

OWNERS MANUAL

INDIVIDUAL INFRA-RED HEATERS PT - SERIES

IMPORTANT: Thoroughly read this instruction manual before performing Installation, Servicing, and Maintenance procedures. Follow all warnings or cautions included in this literature and attached to the unit. Consult local building codes and National Electric Code (NEC) for special requirements.

ER Series
1b01 — cvr



AMBIRAD

ENERGY EFFICIENT HEATING SYSTEMS

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Note:

All reference to standard specification, codes, regulations etc. are intended to reflect latest editions included in the ANSI Testing, Construction, Performance and Installation Standards (ANSI/NFPA standard 1985) and National Standards of Canada.

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

A. INSTALLATION INSTRUCTIONS

A.1 TECHNICAL DATA

- (a) General Information:
Model & Heat Input
See Chart Pg (2) for units available

Information all units:

Gas Supply Connection	½" NPT Male
Electrical Supply	120V, 1 Phase, 60HZ
Current Rating	1.2 AMP MAX 0.3 Burner 0.9 Fan
Ignition	Electronic Program Start up with Spark Ignition

- OPTIONS :**
1. Ambi-Rad Black Bulb Thermostat.
 2. Control Panel with multi-zone capabilities (not AGA/CSA certified).
 3. Individual Heater Vent to Exterior.

NOTES :

- A. Heater is intended for heating non-residential indoor and outdoor spaces and should only be installed where flammable gases or vapors are not generally present.

- B. Indoor heaters may be suspended either horizontal or at an angle, or may be wall mounted. Outdoor heaters must be suspended horizontally. See section A3 for clearance dimensions.

- C. Installation shall conform with local building code requirements and with National Fuel Code ANSI-Z223. 1A (latest edition) and section 7.8A-3;Z223.1 (latest edition) for USA. In Canada with local building codes or in absence of local codes, with current CAN1-B149.

- D. The unit shall be electrically grounded in accordance with National Electric Code ANSI/NFPA 70-1987.

- E. The heater may be installed in aircraft hangars when conforming with ANSI/NFPA 409-1985 and in automotive garages when conforming with ANSI/NFPA 88A (latest edition) for Parking Structures and ANSI/NFPA 88B (latest edition) for repair garages. In Canada, installation code for natural gas burning appliances and equipment. CAN1-B149.1 and propane CAN1-B149.2.

Ensure that minimum clearances will be maintained to vehicles parked below the heater.

! WARNING: Minimum clearance from heater must be maintained from vehicles parked below heater. In all situations, clearances to combustibles must be maintained. Signs should be posted in storage areas to specify maximum stacking height to maintain required clearance to combustibles. Refer to mounting clearance tables

A.2 PACKAGING AND SHIPPING INFORMATION

See Appendix "A" for assembly drawings. Material list with part numbers and descriptions for each part will accompany each shipment.

Heaters Include:

- Burner/Control
- Radiant Tubes
- Reflectors
- Brackets
- Fan
- U-Bend (U-Tube Units only)
- Tube Couplings

Options:

- 1 180 degree bend
- 1 or 2 90 deg. Bends
- Flex Gas Connector
- Ball Valve
- Vent Hoods
- Hanging Assembly (Chain, ect.)

Shipping packages for individual projects will be boxed and crated as outlined on the specific bill of lading.

A.3 MOUNTING CLEARANCES

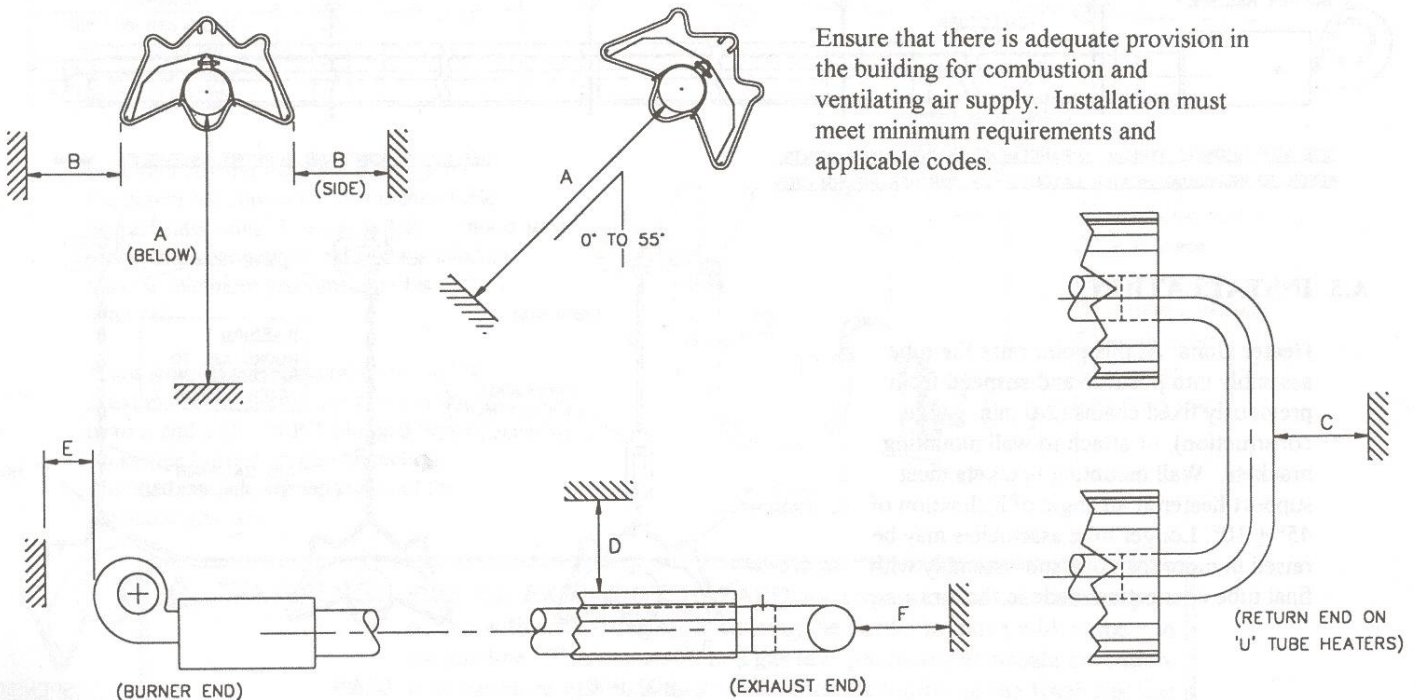
The heater should be positioned so that clearances from combustible materials will meet or exceed those shown in the following table. Also, ensure that there is at least 6" clearance on all sides of burner for service access and for free flow of combustion air. When heater is angle mounted, the burner/control assembly must remain horizontal.

Model	Input-BTU/HR	A	B	C	D	E	F
PT60	60,000	62	29	6	6	6	12
PT80	80,000	65	29	6	6	6	12
PT100	100,000	70	32	6	6	6	16
PT125	125,000	76	37	6	6	6	18
PT150	150,000	79	37	6	6	6	18
PT175	175,000	82	47	6	8	6	20
PT200	200,000	82	47	6	8	6	20
PT225	225,000	82	47	6	8	6	20

	Suggested Mounting Height Above Floor			
	60,000-80,000 BTU	100,000-125,000 BTU	150,000-175,000 BTU	175,000-225,000 BTU
Mounting Position				
Horizontal				
Recommended	14FT	16FT	18FT	20FT
Minimum	12FT	14FT	16FT	18FT
Inclined				
Recommended	11FT	13FT	15FT	17FT
Minimum	10FT	12FT	14FT <td 16FT	

WARNING: FIRE OR EXPLOSION HAZARD — can cause death, severe injury, or property damage. Failure to maintain specified minimum clearances to combustibles could result in a serious fire hazard. **DO NOT** locate flammable or combustible materials within minimum distances specified in the preceding tables.

FR Series 1403 — p5



Ensure that there is adequate provision in the building for combustion and ventilating air supply. Installation must meet minimum requirements and applicable codes.

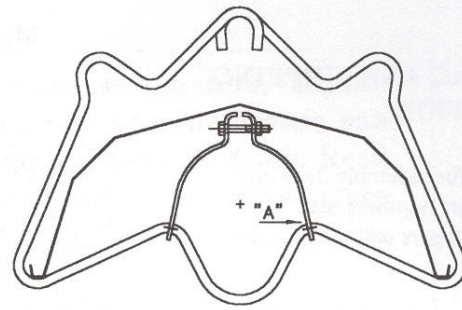
A.4 ASSEMBLY

Each heater is assembled as follows:

Each heating unit has two types of emitter tubes. The first tube section, connected to the burner, will be AlumaTherm® steel, silver in color marked with yellow paint. The remaining tubes are Mild steel, black in color marked with blue paint. Exception; 175,000 through 225,000 Btu units require a second section of AlumaTherm®, 20 ft. total, steel tube connected together by a high temperature coupling, see Figure 1 pg. 15. All other tube connections are made with a band type coupling, see Figure 1 pg. 15.

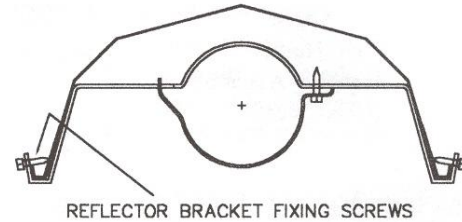
Slip the suspension brackets onto the tube assembly. The fixed suspension point 'H' adjacent to burner secures the first suspension bracket to the tube with a tube strap. All other suspension brackets have a floating suspension point positioned as shown in Appendix "A" individual heater details. The reflectors are supported by fixed point "F" or sliding joint "S" also detailed in Appendix "A".

Reflectors are fixed at point F with a reflector support bracket and reflectors are held in position with fixing screws. Fixed and sliding joints alternate along the heater at the spacing indicated on the individual heater details, Appendix "A".



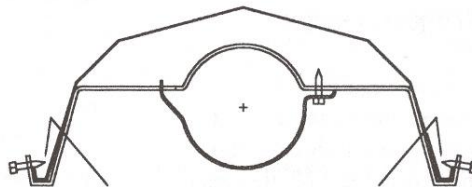
VIEW ON "A"

DETAIL AT FIRST HANGER POINT (NEXT TO BURNER) ONLY
REMAINING SUSPENSION BRACKETS NEED NO STRAPS: "H"



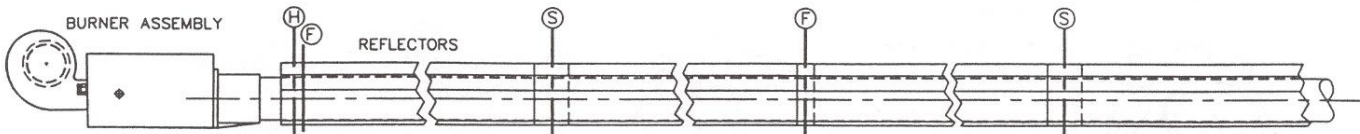
REFLECTOR BRACKET FIXING SCREWS

"FIXED JOINT" DETAIL: "F"



LEAVE 1/8" MIN. GAP TO ALLOW REFLECTOR TO SLIDE

"SLIDING JOINT" DETAIL: "S"

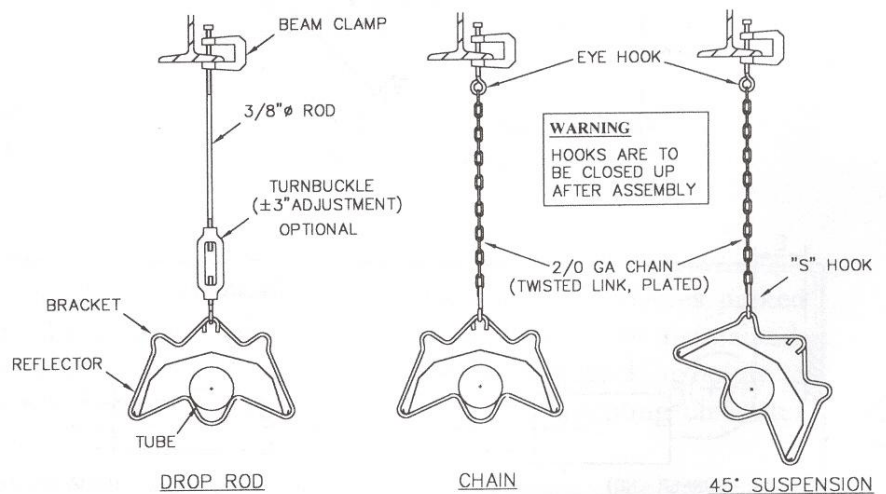


SIDE VIEW SHOWING TYPICAL ARRANGEMENT OF REFLECTOR JOINTS:
REFER TO INDIVIDUAL HEATER LAYOUTS FOR FURTHER INFORMATION

REFLECTOR JOINT AND SUPPORT ASSEMBLIES PHB 062

A.5 INSTALLATION

Heater Units: At this point raise the tube assembly into position and suspend from previously fixed chains (2/0 min. gauge construction), or attach to wall mounting brackets. Wall mounting brackets must support heater at an angle of inclination of $45^\circ \pm 10^\circ$. Longer tube assemblies may be raised in more than one sub-assembly with final tube connection made in the air.



A.5 INSTALLATION (cont)

The heater can be installed with 1 or 2 90° bends or a 180° bend as shown in these instructions.

It is recommended that the heaters be suspended to slope slightly down-ward from the burner approximately 1" in 20-feet, but not more than 2" total.

Warning:

Remove the protective plastic film from the reflector surface.

After tube suspension has been completed, slide reflectors into place. Refer to Appendix "A" for reflector overlap.

Slide burner/control assembly onto the burner end of the radiant tube ensuring it is fully engaged and upright, (i.e with air inlet on fan facing sideways) and secure with locking screws provided. Refer to Figure 2 for burner support detail

For the purpose of unvented indoor applications, a 4" 90 degree elbow should be used on the terminating end of the radiant tube sections. This elbow should be turned with the outlet facing either side

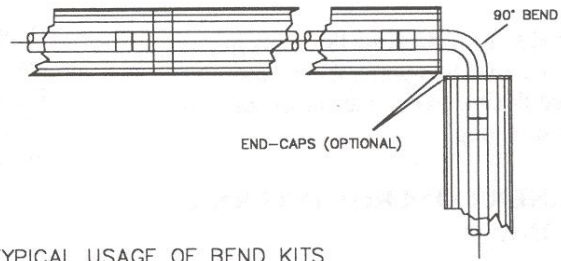
A.6 GAS CONNECTION

The gas connection on the heater is 1/2" NPT external thread.

SERVICE REQUIREMENTS	NAT GAS (in W.C.)	PROPANE (in W.C.)
Max. Inlet gas supply All models	10.0	14.0
Min. Inlet gas supply 60 to 50,000 btu	5.0	11.0
Min. Inlet gas supply 175 to 225,000 btu	7.0	11.0

Injector sizes and manifold pressure for the burner are shown in the attached table for all heater units. The gas supply piping and connections must be installed so that the minimum pressure stated is achieved.

A gas shut off valve and union should be fitted in the gas supply line close to the heater, and a 1/8" N.P.T plugged tapping, accessible for test gauge connection, provided immediately upstream of the appliance gas inlet.

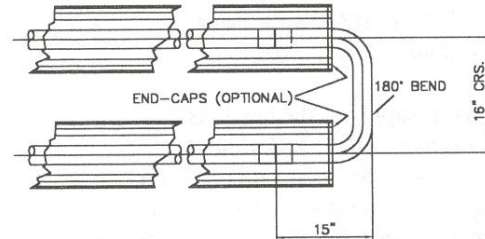


TYPICAL USAGE OF BEND KITS

IMPORTANT

REFLECTOR SUPPORT BRACKET ASSEMBLIES ARE TO BE FITTED AT EACH REFLECTOR JOINT, WITH THE CLAMPING SCREWS ADJUSTED SO THAT REFLECTORS ARE FIXED TOGETHER ONLY AT ALTERNATE JOINTS, TO ALLOW FOR THERMAL EXPANSION.

REFER TO LAYOUT DRAWINGS FOR BRACKET DETAILS.

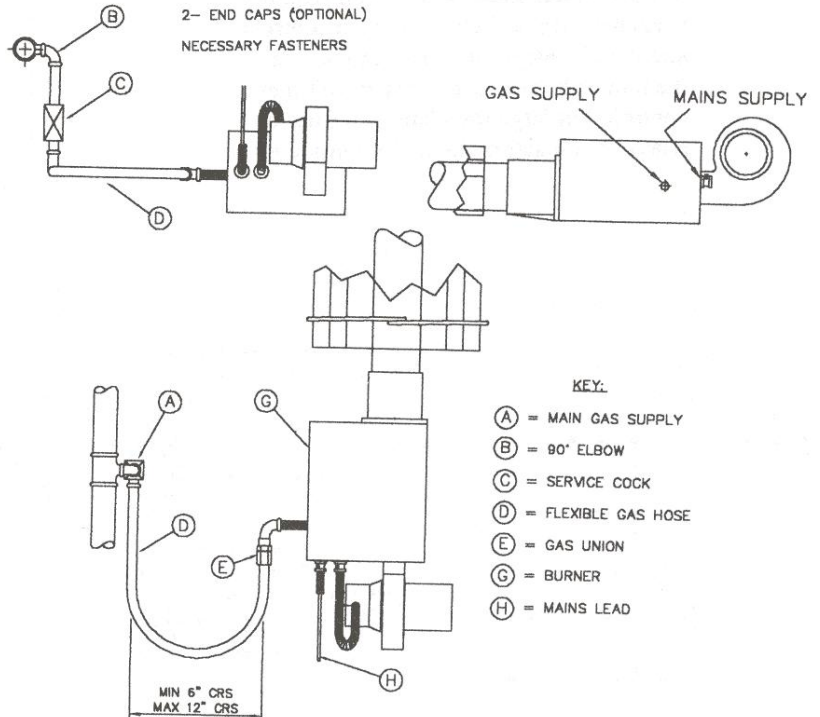


NOTES

BEND KIT COMPRISES OF:

- 1- BEND (90° OR 180°)
- 2- COUPLERS
- 2- EXTRA SUSPENSION BRACKETS
- 2- EXTRA REFLECTOR SUPPORT BRACKETS
- 2- END CAPS (OPTIONAL)

NECESSARY FASTENERS



⚠ WARNING: FIRE OR EXPLOSION HAZARD — Expansion of the radiant pipe occurs with each firing cycle causing the burner to move with respect to the gas line. This can result in a gas leak producing an unsafe condition. It is therefore essential to provide some flexibility in the final gas line connection — preferably by use of an approved armoured flexible connector or stainless steel expansion loop as shown in drawing.

ER Series
lbi09 — Appendix, p18

A.6 GAS CONNECTION (cont)

It is essential to provide some flexibility in the final gas connection preferably by use of an approved flexible gas connector or stainless steel expansion loop.

A.7 BURNER/CONTROL INTERNAL WIRING

Important: All electrical work should be done by a qualified electrician in strict accordance with the National Electrical Code ANSI/NFPA 70. or Canadian codes.

Supply: 120V. 60HZ, single phase
Current Rating: 1.2 amp max.

The electrical supply to the heater is by three wires: live, neutral and ground connections. It is recommended that the supply cable be in metallic conduit to the 3/4" hole provided. Install in accordance with all state & local codes

It is recommended that the electrical circuit controlling the heater or group of heaters include thermostats and if required manual control switches. All such controls and switch gear must be rated to handle the total inductive load of the circuit they control. For large installations the use of relays or contactors should be considered.

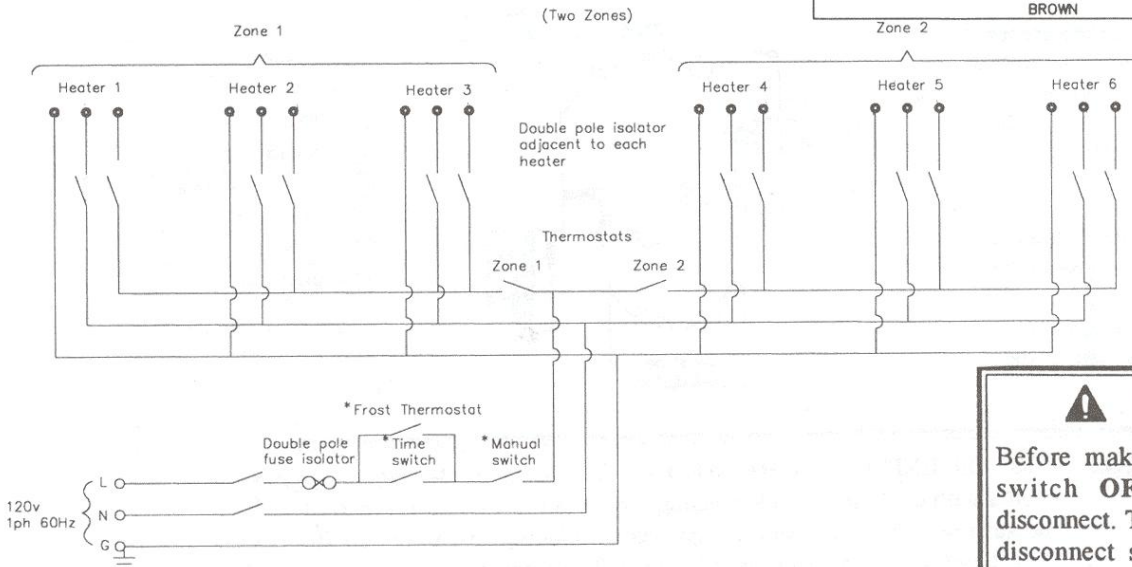
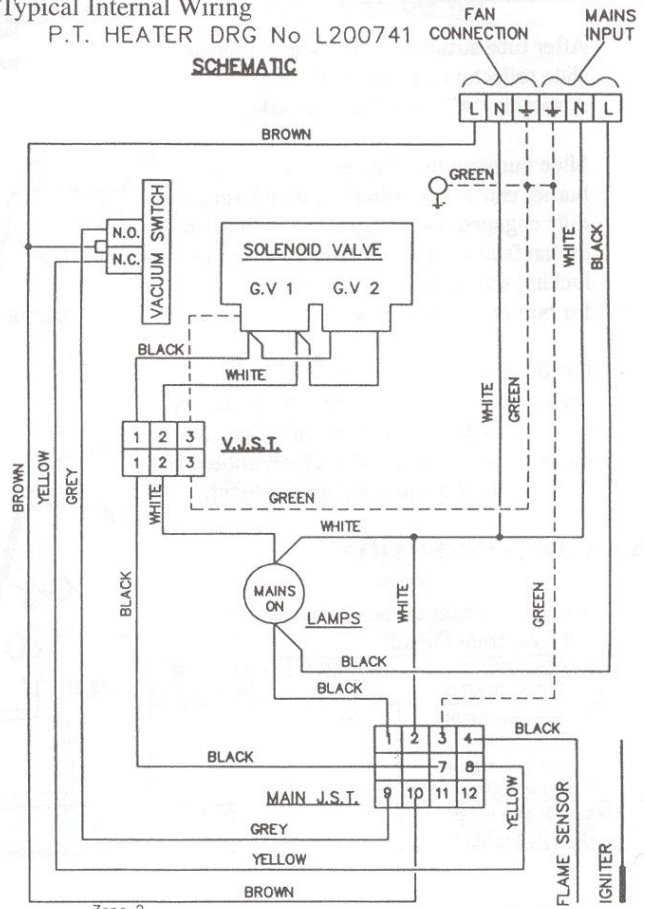
Control panels are available from the manufacturer incorporating multiple Black Bulb Thermostats controlling up to 10 heaters per thermostat for zone control of the heated area.

(Control Panels are not A.G.A/CSA design certified)

(b) Typical Internal Wiring

P.T. HEATER DRG No L200741

SCHEMATIC



TYPICAL EXTERNAL WIRING DIAGRAM

⚠ WARNING

Before making electrical connections, switch **OFF** the main electrical disconnect. There may be more than one disconnect switch. Lock out and tag switch with a suitable warning label. Electrical shock can cause personal injury or death.

ER Series; 1b10 — Appendix; p18

A.8 VENT REQUIREMENTS AND DETAILS

- (1) UNVENTED UNITS: Heaters may be installed without a flue providing the governing building codes are met and consideration is properly given to possibilities of condensation on cold surfaces.

Installation shall meet the following requirements when unvented:

- (A) Internal volume of the heated room must be greater than 214cu.ft. per 100 BTU/HR of heaters installed.
- OR -
- (B) Natural or mechanical means shall be provided to supply and exhaust at least 4 CFM per 1,000 BTU per hour input of installed heaters.
- (C) Combustion gases shall not impinge on combustible materials with a temperature in excess of 150°F
- (2) VERTICAL VENTING: The heater may be installed with a vertical flue.

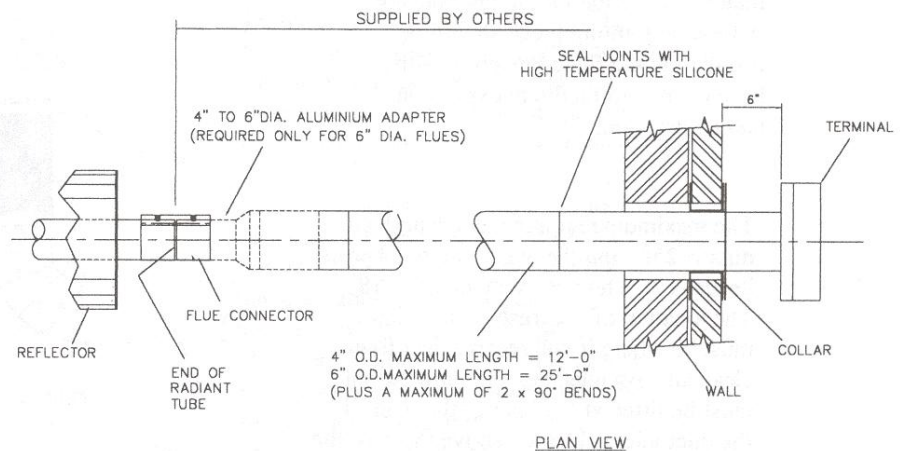
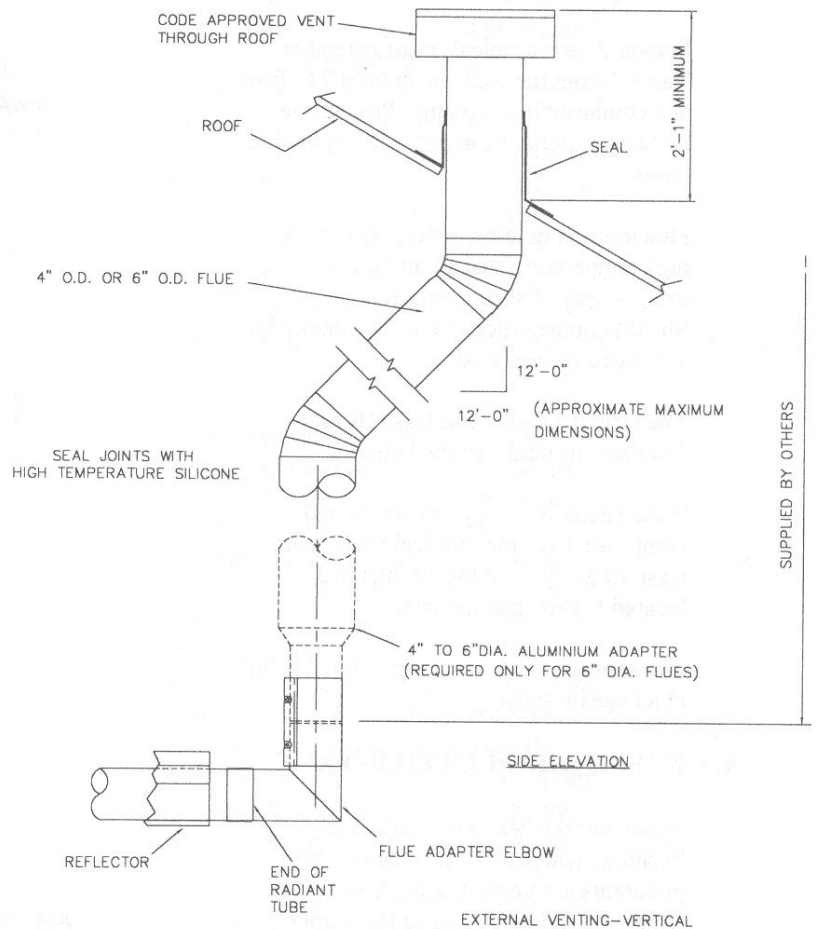
All flue piping should be adequately supported from the building structure and terminated with an approved terminal.

The maximum recommended flue length is 25ft with a maximum of two bends. All connections should be properly sealed.

- (3) HORIZONTAL VENTING: Individual units may be vented horizontally through side walls. Venting must be installed in accordance with ANSI Z223.1 (NFPA-54) and local codes. Recommended terminals are Ambi-Rad V0700 for 4" and V0800 for 6" flue.

Maximum length of vent is 25ft. with 2-90 degree long radius elbows. Runs of 12ft. or shorter can use 4" dia. flue. Runs over 12ft. should use 6" dia. flue pipe.

Any portion of flue that passes through a combustible wall must be insulated, or use an approved insulating thimble.



A.8 VENT REQUIREMENTS AND DETAILS (cont)

Standard vent terminals must extend at least 6" from the wall and at least 24" from any combustible overhang. Protect the building material from degradation by flue gases.

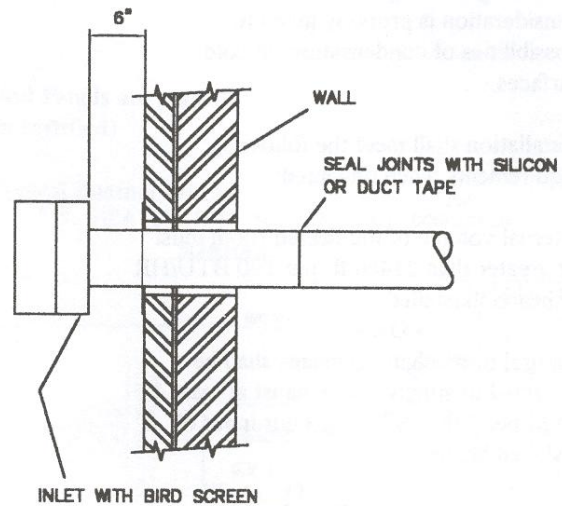
Flue joints should be sealed using RTV high temperature sealant and secured using at least 3 sheet metal screws. Should condensation occur flue should be shortened or insulated.

The terminal must be at least 3ft away from any air intake to the building.

If the heater is equipped with ducted combustion air, the terminal must be at least 3ft away from the air inlet and located higher than the inlet.

The vent terminal must be protected from blockage by snow.

WALL TERMINATION INLET KIT



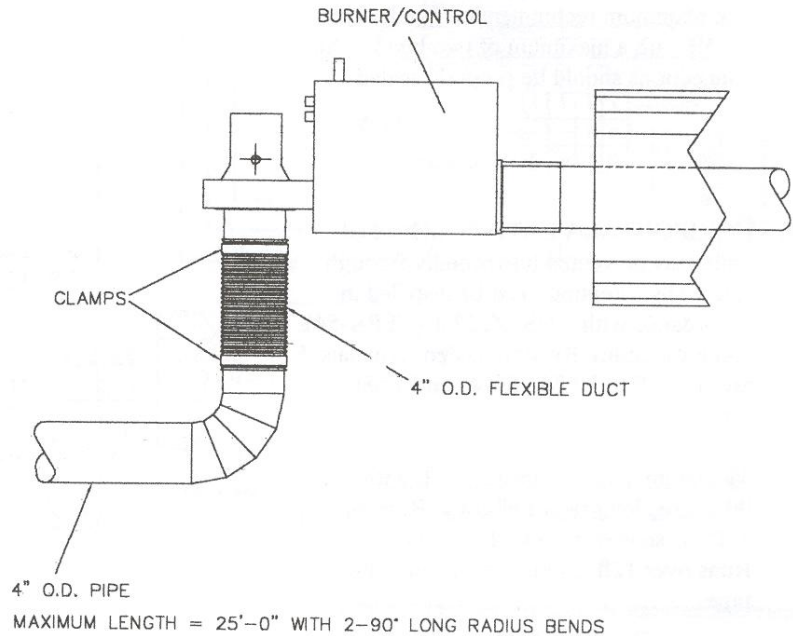
A.9 FRESH AIR DUCTED INTAKE

Whenever the heater is installed in locations where airborne dust or other pollutants are present, a fresh air supply should be ducted to the burner.

A fresh air duct of 4" dia. should be installed from the fresh air to the air intake connection on the fan housing. A flexible jointing piece should be installed at the fan connection with hose clamps to facilitate expansion and contraction.

The maximum recommended length air duct is 25ft. and the maximum number of bends is 2. The minimum length is 18" The location of the fresh air duct inlet must be where it will receive dust free clean air. An inlet cap with bird screen must be fitted at the inlet of the duct. If the duct inlet is located above the roof the underside of the inlet terminal must be at least 2ft. above roof level and at least 10" above any protection on the roof within 7ft. of the inlet. Intake pipe, fittings and sealant are not furnished by Manufacturer.

AIR DUCT CONNECTION TO BURNER



10. INSTALLATION CHECK OUT AND START UP

Inspect installation and ensure that it has been carried out in accordance with these instructions. Ensure that electrical and gas supplies are isolated.

The gas supply should be purged and tested for soundness in accordance with local and National Safety codes.

Open isolating gas valve and test gas connections for soundness using soap solution.

Remove burner cover plate by unscrewing 8 screws. Take care not to damage the sealing gasket. Inspect the burner and electrode assemblies ensuring these are securely fixed and all electrical connections securely made. Replace the burner cover plate ensuring that the sealing gasket is correctly positioned and the eight screws are fully tightened. The heater will not operate until this plate is refitted.

Remove the control housing cover plate by unscrewing the one securing screw.

Ensure all internal components are securely fixed and all connections securely made.

Open the manual gas valve outside of the control housing.

Switch on the electrical supply to the heater and observe the correct start up sequence. Ensure that the setting of any time switch and thermostat are such that the heating system will be required to operate.

The fan will start to run and 'Power On' lamp will illuminate. Safe-start checks are carried out automatically. After the fan has run up to full speed and a satisfactory pressure condition has been established, the ignition sequence will commence. The spark ignition will be energized producing a spark at the ignition electrode. The gas solenoid valve will at the same time be energized.

If the ignition is successful the flame is detected by the flame sensing probe and the ignition spark is switched off.

If ignitions is unsuccessful or fails at any time the gas valve will close and the spark ignition de-energized after approximately 10 seconds. For approximately 10 to 20 seconds the fan will purge the system then re-ignition will be attempted. After 2 further attempts at ignition the control unit will 'lock-out', the 'power on' lamp will remain illuminated and the fan will continue to run. To reset after 'lock-out' switch off the power supply to the system and wait 5 minutes. Then turn the power on. If repeated 'lock-out' occurs investigate the cause.

Set burner gas pressure as follows. Switch off the power supply to the heating system. Connect a 'U' tube manometer to the pressure test point provided on the combination gas control valve. Remove the cover from the pressure regulator revealing the adjustable screw. Start the heater and using a suitable screwdriver adjust the pressure regulator, turning the screw clockwise to increase the pressure or counter-clockwise to decrease the pressure. Set the pressure to appropriate inches w.c from the table of gas pressures and orifice plate dimensions for correct heater description. Switch off the power supply to the heating system. Disconnect 'U' tube manometer, then securely replace screw in pressure test nipple.

Check the operation of the flame safeguard equipment as follows. With the heater running normally, switch off the gas supply at the shut off valve. The heater should attempt to relight and if the gas valve has been left off 'lock-out' should occur indicated by the 'power on' light being illuminated and fan running.

Check the operation of the pressure proving switch as follows. With the heater running normally, pull off the silicone rubber tube connecting the vacuum switch to the combustion chamber. Within 4 seconds the burner should shut off. Then replace the tube securely and observe that the heater proceeds to ignite in the normal way.

Replace the controls cover securing the screws.

B. SERVICE AND MAINTENANCE INSTRUCTIONS

B1. SERVICING INSTRUCTIONS

Under normal working conditions, it is recommended that the Ambi-Rad heater be serviced annually. In exceptionally dirty or dusty conditions such as may occur in a foundry, more frequent servicing may be desirable. Servicing work should be carried out by a qualified gas service engineer.

IMPORTANT:

1. Never rest anything, especially ladders, against the heater.
2. Turn off gas and electrical supplies before servicing or repair work is started.
3. Unless otherwise instructed, reassemble parts in reverse order to follow instructions.

B2. ROUTINE SERVICE

- A. FAN** - Inspect the main fan impeller and remove any dust brushing with a soft brush. Similarly remove any dust from the finger guard covering the secondary (cooling) impeller and the mesh aperture in the motor cover. Ensure that the impeller turns freely and that there is not excessive play in the bearings.
- B. EMITTER TUBE** - Brush away any dust on the exterior of the emitter tube. Inspect the emitter tube internally by removing the burner control box as directed in D. If there is any appreciable build up of dust or deposits, the tube should be cleaned internally. The emitter tube may be cleaned by use of an industrial vacuum cleaner with a long extension tube which is passed down the emitter tube.
- C. REFLECTOR** - The condition of the reflector should be noted and any necessary cleaning performed. The reflectors can be simply removed for cleaning by removing the reflector clamp screws securing them to the suspension brackets and sliding them out of the suspension brackets. The reflector can be cleaned with a soft cloth and detergent in water

A mild non abrasive metal polish may be used in cases of extreme discoloration.

- D. REMOVAL OF BURNER/CONTROL ASSEMBLY** - Remove the burner/control assembly by disconnecting the gas and electrical supply (and fresh air inlet duct if fitted).
Slacken the burner fixing screws and draw the assembly off the emitter tube.
- BURNER/ELECTRODE ASSEMBLY-**
- E.** Inspect the burner/electrode assembly by removing the 8 screws securing the combustion chamber cover plate to top of control box, taking care not to damage the sealing gasket. Remove the burner casting and cross current diverter (fitted on PT60 - PT125 only) from front of burner housing. Then take out 2 screws holding electrode assembly. Remove the burner head by unscrewing it from the injector taking care not to drop it onto the leads of ignition electrodes. Replace the electrode assembly if it is not in good condition. The assembly is removed by removing the screws which attach it to the bracket to the floor of the combustion chamber. The assembly is lifted out of the combustion chamber and the cable disconnected. If the electrode assembly is in good order the spark electrode gap this should be 0.125 ± 0.003 ". Adjust the gap if necessary by bending the ground rod. Ensure the electrical connections are secure.

Inspect the injector and clean as necessary using a soft bristle brush. To remove or replace the injector, with the burner head removed, unscrew the injector from its carrier using a wrench on the hexagon portion of its body. When replacing the injector ensure that it is fully tightened in its carrier. (snug, not overtight)

Replace the burner head. Replace the combustion chamber top cover, replacing the sealing gasket if this is not in good condition.

Inspect the burner fresh inlet duct and ensure that it is free of any blockage or obstruction. Inspect the air inlet terminal and ensure this is not liable to obstruction.

B2. ROUTINE SERVICE (cont)

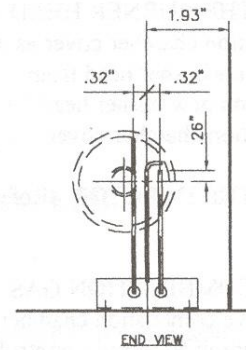
Re-check the heater by following the procedure for check out and start up, taking care to check that the burner gas pressure is correctly set, and that the vacuum switch and flame safeguard equipment function correctly.

- F. **AUXILIARY CONTROLS** - Check that auxiliary controls such as room thermostats, time switches, etc function correctly and are set to operate at the desired temperatures. Ensure that the user is aware of the functions of the auxiliary controls and their correct settings. For most efficient operations of the heating system the time switch, if fitted, should be set to switch on normally between 1/4 hour and 1 hour before commencement of occupancy of the building, depending on local conditions. The correct setting of the room thermostat can only be determined by experience in cold weather when it should be set to shut off the heaters when a comfortable level of warmth has been achieved, this setting will normally be several degrees below that which would be required with a convective heating system.

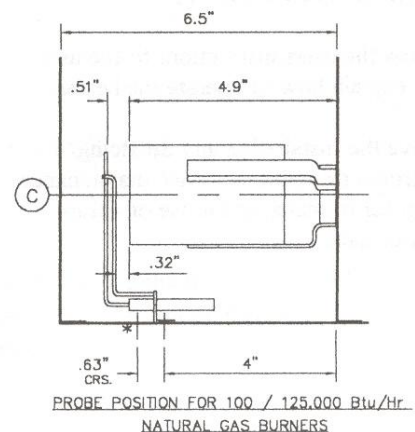
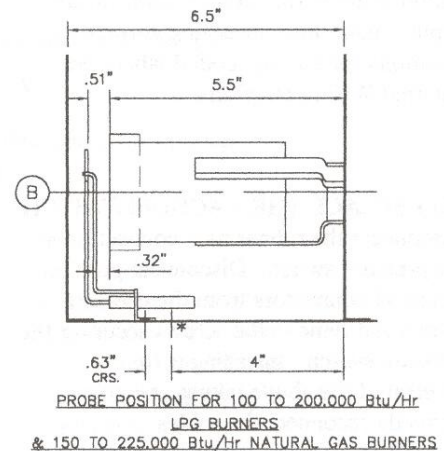
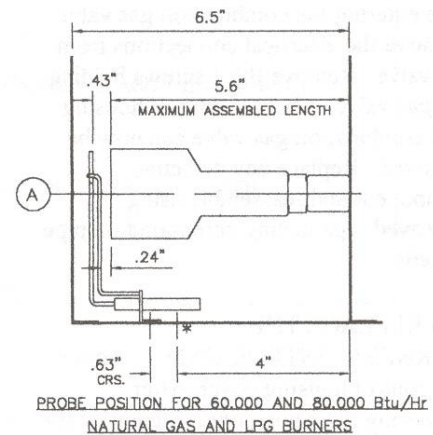
B3 REPLACEMENT OF COMPONENTS

WARNING : Turn off gas and electrical supplies before starting repair work

- A. **TO REPLACE ANY COMPONENTS IN THE BURNER/CONTROL ASSEMBLY** this assembly should be removed from the heater by disconnecting the gas and electrical supplies (also the fresh air intake duct if used). Loosen the bolts and slide the burner/control assembly from the emitter tube.
- B. **TO REPLACE ELECTRODE ASSEMBLY** - Remove top cover of combustion chamber by removing 8 screws. Remove the screws securing the electrode assembly and pull off the electrode cable connector. Reconnect the cable connector to the new electrode assembly and replace the assembly. Replace the cover plate and gasket. Spark electrode gap 0.125 ± 0.3 "



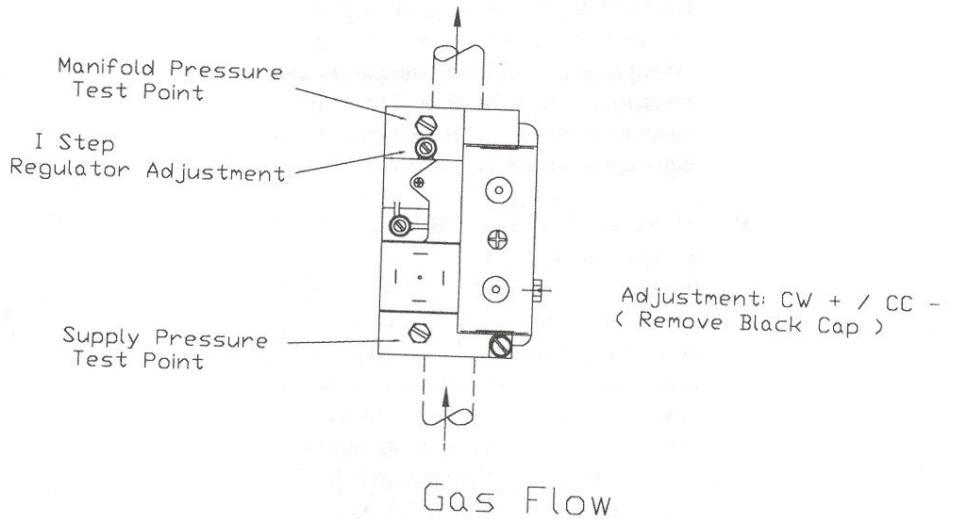
IMPORTANT
THE 2-UNUSED HOLES MARKED * MUST BE CLOSED OFF



PROBE POSITIONS

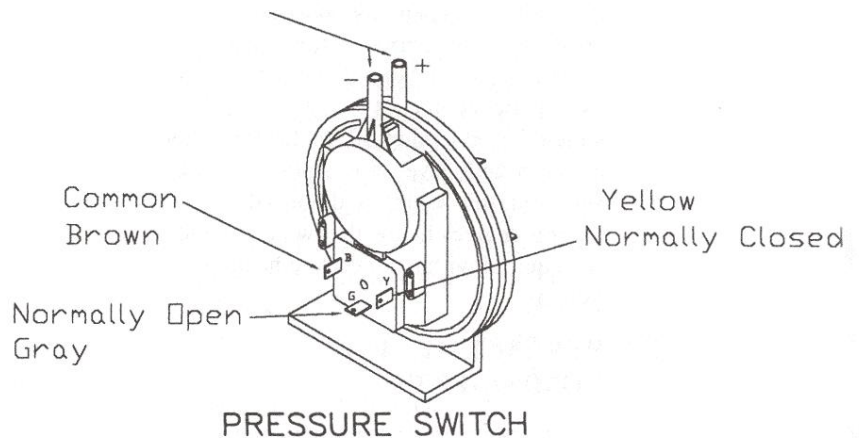
- C. TO REPLACE THE BURNER HEAD -** Remove combustion chamber cover as in section B. Unscrew burner head from injector. Screw on new burner head. Replace combustion chamber cover.
- D. TO REPLACE THE INJECTOR -** Refer to section E.
- E. TO REPLACE COMBINATION GAS VALVE -** Remove combustion chamber cover as in paragraph B. remove control housing cover. Remove burner head as in paragraph C. Unscrew the gas supply pipe entering the combination gas valve. Remove the electrical connections from the valve. Remove the 4 screws holding the gas valve to burner control housing. The combination gas valve can now be removed. Replace any defective component and reassemble using approved pipe joining compound on pipe threads.
- F. TO REPLACE THE BURNER/CONTROL UNIT -** Remove the control housing cover. After observing their positions, disconnect the wiring harness to the burner control unit. Remove the burner control unit. Install replacement unit, observing correct positions for colored coded labels. See Internal Wiring Diagram.

Twin Solenoid Gas Valve



- G. TO REPLACE THE VACUUM SWITCH** Disconnect the rubber tube connection at the pressure switch. Disconnect push on electrical connectors from the pressure switch and remove the screws securing the pressure switch. Installing is the reversal of the above taking care to correctly reconnect the cables.

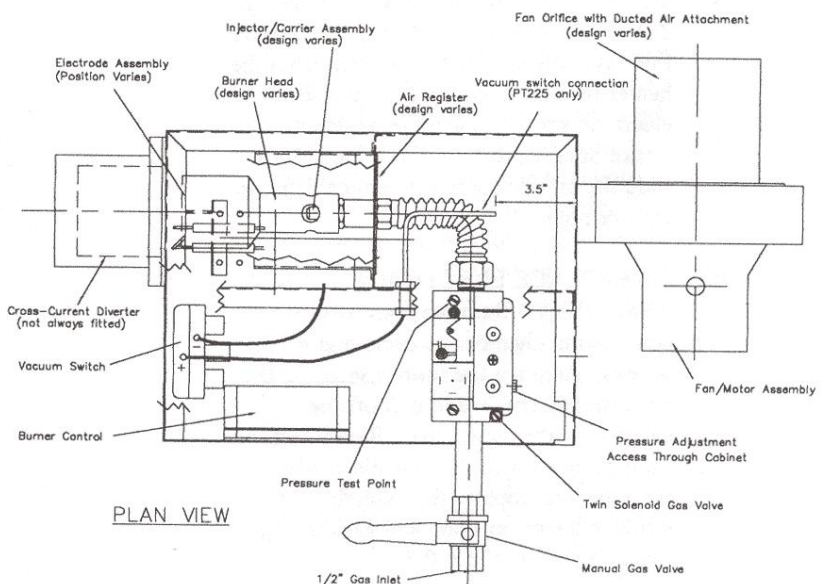
Pressure Connections



USER INSTRUCTIONS

Show the users instructions to the user and explain how to operate the heater.

Leave the Installation and Servicing Instructions with the service maintenance engineer or manager for use on future service calls.



TYPICAL ARRANGEMENT OF BURNER / CONTROL UNIT

USER INSTRUCTIONS

AMBI-RAD TUBULAR RADIANT HEATERS

AMBI-RAD is the manufacturer of a series of tubular infra-red heaters designed for overhead heating of industrial and commercial buildings. Individual heating units are suspended from the roof or mounted at an angle on the wall.

IMPORTANT

1. This appliance must only be installed by qualified craftsmen in accordance with the requirements of local and National Codes.
2. This appliance must be grounded in accordance with the National Electrical Code ANSI/NFPA No. 70 or Canadian Codes.
3. Never rest anything, especially ladders against the heaters.

To Start the Heater

1. First ensure that the gas supply to each heater is turned on by opening main gas shut-off valve.
2. Ensure that the setting of any time switch and thermostat are such that the heating system will be required to operate.
3. Switch on the electrical supply to the heater. The fan will start, the 'power on' light on the burner will illuminate and ignition commence.
4. Ignition will then occur.
5. If ignition is unsuccessful the gas valve will close and the spark ignition de-energize after approximately 10 seconds. For approximately 10-20 seconds the fan will purge the system then re-ignition will be attempted. After 3 attempts at ignition the control unit will 'lock-out', the 'power on' lamp will remain illuminated and the fan will continue to run. To reset after 'lockout', switch off the power supply to the heater and wait 5 minutes. Then turn the power on. If repeated 'lockout' occurs investigate the cause.

To Switch Off the Heater

Switch off the electrical supply. The burner will shut off and the fan will stop.

Servicing

To ensure continued efficient and safe operation it is recommended that the heater be serviced regularly by a qualified person every year in normal working conditions but in exceptionally dusty or polluted conditions more frequent servicing may be needed.

AMBI-RAD "PT" BURNER PARTS LIST

ITEM	PART #	DESCRIPTION
1	P-200001	BURNER CONTROL HOUSING
2	P-2054	GAS VALVE – TWIN SOLENOID
3	P-3256.9	CONTROLLER
4	P-2192-2	VACUUM/PRESSURE SWITCH
5-1	P-200541	OPEN PORT HEAD NG, LPG
5-2	P-200530	PEPPERPOT HEAD LPG
5-3	P-200520	PEPPERPOT HEAD NAT. GAS
5-4	P-200550	PEPPERPOT HEAD NAT. GAS
6	P-3175	ELECTRODE ASSEMBLY
7	P-200003	COVER PLATE
8	P-200002	CONTROLS CHAMBER LID
9	P-200200*	AIR REGISTER
10	P-2003302*	FAN ORIFICE PLATE
10A		DUCT AIR FAN INLET HUB
11	P-3084	SUPPORT CASTING
12	P-200004	GAS TRAIN FLANGE
13	P-2275	CROSS-CURRENT DIVERTER (NOT ALL MODELS)
14	P-2615	ELECTRICAL CONNECTION BLOCK
15	P-2181	RED NEON INDICATOR
16	P-2267	IMPULSE LINE STUD
17	P-980020**	AIR SPINNING
18	P-000000*	GAS INJECTOR
19	P-200510	1/2" B.S.P. JET CARRIER
22	P-2356	1/2" B.S.P. FLEXIBLE
23	P-2362	1/2" B.S.P. x 80mm BARREL NIPPLE
24	A-1427	1/2" B.S.P. GAS VALVE
25	FAO-100	FAN AND MOTOR
26	P-3263.1	CABLE GLAND
27	P-200540	OPEN PORT HEAD
28	p-2285	3/8" B.S.P. JET CARRIER
29	P-2308	3/8" B.S.P. SOCKET
30	P-200100	3/8" B.S.P. x 1/2" B.S.P. M/M ADAPTOR
31	P-110350	GASKET
32	P-523500	MICA WINDOW
33	P-110709	RETAINER PLATE

* SEE HEATER SPECIFICATION CHARTS FOR AIR HOLE PATTERN

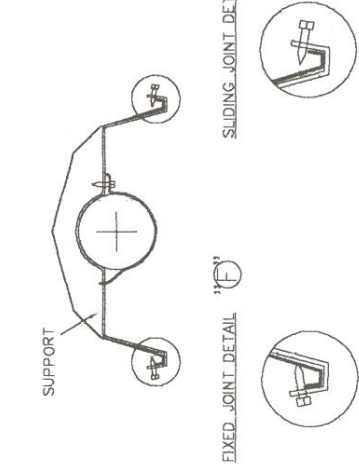
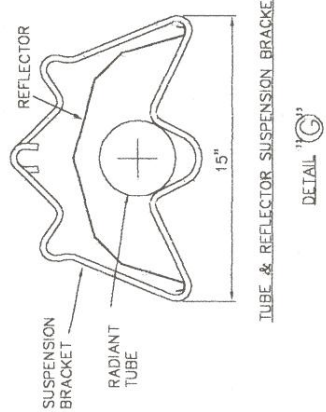
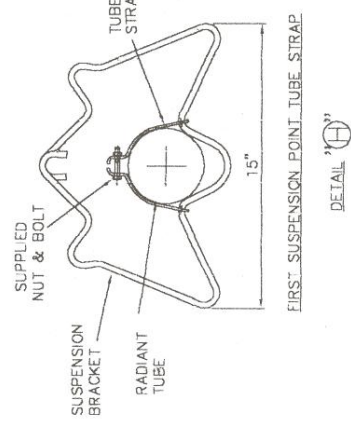
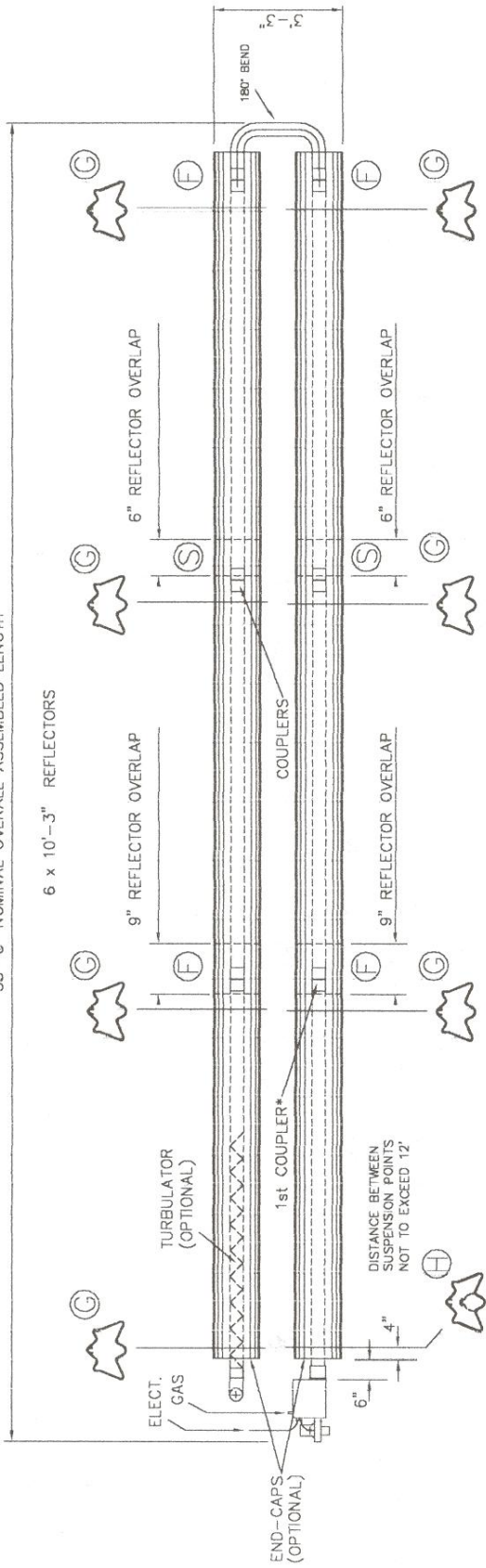
** WELDED TO HOUSING PARTITION, AVAILABLE ONLY AS PART OF THE HOUSING

"PT" SERIES INFRARED GAS HEATER

"U60"

33'-0" NOMINAL OVERALL ASSEMBLED LENGTH

6 x 10'-3" REFLECTORS



2 x SCREWS TIGHTENED TO FIX REFLECTORS

LEAVE 1/8" MIN. GAP TO ALLOW REFLECTOR TO SLIDE

SERIES	COMBUSTION TUBE*	REMAINING TUBES	REFLECTORS
PTSC	4" ALUMINIZED STL.	4" MILD STEEL	ALUMINUM
PTER	4" ALUMINIZED STL.	4" MILD STEEL	STAINLESS STEEL

AMBIRAD

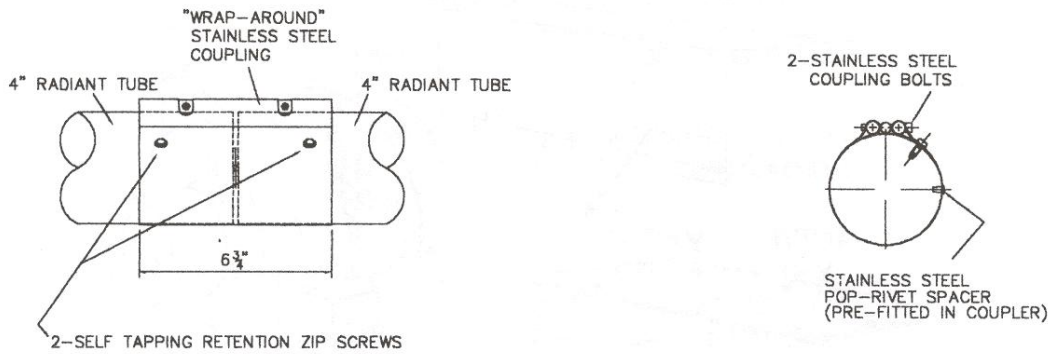
*NOTE
 20' MINIMUM OF ALUMINIZED STEEL COMBUSTION TUBES CONNECTED BY HIGH TEMPERATURE STAINLESS STEEL COUPLING AS SHOWN ON PAGE 15, FOR ALL PT175, 200, AND 225 HEATERS.

MODEL NUMBER	BTU/HR	OPERATING GAS PRESSURE
PTSC125-U60	125,000	NATURAL GAS 3.9"wc LP GAS 10"wc
PTSC150-U60	150,000	3.5"wc 9.5"wc
PTSC175-U60*	175,000	3.5"wc 9.7"wc
PTSC200-U60*	200,000	3.5"wc 10"wc
PTSC225-U60*	225,000	3.5"wc 9.3"wc

FIGURE 1 TUBE COUPLING DETAIL

HIGH TEMPERATURE STAINLESS STEEL 4" COUPLING

THIS WRAP AROUND COUPLING IS TO BE USED TO CONNECT THE FIRST AND SECOND TUBES FOR ALL PT175, 200 AND 225 HEATERS.



STANDARD 4" STAINLESS STEEL TUBE COUPLING

BAND TIGHTENED COUPLING USED TO CONNECT ALL OTHER 4" RADIANT TUBES FROM END TO END.

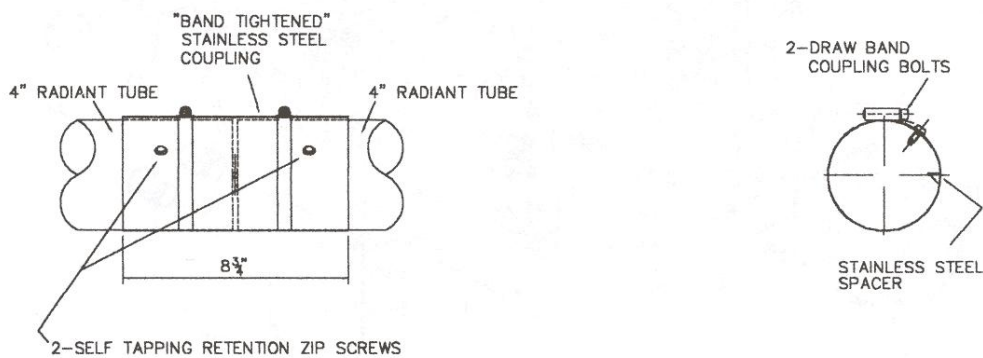
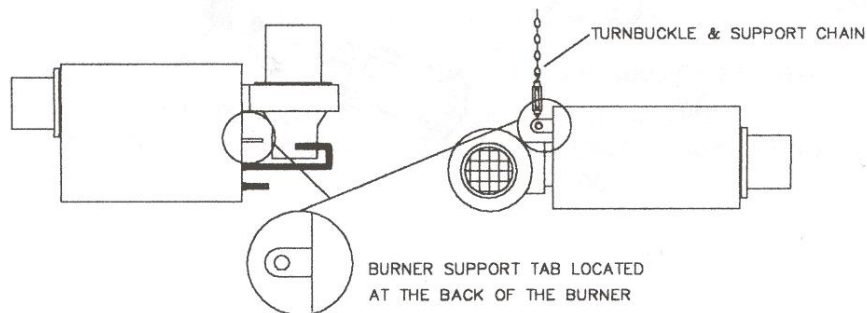
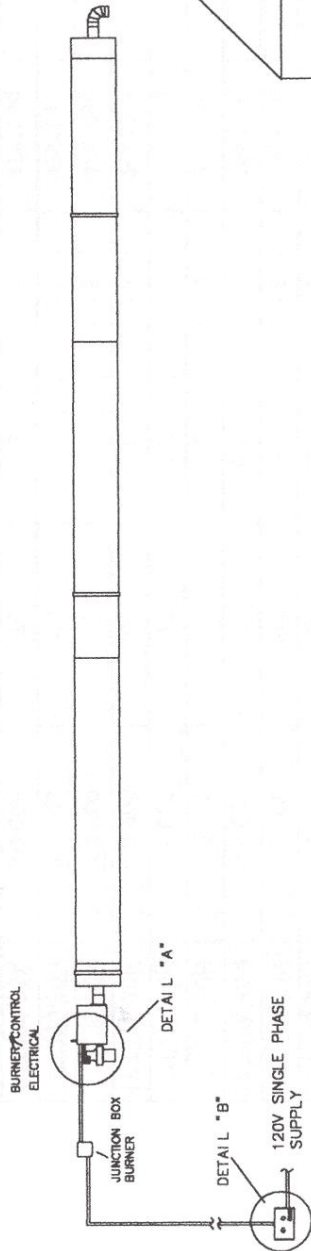


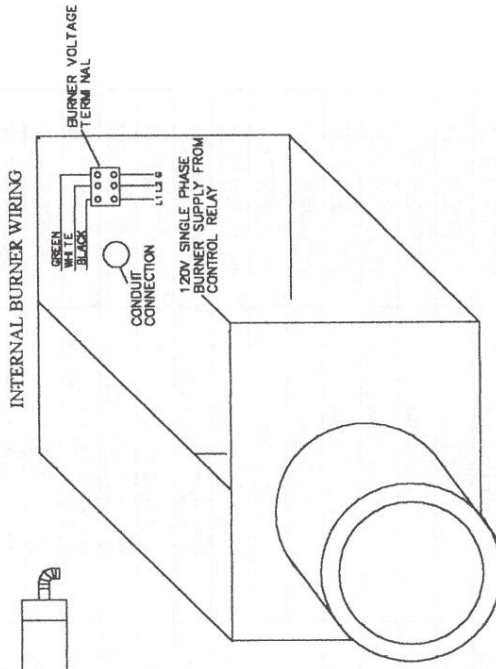
FIGURE 2 BURNER SUPPORT DETAIL



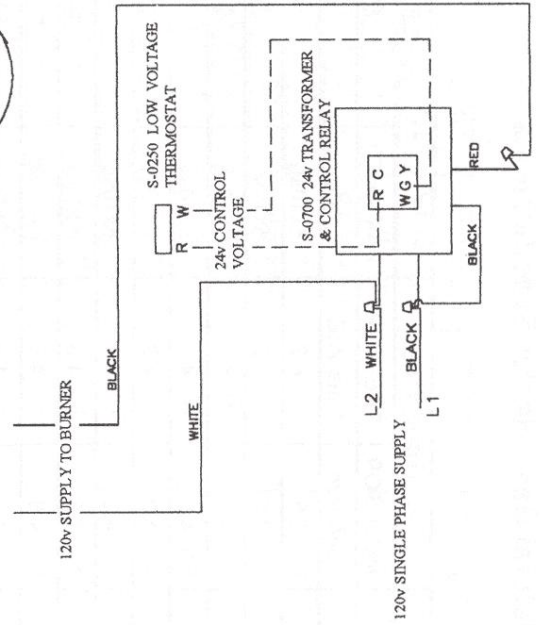
AMBRAD "PT" WIRING DETAIL FOR LINE & LOW VOLTAGE THERMOSTAT



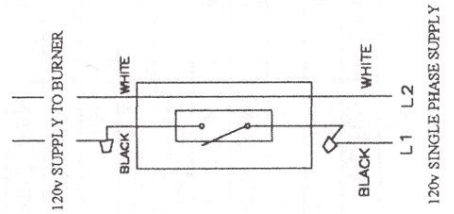
DETAIL "A"
BURNER CONNECTIONS



DETAIL "B"
LOW VOLTAGE THERMOSTAT & RELAY



DETAIL "B"
LINE VOLTAGE THERMOSTAT



Natural Gas - Heater Specifications

MODEL	HEAT INPUT Btu/Hr	LENGTH ft	NATURAL GAS		ORIFICES		BURNER HEAD Ref. To Dia. C
			INJECTOR DIA mm	PRESSURE ins W.C	FAN INLET mm	BURNER mm	
PT60-20N	60,000	20	3.6	4.2	5x10sq	8x12.5dia	OPEN PORT
PT60-30N	60,000	30	3.6	4.2	5x10sq	8x12.5dia	OPEN PORT
PT60-40N	60,000	40	3.6	4.2	5x10sq	8x12.5dia	OPEN PORT
PT80-20N	80,000	20	4.2	4.3	8x10sq	12x12.5dia	OPEN PORT
PT80-30N	80,000	30	4.2	4.3	8x10sq	12x12.5dia	OPEN PORT
PT80-40N	80,000	40	4.2	4.3	8x10sq	12x12.5dia	OPEN PORT
PT100-30N	100,000	30	4.8	4.3	10x10sq	14x12.5dia	PEPPER POT
PT100-40N	100,000	40	4.8	4.3	10x10sq	14x12.5dia	PEPPER POT
PT100-50N	100,000	50	4.8	4.3	10x10sq	14x12.5dia	PEPPER POT
PT125-40N	125,000	40	5.6	3.9	14x10sq	17x12.5dia	PEPPER POT
PT125-50N	125,000	50	5.6	3.9	14x10sq	17x12.5dia	PEPPER POT
PT125-60N	125,000	60	5.6	3.9	14x10sq	17x12.5dia	PEPPER POT
PT150-40N	150,000	40	6.1	3.5	18x10sq	21x12.5dia	PEPPER POT
PT150-50N	150,000	50	6.1	3.5	18x10sq	21x12.5dia	PEPPER POT
PT150-60N	150,000	60	6.1	3.5	18x10sq	21x12.5dia	PEPPER POT
PT150-70N	150,000	70	6.1	3.5	18x10sq	21x12.5dia	PEPPER POT
PT175-50N	175,000	50	6.6	3.5	26x10sq	21x12.5+4x14dia	PEPPER POT
PT175-60N	175,000	60	6.6	3.5	26x10sq	21x12.5+4x14dia	PEPPER POT
PT175-70N	175,000	70	6.6	3.5	26x10sq	21x12.5+4x14dia	PEPPER POT
PT175-80N	175,000	80	6.6	3.5	26x10sq	21x12.5+4x14dia	PEPPER POT
PT200-50N	200,000	50	7.3	3.5	42x10sq	21x12.5+4x18dia	PEPPER POT
PT200-60N	200,000	60	7.3	3.5	42x10sq	21x12.5+4x18dia	PEPPER POT
PT200-70N	200,000	70	7.3	3.5	42x10sq	21x12.5+4x18dia	PEPPER POT
PT200-80N	200,000	80	7.3	3.5	42x10sq	21x12.5+4x18dia	PEPPER POT
PT225-50N	225,000	50	7.8	3.5	100mm dia	11x13/11x14.5+5x18dia	PEPPER POT
PT225-60N	225,000	60	7.8	3.5	100mm dia	11x13/11x14.5+5x18dia	PEPPER POT
PT225-70N	225,000	70	7.8	3.5	100mm dia	11x13/11x14.5+5x18dia	PEPPER POT
PT225-80N	225,000	80	7.8	3.5	100mm dia	11x13/11x14.5+5x18dia	PEPPER POT

Note: Consult factory for altitude installations at 2,000 sea level and above.

Natural Gas - Heater Specifications

MODEL	HEAT INPUT Btu/Hr	LENGTH ft	NATURAL GAS		ORIFICES		BURNER HEAD Ref. To Dia. C
			INJECTOR DIA mm	PRESSURE ins W.C	FAN INLET mm	BURNER mm	
PT60-20N	60,000	20	3.6	4.2	5x10sq	8x12.5dia	OPEN PORT
PT60-30N	60,000	30	3.6	4.2	5x10sq	8x12.5dia	OPEN PORT
PT60-40N	60,000	40	3.6	4.2	5x10sq	8x12.5dia	OPEN PORT
PT80-20N	80,000	20	4.2	4.3	8x10sq	12x12.5dia	OPEN PORT
PT80-30N	80,000	30	4.2	4.3	8x10sq	12x12.5dia	OPEN PORT
PT80-40N	80,000	40	4.2	4.3	8x10sq	12x12.5dia	OPEN PORT
PT100-30N	100,000	30	4.8	4.3	10x10sq	14x12.5dia	PEPPER POT
PT100-40N	100,000	40	4.8	4.3	10x10sq	14x12.5dia	PEPPER POT
PT100-50N	100,000	50	4.8	4.3	10x10sq	14x12.5dia	PEPPER POT
PT125-40N	125,000	40	5.6	3.9	14x10sq	17x12.5dia	PEPPER POT
PT125-50N	125,000	50	5.6	3.9	14x10sq	17x12.5dia	PEPPER POT
PT125-60N	125,000	60	5.6	3.9	14x10sq	17x12.5dia	PEPPER POT
PT150-40N	150,000	40	6.1	3.5	18x10sq	21x12.5dia	PEPPER POT
PT150-50N	150,000	50	6.1	3.5	18x10sq	21x12.5dia	PEPPER POT
PT150-60N	150,000	60	6.1	3.5	18x10sq	21x12.5dia	PEPPER POT
PT150-70N	150,000	70	6.1	3.5	18x10sq	21x12.5dia	PEPPER POT
PT175-50N	175,000	50	6.6	3.5	26x10sq	21x12.5+4x14dia	PEPPER POT
PT175-60N	175,000	60	6.6	3.5	26x10sq	21x12.5+4x14dia	PEPPER POT
PT175-70N	175,000	70	6.6	3.5	26x10sq	21x12.5+4x14dia	PEPPER POT
PT175-80N	175,000	80	6.6	3.5	26x10sq	21x12.5+4x14dia	PEPPER POT
PT200-50N	200,000	50	7.3	3.5	42x10sq	21x12.5+4x18dia	PEPPER POT
PT200-60N	200,000	60	7.3	3.5	42x10sq	21x12.5+4x18dia	PEPPER POT
PT200-70N	200,000	70	7.3	3.5	42x10sq	21x12.5+4x18dia	PEPPER POT
PT200-80N	200,000	80	7.3	3.5	42x10sq	21x12.5+4x18dia	PEPPER POT
PT225-50N	225,000	50	7.8	3.5	100mm dia	11x13/11x14.5+5x18dia	PEPPER POT
PT225-60N	225,000	60	7.8	3.5	100mm dia	11x13/11x14.5+5x18dia	PEPPER POT
PT225-70N	225,000	70	7.8	3.5	100mm dia	11x13/11x14.5+5x18dia	PEPPER POT
PT225-80N	225,000	80	7.8	3.5	100mm dia	11x13/11x14.5+5x18dia	PEPPER POT

Note: Consult factory for altitude installations at 2,000 sea level and above.

L.P. Gas - Heater Specifications

MODEL	HEAT INPUT		LENGTH ft	LIQUID PETROLEUM		ORIFICES		BURNER HEAD Ref to Dia C
	Btu/Hr			INJECTOR DIA mm	PRESSURE ins W.C	FAN INLET mm	BURNER mm	
PT60-20P	60,000		20	2.5	8	5x10sq	8x12.5dia	OPEN PORT
PT60-30P	60,000		30	2.5	8	5x10sq	8x12.5dia	OPEN PORT
PT60-40P	60,000		40	2.5	8	5x10sq	8x12.5dia	OPEN PORT
PT80-20P	80,000		20	2.7	9.7	9x10sq	13x12.5dia	OPEN PORT
PT80-30P	80,000		30	2.7	9.7	9x10sq	13x12.5dia	OPEN PORT
PT80-40P	80,000		40	2.7	9.7	9x10sq	13x12.5dia	OPEN PORT
PT100-30P	100,000		30	3	10	11x10sq	15x12.5dia	PEPPER POT
PT100-40P	100,000		40	3	10	11x10sq	15x12.5dia	PEPPER POT
PT100-50P	100,000		50	3	10	11x10sq	15x12.5dia	PEPPER POT
PT125-40P	125,000		40	3.4	10	13x10sq	17x12.5dia	PEPPER POT
PT125-50P	125,000		50	3.4	10	13x10sq	17x12.5dia	PEPPER POT
PT125-60P	125,000		60	3.4	10	13x10sq	17x12.5dia	PEPPER POT
PT150-40P	150,000		40	3.8	9.5	18x10sq	22x12.5dia	PEPPER POT
PT150-50P	150,000		50	3.8	9.5	18x10sq	22x12.5dia	PEPPER POT
PT150-60P	150,000		60	3.8	9.5	18x10sq	22x12.5dia	PEPPER POT
PT150-70P	150,000		70	3.8	9.5	18x10sq	22x12.5dia	PEPPER POT
PT175-50P	175,000		50	4.1	9.7	26x10sq	25x12.5dia	PEPPER POT
PT175-60P	175,000		60	4.1	9.7	26x10sq	25x12.5dia	PEPPER POT
PT175-70P	175,000		70	4.1	9.7	26x10sq	25x12.5dia	PEPPER POT
PT175-80P	175,000		80	4.1	9.7	26x10sq	25x12.5dia	PEPPER POT
PT200-50P	200,000		50	4.4	10	42x10sq	20x12.5+4x18dia	PEPPER POT
PT200-60P	200,000		60	4.4	10	42x10sq	20x12.5+4x18dia	PEPPER POT
PT200-70P	200,000		70	4.4	10	42x10sq	20x12.5+4x18dia	PEPPER POT
PT200-80P	200,000		80	4.4	10	42x10sq	20x12.5+4x18dia	PEPPER POT
PT225-50P	225,000		50	4.7	9.3	100mm dia	11x13/11x14.5+5x18dia	PEPPER POT
PT225-60P	225,000		60	4.7	9.9	100mm dia	11x13/11x14.5+5x18dia	PEPPER POT
PT225-70P	225,000		70	4.7	9.3	100mm dia	11x13/11x14.5+5x18dia	PEPPER POT
PT225-80P	225,000		80	4.7	9.3	100mm dia	11x13/11x14.5+5x18dia	PEPPER POT

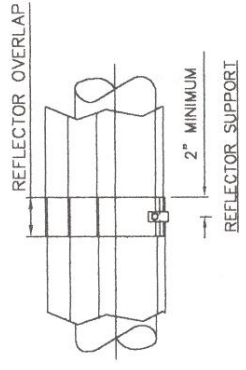
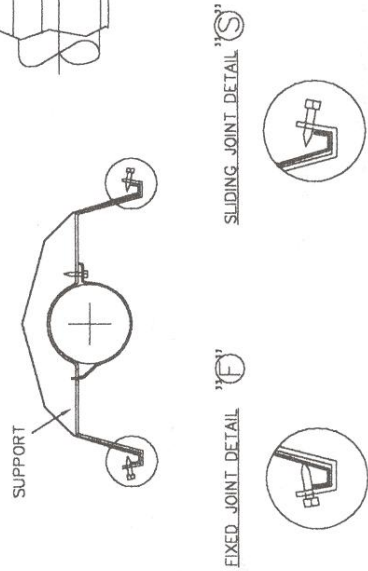
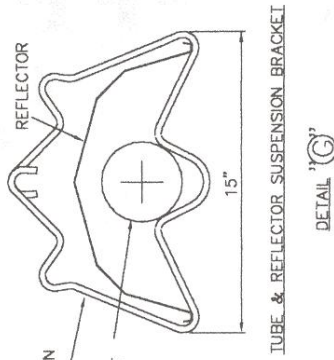
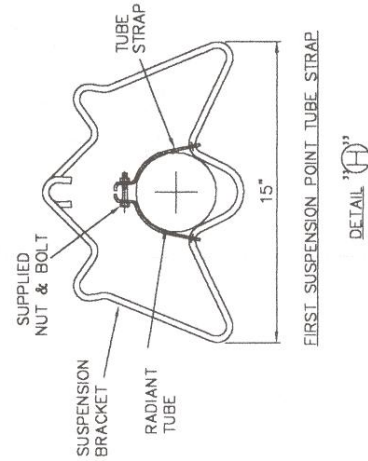
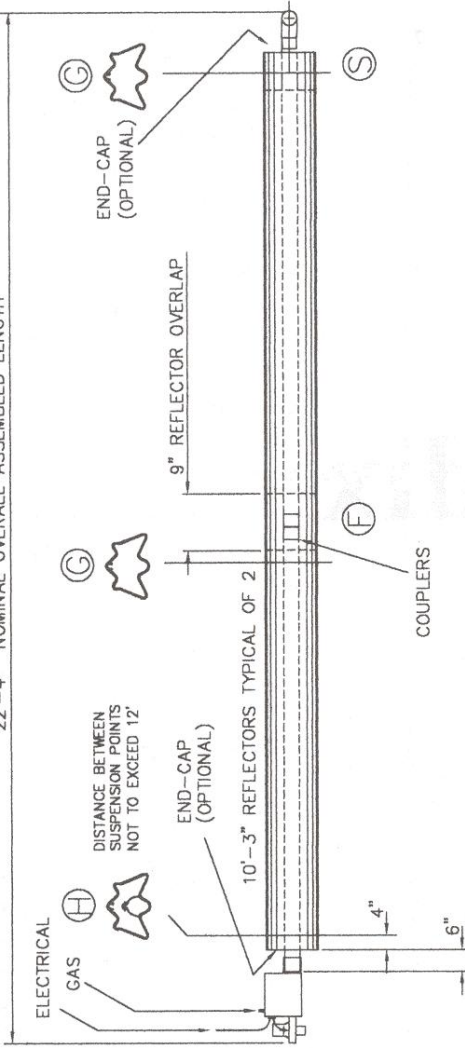
Note: Consult factory for altitude installations at 2,000 sea level and above.

Appendix 'A'

"PT" SERIES INFRARED GAS HEATER

"S20"

22'-4" NOMINAL OVERALL ASSEMBLED LENGTH



SERIES	COMBUSTION TUBE	REMAINING TUBE	REFLECTORS
PTSC	4" ALUMINIZED STL.	4" MILD STEEL	ALUMINUM
PTER	4" ALUMINIZED STL.	4" MILD STEEL	STAINLESS STEEL

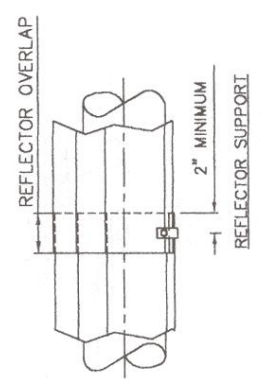
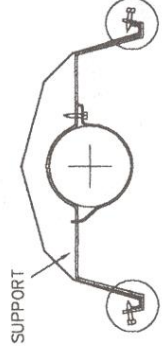
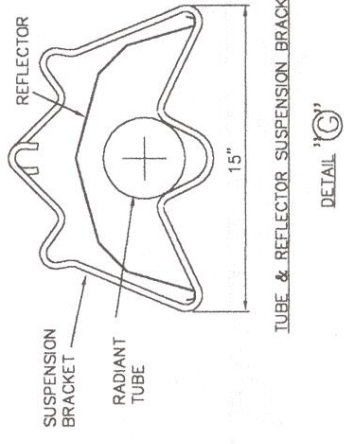
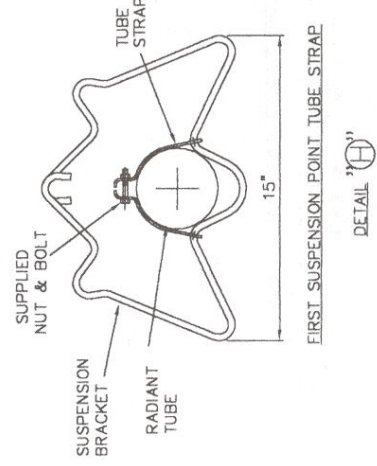
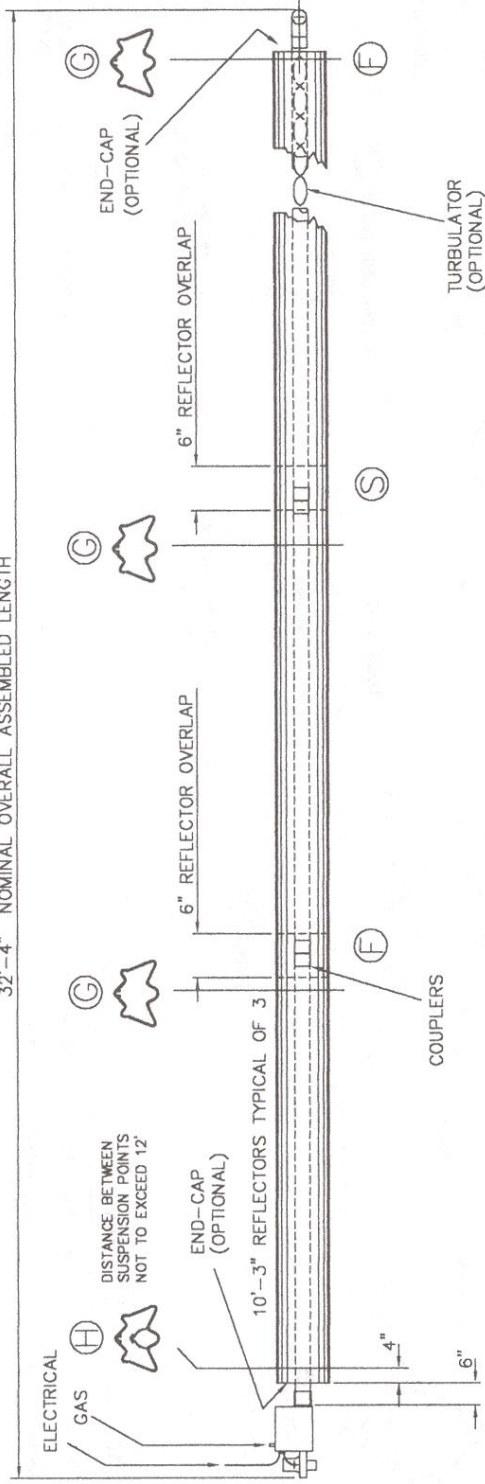
MODEL NUMBER	BTU/HR	OPERATING GAS	PRESSURE
PTSC60-S20	60,000	NATURAL GAS	4.2"wc
PTSC80-S20	80,000	LP GAS	8"wc
			4.3"wc
			9.7"wc

AMBIRAD

"PT" SERIES INFRARED GAS HEATER

"S30"

32'-4" NOMINAL OVERALL ASSEMBLED LENGTH



SERIES	COMBUSTION TUBE	REMAINING TUBES	REFLECTORS
PTC	4" ALUMINIZED STL.	4" MILD STEEL	ALUMINUM
PTER	4" ALUMINIZED STL.	4" MILD STEEL	STAINLESS STEEL

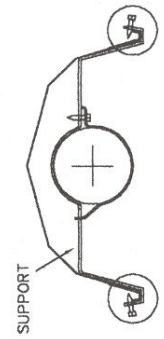
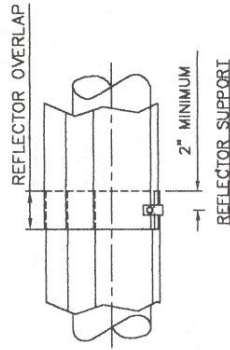
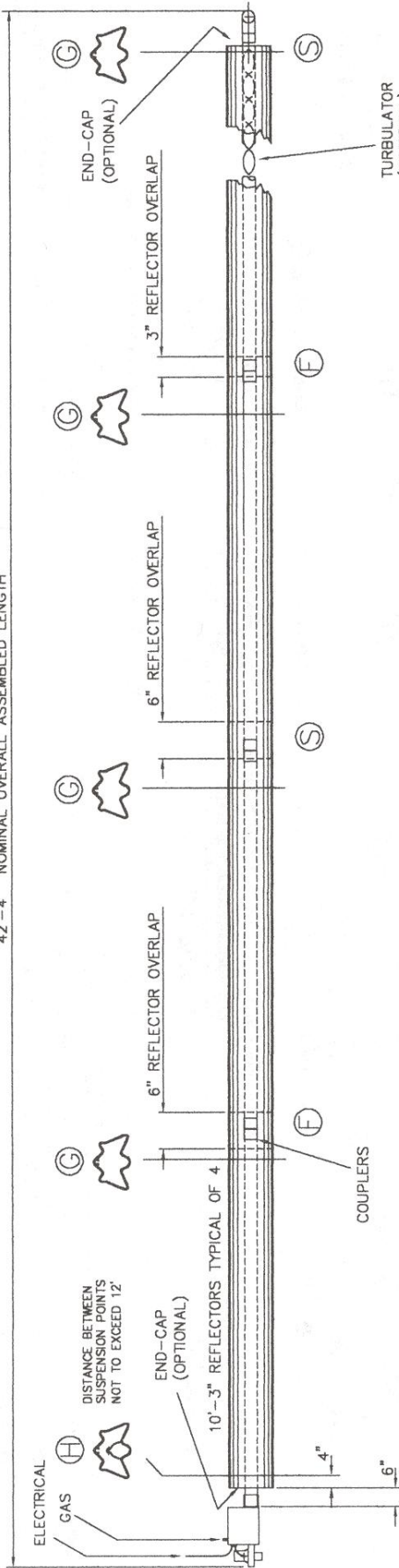
MODEL NUMBER	BTU/HR	OPERATING GAS	PRESSURE
PTSC60-S30	60,000	NATURAL GAS	LP GAS 8" WC
PTSC80-S30	80,000	NATURAL GAS	LP GAS 9.7" WC
PTSC100-S30	100,000	NATURAL GAS	LP GAS 10" WC

AMBIRAD

"PT" SERIES INFRARED GAS HEATER

"S40"

42'-4" NOMINAL OVERALL ASSEMBLED LENGTH



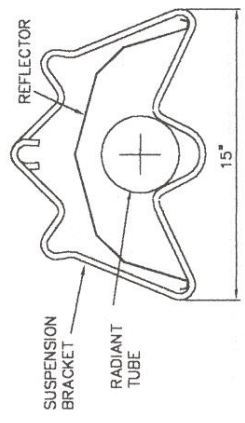
SLIDING JOINT DETAIL "S"

FIXED JOINT DETAIL "F"

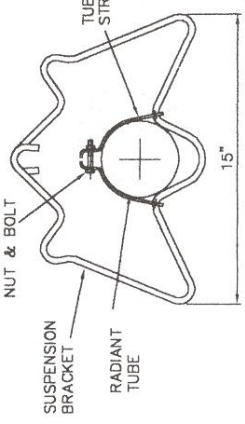


LEAVE 1/8" MIN. GAP TO ALLOW REFLECTOR TO SLIDE

2 x SCREWS TIGHTENED TO FIX REFLECTORS



TUBE & REFLECTOR SUSPENSION BRACKET DETAIL "G"



FIRST SUSPENSION POINT TUBE STRAP DETAIL "H"

SERIES	COMBUSTION TUBE	REMAINING TUBES	REFLECTORS
PTSC	4" ALUMINIZED STL.	4" MILD STEEL	ALUMINUM
PTER	4" ALUMINIZED STL.	4" MILD STEEL	STAINLESS STEEL

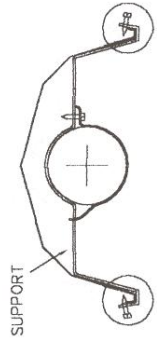
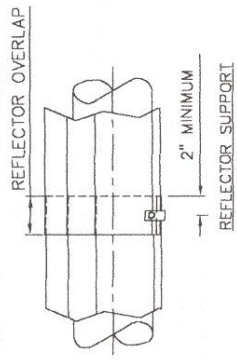
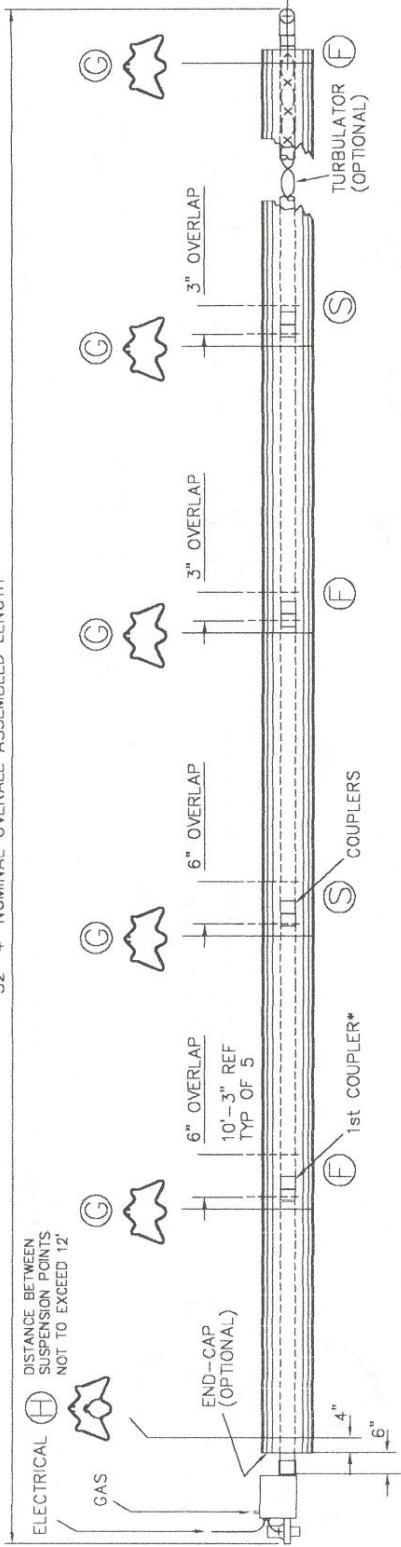
MODEL NUMBER	BTU/HR	OPERATING GAS PRESSURE	NATURAL GAS	LP GAS
PTSC60-S40	60,000	4.2"wc	8"wc	
PTSC80-S40	80,000	4.3"wc	9.7"wc	
PTSC100-S40	100,000	4.3"wc	10"wc	
PTSC125-S40	125,000	3.9"wc	10"wc	
PTSC150-S40	150,000	3.5"wc	9.5"wc	

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"PT" SERIES INFRARED GAS HEATER

"S50"

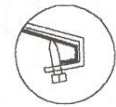
52'-4" NOMINAL OVERALL ASSEMBLED LENGTH



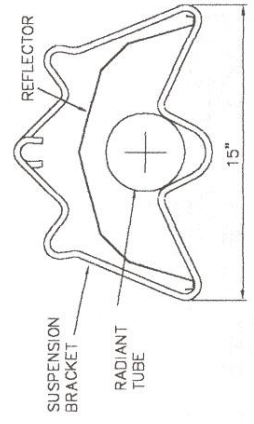
SLIDING JOINT DETAIL "S"



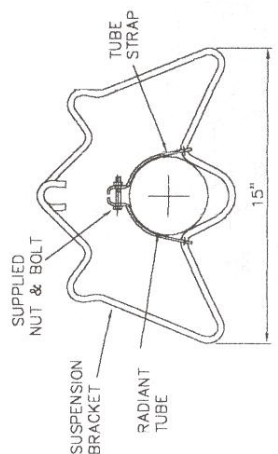
FIXED JOINT DETAIL "F"



2 x SCREWS TIGHTENED TO FIX REFLECTORS
LEAVE 1/8" MIN. GAP TO ALLOW REFLECTOR TO SLIDE



TUBE & REFLECTOR SUSPENSION BRACKET DETAIL "G"



FIRST SUSPENSION POINT TUBE STRAP DETAIL "H"

SERIES	COMBUSTION TUBE*	REMAINING TUBES	REFLECTORS
PTSC	4" ALUMINIZED STL.	4" MILD STEEL	ALUMINUM
PTER	4" ALUMINIZED STL.	4" MILD STEEL	STAINLESS STEEL

***NOTE**

20' MINIMUM OF ALUMINIZED STEEL COMBUSTION TUBES CONNECTED BY HIGH TEMPERATURE STAINLESS STEEL COUPLING AS SHOWN ON PAGE 15, FOR ALL PT175, 200, AND 225 HEATERS.

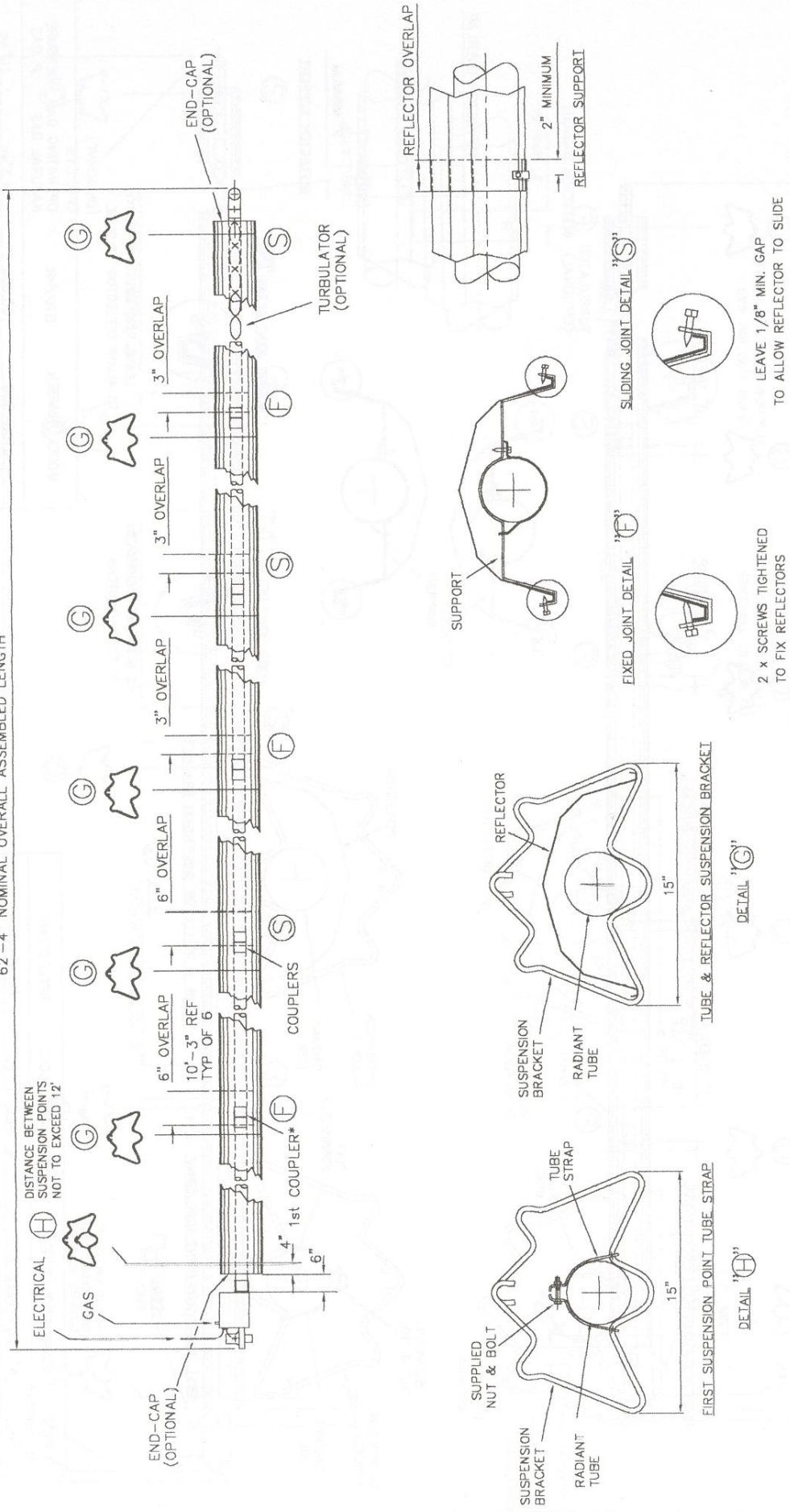
AMBIRAD

MODEL NUMBER	BTU/HR	OPERATING GAS	PRESSURE
PTSC100-S50	100,000	NATURAL GAS	4.3"wc
PTSC125-S50	125,000	LP GAS	10"wc
PTSC150-S50	150,000		10"wc
PTSC175-S50*	175,000		9.5"wc
PTSC200-S50*	200,000		9.7"wc
PTSC225-S50*	225,000		10"wc
			9.3"wc

"PT" SERIES INFRARED GAS HEATER

"S60"

62'-4" NOMINAL OVERALL ASSEMBLED LENGTH



2 x SCREWS TIGHTENED TO FIX REFLECTORS

LEAVE 1/8" MIN. GAP TO ALLOW REFLECTOR TO SLIDE

SERIES	COMBUSTION TUBE*	REMAINING TUBES	REFLECTORS
PTSC	4" ALUMINIZED STL.	4" MILD STEEL	ALUMINUM
PTER	4" ALUMINIZED STL.	4" MILD STEEL	STAINLESS STEEL

MODEL NUMBER	BTU/HR	OPERATING GAS	PRESSURE
PTSC125-S60	125,000	NATURAL GAS	3.9" WC
PTSC150-S60	150,000	NATURAL GAS	3.5" WC
PTSC175-S60*	175,000	NATURAL GAS	3.5" WC
PTSC200-S60*	200,000	NATURAL GAS	3.5" WC
PTSC225-S60*	225,000	NATURAL GAS	3.5" WC
		LP GAS	10" WC
		LP GAS	9.5" WC
		LP GAS	9.7" WC
		LP GAS	10" WC
		LP GAS	9.3" WC

***NOTE**

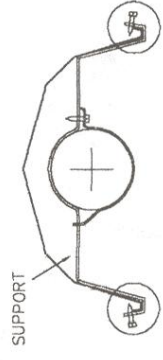
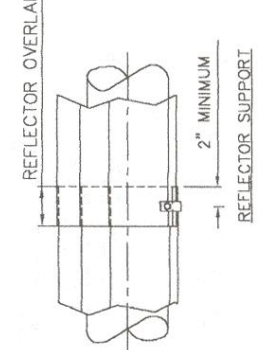
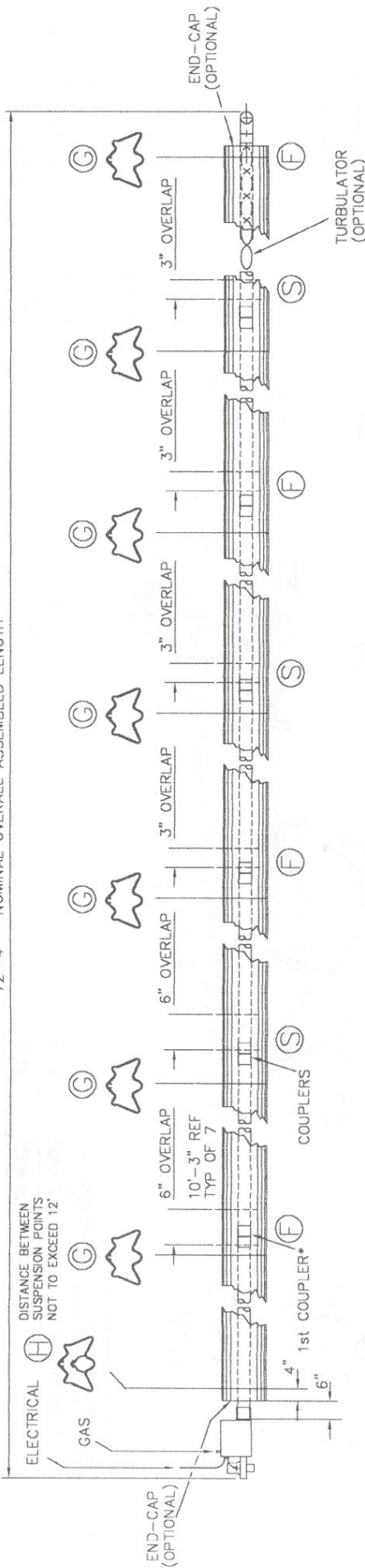
20' MINIMUM OF ALUMINIZED STEEL COMBUSTION TUBES CONNECTED BY HIGH TEMPERATURE STAINLESS STEEL COUPLING AS SHOWN ON PAGE 15, FOR ALL PT1175, 200, AND 225 HEATERS.

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"PT" SERIES INFRARED GAS HEATER

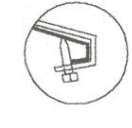
"S70"

72'-4" NOMINAL OVERALL ASSEMBLED LENGTH

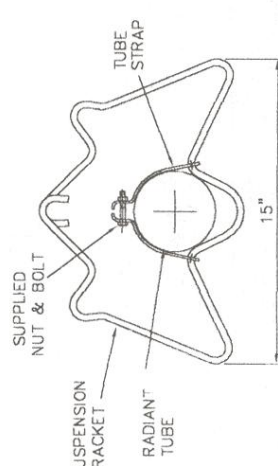
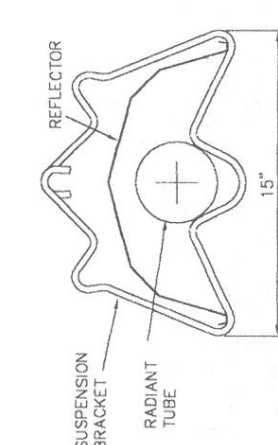


SLIDING JOINT DETAIL "S"

FIXED JOINT DETAIL "F"



2 x SCREWS TIGHTENED TO FIX REFLECTORS
LEAVE 1/8" MIN. GAP TO ALLOW REFLECTOR TO SLIDE



SERIES	COMBUSTION TUBE*	REMAINING TUBES	REFLECTORS
PTSC	4" ALUMINIZED STL.	4" MILD STEEL	ALUMINUM
PTER	4" ALUMINIZED STL.	4" MILD STEEL	STAINLESS STEEL

MODEL NUMBER	BTU/HR	OPERATING GAS	NATURAL GAS	PRESSURE LP GAS
PTSC150-S70	150,000	3.5" WC	3.5" WC	9.5" WC
PTSC175-S70*	175,000	3.5" WC	3.5" WC	9.7" WC
PTSC200-S70*	200,000	3.5" WC	3.5" WC	10" WC
PTSC225-S70*	225,000	3.5" WC	3.5" WC	9.3" WC

***NOTE**

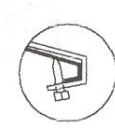
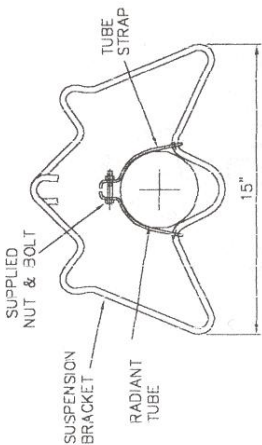
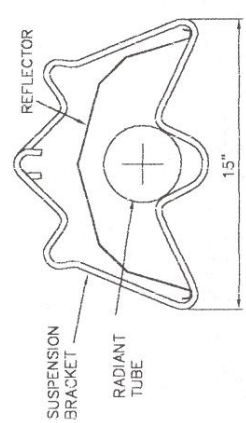
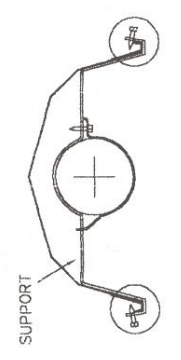
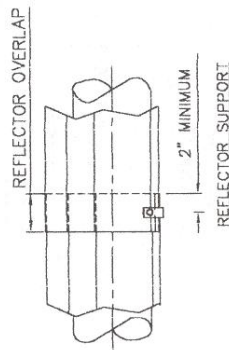
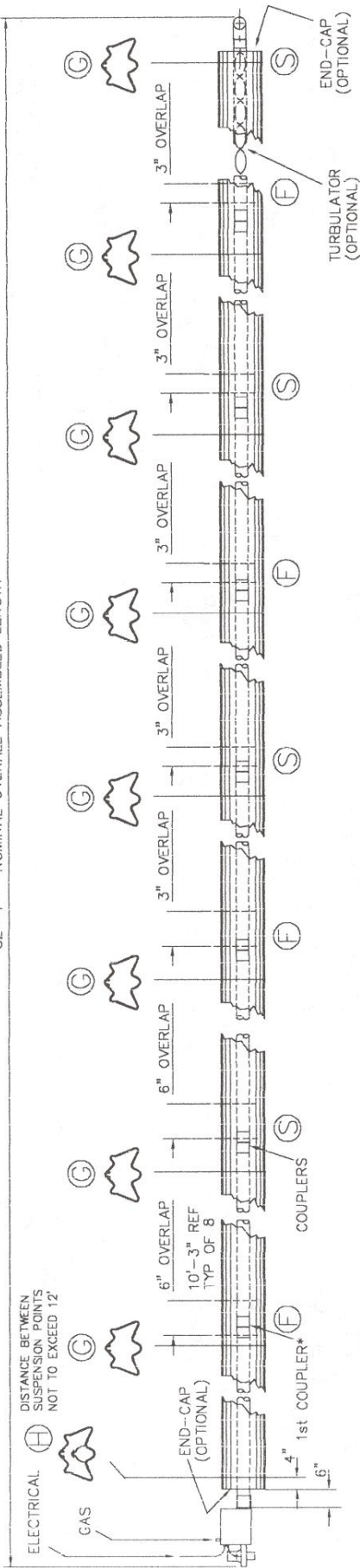
20' MINIMUM OF ALUMINIZED STEEL COMBUSTION TUBES CONNECTED BY HIGH TEMPERATURE STAINLESS STEEL COUPLING AS SHOWN ON PAGE 15, FOR ALL PTT75, 200, AND 225 HEATERS.

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"PT" SERIES INFRARED GAS HEATER

"S80"

82'-4" NOMINAL OVERALL ASSEMBLED LENGTH



DETAIL "C"

DETAIL "H"

2 x SCREWS TIGHTENED TO FIX REFLECTORS
LEAVE 1/8" MIN. GAP TO ALLOW REFLECTOR TO SLIDE

SERIES	COMBUSTION TUBE*	REMAINING TUBES	REFLECTORS
PTSC	4" ALUMINIZED STL.	4" MILD STEEL	ALUMINUM
PTER	4" ALUMINIZED STL.	4" MILD STEEL	STAINLESS STEEL

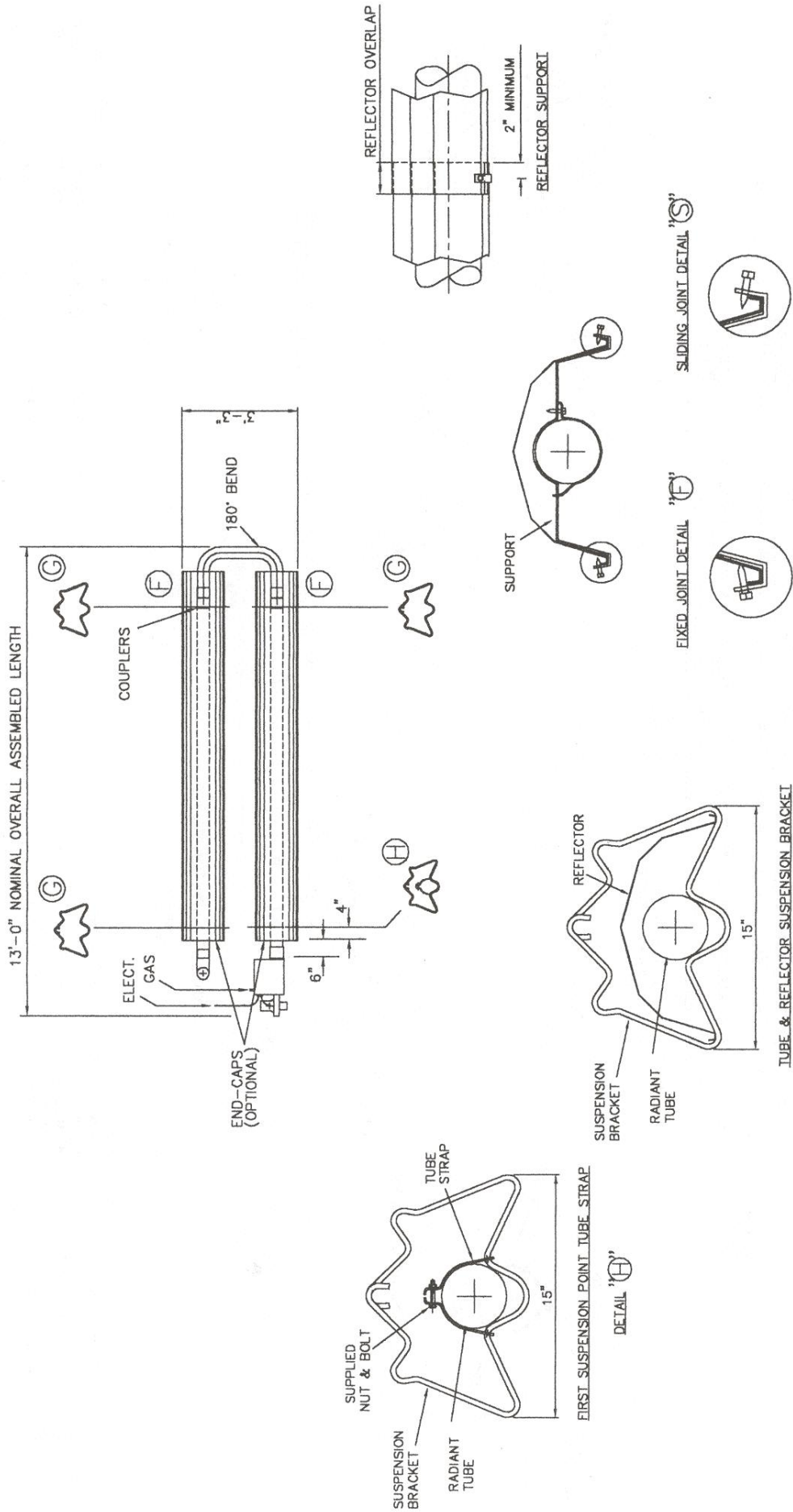
MODEL NUMBER	BTU/HR	OPERATING GAS	PRESSURE
PTSC150-S80	150,000	NATURAL GAS	LP GAS
PTSC175-S80*	175,000	3.5" WC	9.5" WC
PTSC200-S80*	200,000	3.5" WC	9.7" WC
PTSC225-S80*	225,000	3.5" WC	10" WC
		3.5" WC	9.3" WC

*NOTE
20' MINIMUM OF ALUMINIZED STEEL COMBUSTION TUBES CONNECTED BY HIGH TEMPERATURE STAINLESS STEEL COUPLING AS SHOWN ON PAGE 15, FOR ALL PT175, 200, AND 225 HEATERS.

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"PT" SERIES INFRARED GAS HEATER

"U20"



2 x SCREWS TIGHTENED TO FIX REFLECTORS
 LEAVE 1/8" MIN. GAP TO ALLOW REFLECTOR TO SLIDE

SERIES	COMBUSTION TUBE	REMAINING TUBE	REFLECTORS
PTSC	4" ALUMINIZED STL.	4" MILD STEEL	ALUMINUM
PTER	4" ALUMINIZED STL.	4" MILD STEEL	STAINLESS STEEL

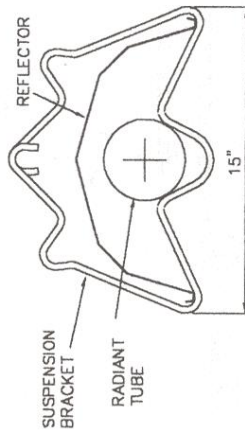
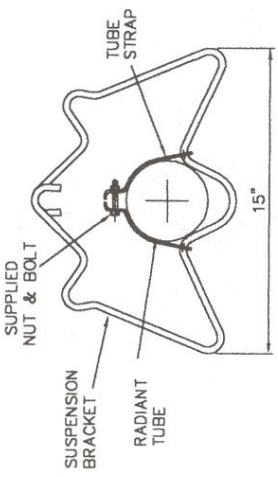
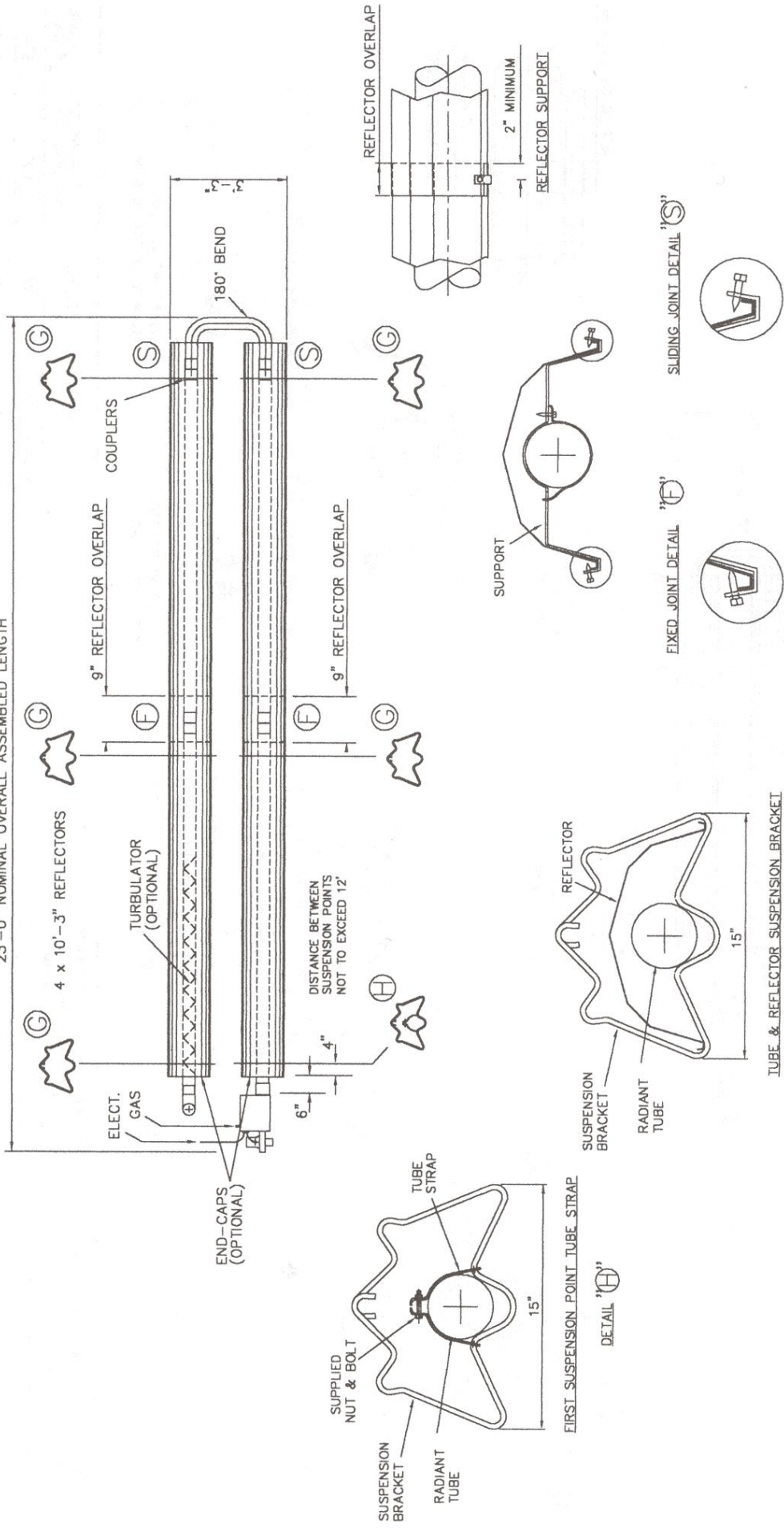
MODEL NUMBER	BTU/HR	OPERATING GAS PRESSURE
PTSC60-U20	60,000	NATURAL GAS 4.2"wc LP GAS 8"wc
PTSC80-U20	80,000	NATURAL GAS 4.3"wc LP GAS 9.7"wc

AMBIRAD

"PT" SERIES INFRARED GAS HEATER

"U40"

23'-0" NOMINAL OVERALL ASSEMBLED LENGTH



2 x SCREWS TIGHTENED TO FIX REFLECTORS

LEAVE 1/8" MIN. GAP TO ALLOW REFLECTOR TO SLIDE

SERIES	COMBUSTION TUBE	REMAINING TUBES	REFLECTORS
PTSC	4" ALUMINIZED STL.	4" MILD STEEL	ALUMINUM
PTER	4" ALUMINIZED STL.	4" MILD STEEL	STAINLESS STEEL

MODEL NUMBER	BTU/HR	OPERATING GAS	PRESSURE
		NATURAL GAS	LP GAS
PTSC60-U40	60,000	4.2"wc	8"wc
PTSC80-U40	80,000	4.3"wc	9.7"wc
PTSC100-U40	100,000	4.3"wc	10"wc
PTSC125-U40	125,000	3.9"wc	10"wc
PTSC150-U40	150,000	3.5"wc	9.5"wc

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