

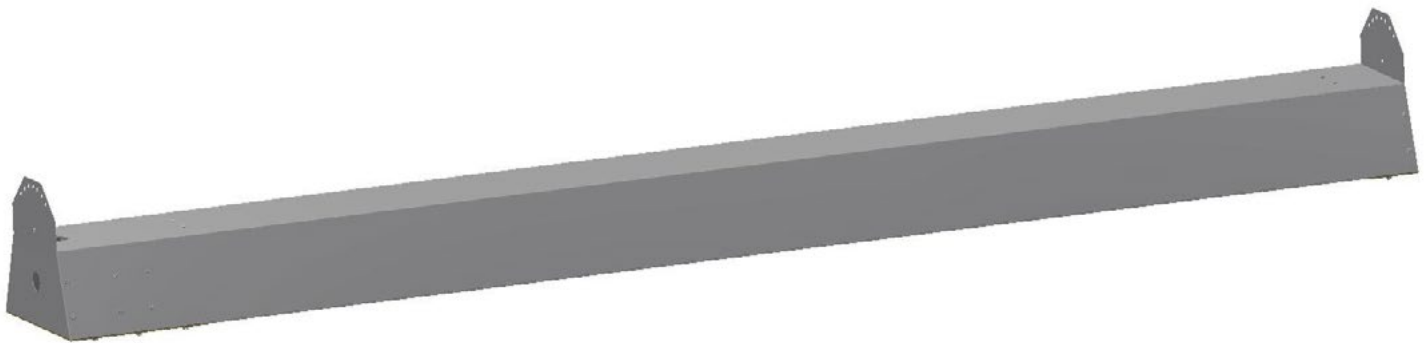


TPI Corporation
P.O. Box 4973
Johnson City, TN 37602



OCH2 series Direct Wired Units

*Indoor and Outdoor Comfort Heaters



*EXCLUDING RESIDENCES

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





REFER TO COMPLETE
INDEX OF
INFORMATION ON
PAGE 2

QUARTZ TUBE INSTALLATION

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

IMPORTANT INSTRUCTIONS

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

1. Read all instructions before using this heater.
2. **CAUTION:**High temperatures. Keep cords and all other combustible material, such as furniture, papers, clothes and curtains away from the heater. For safe and efficient operation, heaters must be mounted a minimum of 30" from a vertical surface, a minimum of 6-3/4" from the ceiling, A minimum of 72" from direct radiation to combustibles, and a minimum of 2.4M (7.5') above the floor. Heaters must be at least 36" apart.

ATTENTION - HAUT TEMPÉRATURES. Pour un fonctionnement sûr et efficace. CHAUFFE doit être monté un Minimum de 30 "d"une surface vertical, un minimum de 6-3/4" du plafond, un minimum de 72 " DE RADIATION DIRECTE DE COMBUSTIBLES ET UN MIN MUM DE 2.4M (7.5') FROM LE SOL. NE PAS UTILISER CETTE BOITE DE CABLAGE. UTILISER 90°C FIL MINIMUM DÉBRANCHER before ENTRETIEN.

3. Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
4. Do not operate any heater after it malfunctions, has been dropped or damaged in any manner. Return heater to authorized service facility for examination, electrical or mechanical adjustment, or repair.
5. To disconnect heater, turn controls to off, and turn off power to heater circuit at main disconnect panel (or operate internal disconnect switch if provided).
6. Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric chock or fire, or damage the heater.
7. To prevent a possible fire, do not block air intakes or exhaust in any manner.
8. A heater has hot and arcing or sparking parts inside. **WARNING: Do not use it in area where gasoline, paint, or flammable liquids are used or stored.**
9. 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.
10. This heater may include an audible or visual alarm to warn that parts of the heater are getting excessively hot. If the alarm sounds (or illuminates), immediately turn the heater off and inspect for any objects on or adjacent to the heater that may have blocked the airflow or otherwise caused high temperatures to have occurred. **DO NOT OPERATE THE HEATER WITH THE ALARM SOUNDING (OR ILLUMINATING).**

11. SAVE THESE INSTRUCTIONS

SPECIFICATIONS

DESCRIPTION

Fostoria multi-purpose OCH2 series electric infrared heaters are designed to provide efficient spot heating for many commercial and industrial applications. All models operate with dual quartz tube emitters 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 listed for both INDOOR (excluding residences) AND OUTDOOR applications in the USA and Canada.

⚠ **WARNING**

**EXPLOSION HAZARD
FIRE HAZARD**




Serious injury or death may occur.

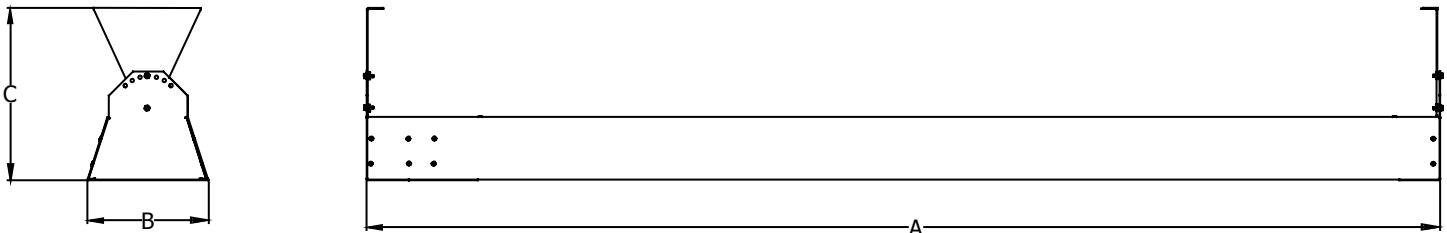
Do not use in locations containing hazardous atmospheres.

Do not use inside residences.



Housing	OCH2	20 ga Galvannealed / Finish: Hi Temp Brown powder coat
	OCH2-SS	20 ga Type 304 Grain Line Stainless Steel / Finish: No. 3
Reflectors and End Caps	0.040" gold anodized aluminum	
Suspension	Adjustable Mounting Bracket or Chain	

Model	P/N	Tube P/N (2per)	Watts	Volts	Amps	Dim A*	Dim B*	Dim C*	SUPPLY WIRE SIZE 90°C AWG.
OCH2-55-208V	04915502	04914702	4000	208	19.2	55.0"	7.500"	10.625"	10
OCH2-55-240V	04915602	04914802	4000	240	16.7	55.0"	7.500"	10.625"	10
OCH2-55-277V	04915702	04914902	4000	277	14.4	55.0"	7.500"	10.625"	12
*OCH2-55-480V	04915802	*04914802	4000	480	8.3	55.0"	7.500"	10.625"	12
OCH2-55-208V-SS	04915902	04914702	4000	208	19.2	55.0"	7.500"	10.625"	10
OCH2-55-240V-SS	04916002	04914802	4000	240	16.7	55.0"	7.500"	10.625"	10
OCH2-55-277V-SS	04916102	04914902	4000	277	14.4	55.0"	7.500"	10.625"	12
*OCH2-55-480V-SS	04916202	*04914802	4000	480	8.3	55.0"	7.500"	10.625"	12
OCH2-66-208V	04916302	04915002	6000	208	28.8	66.0"	7.500"	10.625"	8
OCH2-66-240V	04916402	04915102	6000	240	25	66.0"	7.500"	10.625"	8
OCH2-66-277V	04916502	04915202	6000	277	21.7	66.0"	7.500"	10.625"	10
*OCH2-66-480V	04916602	*04915102	6000	480	12.5	66.0"	7.500"	10.625"	12
OCH2-66-208V-SS	04916702	04915002	6000	208	28.8	66.0"	7.500"	10.625"	8
OCH2-55-240V-SS	04916802	04915102	6000	240	25	66.0"	7.500"	10.625"	8
OCH2-55-277V-SS	04916902	04915202	6000	277	21.7	66.0"	7.500"	10.625"	10
*OCH2-66-480V-SS	04917002	*04915102	6000	480	12.5	66.0"	7.500"	10.625"	12

*480V MODEL USE (2) 240V ELEMENTS WIRED IN SERIES



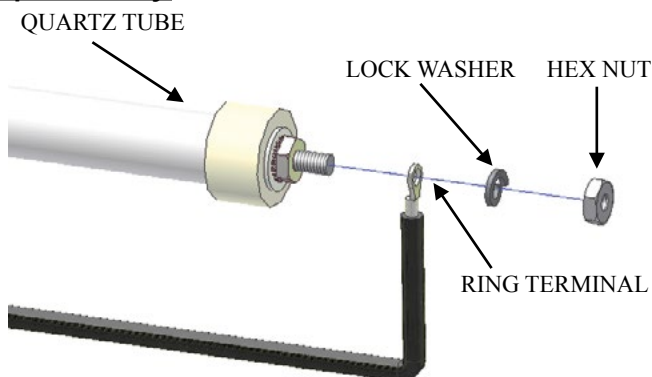
QUARTZ TUBE INSTALLATION

 	<h3 style="margin: 0;">⚠ WARNING</h3>
ELECTRICAL SHOCK HAZARD	
<ul style="list-style-type: none"> • Serious injury or death may occur. • Disconnect from electrical supply before installing or servicing any heater. • Reflector end caps must be installed prior to powering the unit; refer to note #3. 	

Each heater is equipped with hi-temperature lead wires and one green lead wire for ground termination. **Make sure the 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) split washer and (1) hex nut on the threaded stud and **tighten securely** (see image below). Split washers and hex nuts are provided in hardware package.
 - ▶ All Lead wires are already installed in your heater with the exception of 480V models. 480V models utilize a series wire connection with a jumper lead wire located in the hardware package. Refer to Wiring Diagrams on Page 7.

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.

<h1 style="margin: 0;">CAUTION</h1>
<p>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.</p>

HEATER INSTALLATION

MINIMUM INSTALLATION CLEARANCES

<p>These heaters MUST be installed as follows:</p> <ul style="list-style-type: none"> • 30 inches minimum from a vertical surface • 82 inches minimum from ANY combustible material • 6-3/4 inches minimum from the ceiling • 36 inches minimum from other heaters

 	<h3 style="margin: 0;">⚠ WARNING</h3>
FIRE HAZARD	
<ul style="list-style-type: none"> • Serious injury or death may occur. • Read and follow clearances shown in box at left for ALL OCH2 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 OCH2-55 models, and 8 to 10 feet for OCH2-66 models.

HEATER INSTALLATION continued

Your OCH2 series heater can be mounted with either adjustable mounting brackets or chain suspension. Both options are included with your heater.

Standard Mounting:

In the carton insert shipped with your heater you will find two adjustable mounting brackets and a hardware pack with 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.

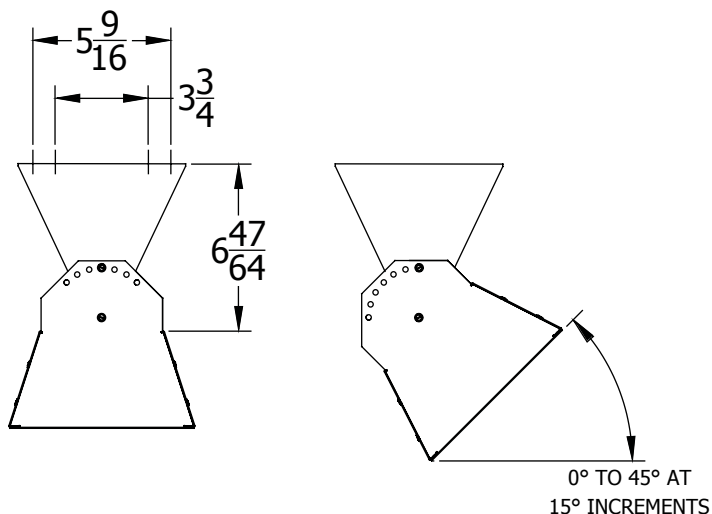


Figure 1: end view

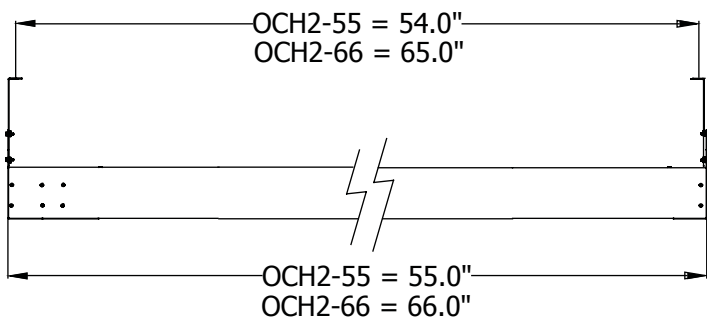


Figure 2: side view

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 burn-out.

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

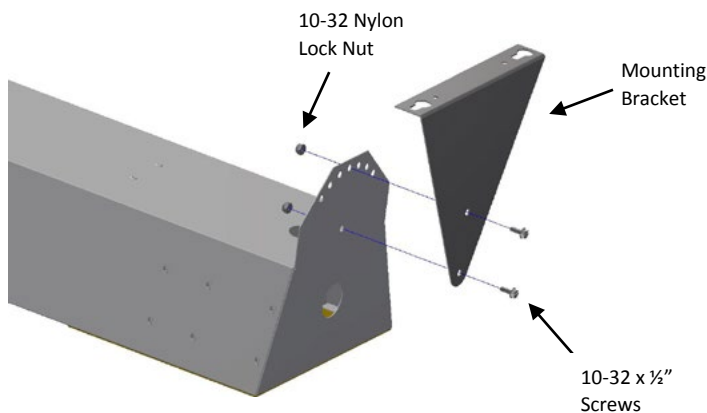


Figure 3: mounting view

HEATER INSTALLATION continued

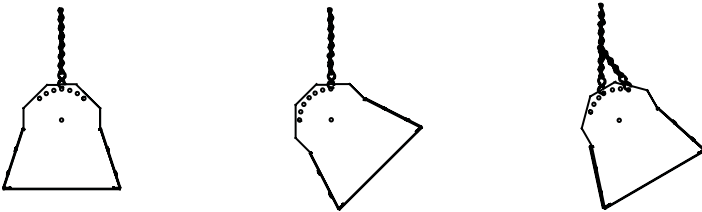


Figure 4: end view

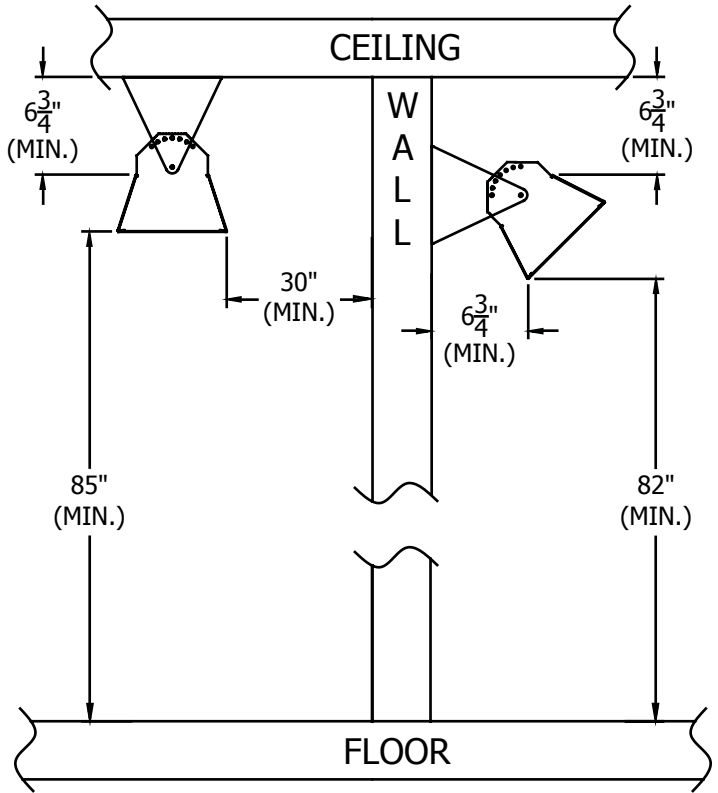


Figure 5: mounting view

Wiring Diagrams

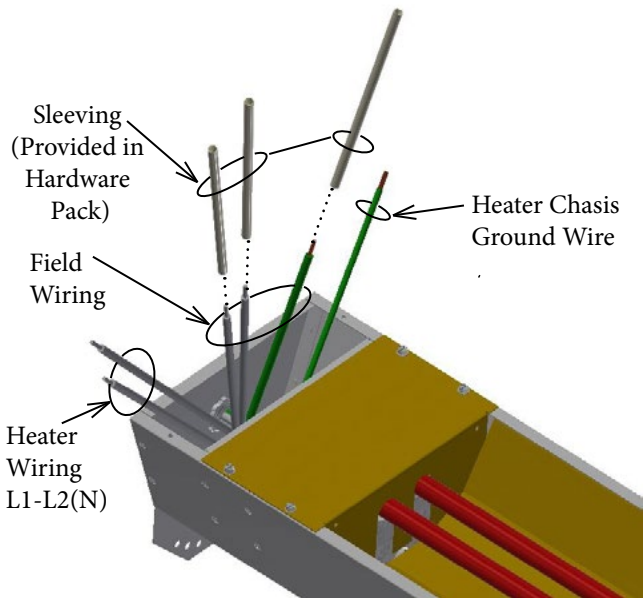
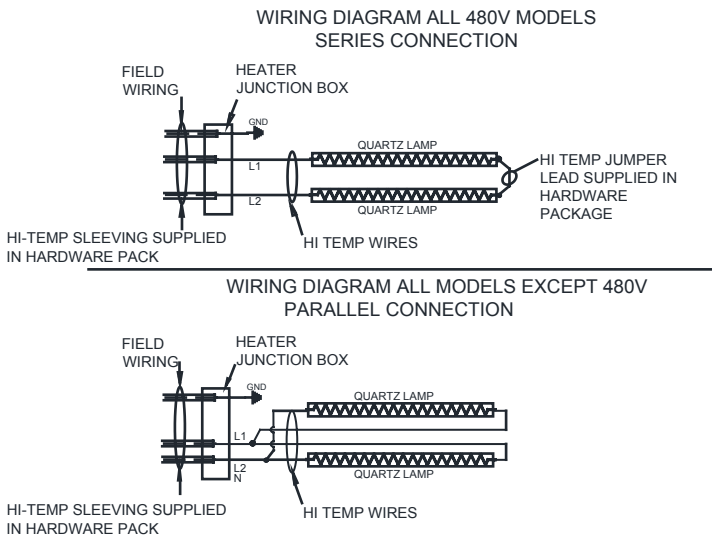


Figure 6: Install sleeving



WIRING INSTRUCTIONS

JUNCTION BOX and CONDUIT

Required conduit size: ½”

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

Conduit connections can be made at either of two locations. The end of the heater or the back of heater. A water tight hole plug is provided for sealing the unused hole.

Water tight hole plug installation: The provided hole plug is for water tight applications and can be difficult to install because of the tight fit. Start the plug into the hole being sealed. Using a blunt rounded object (ie, screwdriver handle) firmly press the center of the hole inward until the plug snaps into place.

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. The provided water tight hole plug **MUST** be used to seal unused hole. (See above for proper plug installation).




INTERNAL WIRING DIAGRAM

OCH2 heaters are equipped with hi-temperature silicone lead wires and one (1) bonding* (ground) lead wire. Supply wires must be copper and rated for at least 90°C. Also supplied in the hardware pack are High Temp

Fiberglass Sleeve that **MUST** be installed on your supply wiring and extend from the point of entry into the heater junction box to the wire connection.

1. Terminate field bonding wire to the bonding (ground) wire of the heater with wire nuts (customer supplied).
2. Slide Fiberglass Sleeve (provided in hardware pack) over supply wiring covering the entire wire to the entry point into the heater junction box (conduit connector). Terminate L1 and L2(N) field wires to the power wires of the heater with approved wire nuts (customer supplied)

(See Figure 6 Page 7)
(See Wiring Diagrams Page 7)



  	⚠ WARNING
	ELECTRICAL SHOCK HAZARD <ul style="list-style-type: none">• Serious injury or death may occur.• Disconnect from electrical supply before installing or servicing any heater.• This appliance must be connected to a properly *bonded (grounded electrical source.• Read and follow all safety information in box below.

<ul style="list-style-type: none">▶ 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.

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.

 	<h3 style="margin: 0;">⚠ WARNING</h3>
	<p>ELECTRICAL SHOCK HAZARD</p> <ul style="list-style-type: none"> Serious injury or death may occur. Disconnect from electrical supply before installing or servicing any heater.

TROUBLESHOOTING

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