



Schaefer HotZone™ Electric Patio Heater

Infrared Heater - High Output

INSTALLATION & OPERATION INSTRUCTIONS



HZE-1500P



HZE-1500W



SCHAEFER
Ventilation Equipment

800-779-3267

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Specifications

Congratulations on purchasing a Schaefer HotZone™ Electric Patio Heater. Your new heater should give you many years of maintenance-free comfort. Unlike forced air heaters, HotZone™ heaters have no moving parts and warm people and objects, but not the air, with infrared radiation.

HotZone™ heaters have a patented, lobster eye inspired, compound reflective lens that focuses and directs the infrared energy into a beam (or a spot). These lenses are lightweight aluminum grids that look like a four-walled honeycomb structure and are capable of magnifying without overheating.

Because HotZone™ heaters focus and direct the infrared energy into a beam:

- HotZone™ heaters can be installed out of the way of people and equipment.
- The radiant intensity is much less sensitive to distance from the heater (your head doesn't cook while your feet freeze).
- They deliver between three and five times as much infrared energy to the spot, compared to a similar powered, unfocused high intensity infrared heater.
- They will raise the surface temperature of a 14 square foot area by 15° with a single 1500 watt heater mounted eight feet above it.

Plan your installation by identifying the area you want heated and how much temperature increase you need. Imagine the heater as a kind of floodlight and place it so as to cover your target area with enough heat.

Model HZE-1500W includes an aluminum wall mounting bracket with on/off switch and 9' power cord.

Model HZE-1500P includes a pedestal and base with on/off switch, tip switch and 15' power cord.

This appliance has been developed specifically for outdoor use, and must be installed on a non-flammable surface.

The heater unit itself is ETL certified to UL 2021 (Fixed and Location Dedicated Electric Room Heaters).

WARNING

The safety of this product can only be guaranteed if these instructions are followed. Please keep them for future reference.

- *Always disconnect the heater from the main electrical supply during installation and/or replacement of the heater element.*
- *Infrared energy heats people and objects when it is absorbed. Flammable objects placed too close to the heater lens could catch fire.*

Power Supply	120V, 60Hz, single phase, 15 amp circuit	
Element	1500 watt	
Weight	HZE-1500W	5 lbs
	HZE-1500P	20 lbs
Dimensions	Heater alone	14" wide x 14" high x 9.5" deep (without junction box)
	HZE-1500W	18" deep (with junction box and mounting bracket)
	HZE-1500P	24" diameter base x 102" total height
Minimum mounting height		72"
Minimum mounting clearance to structure above		9"
Minimum distance from front face of heater to surface		48"
Minimum distance from side of heater to surface		1"

When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

- Read all instructions before installing and using this heater.
- Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
- Never locate heater where it may fall into water or combustibles.
- Do not install closer than the minimum clearances to any surface.
- Install heaters so that items in the infrared beam of the heaters do not overheat.
- A heater has hot and/or arcing and/or sparking parts inside. Do not use it in areas where gasoline, paint, flammable liquids or highly combustible dusts are used or stored.
- If the unit is installed in proximity of tents or awnings, please be sure that recommended installation heights and clearances are respected, and that the heater is not in direct contact with the tent or awning material.
- Allow for user angle and directional adjustment, if possible, as heating requirements change. The optimal mounting angle is between directly down and 45°. Comfort is best obtained with the heater off to one side and angled at 35°.
- Heater must be installed according to NEC and all local electrical codes.
- Be sure the electrical supply is adequate for the heater (voltage/amps/phase) while allowing for line losses.
- The heater should *always* be connected to a grounded circuit. If a GFCI socket is not available, GFCI adapters can be purchased locally.
- Never use an extension cord with this appliance.
- To avoid burns, do not touch hot surfaces with bare skin. Keep combustible materials at least 48" from the front of the heater and avoid contact with the sides, back and top.
- Extreme caution is necessary when any heater is used in areas with children or persons that may not have reasonable judgement around appliances. The heater should never be used unattended.
- Do not insert or allow foreign objects to enter the heater or block any ventilation openings as this may cause an electric shock or fire, or damage the heater. Do not cover or obstruct the heater while operating.
- Do not operate any heater with a damaged cord or plug or after the heater malfunctions, has been dropped or damaged in any manner. Return heater to dealer for examination, electrical or mechanical adjustment, or repair.
- Burned-out elements cannot be repaired and must be replaced. The element can be replaced by the user; please follow the instructions provided.
- ***Always disconnect the heater from the main electrical supply during installation and/or replacement of the heater element.***

HZE-1500W Installation

**** The power cord MUST be attached to the heater BEFORE the unit is secured to the wall. ****

Remove the four Phillips head screws that hold the junction box cover in place.

Follow the Wiring Instructions on page 6, then return to this page.

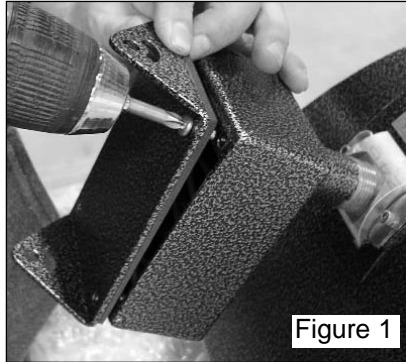
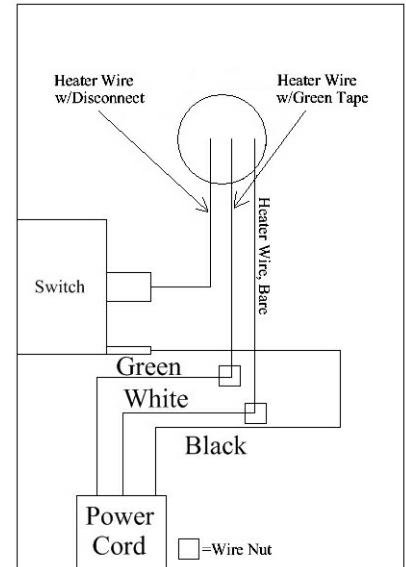


Figure 1

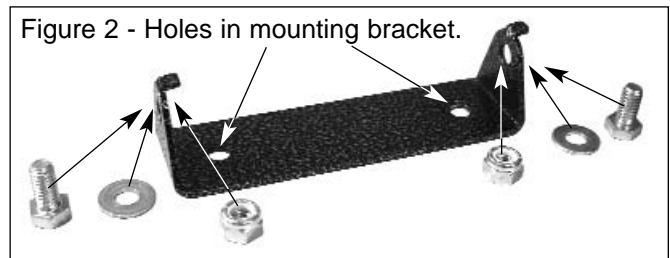


HZE-1500W Wiring Schematic
(see page 6 for instructions)

WALL MOUNTING BRACKET

The heater does NOT include hardware for attaching the mounting bracket to the wall.

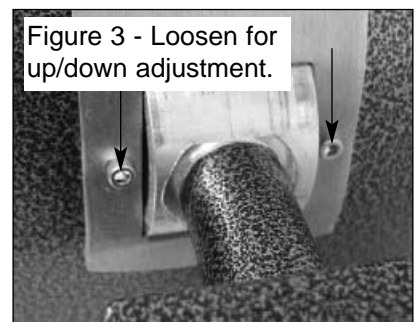
1. Use the four Phillips head screws removed above to attach the junction box cover. (Figure 1)
2. Remove the mounting bracket from the hardware bag. (Figure 2)
3. Determine an appropriate mounting location according to all specified clearances, and be sure your mounting hardware will fasten the unit securely to the wall. Place your mounting hardware through the holes in the bracket to secure it to the wall.
4. Lift the heater up to the bracket and secure with the two bolts, washers and nuts from the hardware bag.



The bracket is adjustable both up and down and from side to side.

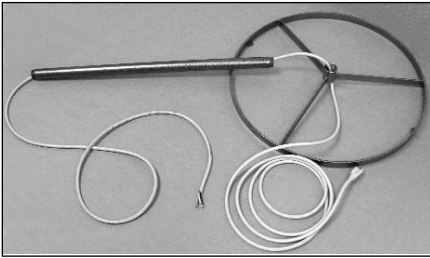
When adjusting up and down, be sure to loosen the allen screws (using the allen wrench provided) before moving the heater and then tighten them just enough to hold the unit in place. (Figure 3) ***Overtightening can bend the frame and damage the unit.***

Use caution when adjusting the heater from side to side. Be sure the bolts and nuts pictured above (which attach the junction box to the mounting bracket) are not too tight. (Figure 2)



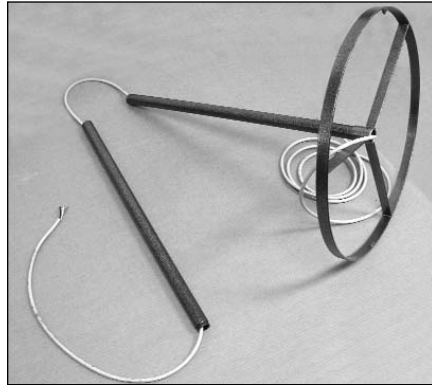
5. Plug the heater in and test operation.

PEDESTAL ASSEMBLY

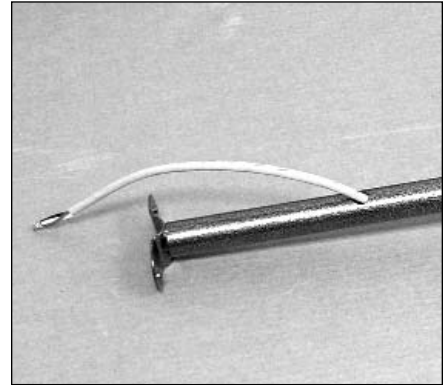


The unit should be assembled in an area where it can be tipped down.

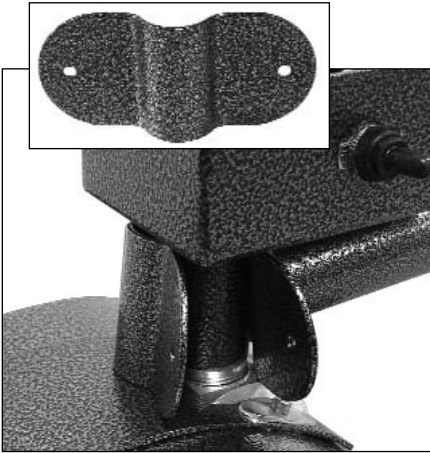
1. Insert the power cord through the hole in the center of the base and then through one of the two identical poles (lower end is threaded on the outside).
2. Insert the lower end of the pole into the center of the base and turn to tighten.



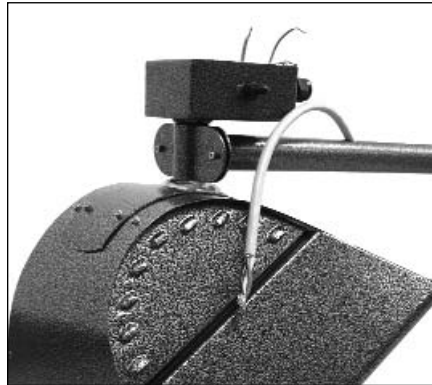
3. Insert the power cord through the other identical pole (lower end has threads on the outside).
4. Insert the lower end of the middle pole into the upper end of the bottom pole and turn to tighten.



5. Insert the power cord through the top pole (lower end has threads on the outside; upper end has bracket). The cord must exit the pole through the hole near the top, as shown.
6. Insert the lower end of the top pole into the upper end of the middle pole and turn to tighten.

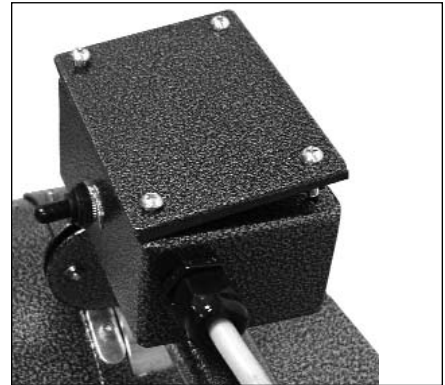


7. Place the short stub that connects the junction box to the heater body in the bracket on the top pole. Place the small bracket piece over the stub and insert two allen screws. Use the allen wrench provided to tighten these screws which hold the heater on the pedestal.



8. Remove the four Phillips head screws that hold the junction box cover in place.

The heater is ready to be wired. Follow the Wiring Instructions on page 6, then return to this page.

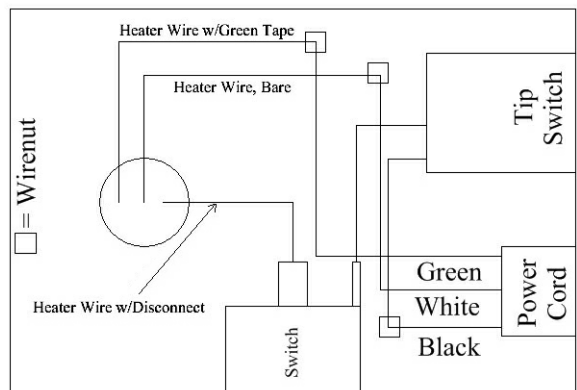


9. Use the four Phillips head screws removed earlier to attach the junction box cover, as shown.
10. Be sure the heater is still firmly attached to the pedestal, then tip it upright and plug it in to test operation.

**** The heater MUST be secured to the pedestal BEFORE the power cord is attached. ****

**** All three pedestal poles MUST be used. ****

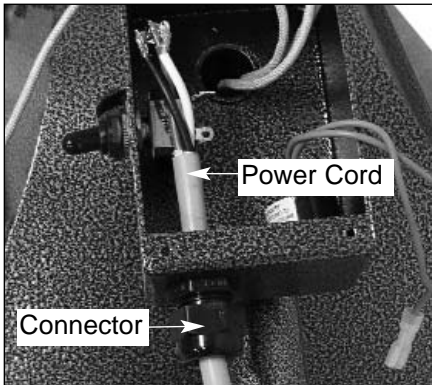
HZE-1500P Wiring Schematic
(see page 6 for instructions)



Wiring Instructions (all models)

**** HZE-1500W The power cord MUST be attached to the heater BEFORE the unit is secured to the wall. ****

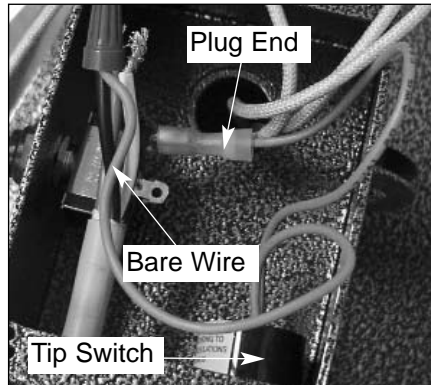
**** HZE-1500P The power cord MUST be attached to the heater AFTER it is secured to the pedestal. ****



1. ALL MODELS

Insert the power cord through the connector in the bottom of the junction box.

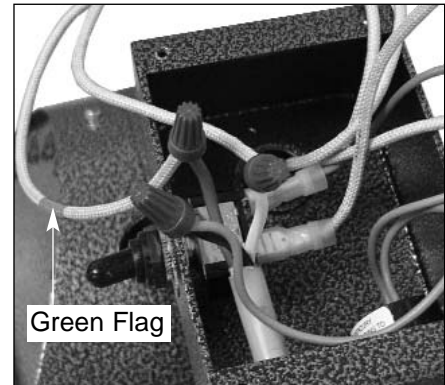
Tighten the connector.



2. HZE-1500P

Connect the bare wire from the tip switch to the black wire from the power cord with a wire nut.

Plug the wire from the tip switch with the plug attached onto the clip on the END of the ON/OFF switch.

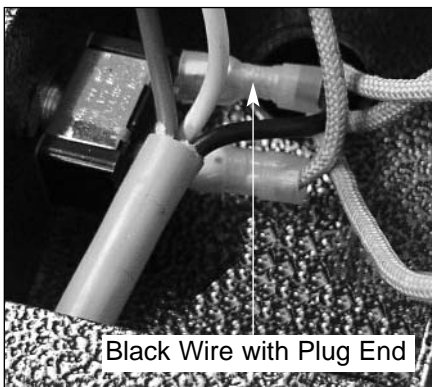


3. HZE-1500P

Connect the heater wire with the green flag to the green wire from the power cord with a wire nut.

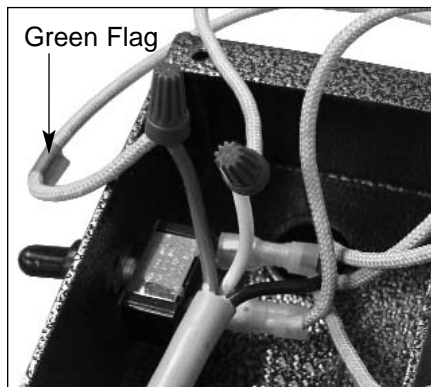
Connect the plain heater wire to the white wire from the power cord with a wire nut.

Plug the heater wire with the plug attached onto the clip in the MIDDLE of the ON/OFF switch.



2. HZE-1500W

Plug the black wire from the power cord onto the clip on the END of the ON/OFF switch.

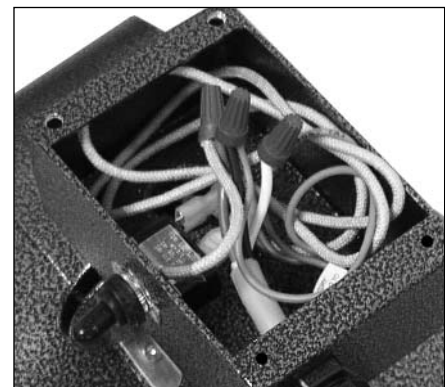


3. HZE-1500W

Connect the heater wire with the green flag to the green wire from the power cord with a wire nut.

Connect the plain heater wire to the white wire from the power cord with a wire nut.

Plug the heater wire with the plug attached onto the clip in the MIDDLE of the ON/OFF switch.



4. ALL MODELS: Carefully coil all the wires into the box so the cover can be attached.

Return to the appropriate Installation Instructions.

MAINTENANCE

- The heater body can be washed with gentle detergent and a soft wash cloth. **Do not use a pressure washer.** With an air hose regulated to 30 psi, blow off any dust and dirt from in front of the heater that has accumulated on the reflective surfaces of the heater and reflective lens. A vacuum cleaner can be used as well. Accumulated dirt will degrade performance.
- Blow off or vacuum any accumulated dirt on the vent holes of the heater and make sure they are not bent such that the vent area is reduced.
- When not installed or in use, store the heater in a dry, dust-free place and be sure the lens-assembly is protected from any possible damage.
- The heater lens is manufactured from thin aluminum and is easily bent and damaged. Heater performance deteriorates when the lens is bent or damaged. In most cases the lens can be bent back into shape by hand or with pliers. If the lens cannot be repaired, it can be replaced.
- If the heater is turned on when wet it may steam and sizzle a bit but this will subside as it dries.

TO CHANGE THE COLOR OF THE HEATER

- The outer housing of the heater can be spray painted with 160° metal paint. **DO NOT** paint the bare aluminum lens or inside surfaces. (The bare aluminum reflects 100% of the infrared heat; paint absorbs infrared and will cause the unit to overheat. *This will void the warranty.*)

TROUBLESHOOTING

At full power and after two to three minutes of warm-up time, the heater element should glow a warm orange color, similar to the color of coals in a hot fire.

If the element does not warm up at all:

- Is the service power on at the circuit breaker?
- Is there a switch or dimmer in the circuit? Is the switch on?
- Is the element in working condition? Burned out elements normally have visible burn marks on the face of the element. If there is no evidence of damage, and you still suspect the element, turn off the power at the circuit breaker, disconnect the service power and check element resistance. It should be approximately 10 ohms.
- Are the high temperature leads connected to the element? Turn off the power at the circuit breaker. Remove the element from the heater housing and check the connections at the back of the element.

If the element barely glows:

- Is the outlet on a dimmer? Is the dimmer turned full on and operating correctly?
- Is the heater plugged into an outlet that provides 120V? If the outlet provides less than 120V the element will not operate correctly.

If the element glows a bright orange-white and heats up very quickly:

- The heater is receiving too much power and will burn out very quickly if it is not turned off.
- Is the heater plugged into an outlet that provides 120V? If the outlet provides more than 120V the element will not operate correctly.
- Is the element damaged? A short circuit between adjacent coils will cause some coils to go dark and some coils to overheat. Damaged elements cannot be repaired and must be replaced.

Element Replacement

HEATER ELEMENT

The CerIR™ heating element operates at approximately 1800° F. The element is resistant to thermal and mechanical shock, and is appropriate for use in both wet and dry locations. (Figure 4)

The element has an expected life of 2000 hours. When an element burns out, it cannot be repaired and must be replaced. For replacement, have your heater model number available and call your dealer or Schaefer Ventilation to order Schaefer part number HZEL-1500-120.

To replace the element:

Always disconnect the heater from the main electrical supply during installation and/or replacement of the heater element.

1. Remove the heater from the wall bracket (HZE-1500W) by removing the two bolts, washers and nuts from the bracket. (Figure 2 and Figure 5)

Remove the heater from the pedestal (HZE-1500P) by removing the two allen screws that hold the bracket together (you will need to tip the unit down first).

2. Place the heater on a level, flat surface. Be careful not to bend the lens (lay the heater on a soft or padded surface, such as a folded towel or bubble wrap).
3. Remove the four screws that hold the cover on the junction box. Remove the cover. (Figure 5 and Figure 6)
4. Remove the two allen screws that hold the element frame in place. (Figure 7)
5. Carefully slide the element frame out to one side. Notice the two wires that are being pulled out of the junction box; feed them out as they are pulled by the frame. (Figure 6 and Figure 8)
6. Lay the element frame as flat as possible next to the heater (still attached by the two wires). (Figure 9)
7. Disconnect the two lead wires from the two ring terminals on the used element. Do not lose the hardware! (Figure 10)

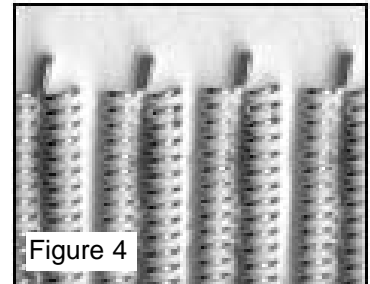


Figure 5 - Wall bracket removed from conduit box.

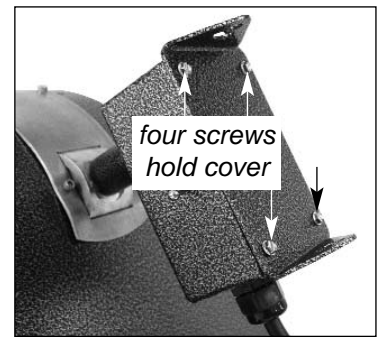


Figure 6 - Conduit cover removed from conduit box.

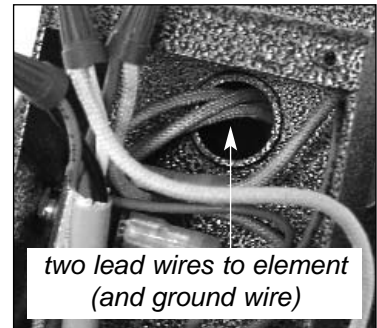
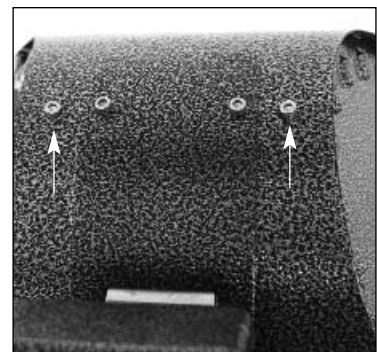


Figure 7 - Two allen screws hold element frame in housing.



Element Replacement cont'd

8. Loosen the four screws that hold the element in the frame. Remove the used element. (Figure 9)
9. Lay the new element into the frame. Center it and then tighten the four screws to hold it in place.
10. Attach the two leads using the hardware that was removed from the used element (it does not matter which wire connects to each ring terminal). (Figure 9)
11. Carefully slide the element frame back into the heater. The two wires must be carefully pulled back into the junction box as the element is slid into place (leaving them loose in the heater housing can cause them to overheat). (Figure 6)
12. Replace the two allen screws that hold the element frame in place. (Figure 7)
13. Replace the junction box cover and the four screws that hold it in place. Be sure the gasket is intact. (Figure 5)
14. Attach the heater to the wall mount bracket or pedestal using the hardware removed in Step 1. (Figure 2)
15. Connect the heater to electrical supply and test for operation.

Figure 8 - Element in frame slides in/out of housing.



Figure 9 - Element in frame with lead wires connected.

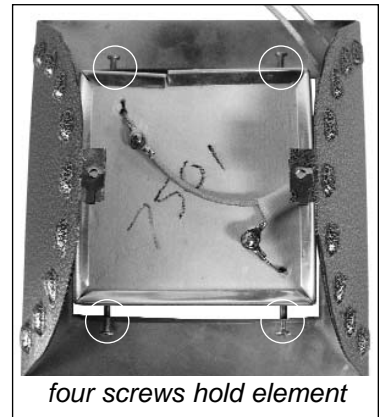


Figure 10 - Lead wires disconnected from element.



Warranty

Schaefer Ventilation Equipment, LLC. warrants to the original purchaser that our products which prove to be defective in material or workmanship within one year (unless otherwise specified) from date of purchase will be repaired or replaced at the option of Schaefer Ventilation Equipment, LLC. F.O.B. Sauk Rapids, Minnesota.

Products with warranty periods that differ from the stated one-year warranty are listed below. These products are subject to all other provisions as stated in The Schaefer Warranty.

HZE-1500 Series Heaters are warranted to the original purchaser new goods or parts to be free from defects in material and workmanship for the following periods of time from the time of delivery:

- Electric elements - one year of regular, periodic use or 2000 hours of continual use.
- All other heater components - three years.

What is Not Covered By The Warranty

The warranty does not cover:

- (1) Installations not made in accordance with installation instructions;
- (2) Where the operation of the product varies substantially from our operating instructions;
- (3) Malfunctions resulting from misuse, negligence, alteration, accident or lack of performance of required maintenance;
- (4) Loss of time, inconvenience, loss of use of the product, or other consequential damages;
- (5) Removal of any manufacturer nameplate.

The above constitutes our sole warranty.

THERE IS NO WARRANTY OF MERCHANTABILITY AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF.

All information, illustrations and specifications provided here are based on the latest product information available at the time of printing. Product specifications subject to change.



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