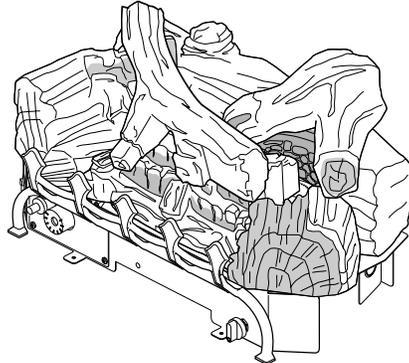




# UNVENTED (VENT-FREE) GAS LOG HEATER OWNER'S OPERATION AND INSTALLATION MANUAL

For more information, visit [www.desatech.com](http://www.desatech.com)



**24" and 30" Remote-Ready Models:**  
VRL24NR, VRL24PR, VRL30NR,  
VRL30PR, CSG3924NR, CSG3924PR  
CTB3924NR, CTB3924PR

**24" and 30" Thermostat Models:**  
VRL24NT, VRL24PT, VRL30NT,  
VRL30PT, CSG3924NT, CSG3924PT  
CTB3924NT, CTB3924PT

**Remote-Ready Models Also Design-Certified As Vented  
Decorative Appliances**

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

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

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

**WARNING:** This appliance is for installation only in a solid-fuel burning masonry or UL127 factory-built fireplace, or in an approved ventless firebox. It is design-certified for these installations in accordance with ANSI Z21.11.2. Exception: Do not install this appliance in a factory-built fireplace that includes instructions stating it has not been tested or should not be used with unvented gas logs. For unmarked factory-built fireplaces, contact fireplace manufacturer if unsure of this application.

**WARNING:** This is an unvented gas-fired heater. It uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. Refer to *Air for Combustion and Ventilation* section on page 5 of this manual.

This appliance may be installed in an aftermarket,\* permanently located, manufactured (mobile) home, where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases.

\* Aftermarket: Completion of sale, not for purpose of resale, from the manufacturer

Save this manual for future reference.



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## SAFETY INFORMATION

### WARNINGS

**IMPORTANT:** Read this owner's manual carefully and completely before trying to assemble, operate, or service this heater. Improper use of this heater can cause property damage and serious injury or death from burns, fire, explosion, electrical shock, and carbon monoxide poisoning.

** DANGER:** Carbon monoxide poisoning may lead to death!

**Carbon Monoxide Poisoning:** Early signs of carbon monoxide poisoning resemble the flu, with headaches, dizziness, or nausea. If you have these signs, the heater may not be working properly. **Get fresh air at once!** Have heater serviced. Some people are more affected by carbon monoxide than others. These include pregnant women, people with heart or lung disease or anemia, those under the influence of alcohol, and those at high altitudes.

**Natural and Propane/LP Gas:** Natural and Propane/LP gases are odorless. An odor-making agent is added to the gas. The odor helps you detect a gas leak. However, the odor added to the gas can fade. Gas may be present even though no odor exists.

Make certain you read and understand all warnings. Keep this manual for reference. It is your guide to safe and proper operation of this heater.

** WARNING:** Any change to this heater or its controls can be dangerous.

** WARNING:** Do not use a blower insert, heat exchanger insert, or other accessory not approved for use with this heater.

** WARNING:** This appliance is for installation only in a solid-fuel burning fireplace or approved ventless firebox enclosure.

** WARNING:** Do not allow fans to blow directly into the fireplace. Avoid any drafts that alter burner flame patterns. Ceiling fans can create drafts that alter burner flame patterns. Altered burner patterns can cause sooting.

Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.

Do not place clothing or other flammable material on or near the appliance. Never place any objects on the heater.

Heater base assembly becomes very hot when running heater. Keep children and adults away from hot surface to avoid burns or clothing ignition. Heater will remain hot for a time after shutdown. Allow surface to cool before touching.

Carefully supervise young children when they are in the room with heater. When using the hand-held remote accessory (Remote-Ready Models Only), keep selector switch in the OFF position to prevent children from turning on burners with remote.

You must operate this heater with a fireplace screen in place. Make sure fireplace screen is closed before running heater.

Keep the appliance area clear and free from combustible materials, gasoline, and other flammable vapors and liquids.

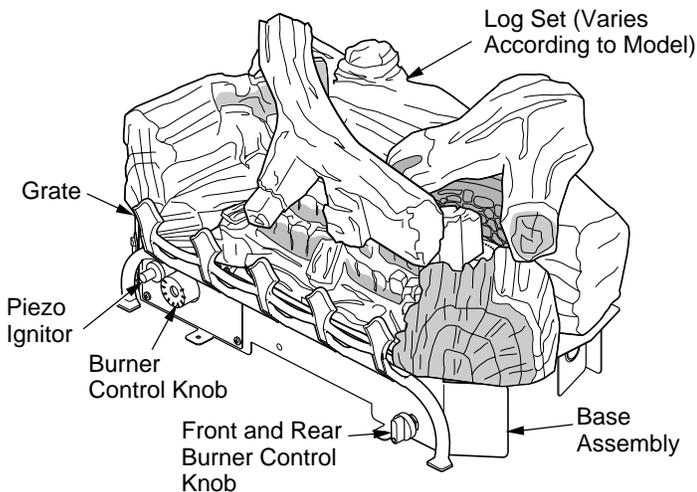
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## SAFETY INFORMATION

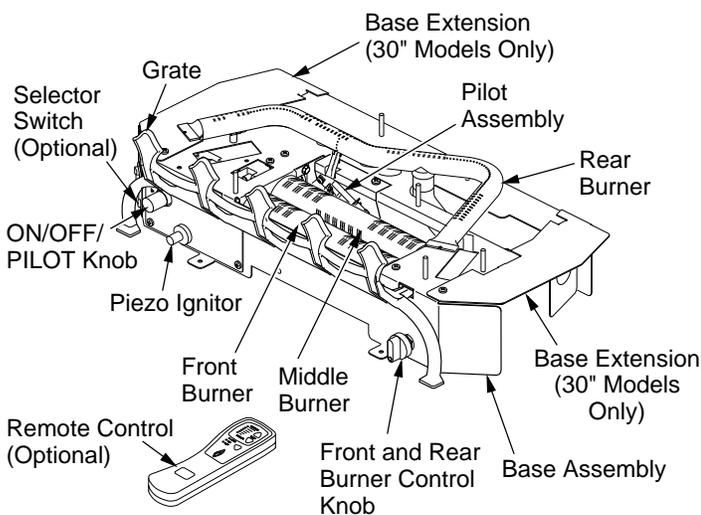
### Continued

1. 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.
2. Do not place propane/LP supply tank(s) inside any structure. Locate propane/LP supply tank(s) outdoors.
3. If you smell gas
  - shut off gas supply
  - 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
4. This heater shall not be installed in a bedroom or bathroom, unless installed as a vented appliance. See *Installing Damper Clamp Accessory for Vented Operation*, page 11 (Remote-Ready Models Only).
5. Before installing in a solid fuel burning fireplace, the chimney flue and firebox must be cleaned of soot, creosote, ashes and loose paint by a qualified chimney cleaner. Creosote will ignite if highly heated. Inspect chimney flue for damage. If damaged, repair flue damper before operating heater.
6. If fireplace has glass doors, never operate this heater with glass doors closed. If you operate heater with doors closed, heat buildup inside fireplace will cause glass to burst. Also, if fireplace opening has vents at the bottom, you must open the vents before operating heater.
7. To prevent the creation of soot, follow the instructions in *Cleaning and Maintenance*, page 23.
8. Before using furniture polish, wax, carpet cleaner, or similar products, turn heater off. If heated, the vapors from these products may create a white powder residue within burner box or on adjacent walls and furniture.
9. This heater needs fresh, outside air ventilation to run properly. This heater has an Oxygen Depletion Sensing (ODS) safety shutoff system. The ODS shuts down the heater if enough fresh air is not available. See *Air for Combustion and Ventilation*, pages 5 through 7. If heater keeps shutting off, see *Troubleshooting*, pages 24 through 26.
10. Do not run heater
  - where flammable liquids or vapors are used or stored
  - under dusty conditions
11. Do not use this heater to cook food or burn paper or any other type of sold fuels.
12. Do not use heater if any part has been exposed to or under water. Immediately call a qualified service technician to inspect the room heater and to replace any part of the control system and any gas control which has been under water.
13. Do not operate heater if any log is broken. Do not operate heater if a log is chipped (dime-sized or larger).
14. Turn heater off and let cool before servicing, installing, or repairing. Make sure the selector switch is in the OFF position (Remote-Ready Models Only). Only a qualified service person should install, service, or repair heater.
15. Make sure the selector switch is in the OFF position when you are away from home for long periods of time (Remote-Ready Models Only).
16. Remote-ready heaters do not need to be connected to any external electrical source.
17. Operating heater above elevations of 4,500 feet may cause pilot outage.
18. To prevent performance problems with propane/LP models, do not use propane/LP fuel tank of less than 100 lb. capacity.
19. Provide adequate clearances around air openings.

## PRODUCT IDENTIFICATION



**Thermostat Models:** CSG3924NT, CSG3924PT, CTB3924NT, CTB3924PT, VRL24NT, VRL24PT, VRL30NT, VRL30PT



**Remote-Ready Models:** CSG3924NR, CSG3924PR, CTB3924NR, CTB3924PR, VRL24NR, VRL24PR, VRL30NR, VRL30PR

**Figure 1 - Product Identification**

## OPTIONAL REMOTE CONTROL ACCESSORIES

There are four optional remote controls that can be purchased separately for Remote-Ready Models Only:

- wall switch
- wall thermostat
- hand-held ON/OFF remote
- hand-held thermostat remote.

See *Accessories*, page 34.

The wall thermostat or hand-held thermostat may not be used where vented decorative listing is required.

## LOCAL CODES

Install and use heater with care. Follow all local codes. In the absence of local codes, use the latest edition of *The National Fuel Gas Code ANSI Z223.1/NFPA 54\**.

\*Available from:

American National Standards Institute, Inc.  
 1430 Broadway  
 New York, NY 10018

National Fire Protection Association, Inc.  
 Batterymarch Park  
 Quincy, MA 02269

**Note:** Where listed vented decorative logs are required, thermostat operation is not permitted.

## UNPACKING

**CAUTION:** Do not remove the data plates from the base assembly. The data plates contain important warranty and safety information.

1. Remove logs and heater base assembly from carton. **Note:** Do not pick up heater base assembly by burners. This could damage heater. Always handle base assembly by the sides of assembly.
2. Remove all protective packaging applied to logs and heater for shipment.
3. Check all items for any shipping damage. If damaged, promptly inform dealer where you bought heater.

## PRODUCT FEATURES

### OPERATION

This heater is clean burning. It requires no outside venting. There is no heat loss out a vent or up a chimney. Heat is generated by both realistic flames and glowing coals. This heater is designed for vent-free operation with flue damper closed. It has been tested and approved to ANSI Z21.11.2 standard for unvented heaters. State and local codes in some areas prohibit the use of vent-free heaters. This heater may also be operated as a vented decorative (ANSI Z21.60) product by opening the flue damper (Remote-Ready Models Only).

### SAFETY DEVICE

This heater has a pilot with an Oxygen Depletion Sensing (ODS) safety shutoff system. The ODS/pilot is a required feature for vent-free room heaters. The ODS/pilot shuts off the heater if there is not enough fresh air.

### PIEZO IGNITION SYSTEM

This heater has a piezo ignitor. This system requires no matches, batteries, or other sources to light heater.

## AIR FOR COMBUSTION AND VENTILATION

**⚠ WARNING:** This heater shall not be installed in a confined space or unusually tight construction unless provisions are provided for adequate combustion and ventilation air. Read the following instructions to insure proper fresh air for this and other fuel-burning appliances in your home.

Today's homes are built more energy efficient than ever. New materials, increased insulation, and new construction methods help reduce heat loss in homes. Home owners weather strip and caulk around windows and doors to keep the cold air out and the warm air in. During heating months, home owners want their homes as airtight as possible.

While it is good to make your home energy efficient, your home needs to breathe. Fresh air must enter your home. All fuel-burning appliances need fresh air for proper combustion and ventilation.

Exhaust fans, fireplaces, clothes dryers, and fuel burning appliances draw air from the house to operate. You must provide adequate fresh air for these appliances. This will insure proper venting of vented fuel-burning appliances.

### PROVIDING ADEQUATE VENTILATION

The following are excerpts from *National Fuel Gas Code, ANSI Z223.1/NFPA 54, Section 5.3, Air for Combustion and Ventilation*.

All spaces in homes fall into one of the three following ventilation classifications:

1. Unusually Tight Construction
2. Unconfined Space
3. Confined Space

The information on pages 5 through 7 will help you classify your space and provide adequate ventilation.

#### Unusually Tight Construction

The air that leaks around doors and windows may provide enough fresh air for combustion and ventilation. However, in buildings of unusually tight construction, you must provide additional fresh air.

**Unusually tight construction is defined as construction where:**

- a. walls and ceilings exposed to the outside atmosphere have a continuous water vapor retarder with a rating of one perm ( $6 \times 10^{-11}$  kg per pa-sec- $m^2$ ) or less with openings gasketed or sealed *and*
- b. weather stripping has been added on openable windows and doors *and*
- c. caulking or sealants are applied to areas such as joints around window and door frames, between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical, and gas lines, and at other openings.

If your home meets all of the three criteria above, you must provide additional fresh air. See *Ventilation Air From Outdoors*, page 7.

**If your home does not meet all of the three criteria above, proceed to *Determining Fresh-Air Flow For Heater Location*, page 6.**

#### Confined and Unconfined Space

*The National Fuel Gas Code, ANSI Z223.1/NFPA 54* defines a confined space as a space whose volume is less than 50 cubic feet per 1,000 Btu per hour ( $4.8 \text{ m}^3$  per kw) of the aggregate input rating of all appliances installed in that space and an unconfined space as a space whose volume is not less than 50 cubic feet per 1,000 Btu per hour ( $4.8 \text{ m}^3$  per kw) of the aggregate input rating of all appliances installed in that space. Rooms communicating directly with the space in which the appliances are installed\*, through openings not furnished with doors, are considered a part of the unconfined space.

\* Adjoining rooms are communicating only if there are doorless passageways or ventilation grills between them.

## AIR FOR COMBUSTION AND VENTILATION

### Continued

#### DETERMINING FRESH-AIR FLOW FOR HEATER LOCATION

##### Determining if You Have a Confined or Unconfined Space

Use this work sheet to determine if you have a confined or unconfined space.

**Space:** Includes the room in which you will install heater plus any adjoining rooms with doorless passageways or ventilation grills between the rooms.

1. Determine the volume of the space (length x width x height).

Length x Width x Height = \_\_\_\_\_ cu. ft. (volume of space)

*Example:* Space size 20 ft. (length) x 16 ft. (width) x 8 ft. (ceiling height) = 2560 cu. ft. (volume of space)

If additional ventilation to adjoining room is supplied with grills or openings, add the volume of these rooms to the total volume of the space.

2. Multiply the space volume by 20 to determine the maximum Btu/Hr the space can support.

\_\_\_\_\_ (volume of space) x 20 = (Maximum Btu/Hr the space can support)

*Example:* 2560 cu. ft. (volume of space) x 20 = 51,200 (maximum Btu/Hr the space can support)

3. Add the Btu/Hr of all fuel burning appliances in the space.

Vent-free heater	_____	Btu/Hr
Gas water heater*	_____	Btu/Hr
Gas furnace	_____	Btu/Hr
Vented gas heater	_____	Btu/Hr
Gas fireplace logs	_____	Btu/Hr
Other gas appliances* +	_____	Btu/Hr
Total	= _____	Btu/Hr

\* Do not include direct-vent gas appliances. Direct-vent draws combustion air from the outdoors and vents to the outdoors.

*Example:*

Gas water heater	_____	40,000	Btu/Hr
Vent-free heater	+ _____	39,000	Btu/Hr
Total	= _____	79,000	Btu/Hr

4. Compare the maximum Btu/Hr the space can support with the actual amount of Btu/Hr used.

\_\_\_\_\_ Btu/Hr (maximum the space can support)

\_\_\_\_\_ Btu/Hr (actual amount of Btu/Hr used)

*Example:* 51,200 Btu/Hr (maximum the space can support)

79,000 Btu/Hr (actual amount of Btu/Hr used)

The space in the above example is a confined space because the actual Btu/Hr used is more than the maximum Btu/Hr the space can support. You must provide additional fresh air. Your options are as follows:

- A. Rework worksheet, adding the space of an adjoining room. If the extra space provides an unconfined space, remove door to adjoining room or add ventilation grills between rooms. See *Ventilation Air From Inside Building*, page 7.
- B. Vent room directly to the outdoors. See *Ventilation Air From Outdoors*, page 7.
- C. Install a lower Btu/Hr heater, if lower Btu/Hr size makes room unconfined.

If the actual Btu/Hr used is less than the maximum Btu/Hr the space can support, the space is an unconfined space. You will need no additional fresh air ventilation.

**⚠ WARNING:** If the area in which the heater may be operated is smaller than that defined as an unconfined space or if the building is of unusually tight construction, provide adequate combustion and ventilation air by one of the methods described in the *National Fuel Gas Code, ANSI Z223.1/NFPA 54 Section 5.3* or applicable local codes.

# AIR FOR COMBUSTION AND VENTILATION

Continued

## VENTILATION AIR

### Ventilation Air From Inside Building

This fresh air would come from an adjoining unconfined space. When ventilating to an adjoining unconfined space, you must provide two permanent openings: one within 12" of the ceiling and one within 12" of the floor on the wall connecting the two spaces (see options 1 and 2, Figure 2). You can also remove door into adjoining room (see option 3, Figure 2). Follow the *National Fuel Gas Code, ANSI Z223.1/NFPA 54, Section 5.3, Air for Combustion and Ventilation* for required size of ventilation grills or ducts.

### Ventilation Air From Outdoors

Provide extra fresh air by using ventilation grills or ducts. You must provide two permanent openings: one within 12" of the ceiling and one within 12" of the floor. Connect these items directly to the outdoors or spaces open to the outdoors. These spaces include attics and crawl spaces. Follow the *National Fuel Gas Code, ANSI Z223.1/NFPA 54, Section 5.3, Air for Combustion and Ventilation* for required size of ventilation grills or ducts.

**IMPORTANT:** Do not provide openings for inlet or outlet air into attic if attic has a thermostat-controlled power vent. Heated air entering the attic will activate the power vent.

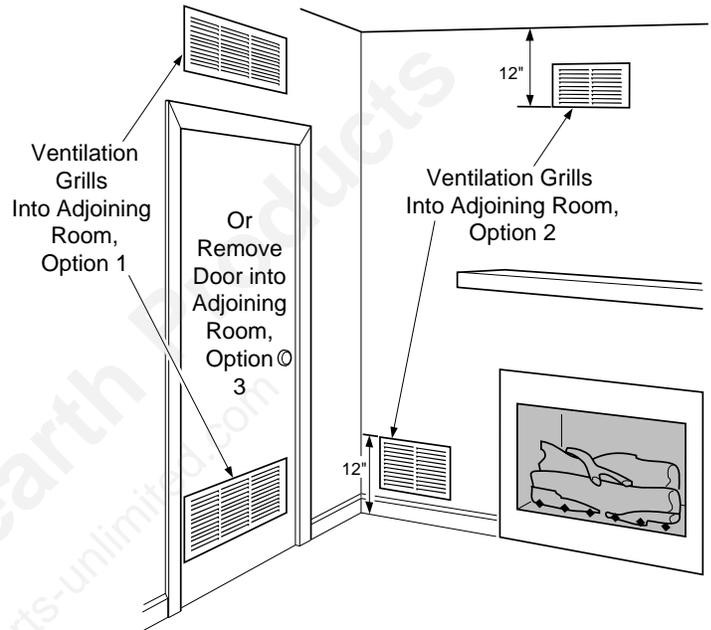


Figure 2 - Ventilation Air from Inside Building

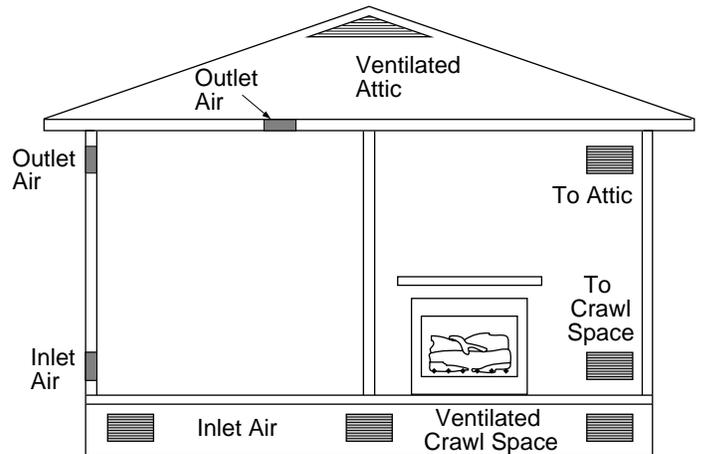


Figure 3 - Ventilation Air from Outdoors

## INSTALLATION

**NOTICE:** This heater is intended for use as supplemental heat. Use this heater along with your primary heating system. Do not install this heater as your primary heat source. If you have a central heating system, you may run system's circulating blower while using heater. This will help circulate the heat throughout the house. In the event of a power outage, you can use this heater as your primary heat source.

**⚠ WARNING:** Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners and circulating air passages of the appliance be kept clean.

**NOTICE:** State or local codes may only allow operation of this appliance in a vented configuration. Check your state or local codes.

**⚠ WARNING:** Make sure the selector switch is in the OFF position before installing heater (Remote-Ready Models Only).

**⚠ WARNING:** Before installing in a solid fuel burning fireplace, the chimney flue and firebox must be cleaned of soot, creosote, ashes and loose paint by a qualified chimney cleaner. Creosote will ignite if highly heated. A dirty chimney flue may create and distribute soot within the house. Inspect chimney flue and firebox for damage. If damaged, repair flue damper before operating heater.

**⚠ WARNING:** Seal any fresh air vents or ash clean-out doors located on floor or wall of fireplace. If not, drafting may cause pilot outage or sooting. Use a heat-resistant sealant. Do not seal chimney flue damper.

**⚠ WARNING:** Never install the heater

- in a bedroom or bathroom unless installed as a vented appliance, see page 11 (Remote-Ready Models Only)
- in a recreational vehicle
- where curtains, furniture, clothing, or other flammable objects are less than 42 inches from the front, top, or sides of the heater
- in high traffic areas
- in windy or drafty areas

**⚠ CAUTION:** This heater creates warm air currents. These currents move heat to wall surfaces next to heater. Installing heater next to vinyl or cloth wall coverings or operating heater where impurities (such as, but not limited to, tobacco smoke, aromatic candles, cleaning fluids, oil or kerosene lamps, etc.) in the air exist, may discolor walls or cause odors.

**IMPORTANT:** Vent-free heaters add moisture to the air. Although this is beneficial, installing heater in rooms without enough ventilation air may cause mildew to form from too much moisture. See *Air for Combustion and Ventilation*, pages 5 through 7.

### CHECK GAS TYPE

Use the correct gas type (natural or propane/LP) for your unit. If your gas supply is not correct, do not install fireplace. Call dealer where you bought fireplace for proper type fireplace.

### INSTALLATION AND CLEARANCES FOR VENT-FREE OPERATION

**⚠ WARNING:** Maintain the minimum clearances. If possible, provide greater clearances from floor, ceiling, and adjoining wall.

LOG SIZING REQUIREMENTS				
Log Size	Minimum Firebox			
	Height	Depth	Front Width	Rear * Width
24"	17"	14"	28"	20 1/4"
30"	17"	14"	34"	22 3/8"

\* Measured at 14" depth.

# INSTALLATION

## Continued

Carefully follow the instructions below. This will ensure safe installation into a masonry, UL127-listed manufactured fireplace, or listed vent-free firebox.

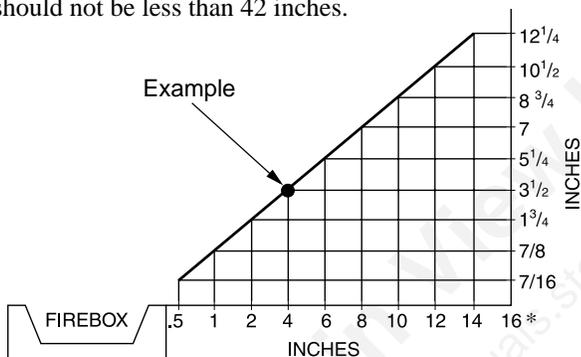
### Minimum Clearances For Side Combustible Material, Side Wall, and Ceiling

A. Clearances from the side of the fireplace cabinet to any combustible material and wall should follow diagram in Figure 4.

**Example:** The face of a mantel, bookshelf, etc. is made of combustible material and protrudes 3 1/2" from the wall. This combustible material must be 4" from the side of the fireplace cabinet (see Figure 4).

**Note:** When installing your gas logs into a manufactured firebox, follow firebox manufacturer's instructions for minimum clearances to combustible materials.

B. Clearances from the top of the fireplace opening to the ceiling should not be less than 42 inches.



\*Minimum 16 inches from Side Wall

Figure 4 - Minimum Clearance for Combustible to Wall

**NOTICE:** Manual control heaters may be used as a vented product. If so, you must always run heater with chimney flue damper open. If running heater with damper open, noncombustible material above fireplace opening is not needed. Go to *Installing Damper Clamp Accessory for Vented Operation*, page 11.

### Minimum Noncombustible Material Clearances

#### If Not Using Mantel

**Note:** If using a mantel proceed to *If Using Mantel*. If not using a mantel, follow the information on this page.

You must have noncombustible material(s) above the fireplace opening. Noncombustible materials (such as slate, marble, tile, etc.) must be at least 1/2 inch thick. With sheet metal, you must have noncombustible material behind it. Noncombustible material must extend at least 8" up (for all models). If noncombustible material is less than 12", you must install the fireplace hood accessory (24" and 30" models only). See Figure 5 for minimum clearances.

#### If Using Mantel

You must have noncombustible material(s) above the fireplace opening. Noncombustible materials (such as slate, marble, tile, etc.) must be at least 1/2 inch thick. With sheet metal, you must have noncombustible material behind it. Noncombustible material must extend at least 8 inches up. If noncombustible material is less than 12", you must install the fireplace hood accessory. Even if noncombustible material is more than 12", you may need the hood accessory to deflect heat away from your mantel shelf. See Figure 5 and Figures 6 and 7, page 10, for minimum clearances.

**IMPORTANT:** If you cannot meet these minimum clearances, you must operate heater with chimney flue damper open. Go to *Installing Damper Clamp Accessory for Vented Operation*, page 11.

Noncombustible Material Distance (A)	Requirements for Safe Installation
12" or more	Noncombustible material OK.
Between 8" and 12"	24" or 30" Models: Install fireplace hood accessory (GA6050, GA6052, or GA6053 see <i>Accessories</i> , page 34).
Less than 8"	Noncombustible material must be extended to at least 8". See <i>Between 8" and 12"</i> , above. If you cannot extend material, you must operate heater with flue damper open.

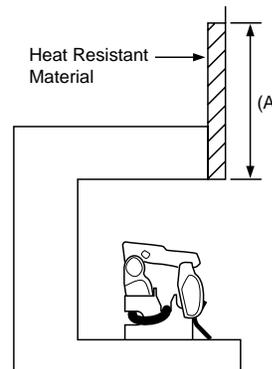


Figure 5 - Heat Resistant Material (Slate, Marble, Tile, etc.) Above Fireplace

## INSTALLATION

### Continued

### MANTEL CLEARANCES

In addition to meeting noncombustible material clearances, you must also meet required clearances between fireplace opening and mantel shelf. If you do not meet the clearances listed below, you will need a hood.

#### Determining Minimum Mantel Clearance

If you meet minimum clearance between mantel shelf and top of fireplace opening, a hood is not required (see Figure 6).

#### Determining Minimum Mantel Clearance When Using a Hood

If minimum clearances in Figure 6 are not met, you must have a hood. When using a hood there are still certain minimum mantel clearances required. Follow minimum clearances shown in Figure 7 when using hood.

**NOTICE: Surface temperatures of adjacent walls and mantels become hot during operation. Walls and mantels above the firebox may become hot to the touch. If installed properly, these temperatures meet the requirement of the national product standard. Follow all minimum clearances shown in this manual.**

**NOTICE: If your installation does not meet the minimum clearances shown, you must do one of the following:**

- operate the logs only with the flue damper open
- raise the mantel to an acceptable height
- remove the mantel

### FLOOR CLEARANCES

- If installing appliance on the floor level, you must maintain the minimum distance of 14" to combustibles (see Figure 8).
- If combustible materials are less than 14" to the fireplace, you must install appliance at least 5" above the combustible flooring (see Figure 9).

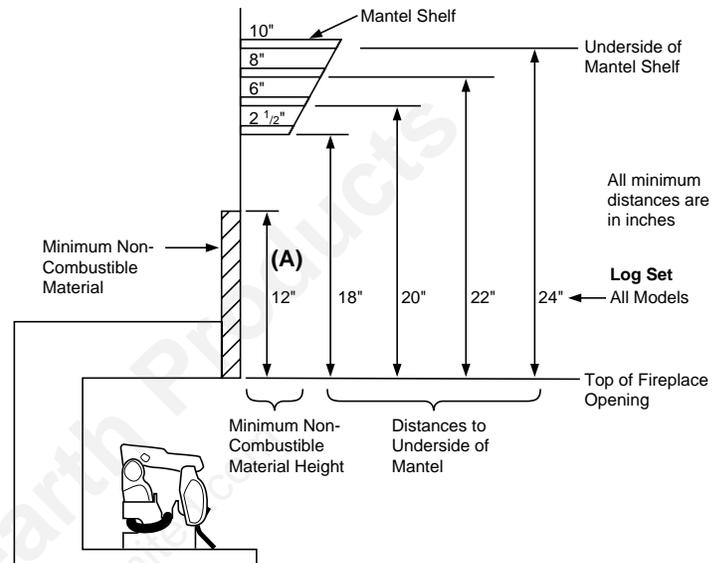


Figure 6 - Minimum Mantel Clearances Without Using Hood

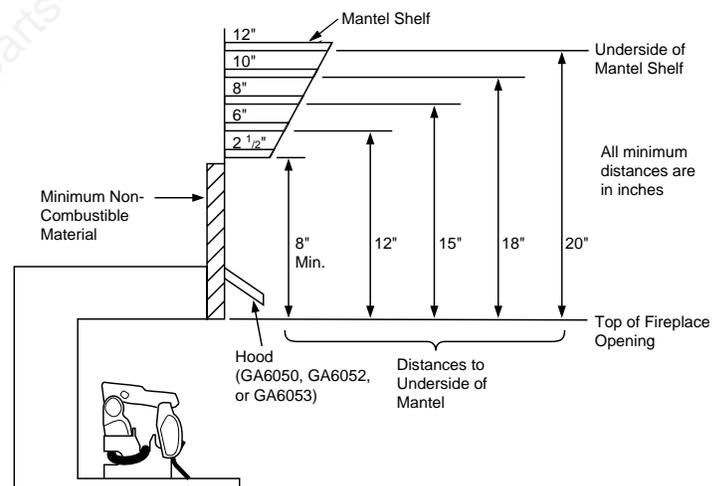


Figure 7 - Minimum Mantel Clearances When Using Hood

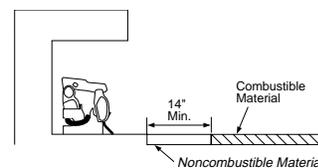


Figure 8 - Minimum Fireplace Clearances If Installed at Floor Level

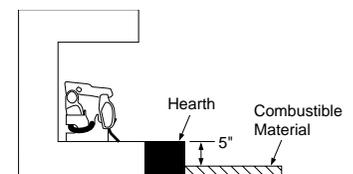


Figure 9 - Minimum Fireplace Clearances Above Combustible Flooring

For more information, visit [www.desatech.com](http://www.desatech.com)

# INSTALLATION

*Continued*

## INSTALLING DAMPER CLAMP ACCESSORY FOR VENTED OPERATION (Remote-Ready Models Only)

*Note:* When used as a vented heater, appliance must be installed only in a solid-fuel burning fireplace with a working flue and constructed of noncombustible material.

If your heater is a manually-controlled, you may use this heater as a vented product. There are three reasons for operating your heater in the vented mode.

1. The fireplace does not meet the clearance to combustibles requirements for vent-free operation.
2. State or local codes do not permit vent-free operation.
3. You prefer vented operation.

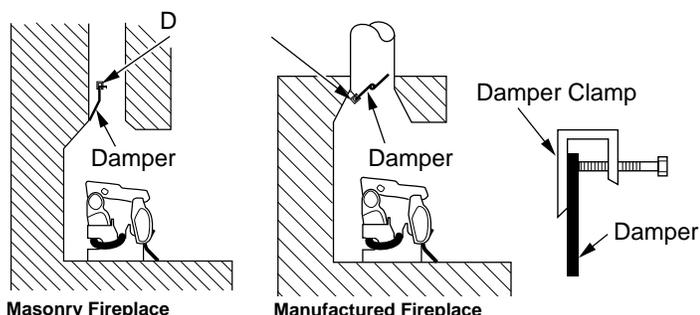
If reasons number 1 or 2 above apply to you, you must permanently open chimney flue damper. You must install the damper clamp accessory (to order, see *Accessories*, page 34). This will insure vented operation (see Figure 10). The damper clamp will keep damper open. Installation instructions are included with clamp accessory.

See chart below for minimum permanent flue opening you must provide. Attach damper clamp so the minimum permanent flue opening will be maintained at all times.

Area of Various Standard Round Flues	
Diameter (ins.)	Area (sq. ins.)
5"	20 sq. inches
6"	29 sq. inches
7"	39 sq. inches
8"	51 sq. inches

Chimney Height (ft.)	Minimum Permanent Flue Opening (sq. ins.)
6' to 15'	39 sq. inches
15' to 30'	29 sq. inches



**Figure 10 - Attaching Damper Clamp**

## INSTALLING HEATER BASE ASSEMBLY

**⚠ WARNING:** You must secure this heater to fire-place floor. If not, heater will move when you adjust controls. Moving heater may cause a gas leak.

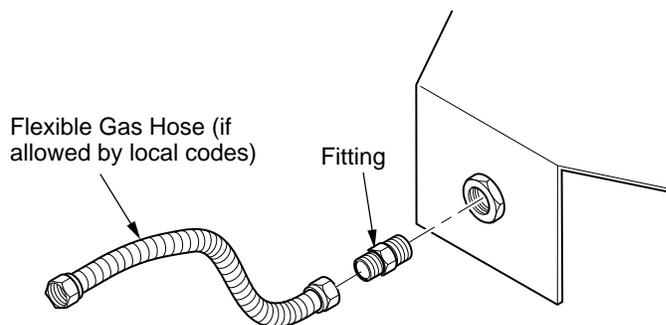
**⚠ WARNING:** If installing in a sunken fireplace, special care is needed. You must raise the fireplace floor to allow access to heater control panel. This will insure adequate air flow and guard against sooting and controls being damaged. Raise fireplace floor with noncombustible material. Make sure material is secure.

**⚠ CAUTION:** Do not pick up heater base assembly by burners. This could damage heater. Only handle base assembly by sides of base.

**IMPORTANT:** Make sure the heater burners are level. If heater is not level, heater will not work properly. For thermostat models, avoid damage to thermostat bulb. Avoid nicks or sharp bends in thermostat bulb wire. Keep thermostat bulb in mounting bracket until ready to mount base to floor. See *Optional Positioning of Thermostat Sensing Bulb*, page 27.

### Installation Items Needed

- hardware package (provided with heater)
  - approved flexible gas hose and fitting (not provided) (if allowed by local codes)
  - sealant (resistant to propane/LP gas, not provided)
  - electric drill with 3/16" drill bit (metal or masonry as applicable)
  - flathead screwdriver
1. Connect fitting to base as shown in Figure 11. Connect approved flexible gas hose to fitting in base (see Figure 11).  
**IMPORTANT:** Hold gas fitting with wrench when connecting flexible gas hose.



**Figure 11 - Attaching Flexible Gas Hose to Heater**

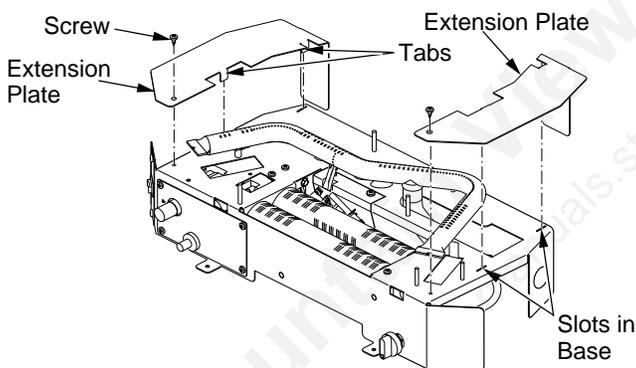
**For more information, visit [www.desatech.com](http://www.desatech.com)**



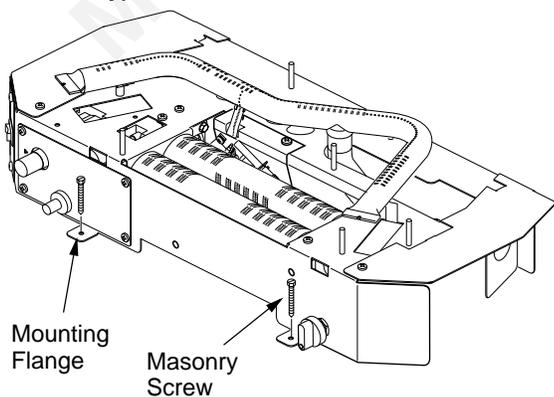
## INSTALLATION

### Continued

2. Locate two masonry screws in hardware package.
3. Attach extension plates (left and right on 30" models only) to base by placing tabs into base slots. Use supplied screws (2) to secure extension plates to base (see Figure 12).
4. Place heater base in fireplace.
5. Place logs in their proper position on heater base (see *Installing Logs*, pages 15 and 16).
6. Center heater base and logs front-to-back and side-to-side in fireplace.
7. Carefully remove logs without moving heater base.
8. Mark screw locations through one hole on each side of the mounting bracket (see Figure 13). If installing in a brick-bottom fireplace, mark screw locations in mortar joint of bricks.
9. Remove heater base from fireplace. If installing optional control accessories, do so at this time. Follow all directions provided with accessory.
10. Drill holes at marked locations using 3/16" drill bit.
11. Attach base assembly to fireplace floor using two masonry screws (in hardware package).



**Figure 12 - Attaching Extension Plates to Base Assembly (30" Model Only)**



**Figure 13 - Attaching Base Assembly to Fireplace Floor (30" Model Shown)**

## CONNECTING TO GAS SUPPLY

**⚠ WARNING:** This appliance requires a 1/2" NPT (National Pipe Thread) inlet connection to the pressure regulator.

**⚠ WARNING:** A qualified service person must connect heater to gas supply. Follow all local codes.

**⚠ CAUTION:** For propane/LP gas, never connect heater directly to the propane/LP supply. This heater requires an external regulator (not supplied). Install the external regulator between the heater and propane/LP supply.

### Installation Items Needed

Before installing heater, make sure you have the items listed below.

- external regulator for propane/LP only (supplied by installer)
- piping (check local codes)
- sealant (resistant to propane/LP gas)
- equipment shutoff valve \*
- test gauge connection \*
- sediment trap
- tee joint
- pipe wrench

\* A CSA design-certified equipment shutoff valve with 1/8" NPT tap is an acceptable alternative to test gauge connection. Purchase the optional CSA design-certified equipment shutoff valve from your dealer. See *Accessories*, page 34.

For propane/LP only, the installer must supply an external regulator. The external regulator will reduce incoming gas pressure. You must reduce incoming gas pressure to between 11 and 14 inches of water. If you do not reduce incoming gas pressure, heater regulator damage could occur. Install external regulator with the vent pointing down as shown in Figure 14, page 13. Pointing the vent down protects it from freezing rain or sleet.

**⚠ WARNING:** For natural gas, never connect heater to private (non-utility) gas wells. This gas is commonly known as wellhead gas.

**⚠ CAUTION:** Use only new, black iron or steel pipe. Internally-tinned copper tubing may be used in certain areas. Check your local codes. Use pipe of 1/2" diameter or greater to allow proper gas volume to heater. If pipe is too small, undue loss of volume will occur.

**For more information, visit [www.desatech.com](http://www.desatech.com)**

# INSTALLATION

## Continued

Installation must include an equipment shutoff valve, union, and plugged 1/8" NPT tap. Locate NPT tap within reach for test gauge hook up. NPT tap must be upstream from heater (see Figure 15 or 16, depending on your model).

**IMPORTANT:** Install equipment shutoff valve in an accessible location. The equipment shutoff valve is for turning on or shutting off the gas to the appliance.

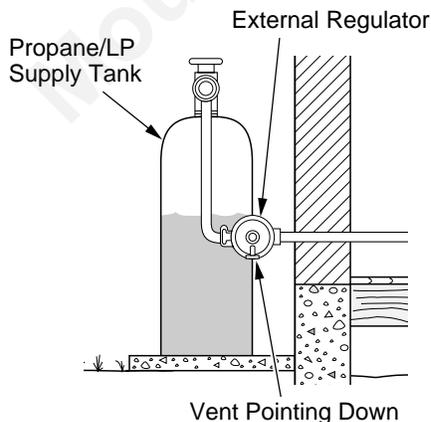
Apply pipe joint sealant lightly to male NPT threads. This will prevent excess sealant from going into pipe. Excess sealant in pipe could result in clogged heater valves.

**⚠ WARNING: Use pipe joint sealant that is resistant to liquid petroleum (LP) gas.**

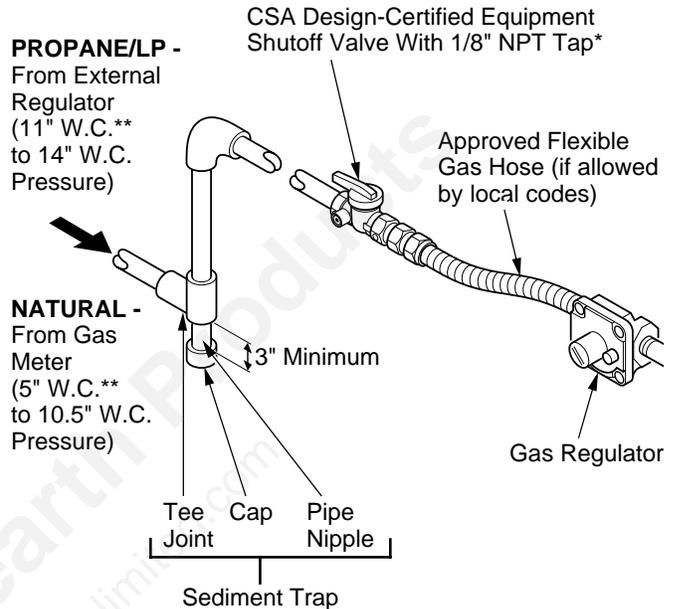
We recommend that you install a sediment trap in supply line as shown in Figure 15 or 16, depending on your model. Locate sediment trap where it is within reach for cleaning. Install in piping system between fuel supply and heater. Locate sediment trap where trapped matter is not likely to freeze. A sediment trap traps moisture and contaminants. This keeps them from going into heater controls. If sediment trap is not installed or is installed wrong, heater may not run properly.

**⚠ CAUTION: Avoid damage to regulator. Hold gas regulator with wrench when connecting it to gas piping and/or fittings (Thermostat-Controlled Models Only).**

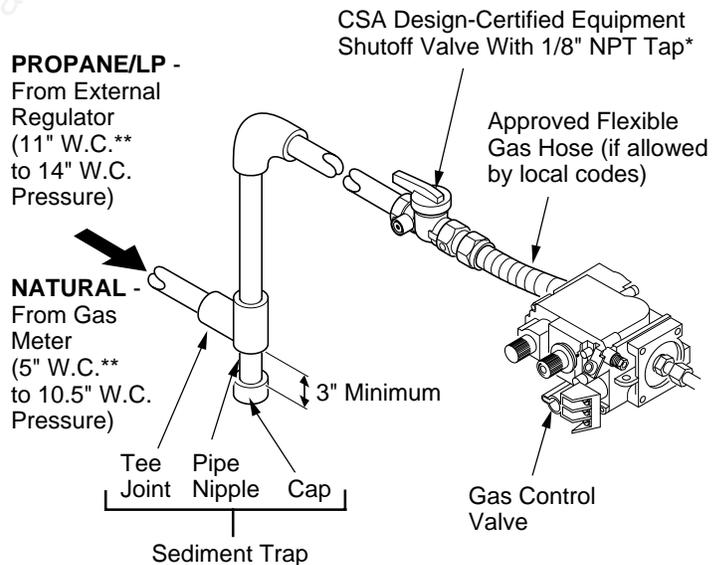
**⚠ CAUTION: Avoid damage to gas control. Hold gas control with wrench when connecting it to gas piping and/or fittings (Remote-Ready Models Only).**



**Figure 14 - External Regulator With Vent Pointing Down**



**Figure 15 - Gas Connection (Thermostat-Controlled Models Only)**



**Figure 16 - Gas Connection (Remote-Ready Models Only)**

\* Purchase the optional CSA design-certified equipment shutoff valve from your dealer. See *Accessories*, page 34.

\*\*Minimum inlet pressure for purpose of input adjustment.

## INSTALLATION

*Continued*

### CHECKING GAS CONNECTIONS

**⚠ WARNING:** Test all gas piping and connections for leaks after installing or servicing. Correct all leaks at once.

**⚠ WARNING:** Never use an open flame to check for a leak. Apply a noncorrosive leak detection fluid to all joints. Bubbles forming show a leak. Correct all leaks at once.

**⚠ CAUTION:** Make sure external regulator has been installed between propane/LP supply and heater. See guidelines under *Connecting to Gas Supply*, page 12.

#### Pressure Testing gas Supply Piping system

##### Test Pressures In Excess Of 1/2 PSIG (3.5 kPa)

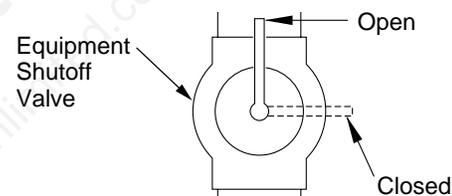
1. Disconnect appliance with its appliance main gas valve (control valve) and equipment shutoff valve from gas supply piping system. Pressures in excess of 1/2 psig will damage heater regulator.
2. Cap off open end of gas pipe where equipment shutoff valve was connected.
3. Pressurize supply piping system by either opening propane/LP supply tank valve for propane/LP gas or opening main gas valve located on or near gas meter for natural gas, or using compressed air.
4. Check all joints of gas supply piping system. Apply a noncorrosive leak detection fluid to all joints. Bubbles forming show a leak.
5. Correct all leaks at once.
6. Reconnect heater and equipment shutoff valve to gas supply. Check reconnected fittings for leaks.

##### Test Pressures Equal To or Less Than 1/2 PSIG (3.5 kPa)

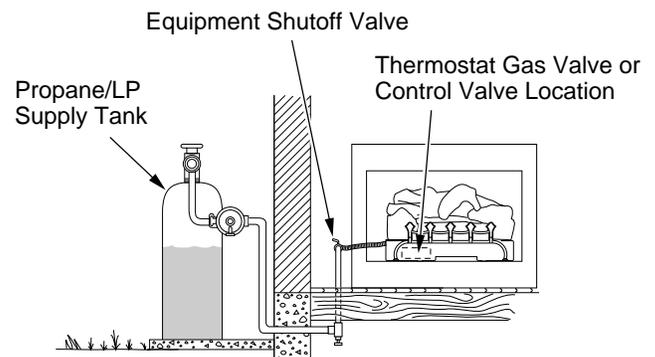
1. Close equipment shutoff valve (see Figure 17).
2. Pressurize supply piping system by either opening propane/LP supply tank valve for propane/LP gas or opening main gas valve located on or near gas meter for natural gas, or using compressed air.
3. Check all joints from gas meter for natural or propane/LP supply to equipment shutoff valve (see Figure 18 or 19). Apply a noncorrosive leak detection fluid to all joints. Bubbles forming show a leak.
4. Correct all leaks at once.

#### Pressure Testing Heater Gas Connections

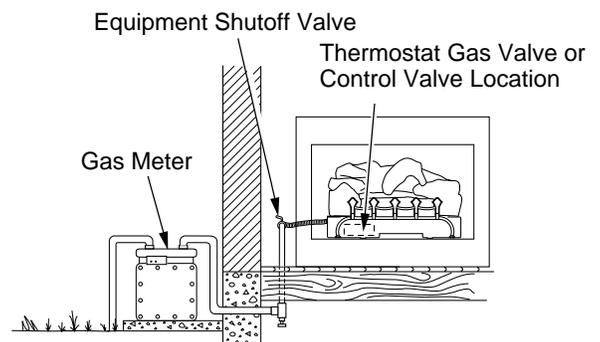
1. Open equipment shutoff valve (see Figure 17).
2. Open main gas valve located on or near gas meter for natural gas or open propane/LP supply tank valve.
3. Make sure control knobs of heater are in the OFF position.
4. Check all joints from equipment shutoff valve to thermostat gas valve (Thermostat-Controlled Models) or control valve (Remote-Ready Models) (see Figure 18 or 19). Apply a noncorrosive leak detection fluid to all joints. Bubbles forming show a leak.
5. Correct all leaks at once.
6. Light heater (see *Operating Heater*, pages 17 through 21). Check all other internal joints for leaks.
7. Turn off heater (see *To Turn Off Gas to Appliance*, page 18 [Thermostat-Controlled Models] or page 20 [Remote-Ready Models]).



**Figure 17 - Equipment Shutoff Valve**



**Figure 18 - Checking Gas Joints (Propane/LP Gas Only)**



**Figure 19 - Checking Gas Joints (Natural Gas Only)**

**For more information, visit [www.desatech.com](http://www.desatech.com)**

# INSTALLATION

*Continued*

## INSTALLING LOGS

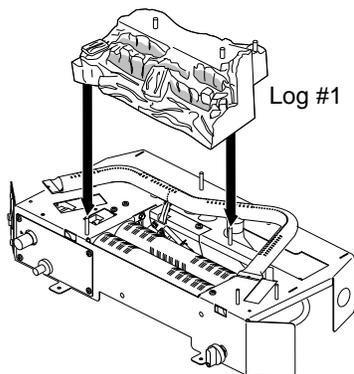
**⚠ WARNING:** Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this heater may result in property damage or personal injury.

**⚠ CAUTION:** After installation and periodically thereafter, check to ensure that no yellow flame comes in contact with any log. With the heater set to HI, check to see if flames contact any log. If so, reposition logs according to the log installation instructions in this manual. Yellow flames contacting logs will create soot.

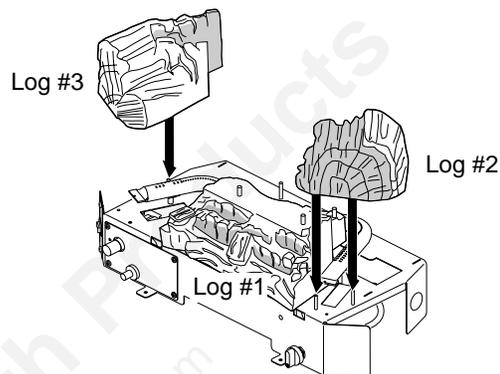
It is very important to install the logs exactly as instructed. Do not modify logs. Only use logs supplied with heater. Before installing logs, make sure log alignment screws are in place and straight.

**Models CSG3924NT, CSG3924PT, CSG3924NR, CSG3924PR, CTB3924NT, CTB3924PT, CTB3924NR and CTB3924PR**

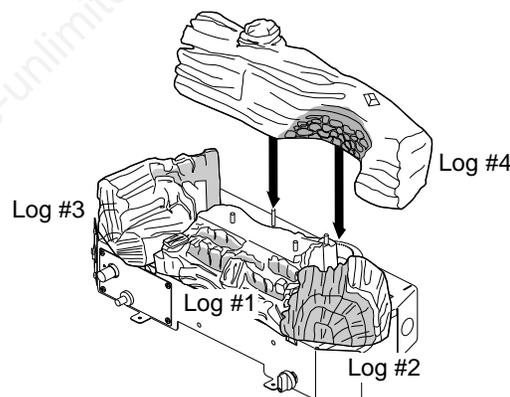
1. Place log #1 (ember bed) onto base. Position log over alignment screws to left of front burner and behind middle burner. Ember bed will sit on top of front and middle burners (see Figure 20).
2. Place log #2 to the right of log #1. Log #2 will wrap around right end of rear burner and sit on two log alignment screws (see Figure 21).
3. Place log #3 on left side of base and onto alignment screw shown in Figure 21, to left of rear burner. Log #3 will wrap around left end of rear burner.
4. Place log #4 onto two alignment screws to the rear of base (see Figure 22).
5. Place log #5 over knob on log #4 and across back part of log #1 and touch log #2 (see Figure 23).
6. Place log #6 onto two pin on log #1 (ember bed) and rest back of log #6 on back log #4 (see Figure 23).



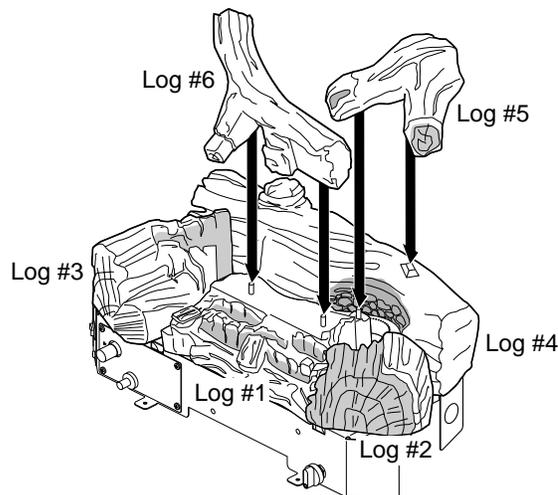
**Figure 20 - Installing Log #1 [Ember Bed] (Model CSG3924NR Shown)**



**Figure 21 - Installing Log #2 (Right) and Log #3 (Left) (Model CSG3924NR Shown)**



**Figure 22 - Installing Log #4 (Model CSG3924NR Shown)**



**Figure 23 - Installing Log #5 (Right) and Log #6 (Left) (Model CSG3924NR Shown)**

For more information, visit [www.desatech.com](http://www.desatech.com)

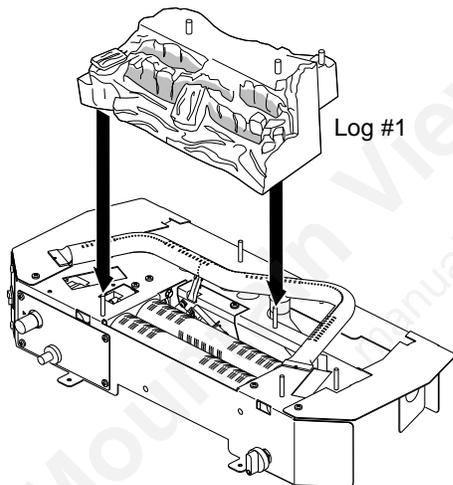


## INSTALLATION

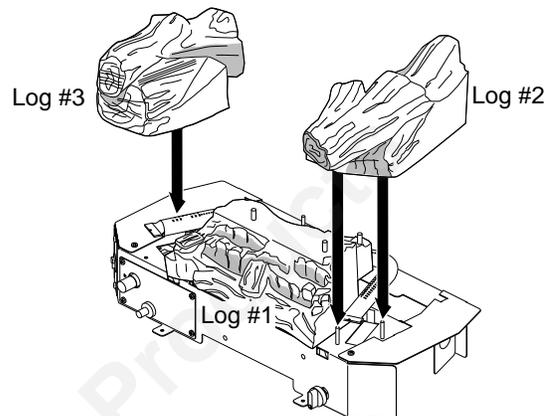
### Continued

#### Models VRL24NR, VRL24PR, VRL30NR, VRL30PR, VRL24NT, VRL24PT, VRL30NT and VRL30PT

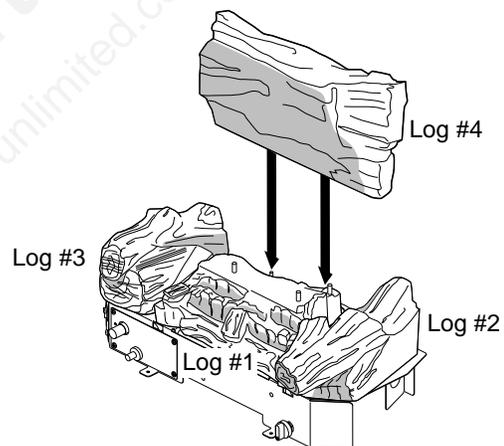
1. Place log #1 (ember bed) onto base over log alignment screws to the left of front burner and behind middle burner. Log #1 will sit on top of front and middle burners (see Figure 24).
2. Place log #2 to right of log #1 and onto two log alignment screws as shown in Figure 25. Log #2 will wrap around right end of rear burner (see Figure 25).
3. Place log #3 on left side of base and over alignment screw shown in Figure 25 to left of rear burner. Log #3 will wrap around left end of rear burner.
4. Place log #4 onto two alignment screws to rear of base (see Figure 26).
5. Locate hole on bottom of log #5 and place over pin in rear of ember bed (log #1). Log #5 will rest on log #2 and log #4 as well (see Figure 27)
6. Place log #6 onto two pin on log #1 (ember bed) and rest back of log #6 on back log #4 (see Figure 27).



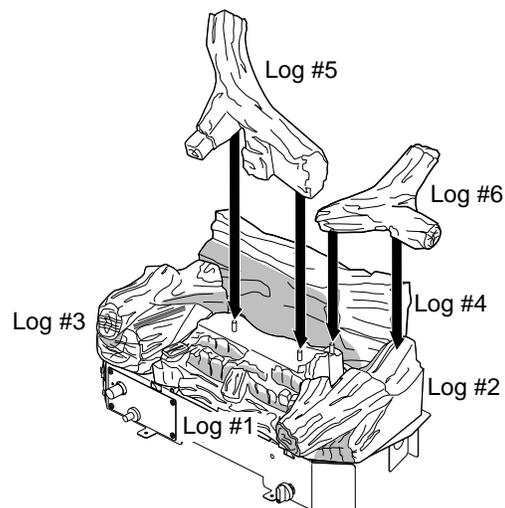
**Figure 24 - Installing Log #1 (Ember Bed)**  
**[Model VRL30NR Shown]**



**Figure 25 - Installing Log #2 (Right) and Log #3 (Left)**  
**[Model VRL30NR Shown]**



**Figure 26 - Installing Log #4 (Model VRL30NR Shown)**



**Figure 27 - Installing Log #5 and Log #6**  
**[Model VRL30NR Shown]**

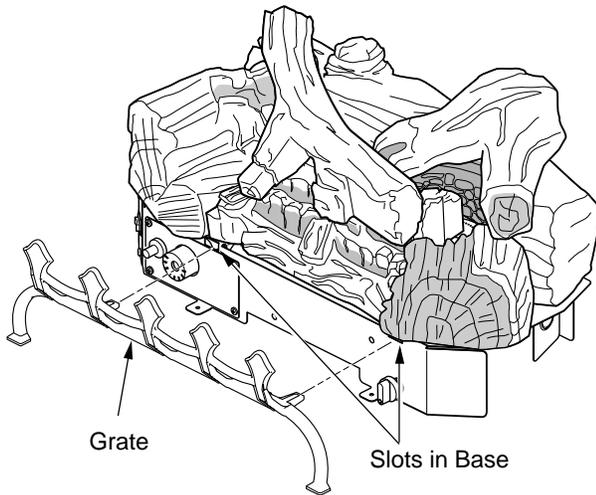
**For more information, visit [www.desatech.com](http://www.desatech.com)**

## INSTALLATION

*Continued*

### ATTACHING GRATE TO BASE ASSEMBLY

Locate the two slots in the front of the base assembly. Carefully slide the decorative grate into these slots (see Figure 28).



*Figure 28 - Attaching Grate to Base Assembly (Logs and Base Will Vary According to Model)*

### ADDING LAVA ROCK

Place lava rock around base of heater if desired. Be sure not to cover the control knobs or air inlet openings on the front of heater.

## OPERATING HEATER

### THERMOSTAT-CONTROLLED MODELS

**FOR YOUR SAFETY READ  
BEFORE LIGHTING**

**⚠ WARNING:** If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. **BEFORE LIGHTING** smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

#### WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
  - Do not touch any electric switch; do not use any phone in your building.
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician or gas supplier. Force or attempted repair may result in a fire or explosion.
  - D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

### LIGHTING INSTRUCTIONS

**⚠ WARNING:**

- If fireplace has glass doors, never operate this heater with glass doors closed. If you operate heater with doors closed, heat buildup inside fireplace will cause glass to burst. Also if fireplace opening has vents at the bottom, you must open the vents before operating heater.
- You must operate this heater with a fireplace screen in place. Make sure fireplace screen is closed before running heater.

**NOTICE:** During initial operation of new heater, burning logs will give off a paper-burning smell. Orange flame will also be present. Open damper or window to vent smell. This will only last a few hours.

## OPERATING HEATER

### Continued

**Note:** Home owners generally prefer to operate their heater with the chimney damper closed. This will put all the heat into the room. However, there may be times you will desire the full flames of the HI heat setting but will find the heat output excessive. You can open the chimney damper (if you have one) fully or partially to release some of the heat.

**⚠ WARNING:** Damper handle will be hot if heater has been running.

1. STOP! Read the safety information on page 17, column 2.
2. Make sure equipment shutoff valve is fully open.
3. Turn control knob clockwise  to the OFF position.
4. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information, page 17, column 2. If you don't smell gas, go to the next step.
5. Turn control knob counterclockwise  to the PILOT position. Press in control knob for five (5) seconds (see Figure 29).

**Note:** You may be running this heater for the first time after hooking up to gas supply. If so, the control knob may need to be pressed in for 30 seconds or more. This will allow air to bleed from the gas system.

6. With thermostat control knob pressed in, press and release ignitor button. This will light pilot. The pilot is attached to the front burner. If needed, keep pressing ignitor button until pilot lights.

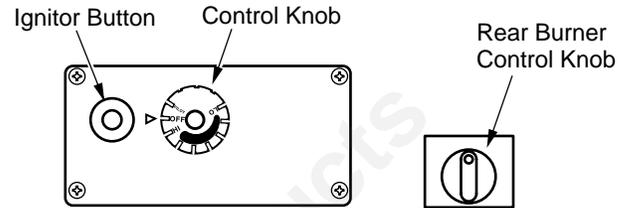
**Note:** If pilot does not stay lit, contact a qualified service person or gas supplier for repairs. Until repairs are made, light pilot with match. To light pilot with match, see *Manual Lighting Procedure* on page 19.

7. Keep control knob pressed in for 30 seconds after lighting pilot. After 30 seconds, release control knob.
  - If control knob does not pop out when released, contact a qualified service person or gas supplier for repairs.

**Note:** If pilot goes out, repeat steps 3 through 7. This heater has a safety interlock system. Wait one (1) minute for system to reset before lighting pilot again.

8. Turn control knob counterclockwise  to desired heating level. The front burner should light. Set control knob to any heat level between HI and LO.
9. To light the rear yellow flame burner, push in and turn rear burner control knob counterclockwise  to the ON position.

**⚠ CAUTION:** Do not try to adjust heating levels by using the equipment shutoff valve.



Models: CSG3924NT, CSG3924PT, VRL24NT, VRL24PT, VRL30NT and VRL30PT

Figure 29 - Control Knob(s) and Ignitor Button Locations

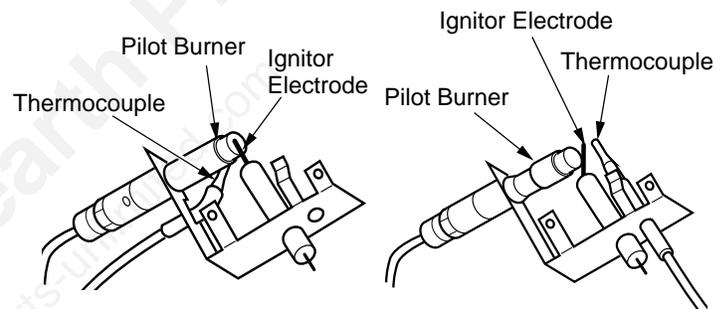


Figure 30 - Pilot (Propane/LP) Figure 31 - Pilot (Natural)

## TO TURN OFF GAS TO APPLIANCE

### Shutting Off Heater

1. Turn control knob clockwise  to the OFF position.
2. Turn rear burner control knob clockwise  to the OFF position.

### Shutting Off Burners Only (pilot stays lit)

1. Turn control knob clockwise  to the PILOT position.
2. Turn rear burner control knob clockwise  to the OFF position.

## OPERATING HEATER

Continued

### THERMOSTAT CONTROL OPERATION

The thermostat control knob can be set to any comfort level between HI and LO. The thermostat will gradually modulate the heat output and flame height from higher to lower settings, or pilot, in order to maintain the comfort level you select. The ideal comfort setting will vary by household depending upon the amount of space to be heated, the output of the central heating system, etc.

**Note:** Selecting the HI setting with the control knob will cause the burner to remain fully on, without modulating down in most cases.

### MANUAL LIGHTING PROCEDURE

1. Follow steps 1 through 5 under *Lighting Instructions*, page 18.
2. Depress control knob and light pilot with match.
3. Keep control knob pressed in for 30 seconds after lighting pilot. After 30 seconds, release control knob. Now follow steps 8 and 9 under *Lighting Instructions*, page 18.

### REMOTE-READY MODELS

#### FOR YOUR SAFETY READ BEFORE LIGHTING

**⚠ WARNING:** If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. **BEFORE LIGHTING** smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

#### WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
  - Do not touch any electric switch; do not use any phone in your building.
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician or gas supplier. Force or attempted repair may result in a fire or explosion.
  - D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

### LIGHTING INSTRUCTIONS

#### ⚠ WARNING:

- If fireplace has glass doors, never operate this heater with glass doors closed. If you operate heater with doors closed, heat buildup inside fireplace will cause glass to burst. Also if fireplace opening has vents at the bottom, you must open the vents before operating heater.
- You must operate this heater with a fireplace screen in place. Make sure fireplace screen is closed before running heater.

**NOTICE:** During initial operation of new heater, burning logs will give off a paper-burning smell. Open damper or window to vent smell. This will only last a few hours.

**Note:** Home owners generally prefer to operate their heater with the chimney damper closed. This will put all the heat into the room. However, there may be times you will desire the full flames of the HI heat setting but will find the heat output excessive. You can open the chimney damper (if you have one) fully or partially to release some of the heat.

**⚠ WARNING:** Damper handle will be hot if heater has been running.

1. **STOP!** Read the safety information in column 1.
2. Make sure equipment shutoff valve is fully open.
3. Set switch in OFF position.

**⚠ WARNING:** Burner will come on automatically within one minute when the remote selector switch is in the ON position after the pilot is lit.

4. Press in and turn control knobs clockwise  to the OFF position.
5. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, **STOP!** Follow "B" in the safety information, column 1. If you don't smell gas, go to the next step.
6. Press in and turn control knob counterclockwise  to the PILOT position. Press in control knob for five (5) seconds (see Figure 32, page 20).

**Note:** You may be running this heater for the first time after hooking up to gas supply. If so, the control knob may need to be pressed in for 30 seconds or more. This will allow air to bleed from the gas system.

For more information, visit [www.desatech.com](http://www.desatech.com)

**DESA**

## OPERATING HEATER

### Continued

7. With control knob pressed in, press and release ignitor button. This will light pilot. The pilot is attached to the front burner. If needed, keep pressing ignitor button until pilot lights.
 

**Note:** If pilot does not stay lit, contact a qualified service person or gas supplier for repairs. Until repairs are made, light pilot with match. To light pilot with match, see *Manual Lighting Procedure*.
8. Keep control knob pressed in for 30 seconds after lighting pilot. After 30 seconds, release control knob.
  - If control knob does not pop out when released, contact a qualified service person or gas supplier for repairs.
 

**Note:** If pilot goes out, repeat steps 4 through 8.
9. Slightly push in and turn control knob counterclockwise to the ON position.
10. Wait one minute and switch selector switch to the ON position to light burner. **Note:** AUTO is only functional when using GWMT1 or GWMS2 optional accessories.
11. To light the front/rear burners, push in and turn rear burner control knob counterclockwise to the ON position.

**CAUTION:** Do not try to adjust heating levels by using the equipment shutoff valve.

**WARNING:** Make sure the selector switch is in the OFF position when you are away from home for long periods of time. Heater will come on automatically with selector switch in the ON position.

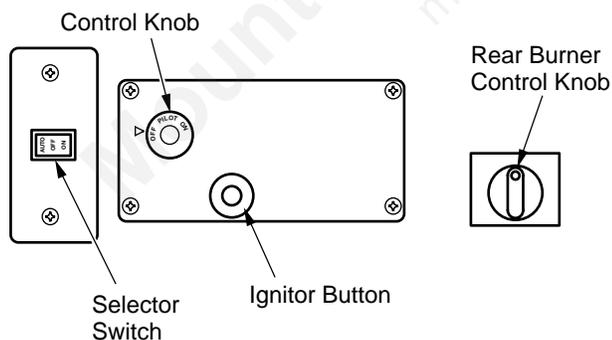


Figure 32 - Control Knobs and Ignitor Button Locations (Shown as Supplied, No Remote Control Operation)

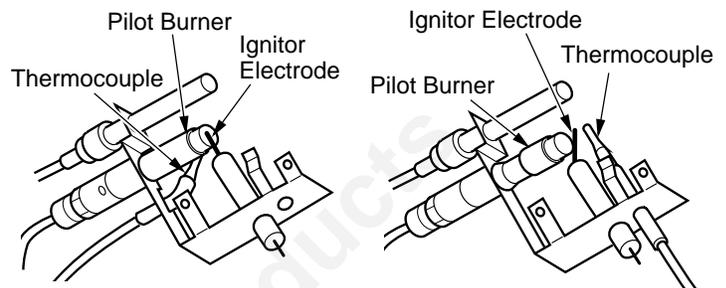


Figure 33 - Pilot (Propane/LP) Figure 34 - Pilot (Natural)

## TO TURN OFF GAS TO APPLIANCE

### Shutting Off Heater

1. Turn control knob clockwise to the OFF position.
2. Turn rear burner control knob clockwise to the OFF position.
- 3a. Set selector switch in the OFF position.
- 3b. If Using Optional Hand-Held Remote: Set selector switch in the OFF position to prevent draining battery.

### Shutting Off Burners Only (pilot stays lit)

You may shut off the burners and keep the pilot lit by doing one of the following:

1. Turn control knob clockwise to the PILOT position.
2. Turn rear burner control knob clockwise to the OFF position.
3. Use remote control manual OFF button.
4. Set selector switch in the OFF position.

## MANUAL LIGHTING PROCEDURE

1. Follow steps 1 through 6 under *Lighting Instructions*, page 20.
2. Depress control knob and light pilot with match.
3. Keep control knob pressed in for 30 seconds after lighting pilot. After 30 seconds, release control knob. Now follow steps 9 through 12, *Lighting Instructions*, column 1.

## OPERATING HEATER

Continued

### OPTIONAL REMOTE OPERATION

**Note:** All remote control accessories must be purchased separately (see *Accessories*, page 34). Follow instructions included with the remote control.

#### Thermostat Control Operation

(Optional GHRCTA Series Only) The thermostat control setting on the remote control unit can be set to any comfort level between WARMER and COOLER. The burners will turn on and off automatically to maintain the comfort level you select. The ideal comfort setting will vary by household depending upon the amount of space to be heated, the output of the central heating system, etc.

For wall thermostat operation, follow instruction supplied with thermostat accessory GWMT1. For wall switch operation follow instructions supplied with GWMS2.

**NOTICE:** You must light the pilot before using the hand-held remote control unit. See *Lighting Instructions* on pages 19 and 20.

1. After lighting, let pilot flame burn for about one minute. Turn control knob to ON position. Adjust flame adjustment knob anywhere between HI and LO. Slide the selector switch to the REMOTE position. **Note:** The burners may light if hand-held remote ON button was on when selector switch was last turned off. You can now turn the burners on and off with the hand-held remote control unit.

**IMPORTANT:** Do not leave the selector switch in the REMOTE position when the pilot is not lit. This will drain the battery.

**IMPORTANT:** Be sure to press the ON/OFF buttons on the hand-held remote control unit for up to 3 seconds to assure proper operation.

#### GHRC Series Operation:

- 2a. Press the ON/OFF button to turn the burners on and off. When turning burners off, the pilot will remain lit.

#### GHRCTA Series Operation:

- 2b. Press the AUTO/ON/OFF button on the hand-held remote control (see Figure 36). The lights to the left of the button will show AUTO, ON, or OFF.
  - In the ON mode, the burners will ignite. The heater is in manual mode when ON is lit.

- In the AUTO mode, the thermostat in the hand-held remote unit controls the room temperature. To increase the room temperature, press the top arrow of the TEMP button. To lower the room temperature, press the bottom arrow of the TEMP button. At higher settings the heater will run longer.

**IMPORTANT:** This remote control has been specially engineered to take an air temperature sample every 5.5 minutes in the auto mode. It will not respond immediately to the temperature setting being turned up or down.

**IMPORTANT:** The hand-held remote control unit must be near the heater. Do not keep the hand-held remote control unit too close to the heater. The thermostat on the hand-held remote control unit will heat up too quickly and turn the heater off.

3. To turn the burner off, press the AUTO/ON/OFF button until OFF lights. The pilot will remain lit.

**IMPORTANT:** To turn the pilot off, manually turn the control knob on the heater to the OFF position.

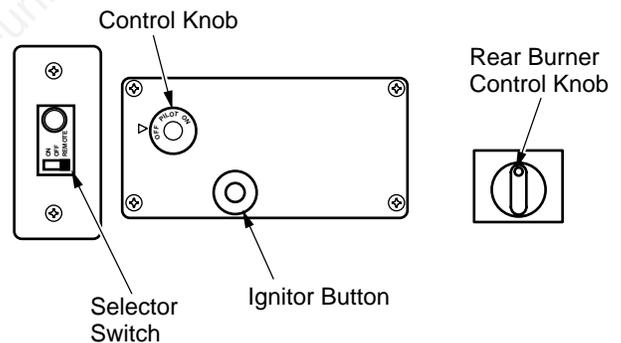


Figure 35 - Control Knobs, Selector Switch and Ignitor Button Locations for Remote Operation

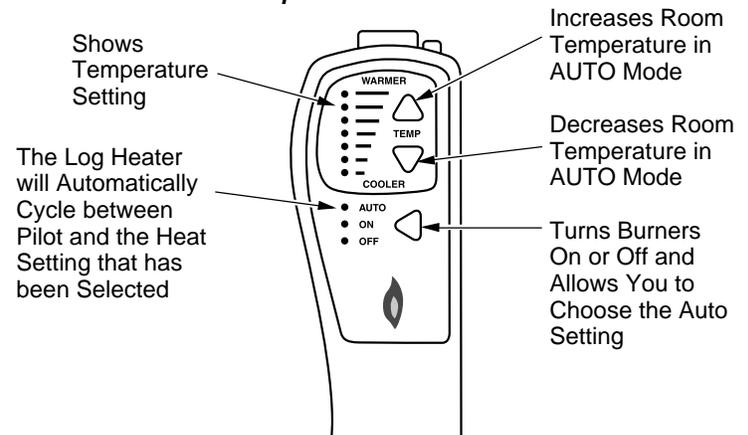


Figure 36 - Thermostat Hand-Held Remote Control Unit Selections (GHRCTA Only)

## INSPECTING BURNERS

Check pilot flame pattern and burner flame patterns often.

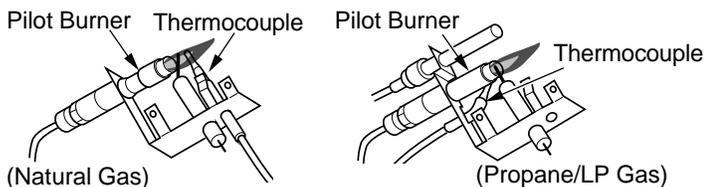
### PILOT FLAME PATTERN

Figure 37 shows a correct pilot flame pattern. Figure 38 shows an incorrect pilot flame pattern. The incorrect pilot flame is not touching the thermocouple. This will cause the thermocouple to cool. When the thermocouple cools, the heater will shut down.

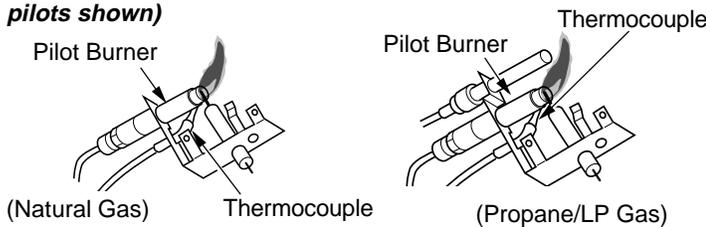
If pilot flame pattern is incorrect, as shown in Figure 38

- turn heater off (see *To Turn Off Gas to Appliance*, page 18 [Thermostat-Controlled Models] or page 20 [Remote-Ready Models])
- see *Troubleshooting*, pages 24 through 26

**Note:** The pilot flame on natural gas units will have a slight curve, but the flame should be blue and have no yellow or orange color.



**Figure 37 - Correct Pilot Flame Pattern (Your pilot may vary from pilots shown)**



**Figure 38 - Incorrect Pilot Flame Pattern (Your pilot may vary from pilots shown)**

### BURNER FLAME PATTERNS

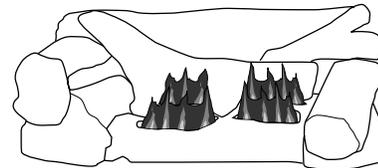
Figure 39 shows correct front and/or middle burner flame patterns. Figure 40 shows incorrect front and/or middle burner flame patterns. The incorrect burner flame patterns show yellow tipping at top of blue flame.

**WARNING:** If yellow tipping occurs, your heater could produce increased levels of carbon monoxide. If burner flame patterns show yellow tipping, follow instructions below. Yellow flame on rear burner is normal.

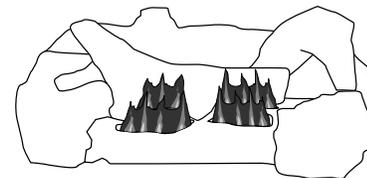
**NOTICE:** Do not mistake orange flames with yellow tipping. Dirt or other fine particles are burned by heater, causing brief patches of orange flame.

If front and/or middle burner flame patterns are incorrect, as shown in Figure 40

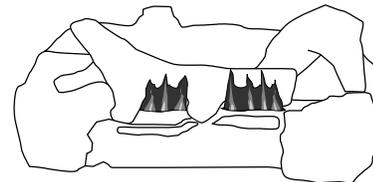
- turn heater off (see *To Turn Off Gas to Appliance*, page 18 [Thermostat-Controlled Models] or page 20 [Remote-Ready Models])
- see *Troubleshooting*, pages 24 through 26



Correct Front and Middle Burner Flame Patterns for VRL24NT/PT, VRL24NR/PR, VRL30NT/PT and VRL30NR/PR Models



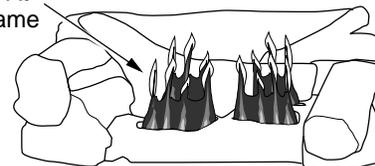
Correct Front and Middle Burner Flame Patterns for CSG3924NT/PT and CSG3924NR/PR Models



Correct Middle Burner Flame Pattern for CTB3924NT/PT and CTB3924NR/PR Models

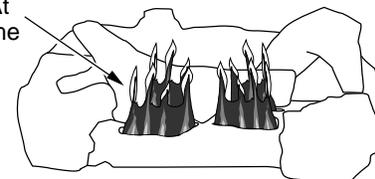
**Figure 39 - Correct Burner Flame Patterns**

Yellow Tipping At  
Top of Blue Flame



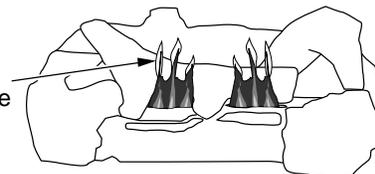
Incorrect Front and Middle Burner Flame Patterns for VRL24NT/PT, VRL24NR/PR, VRL30NT/PT and VRL30NR/PR Models

Yellow Tipping At  
Top of Blue Flame



Incorrect Front and Middle Burner Flame Patterns for CSG3924NT/PT and CSG3924NR/PR Models

Yellow Tipping At  
Top of Blue Flame



Incorrect Middle Burner Flame Pattern for CTB3924NT/PT and CTB3924NR/PR Models

**Figure 40 - Incorrect Burner Flame Patterns (VRL Models only)**

## CLEANING AND MAINTENANCE

**⚠ WARNING:** Turn off heater and let cool before cleaning.

**⚠ CAUTION:** You must keep control areas, burners, and circulating air passageways of heater clean. Inspect these areas of heater before each use. Have heater inspected yearly by a qualified service person. Heater may need more frequent cleaning due to excessive lint from carpeting, pet hair, bedding material, etc.

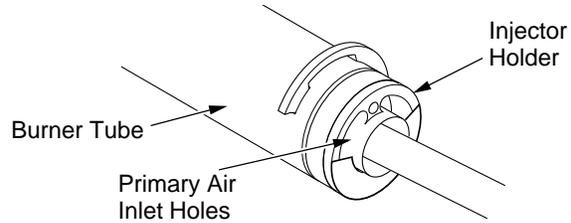
### CLEANING BURNER INJECTOR HOLDERS AND PILOT AIR INLET HOLES

The primary air inlet holes allow the proper amount of air to mix with the gas. This provides a clean burning flame. Keep these holes clear of dust, dirt, lint, and pet hair. Clean these air inlet holes prior to each heating season. Blocked air holes will create soot. We recommend that you clean the unit every three months during operation and have heater inspected yearly by a qualified service person.

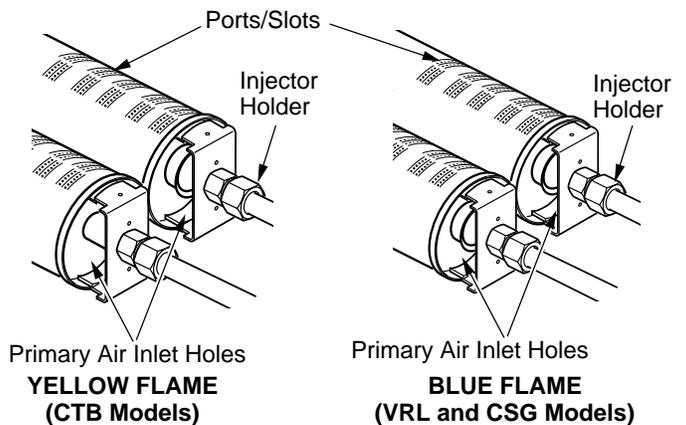
We also recommend that you keep the burner tubes and pilot assembly clean and free of dust and dirt. To clean these parts we recommend using compressed air no greater than 30 PSI. Your local computer store, hardware store, or home center may carry compressed air in a can. You can use a vacuum cleaner in the blow position. If using compressed air in a can, please follow the directions on the can. If you don't follow directions on the can, you could damage the pilot assembly.

1. Shut off the unit, including the pilot. Allow the unit to cool for at least thirty minutes.
2. Inspect burners, pilot, and primary air inlet holes on injector holder for dust and dirt (see Figures 41 or 42).
3. Blow air through the ports/slots and holes in the burners.
4. Check the injector holders located at the end of the burner tubes again. Remove any large particles of dust, dirt, lint, or pet hair with a soft cloth or vacuum cleaner nozzle.
5. Blow air into the primary air holes on the injector holders.
6. In case any large clumps of dust have now been pushed into the burner repeat steps 3 and 4.

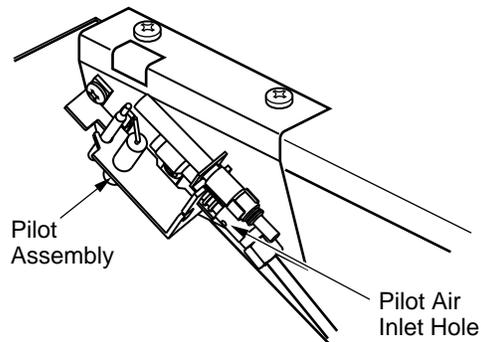
Clean the pilot assembly also. A yellow tip on the pilot flame indicates dust and dirt in the pilot assembly. There is a small pilot air inlet hole about two inches from where the pilot flame comes out of the pilot assembly (see Figure 43). With the unit off, lightly blow air through the air inlet hole. You may blow through a drinking straw if compressed air is not available.



**Figure 41 - Injector Holder On Outlet Burner Tube - Rear Burner**



**Figure 42 - Injector Holder On Outlet Burner Tubes - Front and Middle Burners**



**Figure 43- Pilot Inlet Air Hole**

### LOGS

- If you remove logs for cleaning, refer to *Installing Logs*, pages 15 and 16, to properly replace logs.
- Replace log(s) if broken or chipped (dime-sized or larger).

## TROUBLESHOOTING

*Note:* For additional help, visit DESA International's technical service web site at [www.desatech.com](http://www.desatech.com).

**⚠ WARNING:** Turn off heater and let cool before servicing. Only a qualified service person should service and repair heater.

**⚠ CAUTION:** Never use a wire, needle, or similar object to clean ODS/pilot. This can damage ODS/pilot unit.

*Note:* All troubleshooting items are listed in order of operation.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
When ignitor button is pressed, there is no spark at ODS/pilot	<ol style="list-style-type: none"> <li>Ignitor electrode not connected to ignitor cable</li> <li>Ignitor cable pinched or wet</li> <li>Piezo ignitor nut is loose</li> <li>Broken ignitor cable</li> <li>Bad piezo ignitor</li> <li>Ignitor electrode positioned wrong</li> <li>Ignitor electrode broken</li> </ol>	<ol style="list-style-type: none"> <li>Reconnect ignitor cable</li> <li>Free ignitor cable if pinched by any metal or tubing. Keep ignitor cable dry</li> <li>Tighten nut holding piezo ignitor to base panel of log set. Nut is located behind base panel.</li> <li>Replace ignitor cable</li> <li>Replace piezo ignitor</li> <li>Replace pilot assembly</li> <li>Replace pilot assembly</li> </ol>
When ignitor button is pressed, there is spark at ODS/pilot but no ignition	<ol style="list-style-type: none"> <li>Gas supply turned off or equipment shutoff valve closed</li> <li>Control knob not in PILOT position</li> <li>Control knob not pressed in while in PILOT position</li> <li>Air in gas lines when installed</li> <li>Depleted gas supply (propane/LP only)</li> <li>ODS/pilot is clogged</li> <li>Gas regulator setting is not correct</li> </ol>	<ol style="list-style-type: none"> <li>Turn on gas supply or open equipment shutoff valve</li> <li>Turn control knob to PILOT position</li> <li>Press in control knob while in PILOT position</li> <li>Continue holding down control knob. Repeat igniting operation until air is removed</li> <li>Contact local propane/LP gas company</li> <li>Contact ODS/pilot (see <i>Cleaning and Maintenance</i>, page 23) or replace ODS/pilot assembly</li> <li>Replace gas regulator</li> </ol>
ODS/pilot lights but flame goes out when control knob is released	<ol style="list-style-type: none"> <li>Control knob not fully pressed in</li> <li>Control knob not pressed in long enough</li> <li>Safety interlock system has been triggered (Thermostat-Controlled Models only)</li> <li>Equipment shutoff valve not fully open</li> <li>Pilot flame not touching thermocouple, which allows thermocouple to cool, causing pilot flame to go out. This problem could be caused by one or both of the following: <ol style="list-style-type: none"> <li>Low gas pressure</li> <li>Dirty or partially clogged ODS/pilot</li> </ol> </li> <li>Thermocouple connection loose at control valve</li> <li>Thermocouple damaged</li> <li>Control valve damaged</li> </ol>	<ol style="list-style-type: none"> <li>Press in control knob fully</li> <li>After ODS/pilot lights, keep control knob pressed in 30 seconds</li> <li>Wait one minute for safety interlock system to reset. Repeat ignition operation</li> <li>Fully open equipment shutoff valve</li> <li> <ol style="list-style-type: none"> <li>Contact local natural or propane/LP gas company</li> <li>Clean ODS/pilot (see <i>Cleaning and Maintenance</i>, page 23) or replace ODS/pilot assembly</li> </ol> </li> <li>Hand tighten until snug, then tighten 1/4 turn more</li> <li>Replace pilot assembly</li> <li>Replace control valve</li> </ol>

## TROUBLESHOOTING

### Continued

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
One or more burners do not light after ODS/pilot is lit	<ol style="list-style-type: none"> <li>1. Inlet gas pressure is too low</li> <li>2. Burner orifice(s) clogged</li> <li>3. Mislocated crossover tube</li> <li>4. Thermopile leads disconnected or improperly connected (Remote-Ready Models Only)</li> <li>5. Burners will not come on in remote position (Remote-Ready Models Only)</li> </ol>	<ol style="list-style-type: none"> <li>1. Contact local natural or propane/LP gas company</li> <li>2. Clean burner(s) (see <i>Cleaning and Maintenance</i>, page 23) or replace burner orifice(s)</li> <li>3. Contact qualified service person</li> <li>4. Reconnect leads (see <i>Wiring Diagram</i>, page 28)</li> <li>5. Replace battery in transmitter and receiver</li> </ol>
Delayed ignition of one or more burners	<ol style="list-style-type: none"> <li>1. Manifold pressure is too low</li> <li>2. Burner orifice(s) clogged</li> <li>3. Mislocated crossover tube</li> </ol>	<ol style="list-style-type: none"> <li>1. Contact local natural or propane/LP gas company</li> <li>2. Clean burner(s) (see <i>Cleaning and Maintenance</i>, page 23) or replace burner orifice(s)</li> <li>3. Contact qualified service person</li> </ol>
Burner backfiring during combustion	<ol style="list-style-type: none"> <li>1. Burner orifice is clogged or damaged</li> <li>2. Damaged burner</li> <li>3. Gas regulator defective</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean burner (see <i>Cleaning and Maintenance</i>, page 23) or replace burner orifice</li> <li>2. Replace damaged burner</li> <li>3. Replace gas regulator</li> </ol>
Yellow flame in front/middle burner during burner combustion (VRL24NT/PT, VRL24NR/PR, VRL30NT/PT, VRL30NR/PR, CSG3924NT/PT, CSG3924NR/PR) Yellow flame in front burner during burner combustion (CTB3924NT/PT, CTB3924NR/PR)	<ol style="list-style-type: none"> <li>1. Not enough air</li> <li>2. Gas regulator defective</li> </ol>	<ol style="list-style-type: none"> <li>1. Check burner(s) for dirt and debris. If found, clean burner(s) (see <i>Cleaning and Maintenance</i>, page 23)</li> <li>2. Replace gas regulator</li> </ol>
Slight smoke or odor during initial operation	<ol style="list-style-type: none"> <li>1. Residues from manufacturing processes and logs curing</li> </ol>	<ol style="list-style-type: none"> <li>1. Problem will stop after a few hours of operation</li> </ol>
Heater produces a whistling noise when burners are lit	<ol style="list-style-type: none"> <li>1. Turning control knob to HI position when burners are cold</li> <li>2. Air in gas line</li> <li>3. Air passageways on heater blocked</li> <li>4. Dirty or partially clogged burner orifice(s)</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn control knob to LO position and let warm up for a minute</li> <li>2. Operate burners until air is removed from line. Have gas line checked by local natural or propane/LP gas company</li> <li>3. Observe minimum installation clearances (see pages 8 through 10)</li> <li>4. Clean burners (see <i>Cleaning and Maintenance</i>, page 23)</li> </ol>
White powder residue forming within burner box or on adjacent walls or furniture	<ol style="list-style-type: none"> <li>1. When heated, vapors from furniture polish, wax, carpet cleaners, etc. may turn into white powder residue</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn heater off when using furniture polish, wax, carpet cleaners, or similar products</li> </ol>
Moisture/condensation noticed on windows	<ol style="list-style-type: none"> <li>1. Not enough combustion/ventilation air</li> </ol>	<ol style="list-style-type: none"> <li>1. Refer to Air for <i>Combustion and Ventilation</i> requirements (page 5)</li> </ol>

For more information, visit [www.desatech.com](http://www.desatech.com)



## TROUBLESHOOTING

Continued



**WARNING:** If you smell gas

- Shut off gas supply.
- 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.

**IMPORTANT:** Operating heater where impurities in air exist may create odors. Cleaning supplies, paint, paint remover, cigarette smoke, cements and glues, new carpet or textiles, etc., create fumes. These fumes may mix with combustion air and create odors. These odors will disappear over time.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Remote does not function	1. Battery is not installed. Battery power is low	1. Replace 9-volt batteries in receiver and remote control
Heater produces a clicking/ticking noise just after burners are lit or shut off	1. Metal expanding while heating or contracting while cooling	1. This is common with most heaters. If noise is excessive, contact qualified service person
Heater produces unwanted odors	1. Heater burning vapors from paint, hair spray, glues, cleaners, chemicals, new carpet, etc. (See <b>IMPORTANT</b> statement above) 2. Low fuel supply (propane/LP only) 3. Gas leak. <b>See Warning statement at top of page</b>	1. Open window to ventilate room. Stop using odor causing products while heater is running 2. Refill supply tank (propane/LP only) 3. Locate and correct all leaks (see <i>Checking Gas Connections</i> , page 14)
Heater shuts off in use (ODS operates)	1. Not enough fresh air is available 2. Low line pressure 3. ODS/pilot is partially clogged	1. Open window and/or door for ventilation 2. Contact local natural or propane/LP gas company 3. Clean ODS/pilot (see <i>Cleaning and Maintenance</i> , page 23)
Gas odor even when control knob is in OFF position	1. Gas leak. <b>See Warning statement at top of page</b> 2. Control valve defective	1. Locate and correct all leaks (see <i>Checking Gas Connections</i> , page 14) 2. Replace control valve
Gas odor during combustion	1. Foreign matter between control valve and burner 2. Gas leak. <b>See Warning statement at top of page</b>	1. Take apart gas tubing and remove foreign matter 2. Locate and correct all leaks (see <i>Checking Gas Connections</i> , page 14)
Log set cycles to pilot, but room temperature drops to a lower than ideal level before log set comes back on (Thermostat-Controlled Models Only)	1. Thermostat sensing bulb needs to be repositioned	1. Reposition thermostat sensing bulb (see Instructions for <i>Optional Positioning of Thermostat Sensing Bulb</i> , page 27)

For more information, visit [www.desatech.com](http://www.desatech.com)

## OPTIONAL POSITIONING OF THERMOSTAT SENSING BULB (THERMOSTAT-CONTROLLED MODELS ONLY) FOR MASONRY AND FACTORY-BUILT METAL FIREPLACE

If your log set cycles to pilot, but the room temperature drops to a lower than ideal comfort level before the log set comes back on, you may want to reposition the thermostat sensing bulb.

The thermostat sensing bulb is located on the left side of the base assembly. This location allows the thermostat to keep the room temperature at an ideal comfort level for most fireplace applications. For positioning the thermostat sensing bulb elsewhere, an adhesive-backed mounting clip is available.

1. Locate the gas valve assembly and thermostat sensing bulb (see Figure 44).
2. Gently pull thermostat sensing bulb free from the retaining clamp.

**IMPORTANT:** Do not force or bend the thermostat sensing bulb or capillary.

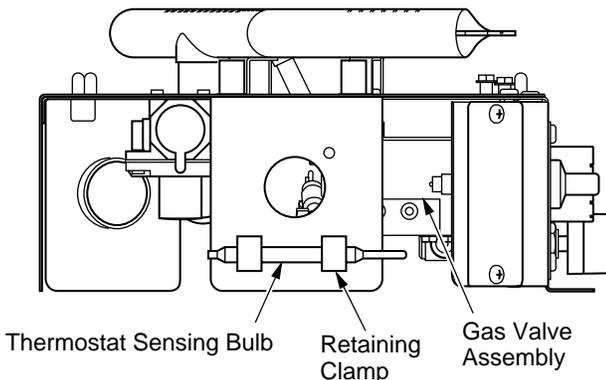
3. The thermostat sensing bulb may be located to the lower right front side of fireplace. Determine location of sensing bulb, but do not mount sensing bulb until step 4. If you have a masonry fireplace, see Figure 46 for location.

If you have a factory-built metal fireplace, see Figure 47 for location.

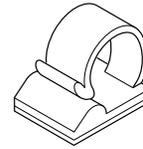
If your fireplace has glass doors, position sensing bulb directly behind door gap on right bottom side (see Figure 48).

4. The mounting clip must be a minimum of 3" from bottom of fireplace to prevent crimping of capillary. Once you have decided on a location, clean the area thoroughly. Remove the paper backing from the adhesive on back of mounting clip. Press the clip into the new location so that the thermostat sensing bulb will be positioned vertically with the capillary at the bottom (see Figure 49). Slide the thermostat sensing bulb into the clip.

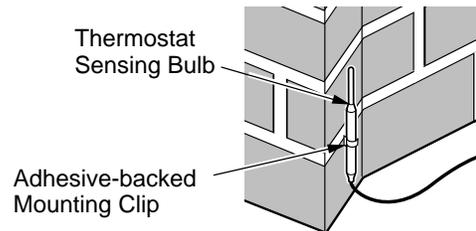
**IMPORTANT:** Do not crimp capillary.



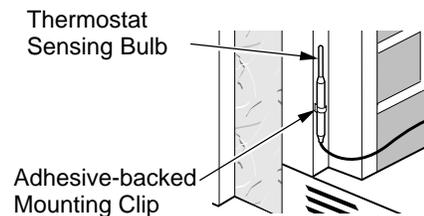
**Figure 44 - Location of Gas Valve Assembly and Thermostat Sensing Bulb**



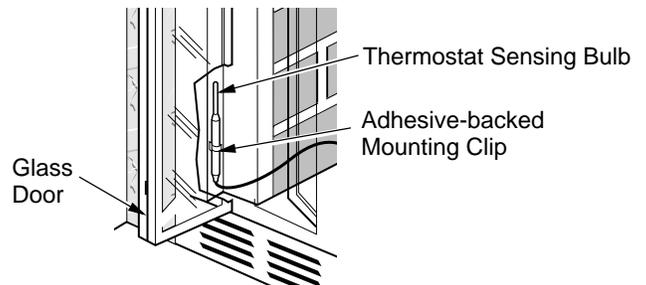
**Figure 45 - Adhesive-backed Mounting Clip**



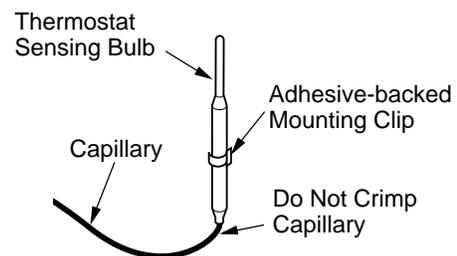
**Figure 46 - Locating Thermostat Sensing Bulb on Masonry Fireplace**



**Figure 47 - Locating Thermostat Sensing Bulb on Factory-built Metal Fireplace**



**Figure 48 - Installing Thermostat Sensing Bulb Behind Glass Doors**



**Figure 49 - Positioning the Thermostat Sensing Bulb in the Vertical Position with the Capillary at the Bottom**

## SPECIFICATIONS

	24" Thermostat-Controlled		30" Thermostat-Controlled	
Btu (Variable)	10,000/40,000	10,000/40,000	10,000/40,000	10,000/40,000
Type Gas	Propane/LP	Natural	Propane/LP	Natural
Ignition	Piezo	Piezo	Piezo	Piezo
Manifold Pressure	7.4" W.C.	3.0" W.C.	7.4" W.C.	3.0" W.C.
Inlet Gas Pressure (in. of water)				
Maximum	14"	10.5"	14"	10.5"
Minimum*	11"	5"	11"	5"
Shipping Weight	30 lbs.	30 lbs.	34 lbs.	34 lbs.
Certified Standards	Z21.11.2-2000	Z21.11.2-2000	Z21.11.2-2000	Z21.11.2-2000

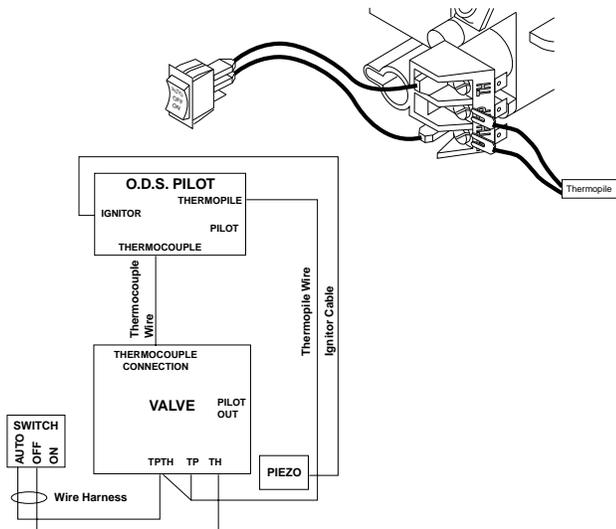
\* For purpose of input adjustment

	24" Remote-Ready		30" Remote-Ready	
Btu (Variable)	10,000/40,000	10,000/40,000	10,000/40,000	10,000/40,000
Type Gas	Propane/LP	Natural	Propane/LP	Natural
Ignition	Piezo	Piezo	Piezo	Piezo
Manifold Pressure	8.0" W.C.	3.0" W.C.	8.0" W.C.	3.0" W.C.
Inlet Gas Pressure (in. of water)				
Maximum	14"	10.5"	14"	10.5"
Minimum*	11"	5"	11"	5"
Shipping Weight	30 lbs.	30 lbs.	34 lbs.	34 lbs.
Certified Standards	Z21.11.2-2000	Z21.11.2-2000	Z21.11.2-2000	Z21.11.2-2000
	Z21.60-1996	Z21.60-1996	Z21.60-1996	Z21.60-1996
	CGA2.26-M96	CGA2.26-M96	CGA2.26-M96	CGA2.26-M96

\* For purpose of input adjustment

## WIRING DIAGRAM (REMOTE-READY MODELS ONLY)

*Note:* For proper operation of optional accessories, the wires from the switch to the control valve must be connected exactly as shown:



## SERVICE HINTS

### When Gas Pressure Is Too Low

- pilot will not stay lit
- burners will have delayed ignition
- heater will not produce specified heat
- propane/LP gas supply may be low

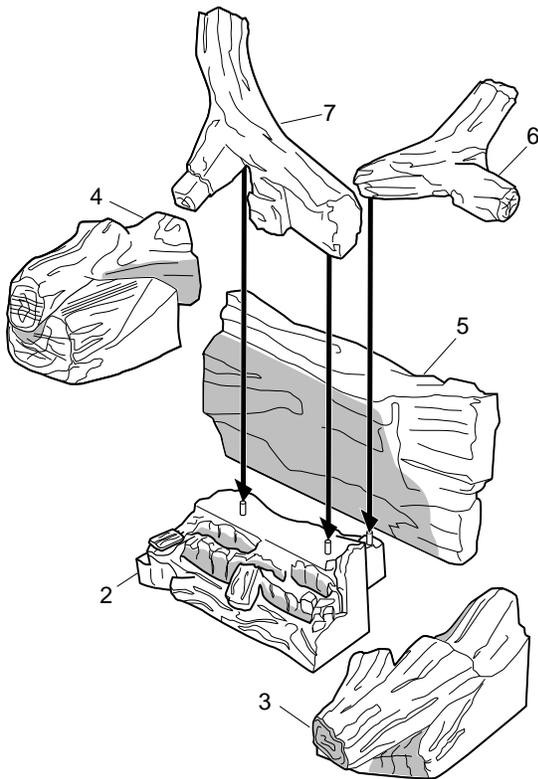
## TECHNICAL SERVICE

You may have further questions about installation, operation, or troubleshooting. If so, contact DESA International's Technical Service Department at 1-866-672-6040. When calling, please have your model and serial numbers of your heater ready.

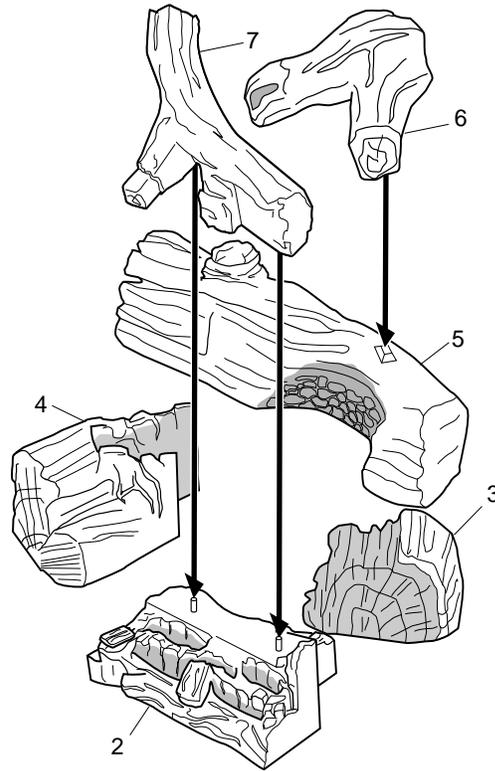
You can also visit DESA International's technical services web site at [www.desatech.com](http://www.desatech.com).

# ILLUSTRATED PARTS BREAKDOWN

## LOGS



Log Set for Models:  
VRL24NT, VRL24PT, VRL24NR,  
VRL24PR, VRL30NT, VRL30PT,  
VRL30NR, VRL30PR

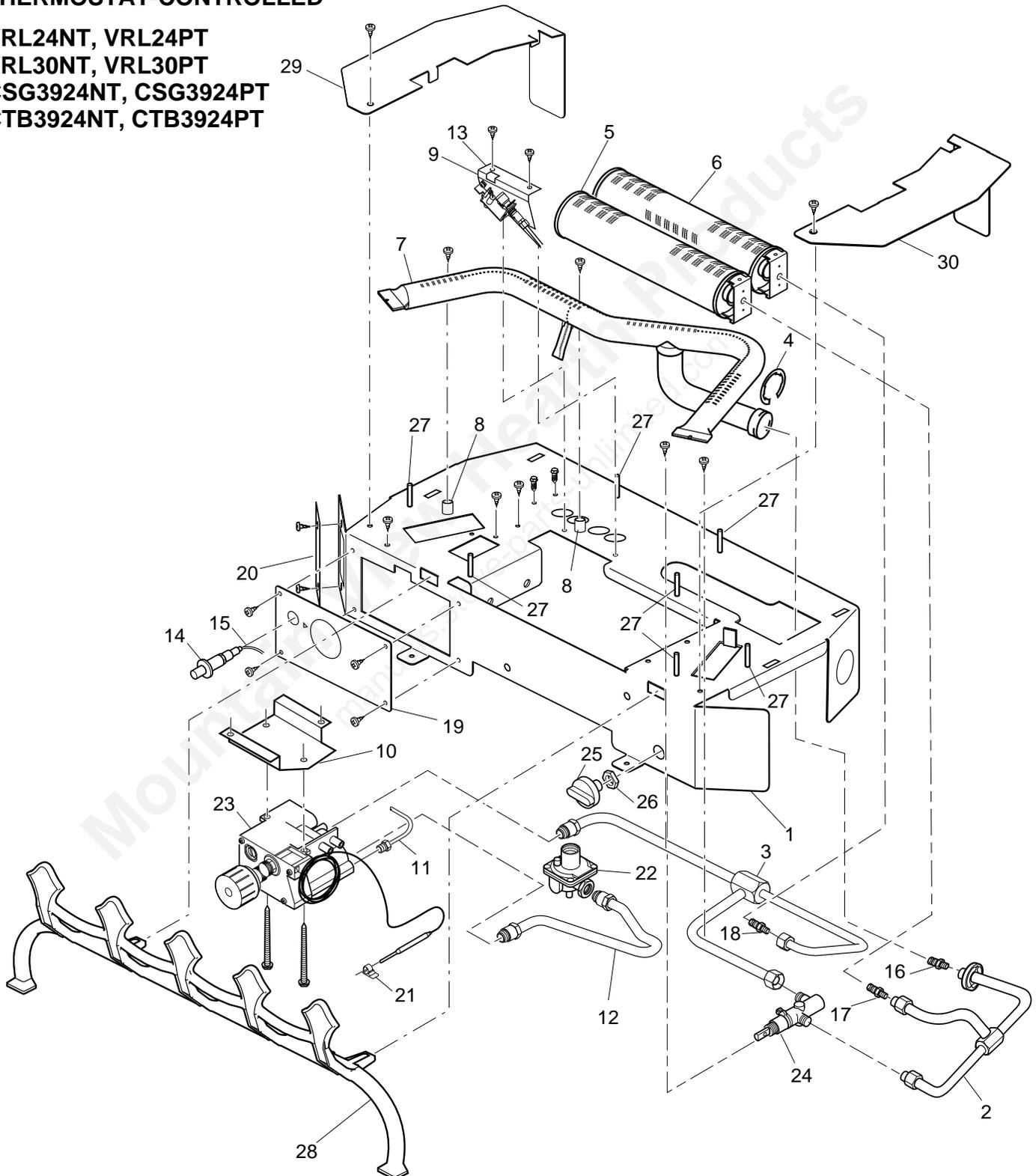


Log Set for Models:  
CSG3924NT, CSG3924PT, CSG3924NR,  
CSG3924PR, CTB3924NT, CTB3924PT,  
CTB3924NR, and CTB3924PR

KEY NO.	PART NUMBER FOR			DESCRIPTION	QTY.
	VRL24NT VRL24PT VRL24NR VRL24PR	VRL30NT VRL30PT VRL30NR VRL30PR	CSG3924NT CSG3924PT CSG3924NR CSG3924PR CTB3924NT CTB3924PT CTB3924NR CTB3924PR		
1	110020-01	110020-02	110020-03	Log Set	1
2	110103-01	110103-01	110103-01	Log Ember Bed	1
3	110105-01	110106-01	110107-01	Log, Right Front	1
4	110105-02	110106-02	110107-02	Log, Left Front	1
5	110105-03	110106-03	110107-03	Log, Back	1
6	110105-04	110106-04	110107-04	Log, Right Crossover	1
7	110104-01	110104-01	110104-01	Log, Left Crossover	1

**ILLUSTRATED PARTS BREAKDOWN***Thermostat-Controlled***VRL24NT, VRL24PT, VRL30NT, VRL30PT****CSG3924NT, CSG3924PT, CTB3924NT, CTB3924PT****ILLUSTRATED PARTS BREAKDOWN****THERMOSTAT-CONTROLLED**

VRL24NT, VRL24PT  
 VRL30NT, VRL30PT  
 CSG3924NT, CSG3924PT  
 CTB3924NT, CTB3924PT



**For more information, visit [www.desatech.com](http://www.desatech.com)**

## PARTS LIST

This list contains replaceable parts used in your heater. When ordering parts, follow the instructions listed under *Replacement Parts* on page 34 of this manual.

### THERMOSTAT-CONTROLLED

KEY NO.	PART NUMBER FOR						DESCRIPTION	QTY.
	VRL24NT CSG3924NT	VRL24PT CSG3924PT	VRL30NT	VRL30PT	CTB3924NT	CTB3924PT		
1	110097-01	110097-01	110097-01	110097-01	110097-01	110097-01	Burner Carriage	1
2	110061-04	110061-03	110061-04	110061-03	110061-04	110061-03	Tube, Front and Rear Burner	1
3	110061-02	110061-02	110061-02	110061-02	110061-02	110061-02	Tube, Middle Burner T-Stat	1
4	102843-01	102843-01	102843-01	102843-01	102843-01	102843-01	Burner Clip	1
5	110063-02	110063-02	110063-02	110063-02	—	—	Burner, Front Blue Flame	1
	—	—	—	—	110063-03	110063-03	Burner, Front Yellow Flame	1
6	110063-01	110063-01	110063-01	110063-01	110063-01	110063-01	Burner, Middle Blue Flame	1
7	108105-01	108105-01	108105-01	108105-01	108105-01	108105-01	Burner, Rear	1
8	107110-01	107110-01	107110-01	107110-01	107110-01	107110-01	Spacer	2
9	104285-01	104286-01	104285-01	104286-01	107485-01	104286-01	ODS Pilot	1
10	102394-02	102394-02	102394-02	102394-02	102394-02	102394-02	Control Bracket (T-Stat)	1
11	099387-18	099387-18	099387-18	099387-18	099387-18	099387-18	Pilot Tube	1
12	108628-01	108628-01	108628-01	108628-01	108628-01	108628-01	Inlet Tube	1
13	110093-01	110093-02	110093-01	110093-02	110093-01	110093-02	Pilot Mounting Bracket	1
14	097159-04	097159-04	097159-04	097159-04	097159-04	097159-04	Piezo Ignitor	1
15	098271-10	098271-10	098271-10	098271-10	098271-10	098271-10	Ignitor Cable	1
16	099056-18	099056-21	099056-18	099056-21	099056-18	099056-21	Burner Orifice Injector, Back	1
17	101004-02	101004-18	101004-02	101004-18	101004-02	101004-18	Burner Orifice Injector, Front	1
18	101004-11	101004-13	101004-11	101004-13	101004-11	101004-13	Burner Orifice Injector, Middle	1
19	108692-02	108692-02	108692-02	108692-02	108692-02	108692-02	T-Stat Cover Plate	1
20	108692-03	108692-03	108692-03	108692-03	108692-03	108692-03	Remote Cover Plate	1
21	102030-01	102030-01	102030-01	102030-01	102030-01	102030-01	Thermobulb Clip	2
22	098867-16	098867-16	098867-16	098867-16	098867-16	098867-16	Gas Regulator (Propane/LP)	1
	098867-15	098867-15	098867-15	098867-15	098867-15	098867-15	Gas Regulator (Natural)	1
23	098522-25	098522-10	098522-25	098522-10	098522-25	098522-10	Thermostatic Gas Valve Kit	1
24	108106-01	108106-01	108106-01	108106-01	108106-01	108106-01	Manual Control Valve	1
25	099393-03	099393-03	099393-03	099393-03	099393-03	099393-03	Control Knob	1
26	098508-01	098508-01	098508-01	098508-01	098508-01	098508-01	Valve Retainer Nut	1
27	108631-01	108631-01	108631-01	108631-01	108631-01	108631-01	Log Alignment Screw	9
28	108111-01	108111-01	108111-01	108111-01	108111-01	108111-01	Cast Iron Grate	1
29	—	—	108717-01	108717-01	—	—	Extension Plate, Left Side	1
30	—	—	108717-02	108717-02	—	—	Extension Plate, Right Side	1
<b>PARTS AVAILABLE — NOT SHOWN</b>								
	100563-01	100563-01	100563-01	100563-01	100563-01	100563-01	Warning Plate	1
	101054-05	101054-05	101054-05	101054-05	101054-05	101054-05	Lighting Instructions Plate	1
	100639-03	100639-03	100639-03	100639-03	100639-03	100639-03	Caution Decal	1
	GA6060	GA6060	GA6060	GA6060	GA6060	GA6060	Lava Rock	1

**ILLUSTRATED PARTS BREAKDOWN**

Remote-Ready Models

VRL24NR, VRL24PR, VRL30NR, VRL30PR

CSG3924NR, CSG3924PR, CTB3924NR, CTB3924PR

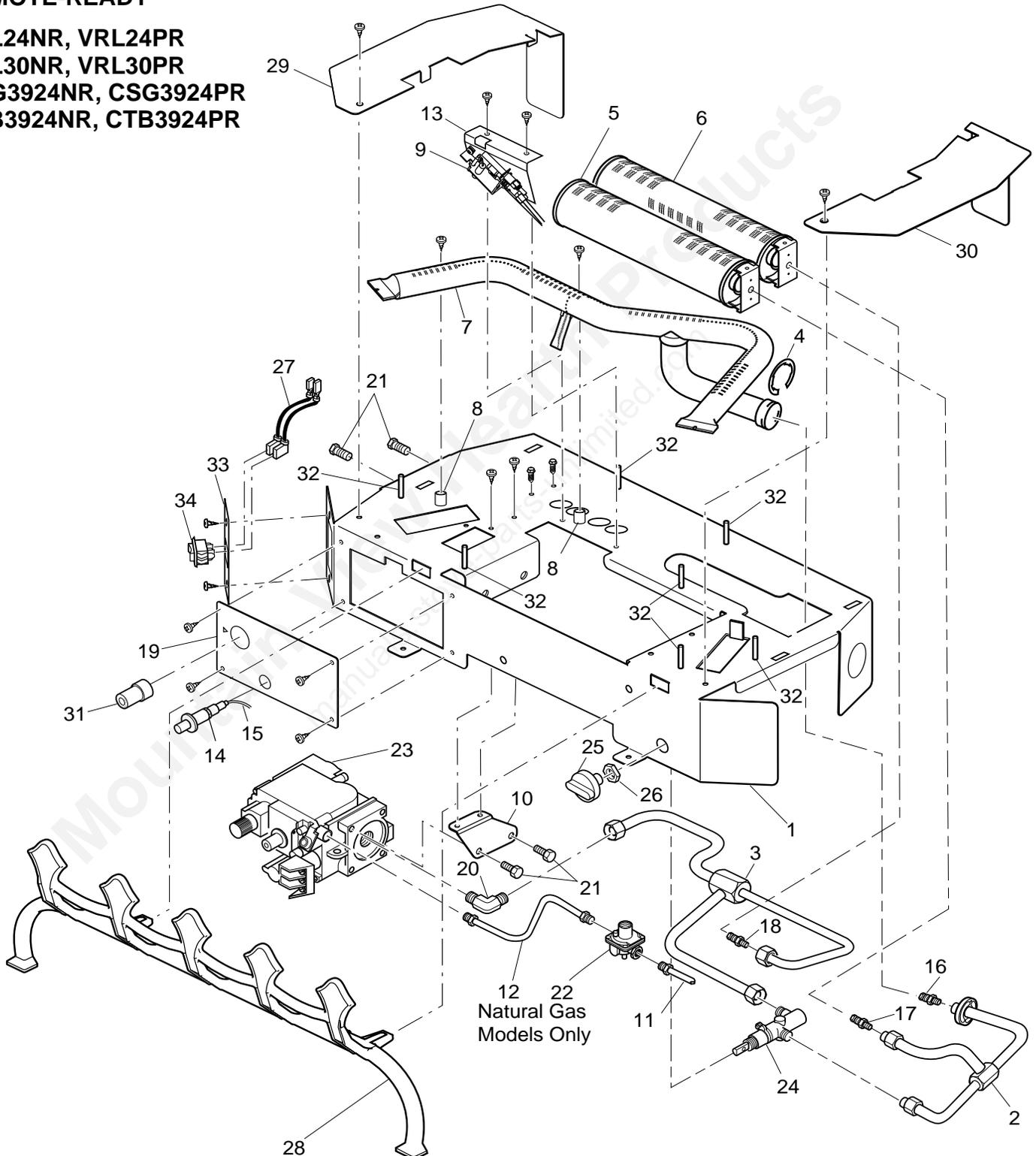
**ILLUSTRATED PARTS BREAKDOWN****REMOTE-READY**

VRL24NR, VRL24PR

VRL30NR, VRL30PR

CSG3924NR, CSG3924PR

CTB3924NR, CTB3924PR

For more information, visit [www.desatech.com](http://www.desatech.com)

# PARTS LIST

This list contains replaceable parts used in your heater. When ordering parts, follow the instructions listed under *Replacement Parts* on page 34 of this manual.

## REMOTE-READY

KEY NO.	PART NUMBER FOR						DESCRIPTION	QTY.
	VRL24NR CSG3924NR	VRL30NR	VRL24PR CSG3924PR	VRL30PR	CTB3924NR	CTB3924PR		
1	110097-01	110097-01	110097-01	110097-01	110097-01	110097-01	Burner Carriage	1
2	110061-04	110061-04	110061-03	110061-03	110061-04	110061-03	Tube, Front and Rear Burner	1
3	110061-01	110061-01	110061-01	110061-01	110061-01	110061-01	Tube, Middle Burner Remote	1
4	102843-01	102843-01	102843-01	102843-01	102843-01	102843-01	Burner Clip	1
5	110063-02	110063-02	110063-02	110063-02	—	—	Burner, Front Blue Flame	1
	—	—	—	—	110063-03	110063-03	Burner, Front Yellow Flame	1
6	110063-01	110063-01	110063-01	110063-01	110063-01	110063-01	Burner, Middle Blue Flame	1
7	108105-01	108105-01	108105-01	108105-01	108105-01	108105-01	Burner, Rear	1
8	107110-01	107110-01	107110-01	107110-01	107110-01	107110-01	Spacer	2
9	103779-01	103779-01	103778-01	103778-01	103779-01	103778-01	ODS Pilot	1
10	108135-01	108135-01	108135-01	108135-01	108135-01	108135-01	Valve Bracket	1
11	099387-14	099387-14	099387-18	099387-18	099387-18	099387-18	Pilot Tube	1
12	099387-15	099387-15	—	—	099387-15	—	Pilot Regulator Tube, NG	1
13	110093-03	110093-03	110093-03	110093-03	110093-03	110093-03	Pilot Mounting Bracket	1
14	097159-04	097159-04	097159-04	097159-04	097159-04	097159-04	Piezo Ignitor	1
15	098271-10	098271-10	098271-10	098271-10	098271-10	098271-10	Ignitor Cable	1
16	099056-18	099056-18	099056-21	099056-21	099056-18	099056-21	Burner Orifice Injector Back	1
17	101004-02	101004-02	101004-18	101004-18	101004-02	101004-18	Burner Orifice Injector Front	1
18	101004-11	101004-11	101004-13	101004-13	101004-11	101004-13	Burner Orifice Injector Middle	1
19	108692-04	108692-04	108692-04	108692-04	108692-04	108692-04	Remote Cover Plate	1
20	098265-02	098265-02	098265-02	098265-02	098265-02	098265-02	Male Elbow	1
21	M12461-26	M12461-26	M12461-26	M12461-26	M12461-26	M12461-26	Screw, Hex Slit Wsr 10-32 x .38	4
22	099918-02	099918-02	—	—	099918-02	—	Pilot Regulator, NG	1
23	103781-03	103781-03	103781-04	103781-04	103781-03	103781-04	Gas Control Valve	1
24	108106-01	108106-01	108106-01	108106-01	108106-01	108106-01	Manual Control Valve	1
25	099393-03	099393-03	099393-03	099393-03	099393-03	099393-03	Control Knob	1
26	098508-01	098508-01	098508-01	098508-01	098508-01	098508-01	Valve Retainer Nut	1
27	103284-03	103284-03	103284-03	103284-03	103284-03	103284-03	Wire Harness	1
28	108111-01	108111-01	108111-01	108111-01	108111-01	108111-01	Cast Iron Grate	1
29	—	108717-01	—	108717-01	—	—	Extension Plate, Left Side	1
30	—	108717-02	—	108717-02	—	—	Extension Plate, Right Side	1
31	103784-01	103784-01	103784-01	103784-01	103784-01	103784-01	On-Off-Pilot Knob Extension	1
32	108631-01	108631-01	108631-01	108631-01	108631-01	108631-01	Log Alignment Screw	8
33	103587-02	103587-02	103587-02	103587-02	103587-02	103587-02	Plate, Switch	1
34	099998-01	099998-01	099998-01	099998-01	099998-01	099998-01	Fan Switch	1
<b>PARTS AVAILABLE — NOT SHOWN</b>								
	100563-01	100563-01	100563-01	100563-01	100563-01	100563-01	Warning Plate	1
	103877-04	103877-04	103877-04	103877-04	103877-04	103877-04	Lighting Instructions Plate	1
	100639-03	100639-03	100639-03	100639-03	100639-03	100639-03	Caution Decal	1
	GA6060	GA6060	GA6060	GA6060	GA6060	GA6060	Lava Rock	1

## REPLACEMENT PARTS

**Note:** Use only original replacement parts. This will protect your warranty coverage for parts replaced under warranty.

### PARTS UNDER WARRANTY

Contact authorized dealers of this product. If they can't supply original replacement part(s), call DESA International's Technical Service Department at 1-866-672-6040.

When calling DESA International, have ready

- your name
- your address
- model and serial numbers of your heater
- how heater was malfunctioning
- type of gas used (propane/LP or natural gas)
- purchase date

Usually, we will ask you to return the part to the factory.

### PARTS NOT UNDER WARRANTY

Contact authorized dealers of this product. If they can't supply original replacement part(s), call DESA International at 1-866-672-6040 for referral information.

When calling DESA International, have ready

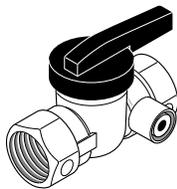
- model number of your heater
- the replacement part number

## ACCESSORIES

Purchase these heater accessories from your local dealer. If they can not supply these accessories, call DESA International at 1-866-672-6040 for referral information. You can also write to the address listed on the back page of this manual.

### EQUIPMENT SHUTOFF VALVE GA5010

**For all models.** Equipment shutoff valve with 1/8" NPT tap. Fits 1/2" NPT pipe.



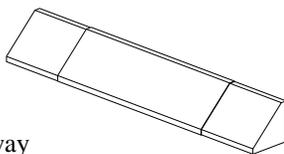
### FIREPLACE HOOD

**Black - GA6050**

**Brass - GA6052**

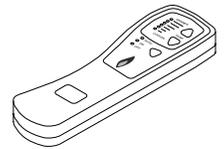
**Antique Brass - GA6053**

**For all models.** Helps deflect heat away from mantel or wall above fireplace. Fits openings 28" to 48" wide.



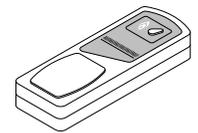
### RECEIVER AND HAND-HELD THERMOSTAT REMOTE CONTROL KIT - GHRCTA

**For all Remote-Ready Models.** Allows the gas log heater to be operated in a manually or thermostatically controlled mode. You can turn the gas log heater on and off without ever leaving the comfort of your easy chair.



### RECEIVER AND HAND-HELD REMOTE CONTROL KIT GHRC

**For all Remote-Ready Models.** Allows the gas log heater to be turned on and off by using a hand-held remote control.



### WALL-MOUNT THERMOSTAT SWITCH GWMT1 (Not Shown)

**For all Remote-Ready Models.** The desired comfort setting can be selected on the wall thermostat and the log heater will automatically cycle from pilot to the heat setting selected.

### WALL-MOUNT ON/OFF SWITCH - GWMS2 (Not Shown)

**For all Remote-Ready Models.** Allows the gas log heater to be turned on and off with a wall switch.

### DAMPER CLAMP - GA6080 (Not Shown)

**For Remote-Ready Models.** Permanently opens chimney flue damper for vented operation.

### LAVA ROCK - GA6060 (Not Shown)

**For all models.** Order when additional rock is desired. (3 lb. bag)

### CLEANING KIT - CCK/GCK (Not Shown)

**For all models.** Your vent-free gas appliance requires regular cleaning and maintenance to prevent performance problems. This kit gives you the tools and instructions to make it easy to clean all critical areas of your appliance.

### INFORMATION VIDEO - 108917-01 (Not Shown)

**For all models.** A care and maintenance video is available by calling 1-866-672-6040.

# OWNER'S REGISTRATION FORM

In order to provide better customer service for this and future purchases, we recommend that you register your product with us. You can register online at [www.desatech.com](http://www.desatech.com). If access to our website is not available to you, please complete this Owner's Registration Form and mail to the address on the back of this owner's manual. Please provide the following product information:

Brand: \_\_\_\_\_ (Comfort Glow, Vanguard, etc.)  
 Model: \_\_\_\_\_ (EFP33PR, VTGH33NR, etc.)  
 Date Purchased: \_\_\_\_\_ *Note: Keep receipt for warranty verification.*  
 Serial Number: \_\_\_\_\_ 7 or 9 digit number located on product or identification tag.  
 First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Country: \_\_\_\_\_  
 Home Phone: \_\_\_\_\_ - \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

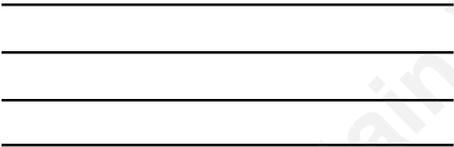
Please answer the following questions to register your product with DESA International:

1. Where will the product be used?  
 Living/Family Room  Office/Warehouse  Utility Shed/Outbuilding  Garage  Bedroom  Bathroom  Other
2. If you bought this product yourself, did you plan to purchase this type of product before going into the store?  Yes  No
3. Who selected the product?  Male  Female  Both
4. What is the population of your area?  Under 10,000  10,000 to 25,000  25,000 to 50,000  50,000 to 100,000  
 100,000 to 250,000  Over 250,000
5. What is your primary source of heat?  Propane (LP Gas)  Fuel Oil  Wood  Natural Gas  Electric  Other
6. How was the product installed?  Professional Installer  Self  Other
7. Cost of product excluding sales tax? \$ \_\_\_\_\_
8. Cost to install product? \$ \_\_\_\_\_
9. Type of store where product was purchased?  Hardware  Propane Dealer  Natural Gas/Utility Co.  Home Center/Builder's Supply  
 Fireplace or Hearth Shop  Farm Store  Other
10. What motivated you to buy this product?  Sudden Cold Weather  Replace Older Model  D.I.Y. Home Project  
 Emergency Back-Up Heat  Heater was on Sale  Energy Savings/High Efficiency  Construction Project  Other
11. How did you learn about this product brand?  Advertising  Relative or Friend  Store Display  Other \_\_\_\_\_
12. Level of Education of Purchaser:  Some High School  Completed High School  Completed College  Completed Graduate School
13. Age of Purchaser:  Under 20  20 - 29  30 - 39  40 - 49  50 - 59  60 or Over
14. Buyer's total annual household income:  Under \$15,000  \$15,000 to \$19,999  \$20,000 to \$34,999  \$35,000 to \$49,999  
 \$50,000 to \$74,999  \$75,000 to \$99,999  \$100,000 and Over
15. Store where product was purchased:  
 Name: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_

16. In choosing this product, how important were the following:

	Not Important	Somewhat Important	Very Important
Availability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brand Name	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall Quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat Output	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Made in USA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Warranty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local Service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Value for Price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prior Brand Experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Controls Location	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thermostat, Remote, or Manual Operation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ease of Operation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Special Features	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Salesperson's Recommendation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friend/Relative's Recommendation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Portability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quiet Operation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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