

# INSTALLATION



# INSTRUCTIONS

## "F" MODEL PANELRAY HEATER

Venting the "F" Model PANELRAY Heater will avoid sweating and diluting the room air with products of combustion which will occur with any unvented gas appliance in a closed room.

The "F" Model PANELRAY Heater may be vented straight up through the ceiling and roof, or out through an adjacent side wall for connection to a vertical vent on the outside of the building. Either one of these installations, when made in accordance with the following instructions, will provide a long life trouble-free vent system, that has a plus value of adding to, rather than detracting from, the appearance of the heater.

### VENT MATERIALS

Use 3" Aluminum Double Wall Round Vent and approved vent fittings. Aluminum vent and fittings may be painted if desired. See painting instructions at end of Installation Instructions. Use attached sketch, showing vertical and side wall vented "F" Model PANELRAY Heaters, as guide in properly selecting type of vent installation and amount of vent and fittings needed.

### HEATER PLACEMENT

Clearances between the "F" Model PANELRAY and adjacent walls should be in accordance with requirements of local ordinances or building codes.

Where no such ordinance or code requirement prevails — the recommended clearances are: for corner installation, a minimum of 3 $\frac{1}{4}$ " between the sides of the heater and each adjacent wall; for wall installation, a minimum of 2" between back of heater and wall, and a minimum of 7" from side of heater to an adjacent wall.

In general, locate the "F" Model PANELRAY Heater for best heat distribution. However, ease of venting should always be considered in selecting location.

### VERTICAL VENT INSTALLATION

Refer to Installation Sketch while following Installation Instructions.

1. After determining the best location for the heater and vent, cut a circular opening 5 $\frac{3}{4}$ " in diameter in the ceiling directly above and in line with the draft hood outlet on the heater.
2. Install a 3" ventilated partition thimble in the ceiling opening.
3. In line with the opening in the ceiling cut a circular hole in the roof of such diameter that there will be a clearance of a minimum of 1" space between the vent pipe and any part of the roof material

4. Install first section of vent pipe on top of heater as follows:

- a. For standard ceiling height rooms use a 5' length of 3" aluminum double wall pipe — for higher ceilings use an additional joint.
- b. As illustrated on sketch — cut off bottom coupler flange on vent pipe. This cut is made just above the rivets, holding coupler in position and can be made with a hack saw or tin snips. The cut end of the vent pipe should be "squared-off" and smoothed in order to obtain a flush fit between this end of the pipe and the top surface of the down-draft cap on heater.

- c. Remove vent cap (held in place by two #4 metal screws) from top of heater, before attaching vent pipe.

- d. Attach vent pipe to heater by first shoving upper end of vent into ceiling thimble then pulling down until a snug fit is obtained at the draw neck on the downdraft cap.

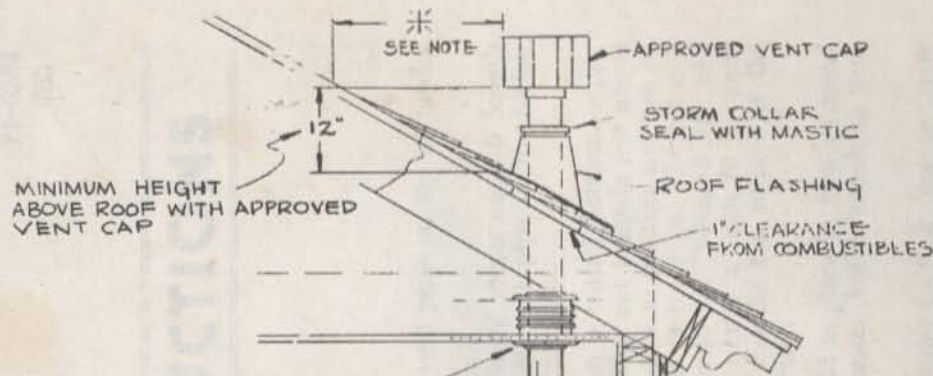
5. Extend vent pipe up through roof opening as follows:

- a. Install an adjustable round roof flashing over vent opening in roof. Center upper opening in flashing over opening in roof, and fasten securely to roof.
- b. Extend vent pipe up through opening in flashing. Securely fasten each joint of vent pipe with a minimum of three sheet metal screws at holes drilled in each set of couplings.

NOTE: Where a building code requires the outlet of a vent to be greater than 3" diameter — the increase to the required size should be made at the top of the vent section attached to the heater.

- c. Center the vent in opening at top of flashing and maintain this positioning by caulking with mastic or plastic roof cement.
- d. Install storm collar above flashing and — seal in place with mastic or plastic roof cement.
- e. Attach an approved top (cowl cap) to top of vent.

NOTE: The Uniform Building Code of the Pacific Coast Builders Conference which is currently in use by approximately 700 cities, permits a vent, that is topped by an approved cowl cap, to terminate at a distance not less than 12 inches from any portion of a roof that has a slope less than 45°. If the roof angle is more than 45° the vent outlet may



MINIMUM HEIGHT ABOVE ROOF WITH APPROVED VENT CAP

SEE NOTE

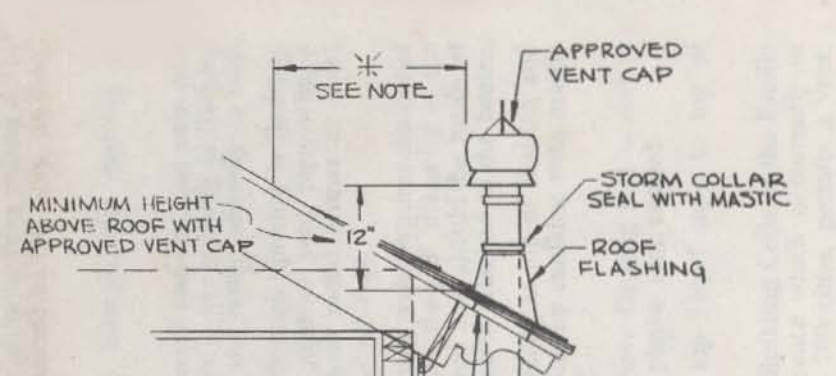
APPROVED VENT CAP  
STORM COLLAR SEAL WITH MASTIC  
ROOF FLASHING  
1" CLEARANCE FROM COMBUSTIBLES

PARTITION THIMBLE

3" DOUBLE WALL VENT PAINT TO MATCH HEATER

OBTAIN FLUSH FIT - VENT TO DOWNDRAFT DIVERTER - BY CUTTING OFF BOTTOM COUPLER FLANGE OF VENT PIPE.

"F" MODEL PANELRAY



MINIMUM HEIGHT ABOVE ROOF WITH APPROVED VENT CAP

SEE NOTE

APPROVED VENT CAP  
STORM COLLAR SEAL WITH MASTIC  
ROOF FLASHING  
1" CLEARANCE FROM COMBUSTIBLES

DOUBLE WALL VENT PIPE

1" CLEARANCE FROM COMBUSTIBLES

VENT PIPE HANGER

DRIP TEE

CAP

FLASHING

WALL THIMBLE

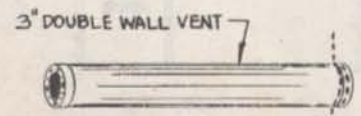
\* NOTE

FOR A ROOF WITH AN ANGLE LESS THAN 45° THIS DISTANCE IS A MINIMUM 12" - FOR ROOF ANGLE GREATER THAN 45° FOLLOW LOCAL BUILDING ORDINANCE

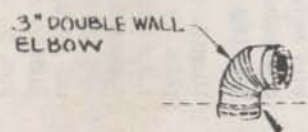
3" DOUBLE WALL ELBOW - PAINT TO MATCH HEATER

OBTAIN FLUSH FIT - ELBOW TO DOWNDRAFT DIVERTER - BY CUTTING OFF BOTTOM COUPLER FLANGE OF ELBOW.

"F" MODEL PANELRAY



CUT OFF BOTTOM COUPLER FLANGE



CUT OFF BOTTOM COUPLER FLANGE

**"F" MODEL PANELRAY**  
**RECOMMENDED VENTING**  
**DAY & NIGHT DIVISION**  
**AFFILIATED GAS EQUIP. INC.**  
**MONROVIA, CALIFORNIA**

11-0084

terminate at a distance not less than 4 feet from the closest portion of the roof. Local building codes should be consulted for vent termination requirement.

#### SIDE WALL VENT FOR CONNECTION TO AN OUTSIDE VERTICAL VENT.

Refer to Installation Sketch while following Installation Instructions.

1. As illustrated in sketch cut off bottom coupler of 3" aluminum double wall 90° elbow. This cut is made just above the rivets holding coupler in position. The cut end of the 90° elbow should be "squared-off" and smoothed in order to obtain a flush fit to top of downdraft cap on heater.
2. Remove vent cap (held in place by two #4 metal screws) from top of heater, and install reworked 90° elbow, in its place.
3. At selected heater location, with elbow in place on heater, move heater so that open end of elbow touches wall at vent location and outline elbow circumference on wall.
4. Extend marked circle on wall to a diameter of 5 $\frac{3}{4}$ ", and cut this opening on both inside and outside walls.
5. Install a 3" wall thimble in wall opening.
6. Install an adjustable length of 3" aluminum double wall vent pipe through thimble and connect to elbow on heater. Secure this connection with a minimum of three sheet metal screws at the screw holes provided in the pipe and elbow couplers.
7. Install the outside vertical vent as follows:

- a. Install a 3" double wall tee on the horizontal vent pipe to provide a transition to the vertical vent. Completely close the bottom of the tee with a tee cap and support the tee on a starting plate or shelf.

NOTE: Use of a 90° elbow in place of the tee is recommended where building codes permit.

- b. Above the tee (or elbow) install aluminum double wall vent pipe up the outside wall, maintaining at least a 1" clearance from combustibles. The vertical vent must be supported against wind pressures, using wall brackets when necessary.
- c. If a roof overhang (eaves) exists at the vertical vent location an opening for passage of the vent must be cut in the roof. This vent opening should be circular and of a diameter that will permit a clearance of at least 1" between the vent and any part of the roof material.
- d. Install an adjustable round roof flashing over the vent opening in roof. Center upper opening of flashing over opening in roof, and fasten securely to roof.
- e. Extend vent pipe up through opening in flashing.

Securely fasten each joint of vent pipe with a minimum of three sheet metal screws at holes drilled in each set of couplings.

NOTE: Where a building code requires the outlet of a vent to be greater than 3" diameter — the increase to the required size should be made in the vertical vent at the joint on the transition tee (or elbow).

- f. Center the vent in opening at top of flashing and maintain this positioning by caulking with mastic or plastic roof cement.
- g. Install storm collar above flashing — and seal in place with mastic or plastic roof cement.
- h. Attach an approved top (cowl cap) to top of vent.

NOTE: The Uniform Building Code, which is in use by approximately 700 cities, permits a vent, that is topped by an approved cowl cap, to terminate at a distance not less than 12 inches from any portion of a roof that has a slope less than 45°. If the roof angle is greater than 45° the vent outlet may terminate at a distance not less than 4 feet from the closest portion of the roof. Local building codes should be consulted for vent termination requirements.

#### PAINTING ALUMINUM VENT PIPE AND FITTINGS

Use of Aluminum Double Wall Vent Pipe and Fittings on the "F" Model PANELRAY Heater will in itself create an attractive installation. This is due to the large outside diameter of this type of vent, which gives the installation a very pleasing streamlined appearance. However, in some cases the natural aluminum color of the vent connection may not quite fit in with the decorative scheme of a room. This can be solved by painting the vent to match the color of the heater. Painting the vent connection will cause it to blend in with the heater to give a smart streamlined integral unit that will fit in with any room's decorative scheme.

#### TO PAINT ALUMINUM VENT MATERIAL:

1. Remove all oil, grease, dirt or finger prints from the surface by washing with a good cleaning solvent such as Carbon Tetrachloride or plain Naphtha (Naphtha is highly inflammable, so take precautions against fire). Use liberally, wipe off and repeat once again.
2. After surface is free of oil, dirt and grease, use either a brush or pressure spray and paint with:
  - a. Murphy Paint Division — Porch and Deck Enamel — Gray.
  - b. Andrew Brown Co. — Synthetic Air Dry Enamel — Gray.

Both of the above paints are available in paint stores throughout the country.