

REDRING

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Handbook for

PowerStar
electric tankless water heaters

MODELS

AE115 AE125

SINGLE PHASE

IMPORTANT: This booklet should be
given to the customer after
installation and demonstration.

Important Safety Instructions

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

1. **READ AND FOLLOW ALL INSTRUCTIONS.**
2. This appliance must be grounded.
3. Disconnect this product from the electrical supply before cleaning, servicing or removing the cover.
4. To reduce the risk of injury, close supervision is necessary when the product is used near children or elderly persons.
5. Warning: Mount the unit onto a flat section of wall, well away from any potential splashes of water or spray and away from areas where direct moist or wet contact could occur.
6. Warning: Do not install the heater in a location where it may be subject to freezing.
7. Warning: Do not install a check valve or any other type of back flow preventer within ten feet of the cold water inlet.
8. The electrical installation must conform to current National Electrical Codes.
9. Warning: Do not switch the heater on if you suspect that it may be frozen. Wait until you are sure that it has completely thawed out.
10. The PowerStar is designed to heat potable cold water for domestic purposes. The **maximum** inlet water temperature it can handle is 86 degrees F. Contact Bosch Thermotechnology Corp. before specifying or installing the appliance in any other application.
11. Additional Canadian safety instructions:
 - a) As per the Canadian Electrical Code, C22.1-02 Section 26-744, an auxiliary terminal block must be fitted to the unit before connecting to the electrical supply (Kit Part N° "AE Canada Kit"). (See Page 7).
 - b) A green terminal (or a wire connector marked "G," "GR," "GROUND" or "GROUNDING") is provided within the control. To reduce the risk of electrical shock, connect this terminal or connector to the grounding terminal of the electrical service of supply panel with a continuous copper wire in accordance with the Canadian Electrical Code, Part I.
 - c) This product shall be protected by a Class A ground fault circuit interrupter.

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SAVE THESE INSTRUCTIONS

Keep this guide in a safe place once your unit has been installed.
You may need to refer to it for general instructions or future maintenance.

Specifications

	AE115 Unit	AE125 Unit
Voltage supply	2 x 240V AC (Canada 240VAC)	3 x 240V AC (Canada 240VAC)
Amperage	2 x 40 A (Canada 80 A)	3 x 40 A (Canada 120 A)
Maximum output	17.25 kW	26.85kW
Temperature control range	95°F to 131°F	95°F to 131°F
Pressure range	15 psi to 150 psi	15 psi to 150 psi
Minimum flow rate	0.6 US gal / min	0.8 US gal / min
Maximum flow rate	See Graph 1, Page 8	See Graph 1, Page 8
Dimensions (excl. water couplers)	15½" H x 15¼" W x 4½" D	15½" H x 15¼" W x 4½" D
Weight (without water)	20 lbs	22 lbs

Note: The unit will work at lower supply voltages but the following changes will apply:

Maximum output	15kW at 220V	22.5kW at 220V
	13kW at 208V	20kW at 208V
Temperature control range	87°F to 116°F at 220V	87°F to 116°F at 220V
	82°F to 108°F at 208V	82°F to 108°F at 208V
Maximum flow rate	84% of maximum at 220V	84% of maximum at 220V
(refer to Graph 1, Page 8)	75% of maximum at 208V	75% of maximum at 208V

Installing the PowerStar

WARNING:

If water supply has a high mineral content, a water softening system is strongly recommended. Damage to the water heater resulting from scale or hard minerals will not be covered under warranty.

DISCLAIMER:

In the Commonwealth of Massachusetts a licensed plumber or electrician must perform the installation. (Approval number: P1-09-25).

Locating the Powerstar

WARNING:

Do not install the water heater in an area where there is a chance of freezing. Damage to the water heater as a result of freezing will not be covered under warranty.

- If being used in a public place, locate the heater out of easy reach to discourage vandalism.
- Mount the unit onto a flat section of wall, well away from any potential splashes of water or spray and away from areas where direct moist or wet contact could occur.

Should it be necessary to service the Powerstar, observe the following clearances. These are not required clearances, but would facilitate any service work.

Recommended minimum clearances for servicing			
Top	12"	Bottom	6"
Sides	0"	Front	12"

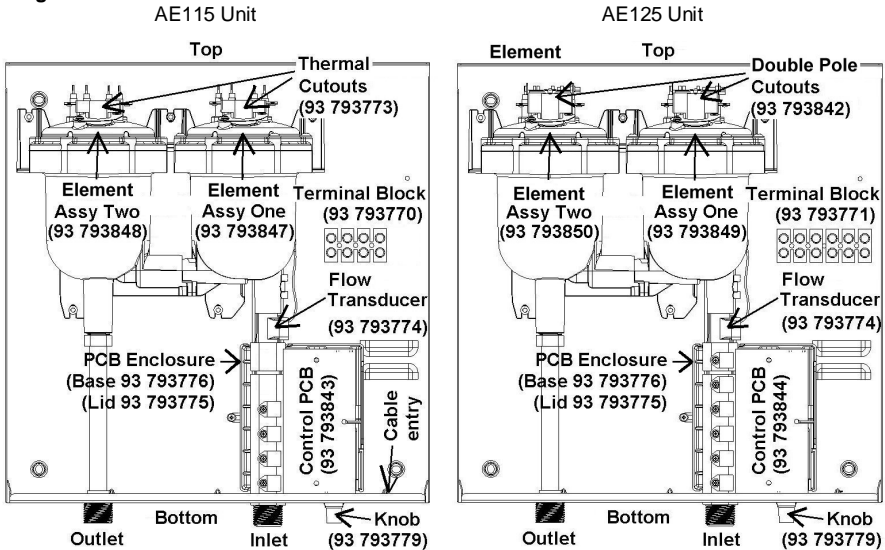
Mounting the Powerstar

WARNING:

The heater must only be installed in the orientation shown in Diagram 1 i.e., mounted in a vertical position with the water fittings located at the bottom of the heater. **Under no circumstances should the heater be mounted differently.**

- Undo the retaining screws on the front cover and take the cover off the heater. Hold the back plate in position against the wall and mark the four mounting holes
- Drill the holes and secure the heater using the four wood screws supplied.

Diagram 1



Water Connections

WARNING:

Do not install a non-return check valve within 10 feet of the inlet.

WARNING:

Do not apply heat or solder to connections or pipe if they are already connected to the unit.

DISCLAIMER:

In the Commonwealth of Massachusetts a pressure relief valve shall be installed on the cold water side by a licensed plumber. (MGL 142 Section 19, Approval number P1-09-25)

- The heater must be connected directly to the main cold water supply and **not to pre-heated water.** (The inlet water temperature must not be greater than 86°F.)
- The heater must be installed with shutoff valves on both the inlet and outlet connections.
- It is recommended that you use ¾ inch or ½ inch copper or high-pressure flex connections.

- Do not use plastic piping within 3 feet on either side of heater.
- Use Teflon tape for sealing pipe threads. Do NOT use pipe dope.
- Remember to keep the hot water pipe runs as short as possible.
- After the heater has been plumbed, and before you wire it, flush it with water to remove any debris or loose particles. Heater must be full of water and air purged before power is turned on. Failure to do so may make the heater inoperable.
- The inlet and outlet connections are clearly marked on the heater. They each have a ¾ inch NPT connector.
- Check the pressure of the main water supply. To operate correctly, the heater needs the following running pressures:

Recommended water pressures			
Min water pressure	15 psi (1 Bar)	Max water pressure	150 psi (10 Bar)

Electrical connections

WARNING

The unit must be wired by a qualified electrician, in accordance with the current version of the National Electrical Code US) or Canadian Electric Code (Canada).

IMPORTANT

When the heater is not within sight of the electrical circuit breakers, a circuit breaker lockout or additional local means of disconnection for all non-grounded conductors must be provided that is within sight of the appliance. (Ref NEC 422.31.)

IMPORTANT

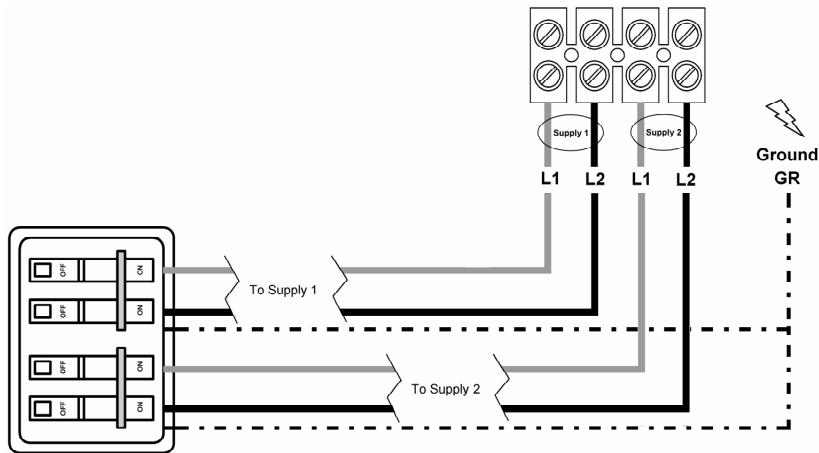
As per the Canadian Electrical Code, C22.1-02 Section 26-744, an auxiliary terminal block must be fitted to the heater before connecting to the electrical supply. This is available as a kit from Bosch Thermotechnology Corp. Part Number "AE Canada Kit". (Contact 866-642-3199).

US wiring

- The minimum recommended wire size is 8 AWG. (The terminal block will accept cables up to 6 AWG size.)
- The cable entry is via the 1 ¼ inch cable entry hole on the bottom right hand edge of the back plate.
- Strip back the insulation on the power wires about ½ inch. Connect the live wires to the terminals marked "L1" and "L2." There are two pairs of live wires in the AE115 and three pairs of live wires in the AE125. (See Diagrams 2 or 3 on page 6).
- Any insulation on the ground wires should be stripped back about ¾ inch. The ground leads must be connected to the pillar terminal marked "GR". (See Diagrams 2 and 3, Page 6).
- Make sure the terminal block screws are tightened securely. Loose connections can cause wires to heat up.
- Make sure that the ground wires are wrapped around its terminal stud and into the saddle washer. The nut should be tightened securely.
- Attach the front cover and tighten the retaining screws.

Diagram 2

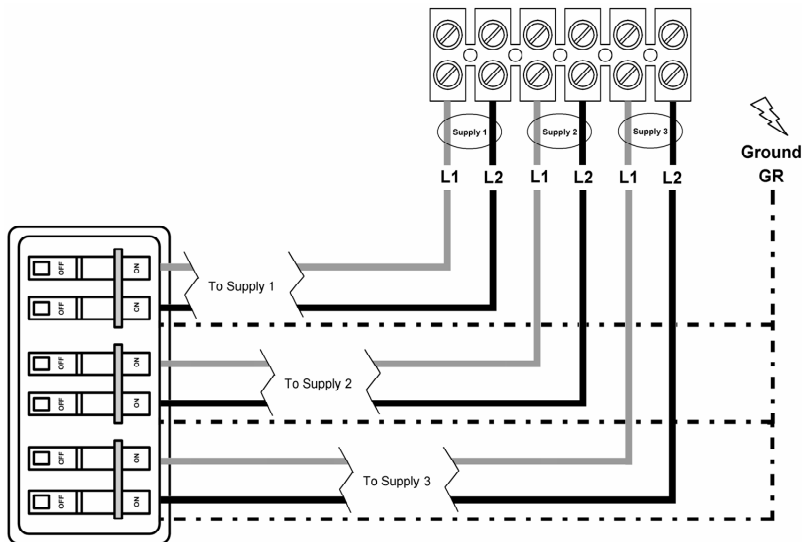
AE115 Terminal Block Connection



The AE115 requires two independent 240V AC circuits protected by two separate and independent double pole breakers (as shown) rated at 40 A each.

Diagram 3

AE125 Terminal Block Connection

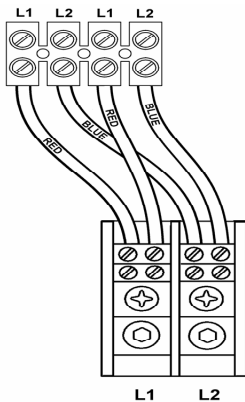


The AE125 requires three independent 240V AC circuits protected by three separate and independent double pole breakers (as shown) rated at 40 A each.

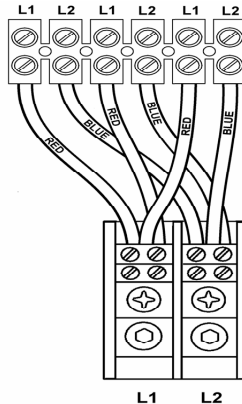
Canada wiring – auxiliary terminal block and connections

Fitting the auxiliary terminal block (see diagram below).

AE115



AE125



NOT
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- Connect the red wires from the left hand terminal of the new block to the L1 terminals in the unit. (There are two red wires required in the AE115 and three in the AE125).
- Connect the blue wires from the right hand terminal of the new block to the L2 terminals in the unit. (There are two blue wires required in the AE115 and three in the AE125).
- Push and click the auxiliary terminal block onto the louvered rail in the backplate.

Connecting the supply cable - Canada only - not for the USA.

- The AE115 requires an 80A 240V AC single phase supply protected by an 80A double pole circuit breaker.
- The AE125 requires a 120A 240V AC single phase supply protected by a 120A double pole circuit breaker.
- The power cable size and the installation must be in accordance with the Canadian Electrical Code, C22.1-02.
- The incoming hole diameter on auxiliary terminal block can accept up to 1/0 AWG size cables.
- The cable entry is via the 1 ¼ inch cable entry hole on the bottom right hand edge of the backplate.
- Strip back the insulation on the power wires about ½ inch. Connect the ungrounded conductors to the terminals "L1" and "L2" on the auxiliary terminal block.
- Any insulation on the ground wire should be stripped back about ¾ inch. The ground lead must be connected to the pillar terminal marked "GR."
- Make sure the terminal block screws are tightened securely. Loose connections can cause wires to heat up.
- Make sure that the ground wire is wrapped around its terminal stud and into the saddle washer. The nut should be tightened securely.
- Attach the front cover and tighten the retaining screws.

Starting up the PowerStar

Checking for leaks and purging air

- Verify all circuit breakers supplying power to the water heater are turned off.
- Open all hot water taps supplied by the water heater and inspect all water connections for leaks.
- With all hot water taps still open, inspect each tap to ensure all air in the lines has been purged out.
- With the air purged and taps still flowing, turn on all circuit breakers supplying the water heater.
- Close all hot water taps and proceed to the next section.

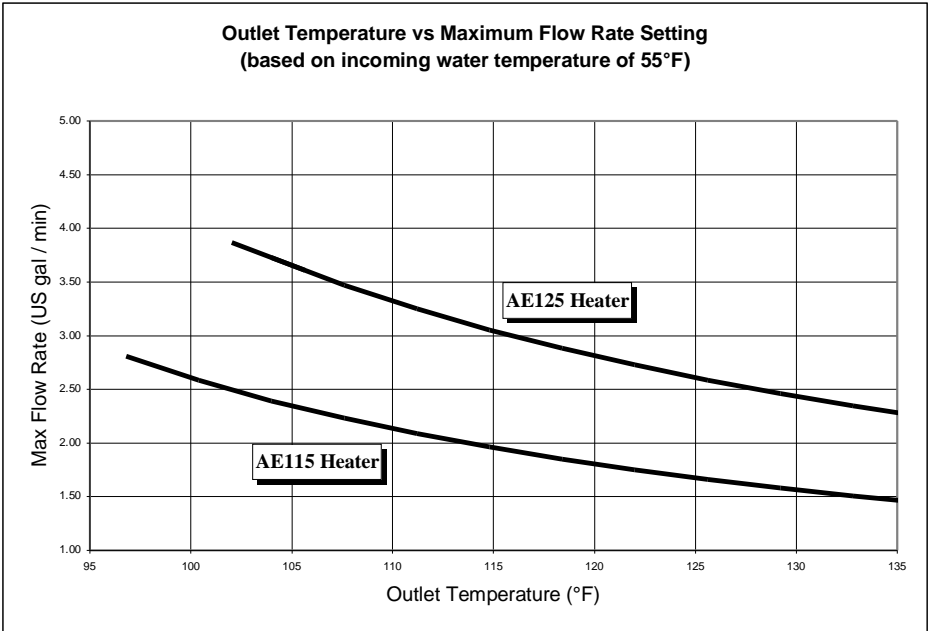
Adjusting the temperature dial

- The temperature adjustment is made using the dial on the bottom edge of the unit. The adjustment is between approximately 95°F and 135°F. Turning the dial clockwise increases the temperature setting as indicated by the marking on the unit.

Adjusting the flow

- Open fully both inlet and outlet shut-off valves at the heater, then :
- Turn on fully the highest flowing hot water faucet (e.g., bathtub) served by the water heater.
- Adjust the outlet shut-off valve until the water flow rate from the hot faucet corresponds to the value given in Graph 1 below.

Graph 1



For example:

- For the AE115 unit, using the outlet ball valve, ensure the flow rate does not exceed 2.3 gallons / minute.
- For the AE125 unit, using the outlet ball valve, ensure the flow rate does not exceed 3.5 gallons / minute.

Note: These figures are based on an inlet water temperature of 55°F and a supply voltage of 240 volts. If the inlet water temperature is lower than 55°F, or if the supply voltage is less than 240 volts, then the outlet temperature will be lower than what is shown in Graph 1. If a higher outlet water temperature is desired, then reduce the flow rate and/or supply the unit with 240 volts.

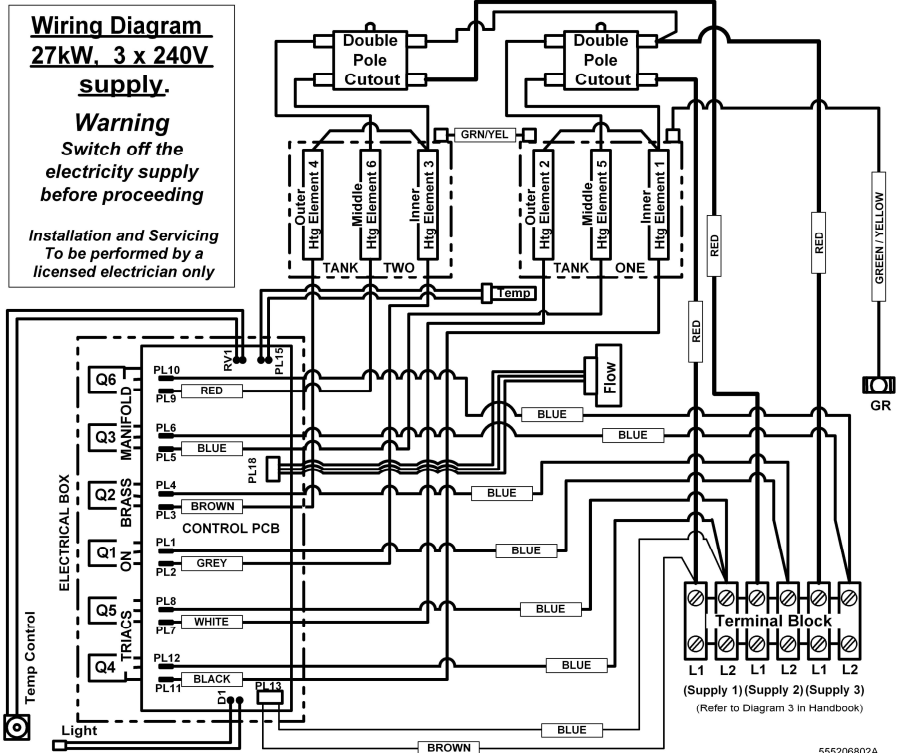
IMPORTANT

Before leaving the site, the installer should demonstrate the unit to the user and give them this guide.

How the PowerStar works

- The PowerStar heats water continuously as it flows through the heater modules.
- The electronic control PCB monitors the flow rate and the incoming water temperature and then switches on the required number of heater elements to reach the temperature set by the adjustment dial.
- As the flow rate or the incoming water temperature changes, the electronic control adjusts the number of heater modules used so that the outlet temperature is maintained.
- The outlet water temperature can change slightly as the flow rate changes due to the steps in power as different heater modules are switched on and off.
- The outlet water temperature can also vary if the maximum flow rate is exceeded (see Graph 1) or if the supply voltage changes.
- Each heater module is protected by an electro-mechanical thermal cut-out. If the temperature of any of the heater modules gets too high, then the cut-out will trip and cut the power to that heater module. If the cut-out trips, it must be reset while the circuit breakers are off. If you are not comfortable or qualified to perform this task, consult the original installer or a licensed electrician. This cut-out will only trip in exceptional circumstances.
- The AE115 unit is supplied from two independent voltage supplies and the AE125 unit from three independent voltage supplies. (In Canada the unit has just one voltage supply).
- Depending on the region of the country, the temperature of the water supply can vary between 40°F in winter to 70°F in summer, with an average of 55°F.

Diagram 4: Internal wiring schematic for single phase AE125 unit. (AE115 does not have Elt 5 & 6 fitted and uses two supplies). (In Canada an auxiliary terminal block is fitted during installation).



Using the PowerStar

WARNING

Do not use the unit if you think it may be frozen, as this could result in serious damage to the unit. Wait until you are sure that it has completely thawed out before you switch it on.

- Check that the power is switched on at the circuit breaker panel.
- Turn on the hot water faucet FULLY. The hot water temperature can be changed by adjusting the temperature dial on the bottom surface of the unit. (The dial adjusts the temperature typically between 95°F and 131°F. The factory sets the temperature dial at the lowest position.)
- There are internal safety thermal cut-outs which will trip if the unit overheats. If the cut-out trips, it must be reset while the circuit breakers are off. If you are not comfortable or qualified to perform this task, consult the original installer or a licensed electrician.
- If the unit has been used recently, run the water through for a few seconds to let the temperature cool down. You may initially get a short burst of very hot water that was in the plumbing lines from previous use.
- If a second outlet connected to the unit is also turned on, the hot water will be shared between the two.

Spare Parts

Part Number	Description (Refer to Diagram 1, Page 4)	
93 793770	4 way term. block (for AE115)	<p>For further information ask your local dealer.</p> <p>FOR SERVICE AND INSTALLATION QUESTIONS CALL:</p> <p>Tel: 866-642-3199</p> <p>Fax: 806-496-6924</p> <p>Bosch Thermotechnology Corporation</p> <p>Bosch Thermotechnology Corp. 340 Mad River Park Waitsfield, VT 05673 Phone 866-642-3199 Fax 806-496-6924 www.boschhotwater.com techsupport@boschhotwater.com</p>
93 793771	6 way term. block (for AE125)	
93 793772	Front cover (white)	
93 793773	Thermal cut-out (AE115)	
93 793842	Double pole cut-out (AE125)	
93 793774	Flow transducer	
93 793775	PCB enclosure (lid)	
93 793776	PCB enclosure (base)	
93 793843	Control PCB (for AE115)	
93 793844	Control PCB (for AE125)	
93 793779	Adjustment knob	
93 793845	O Ring set	
93 793846	Fixing screws for heater flange	
93 793784	¾" Inlet filter screen	
93 793847	Heater element assembly 1 (AE115)	
93 793848	Heater element assembly 2 (AE115)	
93 793849	Heater element assembly 1 (AE125)	
93 793850	Heater element assembly 2 (AE125)	

Maintenance

Check inlet water filter screen once a year

- Shut off the installer supplied cold water isolation valve to the heater. If one is not installed, install before proceeding.
- Open nearest hot water tap to relieve pressure in the plumbing lines.
- Position a bucket under the cold water inlet connection of the heater to catch any water that may drain.
- Disconnect the cold water plumbing connection from the inlet (bottom right of heater) to access filter screen (See Diagram 1, Page 4).
- Remove filter, clean with water and inspect for damage. If the filter is at all damaged, it should be replaced.
- Replace the filter into the inlet housing
- DO NOT leave the filter out.
- DO NOT remove the flow regulator (located behind the filter).
- DO NOT clear the filter by back flushing.
- NEVER use an air line to blow out the heater (the flow transducer will be permanently damaged).

Troubleshooting

WARNING

Always switch off the electricity supply to the unit before you remove the cover.

IMPORTANT:

If you are unable to perform the tasks listed below, or need additional assistance please contact your original installer/licensed electrician.

Cold water only – Neon light off

Flow rate is too low	Verify the flow rate out of fixture is at or above the minimum activation rate required for the unit to activate. (Activation rates: AE115 = 0.6 GPM, AE125 = 0.8 GPM).
The water supply is connected to the outlet of the unit	Verify plumbing connections are correct (See Diagram 1, Page 4). Reconnect the water supply to the inlet of the unit (marked blue).
Plumbing crossover	To test for a plumbing crossover, turn off power supply to the heater. Close installer supplied cold water shut off valve (if none installed, install before proceeding). Open all hot water taps supplied by the heater. Wait 5 minutes and check all taps. Any water running is a sign of a plumbing crossover. Consult a local plumber or service person for help in correcting a plumbing crossover. To return the heater to service, reinstall cover, open the inlet water supply to the heater and open all hot water taps. Let all taps run until there is no air coming out of the fixtures. Shut off all hot water taps. Turn power supply on to the heater. Return heater to service. (This procedure will prevent the heating elements from burning out).
The flow transducer is not spinning	Turn off the power supply to the heater and remove the cover. Observe if the flow transducer "spins" when the water is turned on. Please note the flow transducer spins at a high speed and can appear to be stopped when actually spinning. It is recommended to observe the flow transducer without water flowing, then turn on a hot water tap while observing the flow transducer. If the flow transducer is not spinning, remove and flush flow transducer, noting the Do's and Dont's on Page 11. See the technical support section of www.boschhotwater.com for more detailed instruction on removing the flow transducer.
One or more of the heating module thermal cut-outs has tripped	Turn off the power to the heater, remove the cover and locate thermal cutouts on the top of each heating module. Try resetting each cutout by pushing the reset button located in the center of the cutout. Determine and fix the cause of the overheating. Obstructions in the water path can restrict the flow of water through the heater causing it to overheat. Verify the heater's inlet filter screen and all outlets served by the heater are clear of debris. Ensure the heater is not being fed preheated water. This water heater is designed for a cold water supply only. If thermal cut out does not reset, check for continuity through each cutout (less than 0.5 Ohms). If any cutout reads more than 0.5 Ohms or open, then it may be defective and should be replaced.
No electricity at the heater or one of the supplies has failed	Have a licensed electrician verify proper wiring and adequate voltage on the terminal block inside the water heater. See the "Electrical connections" section on Page 5 of this manual.

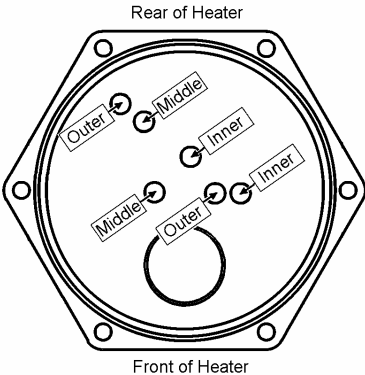
Water too cold – Neon light on

Water too cold – Neon light on

Temperature dial is turned too low	Turn the temperature dial located on the bottom of the water heater clockwise for hotter temperatures. Refer to Graph 1 for outlet temperature vs. flow rate variance.								
Water flow is too high	Adjust water flow to stay within the water heater's specifications. See Graph 1 on Page 8 of this manual.								
One or more of the heating module thermal cut-outs has tripped	Shut off the power to the unit, remove the cover and locate thermal cutouts on the top of each heating module. Try resetting each cutout by pushing the reset button located in the center of the cutout. Determine and fix the cause of the overheating. Obstructions in the water path can restrict the flow of water through the heater causing it to overheat. Verify the heater's inlet filter screen and all outlets served by the heater are clear of debris. Ensure the heater is not being fed preheated water. This water heater is designed for a cold water feed only. If thermal cutout does not reset, check for continuity through each cutout (Less than 0.5 Ohms). If any cutout reads more than 0.5 Ohms or open, then it may be defective and should be replaced.								
The power supply voltage has dropped	<div>This is likely an issue with the incoming power supply. Have a qualified electrician measure voltage on the water heater's terminal block while operating at maximum flow and maximum temperature setting. The AE115 / AE125 models are rated for 240V and will also operate at 220V or 208V with reduced output. The output will vary in accordance with the following ratios:</div> <table><tr><td>Volts</td><td>208</td><td>220</td><td>240</td></tr><tr><td>Output Ratio</td><td>0.75</td><td>0.84</td><td>1.0</td></tr></table>	Volts	208	220	240	Output Ratio	0.75	0.84	1.0
Volts	208	220	240						
Output Ratio	0.75	0.84	1.0						
The inlet water temperature is too cold	Verify the heater is sized appropriately for its geographic location. Turn temperature knob located on the bottom of the water all the way clockwise for maximum temperature setting. Ensure flow rates are within the heater's specifications. Refer to Graph 1 on Page 8 of the manual. Use of an isolation valve on the hot water outlet to control flow rate is recommended.								
One of the power supplies is not on	Have a licensed electrician verify adequate voltage on the terminal block inside the water heater. Verify circuit breakers serving the heater are not tripped. See the "Electrical connections" section on Page 5 of this manual.								
Premature element failure	Shut off power to the unit and remove cover. Use an ohmmeter to verify correct resistance on each element. If readings are different than listed specifications on Page 14, contact Technical Support (866) 642-3199 for further instruction.								

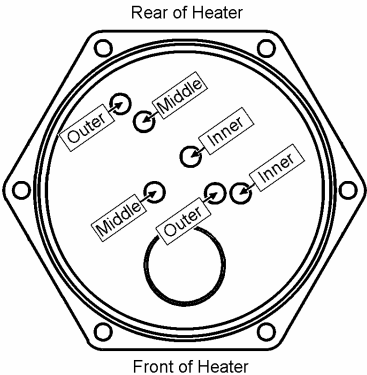
Using an Ohmmeter to check for Premature element failure

LEFT MODULE Top View



Meter probes	Ohm Reading
Outer to Outer	10.5 ± 0.5 Ohms
Middle to Middle	11.5 ± 0.5 Ohms
Inner to Inner	15.0 ± 1 Ohms

RIGHT MODULE Top View



Meter probes	Ohm Reading
Outer to Outer	10.5 ± 0.5 Ohms
Middle to Middle	11.5 ± 0.5 Ohms
Inner to Inner	21.0 ± 1 Ohms

Note: On AE115 model, there is no middle element.

Water flow too low	
There are restrictions in the plumbing	Obstructions in the water path can restrict the flow of water through the heater. Verify the heater's inlet filter screen, faucet aerators, showerheads and whole house filters are clear of debris. Verify proper flow on the outlet side of the heater with the hot water pipe disconnected. Maximum flow rates for each unit are as follows. AE115 = 2.3gpm, AE125 = 3.5gpm.
Water supply pressure too low	Verify incoming water supply is at least 30psi. For people on well systems, the recommended pressure range is 30-50psi.
Outlet shut-off valves are set too low	Adjust installer supplied outlet valve as described below: <ul style="list-style-type: none">• Completely open both installer supplied inlet and outlet shut-off valves at the heater. (if none installed, install before proceeding)• Completely open hot water on the highest flowing hot water fixture served by the heater (i.e. bathtub).• Slowly close the outlet shut-off valve, slowing the water flow rate until the temperature at the hot water faucet corresponds to the values given on Graph 1 on Page 8 of the manual, or desired water temperature is reached.

Water Temperature Too Hot

Temperature dial set too high	Turn the temperature knob located on the bottom of the water heater counterclockwise for cooler temperatures.
There are restrictions in the plumbing	Obstructions in the water path can restrict the flow of water through the heater causing overheating. Verify the heater's inlet filter screen, faucet aerators, showerheads and whole house filters are clear of debris. Verify proper flow on the outlet side of the heater with the hot water pipe disconnected. Opening hot water isolation valve fully may be necessary. Maximum flow rates for each unit are as follows. AE115 - 2.3gpm, AE125 - 3.5gpm.
Inlet water temperature is too warm	Verify the heater is being feed with cold water only. This water heater is not designed for preheated water or recirculation applications. Increase flow rate where ever possible. Replacing low flow showerheads and aerators with higher flowing (GPM) ones may be necessary.

Water Temperature Fluctuates

Cold mix, heater deactivates	If inlet water temperature is over 70°F, water may be very hot out of the tap. This requires a lot of cold water to be added in order to get a usable hot water temperature. The addition of too much cold water will overpower hot water demand from the water heater. This slows the flow within the water heater, decreasing it below the activation point, which shuts off the heater. The end result is nothing but cold water coming out of the outlet. Increase the flow rate by cleaning or replacing fixtures and lower the setting on the temperature adjustment knob. See service bulletin TWH-E2-04 at www.boschhotwater.com for further troubleshooting on this symptom.
Fluctuating water pressure	If the water pressure in the home is erratic and the water flow is not consistent while a tap is opened, then the temperature of hot water will fluctuate. The minimum water pressure for the home should be 30psi or greater. For people on well systems the minimum pressure range is 30-50psi. The use of a pressure reducing/regulating valve is an effective way to maintain constant water pressure to the water heater. Watts brand 25AUB- ¾" or N35B-¾" pressure reducing/regulating valves or equivalent is suggested.
Changing flow rate	Major changes in flow rate can adversely affect the output water temperature of the heater. Increases from one major fixture running to multiple fixtures running at one time can cause the temperature to fluctuate. Stay within the heater's specifications. See Graph 1 on page 8.

PowerStar LIMITED 10 YEAR WARRANTY

COVERAGE

BOSCH THERMOTECHNOLOGY CORP. guarantees this water heater to the original owner of the water heater at the original installation location against defects in material and workmanship for the periods specified below.

WARRANTY PERIOD

1. The Heating Modules – If the original heating module leaks or fails within ten (10) years from the date of original installation of the water heater because of a defect in material or workmanship, Bosch Thermotechnology Corp will furnish to such an owner a replacement heater of the then-prevailing

(Continued...)

(...Continued)

comparable model. *However, if the water heater is installed in other than a single family dwelling this heating modules warranty is limited to two (2) years from the date of original installation and operation.*

Note : Damage caused by exposure to freezing conditions is not covered by the warranty.

Note : Damage caused by scale formation is not covered by the warranty.

2. Any Component Part Other Than the Heating Modules – If any other component part (other than the heating modules) proves to be defective in material or workmanship within one (1) year from the date of original installation of the water heater, Bosch Thermotechnology Corp. will furnish the owner with a replacement of the defective part(s).
3. Verification of Date of Original Installation – When owner cannot verify or document the original date of installation, the warranty period begins on the date of manufacture marked on the tag affixed to the water heater.

EXCLUSIONS

1. THIS LIMITED WARRANTY SHALL BE THE EXCLUSIVE WARRANTY MADE BY THE MANUFACTURER AND IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED (WHETHER WRITTEN OR ORAL), INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
2. Manufacturer shall not be liable for incidental, consequential, special or contingent damages or expenses arising, directly or indirectly, from any defect in the water heater or the use of the water heater.
3. Manufacturer shall not be liable for any water damage arising, directly or indirectly, from any defect in the water heater component part(s) or from its use.
4. Manufacturer shall not be liable under this warranty if:
 - a) The water heater or any of its component parts has been subject to misuse, alteration, neglect or accident, or;
 - b) The water heater has not been installed in accordance with the applicable local plumbing and/or building code(s) and/or regulation(s), or;
 - c) The water heater has not been installed in accordance with the printed manufacturer's instructions, or;
 - d) The water heater is not continuously supplied with potable water.
5. The owner and not the manufacturer or his representative shall be liable for and shall pay for all field damages for labor or other expenses incurred in the removal and/or repair of the product or any expense incurred by the owner in order to repair the product.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHERS.

IMPORTANT: OWNER SHALL KEEP THIS CERTIFICATE

NOTE: A water heater must be installed in such a manner that if it should leak, the resulting flow of water will not cause damage to the area in which it is installed.

The person who initially installed the unit is the best one to contact for help.

You can also call Bosch Thermotechnology Corp. at 866-642-3199. Please have this guide, model number, serial number and date of installation with you when you call.

**Bosch Thermotechnology
Corporation**

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06.17.08