



# FAN-TYPE, DIRECT-VENT THROUGH-THE-WALL GAS HEATER



## INSTALLATION AND OPERATING INSTRUCTIONS



P/N 64920 / 09/2010

### MODEL NUMBERS

NAT. GAS  
WOW253  
WOW403

L.P. GAS  
WOW254  
WOW404

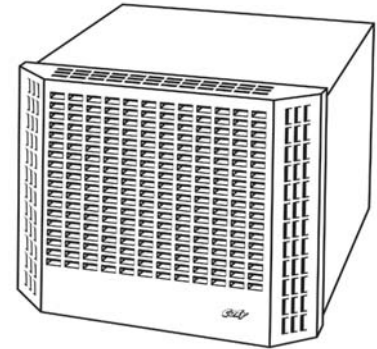
**INSTALLER:** Leave this manual with the appliance.

**CONSUMER:** Retain this manual for future reference.

**WARNING:** If the information in these instructions are 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.**



**MADE IN U.S.A.**

This appliance must be connected to an electrical ground.

**WARNING:**  
**CONNECT TO 115V ELECTRICAL POWER SUPPLY.**  
**DO NOT CONNECT TO 220V POWER SUPPLY.**

**WARNING:** Operation of this furnace without the factory installed vent system could result in Carbon Monoxide (CO) poisoning and possible death. For your safety, this furnace and the vent system must be inspected before initial use and at least annually by a qualified service technician.

This appliance may be installed in an aftermarket, permanently located, manufactured home (USA only) or 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, unless a certified kit is used.

**This unit is for residential installation only and is not approved for greenhouses, or environments involving dusty, wet, corrosive, or explosive conditions. Installation and usage other than residential applications will invalidate the warranty and may create unsafe conditions resulting in property damage, personal injury or loss of life.**

**NOTE: Obstruction in the vent exhaust tube or air intake tube due to insects, small animals, debris, etc. will prevent the heater from operating but DOES NOT constitute a warranty issue.**

Installation, maintenance, service, troubleshooting and repairs must be performed by a qualified service agency. MR./MRS. HOMEOWNER, **DO NOT** attempt any of these procedures yourself as this could expose you to property damage, personal injury, or loss of life and will invalidate all warranties.

**The State of Massachusetts requires that installation and service of a gas appliance be performed by a plumber or gas fitter licensed in the Commonwealth of Massachusetts.**

**For bedroom window installation, the State of Massachusetts requires two or more operable windows in the bedroom that are in compliance with 780CMR, Massachusetts Building Code.**

## CONTENTS

Introduction.....	2	Gas Conversion.....	14
Specifications and Dimensions.....	2	Wiring Diagram.....	15
Safety Rules.....	3	Sequence of Operation.....	16
Location.....	5	Maintenance Instructions.....	17
Clearances.....	6	Removing Main Burner.....	18 - 19
Installation.....	5 - 11	Removing Combustion Tube Assembly.....	20 - 21
Lighting Instructions.....	12	Trouble Shooting.....	22 - 23
Proper Burner Flame.....	13	Parts Drawing.....	25 - 26
Burner Orifice.....	13	Parts List.....	25 - 28
		Warranty.....	29

## INTRODUCTION

THIS IS A GAS-FIRED, DRAFT INDUCED, POWER DEPENDENT, DIRECT VENT WALL FURNACE; THAT WILL OPERATE SAFELY AND PROVIDE AN EFFICIENT SOURCE OF HEAT WHEN INSTALLED, OPERATED AND MAINTAINED AS RECOMMENDED IN THESE INSTALLATION AND OPERATING INSTRUCTIONS, LOCAL CODES AND THE LATEST EDITION OF ANSI Z223.1/NFPA54 OR IN CANADA CSA B149.1. READ THESE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING, SERVICING, OR USING THE APPLIANCE. IF YOU DO NOT UNDERSTAND ANY PART OF THESE INSTRUCTIONS CONSULT LOCAL AUTHORITIES, OTHER QUALIFIED INSTALLERS, SERVICE TECHNICIAN, THE GAS SUPPLIER OR THE MANUFACTURER.

## SPECIFICATIONS AND DIMENSIONS

Your Direct Vent Wall Furnace is shipped complete in one carton. This carton contains the furnace, installation and operating instructions, manual shutoff valve, 3/8 90° st. ell, 3/8x3” black pipe nipple, wall thermostat, 20’ wire, insulated staples, window enclosure panels, caulking, weather stripping, and support brackets.

MODEL NO.	INPUT BTU/HR.	CABINET			AMPS	GAS CONN.	TYPE GAS	MAX WALL THICKNESS	MIN. WALL THICKNESS
		WIDTH	DEPTH	HEIGHT					
WOW253	20,000	14-1/4"	28-1/4"	17-1/8"	1.88	3/8"	NAT.	18"	4"
		361.95 mm	717.55 mm	435 mm				457.2 mm	102 mm
WOW254	20,000	14-1/4"	28-1/4"	17-1/8"	1.88	3/8"	L.P.	18"	4"
		361.95 mm	717.55 mm	435 mm				457.2 mm	102 mm
WOW403	40,000	25-1/16"	22-3/16"	17-1/8"	2.18	3/8"	NAT.	18"	4"
		636.58 mm	563.56 mm	435 mm				457.2 mm	102 mm
WOW404	40,000	25-1/16"	22-3/16"	17-1/8"	2.18	3/8"	L.P.	18"	4"
		636.58 mm	563.56 mm	435 mm				457.2 mm	102 mm

## SAFETY RULES

The Direct Vent Gas Wall/Window Heater and its components meet all applicable safety standards when installed as directed in this manual. For safe installation and operation of your Direct Vent Gas Wall/Window Heater, read all these instructions before you begin. Failure to follow them exactly will void your warranty and may result in fire, property damage, personal injury, and loss of life.

1. Improper installation, adjustment, alteration, service, or maintenance can cause property damage, bodily injury, or death.
2. Use in residential application only, non residential installation will void the warranty, and may result in property damage, personal injury and loss of life.
3. The installation must conform with local codes or in the absence of local codes with the National Fuel Gas Code, ANSI Z223.1/NFPA54, Natural Gas and Propane Installation Code, CSA B149.1. A copy may be obtained from the CSA International, or the National Fire Protection Association, Batterymarch Park, Quincy, MA. 02269. In Canada, use latest edition of CAN1-B149 installation code.
4. **DO NOT INSTALL THIS FURNACE IN A RECREATIONAL VEHICLE.**
5. Do not operate this heater unless the factory installed vent system is in place.
6. Check the rating label to be sure heater is equipped for the type gas you intend to use.
7. Never use a match, candle, flame or other source of ignition to check for gas leaks. Use only soapy water, liquid detergent, or an approved gas leak solution.
8. Your heater, including vent system must be inspected at least annually by a qualified service technician.
9. Before cleaning or servicing, turn off the gas and allow heater to cool.
10. Do not operate heater without all components properly installed.
11. Due to high temperatures, the heater should be located out of traffic and away from furniture and drapes.
12. Children and adults should be alerted to the hazard of high surface temperature and should be kept away to avoid burns or clothing ignition.
13. Young children should be carefully supervised when they are in the same room with the heater.
14. Do not place clothing or other flammable material on or near the heater.
15. INSTALLATION AND REPAIR MUST BE DONE BY A QUALIFIED SERVICE TECHNICIAN. THE HEATER MUST BE INSPECTED BEFORE USE AND AT LEAST ANNUALLY BY A PROFESSIONAL SERVICE TECHNICIAN. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burner, and circulating air passageways of the heater be kept clean.
16. Do not install in a closet, alcove, or small hallway where the heater could be isolated from the space to be heated by closing a door.
17. Do not place anything around the heater or vent that will obstruct the flow of combustion and ventilation air. Special note must be taken outside the home in regard to shrubs, flowers, trees, etc., including snow build-up on top of these items that could block the air intake or vent exhaust tubes.
18. The appliance, when installed, must be electrically grounded in accordance with local codes or, in the absence of local codes, with the latest edition of National Electrical Code, ANSI/NFPA 70. In Canada, use CSA C22.1.
19. Never operate this heater without the burner sight glass in place or with the glass broken or missing.
20. If it is suspected that rising water may enter the heater, turn off the gas immediately.
21. Do not use the heater if any part has been under water. Immediately call a qualified service technician to inspect and clean the appliance and to replace any part of the control system and any gas control which has been under water.
22. Damaged gaskets or sealing material within the vent or air intake system must be replaced prior to operating the heater. Failure to do so may result in property damage, personal injury, loss of life or unsatisfactory performance.
23. The front panel, if removed for servicing, must be replaced prior to operating heater.
24. This heater must **NOT** be connected to a chimney flue.
25. The appliance area must be kept clear and free from combustible materials, gasoline, and other flammable vapors and liquids.
26. 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. Do not cut or remove the grounding prong from this plug.

## INSTALLATION

**WARNING:** Failure to follow these instructions exactly may result in poor performance, property damage, personal injury, or loss of life. Installation must be done by a qualified service person.

### **STEP 1. PREPARING TO INSTALL HEATER**

- a) Open carton and carefully remove heater and all additional parts.
- b) Make sure all components illustrated in Figure 1 have been shipped. You should have received:
  - 1 - Wind-O-Warm Window/Wall Direct Vent Gas Heater
  - 1 - Manual Shutoff Valve, 1 - 3/8 90° St. El, 1 - 3/8x3" Black Pipe Nipple
  - 2 - Support Brackets
  - 2 - Side Panels
  - 1 - Packing set including (Caulking, Thermostat, Thermostat Wire, Insulated Staples, Weather Stripping, and Installation and Operating Instructions)
- c) Check rating plate on heater to verify correct model number and type of gas for intended use.

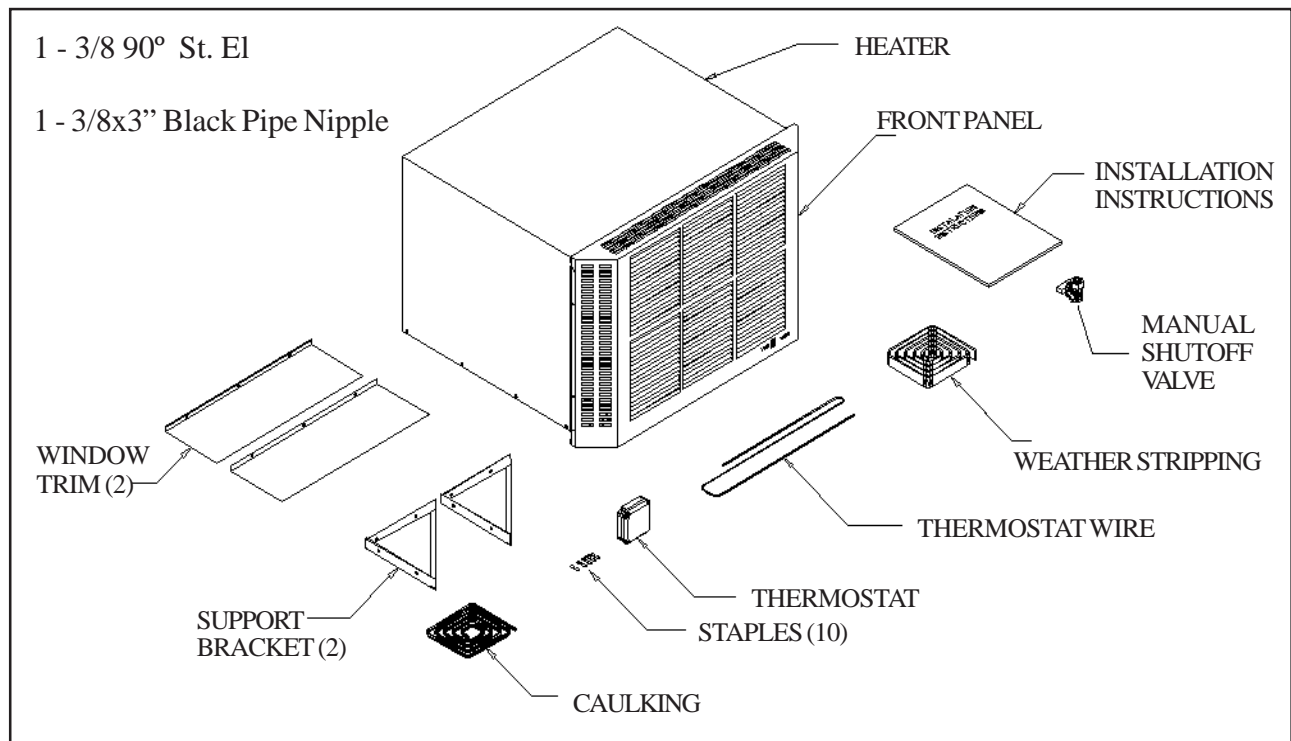


FIGURE 1

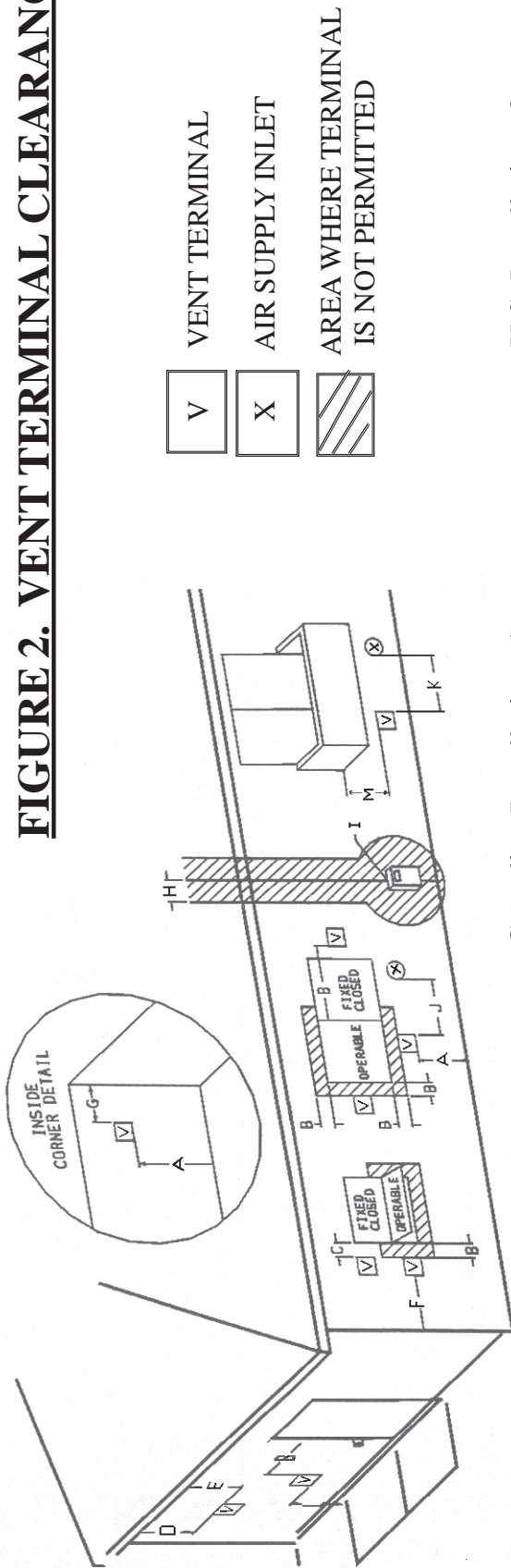
**ATTENTION ALL CANADIAN CONTRACTORS/INSTALLERS:** Before installing this heater into a multi-family hi-rise exceeding four stories, contact the local building code inspector to verify the building construction complies with the **Progressive Collapse** requirements as listed in the National Building Code of Canada 2005.

## LOCATION

### **STEP 2**

1. This heater must be installed through an opening on an **outside wall**. The heater may be installed in an existing window or opening cut through a wooden, brick, or masonry wall.
2. For most efficient performance, locate heater as centrally as possible in the area to be heated.
3. Once a desired location is selected, and before cutting hole, check the outside of the structure for required clearances to vent exhaust and air intake. See Figure 2. (Cont'd. on next page. . .)

**FIGURE 2. VENT TERMINAL CLEARANCES**



**Canadian Installations 1**

**U.S. Installations 2**

	Canadian Installations 1	U.S. Installations 2
A = Clearance above grade, veranda, porch, deck, or balcony	12 Inches (30 cm)	12 Inches (30 cm)
B = Clearance to window or door that may be opened	6 Inches (15 cm) for appliances ≤ 10,000 Btuh (3 kw), 12 inches (30 cm) for appliances > 10,000 Btuh (3 kw) and ≤ 100,000 Btuh (30 kw), 36 inches (91 cm) for appliances > 100,000 Btuh (30 kw)	6 Inches (15 cm) for appliances ≤ 10,000 Btuh (3 kw), 9 inches (23 cm) for appliances > 10,000 Btuh (3 kw) and ≤ 50,000 Btuh (15 kw), 12 inches (30 cm) for appliances > 50,000 Btuh (15 kw)
C = Clearance to permanently closed window	*12 Inches (30 cm) recommended to prevent condensation on window	*12 Inches (30 cm) recommended to prevent condensation on window
D = Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2 feet (61 cm) from the center line of the terminal	*18 Inches (46 cm)	*18 Inches (46 cm)
E = Clearance to unventilated soffit	*12 Inches (30 cm)	*12 Inches (30 cm)
F = Clearance to outside corner	*12 Inches (30 cm)	*12 Inches (30 cm)
G = Clearance to inside corner	*24 Inches (60 cm)	*24 Inches (60 cm)
H = Clearance to each side of center line extended above meter/regulator assembly	3 feet (91 cm) within a height 15 feet (4.5 m) above the meter/regulator assembly	Clearance in accordance with local installation codes and the requirements of the gas supplier.
I = Clearance to service regulator vent outlet	3 feet (91 cm)	Clearance in accordance with local installation codes and the requirements of the gas supplier.
J = Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other appliance	6 Inches (15 cm) for appliances ≤ 10,000 Btuh (3 kw), 12 inches (30 cm) for appliances > 10,000 Btuh (3 kw) and ≤ 100,000 Btuh (30 kw), 36 inches (91 cm) for appliances > 100,000 Btuh (30 kw)	6 Inches (15 cm) for appliances ≤ 10,000 Btuh (3 kw), 9 inches (23 cm) for appliances > 10,000 Btuh (3 kw) and ≤ 50,000 Btuh (15 kw), 12 inches (30 cm) for appliances > 50,000 Btuh (15 kw)
K = Clearance to a mechanical air supply inlet	6 Feet (1.83 m)	3 Feet (91 cm) above if within 10 feet (3 m) horizontally
L = Clearance above paved sidewalk or paved driveway located on public property	7 Feet (2.13 m) †	Clearance in accordance with local installation codes and the requirements of the gas supplier.
M = Clearance under veranda, porch, deck, or balcony	12 Inches (30 cm) ‡	Clearance in accordance with local installation codes and the requirements of the gas supplier.

1 In accordance with the current CSA B149.1, *Natural Gas and Propane Installation Code*.

2 In accordance with the current ANSI Z223.1/NFPA 54, *National Fuel Gas Code*.

† A vent shall not terminate directly above a sidewalk or paved driveway that is located between two single family dwellings and serves both dwellings.

‡ Permitted only if veranda, porch, deck, or balcony is fully open on a minimum of two sides beneath the floor.

\* For clearances not specified in ANSI Z223.1/NFPA 54 or CSA B149.1, one of the following shall be indicated:

a.) A minimum clearance value determined by testing in accordance with section 4.7.3, 6.5.5, 8.5.5; or;

b.) A reference to the following footnote:

“Clearance in accordance with local installation codes and the requirements of the gas supplier.”

## LOCATION - Continued

4. Allow 48" (122 cm) inches from outside rear of cabinet to any obstructions such as fences, walls, shrubs, trees, etc. (Consider outside appearance, pedestrian traffic walkways, plantings, etc.).
5. Do not install heater where the exhaust or air intake will terminate in a window well or any opening below ground level. Special precautions may be required to prevent snow build-up within 12" (30 cm) of the air intake.
6. Check required clearances for front panel (See Figure 3).

## CLEARANCES

<b>CLEARANCES TO COMBUSTIBLES</b>	
<u>COMBUSTIBLE</u>	<u>CLEARANCE</u>
Floor.....	6 Inches (15 cm)
Right Side.....	12 Inches (30 cm)
Left Side.....	12 Inches (30 cm)
Back.....	48 Inches (122 cm)
Front.....	60 Inches (153 cm)
Ceiling.....	12 Inches (30 cm)
Draperies Above Heater.....	4 Inches (10 cm)
Vent.....	48 Inches (122 cm)

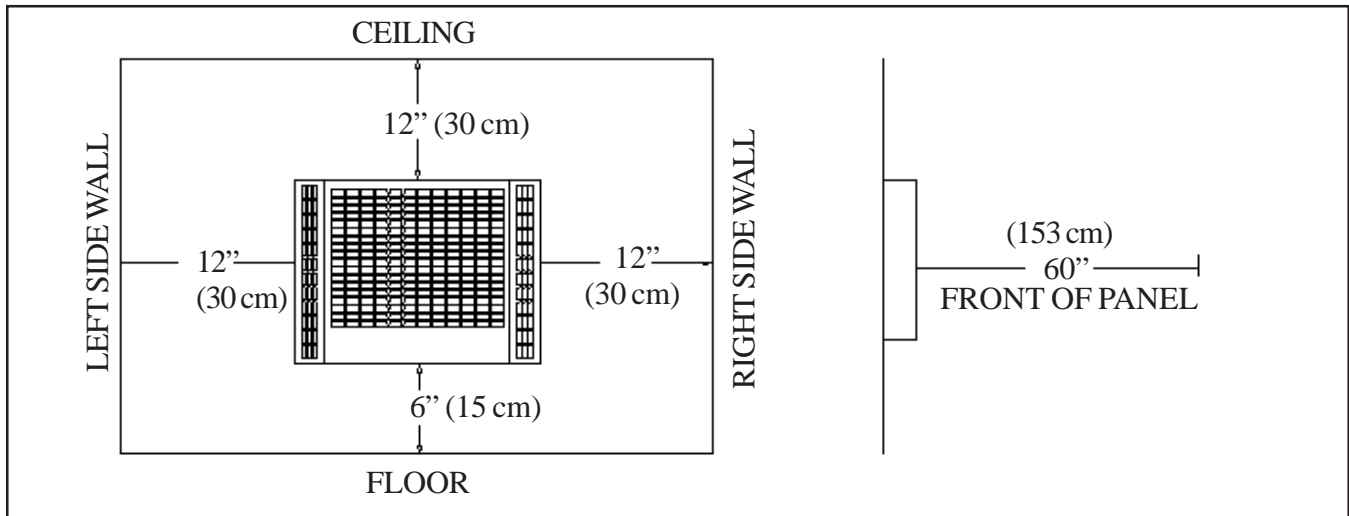


FIGURE 3

7. Clearances around heater must provide adequate room for service, cleaning and air circulation.
8. Make sure no electrical wires or water pipes are in stud space selected.
9. **RESIDENTIAL GARAGE INSTALLATION.** Gas utilization equipment in residential garages shall be installed so that all burners and burner ignition devices are located **not less than 18 inches {46 cm} above the floor.**  
Unit should be located or protected so it is not subject to damage by a moving vehicle. Use care in selecting a good location within the garage. **DO NOT** locate the heater where heated air will be directed onto a nearby parked vehicle, as vehicle paint may discolor or rubber may harden and crack. **DO NOT** allow open or closed containers of paint, gasoline or other liquids having flammable vapors to be stored or used in the same area as the heater.
10. Gas supply line must be 3/8" minimum. Consult gas supplier, local code agency, or ANSI Z223.1 for proper sizing and routing of supply line.
11. Unit must have a grounded 115 v. electrical outlet. Heater is equipped with a 3-prong, 9 ft. factory installed power cord.

## **STEP 3 - LOCATE THERMOSTAT**

1. Thermostat must be installed in same room as heater.
2. Locate thermostat on an inside wall approximately 5 feet {153 cm} above the floor and at least 6 feet {183 cm} from the heater.
3. Do not locate thermostat so as to be effected by heat from sources other than the heater (i.e. direct sunlight, lamps, T.V. sets, radiators, registers, etc.).
4. Do not locate thermostat in unusually cool locations (i.e. outside wall, on a wall separating the heated area from an unheated area, in drafts from stairwells, doors, windows, etc.).
5. Install thermostat where there is good air circulation and where it is readily accessible for wiring, service and adjustment. Never install in a corner, alcove, over or behind furniture or behind a door.

## **STEP 4 - GAS SUPPLY ROUGH-IN**

1. An opening is provided toward the front of the liner base for installation of the gas supply line. This opening facilitates installation of a gas supply line located inside the room where the heater is installed. If the gas supply line is located in a stud space or other concealed area consult the gas supplier, local code officials or the latest edition of ANSI Z223.1/NFPA 54 for special instructions and approval for a concealed gas supply line. NOTE: If gas supply line is concealed, it must be brought into the room under the heater as there **must be a manual shut-off valve installed in the gas supply line that is accessible from inside the room where the heater is installed.**
2. The valve must be connected only by means of a pipe union of the ground joint type.
3. Mr. Installer, support gas valve, with a second wrench, when connecting the gas supply line, to prevent damage.
4. Install at least 3/8" gas supply line. Contact local gas supplier if any questions.
5. Install a drip leg in gas supply line immediately upstream from the gas connection to heater. (see local codes), and provide a 1/8" N.P.T. plugged tapping, accessible for test gauge connection and an individual manual shut off valve accessible within room where heater is installed. (See Figure 4). The heater and its individual shut off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5Pa). The heater 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 1/2 psig (3.5Pa).
6. Test all connections for leaks using a soapy solution. NEVER USE AN OPEN FLAME TO TEST FOR LEAKS.
7. The maximum inlet gas supply pressure for natural or L.P./Propane gas is 1/2 p.s.i. or 14" w.c.
8. The minimum inlet gas supply pressure for the purpose of adjustment is 4.5" w.c. for natural gas or 11.0" w.c. for L.P./Propane gas.

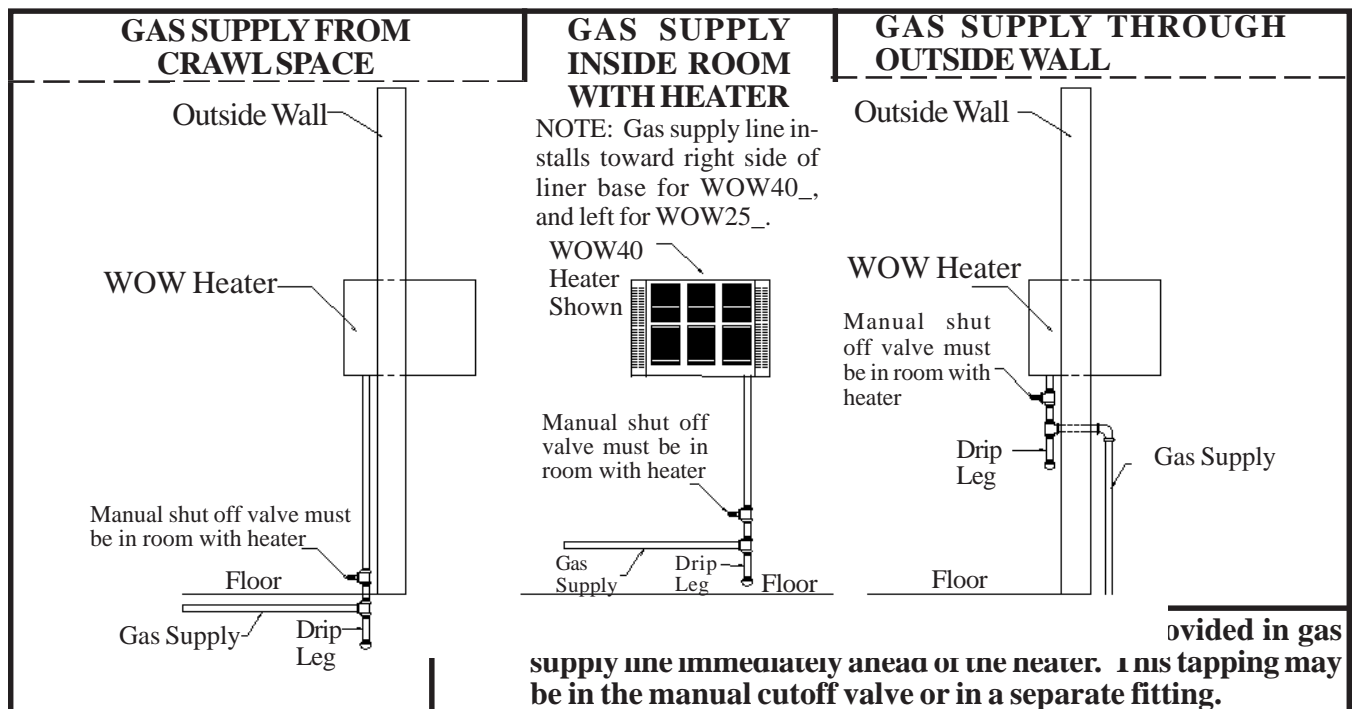


FIGURE 4

**ATTENTION ALL CANADIAN CONTRACTORS/INSTALLERS:** Before installing this heater into a multi-family hi-rise exceeding four stories, contact the local building code inspector to verify the building construction complies with the **Progressive Collapse** requirements as listed in the National Building Code of Canada 2005.

**STEP 5 - INSTALLING THE HEATER**

Use only factory supplied parts. Do not modify heater in any way.

**WINDOW INSTALLATION**

- A.) Raise window - locate center.
- B.) Heater requires level mounting surface, framing may be necessary in window sill.
- C.) Remove the 6 screws securing the back of outer cabinet to intake and exhaust tube flange and save (See Figure 5).
- E.) Center outer cabinet in window opening and slide in so bottom flange is flush against windowsill. Secure cabinet to windowsill through holes provided in cabinet bottom. Use appropriate fasteners (not provided) for type of material you are securing into. (See Figure 7).

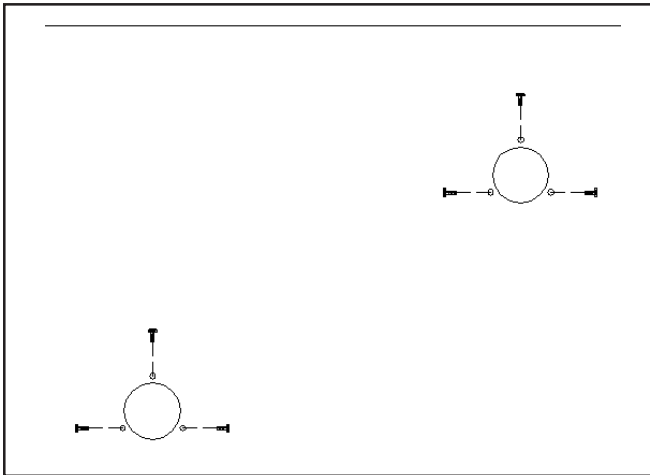


FIGURE 5

- D.) Gently slide combustion tube assembly forward and out of the outer casing assembly (See Figure 6).

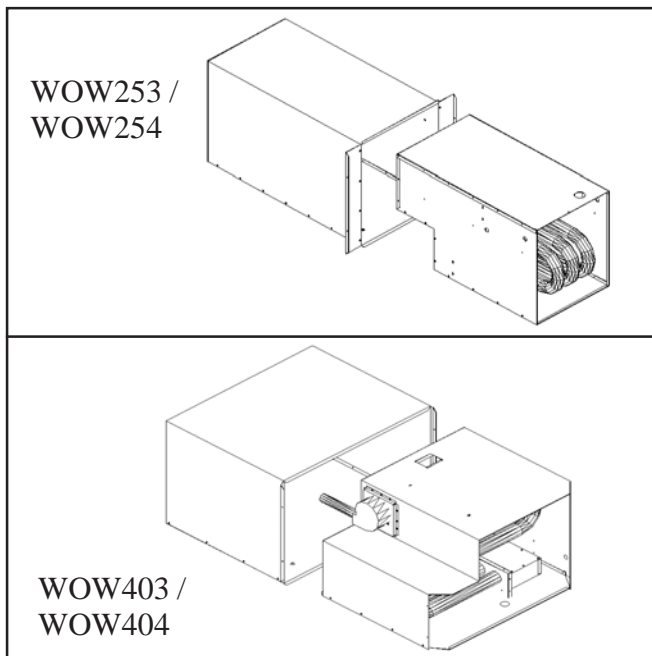


FIGURE 6

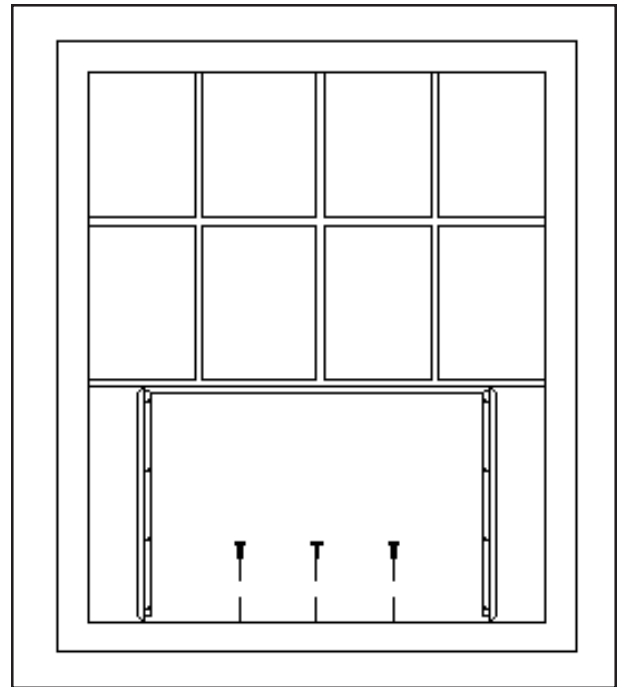


FIGURE 7

- F.) Lower window onto the outer cabinet top. Do not apply excessive downward force as the cabinet top could be damaged. Leave a minimum 1/16" gap between front of window sash and cabinet top flange. This gap is required to install the front panel. Locate and drill three holes through the cabinet top into the center of the window sash. Use appropriate fasteners (not provided) for type of material you are securing into.
- G.) Precisely measure the remaining opening on each side of cabinet and cut side trim panels (provided) to fit. Affix weather stripping on three sides.

# WINDOW INSTALLATION - Cont'd.

- H.) Using 3 #8 x 3/8" screws (provided), attach trim panels to left and right flanges on outer cabinet. The 1/2", 90 degree break on the trim panel must be attached securely to the window frame. (See Figure 8).

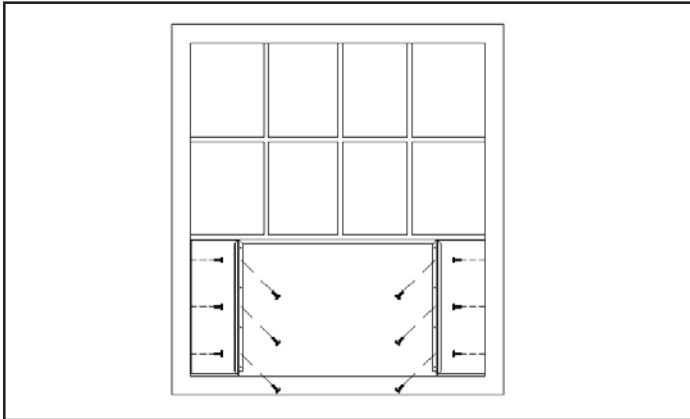


FIGURE 8

- I.) From outside secure the two support brackets to the outside wall, anchors (not provided) may be required. Make sure brackets are flush against the outer cabinet bottom and under the left and right sides. You must drill four 7/64" holes through the outer cabinet bottom using clearance holes in the support bracket as a template. Secure bracket to outer cabinet bottom using four #8x1/2" screws provided. See Figure 21.
- J.) Gently slide the combustion tube assembly back into outer cabinet. Make sure air intake and exhaust tubes extend through holes in outer cabinet back. From the outside, secure the cabinet back to the tube flanges with the screws removed in Step C. Make sure flange gaskets are in place (See Figure 5).

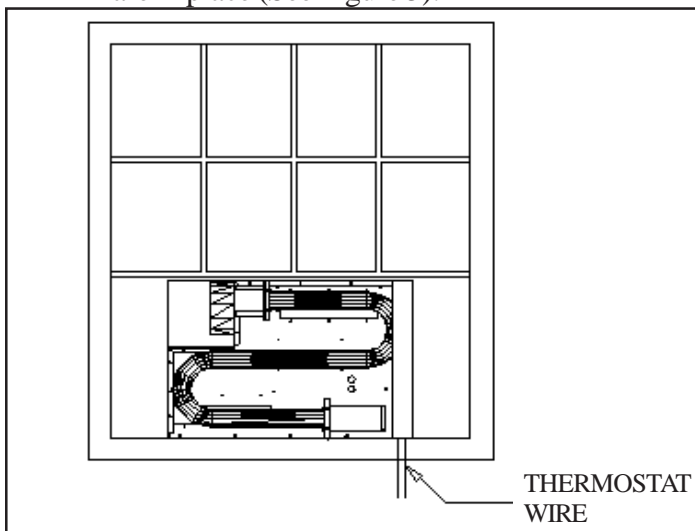


FIGURE 9

- K.) Locate factory installed thermostat wires extending from the front of heater. Connect 24 V. wall thermostat (provided) to heater using a maximum 20' of thermostat wire. Do **not** splice thermostat wire. (See Figure 9).
- L.) Connect 3/8" minimum gas supply line to heater. (See Figure 4).
- M.) Plug factory wired power cord into a properly grounded 115 volt electrical outlet. NEVER use an extension cord. If homeowner desires, heater may be hard wired by a licensed electrician (check your local electrical codes).
- N.) Turn gas supply on, check all connections for leaks using a soapy solution. NEVER check for leaks with an open flame.
- O.) Install front panel. Hang top of front panel over top cabinet flange and between window sash. Secure using four (4) #8 x 1/2" painted screws (Provided). (See Figure 10).

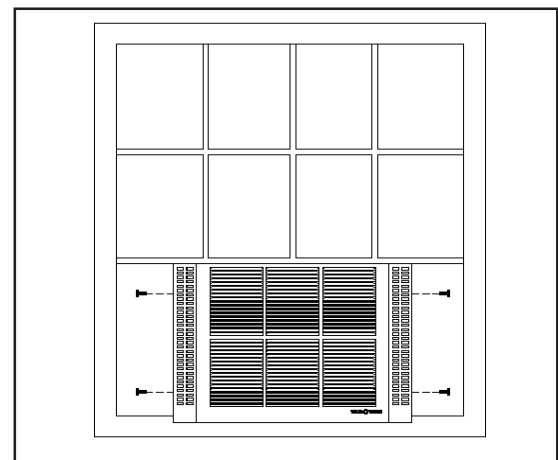


FIGURE 10

- P.) From outside, caulk between cabinet and side panels.

INSTALLATION IS NOW COMPLETE. FOLLOW LIGHTING INSTRUCTIONS TO PUT HEATER IN OPERATION.

DURING INITIAL WARM-UP HEATER MAY SMOKE SLIGHTLY, SO PROVISION SHOULD BE MADE FOR ADEQUATE VENTILATION.

# INSTALLING THROUGH A FRAME WALL

NOTE: The WOW25 models will install between wall studs on 16" centers. The WOW40 will attach to a stud on either the right or left side. The opposite stud must be cut out of the opening and 1-1/2" below the cutout. You must then install a 2"-by your wall thickness plate on top of the cut stud and secure to the remaining stud. This plate will cover the opening inside the wall, front to back, and provides support as well as a foundation that will be used to secure the bottom of the heater.

A.) At desired height, mark hole opening for your model heater. (See Figure 11).

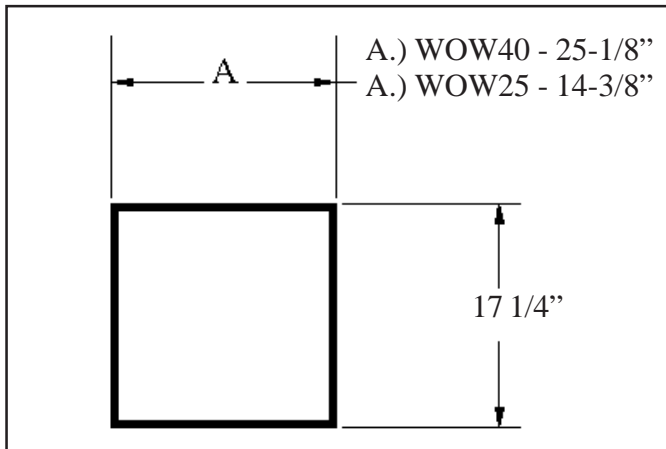


FIGURE 11

- B.) Before cutting, verify both inside and outside clearances. Verify that no electrical wires, conduit, water or gas pipes pass through the area you have marked.
- C.) Cut out marked hole location. Make sure that the cut out opening is level inside to outside.
- D.) Remove six (6) screws from back of heater which secure back of outer cabinet to intake and exhaust tube flanges. Save screws. (See Figure 5).
- E.) Gently slide combustion tube assembly forward and out of outer cabinet. (See Figure 6).
- F.) From inside the room, slide outer cabinet through cut out opening until flanges are flush against inside wall. (See Figure 12).

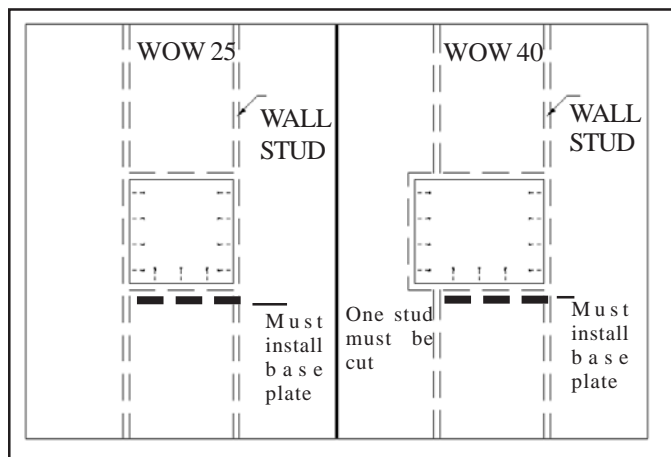


FIGURE 12

- G.) Secure in place through side of cabinet into stud. WOW253/254 will be secured into studs on both sides. WOW403/404 must be secured to stud on one side, can be left or right side. (See Figure 12).
- H.) From outside secure the two support brackets to the outside wall, anchors (not provided) may be required. Make sure brackets are flush against the outer cabinet bottom and under the left and right sides. You must drill four 7/64" holes through the outer cabinet bottom using clearance holes in the support bracket as a template. Secure brackets to outer cabinet bottom using four #8x1/2" screws provided. See Figure 21.
- I.) Gently slide combustion tube assembly back into outer cabinet. Check to make sure the gaskets on the intake and exhaust tube flanges are in place and unbroken. Flanges must be flush against back of outer cabinet. From outside, secure back of outer cabinet to air intake and exhaust flanges with the six (6) screws removed in step D.
- J.) Locate factory installed thermostat wires extending from the front of heater. Connect 24 V. wall thermostat (provided) and a maximum 20' of thermostat wire. Do **not** splice thermostat wire. (See Figure 9).
- K.) Connect 3/8" minimum gas supply line to heater. (See Figure 4).
- L.) Plug factory wired power cord into a properly grounded 115 volt electrical outlet. Never use an extension cord. If homeowner desires, heater may be hard wired by a licensed electrician (check your local electrical codes).
- M.) Turn gas supply on. Check all connections for leaks using a soapy solution. NEVER check for leaks with an open flame.
- N.) Install front panel. Hang top of front panel over top outer cabinet flange and between wall. Secure using four (4) #8 x 1/2 painted screws (provided). (See figure 10).
- O.) From outside, caulk between cabinet and wall opening. Installation is now complete. Follow lighting instructions to put heater in operation. During initial warm-up heater may smoke slightly, so provision should be made for adequate ventilation.

# INSTALLING THROUGH A MASONRY WALL

- A.) At desired height, mark hole opening for your model heater. (See Figure 11).
- B.) Before cutting, verify both inside and outside clearances. Verify that no electrical wires, conduit, water or gas pipes pass through area you have marked.
- C.) Cut out marked hole location. Make sure that cut out opening is level inside to outside.
- D.) Remove six (6) screws from back of heater which secure back of outer cabinet to intake and exhaust tube flanges. Save screws. (See Figure 5).
- E.) Gently slide combustion tube assembly forward and out of outer cabinet. (See Figure 6).
- F.) From inside the room, slide outer cabinet through cut out opening until side and bottom flanges are flush against inside wall. (See Figure 12). This leaves a 1/16" gap between the wall and cabinet top flange. This gap is necessary to install the front panel.
- G.) Secure in place using holes in side of outer casing. Use fasteners appropriate for type of wall material. Anchors (not provided) may be required.
- H.) From outside secure the two support brackets to the outside wall, anchors (not provided) may be required. Make sure brackets are flush against the outer cabinet bottom and under the left and right sides. You must drill four 7/64" holes through the outer cabinet bottom using clearance holes in the support bracket as a template. Secure brackets to outer cabinet bottom using four #8x1/2" screws provided. See Figure 21.
- I.) Gently slide combustion tube assembly into outer cabinet. Check to make sure the gaskets and the intake and exhaust tube flanges are in place and unbroken. Flanges must be flush against back of outer cabinet. From outside, secure back of outer cabinet to air intake and exhaust flanges with the six (6) screws removed in Step D.
- J.) Locate factory installed thermostat wires extending from the front of heater. Connect 24 V. wall thermostat (provided) using 20' maximum thermostat wire. **Do not** splice thermostat wire. (See Figure 9).
- K.) Connect 3/8" minimum gas supply line to heater. (See Figure 4).
- L.) Plug factory wired power cord into a properly grounded 115 volt electrical outlet. NEVER use an extension cord. If homeowner desires, heater may be hardwired by a licensed electrician (check your local electrical codes).
- M.) Turn gas supply on. Check all connections for leaks using a soapy solution. NEVER check for leaks with an open flame.
- N.) Install front panel. Hang top of front panel over top outer cabinet flange and between wall. Secure using four (4) #8 x 1/2" painted screws (provided). (See Figure 10).
- O.) From outside, caulk between outer cabinet and wall opening.

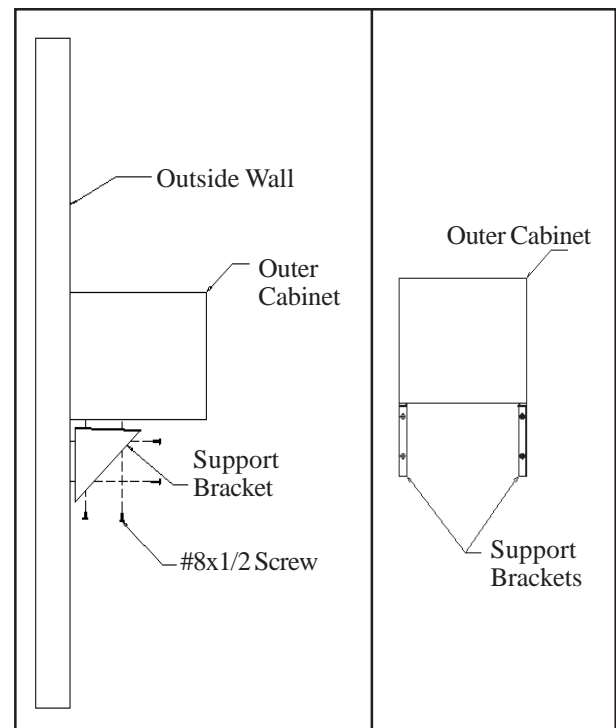


Figure 21

INSTALLATION IS NOW COMPLETE. FOLLOW LIGHTING INSTRUCTIONS TO PUT HEATER INTO OPERATION.



DURING INITIAL WARM-UP HEATER MAY SMOKE SLIGHTLY, SO PROVISION SHOULD BE MADE FOR ADEQUATE VENTILATION.

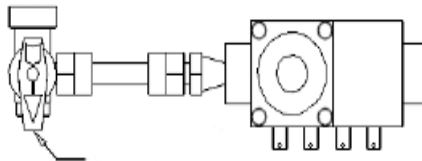
## FOR YOUR SAFETY READ BEFORE OPERATING

**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 does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
- B. BEFORE OPERATING 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. 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.
- If you cannot reach your gas supplier, call the fire department.


## OPERATING INSTRUCTIONS

1. STOP! Read safety information on this label.
2. Set the thermostat to the lowest setting.
3. Turn off all electric power to the appliance.
4. This appliance is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
5. Turn gas control knob clockwise  to "OFF". Do not force.
6. Wait five (5) minutes to clear out any gas. If you smell gas, STOP! Follow "B" in safety information on this label. If you don't smell gas, go to next step.
7. Turn gas control knob counterclockwise  to "ON".
8. Turn on all electric power to the appliance.
9. Set thermostat to desired setting.
10. If the appliance does not operate, follow instructions "To Turn Off Gas To Appliance" and call your service technician or gas supplier.



Gas control knob shown  
in "OFF" position

## TO TURN OFF GAS TO APPLIANCE

1. Set the thermostat to lowest setting.
2. Turn off all electric power to the appliance if service is to be performed.
3. Turn gas control knob clockwise  to "OFF". Do not force.

## PROPER BURNER FLAME

Appliance input ratings are based on sea level operation and need not be changed for operation up to 2,000 (609.9m) elevation. For operation at elevations above 2,000 ft. (609.9m), manufactured to specified deration conditions for Canada and the United States, use the following orifice chart for/to determine the correct orifice DMS for a specific elevation.

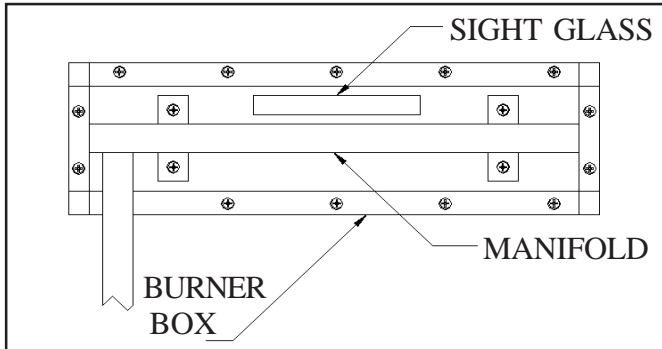


FIGURE 13 -- WOW253 / WOW254

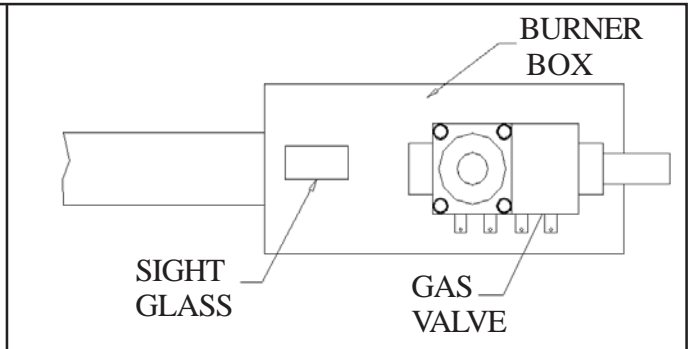
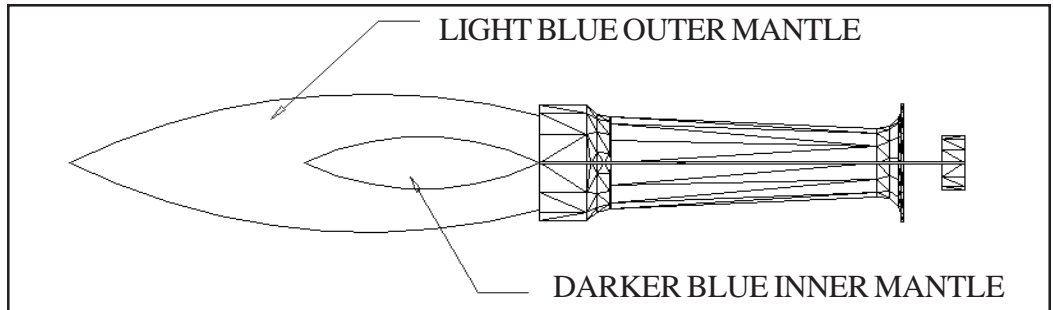


FIGURE 13 -- WOW403 / WOW404

FIGURE 14



There is no primary air adjustment on the burner and with correct installation, a proper flame is assured; since the correct manifold pressure and orificing has been done at the factory for elevations up to 2,000 ft.

### HIGH ALTITUDE BURNER ORIFICING

Appliance input ratings are based on sea level operation and need not be changed for operation up to 2,000 ft. (609.9m) elevation. For operation at elevations above 2,000 ft. (609.9m), manufactured to specified deration conditions for Canada and the United States. Use the following orifice chart for/to determine the correct orifice DMS for a specific elevation. Orifice change must be completed by a qualified installer or service technician.

#### SPECIFIC ELEVATIONS

MODEL NO.	0 to 2,000'	2,000' to 4,000'	4,000' to 6,000'	6,000' to 8,000'	8,000' - 10,000'
<b><u>NATURAL GAS</u></b>					
WOW253	1.3	1.3	1.3	1.3	1.3
WOW403	54	54	54	1.3	1.3
<b><u>L.P. GAS</u></b>					
WOW254	67	67	67	67	67
WOW404	66	68	68	69	69

After conversion is complete, attach P/N 91137 Label adjacent to the rating plate.

### BLOCKED VENT SHUT-OFF SYSTEM

This heater is equipped with a blocked vent shut-off system that will automatically turn the heater off in the advent of the vent exhaust or air intake pipe becoming blocked. This blockage may be caused by snow accumulation, insects, small animals, animal nest, etc.

Once this occurs the heater will remain in a lock-out cycle for one hour. After one hour there will be an ignition attempt. If the blockage has been removed, the heater will return to normal operation. If the blockage remains, the heater will return to a one hour lock out cycle.

If this problem occurs, homeowners must not attempt to operate or repair the heater themselves but contact a qualified service agency.

## GAS CONVERSION

This heater is field convertible. Use only factory supplied, certified kits.

Model Number	Description	Conversion Kit No.
WOW253	Convert Nat. to L.P. 20,000	49670
WOW254	Convert L.P. to Nat. 20,000	49660
WOW403	Convert Nat. to L.P. 40,000	49690
WOW404	Convert L.P. to Nat. 40,000	49680

**CAUTION: Only qualified installers or service technicians are authorized to make a gas conversion on this heater.**

## ORIFICE CONVERSION

- A.) Turn thermostat to "OFF" or lowest setting.
- B.) Allow heater to cool. Remove front panel.
- C.) Turn off electric power to heater.
- D.) Turn off gas supply.
- E.) Disconnect gas supply line from gas control.
- F.) From outside, remove six (6) screws securing back of outer cabinet to air intake and exhaust flanges.
- G.) From inside, gently slide combustion tube assembly forward and out of outer cabinet.
- H.) Disconnect gas control wires and remove right side of inner cabinet.
- I.) Remove two screws securing gas control bracket to burner box.
- J.) Remove six (6) screws securing manifold to burner box.
- K.) Pull manifold/gas control assembly out of burner box.
- L.) Replace burner orifices with orifices of correct size for type of gas and elevation. NOTE: The WOW403, 404 requires 5 orifices and the WOW253, 254 requires 3.
- M.) Carefully check integrity of all gaskets, make sure all gaskets are in place.
- N.) Re-assemble heater by reversing Steps K - F.

## CONVERTING GAS CONTROL

- A.) Remove the converting seal cap. (See Figure A). **WARNING:** Do not remove or tamper with any other valve components.
- B.) Remove the black rubber gasket from the down side of the converting seal cap and reinstall gasket on opposite side of converting seal cap. Gasket must be on down (valve) side of converting seal cap. (See Figure A).
- C.) Invert the converting seal cap and reinstall.
- D.) Insure that the desired gas (LP for liquefied petroleum or NAT for natural gas) symbol is visible after reassembly of cap. (See Figure A).

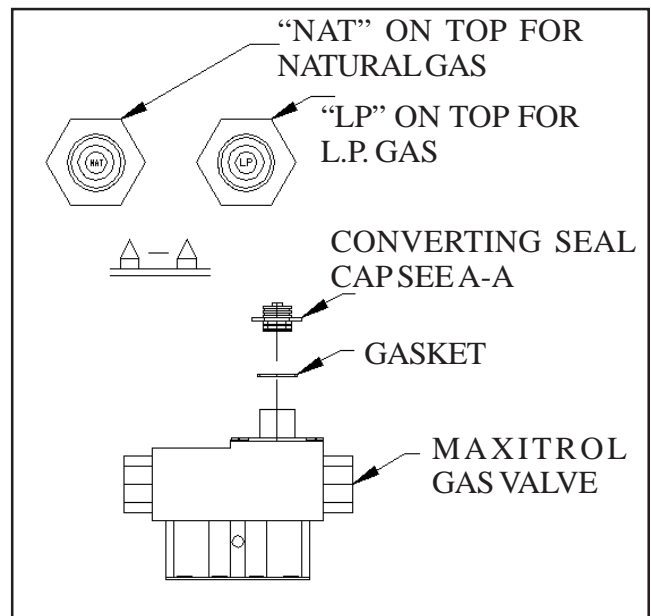


FIGURE A

## COMPLETING CONVERSION

- A.) Connect gas supply line to gas control.
- B.) Turn on gas supply. Check for leaks using a soapy solution. NEVER use an open flame to check for leaks.
- C.) Turn on electric power to heater.
- D.) Replace front panel.
- E.) Follow lighting instructions to place heater in operation.
- F.) Using a Manometer, check manifold pressure. Correct pressure is 3.5" w.c. for Natural and 10.0" w.c. for L.P..

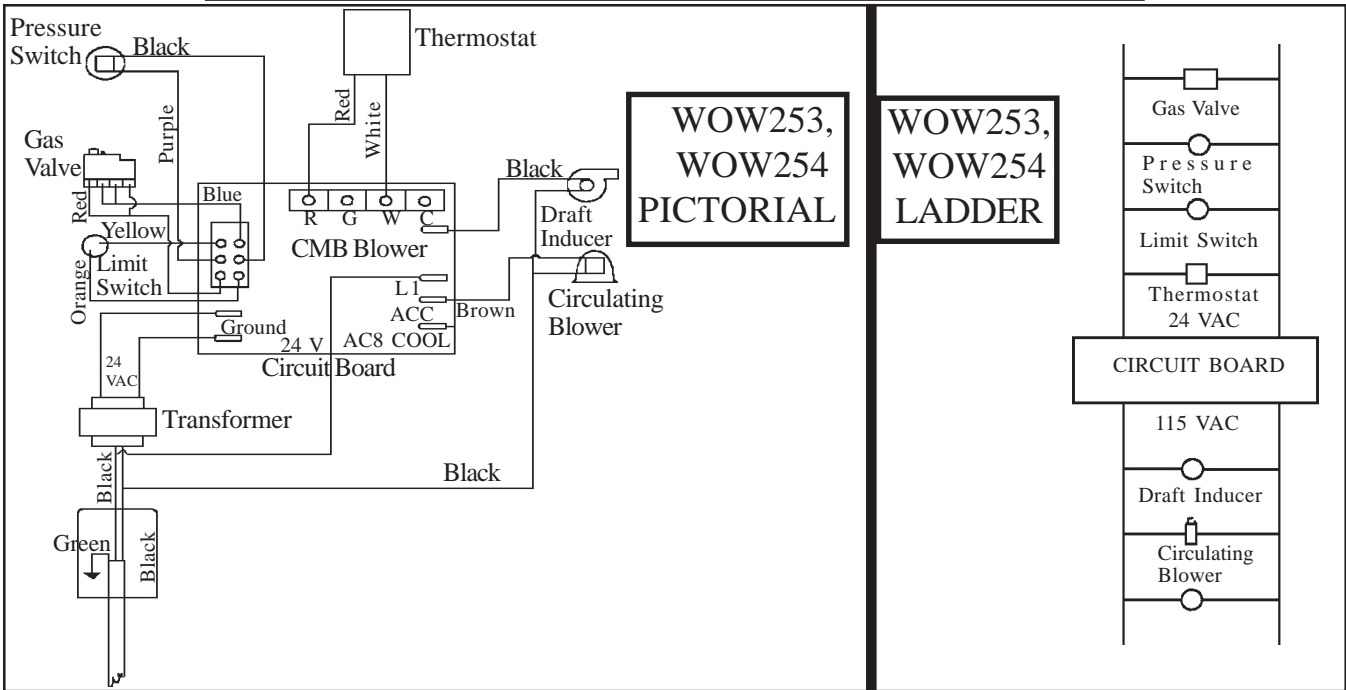
## WIRING

IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH A WIRE OF AT LEAST 105 DEGREE C TEMPERATURE RATING.

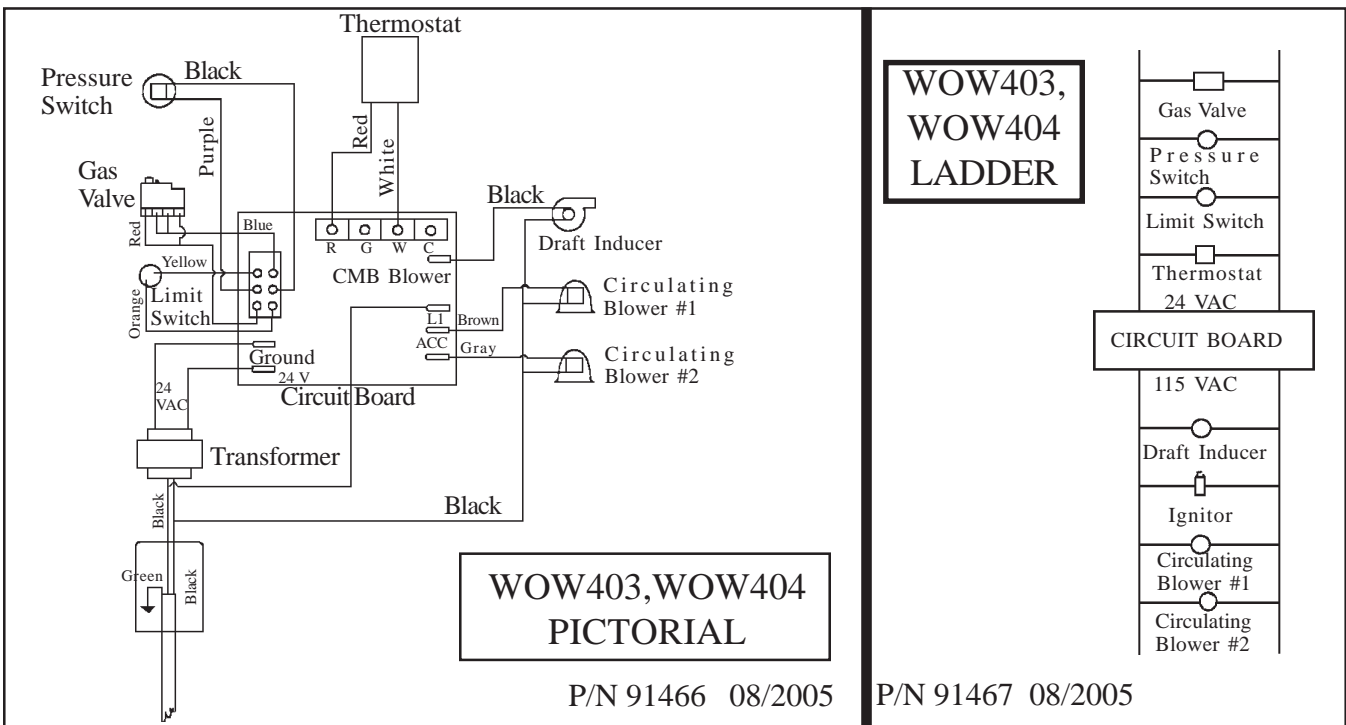
CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.

VERIFY PROPER OPERATION AFTER SERVICING.

### WIRING DIAGRAM - WOW253 & WOW254



### WIRING DIAGRAM - WOW403 & WOW404



P/N 91466 08/2005

P/N 91467 08/2005



## MAINTENANCE INSTRUCTIONS

- For correct and safe operation, keep heater and heater area clean. At regular intervals, turn control valve to OFF, let heater cool and clean inside control and heat exchanger compartments.
- To clean outside cover, use a damp cloth, do not use any kind of solvent or cleaning fluid as they may leave a residue that could burn or give off odors when heater is turned on.
- Have heater, including exhaust/intake tubes, checked, cleaned and/or repaired by a qualified service technician prior to use each year.
- Follow a regular service and maintenance schedule for safe and efficient operation.
- Do not obstruct combustion, ventilation or circulating air.
- Do not place furniture in front of heater.
- Keep bushes, shrubs, etc. trimmed to maintain a 12” clearance below and 48” from back of heater.
- If any components are removed, make sure all gaskets are reinstalled and are in good condition. If any sign of damage, replace gasket as this is a sealed system and must be air-tight for proper operation. **DO NOT** operate heater with any gasket missing or damaged. Failure to replace a missing or damaged gasket may result in property damage, personal injury, loss of life, or poor performance.

### SERVICE RECORD

DATE	DATE	DATE

### SERVICE RECORD

DATE	DATE	DATE

**TO REMOVE MAIN BURNERS FOR INSPECTION AND CLEANING:**  
**SERVICE MUST BE PERFORMED BY A QUALIFIED SERVICE TECHNICIAN**

**INSTRUCTIONS FOR WOW253 & WOW254**

- A.) Turn thermostat to “OFF” or lowest setting.
- B.) Allow heater to cool.
- C.) Turn off electric power to the heater.
- D.) Turn off the gas supply.
- E.) Remove front panel.
- F.) Disconnect ignition cable and pressure switch tubing from burner box bottom.
- G.) Remove fourteen screws securing burner box bottom.
- H.) Remove two screws that secure each burner to burner mounting bracket. See Figure 17.
- I.) Slide burner forward, down and out of burner box.
- J.) You can now inspect, clean or replace burner as needed. Clean by blowing compressed air through burner. Special care must be taken not to damage the ceramic burner head or enlarge the ports.
- K.) Carefully check integrity of the burner box bottom gasket, replace if damaged.
- L.) Reinstall by reversing steps J through A. Follow lighting instructions to place heater in operation.

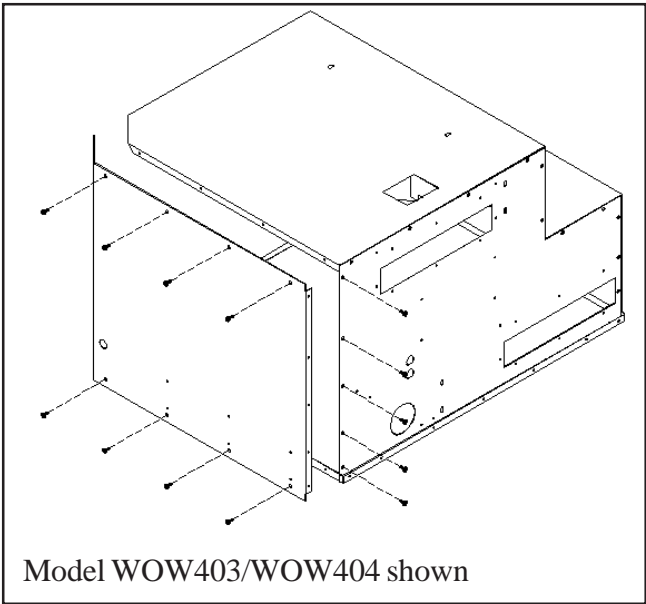


FIGURE 15

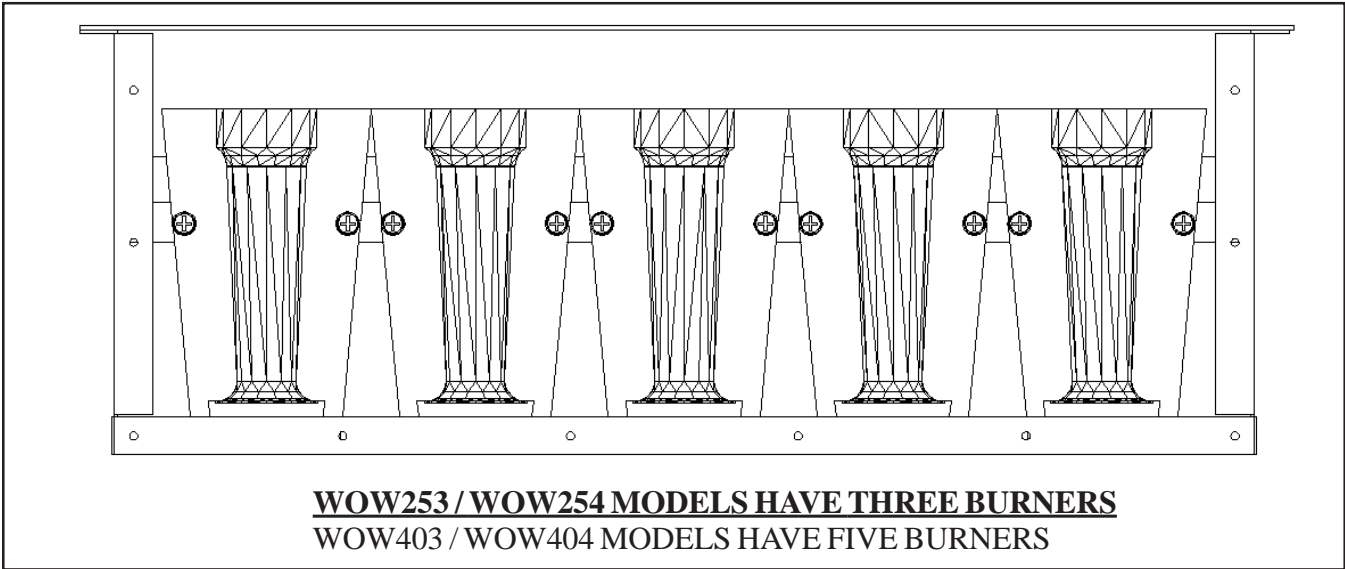


FIGURE 17

**TO REMOVE MAIN BURNERS FOR INSPECTION AND CLEANING:**  
**SERVICE MUST BE PERFORMED BY A QUALIFIED SERVICE TECHNICIAN**

**INSTRUCTIONS FOR WOW403 & WOW404**

- A.) Turn thermostat to "OFF" or lowest setting.
- B.) Turn off electric power to heater.
- C.) Allow heater to cool.
- D.) Turn off gas supply.
- E.) Disconnect gas supply line at heater.
- F.) Remove front panel.
- G.) From outside, remove six (6) screws securing back of outer cabinet to air intake and exhaust flanges. (See Figure 5).
- H.) From inside, gently slide combustion tube assembly forward and out of outer cabinet. (See Figure 6).
- I.) Disconnect valve wires and remove right side of inner cabinet. (See Figure 15).
- J.) Disconnect ignition cable and pressure switch tubing from top of burner box. Remove screws securing burner box top and lift top off of burner box.
- K.) Remove two screws that secure each burner to burner mounting bracket. (See Figure 17).
- L.) Once screws are removed, slide burner forward slightly off of burner orifice and lift up.
- M.) You can now inspect, clean or replace burner as needed. Clean by blowing compressed air through burner. Special care must be taken not to damage ceramic head of burner, or enlarge the burner ports in the ceramic head.
- N.) Carefully check integrity of burner box top gasket, then reinstall by reversing steps K - A. Follow lighting instructions to put heater in operation.

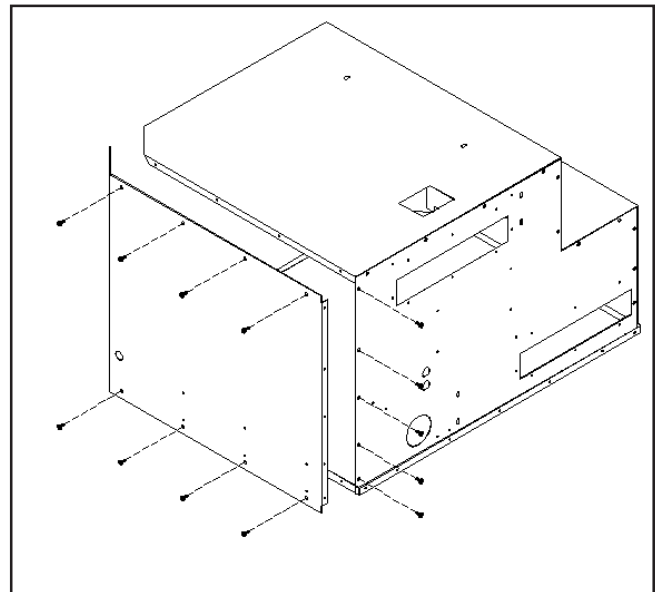


FIGURE 15

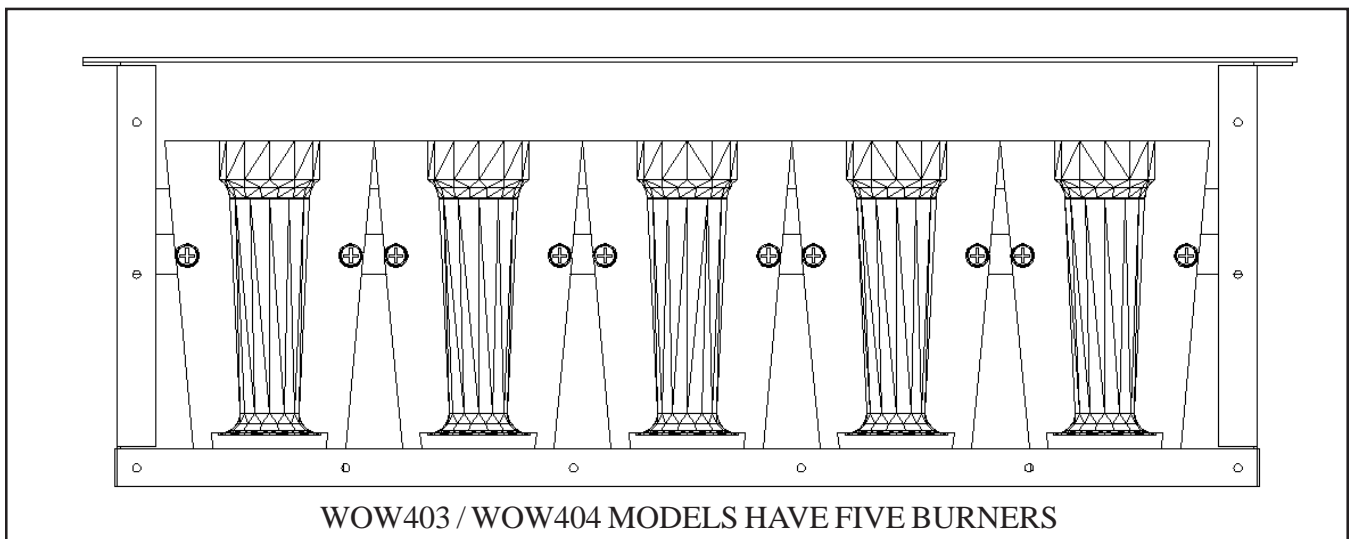


FIGURE 17

# TO REMOVE COMBUSTION TUBE ASSEMBLY FOR INSPECTION, CLEANING AND REPLACEMENT

SERVICE MUST BE PERFORMED BY A QUALIFIED SERVICE TECHNICIAN.

For WOW253 / WOW254

- A.) Turn thermostat to "OFF" or lowest setting.
- B.) Allow heater to cool.
- C.) Turn off electric power to heater.
- D.) Turn gas supply valve to "OFF".
- E.) Disconnect gas supply line from gas valve.
- F.) From outside, remove six (6) screws securing back of outer cabinet to air intake and exhaust flanges. (See Figure 5).
- G.) From inside, gently slide combustion tube assembly forward and out of outer cabinet. (See Figure 6).
- H.) Disconnect air pressure switch tubing from draft inducer. See Figure 18-A.
- I.) Remove draft inducer. (See Figure 18-A).
- J.) Disconnect ignition cable and pressure switch tubing from top of burner box. (See Figure 16).
- K.) Remove screws securing collection box and burner box flange to liner top, bottom, left side, right side and back. (See Figure 19).
- L.) Pull combustion tube assembly forward and out of the liner. (See Figure 20).
- M.) You can now inspect, clean or replace tubular heat exchanger as needed. NOTE: If combustion tube assembly is being replaced, you must keep and use collection and burner box from assembly being replaced.
- N.) Carefully check integrity of all gaskets (replace as needed), then reinstall combustion tube assembly by reversing Steps L - A. Follow lighting instructions to put heater in operation.

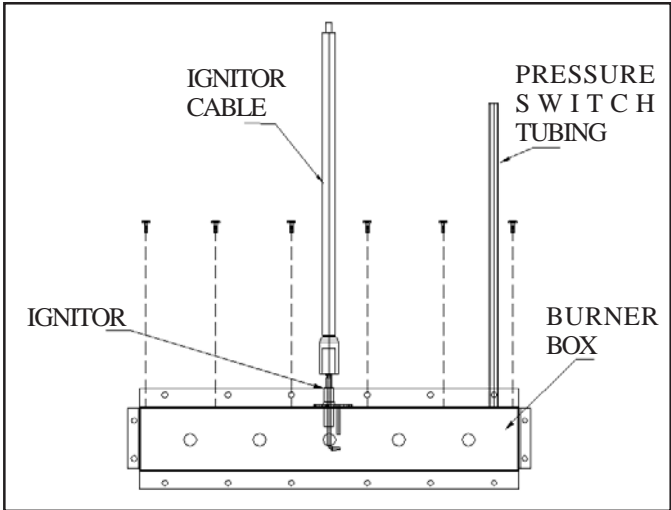


FIGURE 16

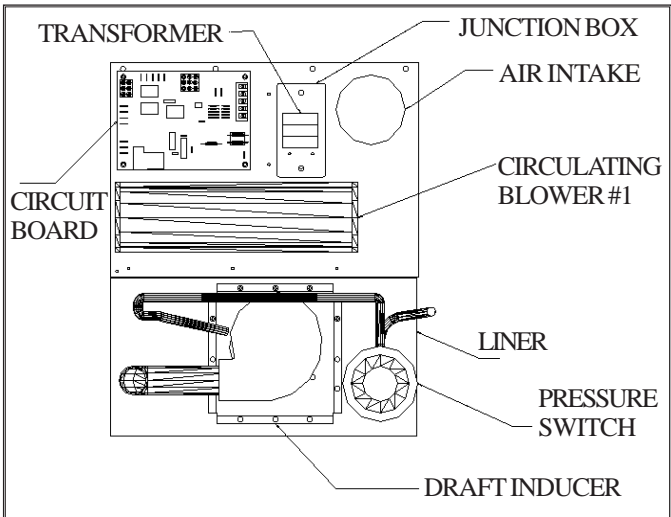


FIGURE 18-A (For WOW253 / WOW254)

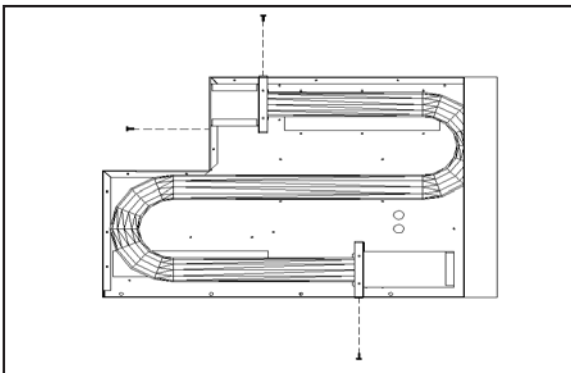


FIGURE 19

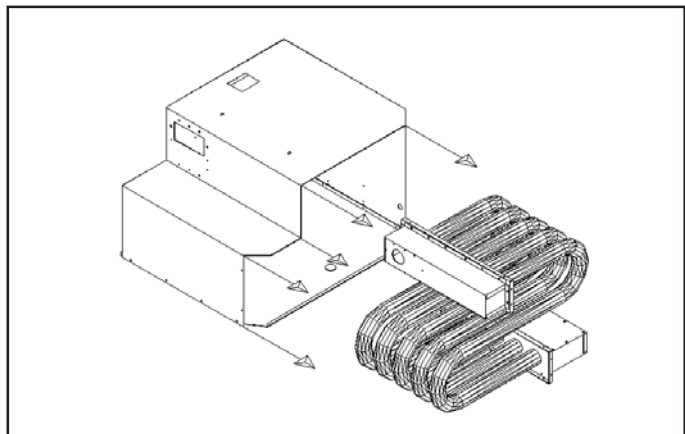


FIGURE 20

# TO REMOVE COMBUSTION TUBE ASSEMBLY FOR INSPECTION, CLEANING AND REPLACEMENT

SERVICE MUST BE PERFORMED BY A QUALIFIED SERVICE TECHNICIAN.

**For WOW403 / WOW404**

- A.) Turn thermostat to "OFF" or lowest setting. Allow heater to cool.
- B.) Turn off electric power to heater.
- C.) Remove front panel.
- D.) Turn gas supply valve to "OFF".
- E.) Disconnect gas supply line from gas valve.
- F.) From outside, remove six (6) screws securing back of outer cabinet to air intake and exhaust flanges. (See Figure 5).
- G.) From inside, gently slide combustion tube assembly forward and out of outer cabinet. (See Figure 6).
- H.) Disconnect air pressure switch tubing from draft inducer. (See Figure 18-B).
- I.) Remove draft inducer. (See Figure 18-B).
- J.) Disconnect ignition cable and pressure switch tubing from top of burner box. (See Figure 16).
- K.) Remove screws securing collection box flange and burner box flange to inner casing top, bottom, and back. (See Figure 19).
- L.) Pull combustion tube assembly forward and out. (See Figure 20).
- M.) You can now inspect, clean or replace tubular heat exchanger as needed.  
NOTE: If combustion tube assembly is being replaced, you must keep and use collection box and burner box from assembly being replaced.
- N.) Carefully check integrity of all gaskets (replace as needed), then reinstall combustion tube assembly by reversing Steps L - A. Follow lighting instructions to put heater in operation.

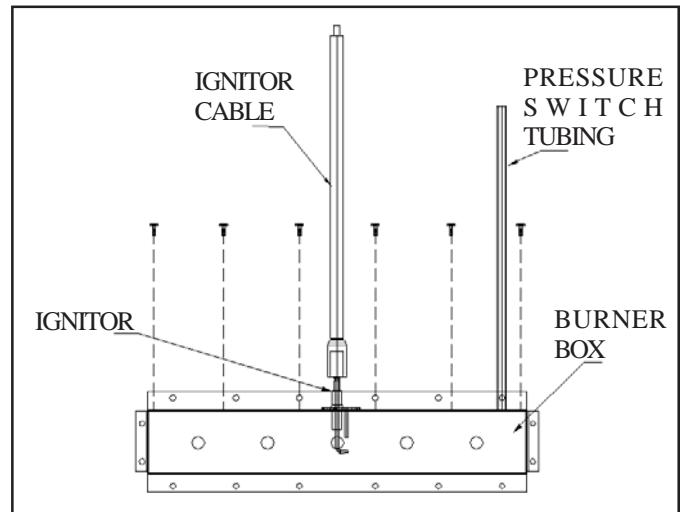


FIGURE 16

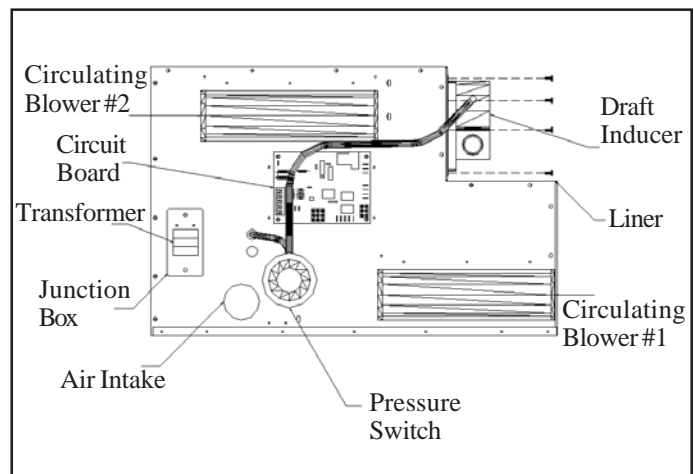


FIGURE 18-B (For WOW403 / WOW404)

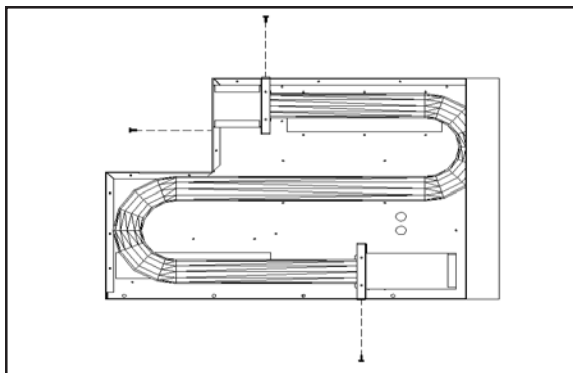


FIGURE 19

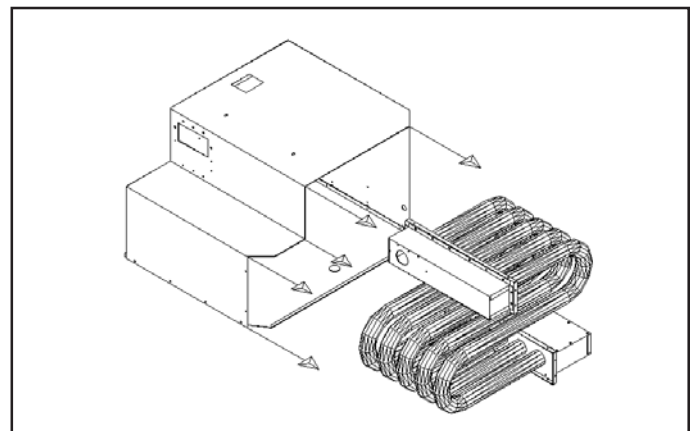


FIGURE 20

## TROUBLE SHOOTING CHART - for use by a qualified service technician

To assist in diagnosing and servicing, this heater is equipped with a self-diagnosing control module. Should a malfunction occur, the green indicator light on the control module will flash a varying number of times indicating the circuit in which malfunction is located.

# OF FLASHES	REASON FOR INDICATION	POSSIBLE CAUSES	CORRECTIVE ACTION
Slow Flash	Normal operation, no call for heat		
Fast Flash	Normal operation, call for heat		
2	System lockout failed to detect or sustain flame	<ul style="list-style-type: none"> <li>a.) Defective ignitor.</li> <li>b.) Ignition cable defective.</li> <li>c.) Ignitor cable disconnected.</li> <li>d.) Manual gas valve in "OFF" position. No gas to valve.</li> <li>e.) Defective wire to gas valve.</li> <li>f.) Wire to gas valve disconnected.</li> <li>g.) Obstruction to vent outlet.</li> <li>h.) Obstruction to air inlet.</li> </ul>	<ul style="list-style-type: none"> <li>a.) Replace ignitor.</li> <li>b.) Replace ignitor cable.</li> <li>c.) Connect ignitor cable.</li> <li>d.) Turn manual gas valve to "ON".</li> <li>e.) Replace defective wire.</li> <li>f.) Connect gas valve wire.</li> <li>g.) Remove obstruction.</li> <li>h.) Remove obstruction.</li> </ul>
3	Pressure switch Open or Closed	<ul style="list-style-type: none"> <li>a.) Defective pressure switch.</li> <li>b.) Pressure switch tubing damaged, kinked or collapsed.</li> <li>c.) Pressure switch tubing disconnected.</li> <li>d.) Defective draft inducer.</li> <li>e.) Pressure switch tubing to wrong connection.</li> </ul>	<ul style="list-style-type: none"> <li>a.) Replace pressure switch.</li> <li>b.) Replace damaged tubing.</li> <li>c.) Connect pressure switch tubing.</li> <li>d.) Replace draft inducer.</li> <li>e.) Reverse tubing connections on pressure switch.</li> </ul>
4	Limit Switch opens	<ul style="list-style-type: none"> <li>a.) Defective limit switch.</li> <li>b.) Damaged limit switch wire.</li> <li>c.) Limit switch wire disconnected.</li> <li>d.) Blockage in front of front panel.</li> <li>e.) Heater over rate.</li> </ul>	<ul style="list-style-type: none"> <li>a.) Replace limit switch.</li> <li>b.) Replace damaged wire.</li> <li>c.) Connect limit switch wire.</li> <li>d.) Remove blockage.</li> <li>e.) Check orifice, pressures, rate.</li> </ul>
5	Flame sensed gas valve not energized	<ul style="list-style-type: none"> <li>a.) Defective gas valve.</li> <li>b.) Defective control module.</li> </ul>	<ul style="list-style-type: none"> <li>a.) Replace gas valve.</li> <li>b.) Replace control module.</li> </ul>
Steady light No Flashes	Internal failure (control module failure and power on self-check)	<ul style="list-style-type: none"> <li>a.) Defective control module.</li> </ul>	<ul style="list-style-type: none"> <li>a.) Replace control module.</li> </ul>

## **TROUBLE SHOOTING CHART - for use by a qualified service technician.**

<b>SYMPTOM</b>	<b>POSSIBLE CAUSES</b>	<b>CORRECTIVE ACTION</b>
Flame too large	<ol style="list-style-type: none"> <li>1. Defective operator section of valve.</li> <li>2. Burner orifices too large.</li> <li>3. If installed above 2,000 ft.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace valve.</li> <li>2. See installation instructions or check with local gas company for proper orifice size and replace as needed.</li> <li>3. See burner orifice section, Page 13.</li> </ol>
Yellow burner flame	<ol style="list-style-type: none"> <li>1. Clogged burner ports.</li> <li>2. Obstruction around air intake or exhaust tubes.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove burners and check for obstructions in throats, ports, and orifices. Clean - but do not enlarge ports or orifices.</li> <li>2. Remove obstruction.</li> </ol>
Gas odor	<ol style="list-style-type: none"> <li>1. Gas leak.</li> </ol>	<ol style="list-style-type: none"> <li>1. See Page 1.</li> </ol>
Delayed Ignition	<ol style="list-style-type: none"> <li>1. Low gas pressure.</li> <li>2. Ignitor not properly located.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check gas supply pressure.</li> <li>2. Check ignitor location and correct if necessary.</li> </ol>
Failure to ignite	<ol style="list-style-type: none"> <li>1. Main gas off.</li> <li>2. Thermostat not set high enough to call for heat.</li> <li>3. Clogged burner orifice.</li> <li>4. Incorrect wiring.</li> <li>5. Defective valve.</li> <li>6. No power to unit.</li> <li>7. Defective pressure switch.</li> </ol>	<ol style="list-style-type: none"> <li>1. Open all manual gas valves.</li> <li>2. Set thermostat to higher temperature.</li> <li>3. Clean burner orifice (do not enlarge).</li> <li>4. Check wiring diagram.</li> <li>5. Replace valve.</li> <li>6. Check power supply.</li> <li>7. Replace pressure switch.</li> </ol>
Burner won't turn off	<ol style="list-style-type: none"> <li>1. Defective or damaged thermostat wire, or thermostat.</li> <li>2. Thermostat location.</li> <li>3. Defective or sticking valve.</li> <li>4. Excessive gas pressure.</li> <li>5. Defective or damaged thermostat.</li> <li>6. Defective gas valve.</li> </ol>	<ol style="list-style-type: none"> <li>1. Can be checked by removing wire from control board terminal. If burner goes off, replace thermostat.</li> <li>2. Re-locate thermostat out of drafts, hot, or cold spots.</li> <li>3. Replace valve.</li> <li>4. Contact utility supplying gas.</li> <li>5. Replace thermostat.</li> <li>6. Replace gas valve.</li> </ol>
Incorrect gas input	<ol style="list-style-type: none"> <li>1. Gas input not checked.</li> <li>2. Clogged orifice.</li> </ol>	<ol style="list-style-type: none"> <li>1. Re-check gas input.</li> <li>2. Clean orifices with a smooth wood toothpick, do not enlarge.</li> </ol>
Not enough heat	<ol style="list-style-type: none"> <li>1. Furnace undersized.</li> <li>2. Temperature set too low.</li> <li>3. Low supply pressure.</li> </ol>	<ol style="list-style-type: none"> <li>1. This is especially true when a dwelling or room is enlarged. Have the heat loss calculated and compare to furnace output. Your gas company can supply you with this information.</li> <li>2. Raise thermostat setting.</li> <li>3. Check supply pressure.</li> </ol>
Too much heat	<ol style="list-style-type: none"> <li>1. Temperature dial set too high.</li> <li>2. Gas control valve stuck open.</li> </ol>	<ol style="list-style-type: none"> <li>1. Lower thermostat setting.</li> <li>2. Replace gas control valve.</li> </ol>
Main burner goes out during normal operation	<ol style="list-style-type: none"> <li>1. Defective flame sensor.</li> <li>2. Input too high.</li> <li>3. Defective gasket.</li> <li>4. Missing gasket.</li> <li>5. Limit switch opens.</li> <li>6. Exhaust or air intake tubes blocked.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check voltage and replace ignitor if low.</li> <li>2. Check input rate.</li> <li>3. Check and replace gasket if needed.</li> <li>4. Be sure all gaskets are in place and properly sealed.</li> <li>5. Check rate - remove any obstructions to circulating air.</li> <li>6. Remove obstruction. Check for snow accumulation blocking intake and/or exhaust tube.</li> </ol>

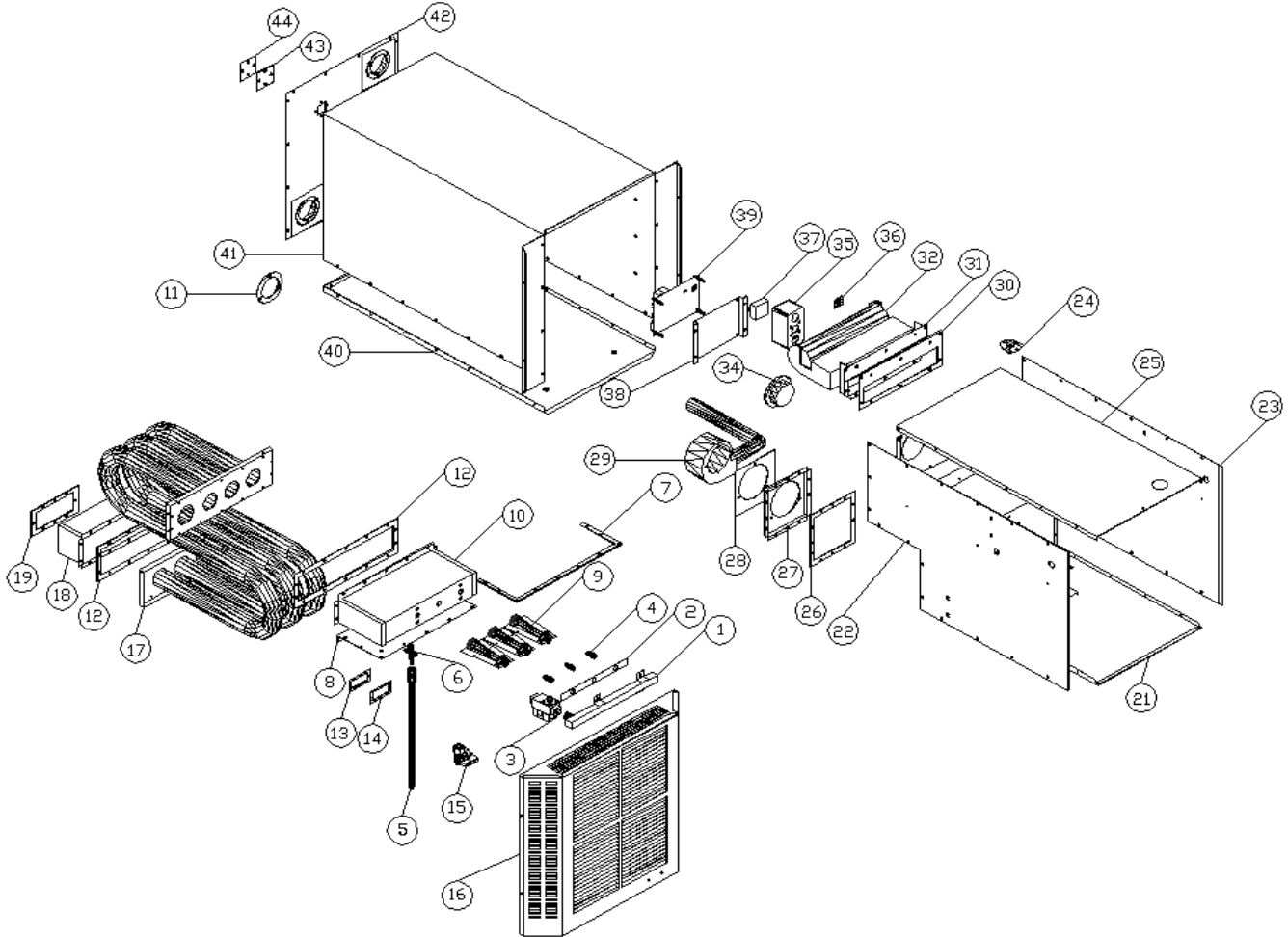
**MODEL NUMBERS**

**NAT. GAS L.P. GAS**

WOW253    WOW254

**FAN-TYPE, DIRECT-VENT  
THROUGH-THE-WALL GAS HEATER**

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



**WOW253/  
WOW254**

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**NOTE:** Parts prices & schematic drawings on current models are shown at [www.cozyheaters.com](http://www.cozyheaters.com).

**HOW TO PROPERLY ORDER PARTS:** In addition to part description and part number, please give model number, serial number, and type of gas used. This information can be found on the rating plate located inside the cabinet cover.

MODEL NUMBER	NAT.	WOW253	
MODEL NUMBER	L.P.	WOW254	
PART DESCRIPTION	REF. NO.	PART NO.	LIST PRICE
Manifold	1	64501	\$ 80.40
Manifold Gasket - 3/4X10-7/8"	2	64665	\$ 2.30
Gas Valve, Natural Gas, CV200 - 24 Volt	3	64590	\$ 85.20
Gas Valve, L.P. Gas, CV200 - 24 Volt	3	64591	\$ 85.20
Burner Orifice, Natural Gas	4	64509**	\$ 4.00
Burner Orifice, L.P. Gas	4	64508**	\$ 4.00
Ignitor Cable 32"	5	64211	\$ 20.20
Ignitor	6	64009	\$ 26.10
Burner Box Bottom	7	20270	\$ 5.00
Burner Box Bottom Gasket - 12-1/8X5-1/2"	8	64662	\$ 10.10
Burner	9	64515**	\$ 8.70
Burner Box (No Burners)	10	20240	\$ 56.00
Inlet/Outlet Flange Gasket - 3-1/4" Circle	11	64655***	\$ 2.20
Burner/Collection Box Gasket - 16x4"	12	64652	\$ 8.50
Sight Glass Gasket - 7/8x2-1/2"	13	64664	\$ 1.90
Sight Glass Assembly	14	20275	\$ 9.10
Manual Shutoff Valve	15	64074	\$ 16.90
Front Panel Assembly	16	20020	\$ 45.30
Heat Exchanger	17	64503	\$ 258.20
Collection Box	18	20185	\$ 49.80
Liner/Collection Box Gasket - 3x6"	19	64660	\$ 3.30
Liner, Left Side Extension	20	N/A	N/A
Liner, Base Assembly	21	20100	\$ 37.40
Liner, Left Side Assembly	22	20125	\$ 28.00
Liner, Right Side Assembly	23	20115	\$ 28.00
Limit Switch	24	64517	\$ 9.70
Liner, Top Assembly	25	20085	\$ 23.60
Draft Inducer Mounting Plate Gasket - 5-3/4x6"	26	64653	\$ 4.40
Draft Inducer Mounting Plate	27	20170	\$ 24.40
Draft Inducer Gasket - 5-1/4x5"	28	64654	\$ 4.20
Draft Inducer	29	64511	\$ 227.00
Circulating Blower Gasket - 4x10-1/2"	30	64658	\$ 2.40
Circulating Blower Mounting Bracket Assy.	31	20150	\$ 7.60
Circulating Blower	32	64531	\$ 227.00
Pressure Switch Mounting Bracket	33	N/A	N/A
Pressure Switch	34	64594	\$ 23.70
Junction Box	35	78059	\$ 4.90
Terminal Board	36	64596	\$ 4.20
Transformer	37	78069	\$ 27.50
Circuit Board Mounting Bracket	38	20175	\$ 4.80
Circuit Board	39	64625	\$ 249.00
Casing Base	40	20075	\$ 25.90
Casing Wrapper	41	20070	\$ 68.50
Casing Back Assembly	42	20045	\$ 44.50
Back Cover Plate Gasket - 2x2"	43	64659	\$ 1.30
Back Cover Plate	44	20060	\$ 4.90
Caulking, Rope	N/A	70151	\$ 2.80
9' Power Cord	N/A	64205	\$ 6.60
Weatherstripping	N/A	64657	\$ 5.00
Wiring Harness	N/A	64669	\$ 17.70
20' Thermostat Wire	N/A	74518	\$ 1.60
Thermostat 24V	N/A	78355	\$ 23.40
Mounting Support Brackets (Set of 2)	N/A	20355	\$ 28.10
Window Enclosure Panels Set/2	N/A	20360	\$ 20.30
Valve Shield Assembly	N/A	20310	\$ 15.30

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\* REQUIRES 5

/

\*\* REQUIRES 3 /

\*\*\* REQUIRES 2

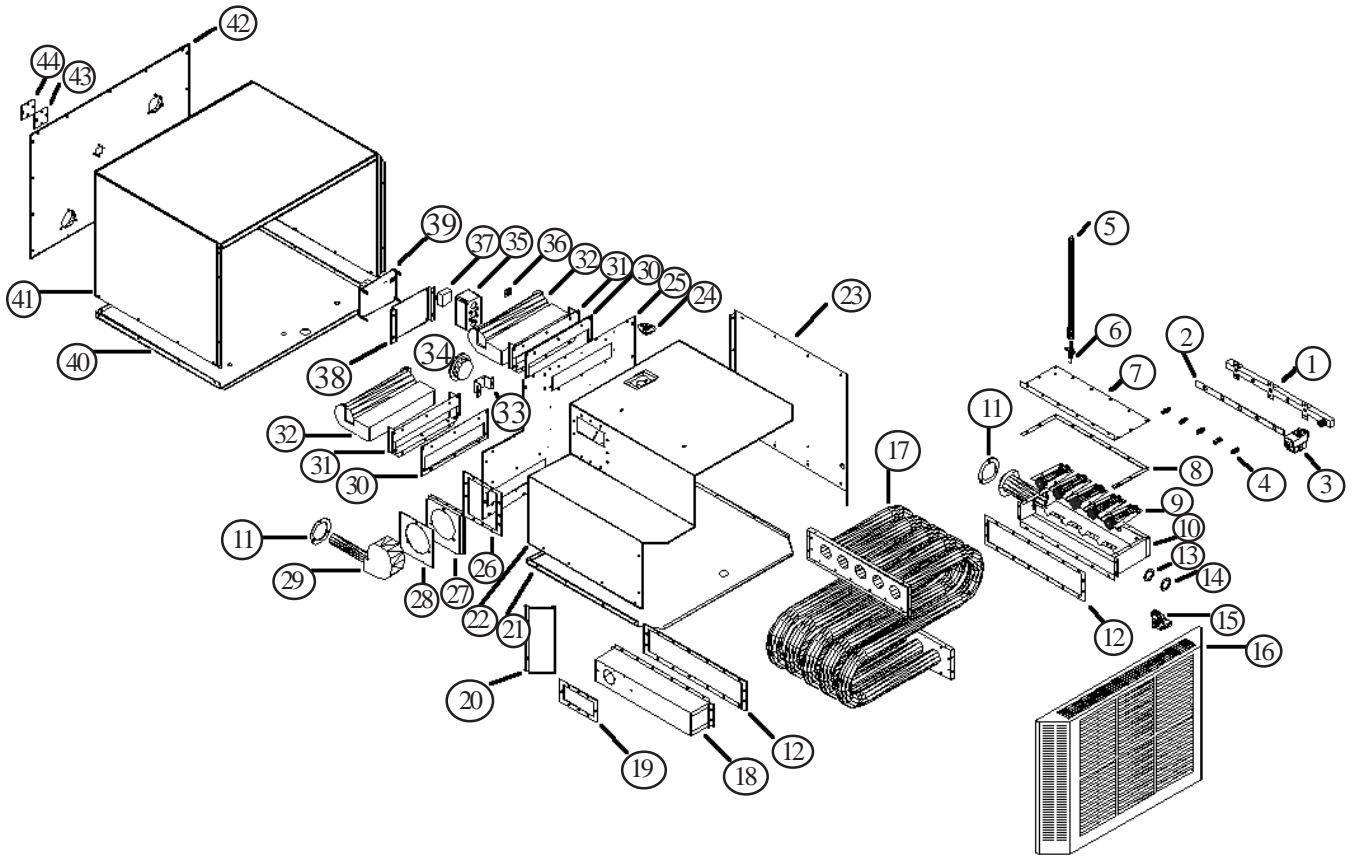
**MODEL NUMBERS**

**NAT. GAS L.P. GAS**

WOW403    WOW404

**FAN-TYPE, DIRECT-VENT  
THROUGH-THE-WALL GAS HEATER**

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



**WOW403/  
WOW404**

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**NOTE:** Parts prices & schematic drawings on current models are shown at [www.cozyheaters.com](http://www.cozyheaters.com).

**HOW TO PROPERLY ORDER PARTS:** In addition to part description and part number, please give model number, serial number, and type of gas used. This information can be found on the rating plate located inside the cabinet cover.

MODEL NUMBER	NAT.	WOW403	
MODEL NUMBER	L.P.	WOW404	
	REF.	PART	LIST
PART DESCRIPTION	NO.	NO.	PRICE
Manifold	1	64500	\$ 78.10
Manifold Gasket - 3/4x14"	2	64656	\$ 1.90
Gas Valve, Natural Gas	3	64590	\$ 85.20
Gas Valve, L.P. Gas	3	64591	\$ 85.20
Burner Orifice, Natural Gas	4	64505*	\$ 4.00
Burner Orifice, L.P. Gas	4	64507*	\$ 4.00
Ignitor Cable 18"	5	64210	\$ 19.50
Ignitor	6	64009	\$ 26.10
Burner Box Top	7	20770	\$ 5.60
Burner Box Top Gasket - 12x5-1/2"	8	64651	\$ 10.90
Burner	9	64515*	\$ 8.70
Burner Box (No Burners)	10	20740	\$ 85.60
Inlet/Outlet Flange Gasket - 3-1/4" Circle	11	64655***	\$ 2.20
Burner/Collection Box Gasket - 16x4"	12	64652**	\$ 8.50
Sight Glass Gasket - 1-5/8" Circle	13	64661	\$ 1.60
Sight Glass Assembly	14	20775	\$ 6.70
Manual Shutoff Valve	15	64074	\$ 16.90
Front Panel Assembly	16	20520	\$ 67.30
Heat Exchanger	17	20710	\$ 300.40
Collection Box	18	20685	\$ 45.30
Liner/Collection Box Gasket - 3x6"	19	64660	\$ 3.30
Liner, Left Side Extension	20	20605	\$ 3.60
Liner, Base Assembly	21	20610	\$ 34.10
Liner, Body Assembly	22	20585	\$ 65.60
Liner, Right Side Assembly	23	20640	\$ 25.80
Limit Switch	24	80097	\$ 10.90
Liner, Rear	25	20630	\$ 19.10
Draft Inducer Mounting Plate Gasket - 5-3/4x6"	26	64653	\$ 4.40
Draft Inducer Mounting Plate	27	20170	\$ 24.40
Draft Inducer Gasket - 5-1/4x5"	28	64654	\$ 4.20
Draft Inducer	29	64510	\$ 205.70
Circulating Blower Gasket - 4x10-1/2"	30	64658	\$ 2.40
Circulating Blower Mounting Bracket Assy.	31	20150	\$ 7.60
Circulating Blower	32	64530***	\$ 149.60
Pressure Switch Mounting Bracket	33	20800	\$ 3.00
Pressure Switch	34	64595	\$ 24.90
Junction Box	35	78059	\$ 4.90
Terminal Board	36	64596	\$ 4.20
Transformer	37	78069	\$ 27.50
Circuit Board Mounting Bracket	38	20175	\$ 4.80
Circuit Board	39	64625	\$ 249.00
Casing Base	40	20575	\$ 31.80
Casing Wrapper	41	20570	\$ 76.10
Casing Back Assembly	42	20545	\$ 48.20
Back Cover Plate Gasket - 2x2"	43	64659	\$ 1.30
Back Cover Plate	44	20060	\$ 4.90
Caulking, Rope	N/A	70151	\$ 2.80
9' Power Cord	N/A	64205	\$ 6.60
Weatherstripping	N/A	64657	\$ 5.00
Wiring Harness	N/A	64670	\$ 13.70
20' Thermostat Wire	N/A	74518	\$ 1.60
Thermostat 24V	N/A	78355	\$ 23.40
Mounting Support Brackets (Set of 2)	N/A	20855	\$ 23.00
Window Enclosure Panels (Set of 2)	N/A	20360	\$ 20.30
Valve Shield Assembly	N/A	20810	\$ 16.30

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\* REQUIRES 5 / \*\* REQUIRES 3 / \*\*\* REQUIRES 2

## REPLACEMENT WIRING

**FOR**

**WOW253, WOW254, WOW403, AND WOW404**

MODEL NUMBER	NAT.	WOW253		WOW403	
MODEL NUMBER	L.P.	WOW254		WOW404	
PART DESCRIPTION	REF. NO.	PART NO.	LIST PRICE	PART NO.	LIST PRICE
30" Black Inducer Wire	N/A	N/A	N/A	64667	\$ 1.60
12" Black Inducer Wire	N/A	N/A	N/A	64668	\$ 1.40
6" Brown wire - circuit board to blower #1	N/A	N/A	N/A	64671	\$ 1.40
16" Black wire - terminal board to blower #1	N/A	N/A	N/A	64672	\$ 1.50
24" Grey wire - circuit board to blower #2	N/A	64674	\$ 1.60	64674	\$ 1.60
14" Black/White Stripe - terminal board to blower #2	N/A	N/A	N/A	64675	\$ 1.60
10" Green wire - circuit board to transformer to ground	N/A	64676	\$ 2.50	64676	\$ 2.50
10" Black wire - transformer to circuit board	N/A	64677	\$ 1.60	64677	\$ 1.60
3" Green wire - terminal board to ground	N/A	78223	\$ 1.20	78223	\$ 1.20
48" Red thermostat wire	N/A	64678	\$ 1.60	64678	\$ 1.60
48" White thermostat wire	N/A	64679	\$ 1.60	64679	\$ 1.60
20" White wire - terminal board to circuit board	N/A	N/A	N/A	64680	\$ 2.30
12" Black Wire - terminal board to blower	N/A	64668	\$ 1.40	N/A	N/A
14" Black/White Stripe - circuit board to terminal board	N/A	64675	\$ 1.60	N/A	N/A

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# 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!**



**THIS IS NOT AN ADVERTISEMENT**

### **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.

# 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 PROHIBITED AND WILL 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 and burners 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**

<u>Product</u>	<u>Warranty Period</u>	
	<u>Heat Exchanger/Tubes</u>	<u>Burners</u>
Cozy Gas Fired Floor Furnace	10 Years	10 Years
Cozy Gas Fired Wall Furnace	10 Years	10 Years
Cozy Gas Fired Vented Console Heater	10 Years	10 Years
Cozy Gas Fired Direct Vent Heater	10 Years	10 Years
Cozy Gas Fired Counterflow Furnace	10 Years	10 Years
Cozy Gas Fired Counterflow Direct Vent Furnace	10 Years	10 Years
Cozy Gas Fired Mobile Home Direct Vent Furnace	10 Years	10 Years
Cozy Gas Fired Hi-Efficient Direct Vent Wall Furnace	10 Years	10 Years
Cozy Gas Fired Direct Vent Baseboard Heater	10 Years	10 Years
Cozy Fan-Type, Direct Vent Through-The-Wall Gas Heater	10 Years	10 Years
Cozy Blue Flame Vent Free Heater	N/A	10 Years
Cozy Infra-Red Vent Free Heater	N/A	N/A

**LOUISVILLE TIN & STOVE COMPANY**

737 S. 13<sup>TH</sup> STREET - LOUISVILLE, KY. 40210