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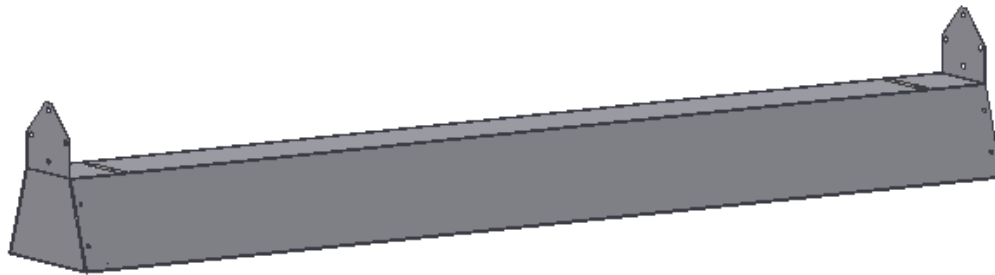
A DIVISION OF



www.fostoriaindustries.com



# OCH-series Direct Wired Units Indoor \* and Outdoor Comfort Heaters



\*EXCLUDING RESIDENCES

	<b>! WARNING</b>
	<p style="text-align: center;"><b>IMPORTANT SAFETY INFORMATION INSIDE</b></p> <ul style="list-style-type: none"> <li>• Serious injury or death possible</li> <li>• Read, understand, and follow all safety information and instructions in this manual before using or servicing this product.</li> <li>• Retain these instructions for future reference.</li> </ul>

REFER TO COMPLETE  
INDEX OF  
INFORMATION ON  
**PAGE 2**



If you have questions about the product you have purchased or would like to leave us feedback, please contact us via our website [www.fostoriaindustries.com](http://www.fostoriaindustries.com) or by calling 1-800-495-4525.





# INDEX

<b>Index</b>	<b>Page 2</b>
<b>Safety Signal Word Definitions</b>	<b>Page 2</b>
<b>Specifications</b>	<b>Page 3</b>
<b>Quartz Tube Installation</b>	<b>Page 4</b>
<b>Heater Installation</b>	<b>Pages 4 &amp; 5</b>
<b>Wiring</b>	<b>Page 6</b>
<b>Optional OCH-EBK Installation Instructions</b>	<b>Page 7 &amp; 8</b>
<b>Replacement Parts</b>	<b>Page 8</b>
<b>Maintenance</b>	<b>Page 9</b>
<b>Troubleshooting</b>	<b>Page 9</b>
<b>Warranty</b>	<b>Page 9</b>



**ATTENTION:**

The table to the right provides definitions of the signal words that can be found throughout this manual. These signal words are used to express the severity of the hazard at hand. The signal words are generally used in conjunction with safety symbols that correspond to the text for that particular hazard. As you read this manual, refer back to this table when you are unsure of the signal word definition.

SIGNAL WORD DEFINITIONS	
	DANGER indicates an imminently hazardous situation which, if not avoided, <b>will</b> result in death or serious injury.
	WARNING indicates a potentially hazardous situation which, if not avoided, <b>could</b> result in death or serious injury.
	CAUTION indicates a potentially hazardous situation which, if not avoided, <b>may</b> result in minor or moderate injury.
	CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, <b>may</b> result in property damage.
<small>As defined in ANSI Z535.4-2002</small>	

# SPECIFICATIONS

## DESCRIPTION

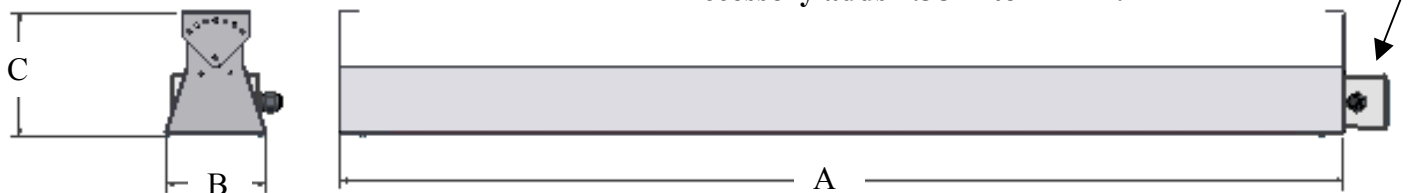
Fostoria multi-purpose OCH series electric infrared heaters are designed to provide efficient spot heating for many commercial and industrial applications. All models operate with a single quartz tube emitter included with the heater, are easily installed, and are equipped with spectral reflectors for excellent radiant output. They are built with corrosion-resistant materials and are **U.L. listed** for both **INDOOR (excluding residences) AND OUTDOOR applications in the USA and Canada.**

	⚠ <b>WARNING</b>
  	<p style="text-align: center; font-weight: bold; color: #000080;">EXPLOSION HAZARD FIRE HAZARD</p> <ul style="list-style-type: none"> <li>Serious injury or death may occur.</li> <li>Do not use in locations containing hazardous atmospheres.</li> <li>Do not use inside residences.</li> </ul>

<b>Housing</b>	24 ga. Galvannealed
<b>Finish</b>	Hi Temp. Brown powder coat
<b>Reflectors, end caps</b>	0.040" gold anodized aluminum
<b>Suspension</b>	Adjustable Mounting Bracket or Chain
<b>U.L. file number</b>	E32304

Model	P/N	Tube P/N	Watts	Volts	Amps	Dim A*	Dim B	Dim C
OCH-46-120V	04804402	04432302	1500	120	12.5	42.0"	5.375"	6.500"
OCH-46-208V	04804502	04418102	2000	208	9.6	42.0"	5.375"	6.500"
OCH-46-240V	04804602	04418002	2000	240	8.3	42.0"	5.375"	6.500"
OCH-46-277V	04804702	04419302	2000	277	7.2	42.0"	5.375"	6.500"
OCH-57-208V	04804902	04416602	3000	208	14.4	53.0"	5.375"	6.500"
OCH-57-240V	04804802	04414702	3000	240	12.5	53.0"	5.375"	6.500"
OCH-57-277V	04805002	04419402	3000	277	10.8	53.0"	5.375"	6.500"
OCH-57-480V	04805102	04419502	2250	480	4.7	53.0"	5.375"	6.500"

\* The optional Electrical Box  
Accessory adds 2.384" to Dim A.



## QUARTZ TUBE INSTALLATION

### **WARNING**

#### **ELECTRICAL SHOCK HAZARD**

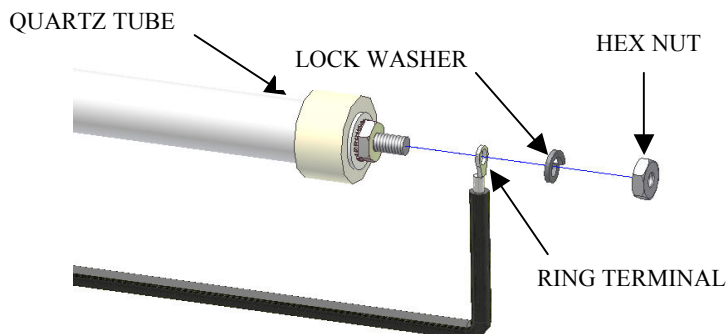
- **Serious injury or death may occur.**
- **Disconnect from electrical supply before installing or servicing this heater.**
- **Reflector end caps must be installed prior to powering the unit; refer to note #3.**



Each heater is equipped with two black hi-temperature silicone lead wires and one green lead wire for ground termination. **Make sure power source conforms to the heater requirements. Use only Fostoria quartz tubes.**

1. Insert quartz tube in the “L”-shaped slots in heater housing.
2. On each end of the quartz tube, place (1) lead wire ring terminal, (1) lock washer and (1) hex nut on the threaded stud and **tighten securely** (see image below). Lock washers and hex nuts are provided in hardware package.
  - One lead wire is already installed in your heater, the second lead wire is located in the hardware package.

**NOTE – Use a second wrench to hold the inner hex nut in place while tightening the outer hex nut. Failure to securely tighten this connection will cause the element to fail prematurely.**



3. Attach reflector end caps to both ends of housing using the (4) screws provided in hardware package.

### **CAUTION**

Install heater so that the quartz tubes are horizontal. Failure to do this may cause the heating element within the tube to sag and cause premature burnout.

## HEATER INSTALLATION

### MINIMUM INSTALLATION CLEARANCES

These heaters **MUST** be installed as follows:

- **12 inches minimum from a vertical surface**
- **72 inches minimum from ANY combustible material**
- **3 inches minimum from the ceiling**
- **36 inches minimum from other heaters**



### **WARNING**

#### **FIRE HAZARD**

- **Serious injury or death may occur.**
- **Read and follow clearances shown in box at left for ALL OCH series heater installations.**
- **Do not use inside residences.**

NOTE: For optimum spot heating performance, it is recommended that the distance from the floor should be approximately 7 to 9 feet for OCH-46 models, and 8 to 10 feet for OCH-57 models.

# HEATER INSTALLATION continued

## SUSPENSION ALTERNATIVES

Your OCH series heater can be mounted with either adjustable mounting brackets or chain suspension. Both options are included with your heater.

### Standard Mounting:

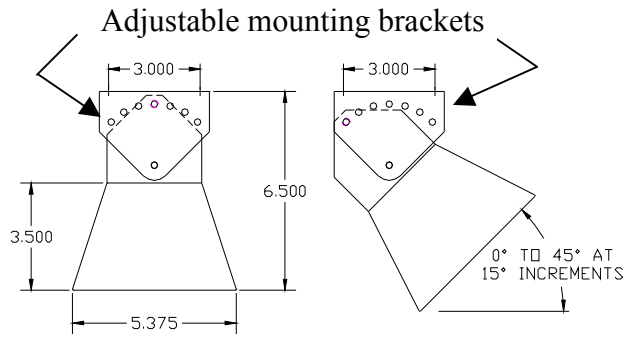
In the hardware bag shipped with your heater you will find two adjustable mounting brackets and fastening hardware. Using the mounting centers specified in figures 1 & 2, mount your adjustable mounting brackets (bends to the inside). Once mounted, assemble the heater to brackets (figure 3) with mounting hardware, these brackets enable the heater to be angled in 15-degree increments up to 45 degrees.

### Chain Suspension:

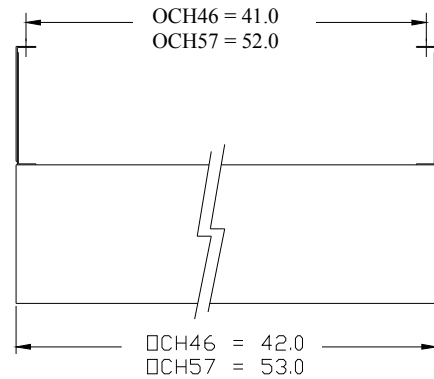
The heater can also be chain-hung as shown in figure 4. Cut the 16ga. chains (two 4 foot chains are provided) to desired length. Attach chains to heater with "S"-hooks provided and suspend from overhead structure. Crimp "S"-hooks closed after assembly.

**CAUTION**

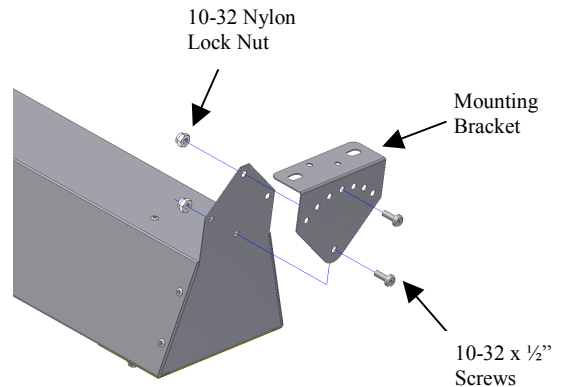
**Install heater so that the quartz tubes are horizontal. Failure to do this may cause the heating element within the tube to sag and cause premature burnout.**



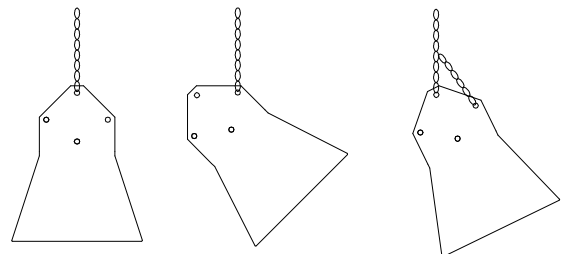
**Figure 1: end view**



**Figure 2: side view**



**Figure 3: mounting view**



**Figure 4: end view**

	<b>WARNING</b>
	<b>ELECTRICAL SHOCK HAZARD</b>
	<ul style="list-style-type: none"> <li><b>Serious injury or death may occur.</b></li> <li><b>Disconnect from electrical supply before installing or servicing this heater.</b></li> <li><b>Read and follow installation clearance requirements on page 4.</b></li> </ul>

# WIRING INSTRUCTIONS

## JUNCTION BOX and CONDUIT

Required conduit size: ½”

All conduit, fittings and junction boxes are supplied by the customer.

Do not make wiring connections inside of heater housing. All connections must be made in a customer supplied junction box.

See page 7 for optional electrical box kits available from Fostoria Industries.

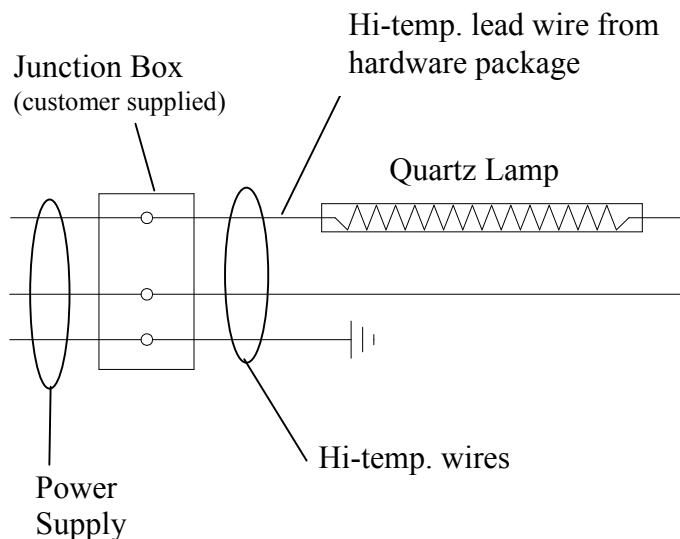
## TOTALLY EXPOSED OUTDOOR APPLICATIONS

For totally exposed outdoor applications (not ceiling protected) all conduit, fittings and junction boxes must be NEMA Type 4 or equal.

## INTERNAL WIRING DIAGRAM

OCH heaters are equipped with two (2) hi-temperature silicone lead wires and one (1) bonding\* (ground) lead wire. Supply wires must be copper and rated for at least 90° C.

1. Terminate field bonding wire to the bonding (ground) wire of the heater with wire nuts (customer supplied)
2. Terminate L1 and L2 field wires to the power wires of the heater with wire nuts (customer supplied)



## **⚠ WARNING**

### **ELECTRICAL SHOCK HAZARD**

- **Serious injury or death may occur.**
- **Disconnect from electrical supply before installing or servicing this heater.**
- **This appliance must be connected to a properly bonded (grounded) electrical source.**
- **Read and follow all safety information in box below.**



- **Do not make wiring connections inside of heater housing.**
- **Use proper conduit fittings to prevent wires from touching the housing's metal edges.**
- **Make certain the power source conforms to specifications on the heater label.**
- **Do not depend on a thermostat or other switch as the sole means of disconnecting power when installing or servicing heater. Always open the safety switch and lock it open.**
- **All wiring must be performed by a licensed electrician.**
- **Never connect the green or green-yellow wire to a live or "hot" conductor.**

\*Bonding is the term that describes the completion of the electrical circuit back to its source, which allows a breaker or fuse to clear if a short occurs in the line.

## WIRING INSTRUCTIONS continued

### OPTIONAL ELECTRICAL BOX ASSEMBLY

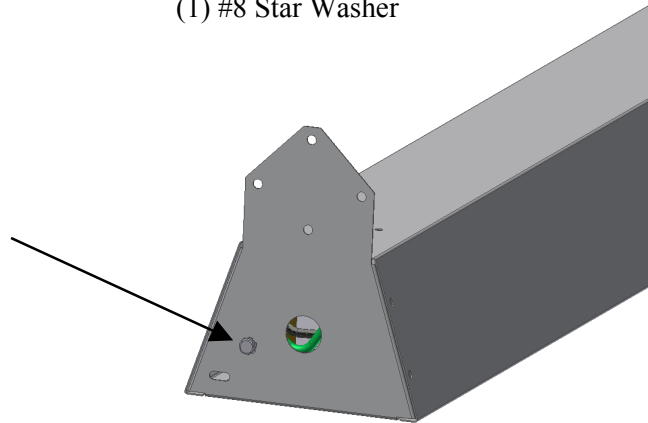
Model No.	Part No.	Voltage	Plug Configuration
OCH-EBK-120	08715502	120V	NEMA 5-15P
OCH-EBK-208	08715602	208V	N/A
OCH-EBK-240	08715702	240V	NEMA 6-20P
OCH-EBK-480	08715802	277 & 480V	N/A

OCH-EBK kits consist of:

- |   |  |
|---|--|
| (1) Electrical box assembly<br>-120V & 240V: Supplied with a cordset<br>-208V: Supplied with a cord (no plug)<br>-277V & 480V: Direct wire only | (2) Wire Nuts<br>(1) Electrical box cover<br>(1) #8-32 Screw<br>(1) Chase Nipple<br>(1) #8 Star Washer |
|---|--|

#### **STEP #1**

Loosen and remove the nut and bolt securing the green lead to the housing end cap and discard the wire and all hardware.

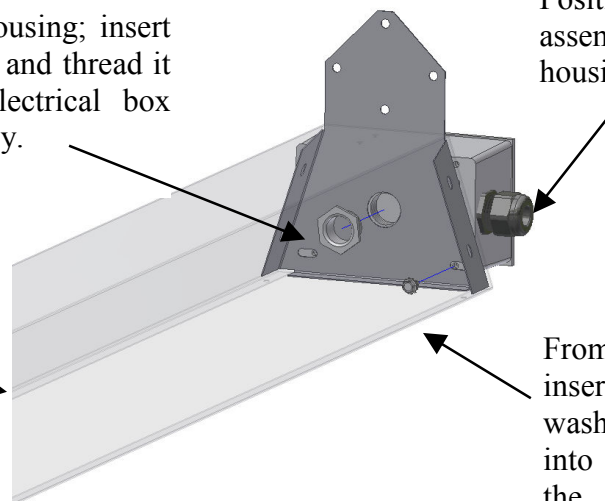


**STEP #2** Attach the electrical box assembly to the end of the heater housing using the chase nipple and screw provided.

From the inside of the housing; insert the chase nipple into hole and thread it into the back of the electrical box assembly. Tighten securely.

Position the electrical box assembly on the end of the heater housing as shown.

**Heater Housing  
has been removed  
for clarity of  
instructions**



From the inside of the housing; insert the #8 screw and #8 star washer thru the slot in the housing into (1) of the 4 corner holes in the electrical box. Tighten securely.

## WIRING INSTRUCTIONS continued

### **STEP #3** Wiring

1. Factory installed black lead:
  - a. Route the lead wire thru the chase nipple into the electrical box assembly.
  - b. Trim lead wire to approx 6 inches in length and strip end approx 1/2 inch.
  - c. 120V, 208V and 240V units: Using one of the supplied wire nuts, attach this lead wire to the black lead wire of the cordset.
  - d. 277V and 480V units: Using one of the supplied wire nuts, attach this lead to L1 of your power supply.
  
2. Lead wire supplied in the hardware package:
  - a. Trim the lead wire to approx 6 inches in length; **DO NOT** cut off the ring terminal.
  - b. Strip end opposite of the ring terminal approx. 1/2 inch.
  - c. 120V, 208V and 240V units: Using the remaining wire nut, attach this lead wire to the white lead wire of the cord or cordset.
  - d. 277V and 480V units: Using the remaining wire nut, attach this lead to L2 of your power supply.
  
3. 480V units only: Attach a bonding\* (ground) lead to the green screw located in the electrical box assembly.

**STEP #4** Attach the cover supplied with kit to the electrical box assembly.

**STEP #5** Follow the installation instruction starting on page 4 of this manual.

## REPLACEMENT PARTS LIST

ITEM	QTY	VOLTAGE	OCH-46 PART NO.	OCH-57 PART NO.	DESCRIPTION
1	1	N/A	8561801	8560401	REFLECTOR
2	2 4	N/A	8561201 2326500		REFLECTOR END CAP SCREW 8-32 X 3/8
3	1	120 208 240 277 480	04432302 04418102 04418002 04419302 N/A	N/A 04416602 04414702 04419402 04419502	QUARTZ TUBE
4	2 4 4	N/A	8561000 2402739 3447239		ADJUSTABLE MOUNTING BRACKETS SCREW 10-32 X 1/2 NUT STOP 10-32
5	1	N/A	3440300		CHAIN KIT



## MAINTENANCE

1. **Always disconnect heater from power supply before performing any maintenance or service.**
2. Periodically clean the reflector with a dampened soft cloth using mild detergent. Rinse with water and wipe dry with a clean soft cloth.



### ⚠ **WARNING**

#### ELECTRICAL SHOCK HAZARD

- **Serious injury or death may occur.**
- **Disconnect from electrical supply before installing or servicing this heater.**

## TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Element does not energize.	<ol style="list-style-type: none"> <li>1. Defective element.</li> <li>2. Improper connection.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace element.</li> <li>2. Check connection to power outlet.</li> </ol>
Not enough heat.	<ol style="list-style-type: none"> <li>1. Heater too small for application.</li> <li>2. Heater mounted too high or too far.</li> </ol>	<ol style="list-style-type: none"> <li>1. Add additional heater(s)</li> <li>2. Decrease mounting height or distance.</li> </ol>
Too much heat.	<ol style="list-style-type: none"> <li>1. Heater too large for application.</li> <li>2. Heater mounted too low or too close.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace with smaller heater.</li> <li>2. Increase mounting height or distance.</li> </ol>
Hot spot in tube.	<ol style="list-style-type: none"> <li>1. Heater is not level.</li> <li>2. Grease or moisture on tube.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust to a level mount.</li> <li>2. Clean tube-replace if problem persists.</li> </ol>

## LIMITED WARRANTY

FOSTORIA INDUSTRIES, INC. – 1200 North Main Street - Fostoria, Ohio 44830 - (419) 435-9201

The warranty herein set forth is in lieu of all other warranties expressed or implied.

Fostoria Industries, Inc. of Fostoria, Ohio 44830, warrants its products to the owner against defects in material and workmanship for a twelve (12) month period under normal use and service following date of manufacture or installation when proof of such is provided to seller.

This Warranty requires that the owner, or his agent, install the equipment in accordance with the National Electrical Code, any other applicable heating or electrical codes and the manufacturer's installation instructions. It further requires that he perform reasonable and necessary maintenance on the unit. The company is not liable for abuse or misuse of product as may be finally determined by the company.

The obligation of Fostoria Industries, Inc. under the terms of this warranty, shall be to supply a new part, repair of defective part, or a refund, at the company's option with no cost to owner for the new or repaired part. Such parts are to be returned to the factory, or such other location as the company may designate. This warranty does not obligate Fostoria Industries, Inc. to bear the cost of labor in replacing any assembly, unit or component part thereof, nor does the company assume any liability for secondary charges, expenses for installing or removal, or any other consequential losses. The company's maximum liability shall not in any case exceed the list price for the product claimed to be defective.

The warranty shall not apply to any product or parts of products which have been repaired or altered outside of Seller's factory in any manner. Warranty is void on products that have been determined to have been subjected to misuse, negligence or accident or which have been used in a manner contrary to Seller's instructions.