

GOZY

VENT FREE INFRA RED HEATERS



INSTALLATION AND OPERATION INSTRUCTIONS

P/N 88900 / REV. 02/04



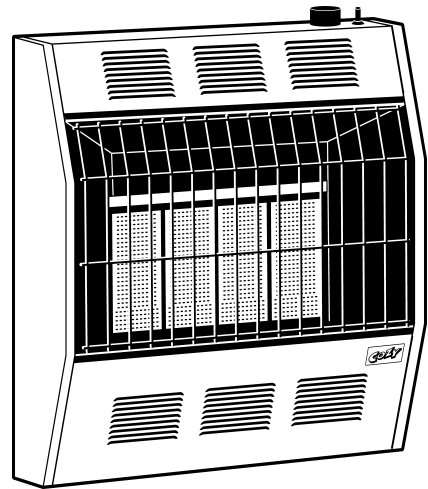
Vent-Free Gas Heat

| MODEL NUMBERS | MANUAL MODELS | THERMOSTAT MODELS |
|---------------|-------------------------------|------------------------|
| NATURAL GAS | VFM63, VFM103, VFM203, VFM303 | VFT101, VFT201, VFT301 |
| PROPANE GAS | VFM64, VFM104, VFM204, VFM304 | VFT102, VFT202, VFT302 |

WARNING: If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury, or loss of life.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **WHAT TO DO IF YOU SMELL GAS:**
 - Do not try to light any appliance.
 - Do not touch any electrical switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.

- **INSTALLATION AND SERVICE MUST BE PERFORMED BY A QUALIFIED INSTALLER, SERVICE AGENCY OR THE GAS SUPPLIER.**



INSTALLER: Leave this manual with the appliance.

CONSUMER: Retain this manual for future reference.

INSTALLER MUST SHOW HOMEOWNER PROPER LIGHTING AND OPERATION OF HEATER. HAVE THEM COMPLETE AND RETURN THE WARRANTY CARD.

This is an unvented gas fired heater. It uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. See Pg. 4 & 5.

This unit is not approved for installation in greenhouses, or environments involving dusty, wet, corrosive, or explosive conditions. Such conditions will invalidate the warranty and may create unsafe conditions.

This appliance may be installed in an aftermarket, permanently located, manufactured (mobile) home, where not prohibited by local codes. This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases.

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Refer to the owner's information manual provided with this appliance. Installation and service must be performed by a qualified installer, service agency or the gas supplier.

THIS HEATER SHOULD NOT BE INSTALLED ABOVE 7,000 FT. ELEVATION. HEATERS INSTALLED ABOVE 4,500 FT. MAY EXPERIENCE NUISANCE PILOT OUTAGE AND THIS CONDITION MAY BE AGGRAVATED BY IMPROPER PRESSURE AND INCORRECT SIZING RELATIVE TO FREE AIR OR CONFINED SPACE.

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INTRODUCTION

Read these installation and operating instructions carefully before you install or attempt to use this vent free room heater. If you do not understand any part of these instructions, consult local authorities, a qualified installer, service agency, or the gas supplier. **FAILURE TO READ OR UNDERSTAND THESE INSTRUCTIONS CAN RESULT IN MALFUNCTION, INEFFICIENT OPERATION, PROPERTY DAMAGE, SERIOUS INJURY OR DEATH.**

These installation instructions are a general guide and do not supersede applicable local codes and ordinances. Before planning or beginning the installation be sure it complies with all phases of the local heating code. Or, in the absence of local codes, with the latest edition of the National Fuel Gas Code, ANSI Z223.1/NFPA 54. A copy of which is available from the American Gas Association, 1515 Wilson Blvd., Arlington, Virginia 22209.

The design of this appliance was certified to comply with the latest edition of ANSI Z21.11.2, also available from the American Gas Association.

INTRODUCTION – CONT'D.

For your protection this heater is equipped with an Oxygen Depletion Sensor (ODS) pilot system. Never operate heater if ODS has been damaged or tampered with as this could expose you to Carbon Monoxide (a colorless, odorless gas) that could result in injury or death. Early signs of Carbon Monoxide poisoning resemble influenza, with headaches, dizziness, or nausea. If you develop these symptoms GET FRESH AIR AT ONCE. Turn off heater and call a qualified serviceman to check heater. Some people are more affected by Carbon Monoxide than others: Including pregnant women, persons with a heart or lung disease, anemia, those under the influence of alcohol, and those at high altitudes.

OPERATION

Infrared heaters “heat like the sun” with almost instantaneous, safe, clean burning “waves” of infrared heat. Like the sun, they must “see” the object to be heated. Make sure they are installed away from furniture or any other object which might block the infrared “waves”. The Cozy thermostatically controlled units offer the additional benefit of automatically cycling the heating to maintain just the right room temperature. Ventfree gas room heaters are designed strictly for “supplemental” room heat use and should never be installed as “sole source heating”.

ROOM HEATER SPECIFICATIONS

Your room heater comes packed in a single carton. Before installation, check the rating plate to verify that the Model Number is correct and that the room heater is equipped for the type gas you intend to use.

| MODEL NUMBER | MANUAL MODELS | | | | THERMOSTAT MODELS | | |
|-----------------------|---------------|---------------|----------------------------|---|-------------------|----------------|----------------|
| NATURAL GAS | VFM63 | VFM103 | VFM203 | VFM303 | VFT101 | VFT201 | VFT301 |
| PROPANE GAS | VFM64 | VFM104 | VFM204 | VFM304 | VFT102 | VFT202 | VFT302 |
| TYPE CONTROL | MAN. | MAN. | MAN. | MAN. | T-STAT BULB | T-STAT BULB | T-STAT BULB |
| HEIGHT | 22-1/2" | 22-1/2" | 22-1/2" | 22-1/2" | 22-1/2" | 22-1/2" | 22-1/2" |
| WIDTH | 11-1/2" | 14-9/16" | 20-11/16" | 26-13/16" | 14-9/16" | 20-11/16" | 26-13/16" |
| DEPTH | 7" | 7" | 7" | 7" | 7" | 7" | 7" |
| INPUT (BTU/HR.) | 5,500 | 10,000 | LO / 10,000 HI / 20,000 | LO / 10,000 MED./20,000 HI / 30,000 | 10,000 | 20,000 | 30,000 |
| Gas Supply Line Size | ½" | ½" | ½" | ½" | ½" | ½" | ½" |
| Optional CVF Blower | NO | NO | YES | YES | NO | YES | YES |
| Optional Floor Stand | NO | YES | YES | YES | YES | YES | YES |
| Bathroom Installation | YES | NO | NO | NO | NO | NO | NO |
| Bedroom Installation | YES | YES | NO | NO | YES | NO | NO |
| Piezo Ignitor | YES | YES | YES | YES | YES | YES | YES |
| Shipping Weight | 16 LB. | 22 LB. | 30 LB. | 35 LB. | 22 LB. | 30 LB. | 35 LB. |

As applicable:

1. An unvented room heater having an input rating of more than 10,000 Btu per hour shall not be installed in a bedroom or bathroom; or
2. An unvented room heater having an input rating of more than 6,000 Btu per hour shall not be installed in a bathroom.

SAFETY INSTRUCTIONS

- 1) Keep burner and control compartment clean.
- 2) Due to high temperatures, the heater should be located out of traffic and away from furniture and draperies.
- 3) Children and adults should be alerted to the hazard of high surface temperature and should stay away to avoid burns or clothing ignition.
- 4) Young children should be carefully supervised when they are in the same room with this heater.
- 5) Do not place clothing or other flammable material on or near the heater.
- 6) Any safety screen or guard removed for servicing must be replaced prior to operating the heater.

SAFETY INSTRUCTIONS - CONTINUED

- 7) Installation and repair should be done by a qualified service person. The heater should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding, material, etc. It is imperative that control compartments, burners, and circulating air passageways of the heater be kept clean.
- 8) **“WARNING: Any changes to this heater or its controls can be dangerous”.**
- 9) Do not use this heater if any part has been under water. Immediately call a qualified service person to inspect the heater and to replace any part of the control system and any gas control which has been under water.
- 10) Due to high surface and radiated temperatures, keep children, clothing, and furniture away.
- 11) Do not install this heater in a recreational vehicle.
- 12) Never use a match, candle, flame or other source of ignition to check for gas leaks. Use only soapy water or liquid detergent.
- 13) Before cleaning or servicing, turn off the gas and allow heater to cool.
- 14) Do not put objects around the heater that will obstruct the flow of combustion and ventilation air.
- 15) When installing the heater allow adequate accessibility clearances for servicing and proper operation.
- 16) Keep appliance area clear and free from combustible materials, gasoline and other flammable vapors and liquids.
- 17) **Do not install in a residential or commercial garage.**
- 18) **WARNING:** Do not use a blower or other accessory not approved for use with this heater.
- 19) **“WARNING:** Failure to keep the primary air opening(s) of the burner(s) clean may result in sooting and property damage.”
- 20) **“WARNING:** Do not allow fans to blow directly into the appliance. Avoid any drafts that alter burner flame patterns.”
- 21) This appliance is intended for supplemental heating.

FRESH AIR FOR COMBUSTION, VENTILATION AND HEAT DISTRIBUTION

With today's energy efficient homes, it is possible to make your home so air tight that it can result in stale air, dry rot, mold development and host of other related problems. Gas burning appliances need fresh air for combustion as well as for good distribution of heated air throughout the home. The following guide provides good general rules for classifying and properly ventilating most homes.

“The National Fuel Gas Code ANSI Z223.1/NFPA54 defines a confined space as a space whose volume is less than 50 cubic feet per 1,000 Btu per hour (4.8m³ per Kw) of the aggregate input rating of all appliances installed in that space and an unconfined space as a space whose volume is equal to or greater than 50 cubic feet per 1,000 Btu per hour (4.8m³ per Kw) of the aggregate input rating of all appliances installed in that space. Rooms communicating directly with the space in which the appliance is installed, through openings not furnished with doors, are considered a part of the unconfined space.”

“This heater shall not be installed in a confined space or unusually tight construction unless provisions for adequate combustion and ventilation air are made. Use the following example to determine if the heater is being installed in a confined or unconfined space.”

STEP 1. First find the cubic feet of area to be heated length x width x height. NOTE: Include any adjoining rooms that cannot be separated by closing a door or that have a air exchange grille that cannot be closed between rooms.

EXAMPLE: Area size 25 ft. x 15 ft. x 7-1/2 ft. = 2,812.5 cubic feet.

STEP 2. Divide area cubic feet by 50. EXAMPLE: 2,812.5 ÷ 50 = 56.25. Multiply this number by 1,000 for total Btu input room can support. EXAMPLE: 56.25 x 1,000 = 56,250 Btu.

STEP 3. List all gas burning appliances in this area and total the combined Btu input. EXAMPLE:

| | |
|--|-------------------|
| Cozy vent free heater..... | 20,000 Btu |
| Gas water heater..... | 58,000 Btu |
| Gas range (all burners & oven on)..... | <u>28,000 Btu</u> |
| | 106,000 Btu |

FRESH AIR FOR COMBUSTION, VENTILATION AND HEAT DISTRIBUTION - CONT'D.

STEP 4. Compare the total Btu the area can support (from Step 2) to the total Btu in the area the heater will be installed (from Step 3). If the total from Step 2 is larger this is considered an unconfined space, if Btu total from Step 3 is larger this is considered a confined space and provisions must be made for additional combustion and ventilation air. **EXAMPLE:** Btu area can support is 56,250, total Btu in area is 106,000 – this would be a confined space.

NOTE: A third construction class is one with unusually tight construction, defined as, construction where: (A) Walls and ceilings exposed to the outside atmosphere have a continuous water vapor retarder with a rating of 1 per (6x10-11 Kg per pa-sec-m²) or less with openings gasketed or sealed, and, (B) Weatherstripping has been added on openable windows and doors, and, (C) Caulking or sealants are applied to areas such as joints around window and door frames, between sole plates and floors, between wall ceiling joints, between wall panels, at penetration for plumbing, electrical, and gas lines, and at other openings.

“WARNING: If the area in which the heater may be operated is smaller than that defined as an unconfined space, or if the building is of unusually tight construction, provide adequate combustion and ventilation air by one of the methods described in the National Fuel Gas Code, ANSI Z223.1/NFPA54, Section 5.3 or applicable local codes.” Examples would be to provide two permanent openings either to an adjoining room, or to the outside. See the National Fuel Gas Code for details. See Figure 9 & Figure 10 below.

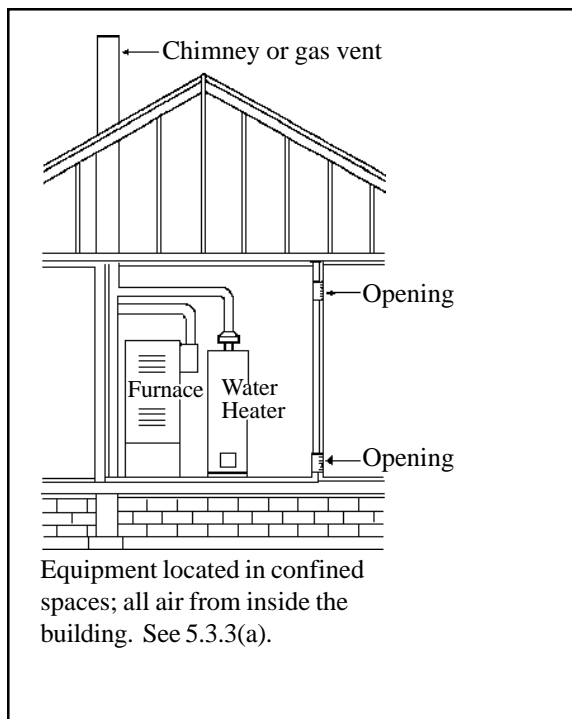


FIGURE 9

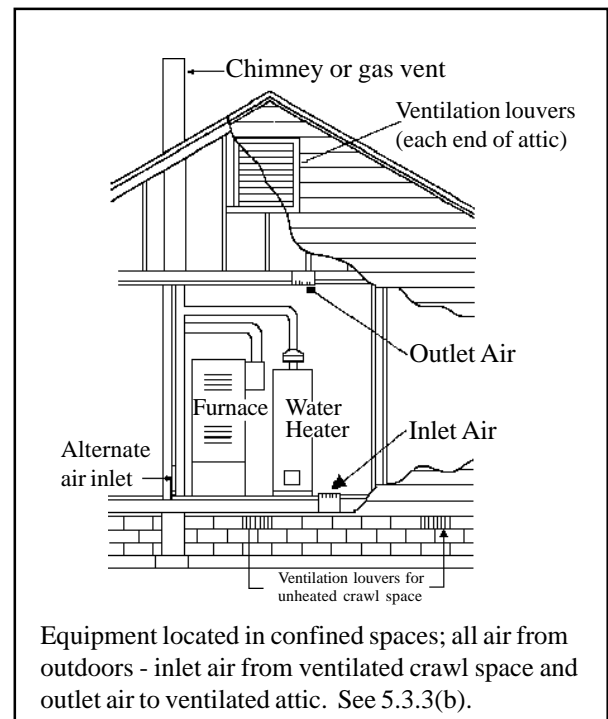


FIGURE 10

INSTALLATION

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

LOCATION

- 1) For most efficient performance, locate heater as centrally as possible in the area to be heated.
- 2) Do not install heater in a closet, alcove or small hallway where the heater could be isolated from the space to be heated and adequate combustion air by closing a door.

INSTALLATION - CONTINUED

- 3) Protect heater from wind, high traffic areas, and drafts (such as doorways, locations that get direct air from a ceiling fan, etc.) as this will cause nuisance pilot outage.
- 4) All models may be wall mounted. Model No. VFM10, VFT10, VFM20, VFT20, VFM30 & VFT30 may be free standing by adding optional VF-FSK floor stand kit. These floor mounted units must also have an approved, fire resistant floor base (available from factory) and must be hard piped.
- 5) If optional blower is to be added, locate heater so there is safe access to an electrical outlet.

CLEARANCES

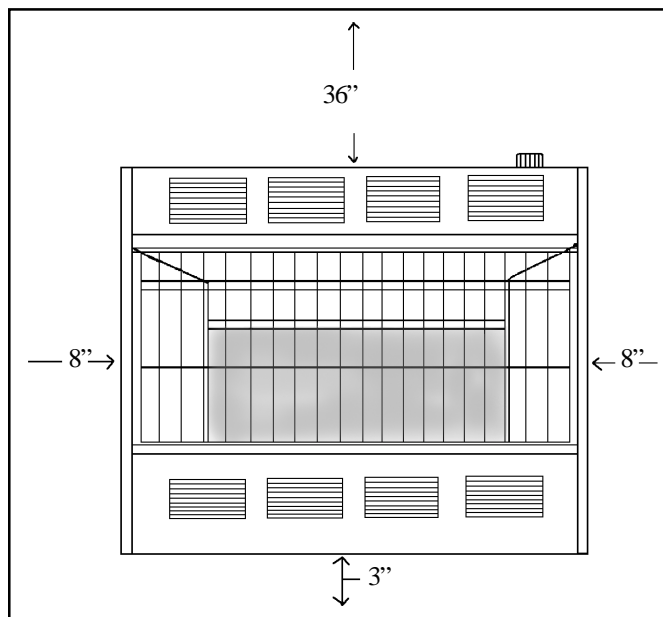
- 1) Maintain adequate accessibility clearances for servicing and proper operation.
- 2) Minimum clearances as viewed from front of heater. 3" clearance below heater shall be measured from top surface of carpeting, tile, etc.
- 3) If VF-FSK Free Standing Kit is used and the heater is installed directly on carpeting, tile, or other combustible material other than wood flooring, the appliance shall be installed on a metal or wood panel extending the full width and depth of the appliance, such as a stove board.

TOOLS AND ADDITIONAL SUPPLIES REQUIRED

- 1) Pipe wrenches (2).
- 2) Phillip head screwdriver or screwgun.
- 3) Pressure test gauge.
- 4) An A.G.A. certified manual shut off valve with 1/8" NPT pressure tap.
- 5) Union connector for type of piping used (check local codes).
- 6) Pipe sealant certified for use with L.P. gas.
- 7) Components to assemble a drip leg.
- 8) Level.
- 9) Drill (if anchors are required).

ROUGH-IN GAS SUPPLY

- 1) Determine location of heater. (See "Operation", "Fresh Air", and "Safety Instructions" for details.
- 2) Install at least a 1/2" diameter gas supply line. (Gas supply can enter through bottom or back of heater). See Figure 1.



CLEARANCES

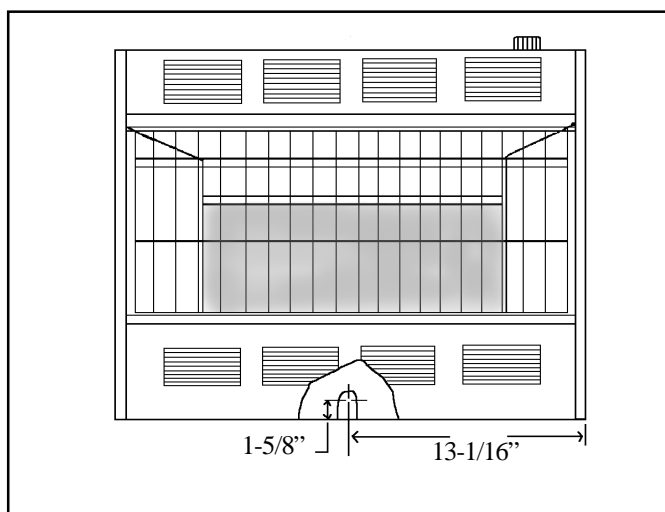


FIGURE 1

SEE FOLLOWING CHARTS FROM NFPA 54, ANSI Z223.1 TO DETERMINE PROPER GAS SUPPLY LINE SIZE REQUIRED TO SUPPORT TOTAL BTU REQUIREMENTS.

NATURAL GAS

Maximum Capacity of Pipe in Cubic Feet of Gas per Hour for Gas Pressures of 0.5 psig or Less and a Pressure Drop of 0.5 Inch Water Column.
(Based on a 0.60 Specific Gravity Gas)

| Nominal Iron Pipe Size, Inches | Internal Diameter, Inches | LENGTH OF PIPE, FEET | | | | | | | | | | | | | | | | | | |
|--------------------------------|---------------------------|----------------------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|--|--|--|--|--|
| | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 125 | 150 | 175 | 200 | | | | | |
| 1/4 | 0.364 | 43 | 29 | 24 | 20 | 18 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | | | | | |
| 3/8 | 0.493 | 95 | 65 | 52 | 45 | 40 | 36 | 33 | 31 | 29 | 27 | 24 | 22 | 20 | 19 | | | | | |
| 1/2 | 0.622 | 175 | 120 | 97 | 82 | 73 | 66 | 61 | 57 | 53 | 50 | 44 | 40 | 37 | 35 | | | | | |
| 3/4 | 0.824 | 360 | 250 | 200 | 170 | 151 | 138 | 125 | 118 | 110 | 103 | 93 | 84 | 77 | 72 | | | | | |
| 1 | 1.049 | 680 | 465 | 375 | 320 | 285 | 260 | 240 | 220 | 205 | 195 | 175 | 160 | 145 | 135 | | | | | |
| 1-1/4 | 1.38 | 1400 | 950 | 770 | 660 | 580 | 530 | 490 | 460 | 430 | 400 | 360 | 325 | 300 | 280 | | | | | |
| 1-1/2 | 1.61 | 2100 | 1460 | 1180 | 990 | 900 | 810 | 750 | 690 | 650 | 620 | 550 | 500 | 460 | 430 | | | | | |
| 2 | 2.067 | 3950 | 2750 | 2200 | 1900 | 1680 | 1520 | 1400 | 1300 | 1220 | 1150 | 1020 | 950 | 850 | 800 | | | | | |
| 2-1/2 | 2.469 | 6300 | 4350 | 3520 | 3000 | 2650 | 2400 | 2250 | 2050 | 1950 | 1850 | 1650 | 1500 | 1370 | 1280 | | | | | |
| 3 | 3.068 | 11000 | 7700 | 6250 | 5300 | 4750 | 4300 | 3900 | 3700 | 3450 | 3250 | 2950 | 2650 | 2450 | 2280 | | | | | |
| 4 | 4.026 | 23000 | 15800 | 12800 | 10900 | 9700 | 8800 | 8100 | 7500 | 7200 | 6700 | 6000 | 5500 | 5000 | 4600 | | | | | |

* Pipe and Tubing Selection

Total piping length = 84 feet (use table 4 @ 90 feet)

From a to b, demand = 200,000 + 38,000 + 65,000 + 35,000 = 338,000 BTU/hr. use 1" pipe.

From b to c, demand = 38,000 + 65,000 + 35,000 = 138,000 BTU/hr; use 3/4" pipe or 7/8" tubing.

From c to d, demand = 65,000 + 35,000 = 100,000 BTU/hr; use 3/4" pipe or 3/4" tubing.

From d to e, demand = 35,000 BTU/hr; use 1/2" pipe or 5/8" tubing.

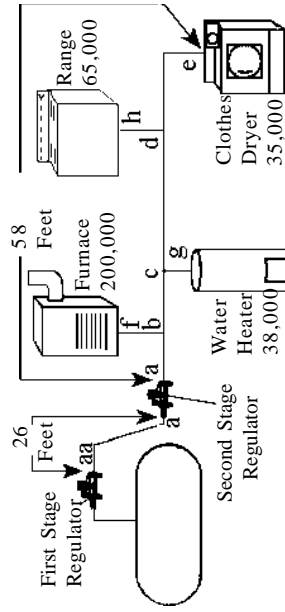
From b to f, demand = 200,000 BTU/hr; use 1" pipe.

From c to g, demand = 38,000 BTU/hr; use 1/2" pipe or 5/8" tubing.

From d to h, demand = 65,000 BTU/hr; use 1/2" pipe or 3/4" tubing.

Example 2.

Determine the sizes of piping or tubing required for the two-stage L.P. Gas installation shown.



Total first stage piping length = 26 feet; first stage regulator setting is 10 PSIG (use Table 1 or 3, @ 30 feet)

From aa to a, demand = 338,000 BTU/hr; use 1/2" pipe, 1/2" tubing, or 1/2" T plastic pipe.

Total second stage piping length = 58 feet (use table 4, @ 60 feet).

From a to b, demand = 338,000 BTU/hr; use 1" pipe.

From b to c, demand = 138,000 BTU/hr; use 3/4" pipe or 7/8" tubing.

From c to d, demand = 100,000 BTU/hr; use 1/2" pipe or 3/4" tubing.

From d to e, demand = 35,000 BTU/hr; use 1/2" pipe or 1/2" tubing.

From b to f, demand = 200,000 BTU/hr; use 3/4" pipe.

From c to g, demand = 38,000 BTU/hr; use 1/2" pipe or 5/8" tubing.

From c to h, demand = 65,000 BTU/hr; use 1/2" pipe or 5/8" tubing.

*Information from - REGO PRODUCTS
"LP GAS SERVICEMAN'S MANUAL"

SEE FOLLOWING PAGE FOR PIPE-SIZING CHARTS FOR PROPANE GAS.

TABLE 1 – first stage pipe sizing**PROPANE GAS**

10 PSIG Inlet with a 1 PSIG Pressure Drop

Maximum capacity of pipe or tubing, in thousands of BTU/hr. of L.P. Gas

| Size of Pipe Or Copper Tubing, Inches | LENGTH OF PIPE OR TUBING, FEET* | | | | | | | | | | |
|---|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | |
| Copper | 3/8 | 558 | 383 | 309 | 265 | 235 | 213 | 196 | 182 | 171 | 161 |
| Copper | 1/2 | 1387 | 870 | 700 | 599 | 531 | 481 | 443 | 412 | 386 | 365 |
| Tubing | 5/8 | 2360 | 1622 | 1303 | 1115 | 988 | 896 | 824 | 767 | 719 | 679 |
| (O.D.) | 3/4 | 3993 | 2475 | 2205 | 1887 | 1672 | 1515 | 1394 | 1297 | 1217 | 1149 |
| Pipe | 1/2 | 3339 | 2295 | 1843 | 1577 | 1398 | 1267 | 1165 | 1084 | 1017 | 961 |
| Size | 3/4 | 6982 | 4799 | 3854 | 3298 | 2923 | 2649 | 2437 | 2267 | 2127 | 2009 |
| | 1 | 13153 | 9040 | 7259 | 6213 | 5507 | 4989 | 4590 | 4270 | 4007 | 3785 |
| | 1-1/4 | 27004 | 18560 | 14904 | 12756 | 11306 | 10244 | 9424 | 8767 | 8226 | 7770 |
| | 1-1/2 | 40461 | 27809 | 22331 | 19113 | 16939 | 15348 | 14120 | 13136 | 12325 | 11642 |
| | 2 | 77924 | 53556 | 43008 | 36809 | 32623 | 29559 | 27194 | 25299 | 23737 | 22422 |
| | | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 350 | 400 |
| Copper | 3/8 | 142 | 130 | 118 | 111 | 104 | 90 | 89 | 89 | 82 | 76 |
| Copper | 1/2 | 323 | 293 | 269 | 251 | 235 | 222 | 211 | 201 | 185 | 172 |
| Tubing | 5/8 | 601 | 546 | 502 | 467 | 438 | 414 | 393 | 375 | 345 | 321 |
| (O.D.) | 3/4 | 1018 | 923 | 843 | 790 | 740 | 700 | 664 | 634 | 584 | 543 |
| | 1/2 | 852 | 772 | 710 | 660 | 619 | 585 | 556 | 530 | 488 | 454 |
| Pipe | 3/4 | 1780 | 1613 | 1484 | 1381 | 1296 | 1224 | 1162 | 1109 | 1020 | 949 |
| Size | 1 | 3354 | 3039 | 2796 | 2601 | 2441 | 2305 | 2190 | 2089 | 1922 | 1788 |
| | 1-1/4 | 6887 | 6240 | 5741 | 5340 | 5011 | 4733 | 4495 | 4289 | 3945 | 3670 |
| | 1-1/2 | 10318 | 9349 | 8601 | 8002 | 7508 | 7092 | 6735 | 6426 | 5911 | 5499 |
| | 2 | 19871 | 18005 | 16564 | 15410 | 14459 | 13658 | 12971 | 12375 | 11385 | 10591 |

*Total length of piping from outlet of first stage regulator to inlet of second stage regulator (or to inlet of second stage regulator furthest away).

- Notes: 1) To allow 2 PSIG pressure drop, multiply total gas demand by .707, and use capacities from table.
 2) For different first stage pressures, multiply total gas demand by the following factors, and use capacities from table.

| | |
|----------------------------------|--------------------|
| First State Pressure PSIG | Multiply by |
| 20 | .844 |
| 21 | .912 |

Data Calculated per NFPA #54 & 58.

TABLE 4 – Second, Single, or Integral Twin Stage Pipe Sizing

11 Inches Water Column Inlet with a 1/2 Inch Water Column Drop

Maximum capacity of pipe or tubing in thousands of BTU/hr of LP-Gas

PROPANE GAS

| Size of Pipe Or Copper Tubing, Inches | LENGTH OF PIPE OR TUBING, FEET* | | | | | | | | | | |
|---|---------------------------------|------|------|------|------|------|------|------|------|------|------|
| | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | |
| Copper | 3/8 | 49 | 34 | 27 | 23 | 20 | 19 | — | — | — | — |
| Copper | 1/2 | 110 | 76 | 61 | 52 | 46 | 42 | 38 | 36 | 33 | 32 |
| Tubing | 5/8 | 206 | 141 | 114 | 97 | 86 | 78 | 71 | 67 | 62 | 59 |
| (O.D.) | 3/4 | 348 | 239 | 192 | 164 | 146 | 132 | 120 | 113 | 105 | 100 |
| | 7/8 | 536 | 368 | 296 | 253 | 224 | 203 | 185 | 174 | 161 | 154 |
| Pipe | 1/2 | 291 | 200 | 161 | 137 | 122 | 110 | 102 | 94 | 87 | 84 |
| Size | 3/4 | 608 | 418 | 336 | 287 | 255 | 231 | 212 | 198 | 185 | 175 |
| | 1 | 1146 | 788 | 632 | 541 | 480 | 435 | 400 | 372 | 349 | 330 |
| | 1-1/4 | 2353 | 1617 | 1299 | 1111 | 985 | 892 | 821 | 764 | 717 | 677 |
| | 1-1/2 | 3525 | 2423 | 1946 | 1665 | 1476 | 1337 | 1230 | 1144 | 1074 | 1014 |
| | 2 | 6789 | 4666 | 3747 | 3207 | 2842 | 2575 | 2369 | 2204 | 2068 | 1954 |
| | | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 350 | 400 |
| Copper | 3/8 | — | — | — | — | — | — | — | — | — | — |
| Copper | 1/2 | — | — | — | — | — | — | — | — | — | — |
| Tubing | 5/8 | — | — | — | — | — | — | — | — | — | — |
| (O.D.) | 3/4 | — | — | — | — | — | — | — | — | — | — |
| | 7/8 | — | — | — | — | — | — | — | — | — | — |
| Pipe | 1/2 | 74 | 67 | 62 | 58 | 54 | 51 | 48 | 46 | 43 | 40 |
| Size | 3/4 | 155 | 141 | 129 | 120 | 113 | 107 | 101 | 97 | 89 | 83 |
| | 1 | 292 | 265 | 244 | 227 | 213 | 201 | 191 | 182 | 167 | 156 |
| | 1-1/4 | 600 | 544 | 500 | 465 | 437 | 412 | 392 | 374 | 344 | 320 |
| | 1-1/2 | 899 | 815 | 749 | 697 | 654 | 618 | 587 | 560 | 515 | 479 |
| | 2 | 1731 | 1569 | 1443 | 1343 | 1260 | 1190 | 1130 | 1078 | 992 | 923 |

*Total length of piping from outlet of regulator to appliance furthest away.

Data Calculated per NFPA #54 & 58.

INSTALLING HEATER

WALL MOUNT (VFM6, VFM10, VFT10)

STEP 1. Remove wall mounting bracket from back of heater.

STEP 2. Locate wall stud.

STEP 3. Attach wall mounting bracket to wall stud with top at desired height, using (2) screws provided. Make sure top of bracket is level. See Figure 2.

STEP 4. Hang top of heater on wall mounting bracket.

STEP 5. Remove bottom front panel.

STEP 6. Secure back of heater to wall, utilizing anchors (if necessary) or wood screws. See Figure 3.

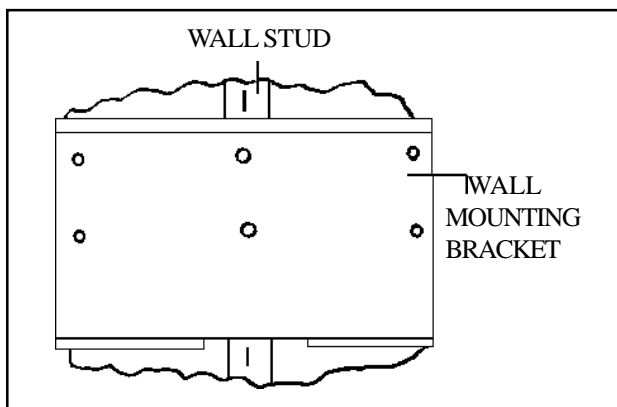


FIGURE 2

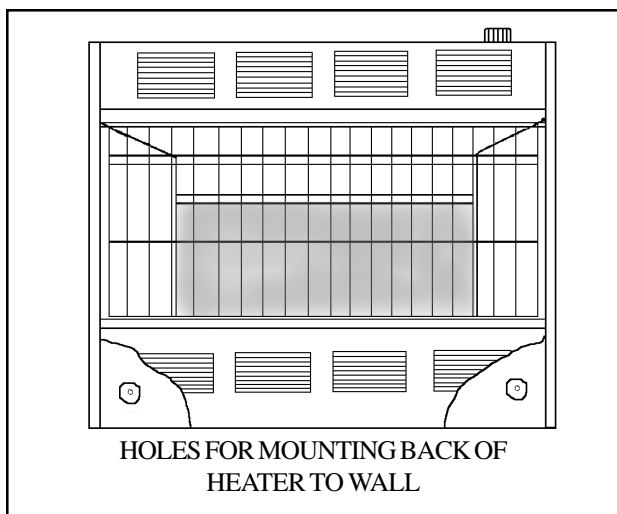


FIGURE 3

WALL MOUNT (VFM20, VFT20, VFM30, VFT30)

STEP 1. Remove wall mounting bracket from back of heater.

STEP 2. Locate two studs.

STEP 3. Attach wall mounting bracket to wall studs with top at desired height using (2) wood screws provided. Make sure top of bracket is level. See Figure 4.

STEP 4. Hang top of heater over wall mounting bracket.

STEP 5. Remove bottom front panel.

STEP 6. Secure back of heater to wall, utilizing anchors (if necessary) or wood screws. See Figure 3.

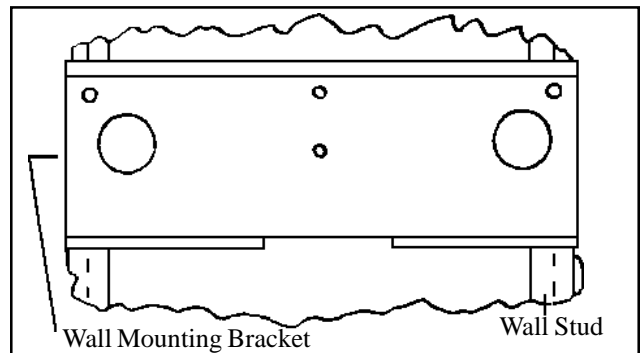


FIGURE 4

INSTALLING VF-FSK FLOOR BASE KIT

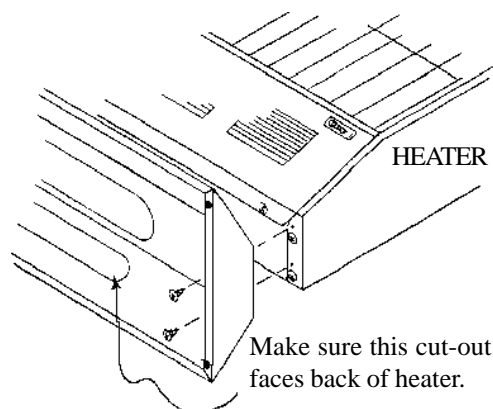
STEP 1. Remove floor base from carton.

STEP 2. Align screw holes in base to holes in heater bottom.

STEP 3. Make sure that cut-out in top of floor base aligns with cut-out in bottom of heater and the other cut-out in base if facing towards back of unit (see illustration below).

STEP 4. Attach floor base to bottom of heater using four #8 screws (provided).

NOTE: Floor bases are for use on VFM10, VFT10, VFM-20, VFT-20, VFM30 and VFT30 only. The VFM6 Series has no base and is not approved for use with one.



GAS CONNECTION

STEP 1. Make the gas connection between the manual shut off valve and regulator located inside heater cabinet. Hold regulator when tightening connection to prevent damage to regulator and internal tubing. See Figure 5 for completed installation.

NOTE: All piping and connection must be checked for leaks by the installer. If connections are not exposed, a pressure test must be run. The appliance and its individual shut off valve must be disconnected from the gas supply piping system during any pressure testing at pressures in excess of ½ psig (3.5 kPa). The appliance must be isolated from the gas supply piping system by closing its individual manual shut off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than ½ psig (3.5kPa).

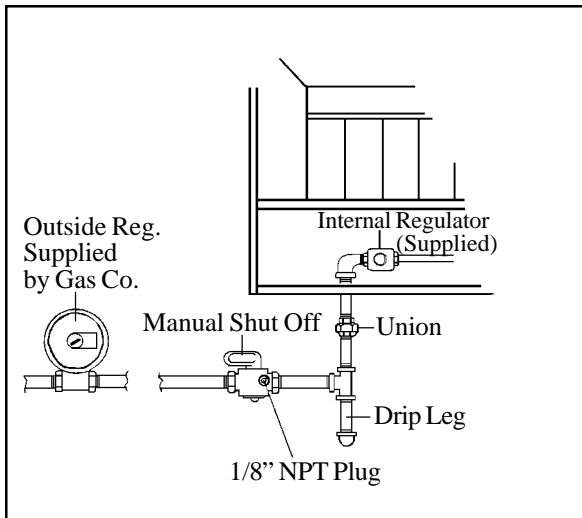


FIGURE 5

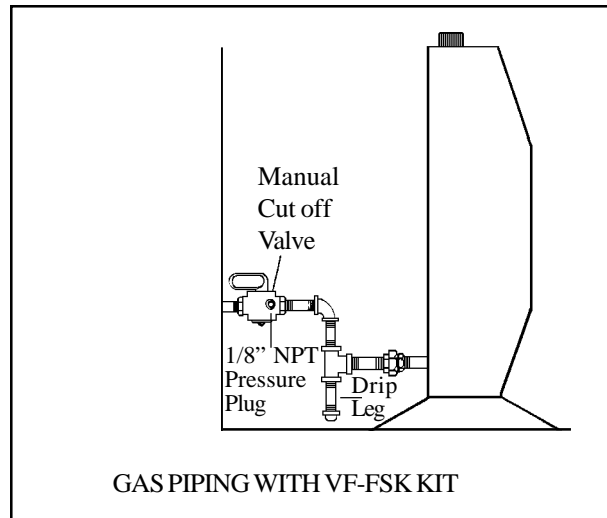



FIGURE 5A

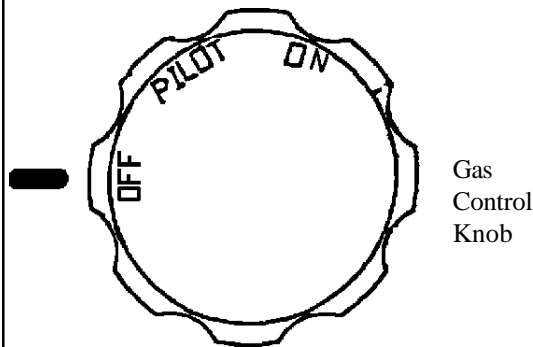
FOR YOUR SAFETY READ BEFORE LIGHT

WARNING: IF YOU DO NOT FOLLOW THESE INSTRUCTIONS EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.

- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS:
- Do not try to light any appliance.
 - Do not touch any electric switch, do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

LIGHTING INSTRUCTIONS

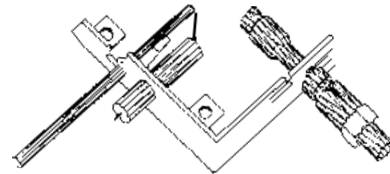
1. STOP! Read the safety information above on this label.
2. Depress gas control knob slightly and turn clockwise  to "OFF".
3. Turn off all electric power to the appliance.





Gas
Control
Knob


NOTE: Knob can not be turned from "PILOT" to "OFF" unless knob is depressed slightly. Do not force.

4. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
5. Locate pilot in the cut-out below the burner.
6. Locate piezo ignitor button on top of heater.



7. Turn gas control knob counterclockwise  to "PILOT".
8. Depress gas control knob and hold in. Immediately begin alternately pushing and releasing piezo ignitor button, observing pilot, until pilot is lit. Continue to hold the control knob in for about one (1) minute after the pilot is lit. Release the gas control knob and it will pop back up. Pilot should remain lit. If pilot goes out, repeat steps 2 thru 7.
 - If knob does not pop up when released, STOP and immediately call your service technician or gas supplier.
 - If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.
9. Turn gas control knob counterclockwise  to "ON".

TO TURN OFF GAS TO APPLIANCE


1. Depress gas control knob slightly and turn clockwise  to "OFF".

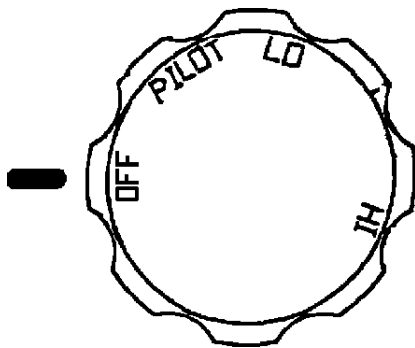
FOR YOUR SAFETY READ BEFORE LIGHTING

WARNING: IF YOU DO NOT FOLLOW THESE INSTRUCTIONS EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.

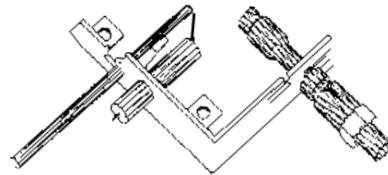
- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS:
- Do not try to light any appliance.
 - Do not touch any electric switch, do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- C. If you cannot reach your gas supplier, call the fire department.
- D. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.



LIGHTING INSTRUCTIONS

1. STOP! Read the safety information above on this label.
2. Depress gas control knob slightly and turn clockwise  to "OFF".
3. Turn off all electric power to the appliance.




Gas
Control
Knob



7. Turn gas control knob counterclockwise  to "PILOT".
8. Depress gas control knob and hold in. Immediately begin alternately pushing and releasing piezo ignitor button, observing pilot, until pilot is lit. Continue to hold the control knob in for about one (1) minute after the pilot is lit. Release the gas control knob and it will pop back up. Pilot should remain lit. If pilot goes out, repeat steps 2 thru 7.
 - If knob does not pop up when released, STOP and immediately call your service technician or gas supplier.
 - If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.
9. Turn on all electric power to the appliance.
10. Turn gas control knob counterclockwise  to desired "LO" or "HI" setting.

TO TURN OFF GAS TO APPLIANCE


1. Depress gas control knob slightly and turn clockwise  to "OFF".
2. Turn off all electric power to the appliance if service is to be performed.

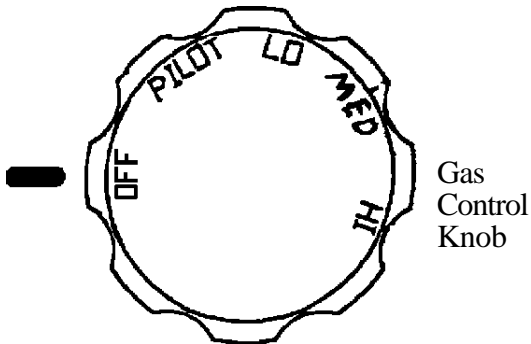
FOR YOUR SAFETY READ BEFORE LIGHTING

WARNING: IF YOU DO NOT FOLLOW THESE INSTRUCTIONS EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.



- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS:**
- Do not try to light any appliance.
 - Do not touch any electric switch, do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

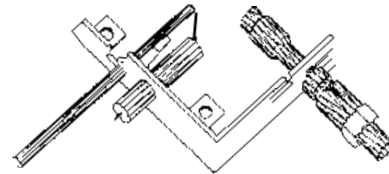
LIGHTING INSTRUCTIONS


1. STOP! Read the safety information above on this label.
2. Depress gas control knob slightly and turn clockwise  to "OFF".
3. Turn off all electric power to the appliance.



NOTE: Knob can not be turned from "PILOT" to "OFF" unless knob is depressed slightly. Do not force.

4. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
5. Locate pilot in the cut-out below the burner.
6. Locate piezo ignitor button on top of heater.
7. Turn gas control knob counterclockwise  to "PILOT".
8. Depress gas control knob and hold in. Immediately begin alternately pushing and releasing piezo ignitor button, observing pilot, until pilot is lit. Continue to hold the control knob in for about one (1) minute after the pilot is lit. Release the gas control knob and it will pop back up. Pilot should remain lit. If pilot goes out, repeat steps 2 thru 7.
 - If knob does not pop up when released, STOP and immediately call your service technician or gas supplier.
 - If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.
9. Turn on all electric power to the appliance.
10. Turn gas control knob counterclockwise  to desired temperature setting.

**TO TURN OFF GAS TO APPLIANCE**

1. Depress gas control knob slightly and turn clockwise  to "OFF".
2. Turn off all electric power to the appliance if service is to be performed.

VFT101, VFT201, VFT301 - NAT. GAS /VFT102, VFT202, VFT302 - L.P.

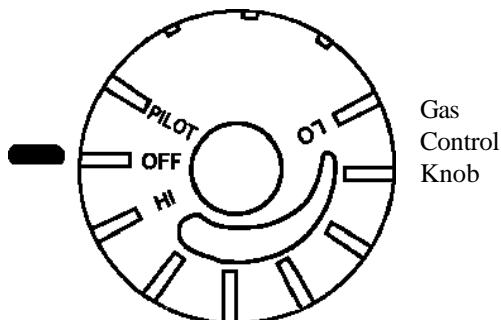
FOR YOUR SAFETY READ BEFORE LIGHTING

WARNING: IF YOU DO NOT FOLLOW THESE INSTRUCTIONS EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.

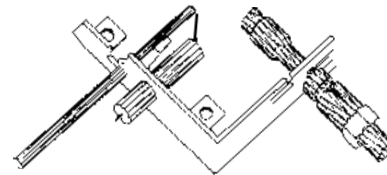
- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS:
- Do not try to light any appliance.
 - Do not touch any electric switch, do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

LIGHTING INSTRUCTIONS

1. STOP! Read the safety information above on this label.
2. Depress gas control knob slightly and turn clockwise ↻ to "OFF".
3. Turn off all electric power to the appliance.



Gas Control Knob



NOTE: Knob can not be turned from "PILOT" to "OFF" unless knob is depressed slightly. Do not force.

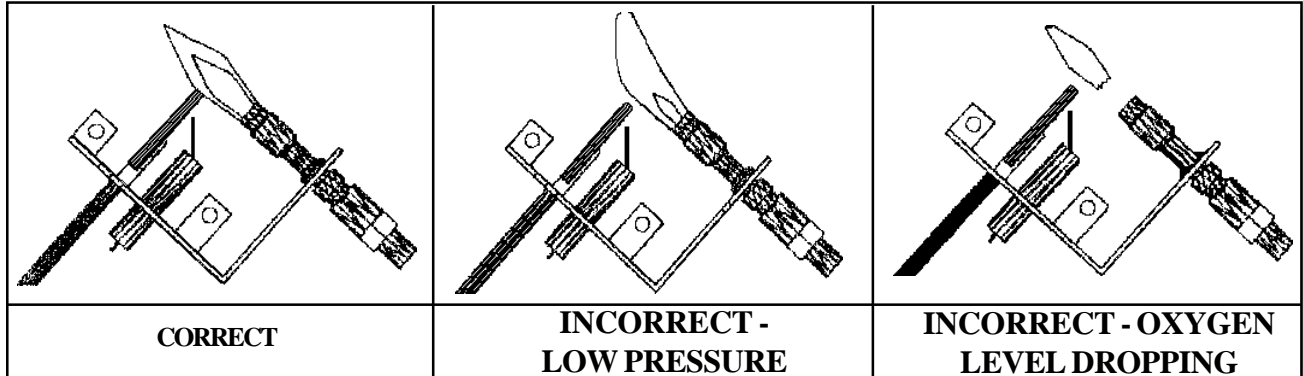
4. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
5. Locate pilot in the cut-out below the burner.
6. Locate piezo ignitor button on top of heater.
7. Turn gas control knob counterclockwise ↻ to "PILOT".
8. Depress gas control knob and hold in. Immediately begin alternately pushing and releasing piezo ignitor button, observing pilot, until pilot is lit. Continue to hold the control knob in for about one (1) minute after the pilot is lit. Release the gas control knob and it will pop back up. Pilot should remain lit. If pilot goes out, repeat steps 2 thru 7.
 - If knob does not pop up when released, STOP and immediately call your service technician or gas supplier.
 - If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.
9. Turn on all electric power to the appliance.
10. Turn gas control knob counterclockwise ↻ to desired temperature setting.

TO TURN OFF GAS TO APPLIANCE

1. Depress gas control knob slightly and turn clockwise ↻ to "OFF".
2. Turn off all electric power to the appliance if service is to be performed.

PROPER OPERATION
ODS / PILOT FLAME

The pilot pressure has been pre-set at the factory and with proper supply pressure will provide a safe, reliable ignition source. See Figure 6.



BURNER FLAME

All orificing and pressure setting was done at the factory and, with proper supply pressure, will provide a safe, efficient source of heat. However, if any questions about manifold pressure, have a qualified serviceman check with a manometer, Natural Gas will be 5", L.P. Gas will be 10" w.c. A proper burner flame (See Figure 7) will produce a reddish-orange flow on the surface of the ceramic burner plaques. If the burner flame has blue streamers or the flame is floating off the surface of the plaques, turn heater off and call a qualified service person. Do not operate heater if all plaques are not glowing.

NOTE: There will be approximately 1/4" space on the sides and top of the burner that will not glow.

VFM20: When turned to the "LO" setting the two middle plaques will light and glow. When valve is turned to "HI" then

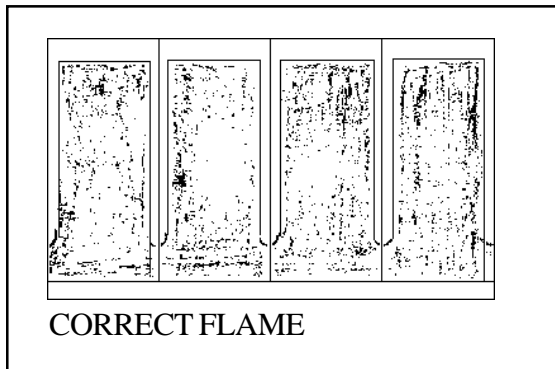
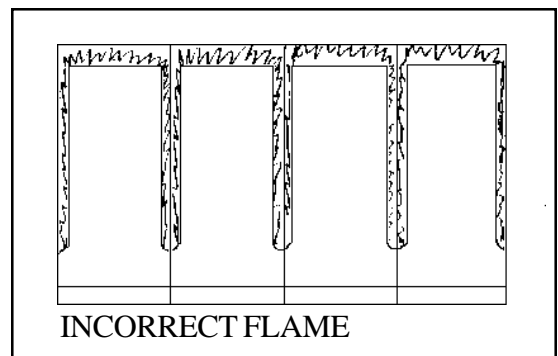
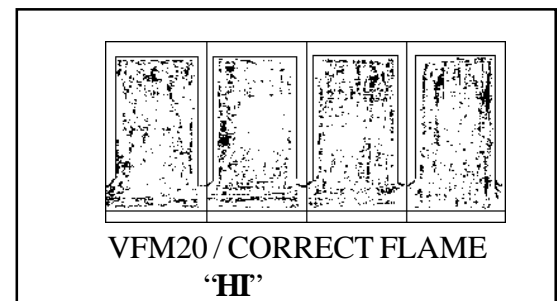
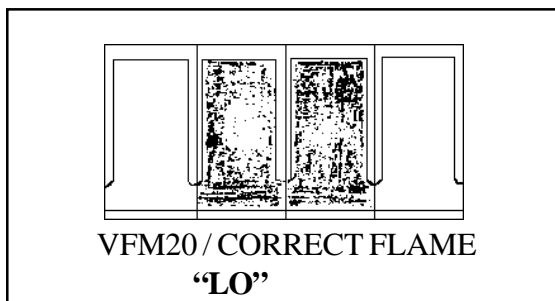


FIGURE 7



all four plaques will be lit.



MAINTENANCE

The entire heater should be checked and cleaned by a qualified service person before the start of each heating season. More frequent cleaning may be required due to excessive lint conditions from carpeting, bedding material, etc.

CABINET

To clean the cabinet and hearth and jamb assemblies of your heater, turn off and allow to cool, then wipe with a soft damp cloth. This will remove any dust. Never use metal polish, furniture wax, or any type of cleaning solution as this could cause odors when the heater is turned back on.

MAIN BURNER

Burners may be cleaned by using a low pressure air hose, or soft brush. Be careful not to damage the ceramic plaque.

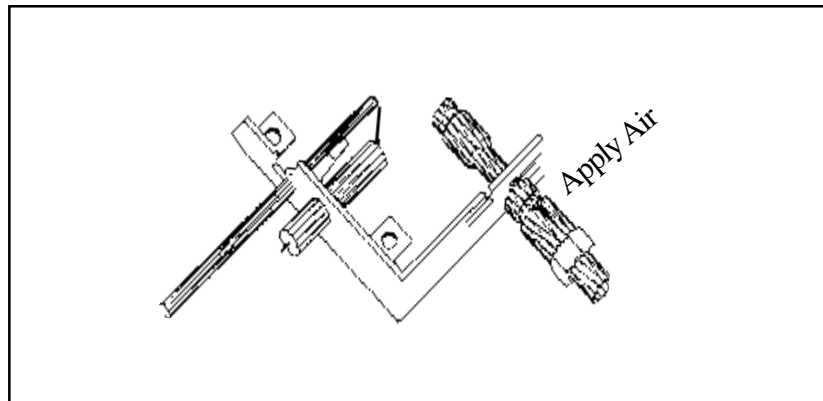
ODS/PILOT

STEP 1. Remove bottom front panel.

STEP 2. Disconnect pilot line from pilot.

STEP 3. Use a low pressure air hose to blow through pilot and through ODS opening in side of pilot.

WARNING: Never insert anything into any of the openings in the pilot as this could damage the Oxygen Depletion System and expose the homeowner to Carbon Monoxide poisoning.



STEP 3 - PILOT CLEANING

WARNING: After any servicing or cleaning make sure heater is completely re-assembled and check for gas leaks.

BLOWER INSTRUCTIONS

INSTALLING THE VFB BLOWER

- STEP 1.** Remove blower assembly from shipping carton.
STEP 2. Insert blower assembly into upper back of heater (See Figure 8).
STEP 3. Secure blower to heater using three #8 screws (provided) through holes pre-punched in heater back.
STEP 4. Locate mounting holes for switchbox (See Figure 8).
STEP 5. Secure switchbox to heater using two #8 screws (provided).
STEP 6. Plug power cord into 115 volt three-prong grounded receptacle.

CAUTION: Always unplug power cord before servicing or cleaning heater. This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle.

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

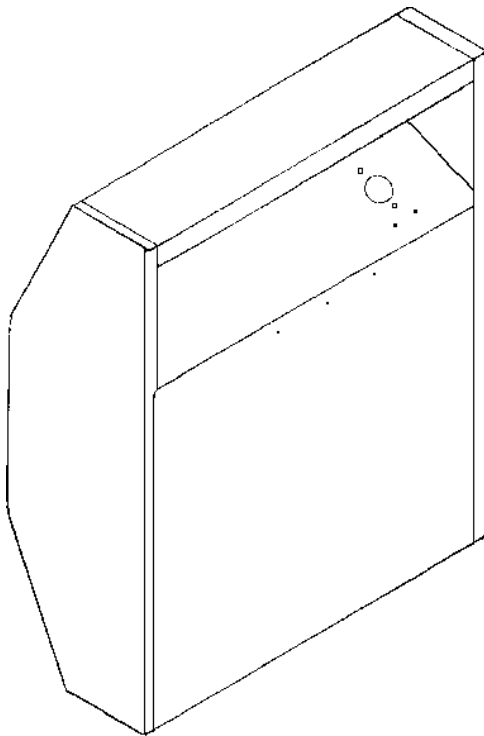
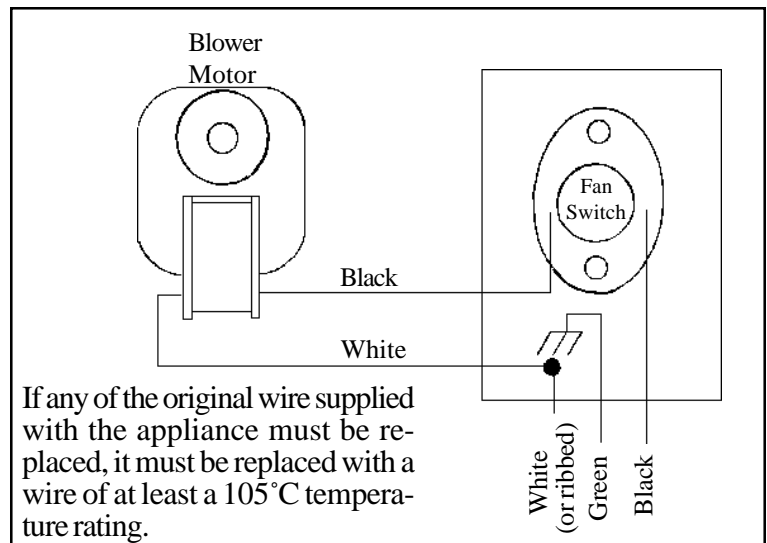
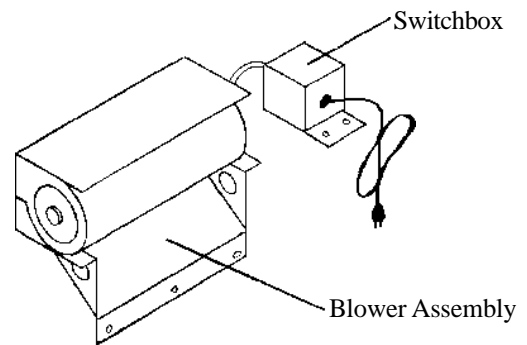


FIGURE 8



WIRING DIAGRAM / VFB BLOWER

MANUAL MODELS

NAT. GAS L.P. GAS

VFM63 VFM64

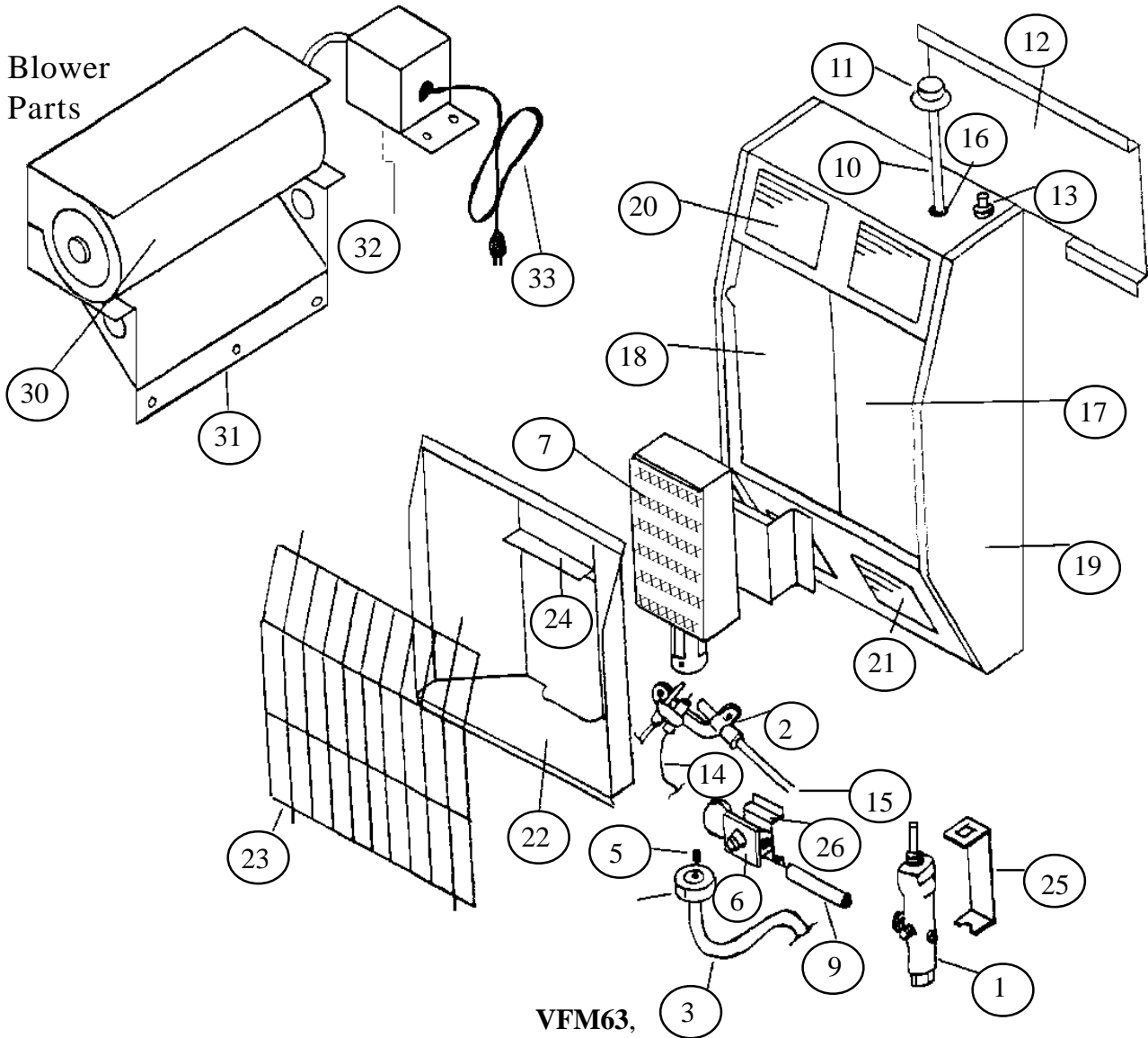
VFM103 VFM104

VFM203 VFM204

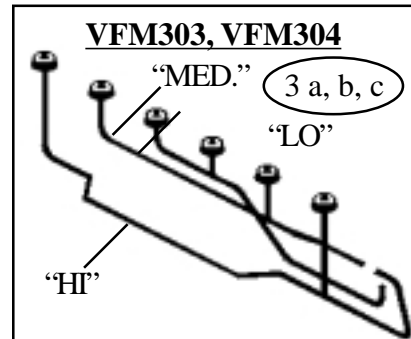
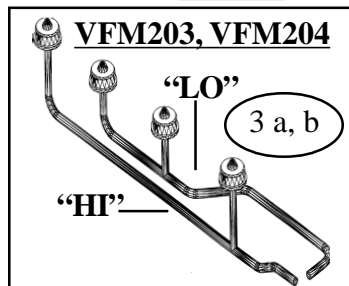
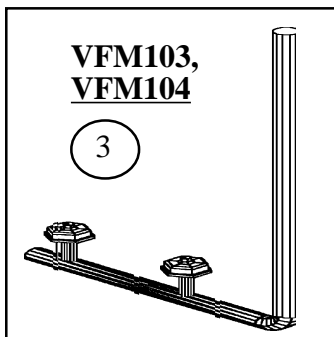
VFM303 VFM304

**VENT FREE INFRA-RED HEATER
MANUAL CONTROL
PARTS LIST**

Prices and specifications subject to change without notice. All prices are F.O.B. factory.



**VFM63,
VFM64**



REPLACEMENT PARTS LIST. TO ORDER REPLACEMENT PARTS YOU MUST GIVE MODEL NUMBER, SERIAL NUMBER, TYPE OF GAS USED, PART DESCRIPTION AND PART NUMBER.

| MODEL NUMBERS NATURAL | | VFM63 | | VFM103 | | VFM203 | | VFM303 | |
|--------------------------------|----------|----------|------------|----------|------------|----------|------------|----------|------------|
| MODEL NUMBERS PROPANE | | VFM64 | | VFM104 | | VFM204 | | VFM304 | |
| PART DESCRIPTION | REF. NO. | PART NO. | LIST PRICE | PART NO. | LIST PRICE | PART NO. | LIST PRICE | PART NO. | LIST PRICE |
| Valve, CPMM-21400/17 | 1 | 88290 | \$40.60 | 88290 | \$40.60 | 88291 | \$42.00 | 88177 | \$41.30 |
| ODS/Pilot (NAT. GAS) | 2 | 88169 | \$41.90 | 88169 | \$41.90 | 88169 | \$41.90 | 88169 | \$41.90 |
| ODS/Pilot (L.P. GAS) | 2 | 88168 | \$36.20 | 88168 | \$36.20 | 88168 | \$36.20 | 88168 | \$36.20 |
| Manifold | 3 | 88147 | \$10.10 | 88148 | \$20.10 | N/A | N/A | N/A | N/A |
| Manifold "LO" | 3a | N/A | N/A | N/A | N/A | 88155 | \$18.40 | 88157 | \$18.80 |
| Manifold "HI" | 3b | N/A | N/A | N/A | N/A | 88156 | \$17.90 | 88159 | \$18.80 |
| Manifold "MEDIUM" | 3c | N/A | N/A | N/A | N/A | N/A | N/A | 88158 | \$18.80 |
| Burner Orifice (NAT. GAS) | 5 | 88021 | \$3.40 | 88021 | \$3.40 | 88021 | \$3.40 | 88021 | \$3.40 |
| Burner Orifice (L.P. GAS) | 5 | 88020 | \$3.40 | 88020 | \$3.40 | 88020 | \$3.40 | 88020 | \$3.40 |
| Gas Regulator (NAT. GAS) | 6 | 88035 | \$17.50 | 88035 | \$17.50 | 88031 | \$17.50 | 88031 | \$17.50 |
| Gas Regulator (L.P. GAS) | 6 | 88036 | \$17.50 | 88036 | \$17.50 | 88032 | \$17.50 | 88032 | \$17.50 |
| Burner Assembly | 7 | 88150 | \$42.20 | 88151 | \$79.70 | 88152 | \$145.50 | 88153 | \$197.40 |
| Gas Supply Tube | 9 | 88045 | \$2.80 | 88066 | \$4.20 | 88066 | \$4.20 | 88049 | \$4.70 |
| Control Rod | 10 | 88019 | \$11.70 | 88019 | \$11.70 | 88019 | \$11.70 | 88019 | \$11.70 |
| Control Knob | 11 | 88075 | \$4.00 | 88075 | \$4.00 | 88008 | \$5.90 | 88010 | \$6.60 |
| Wall Mounting Bracket | 12 | 35220 | \$7.00 | 35220 | \$7.00 | 35960 | \$8.60 | 35960 | \$8.60 |
| Piezo | 13 | 80016 | \$5.70 | 80016 | \$5.70 | 80016 | \$5.70 | 80016 | \$5.70 |
| Electrode Wire 30" | 14 | 88070 | \$2.80 | 88070 | \$2.80 | 88070 | \$2.80 | 88070 | \$2.80 |
| Pilot Tubing Assy.24"Nat.&L.P. | 15 | 88013 | \$4.70 | 88013 | \$4.70 | 88013 | \$4.70 | 88013 | \$4.70 |
| Control Rod Grommet | 16 | 88018 | \$1.10 | 88018 | \$1.10 | 88018 | \$1.10 | 88018 | \$1.10 |
| Casing Back | 17 | 35165 | \$16.90 | 35425 | \$19.30 | 35925 | \$20.00 | 36425 | \$25.90 |
| Casing Left Side | 18 | 35060 | \$13.10 | 35060 | \$13.10 | 35060 | \$13.10 | 35060 | \$13.10 |
| Casing Right Side | 19 | 35070 | \$13.10 | 35070 | \$13.10 | 35070 | \$13.10 | 35070 | \$13.10 |
| Top Front Panel | 20 | 35045 | \$14.90 | 35340 | \$16.20 | 35870 | \$12.70 | 36340 | \$21.20 |
| Bottom Front Panel | 21 | 35080 | \$10.10 | 35360 | \$10.70 | 35860 | \$12.40 | 36360 | \$13.80 |
| Bezel Assembly | 22 | 35100 | \$43.40 | 35380 | \$46.80 | 35880 | \$51.70 | 36380 | \$58.30 |
| Wire Guard | 23 | 88100 | \$21.40 | 88101 | \$23.00 | 88105 | \$26.60 | 88104 | \$33.40 |
| Heat Shield | 24 | 35200 | \$2.60 | 35460 | \$2.90 | 35940 | \$4.00 | 36440 | \$4.60 |
| Valve Support Bracket | 25 | 35185 | \$2.90 | N/A | N/A | 35185 | \$2.90 | 35185 | \$2.90 |
| Regulator Support Bracket | 26 | 35240 | \$5.00 | 35480 | \$4.00 | 35240 | \$5.00 | 35480 | \$4.00 |
| Lighting Instruction Assembly | | 91370 | \$2.80 | 91370 | \$2.80 | 91371 | \$2.80 | 91380 | \$4.50 |
| BLOWER PARTS VF-B | | | | | | | | | |
| Blower/Motor Assembly | 30 | N/A | | N/A | | 88250 | \$58.60 | 88250 | \$58.60 |
| Blower Housing | 31 | N/A | | N/A | | 37025 | \$13.00 | 37025 | \$13.00 |
| Fan Switch | 32 | N/A | | N/A | | 88240 | \$5.90 | 88240 | \$5.90 |
| Power Cord | 33 | N/A | | N/A | | 80202 | \$4.20 | 80202 | \$4.20 |
| Junction Box | | N/A | | N/A | | 37075 | \$6.10 | 37075 | \$6.10 |
| Junction Box Cover | | N/A | | N/A | | 37085 | \$7.80 | 37085 | \$7.80 |

* TWO REQUIRED

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MARCH 2005

THERMOSTAT MODELS

NAT. GAS L.P. GAS

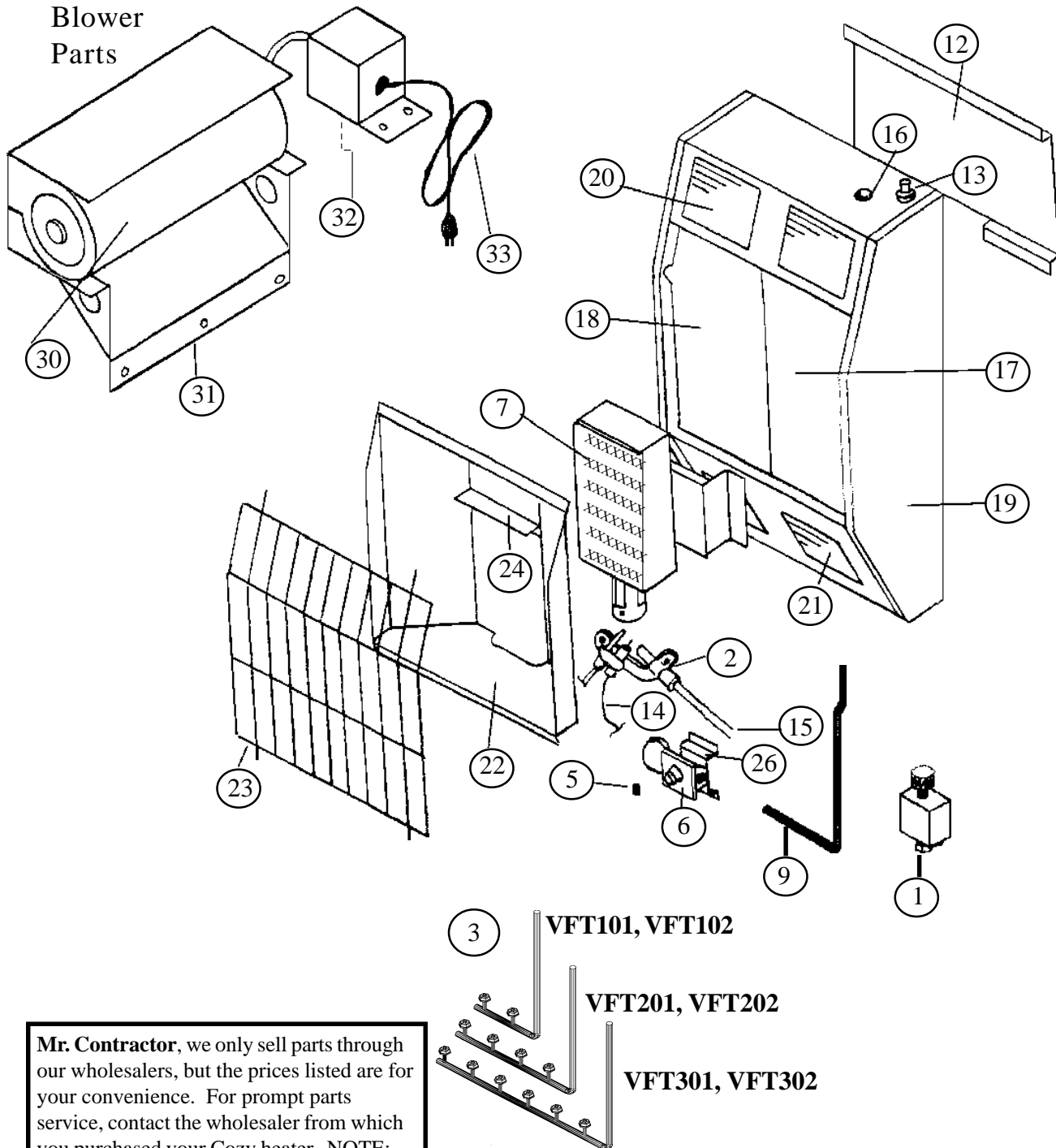
VFT101 VFT102

VFT201 VFT202

VFT302 VFT302

**VENT FREE INFRA-RED HEATER
THERMOSTAT CONTROL
PARTS LIST**

Prices and specifications subject to change without notice. All prices are F.O.B. factory.



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REPLACEMENT PARTS LIST. TO ORDER REPLACEMENT PARTS YOU MUST GIVE MODEL NUMBER, SERIAL NUMBER, TYPE OF GAS USED, PART DESCRIPTION AND PART NUMBER.


| MODEL NUMBERS NATURAL MODEL NUMBERS PROPANE | | VFT101 VFT102 | | VFT201 VFT202 | | VFT301 VFT302 | |
|--|----------|------------------|------------|------------------|------------|------------------|------------|
| PART DESCRIPTION | REF. NO. | PART NO. | LIST PRICE | PART NO. | LIST PRICE | PART NO. | LIST PRICE |
| Valve, VT-23100/18 | 1 | 88179 | \$88.10 | 88179 | \$88.10 | 88179 | \$88.10 |
| ODS/Pilot (NAT. GAS) | 2 | 88169 | \$41.90 | 88169 | \$41.90 | 88169 | \$41.90 |
| ODS/Pilot (L.P. GAS) | 2 | 88168 | \$36.20 | 88168 | \$36.20 | 88168 | \$36.20 |
| Manifold | 3 | 88041 | \$22.80 | 88490 | \$24.60 | 88491 | \$35.30 |
| Burner Orifice (NAT. GAS) | 5 | 88021 | \$3.40 | 88021 | \$3.40 | 88021 | \$3.40 |
| Burner Orifice (L.P. GAS) | 5 | 88020 | \$3.40 | 88020 | \$3.40 | 88020 | \$3.40 |
| Gas Regulator (NAT. GAS) | 6 | 88035 | \$17.50 | 88031 | \$17.50 | 88031 | \$17.50 |
| Gas Regulator (L.P. GAS) | 6 | 88036 | \$17.50 | 88032 | \$17.50 | 88032 | \$17.50 |
| Burner Assembly | 7 | 88151 | \$79.70 | 88152 | \$145.50 | 88153 | \$197.40 |
| Gas Supply Tube | 9 | 88046 | \$6.10 | 88046 | \$6.10 | 88046 | \$6.10 |
| Wall Mounting Bracket | 12 | 35220 | \$7.00 | 35960 | \$8.60 | 35960 | \$8.60 |
| Piezo | 13 | 80016 | \$5.70 | 80016 | \$5.70 | 80016 | \$5.70 |
| Electrode Wire 30" | 14 | 88070 | \$2.80 | 88070 | \$2.80 | 88070 | \$2.80 |
| Pilot Tubing Assy.24"Nat.&L.P. | 15 | 88013 | \$4.70 | 88013 | \$4.70 | 88013 | \$4.70 |
| Control Rod Grommet | 16 | 88005 | \$1.20 | 88005 | \$1.20 | 88005 | \$1.20 |
| Casing Back | 17 | 35425 | \$19.30 | 35925 | \$20.00 | 36425 | \$25.90 |
| Casing Left Side | 18 | 35060 | \$13.10 | 35060 | \$13.10 | 35060 | \$13.10 |
| Casing Right Side | 19 | 35070 | \$13.10 | 35070 | \$13.10 | 35070 | \$13.10 |
| Top Front Panel | 20 | 35345 | \$16.20 | 35855 | \$18.80 | 36355 | \$21.10 |
| Bottom Front Panel | 21 | 35360 | \$10.70 | 35860 | \$12.40 | 36360 | \$13.80 |
| Bezel Assembly | 22 | 35380 | \$46.80 | 35880 | \$51.70 | 36380 | \$58.30 |
| Wire Guard | 23 | 88101 | \$23.00 | 88105 | \$26.60 | 88104 | \$33.40 |
| Heat Shield | 24 | 35460 | \$2.90 | 35940 | \$4.00 | 36440 | \$4.60 |
| Regulator Support Bracket | 26 | 35480 | \$4.00 | 35480 | \$4.00 | 35480 | \$4.00 |
| Lighting Instruction Assembly | | 91373 | \$2.80 | 91373 | \$2.80 | 91373 | \$2.80 |
| BLOWER PARTS VF-B | | | | | | | |
| Blower/Motor Assembly | 30 | N/A | | 88250 | \$58.60 | 88250 | \$58.60 |
| Blower Housing | 31 | N/A | | 37025 | \$13.00 | 37025 | \$13.00 |
| Fan Switch | 32 | N/A | | 88240 | \$5.90 | 88240 | \$5.90 |
| Power Cord | 33 | N/A | | 80202 | \$4.20 | 80202 | \$4.20 |
| Junction Box | | N/A | | 37075 | \$6.10 | 37075 | \$6.10 |
| Junction Box Cover | | N/A | | 37085 | \$7.80 | 37085 | \$7.80 |

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MARCH 2005

TROUBLE SHOOTING GUIDE

(for qualified serviceman)

| SYMPTOM | POSSIBLE CAUSES | CORRECTIVE ACTION |
|---|---|---|
| No spark at ODS 1. | <ol style="list-style-type: none"> 1. Ignitor wire off ODS or Piezo. 2. Ignitor wire shorting out on casing. 3. Defective piezo ignitor. 4. Wrong gap from electrode. | <ol style="list-style-type: none"> 1. Check and re-attach ignitor wire. 2. Move ignitor wire. 3. Replace Piezo ignitor. 4. Set gap at 3/16". |
| Spark but no ignition at ODS | <ol style="list-style-type: none"> 1. No gas to heater. 2. Air in gas line. 3. Blocked ODS orifice. | <ol style="list-style-type: none"> 1. Check and turn on gas. 2. Hold in pilot knob to bleed air from gas line. 3. Blow out ODS with low pressure air hose. |
| ODS will not remain lit when control knob is released | <ol style="list-style-type: none"> 1. Safety interlock system activated. 2. Control knob not held in long enough. 3. Control knob not in "PILOT" position. 4. Thermocouple loose. 5. Defective thermocouple. 6. Defective gas valve. 7. Air in line. | <ol style="list-style-type: none"> 1. Wait five minutes between re-ignition attempts. 2. Press in control knob, light ODS and hold control knob in for one minute. 3. Turn control knob to "OFF" then without pushing down turn knob counterclockwise  until knob stops turning. Push knob down completely at this point. 4. Tighten thermocouple into gas valve. 5. Replace thermocouple (hand tighten plus 1/4 turn with wrench). 6. Replace gas valve. 7. Bleed all air from gas line. |
| ODS lights but main burner does not | <ol style="list-style-type: none"> 1. Control knob not in "ON" position. 2. Burner orifice blocked. 3. Gas supply pressure low. 4. Weak thermocouple. 5. Defective gas valve. | <ol style="list-style-type: none"> 1. Turn control knob to "ON". 2. Clean burner orifice with low pressure air hose. 3. Check supply pressure. Call gas supplier. 4. Replace thermocouple. 5. Replace gas valve. |
| Delayed ignition | <ol style="list-style-type: none"> 1. Low gas supply pressure. 2. Burner orifice blocked at ODS. 3. Low manifold pressure. 4. ODS not in correct location. | <ol style="list-style-type: none"> 1. Check supply pressure. Call gas supplier. 2. Clean burner orifice with low pressure air hose. 3. Check and replace regulator if necessary. 4. Make sure ODS is properly mounted to burner bracket. |
| Flashback | <ol style="list-style-type: none"> 1. Broken or defective plaque. 2. Gas supply pressure low. | <ol style="list-style-type: none"> 1. Discontinue use and replace burner assembly. 2. Check supply pressure. Call gas supplier. |
| One or more plaques not glowing | <ol style="list-style-type: none"> 1. Burner orifice blocked. 2. Broken or defective plaque. 3. Low gas supply pressure. | <ol style="list-style-type: none"> 1. Clean burner orifice with low pressure air hose. 2. Discontinue use and replace burner assembly. 3. Check supply pressure. Call gas supplier. |
| Heater shuts off during normal operation | <ol style="list-style-type: none"> 1. Blocked ODS. 2. Low gas supply pressure. 3. Not an adequate supply of combustion and ventilation air. 4. Heater located in drafty area. | <ol style="list-style-type: none"> 1. Clean ODS. See maintenance section. 2. Check supply pressure. Call gas supplier. 3. See "Provisions for adequate combustion and ventilation air" on Page 3 of instructions. 4. Re-locate heater. |

IMPORTANT SAFETY BULLETIN ON YOUR GAS CONTROL AND PILOT LIGHT SYSTEM FOR HEATING EQUIPMENT

WHAT YOU DON'T KNOW CAN HURT YOU.

Your pilot light system has been designed for safe and reliable operation. Although safety mechanisms are built-in, the potential for hazard exists. This information is intended to help you avoid these hazards.

YOUR GAS CONTROL AND PILOT LIGHT SYSTEM

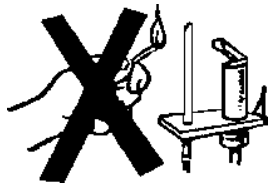
Your gas control and pilot light system has a safety device whose purpose is to shut-off the gas supply to the appliance if the pilot light goes out. If you have trouble lighting the pilot or keeping it lit, it may mean that this safety device is warning you that there is a problem with your system. Inspection and repairs or replacement must be made by a trained gas service technician.



TAMPERING IS DANGEROUS

The pilot safety system may also not work if you do not follow the lighting instructions carefully or if you tamper with the gas control that you use to light the pilot. Tampering with the gas control, particularly with tools, can damage the safety mechanism in the control and can allow gas to leak. This can result in a fire or explosion causing property damage, personal injury or death.

IF YOU SMELL GAS, DON'T LIGHT IT



IF YOU CAN'T LIGHT IT,
DON'T FIGHT IT!



WHAT TO DO IF YOU SMELL GAS . . .

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

CRITICAL SAFETY POINTS TO REMEMBER . . .

- Your gas has been odorized so that you can smell it. Always smell around for gas before lighting your appliance.
- Sniff for L.P.-gas at floor level. LP-gas is heavier than air and may temporarily exist at floor level.



- If you smell gas, do not attempt to light the pilot. Do not cause a spark by turning on or off electrical switches or appliances or by using the phone. Turn off the gas to the appliances and call your gas supplier from another location.
- If your gas control has gotten wet as the result of flooding or other wetting, it must be replaced immediately by a trained gas service technician. Water can lead to damage of the internal safety mechanism in the gas control and can create a hazardous condition.

THIS IS NOT AN ADVERTISEMENT

LIMITED WARRANTY

The Louisville Tin & Stove Co. warrants to the original user the accompanying product for the period specified herein, provided said product is installed, operated, maintained, serviced, and used according to the instructions and specifications accompanying the product. **AS OUTLINED IN OUR INSTRUCTIONS, ANY WARRANTY CONSIDERATIONS ARE CONTINGENT ON INSTALLATION BY A QUALIFIED INSTALLER (CONTRACTOR). SELF-INSTALLATION IS NOT RECOMMENDED AND MAY INVALIDATE YOUR WARRANTY.**

If within a period of one year from the date of installation of the product, any part supplied by the manufacturer proves to be defective due to workmanship or material, it will replace such part, provided parts have not been subjected to misuse, alteration, neglect, or accidents. The term of the warranty for the heat exchanger is covered in Table A below. Any claim not made within ten (10) days after the expiration of the warranty period shall be deemed waived by the user.

The manufacturer shall have no liability or be required to perform any obligation under this warranty unless, when requested, the user returns, at the user's expense, the component or product claimed defective, to the manufacturer for inspection, to enable the manufacturer to determine if the claimed defect is covered by this warranty.

No charges for freight, labor or other expenses incurred in the repair, removal, or replacement of any product or component claimed to be defective, will be paid by the manufacturer to the user, and the manufacturer will not be liable for any expenses incurred, by the user, in remedying any defect in the product.

Service under this warranty is the responsibility of the installer. In the event service under this warranty is needed, the user of the product shall request such service directly from the installer. If the user is unable to locate the installer, the user

should write directly to the manufacturer, and the name of an alternative service source will be supplied.

The product safety registration card (packed inside the appliance) must be completed and returned to the factory.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED (WHETHER WRITTEN OR ORAL). ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE IS EXPRESSLY LIMITED TO THE DURATION OF THE MANUFACTURER'S EXPRESS, WRITTEN WARRANTY.

UNDER NO CIRCUMSTANCES SHALL THE MANUFACTURER BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR EXPENSES ARISING DIRECTLY OR INDIRECTLY FROM ANY COMPONENT OR FROM THE USE THEREOF. THE REMEDIES SET FORTH HEREIN SHALL BE THE EXCLUSIVE REMEDIES AVAILABLE TO THE USER AND ARE IN LIEU OF ALL OTHER REMEDIES.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY, FROM STATE TO STATE.

TABLE A

Warranty for gas appliance heat exchangers only.

| <u>Product</u> | <u>Warranty Period</u> |
|--|------------------------|
| Cozy Gas Fired Floor Furnace | 10 Years |
| Cozy Gas Fired Wall Furnace | 10 Years |
| Cozy Gas Fired Vented Console Heater | 10 Years |
| Cozy Gas Fired Direct Vent Heater | 10 Years |
| Cozy Gas Fired Counterflow Furnace | 10 Years |
| Cozy Gas Fired Counterflow Direct Vent Furnace | 10 Years |
| Cozy Gas Fired Mobile Home Direct Vent Furnace | 10 Years |
| Cozy Gas Fired Hi-Efficient Direct Vent Wall Furnace | 10 Years |

LOUISVILLE TIN & STOVE COMPANY
P.O. BOX 2767 - LOUISVILLE, KENTUCKY 40201-2767