



Counterflow Direct-Vent Gas Wall Furnaces

Model Numbers:

4007332; 4007732; 5507332; 6007732

FOR USE WITH NATURAL GAS ONLY

Model Numbers:

4007331; 4007731; 5507331; 6007731

FOR USE WITH LIQUEFIED PETROLEUM (L.P.) GAS ONLY

READ THIS OWNER'S MANUAL CAREFULLY BEFORE YOU INSTALL YOUR NEW WILLIAMS WALL FURNACE.

WARNING: If the information in these instructions 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:**
 - Open all windows.
 - Do not try to light any appliance.
 - Do not touch any electrical switch; do not use any phone or cell phone in your building.
 - Extinguish any open flame.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach the gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual. For assistance or for additional information consult a qualified installer, service agency or the gas supplier.

WARNING: This direct-vent furnace is approved for aftermarket mobile home installations (once the mobile home is sold, installed and stationary) unless prohibited by local codes. Not for mobile home manufacturer (factory) installation. Do not install any of these furnaces (natural or L.P. Gas) in trailers or recreational vehicles.

Introduction

A Word from the Manufacturer

Dear Customer,

To set up our furnace assembly procedures, several hundred quality assurance, safety audit and design performance tests have been conducted according to the standards provided by the American National Standards Institute, the Department of Energy and our certification agency - the American Gas Association Laboratories.

This was done to assure you of receiving the best value and most reliable appliance of its type available today. We are confident that your Williams furnace can provide you years of low cost, efficient, heating comfort.

Thank you for purchasing a Williams furnace.

Sincerely,
Employees of Williams Furnace Company

Please read our instructions before you install and use your furnace. This will help you obtain the full value from this furnace. It could help you avoid needless service costs, if the answer to the problem is found within this instruction manual.

Basic Description

The direct vent wall furnace is shipped ready to install against an exterior wall not exceeding 9" in thickness. Furnace may also be recessed up to 10" in a wall with studs spaced 16" center-to-center.

Always consult your local heating or plumbing inspector, building department or gas utility company regarding regulations, codes or ordinances which apply to the installation of a direct vent furnace.

Air is drawn in at the top by the fan and discharged through a grille near the floor. A two-speed fan is used with models 5507332, 6007732, 5507331, and 6007731. A single speed fan is used on all other models. The furnace contains a multi-slot burner (two on models 5507332, 6007732, 5507331, and 6007731) and burns either natural or L.P.G (liquefied petroleum gas), depending on the model you have purchased.

The sealed combustion system draws combustion air directly from outdoors into the combustion chamber and combustion gases are discharged directly to the outdoors through tubes mounted to the rear of the furnace.

The furnace heat exchanger is built of heavy gauge steel treated for corrosion resistance. The fan at the top, forces air down along the front, back and sides of the heat exchanger where it is discharged into the room. The furnace cabinet is also constructed of heavy gauge steel and has a powder-coat paint finish.

The furnace controls are located behind an access door on the lower front of the furnace. All models are equipped with American Gas Association listed gas valves and pilots.

Models 4007332, 4007331, 5507332, and 5507331 are equipped with an electronic ignition automatic pilot relight system.

Tools Needed

Hand drill or properly grounded electric drill
Expansion bit 1/2" to 1-5/8" or 1/2" and 1-1/2" blade bits
1/8" and 3/16" drill bit (metal)
6 ft. folding rule or tape measure
Screwdrivers (med. blade) and (Phillips Head)
Pliers (wire cutting)
Hammers
1/8" allen wrench

Stud locator or small finishing nails.
Tin snips
8" and 12" adjustable wrenches
Keyhole or sabre saw
Hack saw
2 - 10" or 12" pipe wrenches
Gloves and safety glasses

Materials

Pipe and fittings to make connections to furnace (See page 18).
Caulking compound-silicone rubber with a temperature rating of 500°F.

DO NOT use caulking compound advertised as paintable or for bath tub use as most contain fillers and will not withstand high temperatures.

Pipe Joint Compound resistant to L.P. Gas.

Electrical wiring supplied as needed (see page 19). Minimum wire size is #14 gauge copper.

3/4" Quarter Round or other wood trim molding approx.

16' long or **Trim Strip Kit 4701**.

2" x 4" x (length as required) Spacer Block (See Page 9).

1" x 1" wood strips if **Optional Side Outlet Grille Kit 6701** is used.

Helpful Installation Information

The following booklets will help you in making the installation:

ANSI/NFPA 70-1990 or current edition "National Electrical Code". In Canada: CSA C22.1 Canadian Electrical Code.

American National Standard NFPA54/ANSI Z223.1 1988 or current edition "National Fuel Gas Code".

Obtained from: American National Standards Institute, Inc., 1430 Broadway, New York, N Y 10018.

In Canada: CAN/CGA B149.

Introduction

Optional Accessories

SIDE OUTLET GRILLE KIT 6701

Let's you route some heated air into a second room. Mounts on the side wall of second room and must be within 10 inches of wall furnace. See pages 7 and 10.

DIFFUSER GRILLE KITS 6703 & 6704

Let's you route some heated air in a two-way direction. Kit 6704 for one-way direction.

SIDE GRILLE KIT 6702

Unpack Your Furnace

The furnace is shipped in two cartons, one containing the furnace, installation instruction booklet and hardware bag and the other containing the vent cap with inlet and vent tubes.

1. Lay the carton horizontally.
2. The bottom front panel can be removed by grasping just below the handle and pulling it outward and then upward. See Fig. 1.
3. Place these and other parts, as they are removed from furnace, where they cannot be lost or damaged before you need them.

NOTE

Check the burner rating plate, located in burner compartment, to make sure your furnace is equipped to operate on the type of gas available (either Natural or L.P. Gas). Do NOT convert the unit from Natural Gas to L.P. Gas or from L.P. Gas to Natural.

4. Remove all literature and package containing thermostat, wire and metal anchors used for free standing installation.
5. Check the fan blade to be sure it spins freely.
6. Take out the four screws holding fan shroud to the side flanges of cabinet and remove shroud. See Figure 1.

NOTE

The fan blade must be removed in order to remove the cardboard shipping brace located under motor.

7. Before removing the fan blade, remember its position by examining the blade nut and the amount of shaft visible. Scribe or mark the motor shaft in order to reinstall the fan blade to its original place on the shaft.
8. Loosen the 1/8" "Allen head" set screw holding the fan blade to motor shaft and remove the fan. Place the fan blade and fan shroud where they will not be damaged.
9. Remove the cardboard shipping brace located under the motor mounting brackets.
10. Properly dispose of shipping materials.

Let's you route some heated air to side of furnace in the same room. See pages 7 and 10.

TRIM STRIP KIT 4701

Provides a finished edge at sides of wall furnace. Neutral beige enamel painted steel.

Note: Kits are identified on the carton by manufacturing number 6701, 6702, 6703 and 6704 are also listed on the furnace rating plate.

FIGURE 1

