240	EX255B
SPEX95T	AM010240T	EX630	EX384-240	EX255B
SPEX012240T	AM012240T	EX500 PRT	EX384-240	EX1050-1
SPEX3208T	-	EX1440	EX384-240	EX255B
SPEX4208T	-	EX1050	EX384-240	EX255B
SPEX8202T	-	EX520	EX384-240	EX255B
SPEX3277T	-	EX260	EX384-277	EX253B
SPEX4277T	AM004277T	EX1920	EX384-277	EX253B
SPEX60T	-	EX1280	EX384-277	EX253B
SPEX80T	AM008277T	EX960	EX384-277	EX253B
SPEX90T	-	EX850	EX384-277	EX253B
SPEX100T	AM010277T	EX760	EX384-277	EX253B

### FlowCo

MODEL NUMBER*	ELEMENT CARTRIDGE	CONTROL BOARD	RELAY
SPEX1812	EX800 PRT	EX383	EX250B
SPEX2412	EX610	EX383	EX250B
SPEX3012	EX480	EX383	EX250B
SPEX3512	EX410	EX383	EX250B
SPEX35	EX1650	EX383	EX254
SPEX48	EX1200	EX383	EX254
SPEX55	EX1050	EX383	EX254
SPEX65	EX890	EX383	EX254
SPEX75	EX770	EX383	EX255B
SPEX95	EX630	EX383	EX255B
SPEX3208	EX1440	EX383	EX254B
SPEX4208	EX1050	EX383	EX254B
SPEX8208	EX520	EX383	EX255B
SPEX3277	EX260	EX383	EX251B
SPEX4277	EX1870	EX383	EX251B
SPEX60	EX1280	EX383	EX251B
SPEX80	EX960	EX383	EX251B
SPEX90	EX850	EX383	EX253B
SPEX100	EX760	EX383	EX253B

\*If heater has suffix "DI" order element with suffix "SS."