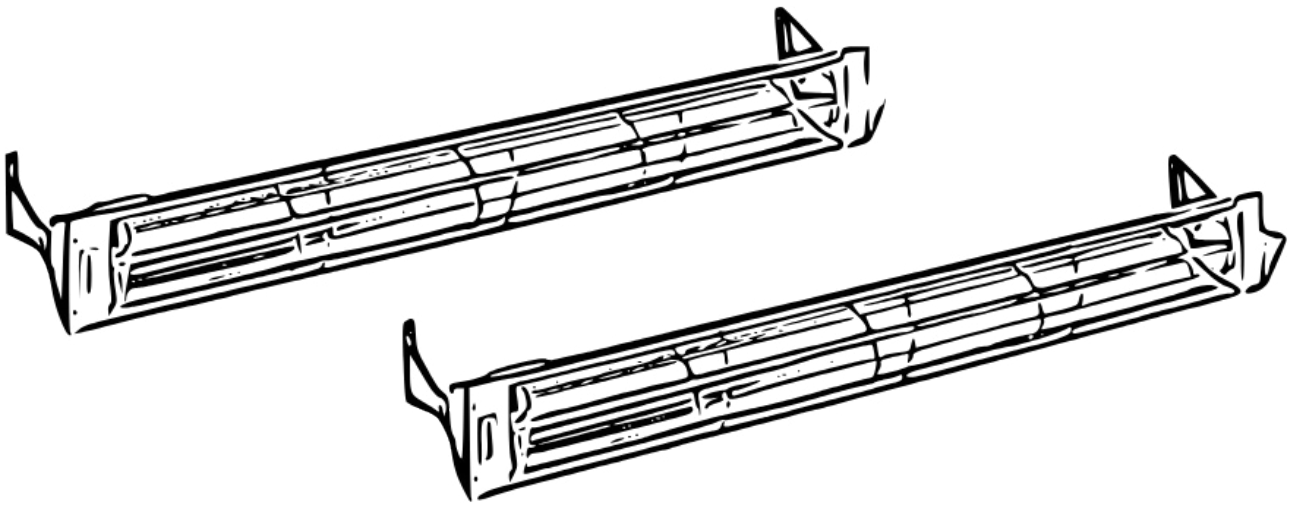
Schwank
Heating. Design. Comfort.



Schwank
Installation Manual & Operation Manual

eSchwank ES/ESD Series Electric Heater

Warnings

READ ALL INSTRUCTIONS BEFORE USING HEATER

Unit may be a source of possible shock. NEVER attempt to service heater without disconnecting its power source.

Source of possible ignition - maintain clearances from combustible materials.

⚠ **WARNING:** If not installed, operated and maintained in accordance with the manufacturer's instructions, this product can expose you to chemicals including nickel, which are known to the State of California to cause cancer.

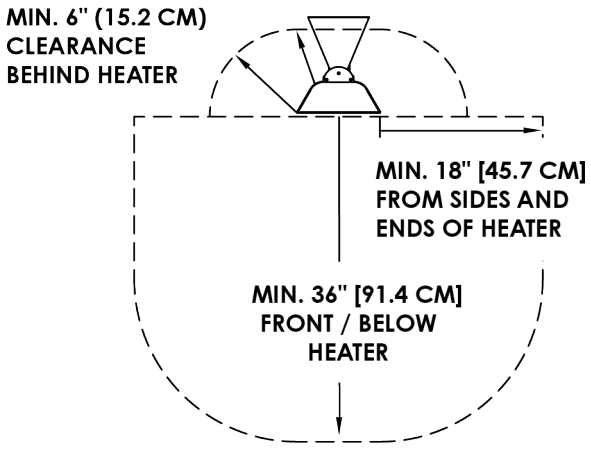
For more information go to www.P65Warnings.ca.gov.

Caution

High Temperature, risk of fire, keep electrical cords, drapery, furnishings and other combustibles at least 3' [0.9m] from the front of heater and away from sides and rear.

Mounting Height/Clearances

CLEARANCE FROM HEATER SURFACES TO COMBUSTIBLES:



- **Wall-Mounting:** Do not install heater closer than 18" (45.7 cm) from adjacent walls and 12" (30.5 cm) from ceiling and do not install less than 8' (2.4 m) from floor.
- **Ceiling-Mounting:** Do not install heater closer than 18" (45.7 cm) from adjacent walls and 6" (15.2 cm) from ceiling and do not install less than 8' (2.4 m) from floor.
  - For heater angled greater than 30° from horizontal, use spacers above mounting brackets to provide minimum 6" (15.2 cm) clearance above heater to combustible ceiling.
- Adjacent Heaters to be installed no less than 3' (0.9 m) apart.
- Do NOT operate within 25' (7.6 m) of flammable/explosive material.
- Never block heater.
- Heaters greater than 240 Volts are for "Commercial Use Only. Risk of fire. Do not use as a residential or household heater."
- A means for disconnection of the appliance must be incorporated in accordance with local wiring codes.
- Do not use if the heating element is damaged or cracked.

IMPORTANT INSTRUCTIONS

SAVE THESE INSTRUCTIONS

Installation Instructions

This heater must be permanently installed and hard wired by a licensed electrician in accordance with local electrical codes. Assembly procedure must be performed with no electrical power to unit.

Step 1: Check UL/CUL/CE rating label on heater for proper voltage.

Step 2: Follow supplied wiring instructions. [See wiring instructions below]

Step 3: Heater must be mounted with reflector angled down [maximum 60° from horizontal].

Step 4: All electrical connections must be in compliance with the National Electric Code [NEC] and local codes for outdoor wiring.

Step 5: Use only wiring components UL/CUL/CE listed for outdoor use with IPX4 minimum rating.

Specifications

Model	Watts	Length	Volts/Amps				Phase	Ship Weight (ib/kg)
ES/EL-519	500	19.5"			120 / 4.2		Single	10 / 4.5
ES/EL-719	750	19.5"			120 / 6.3		Single	10 / 4.5
ES/EL-1033	1000	33"			120 / 8.3		Single	12 / 5.4
ES/EL-1533	1500	33"	120 / 12.5	208 / 7	240 / 6.3		Single	12 / 5.4
ES/EL-2039	2000	39"	208 / 10	240 / 8.3	277 / 7	480 / 4	Single	13 / 5.9
ESD/ELD-3033	3000	33"	208 / 14	240 / 12.5	277 / 11	480 / 6	Single	13 / 5.9
ES/EL-3061	3000	61.25"	208 / 14	240 / 12.5	277 / 11	480 / 6	Single	20 / 9.1
ESD/ELD-4039	4000	39"	208 / 19	240 / 16.7	277 / 14	480 / 8.3	Single	14 / 6.4
ES/EL-4061	4000	61.25"	208 / 19	240 / 16.7	277 / 14	480 / 8.3	Single	20 / 9.1
ESD/ELD-6061	6000	61.25"	208 / 28.8	240 / 25	277 / 21.7	480 / 12.5	Single	21 / 9.5

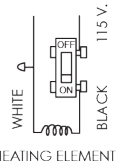
Wiring Instructions

The heater is drilled and threaded for standard 1/2" conduit fittings. The installing electrician will need to provide the appropriate rigid metallic, flexible or liquid tight conduit for the installation location.

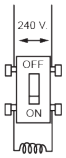
- Observe local electrical code regulations.
- Remove cover plate from junction box.
- Attach conduit.
- Use only copper wire suitable for 90°C.
- Replace cover plate.

TYPICAL WIRING OPTIONS

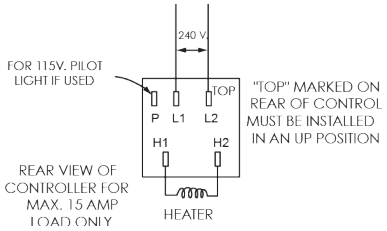
TYPICAL 120V WIRING FOR A SINGLE POLE SWITCH



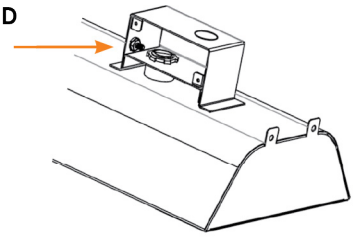
TYPICAL 240V WIRING FOR A TWO POLE SWITCH



WIRING FOR OPTIONAL 120V/240V CONTROLS

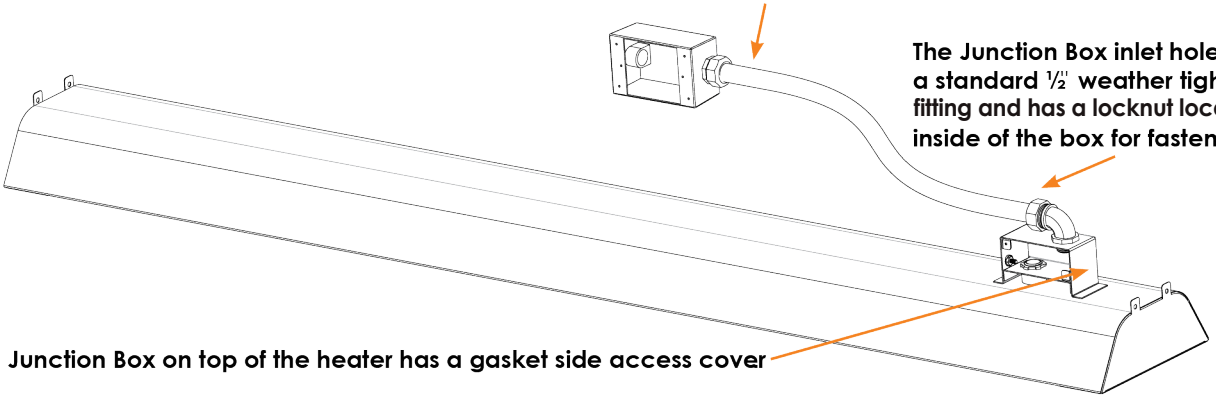


GREEN GROUND WIRE SCREW



Connect power with flexible conduit or appropriate cord to allow heater to be swiveled.

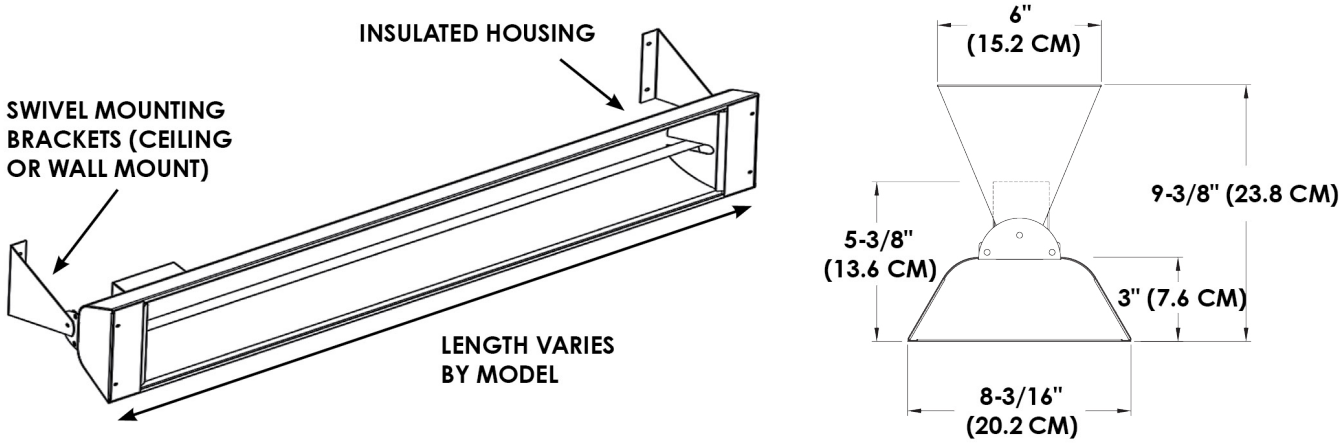
The Junction Box inlet hole is sized for a standard ½" weather tight conduit fitting and has a locknut located on the inside of the box for fastening.

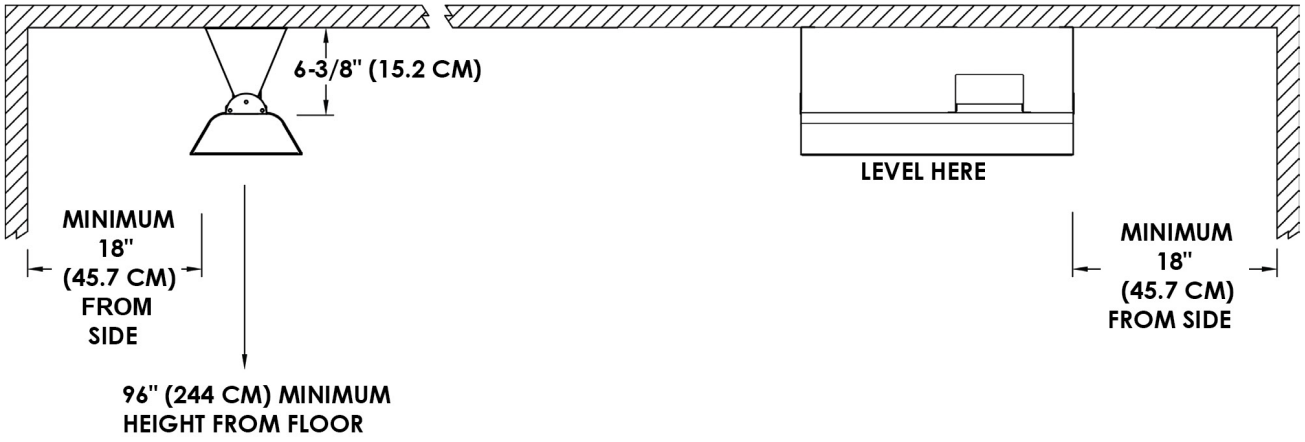


Junction Box on top of the heater has a gasket side access cover

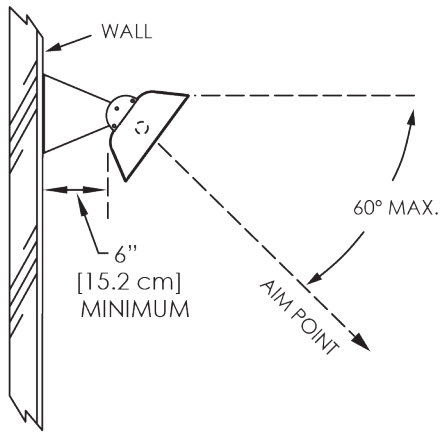
Mounting Instructions

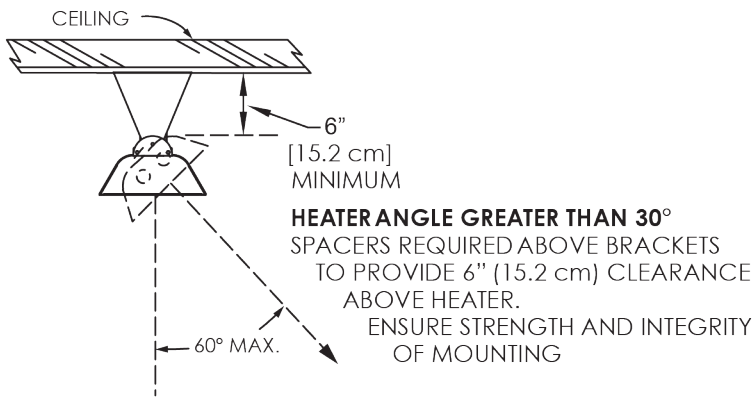
These models may be chain or bracket mounted to any ceiling or horizontal surface. Installation must be such that 18" (45.7 cm) minimum clearance is maintained around the heater on all 4 sides and 36" (91.4 cm) directly in front/ below. Aminimum of 6" (15.24 cm) of clearance provided by mounting brackets is required behind the plane of the face. Heater can be hung using chains or custom brackets. Heater must be level along length, but can be rotated around its horizontal axis.





Heater must be installed with the Quartz horizontally level. For maximum tube life, use a carpenter's level tool to find the optimum level position for the heater's body. Always maintain the minimum clearances from the heater body to any combustible materials.

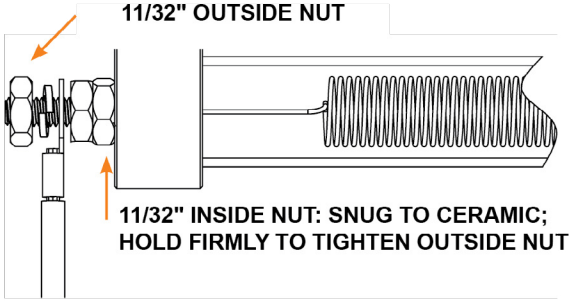




Replacement Element Installation

Disconnect the power at the breaker. Remove the grill by grasping it in the middle, flex grill up and lift it off. Unscrew and remove both end reflectors. Unhook element clips at each end of the heater and remove nuts from end of element to remove the existing Quartz. Carefully install the new element. Remove one nut from end of the new element. Install wire by sliding high temperature ring terminal onto element screw and replace nut. Use a thin 11/32" wrench to hold inside nut. Nuts must make a tight connection. Close element clips over tube, reinstall end reflectors, then snap protective grill back in place.

NOTE: Hold ceramic element firmly while tightening nut to prevent damage to element. Nut should be tightened snug. A loose connection can cause the element to short or fail prematurely.



Replacement Elements (277 & 480 voltages also available)

Part Number	Length	Watts	Volts	Fits
JE-0550-12	16.5" (0.4 m)	500	120	ES-0519-12, EL-0519-12
JE-0551-12	16.5" (0.4 m)	750	120	ES-0719-12, EL-0719-12
JE-0552-12	30" (0.8 m)	1000	120	ES-1033-12, EL-1033-12
JE-0553-12	30" (0.8 m)	1500	120	ES-1533-12, EL-1533-12
JE-0554-20	16-1/2" (0.4 m)	2000	208	ES-2039-20, ES-4039-20/EL-2039-20, EL-4039-20
JE-0556-20	30" (0.8 m)	3000	208	ES-3061-20, ES-6061-20/EL-3061-20, EL-6061-20
JE-0557-20	36" (0.9 m)	4000	208	ES-4061-20/EL-4061-20
JE-0554-24	36" (0.9 m)	2000	240	ES-2039-24, ES-4039-24/EL-2039-24, EL-4039-24
JE-0556-24	58" (1.5 m)	3000	240	ES-3061-24, ES-6061-24/EL-3061-24, EL-6061-24
JE-0557-24	58" (1.5 m)	4000	240	ES-4061-24/EL-4061-24

Consult the label on back of heater for proper watts, voltage, and replacement element part number.

Need help?
To order replacement elements for your heating system, please contact us via phone or visit our website.

Replacement Parts

Part Number	Part Description	Quantity
JE-0570-XX	Single Element End Reflector (Set of 2)	1
JE-0571-XX	Dual Element End Reflector (Set of 2)	1
JE-0573-XX, JE-0574-XX, JE-0575-XX	Body Reflector – Fits 33"(0.8 m), 39" (1.0 m), 61-1/4" (1.6 m)	1
JE-0577-XX, JE-0578-XX, JE-0579-XX	Grill Guard – Fits 33" [0.8 m], 39" (1.0 m), 61-1/4" (1.6 m)	1
JE-0581-XX, JE-0582-XX, JE-0583-XX	Lead Wire Set – Fits 33" (0.8 m), 39" (1.0 m), 61-1/4" (1.6 m)*	1
JE-0585-XX	Stainless Steel Mounting Bracket (Set of 2)	1

Single Element Typical Area Coverage - feet (m)

Part Number	Watts	Mounting Height	Average	Cold	Protected
ES/EL-1533-20	1,500	6' - 8' (1.8 m - 2.4 m)	5' x 5' (1.5 m x 1.5 m)	3' x 3' (.91 m x .91 m)	7' x 7' (2.1 m x 2.1 m)
ES/EL-2039-24	2,000	7' - 9' (2.1 m - 2.7 m)	6' x 6' (1.8 m x 1.8 m)	4' x 4' (1.2 m x 1.2 m)	8' x 8' (2.4 m x 2.4 m)
ES/EL-3061-24	3,000	7' - 9' (2.1 m - 2.7 m)	8' x 8' (2.4 m x 2.4 m)	6' x 6' (1.8 m x 1.8 m)	10' x 10' (3.0 m x 3.0 m)
ES/EL-4061-24	4,000	8' - 11' (2.4 m - 3.4 m)	10' x 10' (3.0 m x 3.0 m)	8' x 8' (2.4 m x 2.4 m)	12' x 12' (3.7 m x 3.7 m)

Grounding instructions

Part Number	Watts	Mounting Height	Average	Cold	Protected
ESD/ELD-4039-24	4,000	8' - 12' (2.4 m - 3.7 m)	8' x 10' (2.4 m x 3.0 m)	6' x 8' (1.8 m x 2.4 m)	10' x 12' (3.0 m x 3.7 m)
ESD/ELD-6061-24	6,000	10' - 14' (3.0 m - 4.3 m)	11' x 11' (3.4 m x 3.4 m)	10' x 10' (3.0 m x 3.0 m)	12' x 12' (3.7 m x 3.7 m)

General Notes

electricSchwank [ES/ESD] and EL/ELD Series heaters are furnished with wall/ceiling mount swivel brackets. These brackets may be discarded when the heater is suspended with chains, or other special bracketing. See 'Specifications' page 2 for full listing of models, voltages, and amperages. At times, especially when the mounting height might be quite low, a greater quantity of smaller heaters can help prevent overheating. Heaters up to 15 AMPS can be controlled with a simple INF controller. This low cost controller, which is actually an infinite switch, gently pulses the heat on and off at regular intervals when not on full power.
Dual Element Heaters can be wired with Duplex/Stack Switch, which enables the ability to operate each element independently, providing for two-stage [half power/full power] capability.
For best comfort heat, heat from two sides rather than from just one side. However, there are site conditions where this is not practical.
Coverage areas indicated above are typical approximate dimensions and will vary depending on outdoor temperature, wind velocity, and personal comfort levels.
Indoor and well-protected environments will generally exceed

Maintenance Instructions

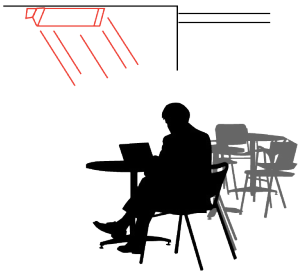
Before performing any maintenance or cleaning, **power must be disconnected** and the heater cool to touch. Heater housing, reflectors, and heating element can be rinsed with a hose or wiped down with isopropyl alcohol, acetone, or glass cleaner. Use a clean, scratch-free rag or paper towel. Any oxidation, surface rust, or discoloration can be removed with a stainless steel cleaner or metal polish on the bare metal surface.
Make sure all water, solvents, or cleaners are removed and the heater is dry before reconnecting the power.

Troubleshooting

Problem	What to do
Heater does not glow	▪ Check supply voltage to confirm it matches voltage of heating element.
Low heat output	▪ A 240V element connected to 110V or 208V will warm, but not glow orange or generate sufficient heat for typical applications [Matching your voltage is extremely important]. If element is visibly orange, but there is insufficient heat, refer to the areas covered with respect to conditions and mounting heights. ▪ Replace or clean dirty or non reflective reflectors.
Heater does not work	▪ Disconnect power and check element with ohm meter for continuity. If there is any continuity across the bulb, the problem is in the wiring/controls. ▪ Check that there is proper voltage to the heater. ▪ Check that the control/switch is working. ▪ Check main power circuit breaker. ▪ Check wiring for a loose connection or burned wire.

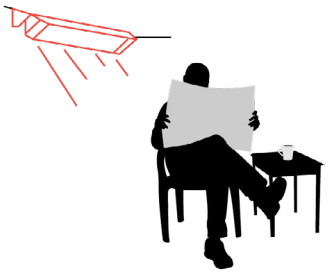
Location Settings

Unless heaters are installed over 12' (3.7 m) high, it is generally recommended that all radiant heaters be mounted on an angle to assure that radiant warmth is distributed from the sides rather than straight down on the heads and shoulders of the people being warmed.



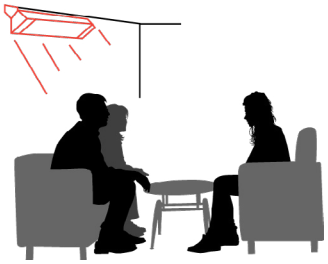
Outdoors

When outdoors, hang heater under protective roof or weather cover whenever possible. Even though heater is all-weather construction, it will last longer and look better if it is protected from rain and snow.



Recommended Positioning

Angle fixture 30° to 60° from horizontal face down. Best angle is approximately 45°.



Installation Direction

Install fixture to heat the area from the "cold side" if possible. This helps compensate for increased body heat losses due to exposure. Warm floors reradiate heat. Warmer air rises from floor. Some heat reflects from floor. Mounting a heater directly over a table or other obstruction will block the energy, primarily heating the object. It is best to move heater to the side, allowing complete body and floor coverage.

Limited Product Warranty

Important: Please retain original proof of purchase to establish warranty period.

eSchwank ES/ESD and EL/ELD Series Electric Powered Radiant Heaters:

The Manufacturer warrants that this product is free from defects in material or workmanship under normal use and service subject to the terms of this document.

Two Year Warranty

Subject to the conditions and limitations stated herein, during the term of this limited warranty, we will supply any component part (at our option a new or repaired component part) of the heater as defined below, excluding any labor, which the Manufacturer's examination determines to be defective in workmanship or material for a period of two years (2 years) from the date of installation, unless otherwise specified below. This warranty applies to the heater's original own-er, and subsequent transferees and only if the unit is installed and operated in accordance with the printed instructions accompanying the unit and in compliance with all applicable installation codes and good trade practices.

What is Not Covered

The Manufacturer shall not be responsible for any expenses, including service, labor, diagnosis, analysis, material or transportation charges incurred during removal or reinstallation of this product, or any of its components or parts. All labor or service charges shall be paid by the owner. This warranty does not cover heating products improperly installed, misused, exposed to or damaged by negligence, accident, corrosive or contaminating atmosphere, water, excessive thermal shock, impact, abrasion, normal wear due to use, alteration or operation contrary to the owner's manual or if the serial number has been altered, defaced or removed. This warranty shall not apply if the input to the heating product varies by more than 10% of the rated input on the rating plate. The Manufacturer shall not be liable for any default or delay in performance by its warranty caused by any contingency beyond its control, including war, government restrictions or restraints, strikes, fire, flood, acts of God, or short / reduced supply of raw materials or products.

Warranty Procedure

To establish the installation date for any purpose under this Limited Warranty, you must retain the original records that can establish the installation date of your unit. If you do not provide such documents, the start date of the term of this Limited Warranty will be based upon the date of unit manufacture, plus thirty (30) days. Failure to maintain the equipment through regular annual service maintenance by a qualified service technician shall void the warranty.

Limitations and Exclusions

This document contains all warranties made by the Manufacturer and may not be varied, altered or extended by any person. There are no promises, or agreements extending from the Manufacture other than the statements contained herein. THIS WARRANTY IS IN LIEU OF ALL WARRANTIES EXPRESSED OR IMPLIED, TO THE EXTENT AUTHORIZED BY THE LAWS OF THE JURISDICTION, INCLUDING SPECIFICALLY THE WARRANTIES OR MERCHANTIBILITY OF FITNESS FOR A PARTICULAR PURPOSE.

It is understood and agreed that the Manufacturer's obligation hereunder is limited to repairing or replacing parts determined to be defective as stated above. In no event shall the Manufacturer be responsible for any alleged personal injuries or other special, incidental or consequential damages. As to property damages, contract, tort or other claim the Manufacturer's responsibility shall not exceed the purchase priced paid for the product. All replacement parts will be warranted for the unused portion of the warranty coverage period remaining on the applicable unit.

Some Authorities do not allow certain warranty exclusions or limitations on duration of warranty or the exclusions or limitations of incidental or consequential damages. In such cases, the above limitations or exclusions may not apply to you and are not intended to do so where prohibited by law. This warranty gives you specific legal rights. You may also have other rights which vary by jurisdiction.

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