# User's Information Manual Gas Firnages

# Non-Condensing Gas Furnaces 80+ Upflow/Horizontal Furnaces H8UH5, MUF, HL



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FIRE OR EXPLOSION HAZARD.

Failure to follow safety warnings exactly could result in death, serious injury and/or property damage.

- -- 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.
  - Leave the building immediately
  - 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.

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Installer: Affix these instructions on or adjacent to the furnace. Consumer: Retain these instructions for future reference.

International Comfort Products, LLC Lewisburg, TN 37091

# Contents

Danger, Warning and Caution	2
Safety Rules	3
Combustion Air (Your Safety)	4
Indoor Humidity (Your Comfort)	5

# Danger, Warning and Caution

Recognize safety information. This is the safety-alert symbol

ightarrow . When you see this symbol on the furnace and in instruction manuals be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING and CAUTION. These words are used to identify levels of hazard seriousness. The signal word DANGER is only used on product labels to signify an immediate hazard. The signal words WARNING and CAUTION will be used on product labels and throughout this manual and other manuals that may apply to the product.

#### Signal Words

DANGER - Immediate hazards which WILL result in severe personal injury or death.

WARNING - Hazards or unsafe practices which COULD result in severe personal injury or death.

CAUTION - Hazards or unsafe practices which COULD result in minor personal injury or product or property damage.

"NOTE" is used to highlight suggestions which will result in enhanced installation, reliability or operation.

#### Signal Words in Manuals

The signal word WARNING is used throughout this manual in the following manner:



The signal word **CAUTION** is used throughout this manual in the following manner:



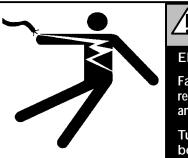
#### Product Labeling

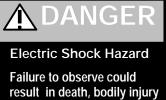
Signal words are used in combination with colors and/or pictures on product labels. Following are examples of product labels with explanations of the colors used.

About Your Furnace ..... 5 Furnace Maintenance ..... 8

#### Danger Label

White lettering on a black background except the word DANGER which is white with a red background.





and/or property damage.

Turn off all power before servicing.

#### Warning Label

White lettering on a black background except the word WARN-ING which is black with an orange background.



# WARNING

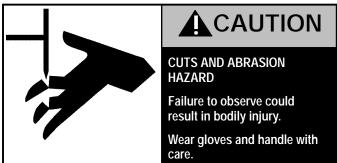
**FIRE HAZARD** 

Failure to observe could result in death, bodily injury and/or property damage.

Use copper wire only.

#### Caution Label

White lettering on a black background except the word CAUTION which is black with a yellow background.



# WARNING

CARBON MONOXIDE POISONING HAZARD.

Carbon monoxide poisoning could result in death from asphyxiation or serious bodily injury.

If you experience headaches, nausea, or dizziness, carbon monoxide may be present.

Leave the house immediately and call your gas supplier.

# Safety Rules

Your furnace is built to provide many years of safe and dependable service providing it is properly installed and maintained. However, abuse and/or improper use can shorten the life of the furnace and create hazards for you, the owner.

A. The U.S. Consumer Product Safety Commission recommends that users of gas-burning appliances install carbon monoxide detectors. There can be various sources of carbon monoxide in a building or dwelling. The sources could be gas-fired clothes dryers, gas cooking stoves, water heaters, furnaces, gas-fired fireplaces, wood fireplaces, and several other items. Carbon monoxide can cause serious bodily injury and/or death. Carbon monoxide or "CO" is a colorless and odorless gas produced when fuel is not burned completely or when the flame does not receive sufficient oxygen.

Therefore, to help alert people of potentially dangerous carbon monoxide levels, you should have carbon monoxide detectors that are listed as complying with a standard by a nationally recognized agency (e.g. ANSI/UL 2034-2002, CSA 6.19-01, or International Approval Services 6-96) installed and maintained in the building or dwelling (see Note below).

- B. There can be numerous sources of fire or smoke in a building or dwelling. Fire or smoke can cause serious bodily injury, death, and/or property damage. Therefore, in order to alert people of potentially dangerous fire or smoke, you should have fire and smoke detectors that are listed by Underwriters Laboratories installed and maintained in the building or dwelling (see Note below).
- **Note:** The manufacturer of your furnace does not test any detectors and makes no representations regarding any brand or type of detector.
- C. To ensure safe and efficient operation of your furnace, you should do the following:
  - 1. Thoroughly read this manual and labels on the furnace. This will help you understand how your furnace operates and the hazards involved with gas and electricity.
  - 2. The furnace area must be kept clear and free of combustible materials, gasoline, and other flammable vapors and liquids.
  - 3. Do not use this furnace if any part has been underwater. A flood-damaged furnace is extremely dangerous. Attempts to use the furnace can result in fire or explosion. Immediately call a qualified service agency to inspect the furnace and to replace all control system parts, electrical parts, and gas controls which have been wet or the furnace, if deemed necessary.

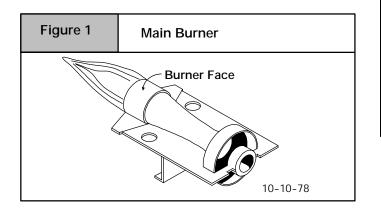
- 4. Never block or obstruct the openings on the furnace, or any ducts that provide air to the furnace. Air must be provided for proper and safe operation of the furnace for combustion and ventilation of flue gases. See the "Combustion Air (Your Safety) section of this manual.
- 5. Familiarize yourself with the possible air starvation signals. These are outlined in the Combustion Air section.
- 6. Check the combustion air supply. Some models use air drawn from outdoors, See NO TAG. Other models and other appliances use combustion air from inside the structure. Air starvation signals are given in the following *"Combustion Air (Your Safety)"*. section of this manual. If any of the signals are noticed, perform a combustion air check as shown in the following *Combustion Air Checks* section of this manual or call a qualified service agency. If you add weather stripping, storm windows, insulation, an additional fuel burning appliance, or remodel the structure, a combustion air check MUST be accomplished after the addition
- 7. Maintain safety and service clearances from the furnace. These clearances are listed on the furnace rating plate. Keep the furnace area clean and free of combustible materials at all times. Never store gasoline, paint, aerosol cans, waxes, bleaches, dry cleaning fluid or items such as paper or rags near the furnace.
- 8. Examine the furnace area when the furnace or additional insulation is added since some insulation materials may be combustible. Furnace must be kept free and clear of exposed or loose insulation materials in the area of installation.
- 9. Check the return air duct connection. The duct connection must be physically sound, sealed to the furnace casing and must terminate outside the space containing the furnace.
- 10. Should the gas supply fail to shut off or if overheating occurs, shut off the gas valve to the furnace before shutting off the electrical supply. Read the label on the front of the furnace and the Operating Your Furnace section of this manual for steps to turn off the furnace.
- 11.Familiarize yourself with all controls. Make sure you know how to shut off the gas and the electrical power to the furnace. Read the label on the front of the furnace and the Operating Your Furnace section of this manual for steps to start and turn off the furnace. If the furnace is to be shut down for an extended length of time (example; remodeling project), turn off both the gas and the electrical power. For safety, always turn them off before performing service or maintenance on the furnace.
- 12. Establish a regular service and maintenance schedule. This will ensure efficient and safe operation of the furnace. It is recommended that you have a qualified service agency perform a complete check on the furnace before each heating season. See furnace *Qualified Agency Checks and Combustion Air Checks* section of this manual.
- 13. **Monthly Inspection**. A properly adjusted gas furnace should not require cleaning at frequent intervals, but it should be inspected regularly to ensure safe and efficient operation. A brief monthly inspection is recommended that does not require disassembly. Examine the furnace installation to determine that:
  - a. All flue gas carrying areas external to the furnace (i.e. chimney, vent connector) are clear and free of obstructions.

- b. The vent connector is in place, slopes upward and is physically sound without holes or excessive corrosion.
- c. (Upflow or downflow installations with duct connection at bottom only.) The physical support of the furnace is sound without sagging, cracks, gaps, etc., around the base so as to provide an air seal between the support and the base.
- d. There should be no obvious signs of deterioration of the furnace.
- e. Check that the pilot and burner flames are in good adjustment. To inspect the Pilot and Main Burner flames it will be necessary to remove the louvered door on the front of the furnace, except for furnaces not having any louvers in the doors. The doors of these furnaces must remain installed (to prevent changes in flame appearance) while inspecting the Pilot and Main Burner flames through the view port in the door. **Contact a qualified service agency at once if an abnormal flame appearance is identified**.

Main Burner Flame: Check for the following:

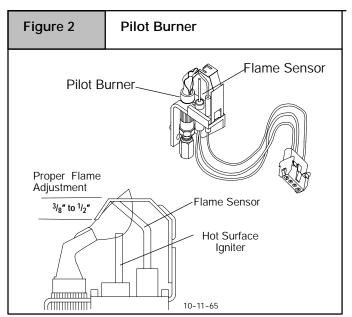
- Stable and blue flames. See Figure 1.
- Flames extending directly from burner into heat exchanger.
- Flames do NOT touch sides of heat exchanger.

**NOTE:** Dust may cause orange tips or wisps of yellow, but flames **MUST NOT** have solid, yellow tips.



**Pilot Burner Flame:** While the main burner is **ON**, the flame should envelop the upper part of the Flame Sensor, as shown in **Figure 2**.

- f. With the equipment shutoff valve turned OFF, remove the burner compartment door of the furnace to use a flashlight to inspect the visible parts of the burners and igniter. Check for loose soot and give particular attention to obvious deterioration from corrosion or other sources. If soot or deterioration is found inside the furnace, DO NOT OPERATE FURNACE; call a qualified service agency.
- g. Inspect the drain line and overflow line monthly (air conditioning cooling coils attached to furnace).



# Combustion Air (Your Safety)



CARBON MONOXIDE POISONING HAZARD Lack of combustion air could result in carbon monoxide gas which could cause death or serious bodily injury.

All fuel-burning appliances must be provided with enough fresh air for proper combustion and ventilation of flue gases.

Some models use air from the space in which they are located, and other appliances in the same space may also be using indoor air for ventilation and/or combustion.

New materials and methods are being used in construction and remodeling which result in lower energy costs for heating and cooling. It may also mean your appliances may not be getting enough air for combustion and ventilation of flue gases. The use of exhaust fans, fireplaces, clothes dryers, and other appliances consume air or vent it to the outdoors.

If the gas appliances or furnace can't get enough air, two conditions may result:

- 1. The appliances or furnace may produce carbon monoxide gas.
- 2. The appliance may not vent flue gases properly. The following are signs that your appliances may not be getting enough air for proper combustion.

#### Be aware of these signals;

- 1. Headaches-Nausea-Dizziness
- 2. Excessive humidity-heavily frosted windows or a moist "clammy" feeling in the structure.
- 3. Smoke from the fireplace won't draw up the chimney.

# WARNING

CARBON MONOXIDE POISONING HAZARD.

Carbon monoxide poisoning could result in death from asphyxiation or serious bodily injury.

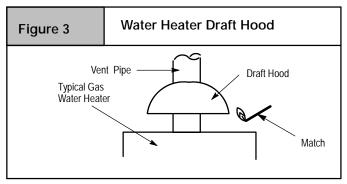
If you experience headaches, nausea, or dizziness, carbon monoxide may be present. Leave the house immediately and call your gas supplier.

### **Combustion Air Checks**

If any of the above signals are noticed, perform a combustion air check or call a qualified service agency. If you add weather stripping, storm windows, insulation, an additional fuel burning appliance, or remodel the structure, a combustion air check **MUST** be accomplished after the addition.

#### Make the inspection as follows:

- 1. Close all doors and windows. If you have a fireplace, start a fire and wait until flames are burning vigorously.
- 2. Turn on all exhausting devices, such as: kitchen and bathroom exhaust fans and dryers (gas or electric).
- 3. Turn on all vented gas appliances, such as: heating equipment (includes any room heaters) and water heaters.
- 4. Wait ten (10) minutes for drafts to stabilize.
- 5. On appliances with a draft hood, check for spillage by holding a lighted match 2 inches from the draft hood opening. Reference **Figure 3**, which shows a water heater draft hood.



- A. *Match flame pulls toward draft hood.* This indicates no spillage and that appliance is getting enough air for combustion. Return exhausting devices and appliances to the condition in which you found them.
- B. *Match goes out or flame wavers away from draft hood.* This indicates spillage and that appliance is not getting enough air for combustion.

# WARNING

CARBON MONOXIDE POISONING HAZARD.

Carbon monoxide poisoning could result in death from asphyxiation or serious bodily injury.

Draft hood spillage means there is not enough air for proper combustion and carbon monoxide may be present.

Keep a window open (a minimum of 2") near the appliance until a permanent combustion air duct is installed. Contact a qualified service agency.

#### If draft hood spillage is indicated:

- 1. Check for plugged vent connectors and chimneys. Repair stoppage and test again.
- 2. If you have a fireplace, open a window or door near the fireplace and then check for spillage. If spillage stops, do not use the fireplace until you can supply fresh air by a permanent duct.
- 3. If you have kitchen and bathroom exhaust fans, turn them **OFF** and check for spillage.

If spillage stops, do not use exhaust fans until you can supply fresh air by a permanent duct. Circuit breakers for fans should be turned off and marked as to why they are off.

4. Spillage means air starvation and that an outdoor air duct or air intake must be installed to provide air directly to the area around the furnace. This duct or intake MUST comply with local and state building codes or in their absence with the National Fuel Gas Code NFPA 54/ANSI Z223.1-2002.

# Indoor Humidity (Your Comfort)

Relative humidity is important to your health. Proper humidification helps cut down incidences of respiratory illness. Air that is too wet may damage the building structure. Air that is too dry is uncomfortable. A quick way to test for proper humidity is as follows:

- 1. Look for frequent fogging or excessive condensation on the inside of windows. This indicates the indoor humidity level is too high for outdoor weather conditions.
- 2. Drop three ice cubes into a glass of water and stir. If, within three minutes, moisture does not form on the glass, the air is too dry and a humidifier would be beneficial. (Do not perform this test in the kitchen, cooking vapors may produce inaccurate results.)

A good relative humidity is one just high enough to barely start condensation along the lower edges or lower corners of the windows, when it is cold outside. More than that can be damaging.

If the humidity is too high, try these suggestions to lower the humidity:

- 1. Reduce setting or discontinue use of humidifier.
- 2. Use range and bathroom exhaust fans while cooking and bathing. Open a door or window for a few minutes to bring in cool drier air.
- 3. Cook with pans covered.
- 4. Take shorter baths or showers with cooler water.
- 5. Install a fresh air intake duct. Cold, dry air brought in from outside to the furnace area lowers the indoor humidity level.
- 6. Have appliances checked. A malfunctioning appliance can contribute water vapor to the structure.
- 7. If the problem continues, consult a heating contractor about adding a heat recovery ventilator or air-to-air heat exchanger.

# About Your Furnace

Figure 4 shows the location of the components in the furnace.

### **Circulating Air Blower**

The blower circulates room air through the furnace, air ducts, and into the rooms of the structure. The blower can be set at the thermostat for automatic or manual operation. In manual mode the blower operates continuously. In automatic, the blower does not come on until a preset time after the gas valve is energized. When the structure reaches the temperature set on the thermostat, the furnace will shut off. The blower will continue to run until the furnace cools down.

### Thermostat

There are many types and styles of thermostats. Most thermostats control both heating and cooling functions and have a Fan Switch with **AUTO** and **ON** settings. On **AUTO**, the Circulating Air Blower will cycle on/off with the furnace, on the heating speed unless a call for cooling is initiated. Blower speed will correspond to the mode of operation of the furnace. If the Fan Switch is positioned to **ON** the blower will run continuously.

In addition some thermostats are programmable with multiple set backs. The set backs can be pre-programmed to lower or raise the temperature automatically.

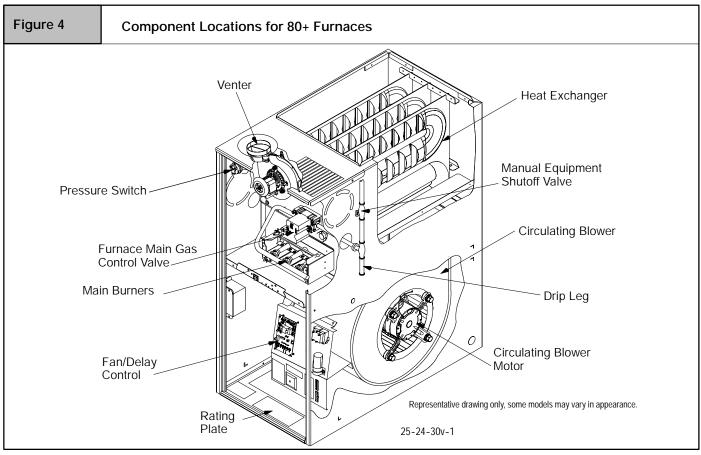
#### Be sure to become familiar with your thermostat.

#### **Rating Plate**

The rating plate contains important information for the service technician and lists the complete model, manufacturing and serial numbers. You should always provide all these numbers when requesting parts or if you need service. See **Figure 4** for rating plate location.

### **Door Interlock Switch**

All the electrical power for the furnace goes through the door interlock switch. The interlock switch interrupts electrical power to the furnace when the blower door is removed. The furnace will not operate until the blower door is reinstalled.



### Fan Control

The fan/delay control provides power to the circulating air blower to keep it on furnace until the furnace cools down.

The fan off-delay setting can be adjusted if the fan remains on long enough that cool drafts are felt in the room after the furnace shuts off.

The off-delay is set by moving a set of switches on the control. The Wiring Diagram located on the inside of the blower door shows the various delay combinations. Refer to **Figure 4** for location of the control.

If you are unsure how to set the Fan Control, contact a Qualified Service Agency.

# Electronic Ignition Module/Gas Control Valve

When the thermostat calls for heat it completes a circuit to the electronic ignition module. The module sends an electrical signal which ignites the pilot, and then opens the gas valve.

When the flame is firmly established, the igniter shuts off. If there is a malfunction, the gas valve automatically shuts off the gas.

#### **Pressure Switch**

The furnace is equipped with one pressure switch to shut down the furnace under various flue conditions. The switch is connected to the furnace by factory supplied tubing.

# **Operating Your Furnace**

Keep the blower access door and all access panels in place except for inspection or maintenance.

Before starting your furnace be sure you read and understand all of the procedures in this manual. Check to make sure the furnace filter is clean and correctly installed.

# WARNING

CARBON MONOXIDE POISONING HAZARD

Failure to provide adequate combustion and ventilation air could result in death and/or personal injury.

Provisions for combustion and ventilation air must be provided for in accordance with installation instructions supplied with furnace.

### Starting The Furnace

See Figure 5 for an illustration of the gas control valve.

- Turn the thermostat to its lowest temperature setting or to OFF if equipped with a System Select Switch.
- 2. Turn **OFF** all electric power to the furnace at the disconnect switch or circuit breaker.
- 3. Remove the burner compartment door by removing the two(2) screws securing the door in front and lifting the door up and outwards. Removing the door will expose the gas control valve switch.
- 4. Slide the gas control valve switch to **OFF**. See **Figure 5**.
- Wait five (5) minutes to clear out any gas. If you then smell gas, STOP! Follow the safety information on the cover of this manual. If you do not smell gas, go to the next step.
- 6. Slide the control valve switch to ON.
- 7. Reinstall all doors.
- 8. Turn **ON** all electrical power to the furnace.
- 9. Set the thermostat to the desired temperature and the System Select Switch to **HEAT**.

The furnace will activate an igniter which lights the pilot flame. When the pilot lights and verifies a steady flame, the ignition system brings on the main burners.

#### System Retries

The ignition system tries to relight the burners whenever the builtin flame sensor detects no flame while the thermostat calls for heat.

# Turning Off The Furnace

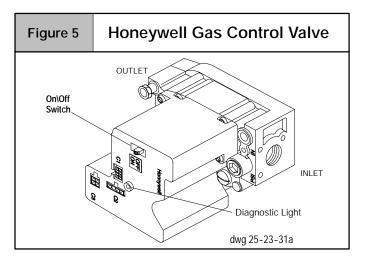
Set the thermostat to the lowest temperature setting or set System Select Switch to **OFF** if so equipped.

Should overheating occur or the gas control valve fail to shut off, shut off the manual equipment shutoff valve to the furnace before shutting off the electrical supply.

#### Extended Shutdown

- 1. Set thermostat to lowest temperature setting or set thermostat System Select Switch to **OFF** if so equipped.
- 2. Turn Manual Equipment Shutoff Valve for furnace to OFF position, (at right angle or 90° to gas line).

- Remove the burner compartment door by removing the two (2) screws securing the door in front and lifting the door up and outwards. Removing the door will expose the gas control valve switch.
- 4. Slide the gas control valve switch to OFF.
- 5. Turn **OFF** electric power to the furnace at the disconnect switch or circuit breaker. (May be left **ON** for set-back type thermostat with batteries, provided thermostat has system select switch placed in the **OFF** position.)
- 6. Reinstall all doors.



#### L P Model Furnaces

# WARNING

#### FIRE OR EXPLOSION HAZARD

Failure to detect and stop gas leak could result in death, bodily injury, or property damage.

Propane gas is heavier than air. Leaking gas can settle in low areas such as crawl space. If you suspect the presence of gas, follow the instructions on the cover of this manual.

If your LP gas Furnace is installed in an excavated or low lying area, we recommend that you contact your LP gas supplier about installing a warning device that would alert you of a gas leak.

# Frozen Water Pipe Hazard

# CAUTION

#### FROZEN AND BURST WATER PIPE HAZARD.

Failure to protect against frozen pipes may result in burst water pipes, serious property damage and/or personal injury.

Furnace may shut down. Do not leave your home unattended for long periods during freezing weather without turning off water supply and draining water pipes or otherwise protecting against the risk of frozen pipes.

# **A WARNING**

#### FROZEN AND BURST WATER PIPE HAZARD.

Failure to protect against frozen pipes could result in burst water pipes, serious property damage and/or personal injury.

Furnace may shut down. Do not leave your home unattended for long periods during freezing weather without turning off water supply and draining water pipes or otherwise protecting against the risk of frozen pipes.

Your furnace is designed solely to provide a safe and comfortable living environment. The furnace is NOT designed to ensure that water pipes will not freeze. It is equipped with several safety devices that are designed to turn the furnace off and prevent it from restarting in the event of various potentially unsafe conditions.

If your furnace remains off for an extended time, the pipes in your home could freeze and burst, resulting in serious water damage.

If the structure will be unattended during cold weather you should take these precautions.

1. Turn off the water supply to the structure and drain the water lines if possible and add an antifreeze for potable water to drain traps and toilet tanks. Open faucets in appropriate areas.

#### -or-

2. Have someone check the structure frequently during cold weather to make sure it is warm enough to prevent pipes from freezing. Instruct them on a qualified service agency to call to provide service, if required.

-or-

3. Install a reliable remote sensing device that will notify somebody of freezing conditions within the home.

# **Furnace Maintenance**

Have your furnace inspected and serviced on an annual basis (before the heating season) by a qualified service agency.

### Labeling

# WARNING

#### FIRE OR EXPLOSION HAZARD

Wiring errors can cause improper and dangerous operation that could result in death, bodily injury, and/or property damage.

Label all wires prior to disconnection when servicing controls. Verify proper operation after servicing. Only qualified service agencies should attempt electrical service.

#### **Pressure Switch**

During regular yearly maintenance, check for cracks in any tubes on the pressure switch.

### Air Filters/Monthly

# **A WARNING**

#### FIRE HAZARD

Failure to clean internal furnace parts could result in death or bodily injury.

Fire hazard from dust and lint buildup on internal furnace parts. Only a qualified service agency should clean furnace internal parts.

Never operate furnace without an air filter installed.

The air filter(s) should be inspected at least monthly and cleaned or replaced as required. There are two types of filters that are commonly used. Washable filters (constructed of aluminum mesh, foam, or reinforced fibers) may be cleaned by soaking in mild detergent and rinsing with water. The fiber-glass disposable type should be **REPLACED** before it becomes clogged.

Remember that dirty filters are the most common cause of inadequate heating or cooling performance.

# CAUTION

#### **RISK OF REDUCED FURNACE LIFE**

Use of excessively dirty and/or restrictive air filters may increase furnace operating temperatures and shorten the life of the furnace.

Filters specified for the furnace are rated at a maximum of 600 FPM air velocity and sized for the furnace's airflow rate. Replacement filters must be of equivalent type, size, and rating except as described below.

Disposable, low-velocity filters may be used to replace washable, high-velocity filters, providing they are sized for 300 FPM or less.

If you are uncertain of the type of replacement filter to use, consult the furnace installer or a qualified service agency for assistance.

#### **Replacement Filters**

If the filter is not located at or within the furnace, it should be located somewhere in the return-air duct system.

**Table 1** lists recommended sizes and types of filters that may beused with your furnace, based on the furnace's heating gas inputrate.

Replacement filters should be of the same type and size as the originals, to ensure adequate air flow and filtering. A disposable low velocity filter can be replaced with a washable high velocity type. Do not replace a high velocity filter with a disposable low velocity filter, except as permitted below.

If a cleanable (high-velocity) filter(s) is to be replaced with a disposable (low-velocity) filter(s), the airflow area of the filter(s) must be doubled (i.e., a second filter of the same size must be installed so that only half of the air goes through each filter). A second return-air duct to the furnace must be added in which to install the second filter. Modification of a furnace installation shall comply with the local installation code and the furnace installation instructions, and shall be made only by a Qualified Service Agency.

NOTE: Some filters are marked with an arrow to indicate the proper direction of air flow through the filter. The air flow di-

rection will be towards the blower motor. Make sure filter is installed correctly.

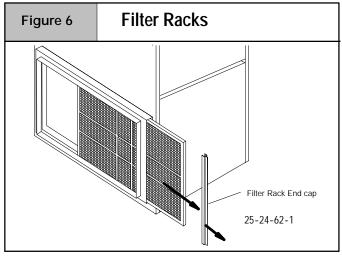
#### Filter Replacement

The filter may be installed in the bottom of the blower compartment, or the filter rack may be installed under the furnace or on either or both sides of the furnace. A plastic end cap is inserted in the filter rack after the filter is installed. The end cap keeps air fromescaping around the open end of the filter rack. See **Figure 6** and **Figure 7** for side and bottom locations. Rack end cap is similar for bottom mounted filter rack.

Filter racks attached to the outside of the furnace are made so the filter simply slides out one side for removal.

#### Filter Replacement - Bottom or Side Mounted Filter Rack Outside Furnace

- 1. Turn off electric power to furnace.
- 2. Remove the end cap from the filter rack.
- 3. Slide the filter out of the filter rack. See Figure 6.
- Inspect the filter(s) and replace or clean washable types. If filter is aluminum mesh it should be recoated with filter coating spray.
- 5. Reinstall the end cap in the filter rack.
- 6. Turn on electric power to furnace.



#### Filter Replacement - Bottom Mounted Filter Inside Furnace

- 1. Turn off electric power to furnace.
- 2. Remove blower door.
- 3. Slide filter straight out toward you. See Figure 7.
- 4. Inspect the filter(s) and replace or clean washable types. If filter is aluminum mesh it should be recoated with filter coating spray.
- 5. Replace blower door.

6. Turn on electric power to furnace.

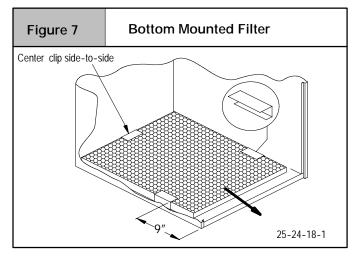


Table 1	Recommended Filter Sizes	
Furnace Size Heating Gas Input Rate 1000 x Btuh	Filter Sizes Surface Area (Sq. In.)/Nominal Size (inches)	
	Disposable Filters (300 FPM) Purchased Separately	Cleanable Filters (600 FPM) Supplied with Furnace
50	350 or 14 x 25 (2Req.)	350 or 14 x 25
75	350 or 14 x 25 (2Req.)	350 or 14 x 25
100	400 or 16 x 25 (2Req.)	400 or 16 x 25
125	500 or 20 x 25 (2Req.)	500 or 20 x 25
140	600 or 24 x 25 (2 Req.)	600 or 24 x 25

#### Lubrication

The blower motor and the venter are prelubricated by the manufacturer and **DO NOT** require oiling.

# **Qualified Service Agency Checks**

When the furnace is being inspected for condition and operation have the Qualified Service Agency check the following items.

- 1. Check all flue gas passages including main and pilot burners, heat exchanger, and vent.
- 2. Check electrical wiring and connections.
- 3. Check supply and return air ducts for leakage, blockage and connections to furnace.
- 4. Check circulating air blower wheel and motor. Clean them if required.
- 5. Perform an operational checkout on the furnace to be sure safety controls function and that furnace operates properly.

For additional information, the Qualified Service Agency can consult the installation instructions for the furnace.

