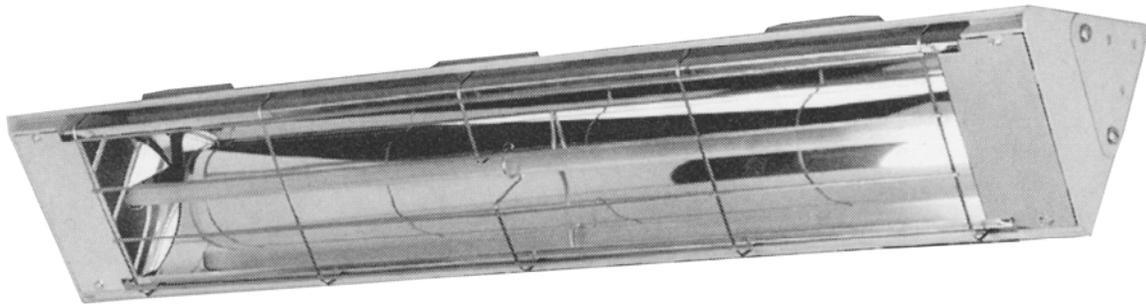


Quartzone™

Infrared Quartz Tube & Metal Sheathed Electric Heaters

Owner's Manual



This manual covers installation, operation and maintenance instructions. Read carefully before attempting to install, operate or service.

IMPORTANT: RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.



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IMPORTANT INSTRUCTIONS

Installation and maintenance personnel should familiarize themselves with this manual and all the **IMPORTANT INSTRUCTIONS** before installing or working on this heater to avoid potential unsafe conditions, severe property damage, personal injury or death.

1. Read all instructions before using this heater.
2. Verify that the supply voltage and phase to the heater matches the nameplate rating before energizing.
3. To disconnect heater, turn controls to off, and turn off power to heater circuit at main disconnect panel.
4. Potentially lethal voltages are present. Be sure to lock the branch circuit disconnect switch in the OFF position and tag the circuit "Out for Maintenance" before working on this equipment.
5. Keep wiring cover tightly closed while in operation.
6. Hazard of Electric Shock. Heater must be grounded in accordance with the National Electric Code.
7. This heater should be installed by qualified personnel familiar with the National Electric Code. It is the responsibility of the installer to verify the safety and suitability of the installation.
8. Use this heater only as described in this manual. Any other use is not recommended by the manufacturer and may result in fire, electric shock or personal injury.
9. The heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces.
10. High Temperature, risk of fire, keep electrical cords, drapery, furnishings, insulation and other

- combustibles at least 12 inches (305mm) from any part of the heater.
11. Installation minimum mounting clearances specified both on heater nameplate and in this owner's manual must be maintained.
 12. A heater has hot and arcing or sparking parts inside. Do not use in potentially explosive atmospheres or in areas where gasoline, paint, or flammable liquids or vapors are used or stored.
 13. Do not operate this heater after a malfunction. Disconnect power at service panel and have heater inspected by a reputable electrician before reusing.
 14. This heater has been evaluated by UL for outdoor use only if mounted underneath an overhang using a quartz tube heating element.
 15. Risk of fire. Do not use as a residential or household heater.
 16. The heater must be mounted with the quartz tube in a horizontal position. This prevents the coiled resistance wire from sagging and potentially failing.
 17. Do not handle the Quartz tube heating elements with bare hands. Salt in perspiration may deteriorate the quartz.
 18. The heater must not be recessed.
 19. Heater **MUST** be securely fastened to the building structure to prevent it from falling.
 20. **SAVE THESE INSTRUCTIONS.**

WARRANTY WILL BE VOID IF INSTRUCTIONS ARE NOT FOLLOWED.

HEATING ELEMENT SELECTION CHARTS

TABLE 1 – Fixture 1154 Heating Elements:

Watts	Volts	Amps	Length	Quartz	Metal Sheathed
1000	120	8.3	36 "	RT-10L	RM-10L
	208	4.8		RT-10V	RM-10V
	240	4.2		RT-10N	RM-10N
	277	3.6		RT-10Y	RM-10Y
1500	120	12.6		RT-15L	RM-15L
	208	7.2		RT-15V	RM-15V
	240	6.3		RT-15N	RM-15N
	277	5.4		RT-15Y	RM-15Y
2000	208	9.6		RT-20V	RM-20V
	240	8.3		RT-20N	RM-20N
	277	7.2		RT-20Y	RM-20Y
	480	4.2		RT-20Z	RM-20Z

TABLE 2 – Fixture 1154A Heating Elements:

Watts	Volts	Amps	Length	Quartz	Metal Sheathed
3000	208	14.4	61"	RT-30N	RM-30V
	240	12.6		RT-30V	RM-30N
	277	10.8		RT-30Y	RM-30Y
	480	6.3		RT-30Z	RM-30Z
4000	208	19.2		RT-40N	RM-40V
	240	16.6		RT-40V	RM-40N
	277	14.4		RT-40Y	RM-40Y
	480	8.3		RT-40Z	RM-40Z

GENERAL

The 1154 and 1154A series infrared heaters are designed for comfort heating. They are to be permanently mounted to the wall or ceiling with the fixture directed to the area to be heated. The unit is designed to give years of safe, trouble-free operation when properly installed and maintained.

INSTALLATION

A. Site Selection:

The supporting structure that the heater is attached to must have adequate strength to safely support the heater. This heater has been evaluated by UL for outdoor use only if mounted underneath an overhang using a quartz tube heating element. The heaters should not be mounted close to insulation, drapery or similar materials which could come in contact with the cabinet or heater guard. The heaters are intended for elevated mounting locations so that they radiate down to the floor area. A mounting height should be selected so that the heater is out of the way of possible moving equipment or personnel, yet low enough to deliver heat to the selected area. For heater weights and minimum clearances, see tables 3 & 4:

TABLE 3:

Fixture	Length	Max Watts	Weight
1154	36"	2000	10 lbs
1154A	61"	4000	13 lbs

TABLE 4:

Location	Minimum Clearance
Top of heater to ceiling	12 in (305 mm)
Bottom of heater to floor	6 ft (1.83 m)
Side or end of heater to wall	12 in (305 mm)
Heater to Adjacent Heater	36 in (915 mm)

Once an acceptable location has been determined, see the following instructions to complete the mechanical installation:

B. Quartz Tube / Metal Sheath Element Installation:

The heater fixture is shipped without the quartz tube or metal sheathed heating element, which must be ordered separately and installed by a qualified person familiar with the NEC. Before removing or replacing the heating element, disconnect power from power supply.

1. Remove the wire guard from the heater cabinet by springing out to one side.
2. Remove the two end reflectors held in place by 2 screws each.
3. Remove the quartz or metal tube heating element from its packaging. Do not pull the element by the white ceramic terminal insulator.
4. Verify the correct heating element is being installed by referencing tables 1 & 2 in the "Heating Element Selection Charts" section of this manual.

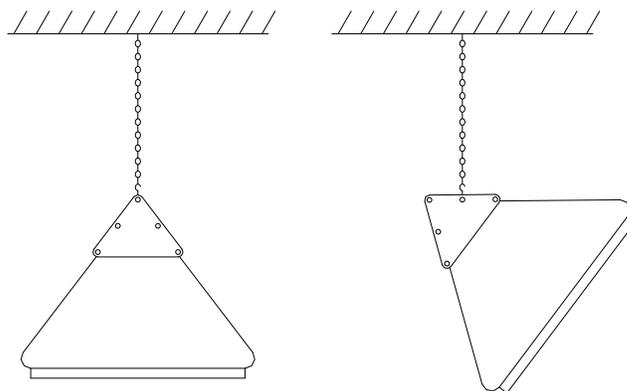
5. For quartz tube heating elements: Leave on the inner paper wrapping until the element is completely installed to prevent finger marks on the quartz tube.
6. Push the element into the two clips in the end castings.
7. Attach the lead wires to the heater terminals.
CAUTION: When tightening the nuts on the terminals, ensure the terminals do not twist by holding the inner nuts when tightening the outer nuts.
8. For quartz heating elements: Remove wrapping paper.
9. Replace end reflectors and guard.

C. Heater Mechanical Installation

Chain Mounting:

1. Fasten the two triangular mounting plates to the fixture with the screws provided. The dimple hole should be kept towards the top.
2. Cut suspension chain to the desired length.
3. Attach the chain to the heater triangular brackets using "S" hooks. Ensure heating element is horizontal.
4. If desired, tilt heater by adjusting chains as shown in figure 1:

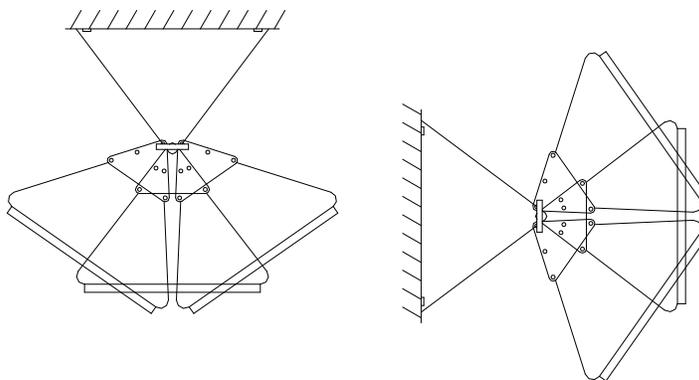
FIGURE 1:



Bracket Mounting (Item HX-1025662):

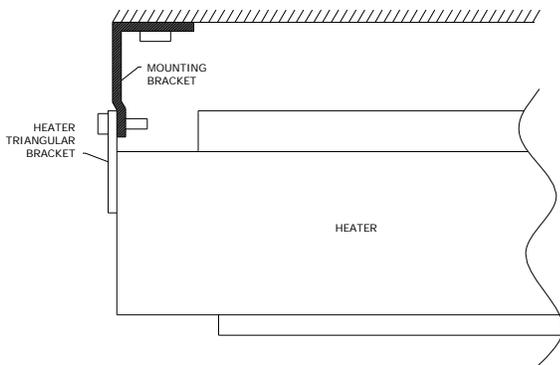
The heaters may also be mounted by means of an optional ceiling or wall mounting bracket as shown in figure 2:

FIGURE 2:



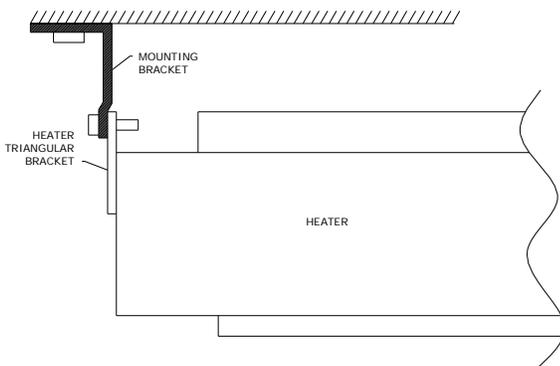
The brackets will register on studs or joists at 16" centers. For the 36" heater, the brackets should be mounted with the flanges facing inward and the heater triangular brackets located on the outer side as shown in figure 3:

FIGURE 3:



For the 61" heater, the mounting brackets should be mounted with the flanges facing outward and the heater triangular brackets located on the inward side as shown in figure 4:

FIGURE 4:



The fixture can be directed into the area being heated by adjusting the mounting brackets.

CAUTION: When directing the heater, care must be exercised to prevent adjacent surfaces from overheating. In no case, should any part of the heater be less than 12" to any wall or ceiling surface. Adjacent heaters should be no less than 36" apart.

CAUTION: The heater must always be mounted with the quartz tube in a horizontal position. This will prevent the coiled resistance wire from sagging and potentially failing.

CAUTION: The heater must not be recessed.

C. Heater Electrical Installation:

Follow these instructions to complete the electrical installation:

1. External branch circuit protection is required. See heating element ratings and follow Code recommendations.
2. Follow the NEC and any local electrical and building codes related to the installation and intended use of the heater.
3. When doing any work on this heater, including the initial electrical connection, disconnect the electrical supply at the main branch circuit switch, and lock the switch in the off (open) position. Tag the circuit "Out for Maintenance" to prevent potential lethal shock hazards.

4. Confirm that the proper elements have been installed and that the electrical power supply matches the marked voltage and amperage rating by referencing tables 1 & 2 in the "Heating Element Selection Charts" section of this manual. Heaters are rated for single phase, 50/60 Hz power.
5. Proper installation of the heater requires that an adequate grounding conductor be connected to the ground terminal. This terminal marked by a green colored screw head and is located on the inside of the wiring compartment.
6. Connect supply conductors to heating element leads and confirm all connections are securely tightened. Remove any foreign objects from the control box and attach the cover.
7. See section titled "OPERATION" before energizing the heater.

OPERATION

1. Check to make sure the mechanical and electrical installation is complete and that it is safe to operate the heater.
2. Set the field supplied temperature controller to a setting above the current room temperature.
3. Energize the heater electrical supply circuit.
4. The heater should come on.
5. Check out and report any unusual or questionable operating characteristics, such as noise, smoke, etc.
6. Set the temperature controller to the desired room temperature setting and place the heater in service.

MAINTENANCE

Maintenance and repair must be performed by qualified personnel only.

At a minimum, all maintenance tasks should be performed annually before each heating season.

1. Inspect all connections and conductor insulation for damage, looseness, fraying, etc., as applicable. Tighten any loose connections and replace or repair wire with damaged or deteriorated insulation.
2. Annually check the tightness of all visible screws, bolts and nuts, in particular the support structure bolts and nuts.
3. Check the wiring compartment for cleanliness. If necessary, clean by using a vacuum or compressed air.
4. The heater will operate at maximum efficiency when the reflector and heating element is kept clean. The reflector can be removed by snapping out one edge and rotating. Most dust and dirt can be removed by washing the reflector and heating elements with a 50-50 mixture of rubbing alcohol and water. Dry thoroughly before energizing.