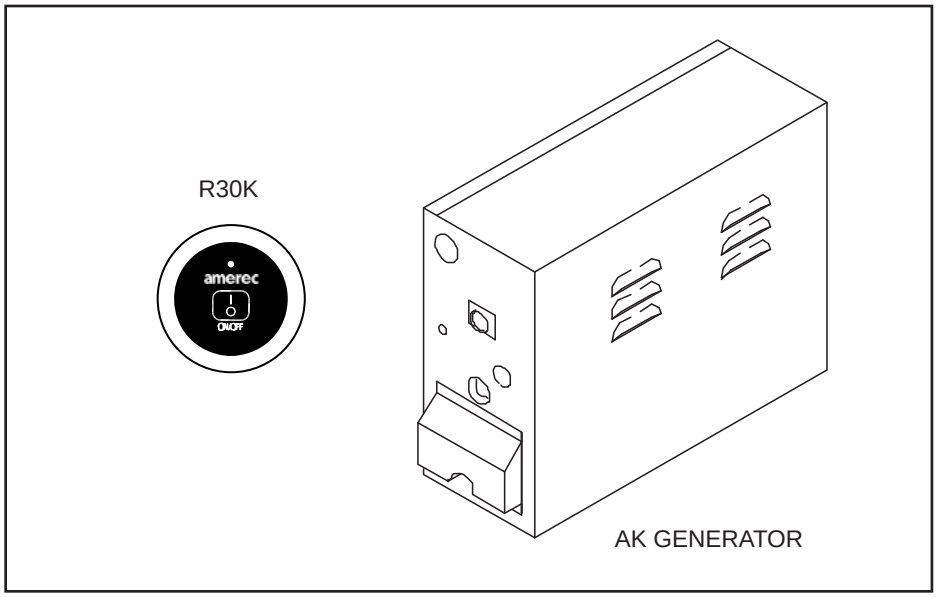
amerec

INSTALLATION INSTRUCTIONS
AK EASYSTEAM™ STEAMERS



AMEREC EASYSTEAM™
STEAMBATH GENERATORS
with the R30K Control

SAVE THESE INSTRUCTIONS

READ ALL INSTRUCTIONS CAREFULLY BEFORE INSTALLATION.

POST "WARNING" LABEL OUTSIDE STEAMBATH FOR SAFETY WARNINGS. REQUIRED POSTING ON DOOR OF STEAM ROOM OR ADJACENT TO DOOR FOR ALL COMMERCIAL INSTALLATIONS.

SECTION 1: GENERAL INFORMATION

AMEREC Steam Generators are listed by ETL for the US and Canada. The steam generators come assembled and ready for installation. Check that the size and rating of the generator is suitable for your application; refer to Steam Room Construction and Generator Sizing Guide (AMEREC document 4211-38).

IMPORTANT
An exhaust fan installed outside the steam room is strongly recommended to remove excess steam from the bathroom or shower area.

WARNING

Electrical grounding is required on all Steam Generators.

All electrical supplies should be disconnected when servicing a Steam Generator.

All wiring must be installed by a licensed electrical contractor in accordance with local and national codes.

All plumbing must be installed by a licensed plumber in accordance with all applicable local and national codes.

Generators are for indoor use only.

Generators are not for space-heating purposes.

Be certain that steam bath enclosures are properly sealed to avoid water damage from escaping steam. It is recommended that 100% silicone caulk be used to seal all pipes and fittings. Steam must be prevented from escaping into the wall cavity.

Never shut off the water to an appliance that is in use.

Electric Shock Hazard
High Voltage exists within this equipment. There are no user serviceable parts in this equipment.

⚠WARNING

REDUCE THE RISK OF OVERHEATING AND SCALDING

1. Exit immediately if uncomfortable, dizzy or sleepy. Staying too long in a heated area is capable of causing overheating.
2. Supervise children at all times.
3. Check with a doctor before use if pregnant, diabetic, in poor health or under medical care.
4. Breathing heated air in conjunction with consumption of alcohol, drugs or medication is capable of causing unconsciousness.

CAUTION! Do not contact steam head. Stay at least 12" away from hot steam escaping from the steam outlet.

REDUCE THE RISK OF SLIPPING AND FALL INJURY

Use care when entering or exiting the steam room, floor may be slippery.

05-21-07 4110-79 NOTE: *For additional safety instructions, see owner's manual.*

Table of Contents

IMPORTANT SAFETY INSTRUCTIONS

1. READ AND FOLLOW ALL INSTRUCTIONS.

2. WARNING - To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

3. WARNING - To reduce the risk of injury:
   a. The wet surfaces of steam enclosures may be slippery. Use care when entering or leaving.
   b. The steam head is hot. Do not touch the steam head and avoid the steam near the steam head.
   c. Prolonged use of the steam system can raise excessively the internal human body temperature and impair the body's ability to regulate its internal temperature (hyperthermia). Limit your use of steam to 10 - 15 minutes until you are certain of your body's reaction.
   d. Excessive temperatures have a high potential for causing fetal damage during the early months of pregnancy. Pregnant or possibly pregnant women should consult a physician regarding correct exposure.
   e. Obese persons and persons with a history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a steambath.
   f. Persons using medication should consult a physician before using a steambath since some medication may induce drowsiness while other medications may affect heart rate, blood pressure and circulation.

4. WARNING - Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6° Fahrenheit (37° Celcius). The symptoms of hyperthermia include an increase in the internal temperature of the body, dizziness, lethargy, drowsiness and fainting. The effects of hyperthermia include:
   a. Failure to perceive heat:
   b. Failure to recognize the need to exit the steambath:
   c. Unawareness of impending risk:
   d. Fetal damage in pregnant women:
   e. Physical inability to exit the steambath: and
   f. Unconsciousness.

WARNING - The use of alcohol, drugs or medication can greatly increase the risk of hyperthermia.

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WARNING

Do not mount outdoors. Protect from freezing.

Unit must be located as to allow access for service.

The generator will not operate properly unless it is mounted level with the arrows pointed up.

SECTION 2: SELECT MOUNTING LOCATION

SEE DIAGRAMS

The steam generator can be hung on a wall or sit on its base. The best mounting location will satisfy all or most of the following:

1. The steam line should slope to allow condensation to drain. Condensation should drain into the steam room.

2. The steam line should be less than twenty feet long. Ten feet is preferred. Steam lines over 20 ft (6 m) long should be insulated.

3. The mounting location should minimize the number of bends and elbows in the steam line.

4. The generator should be installed in a dry, well ventilated area. Suggested locations are under a vanity, in a closet, attic, crawl space or basement. (*Not Subject to Freezing*)

5. The location should provide clearance for service and element removal. See diagram.

6. The mounting location should allow for a drain hook up.

7. The generator must be mounted in a minimum 7 cubic foot (0,2 cubic meters) space.

8. The generator must **NOT** be mounted in an area subject to freezing.

SECTION 3: MOUNTING THE GENERATOR

SEE DIAGRAMS

Wall Mounting:

1. Note the location of the mounting holes on the back of the generator. The screws must set directly into studs or equivalent supports. Drill pilot holes on 11" (279 mm) centers and install the two #10 1½" screws provided.

2. Carefully hang the generator on the two screws. Tighten the screws. Replace the front cover. Secure the front cover with six screws.

Floor Mounting:

1. In general the width of the unit allows it to sit on a shelf, across the ceiling joists or on a floor. The generator must be restrained from moving. Normally the piping will provide adequate restraint. If not, additional restraint must be provided.

2. All floor installed generators must have provision for routine draining of the tank.

DIAGRAM 1

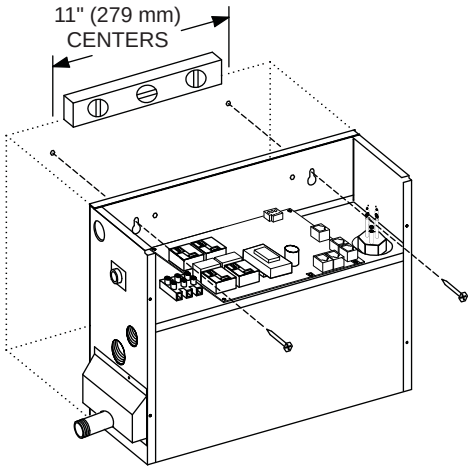


DIAGRAM 2

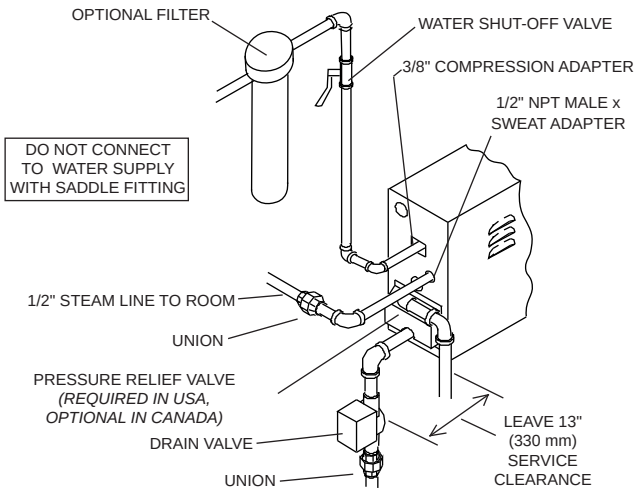
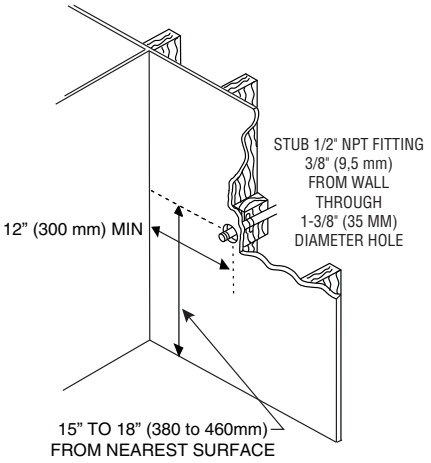


DIAGRAM 3



SECTION 4: PLUMBING INSTRUCTIONS

SEE DIAGRAM

All plumbing shall be installed by a licensed plumber and conform with local and national codes.

Materials (locally available):
- 3/8" O.D. copper tube for the water supply to the generator.
- 3/8" water supply shut-off valve.
- 3/8" supply valve housing and filter (optional depending on local water conditions).
- 3/8" O.D. compression to 3/8" male NPT adapter.
- 1/2" copper unions. (2)
- 1/2" copper pipe for the tank drain.
- 1/2" copper pipe and 1/2" female NPT sweat adapter for the steam line between the generator and the steam room.
- 3/4" copper pipe, fittings, and a sweat union for the Pressure Relief Valve drain.
- Tube DAP 100% silicone caulk.
- Rectorseal No. 5 pipe compound or equivalent.

1. INSTALL WATER LINE

IMPORTANT
Maximum recommended input water pressure not to exceed 80 psi (5,5 Bar).

Run 3/8" copper tube between the nearest cold water line and the WATER INLET fitting on the generator. Locate a shut-off valve near the generator. Connect this line to the generator with a 3/8" compression adapter. When tightening this fitting always use two wrenches so there will be no strain on the water inlet valve.

IMPORTANT
If the generator is mounted in a place difficult for the home owner to access, the water supply shut- off valve should be located where it can be quickly accessed in an emergency.

IMPORTANT
Do not use a saddle valve or saddle fitting for the water shut-off valve. Flush water supply line before final hookup.

2. INSTALL STEAM LINE

A. At the generator: Install a 1/2" male NPT sweat adapter directly into the tank. Install a 1/2" union in the steam line.

B. Run the 1/2" copper steam line from the generator to the steamroom. Refer to SECTION 2: SELECT MOUNTING LOCATION.

C. The steam line should enter the steam room 15" to 18" (380 to 460 mm) above the nearest surface. See diagrams 3, 4 and 5.

D. At the steam room: Drill/prepare a 1-3/8" (35 mm) hole for the steam line entry. Center the 1/2" copper steam pipe in the 1-3/8" (35 mm) hole. See diagram 5.
- Terminate the steam line with a 1/2" NPT male adapter. Stub the line out into the room 3/8" (9,5 mm) from the finished surface.
- Secure the steam line to a structural member.

IMPORTANT
If the steam line is in an area where the temperature will be below 40°F (44°C) or, if the line is more than 20 ft (6 m) long, best results can be obtained by insulating the steam pipe.

WARNING

Do not connect the overpressure device output into the steam line.

Do not connect the drain valve into the steam line.

Do not put a shut off valve in the steam line. Avoid traps and valleys where water could collect and cause a steam blockage. The hot steam line must be insulated against user contact.

Centering the steam pipe is critical in rooms made of plastic, acrylic, resin, fiberglass or similar materials. Allowing the steam pipes to touch materials not rated for 212°F (100°C)or higher will result in damage to these materials.

Do not install the steam head near bench(es) or where steam may spray or where condensation will drip on the user as this will present a scald hazard.

The steam pipe entry and any other entry into the steam room must be caulked to avoid damage caused by steam leakage into the wall.

The pressure relief valve must be installed in such a fashion that the risk of scalding is reduced to a minimum. Draining the pressure relief valve into the steam room may present a scald hazard.

Boiling water may be discharged from the drain. Proper precautions should be taken too insure safety.

Draining the tank into the steam room may present a scald hazard and/or damage materials used to construct the steam room.

SECTION 4: PLUMBING INSTRUCTIONS

(continued)

3. INSTALL STEAM HEAD INSULATOR: Fill in gap (using 100% Silicone caulk between steam pipe and finished wall surface at point of entry (see diagram 5).Apply silicone caulk to the finished wall side of the steam head insulator and screw on hand tight until it is flush with the wall with the opening pointing down. If a hand tight fit does not align with the opening pointing down, use teflon tape on the steam line threads to adjust the fit. (12 KW and 14 KW Generators use 2 steam heads)

4. INSTALL STEAM HEAD: Slide the steam head on until it rests firmly against the finished wall. Tighten the hex head screw underneath the steam head to secure it in place with the allen wrench provided. The steam head should be level with its fragrance reservoir at the top. See diagram. (12KW and 14 KW generators use two steam heads)

IMPORTANT
Check all of the standard fixtures in the steam room. All fixture penetrations must be sealed with 100% silicone caulk to avoid moisture damage within walls.

5. INSTALL PRESSURE RELIEF VALVE *Note: a pressure relief valve is mandatory for US installations and optional for Canada.*

Remove the plastic fitting from the steamer's Pressure Relief port and discard it (see diagram 6).

For all US installations and others as needed: Apply thread sealant to the provided pressure relief valve and install the valve into its port on the generator. The pressure relief valve outlet must drain in accordance with local and national codes.

If a pressure valve is not required, a 3/4" NPT plug must be screwed into the pressure port in the steamer's tank. (*This plug is factory installed for Canada*).

6. INSTALL DRAIN VALVE For best reliability, we recommend that the steam generator be drained periodically to prevent damage caused by hard water. *See Section 5.* A manual ball valve is included with the steam generator and an automatic motorized ball valve is available as an option (see Diagram 6).

Install a 3" (76 mm) long 1/2" pipe nipple (provided) directly into the tank as shown in diagram 6. Install the drain valve on the nipple. If installing the manual ball valve, make sure there is room to reach and to turn the valve handle. Leave the valve closed during normal use!

Install a 1/2" union on the outlet side of the drain valve. Run a 1/2" copper drain line to a gravity flow drain. Do not run the drain uphill! Do not connect the drain line to the steam line or to the pressure relief line, if installed! The drain must be connected in accordance with local and national codes.

Contact Technical Support at 1-800-363-0251 for information on Amerec's ADK option. Refer to Amerec's ADK Installation Instructions, document 4211-112, for more detailed instructions if installing the automatic drain.

When installing the ADK Automatic Drain option, we recommend installing a manual drain valve between the steamer and the motorized valve. This will provide easier servicing later, should it be needed. In this case, leave the manual valve in the open position during normal use.

DIAGRAM 4

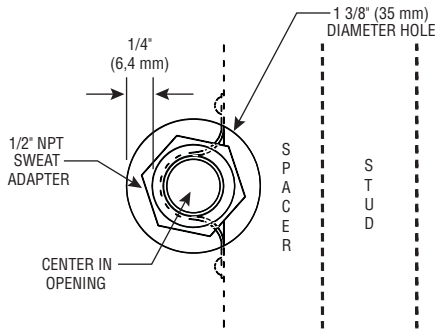


DIAGRAM 5

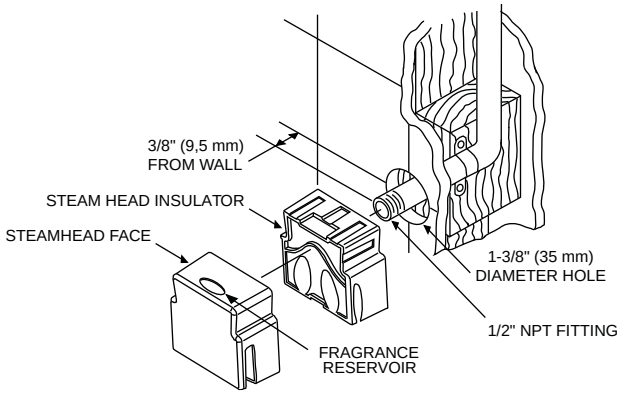
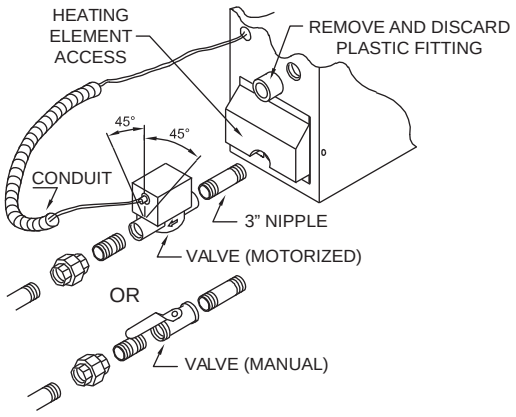


DIAGRAM 6



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INSTALLATION INSTRUCTIONS
AK EASYSTEAM™ STEAMERS

SECTION 5: WATER REQUIREMENTS

The nature of a steambath generator requires testing of the feedwater to avoid potentially high concentrations of impurities which can cause a deposit or scale to form on the internal surfaces. This deposit or scale can interfere with the equipment's proper operation and even cause premature failure. Concentration of impurities is generally controlled by treating the feedwater and/or "blowing down" the generator when it is not heating. The blow down process involves draining and rinsing the tank and refilling it with fresh water.

To ensure proper operation, the water supply should be tested prior to operating the equipment. There are several treatment processes which can be used if you have a water quality problem. A local reliable water treatment company can recommend the appropriate treatment if required. Recommended water quality is listed below:

Feed Water Quality

Hardness	10 - 30 ppm	(5.1 - 1.75 gpg)
T-Alkalinity	150 - 700 ppm	(8.75 - 40.8 gpg)
Silica Range	15 - 25 ppm	(1.28 - 1.45 gpg)
PH (strength of alkalinity)	10.5 - 11.5	

IMPORTANT! Regular maintenance will help your steamer work properly for a long time. Check for leaks, loose or damaged wires, signs of corrosion and calcium build up in the tank on the level probe. This is particularly important in areas with high calcium levels and other water quality problems. Calcium build can cause poor steamer performance and damage the heating elements!

WARNING

Electrical Shock Hazard. Disconnect all electrical power before servicing the generator. All wiring should be installed by a licensed electrical contractor in accordance with local and national codes.

The generator is designed for hookup with copper wire only.

DIAGRAM 7

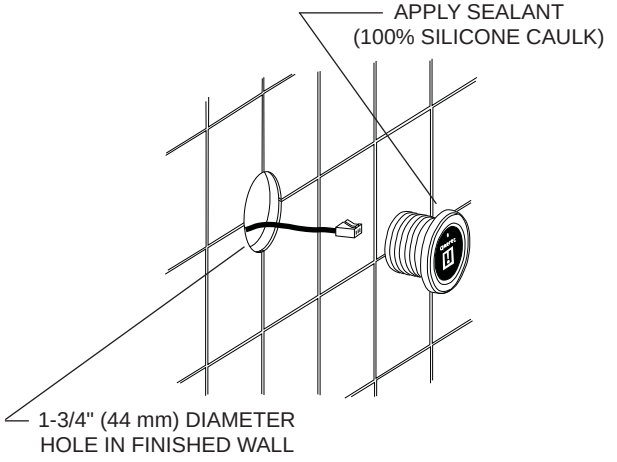
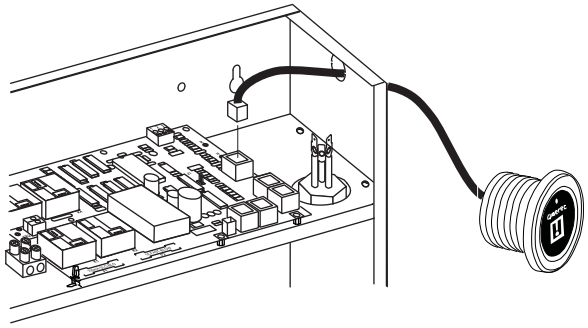


DIAGRAM 8



SECTION 6: WIRING INSTRUCTIONS

1. CONTROL CABLE ROUGH-IN The low voltage control can be mounted **up to 25 feet** from the generator either inside or outside the steam room. A 25 ft (7,6 m) 8 conductor cable (provided) is required for connecting the R30K control to the steam generator. String the 25' cable from the control location through 1/2" (13 mm) holes in the wall studs or ceiling joists to the generator.

Do not staple through or damage cable.

Use factory supplied cables only.

2. ELECTRICAL ROUGH-IN Size wire for the generator as indicated by the Electrical Information Chart on page 8. Use correct size and type to meet electrical codes. Leave 4 ft (1,2 m) of slack wire at generator location to finish hookup. Connect the generator to a dedicated circuit breaker. A GFI device is generally not required. One may be installed if required by local codes or the owner. A GFI device will tend to nuisance trip due to heater element aging.

4. ELECTRICAL FINISH Route the copper supply wire with a 3/4" strain relief through the hole marked POWER ENTRY.
- Connect the supply wires to terminals marked L1 and L2.
- Connect the ground to the ground lug (marked with ⏚).

5. INSTALL CONTROL The low voltage control can be mounted directly to a finished wall either inside or outside the steam room.

Cut a 1-3/4" (44 mm) hole in the finished wall where the control is to be mounted (the control cable should already be roughed-in to this location). Locate the control cable and plug it into the back of the control housing. See diagram 7. Run a bead of 100% silicone caulk around the perimeter on the back of the control housing. Insert the R30K into the finished wall, center the control and tape the control against the finished wall while the silicone hardens.

Route the generator end of the control cable through the generator hole marked CONTROL WIRING ENTRY using the strain relief provided. Plug the control cable into the S30 connector on the printed circuit board assembly. See diagram 8.

SECTION 7: ELECTRICAL INFORMATION CHART

STEAM GENERATOR MODEL kW	AC VOLTAGE	PHASE	NOMINAL WATTAGE @208	NOMINAL WATTAGE @ 240	NOMINAL AMPERAGE @208	NOMINAL AMPERAGE @ 240	UL RECOMMENDED PROTECTIVE DEVICE @208	UL RECOMMENDED PROTECTIVE DEVICE @ 240
5kW	208 / 240	1	3,750	5,000	18.0	21.0	25	30
7kW	208 / 240	1	5,250	7,000	25.3	29.0	35	40
10kW	208 / 240	1	7,500	10,000	36.1	41.5	50	60
12kW	208 / 240	1**	9,000	12,000	28.8/14.4	33.3/16.7	40/20	50/25
14kW	208 / 240	1**	10,500	14,000	32.5/18.0	37.5/20.8	50/25	50/30

Observe wire sizes for 208 VAC installations. 208 VAC wired units must be supplied with a minimum of 195 VAC while operating (heating).

Unit is rated for copper wire only. All wire is UL approved 300V, 75°C minimum unless otherwise specified.

Single phase 12kW & 14kW require two separate line feed circuits.

SECTION 8: OPERATIONAL TEST -- *After Control Installation is Complete*

1. Assure power and water are on.
2. Press the control's ON/OFF switch. The control's green LED should light-up.
3. Allow 10 minutes for the steam to start.
4. Once the steam starts, press the ON/OFF switch. The control light should turn off, the steam should stop and there shouldn't be any water flow.
5. Press the ON/OFF switch.
6. Within one minute the unit should again produce steam. It should call for water once every two minutes or more depending on its power rating. It's normal for the flow of steam out the steam head to slow for up to 10 seconds each time the unit calls for water.
7. The unit will shut down automatically in 30 minutes. When the time runs out the steam will stop and there should not be any water flow.
8. If the unit does not operate as described above, refer to SECTION 10: TROUBLESHOOTING GUIDE.

THE UNIT IS NOW READY FOR OPERATION.

DIAGRAM 9

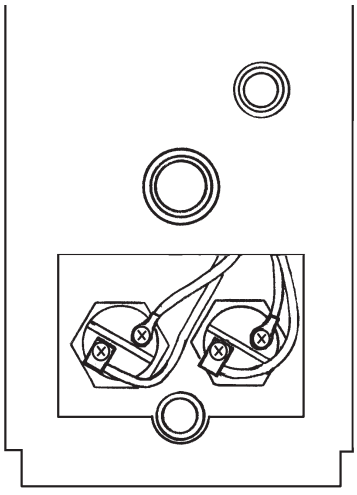


DIAGRAM 10

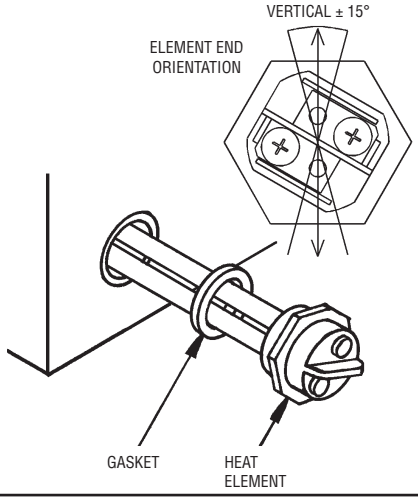
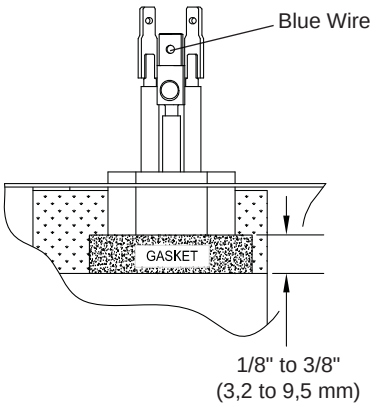


DIAGRAM 11



SECTION 9: SERVICE

SEE ELECTRICAL INFORMATION CHART

1. DESCRIPTION OF STEAM GENERATOR

The Printed Circuit Assembly (the "PCA") provides the basic functions necessary to produce steam. The PCA controls makeup water, provides a water level permissive for powering the elements and provides raw DC power for the system.

The PCA also provides regulated non-interruptible 12 VDC power for the generator control, and 5 VDC for the control, and a built in bath timer.

2. MAINTENANCE OF STEAM GENERATORS

- VISUAL INSPECTION - Whenever the generator is opened, inspect for any evidence of water leaks. Inspect the wiring for any evidence of overheating. Check all electrical connections for tightness.

- FLUSH TANK - Flush monthly, or more often, depending usage and on local water conditions.

FLUSHING PROCEDURE: *with manual drain*

1. The generator should be cool.
2. Press the ON/OFF button to turn the steamer on. The control should light.
3. Open the manual drain valve.
4. The unit will drain. Allow the water to run for a full 10 minutes, then press the ON/OFF button.
5. Allow the unit to drain completely. When the water stops, close the drain valve.

FLUSHING PROCEDURE: *with Autodrain*

1. The generator should be cool.
2. Press the ON/OFF button to turn the steamer on. The control should light.
3. Open the manual drain valve (if installed) and manually open the Autodrain valve by moving its lever until it latches.
4. The unit will drain without heating the water. Allow the water to run for a full 10 minutes, then press the ON/OFF button. The control light should turn off.
5. Allow the unit to drain completely. When the water stops, close the drain valves.

3. REPAIR OF GENERATORS

A. ELEMENT REPLACEMENT:

Disconnect power from the unit. Drain the tank. Remove the front and HEATING ELEMENT ACCESS covers. Note the wire connections. (See diagram) Remove the element wires. Using a hot water element socket, remove the element. To install a new element, mount a new element gasket on the element. Clean the element port and add a light coat of Rectorseal No. 5 pipe thread compound to the threads. Insert and hand tighten the element-gasket combination. Notice the element end orientation as shown in diagram. Tighten the element until the orientation is the same as diagram, ± 15°. The gasket should be set and tight but not deformed to a rounded or bulbous appearance. If the drain valve was removed reinstall it. Reconnect the wiring. Test the unit per SECTION 8: OPERATIONAL TEST. Check for leaks at the element. Replace the front and HEATING ELEMENT ACCESS covers. (*Replace with factory supplied elements only*)

B. PRINTED CIRCUIT REPLACEMENT:

Printed circuit assembly (PCA) removal and replacement must be performed in the following sequence: any other method can damage the PCA.

IMPORTANT
The PCA's contain static sensitive devices. Static electricity may damage PCA's. Handle accordingly.

Disconnect power from the unit. Note and tag the positions of all wires that plug into the printed circuit assembly mounted relays. Remove all the wires from the relays. When removing these wires, pull on the connector, not the wire. Note the blue wire connected to the shortest of the triple pronged water level probe. Disconnect all three wires from the water level probe. Remove PCA from all seven standoffs by pinching the tops. When it is completely disconnected, it may be lifted out of the enclosure. (See diagram) To install the board, reverse this procedure. The wire lugs must fir tightly onto the relay tabs! Test the unit per SECTION 8: OPERATIONAL TEST.

IMPORTANT
The blue wire connected to MAX on the PCA must be connected to the shortest of the three level probes, the black wire (MID) to the long probe with black tubing and the white wire (MIN) connected to the longest probe with white tubing.

C. WATER SOLENOID REPLACEMENT:

Disconnect power from the unit. Turn the water supply OFF. Disconnect the water supply from the water solenoid valve. Remove the front cover. Remove the two blue wires from the water solenoid valve. Rotate the self-tightening hose clamp so it can be loosened with a pair of pliers. Squeeze the clamp and move it down towards the shelf and off the valve outlet tube. Remove the two 1/4" - 20 hex head bolts and lock washers that attach the valve to the chassis. Pull the valve off the rubber fill hose. To install the valve, reverse these instructions. Test the unit per SECTION 8: OPERATIONAL TEST.

D. LEVEL PROBE REPLACEMENT:

Disconnect power from the unit. Remove the front cover. Note where the blue wire is connected to the triple pronged water level probe. Disconnect all three wires from the water level probe. Using a 1-1/4" box wrench, remove the level probe. Install a new level probe. Use Teflon Tape on threads of probe if required. Tighten until the bottom of the plastic nut is 1/8" to 3/8" (3,2 to 9,5 mm) above the top of the port. See diagram 11. Reattach the three wires. Test the unit per SECTION 8: OPERATIONAL TEST.

IMPORTANT
The blue wire connected to "L" on the PCA must be connected to the shortest of the three level probes, the black wire to the probe with black tubing and the white wire to the probe with white tubing.

IMPORTANT The level probe may be extremely tight. Damage to the insulation or chassis may result unless the tank is properly blocked or supported during probe removal or installation. It may be necessary to completely disconnect and disassemble the generator.

WARNING

Electrical shock hazard!
Circuit boards have exposed 208-240VAC High Voltage.
Disconnect all electrical power before servicing the generator.

All wiring should be installed by a licensed electrical contractor in accordance with local and national codes.

The circuit board relays may be damaged if the correct orientation of the wire connectors is not observed! See diagram 14

For continued safe operation use factory authorized replacement parts only.

DIAGRAM 12

PCA Power Relays Connections
3 versions available

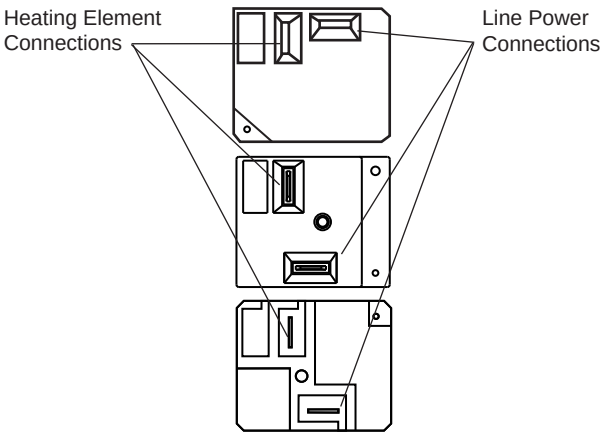


DIAGRAM 13

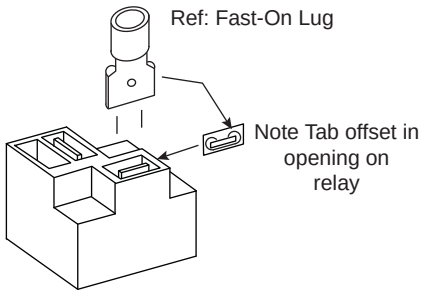
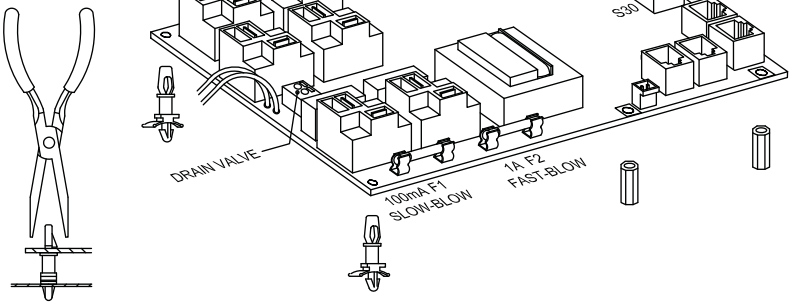


DIAGRAM 14

TO REMOVE CIRCUIT BOARD:
MAKE SURE POWER IS OFF BEFORE PROCEEDING!
REMOVE SCREWS FROM METAL STANDOFFS. GENTLY LIFT NEAR EACH NYLON MOUNTING POST TO REMOVE THE BOARD. IF YOUR GENERATOR HAS LOCKING TABS ON THE MOUNTING POSTS, LIFT WHILE SQUEEZING THE LOCK TAB WITH NEEDLENOSE PLIERS.

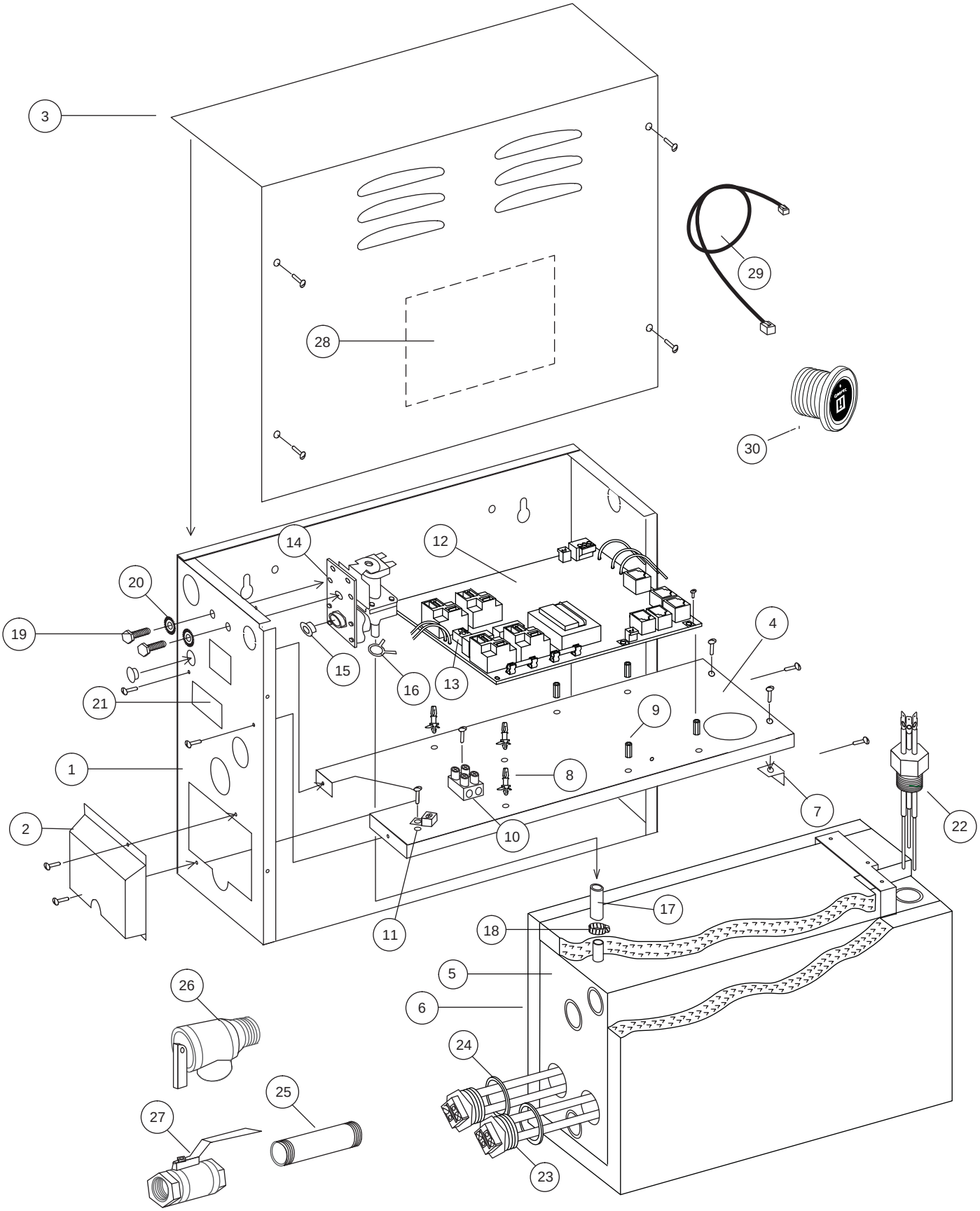


SECTION 10: TROUBLE SHOOTING

There are no user serviceable parts in the Generator. All repair should be performed by a qualified service person. For additional assistance or the factory authorized service person nearest you call the Amerec Service Department at 1-800-363-0251. The Trouble Shooting Guide below is meant as a general aid only. Follow ACTION TO BE TAKEN in order until the problem is resolved. Where replacements or repairs are indicated, see the appropriate paragraph of SECTION: 9 SERVICE.

SECTION 10: TROUBLE SHOOTING - GUIDE

SYMPTOMS	PROBABLE CAUSES	ACTION TO BE TAKEN
Control won't turn ON (Control light off)	Improper power supplied (or no power) or Control improperly connected or Circuit board (PCA) faulty or Control cable faulty or Control faulty	1.a. Make sure circuit breaker is on and 208/240VAC is supplied. b. Use voltmeter to check the line voltage across the two fuses on the PCA. Voltage should be 208 to 240VAC. c. Check the PCA fuses. If a fuse is open, replace with the same size and type: F1 is a 100mA Slo-Blo (Time Delay) fuse, F2 is 1A Fast-Blo (non-Time Delay) fuse. If the fuse fails again, contact Support. 2. Turn off all power to the steamer. a. Check that the control is properly installed. See section 5. b. Check the control cable for installation damage (nail or staple holes, damged connectors, etc. *Contact Support for assistance*. c. Replace the control. *Contact Support for assistance*. d. Replace the PCA. *Contact Support for assistance.*
Control OFF (control light off) Water runs out the steam head and won't shut off.	Water solenoid valve is stuck open or PCA is faulty	1. Turn off power to the steamer. If water stops, go to step 2. a. Disconnect the two blue wires from the water valve. Turn the power back on. If the water stops, the PCA may be faulty. *Contact Support for assistance.* b. If the water continues to run, go to step 2. 2. (*with the power off*) Shut off water to the steamer and remove the water valve. Carefully disassemble the valve, clean it, reassemble and reinstall it then retest. If water continues to run, *contact Support for assistance.*
Control ON (control light lit) Water runs out the steam head and won't shut off.	Connections between the PCA and the water level probe faulty or PCA faulty	1. Check that the two white wires (marked H and R) are connected to the two tallest level probe rods and the blue wire (marked L) is connected to the shortest rod. 2. The PCA may be faulty. *Contact Support for assistance.*
Control ON (control light lit) Tank empty, unit won't fill.	Water supply off or Water valve faulty or Level probe faulty or or PCA faulty	1. Make sure water is supplied to the steamer and all valves are open. 2. Does the water valve solenoid make noise (hum)? a. Yes - water valve may be plugged. Clean and retest. b. No - go to step 3. 3. The PCA may be faulty. *Contact Support for assistance.*
Control ON (control light lit and not blinking) Unit won't steam.	Unit has not filled completely or Heating elements burnt out or Level probe faulty or PCA faulty	1. a. Push the control OFF. b. Open the drain valve and allow the tank to drain completely. c. Close the drain valve. d. Push the control ON. e. Unit will begin filling: listen for a click noise. Within 20 seconds after click noise is heard, the water fill should shut off, indicating the tank is full. If the tank does <u>not</u> fill, go to section: SYMPTOMS: "Unit won't fill". 2. If the tank filled but the relay click was not heard, temporarily ground the two long probes. If the click is heard as each probe is grounded, clean or replace the level probe. If the click is not heard replace the PCA. *Contact Support for assistance.* 3. If the tank filled and the relay click was heard, remove the heating element access panel. Use a voltmeter to verify line voltage between the two wires on each heating element. If proper voltage is found the element(s) may be faulty. If no voltage is found check fro proper wiring (refer to the wiring diagram). *Contact Support for assistance.*
Control ON Control light is blinking	Control connection error or Control cable faulty or PCA is faulty	*Check control is connected to the S30 jack on the PCA* *Contact Support for assistance.*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Item	Description
1	CHASSIS
2	ELEMENT ACCESS COVER
3	FRONT COVER
4	SHELF, PCA MOUNT
5	STEAM TANK
6	INSULATION, MINERAL WOOL
7	SHELF SUPPORT BRACKET
8	NYLON STANDOFF, PCA MOUNT
9	HEX STANDOFF, PCA MOUNT
10	TERMINAL BLOCK, LINE POWER
11	GROUND
12	PCA, AK, AMEREC 3223 SERIES
13	TERMINAL BLOCK, DRAIN (*REFERENCE*)
14	WATER INLET VALVE
15	WATER VALVE INLET PLUG (*DISCARD BEFORE CONNECTING WATER SUPPLY*)
16	HOSE CLAMP, SELF TIGHTENING
17	WATER FILL HOSE
18	HOSE CLAMP, WORM SCREW
19	BOLT, 1/4-20 X 1/2", WATER VALVE MOUNT
20	LOCKWASHER, TOOTHED, 1/4", MOUNT WATER VALVE
21	ID AND RATING LABEL, ETL MARKED
22	LEVEL PROBE, 3-ROD, 2-LEVEL
23	HEATING ELEMENT, SCREW IN
24	GASKET, HEATING ELEMENT
25	PIPE NIPPLE, 1/2NPT x 3", DRAIN
26	PRESSURE RELIEF VALVE, 10 PSI (*MANDATORY FOR US INSTALLATIONS, OPTIONAL IN CANADA*)
27	DRAIN BALL VALVE, MANUAL CONTROL
28	WIRE DIAGRAM (INSIDE COVER)
29	CONTROL CABLE, 8-CONDUCTOR WITH MODULAR PLUGS
30	ON/OFF CONTROL, R30K

PARTS AND/OR RETURNS:

- **For assistance or parts ordering, please contact your local Dealer or Technical Support at 1-800-363-0251. Please help us to serve you better by:**

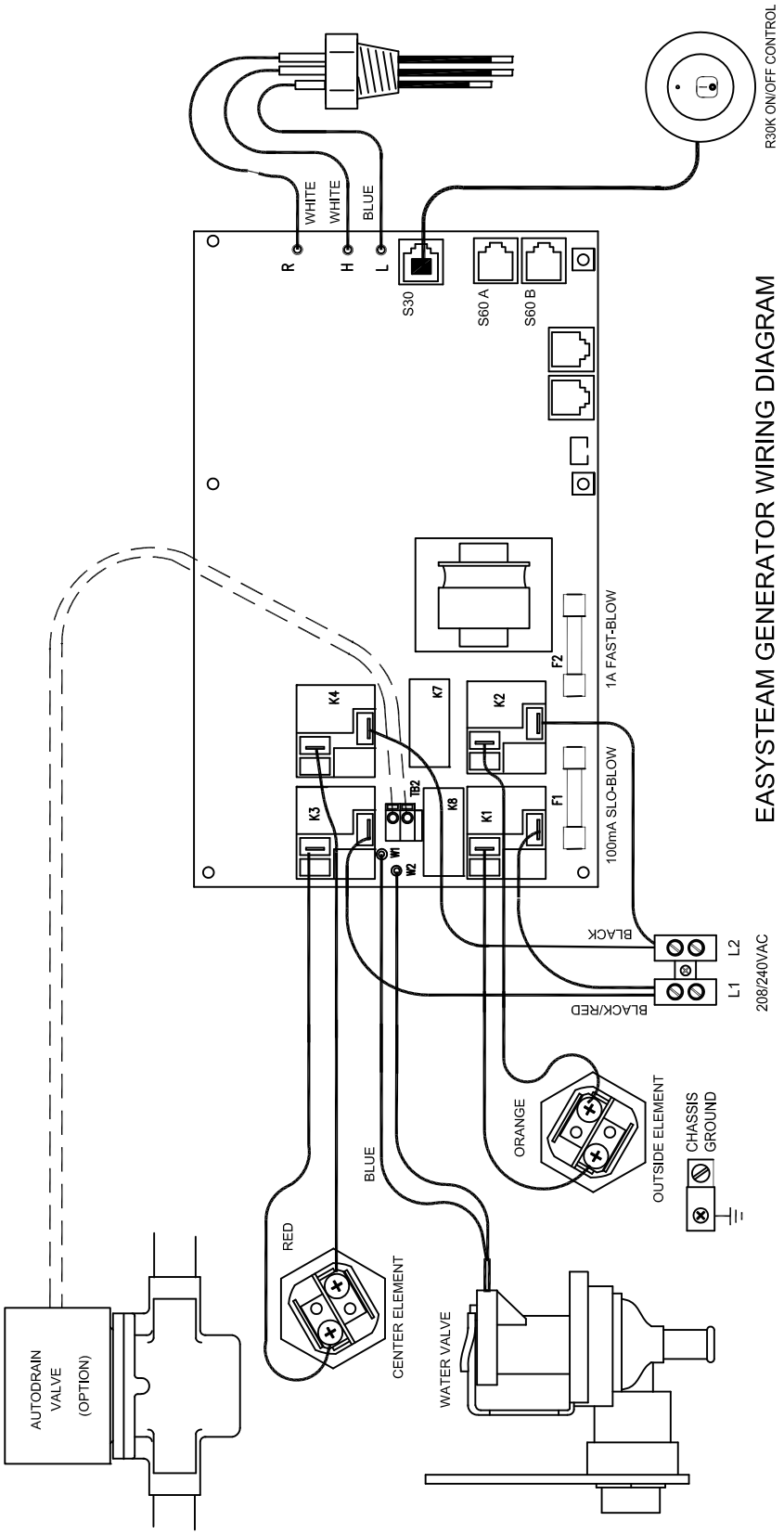
  1. **Identifying the problem by using the troubleshooting guide in this manual.**

  2. **Read Number 12, the Ratings Label, to obtain your unit's model and code number.**

- **When ordering parts, please provide the number, description and quantity needed. When ordering wires or wire assemblies, please describe the wires by color, location and / or their connection points.**

- **Do not return any material without first contacting Technical Support for a Return Authorization Number. Freight must be prepaid to Factory.**

amerec
Technical Support
PO Box 2258
Woodinville, WA 98072
Phone 1-800-363-0251
FAX 425-951-1130
email: support@amerec.com


EASYSTEAM GENERATOR WIRING DIAGRAM
R30K ON/OFF CONTROL
WHITE
WHITE
BLUE
R
H
L
S30
S60 A
S60 B
F2
1A FAST-BLOW
F1
100mA SLO-BLOW
K4
K7
K2
K3
K8
K1
TB2
W1
W2
BLACK
BLACK/RED
L1
L2
208/240VAC
ORANGE
OUTSIDE ELEMENT
CHASSIS GROUND
BLUE
RED
CENTER ELEMENT
WATER VALVE
AUTODRAIN VALVE (OPTION)