



WARRANTY REGISTRATION
enviro.com/warranty

S50/S50-820

FREESTANDING GAS FIREPLACE

OWNER'S MANUAL



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

CERTIFIED TO/CERTIFIÉ AUX: ANSI Z21.88 / CSA2.33 / CSA 2.17

SAFETY PRECAUTIONS



WARNING:

FIRE OR EXPLOSION HAZARD

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

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

INSTALLER:

Leave this manual with the appliance.

CONSUMER:

Retain this manual for future reference.

This appliance may be installed in an after-market 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, unless a certified kit is used.

Only doors certified with the appliance shall be used

Massachusetts installations (Warning): This product must be installed by a licensed plumber or gas fitter when installed within the Commonwealth of Massachusetts. Other Massachusetts code requirements: Flexible connector must not be longer than 36in., a shut off valve must be installed; only direct vent sealed combustion products are approved for bedrooms/bathrooms. A carbon monoxide detector is required in all rooms containing gas fired direct vent appliances. The fireplace damper must be removed or welded in the open position prior to installation of a fireplace insert.

SAFETY PRECAUTIONS

FOR SAFE INSTALLATION AND OPERATION OF YOUR “ENVIRO” HEATER, PLEASE CAREFULLY READ THE FOLLOWING INFORMATION:

- All ENVIRO gas-fired appliances must be installed in accordance with their instructions. Carefully read all the instructions in this manual first. Consult the building authority having jurisdiction to determine the need for a permit prior to commencing the installation.

- **NOTE:** Failure to follow these instructions could cause a malfunction of the fireplace, which could result in death, serious bodily injury, and/or property damage.

- Failure to follow these instructions may also void your fire insurance and/or warranty.

GENERAL

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

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

Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burn or clothing ignition.

- Young children should be carefully supervised when in the same room as the appliance. Toddlers, young children and others may be susceptible to accidental contact burns. A physical barrier is required if there are at risk individuals in the house. To restrict access to a fireplace or stove install an adjustable safety gate to keep toddlers, young children and other at risk individuals out of the room and away from hot surfaces. Any safety screen, guard, or barrier removed for servicing an appliance must be replaced prior to operating the appliance.

- Clothing or other flammable materials should not be placed on or near the appliance.

- A barrier designed to reduce the risk of burns from the hot viewing glass is provided with this appliance and shall be installed for the protection of children and other at-risk individuals. If the barrier becomes damaged, the barrier shall be replaced with the manufacturer's barrier for this appliance

FOR YOUR SAFETY

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

- This installation must conform to local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1.

- To prevent injury, do not allow anyone who is unfamiliar with the stove to operate it.

- **To prevent injury, if the pilot or pilot and burners have gone out on their own, open the glass door and wait 5 minutes to air out before attempting to re-light the stove.**

- Always keep the area around these appliances clear of combustible material, gasoline and other flammable liquids and vapours.

- These appliances should not be used as a drying rack for clothing or for hanging Christmas stockings/decorations.

- Due to the paint curing on the stove, a faint odor and slight smoking will likely be noticed when the stove is first used. Open a window until the smoking stops.

Always connect this gas stove to a vent system and vent to the outside of the building envelope. Never vent to another room or inside the building. Make sure the specified vent pipe is used, properly sized and of adequate height to provide sufficient draft. Inspect the venting system annually for blockage and signs of deterioration.

WARNING: Failure to position the parts in accordance with the diagrams in this booklet, or failure to use only parts specifically approved with this appliance, may result in property damage or personal injury.

WARNING: Do not operate with the glass front removed, cracked or broken. Replacement of the glass should be done by a licensed or qualified service person.

- Never use solid fuels such as wood, paper, cardboard, coal, or any flammable liquids, etc., in this appliance.

- 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 or any gas control which has been under water.

- Do not abuse the glass by striking it or slamming the door shut.

- If the S50 unit is pulled out of its installation, and the vent-air intake system is disconnected for any reason, ensure that the vent-air intake pipes are reconnected and re-sealed in accordance to the instructions noted in DIRECT VENT section on page 28.



HOT GLASS WILL CAUSE BURNS

DO NOT TOUCH GLASS UNTIL COOLED.

NEVER ALLOW CHILDREN TO TOUCH GLASS.

A barrier designed to reduce the risk of burns from the hot viewing glass is provided with this appliance and shall be installed for the protection of children and other at-risk individuals.

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CODES AND APPROVALS

DIRECT VENT ONLY: This type is identified by the suffix DV. This appliance draws all of its air for combustion from outside the dwelling, through a specially designed vent pipe system.

This appliance has been tested and approved for installations from 0 feet to 4500 feet (1372 m) above sea level.

In the USA: The appliance may be installed at higher altitudes. Please refer to your American Gas Association guidelines which state: the sea level rated input of Gas Designed Appliances installed at elevations above 2000 (610 m) feet is to be reduced 4% for each 1000 feet (305 m) above sea level. Refer also to local authorities or codes which have jurisdiction in your area regarding the de-rate guidelines.

In Canada: When the appliance is installed at elevations above 4500 feet (1372 m), the certified high altitude rating shall be reduced at the rate of 4% for each additional 1000 feet (305 m).

- This appliance has been tested by INTERTEK and found to comply with the established VENTED GAS FIREPLACE HEATER standards in CANADA and the USA as follows:

VENTED GAS FIREPLACE HEATER

TESTED AND LISTED TO: ANSI Z21.88 / CSA 2.33 VENTED GAS FIREPLACE HEATERS

CSA 2.17 GAS FIRED APPLIANCES FOR HIGH ALTITUDES

CSA P.4.1 TESTING METHOD FOR MEASURING ANNUAL FIREPLACE EFFICIENCY

This ENVIRO S50 Fireplace:

- Has been certified for use with either natural or propane gases. (See rating label.)
- Is not for use with solid fuels.
- Is approved for bedroom or bed sitting room. (**IN CANADA:** must be installed with a listed wall thermostat. **IN USA:** see current ANSI Z223.1 for installation instructions.)
- Must be installed in accordance with local codes. If none exist, use current installation code CAN/CGA B149.1 in Canada or ANSI Z223.1/NFPA 54 in the USA.
- Must be properly connected to an approved venting system and not connected to a chimney flue serving a separate solid-fuel burning appliance.

IMPORTANT NOTICE (Regarding first fire up): When the unit is turned on for the first time, it should be turned onto high without the fan on for the first 4 hours. This will cure the paint, logs, gasket material and other products used in the manufacturing process. It is advisable to open a window or door, as the unit will start to smoke and can irritate some people. After the unit has gone through the first burn, turn the unit off including the pilot, let the unit get cold then remove the glass door and clean it with a good gas fireplace glass cleaner, available at your local ENVIRO dealer.

NATIONAL
FIREPLACE
INSTITUTE



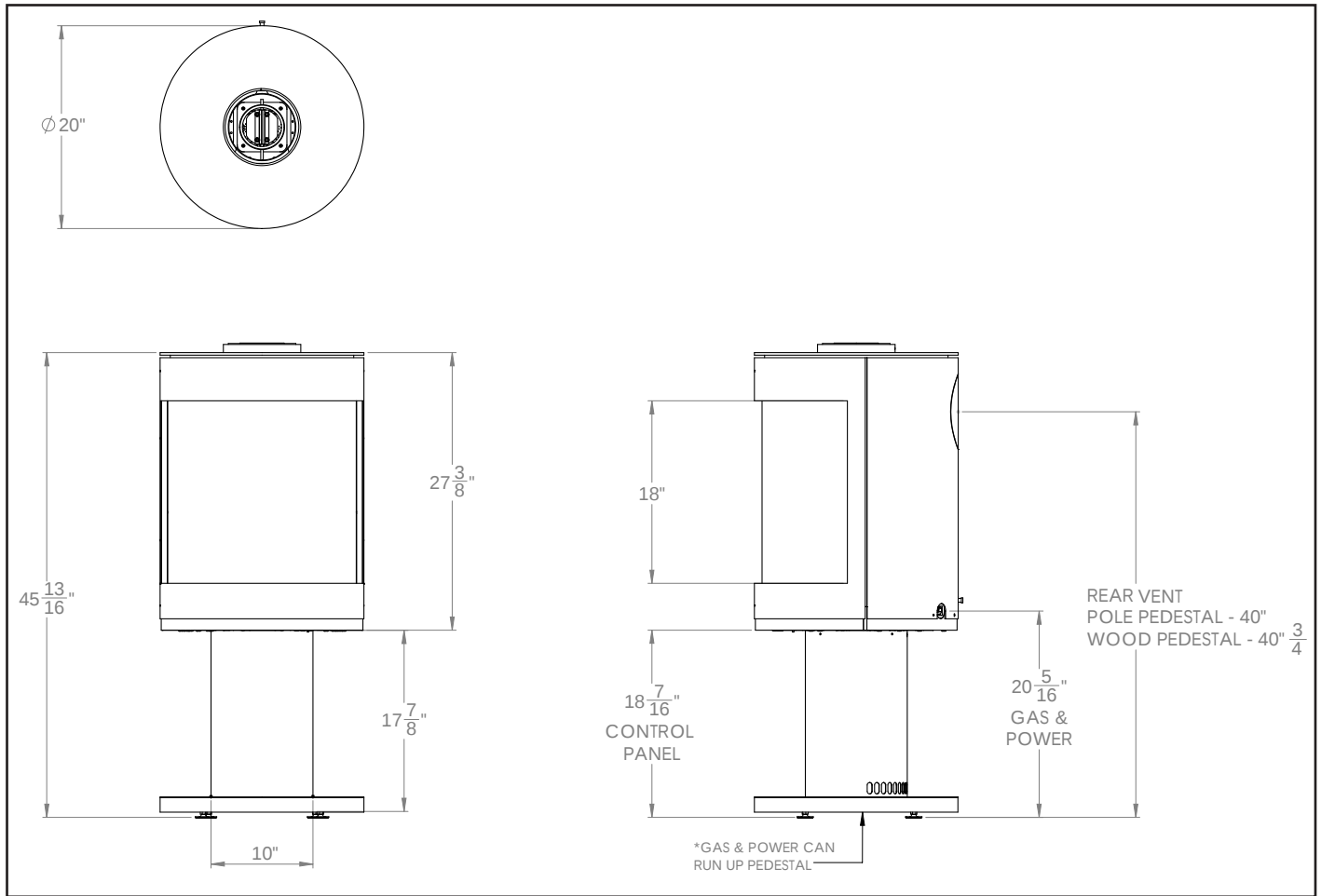
CERTIFIED

www.nficertified.org

We recommend that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

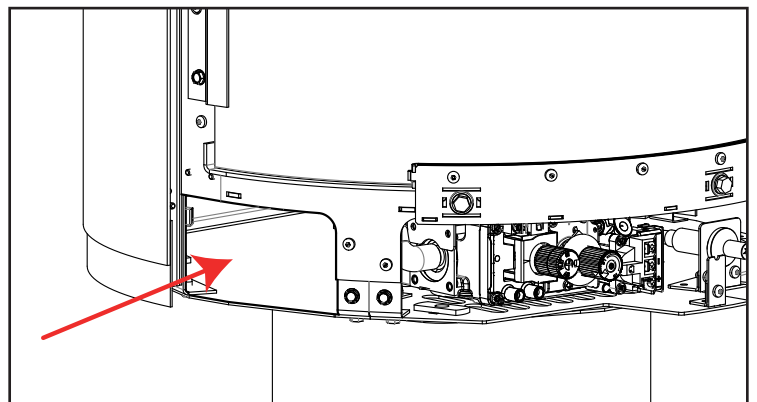
SPECIFICATIONS

DIMENSIONS:



RATING LABEL & LIGHTING INSTRUCTIONS LOCATION

The rating label and lighting instruction booklet is located inside the unit. The fireplace door frame must be removed for access. Refer to page 15 for instructions on door frame removal. The booklet can be found attached to a tether at the back of the component tray. This area can be accessed through the opening shown in Figure 2.



OPERATING INSTRUCTIONS

For Your Safety, Read Safety Precautions And Lighting Instructions Before Operating

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

LIGHTING AND TURNING OFF INSTRUCTIONS

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 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.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it. Call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

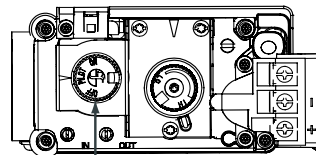
TO TURN OFF GAS TO APPLIANCE

1. Set the thermostat to the lowest setting.
2. Turn off all electric power to the appliance if service is to be performed.
3. Open the front control panel and flip burner switch to "OFF"
4. Turn the gas control knob clockwise  to the "OFF" position.
5. Close the front control panel.

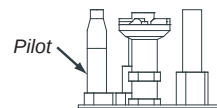
C-16301

LIGHTING INSTRUCTIONS

1. STOP! Read the safety information above on this label.
2. Set the thermostat to the lowest setting.
3. This appliance is equipped with an on-demand pilot that shuts off after 7 consecutive days of main burner inactivity.
4. Turn off all electric power to this appliance.
5. Open the front control panel for valve knob access.
6. Turn off the gas control knob clockwise  to the "OFF" position.
7. Open door. Wait five (5) minutes to clear out any gas. Close door. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
8. Find pilot - located close to the burner(s). Turn the gas control knob counter-clockwise  to "PILOT". Push the gas control in fully and hold, keep knob depressed for about 60 seconds after the pilot is lit or until an audible "BEEP" is heard. Release knob. If pilot goes out, repeat steps 4 through 5. **WARNING:** This gas valve has a lockout device, which will not allow the pilot burner to be relit until the thermocouple has cooled.
 - If the knob does not pop up when released, stop and immediately call your service technician or gas supplier.
 - If the pilot will not stay lit after several tries, turn the gas control knob clockwise  to "OFF" and call your service technician or gas supplier.
9. Turn the gas control knob counter clockwise  to the "ON" position. Flip the burner switch to "ON" then turn the "HI/LOW" knob to the desired setting.
10. Close the front control panel.
11. Turn on all electric power to the appliance.
12. Set thermostat to desired setting.



Gas Control Knob



C-16301

Figure 3: S50 Lighting Instruction Labels

OPERATING INSTRUCTIONS

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 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.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it. Call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

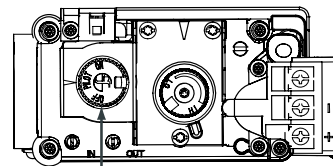
TO TURN OFF GAS TO APPLIANCE

1. Set the thermostat to the lowest setting.
2. Turn off all electric power to the appliance if service is to be performed.
3. Open the front control panel and flip burner switch to "OFF"
4. Turn the gas control knob clockwise  to the "OFF" position.
5. Close the front control panel.

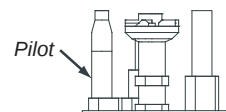
C-16299

LIGHTING INSTRUCTIONS

1. STOP! Read the safety information above on this label.
2. Set the thermostat to the lowest setting.
3. Turn off all electric power to this appliance.
4. Open the front control panel for valve knob access.
5. Turn off the gas control knob clockwise  to the "OFF" position.
6. Open door. Wait five (5) minutes to clear out any gas. Close door. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this label. If you don't smell gas, go to the next step.
7. Find pilot - located close to the burner(s). Turn the gas control knob counter-clockwise  to "PILOT". Push the gas control in fully and hold, keep knob depressed for about 30 seconds after the pilot is lit. Release knob. If pilot goes out, repeat steps 4 through 5. **WARNING:** This gas valve has a lockout device, which will not allow the pilot burner to be relit until the thermocouple has cooled.
 - If the knob does not pop up when released, stop and immediately call your service technician or gas supplier.
 - If the pilot will not stay lit after several tries, turn the gas control knob clockwise  to "OFF" and call your service technician or gas supplier.
8. Turn the gas control knob counter clockwise  to the "ON" position. Flip the burner switch to "ON" then turn the "HI/LOW" knob to the desired setting.
9. Close the front control panel.
10. Turn on all electric power to the appliance.
11. Set thermostat to desired setting.



Gas Control Knob



Pilot

C-16299

Figure 4: S50-820 Lighting Instruction Labels

OPERATING INSTRUCTIONS

PILOT LIGHT

1. Turn off gas to the fireplace. **If not recently done, remove the glass and let the unit air out for at least five (5) minutes to clear out any gas.** Turn on gas to the heater.
2. Align "Pilot" on the control knob (Figure 7) with the horizontal indicator and press knob all the way in while pressing the piezo ignitor repeatedly. When the pilot flame ignites, continue holding down the control knob for approximately 30 seconds then release. On S50 models equipped with 821 valve, hold control knob down until an audible "beep" is heard then release. The pilot flame should remain lit on its own at this point.
3. Ensure pilot is fully engulfing thermocouple and thermopile (see Figure 5).

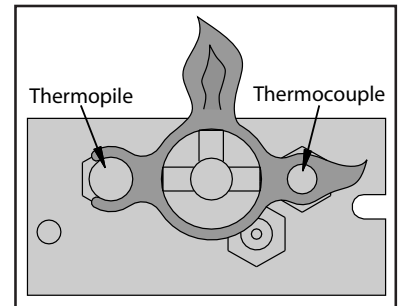


Figure 5: Pilot Flame

Note: The pilot will automatically extinguish after 7 consecutive days of continuous operation without any main burner activity. The pilot will need to be re-lit by turning the control knob to OFF then following steps 2 & 3 above. **Does not apply to S50-820 models.**

AIR SHUTTER

The air shutter plays a very important role in flame appearance and combustion quality. The shutter adjusts how much air gets mixed with the gas before it ignites. Start the fireplace and allow it to heat up for 15+ minutes before making adjustments.

The air shutter slider is located at the back of the unit (see Figure 6).

Adjustments:

Lean (more primary air): Pull slider outwards to make flame appear more blue and low.

Rich (less primary air): Push slider inward to make flame appear more yellow and tall. Flame will continue to richen up during operation creating a potential for gradual soot build-up.

Note: If you cannot attain a healthy flame by making air shutter adjustments, you may have the incorrect restrictor setting or a venting problem.

Warning: Incorrect shutter adjustment may lead to improper combustion, which is a safety hazard. Contact the dealer if there is any concern about the venturi adjustment.

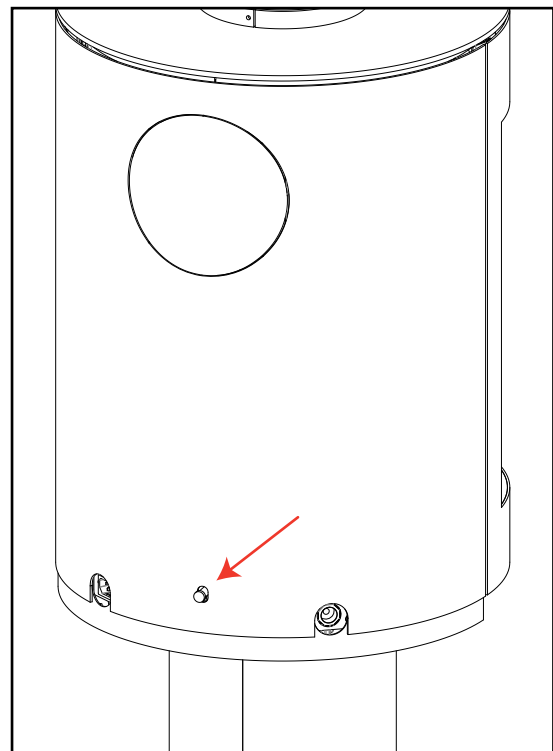


Figure 6: Air Shutter Location

OPERATING INSTRUCTIONS

CONTROL PANEL AND OPERATION

The gas valve and control switches are located behind the door frame at the bottom edge of the stove (see Figure 7). The controls can be accessed by reaching under the door frame without needing to remove it (see Figure 8 and Figure 9).

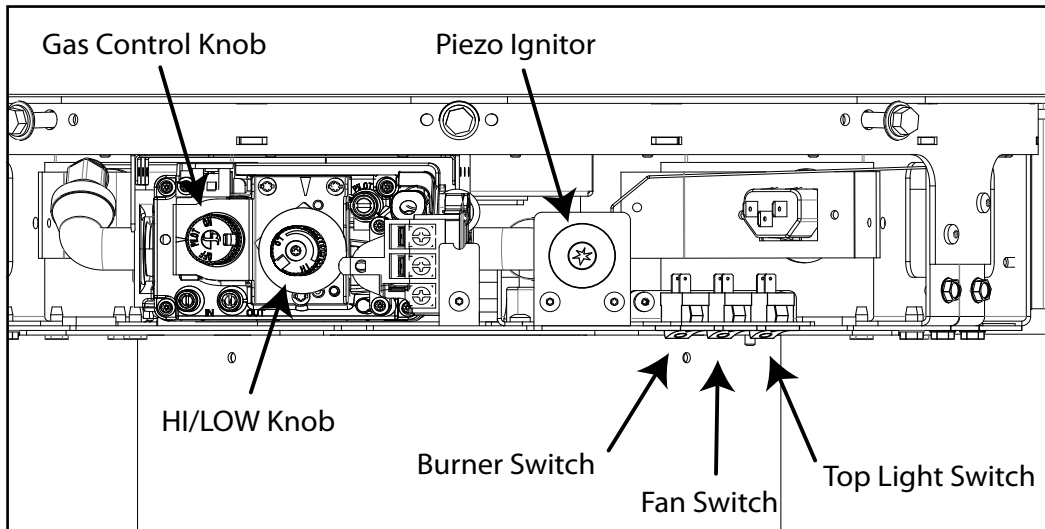


Figure 7: System Controls

How to light burner:

1. Ensure pilot flame is lit (see "Pilot Light" section on page 10 for detail).
2. Push control knob in slightly and turn COUNTER CLOCKWISE to ON.
3. Flip burner switch to ON if it's not already (see Figure 7).
*NOTE: The burner switch has 3 positions (ON, Thermostat Mode, OFF).
4. Turn the HI/LO knob to the desired flame height.

Turning off burner:

1. Flip burner switch to OFF. A small "poof" from the burner may be heard immediately following turn off - this is normal. If a sizeable "poof" is heard, contact your dealer.

If the fireplace is being turned off for the season or for servicing, turn off the gas supply. If the unit is being serviced, unplug the electrical supply.

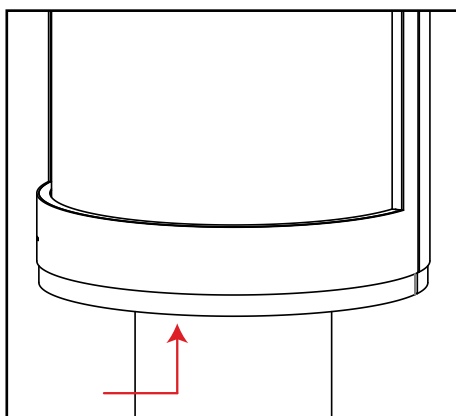


Figure 8: Controls Location

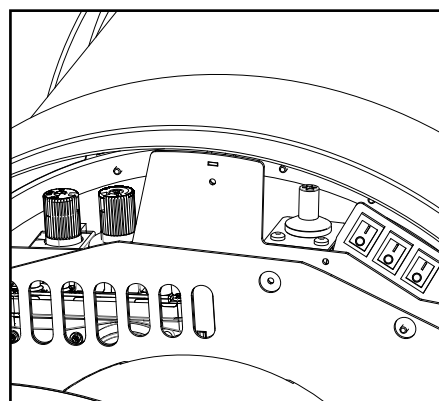


Figure 9: Controls Location (Bottom View)

OPERATING INSTRUCTIONS

***NOTE:** When the unit is turned on for the first time, it should be turned onto high, with the fan OFF, for the first two to four hours. This will cure the paint, logs, gasket material, and other products used in the manufacturing process. It is advised that a door or window be opened as the unit will start to smoke, which can irritate some people. After the unit has gone through the first burn turn the unit OFF, including the pilot, and let the unit get completely cold. Then remove the glass and clean it with a good gas fireplace glass cleaner, available at your local Enviro dealer. See page 15 and page 16 for instructions on removing fireplace door and glass.

NORMAL SOUNDS DURING OPERATION

Table 1: Normal Sounds

Component	Sound & Reason
Firebox	Creaking when heating up or cooling down.
Burner	Pop or poof when turned off; this is more common with LP units.
Pilot Flame	Quiet whisper while the pilot flame is on.
Fan	Fan moving air during operation.
Gas Control Valve	Dull click when turning on or off, this is the valve opening and closing.

MAINTENANCE AND SERVICE

ROUTINE MAINTENANCE

At least once a year, run through the following procedures to ensure the system is clean and working properly. Check the burner to see if all the ports are clear and clean. Check the pilot to make sure it is not blocked by anything. The pilot flame should be blue with little or no yellow on the tips.

WARNING: Failure to position the parts in accordance with this manual, or failure to use only parts specifically approved with this appliance may result in property damage or personal injury.

The venting system must be periodically examined; it is recommended the examination is done by a qualified agency.

CLEANING DECORATIVE SURFACES

Powder coated surfaces: ONLY USE WARM SOAPY WATER and microfiber cloth (paper towel can leave scratches). Chemical cleaners will damage the coating and replacement due to chemical cleaning is NOT covered under warranty.

Enameled liner surfaces: Use a ceramic cleaner with ceramic cleaning sponge or microfiber cloth.

CLEANING THE GLASS

WARNING: Do not clean glass when hot; allow unit to cool completely before disassembling.

Remove the door frame and glass (see details on page 15 and page 16 respectively). Check the gasket material is intact and the adhesive hasn't worn off.

Condensation will sometimes form on the glass during cold starts, this is a normal condition with all fireplaces. This condensation will eventually leave residue which requires cleaning. Initial firebox paint curing can leave a slight film behind the glass which poses a temporary problem; thus the glass may need cleaning about two weeks after installation. Use a mild glass cleaner and a soft cloth. Abrasive cleaners will damage the glass and painted surfaces. Clean glass as needed.

MAINTENANCE AND SERVICE

LIFTING THE TOP PLATE

The top plate of the unit is attached to a pair of hinges and tension cable that will support its weight when lifted allowing access for servicing. Lift the top plate upwards until the hinge arms can both be pulled completely outward simultaneously (see Figure 10 and 11 below).

WARNING: Use a helper to support the top plate until the hinges are set to prevent injury.

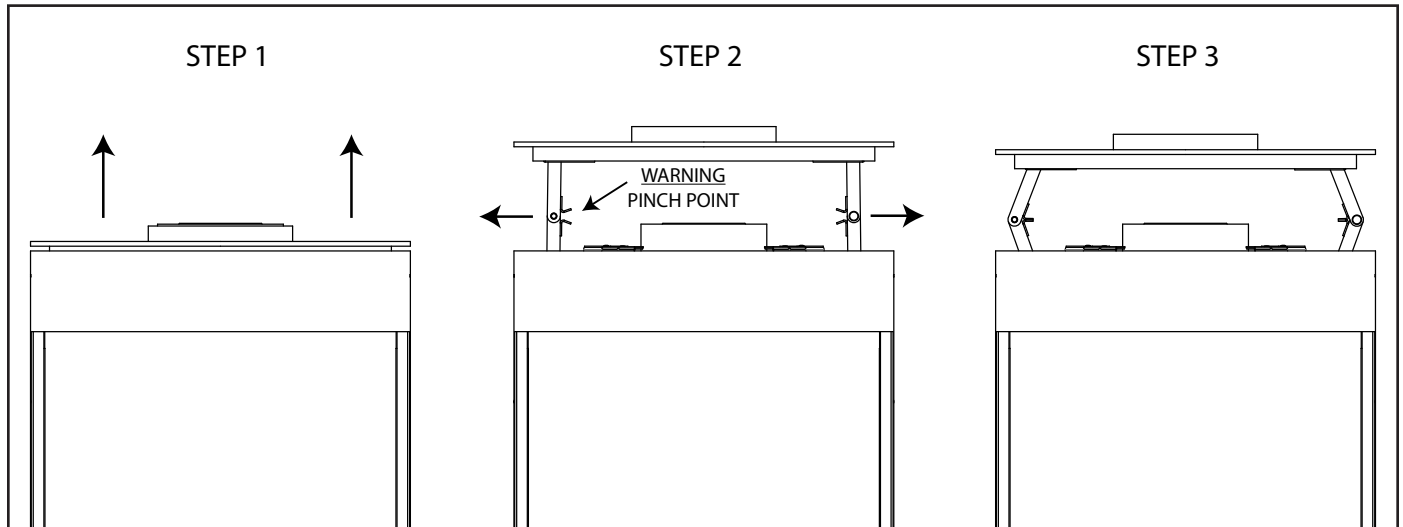


Figure 10: Lifting the Top Plate

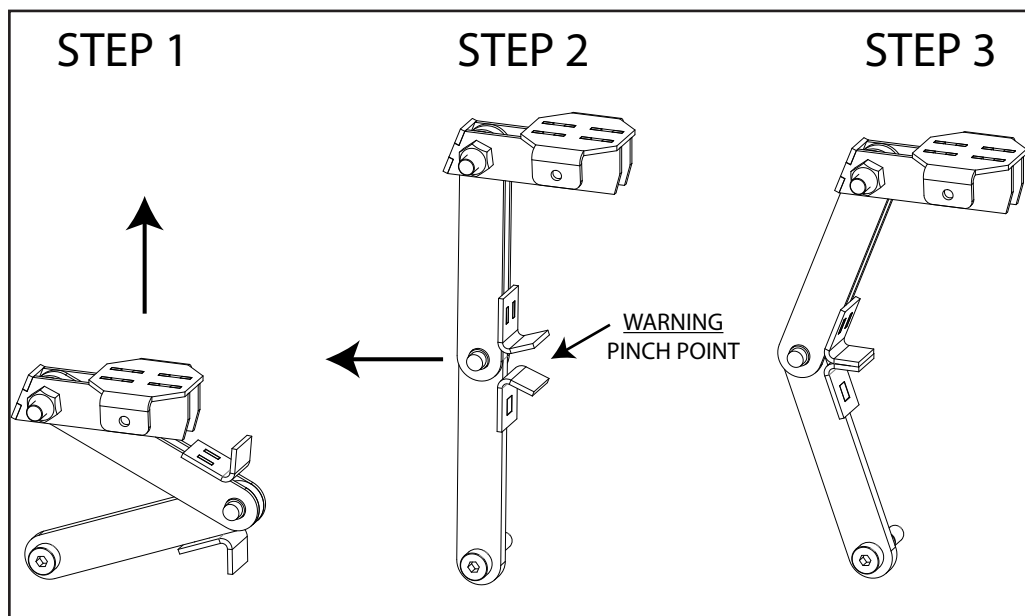
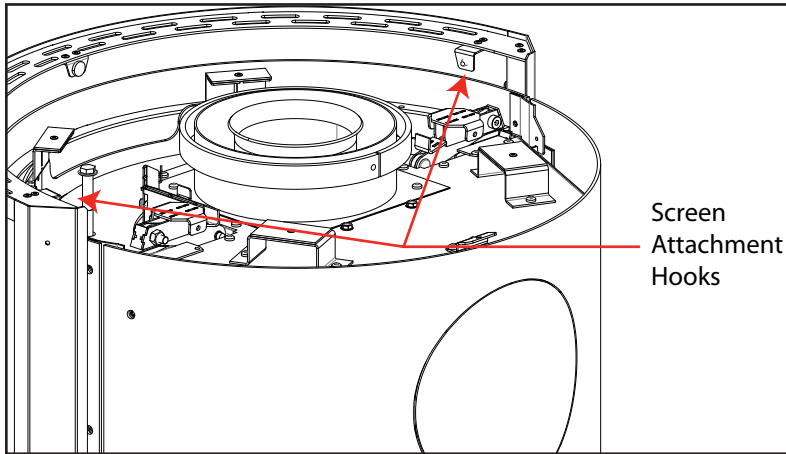


Figure 11: Top Plate Hinge Mechanism

MAINTENANCE AND SERVICE

SAFETY SCREEN

The safety screen is attached by two hooks on the top edge of the unit (see Figure 12). Lift top plate to gain safety screen lift clearance (see instruction previous page); gently and carefully lift the screen up and away from the unit (see Figure 13).



**Figure 12: Safety Screen Attachment Hooks
(Top Plate Removed for Visibility)**

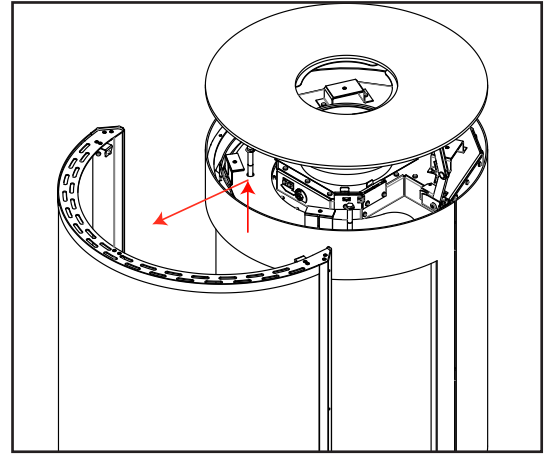


Figure 13: Safety Screen Removal

***NOTE:** The screen uses rubber bumpers as a cushion between it and the main body of the fireplace to prevent damage to the exterior. Even with these in place, it is important to be very careful when removing/attaching the safety screen as to not scratch or chip the paint.

Safety Screen Positioning: The two upper side hooks mount over the door frame. The center bumper rests on the OUTSIDE of the door frame (see Figure 14 for clarification). The lower three standoff bumpers also rest against the outer surface. Take care not to scratch any painted surfaces.

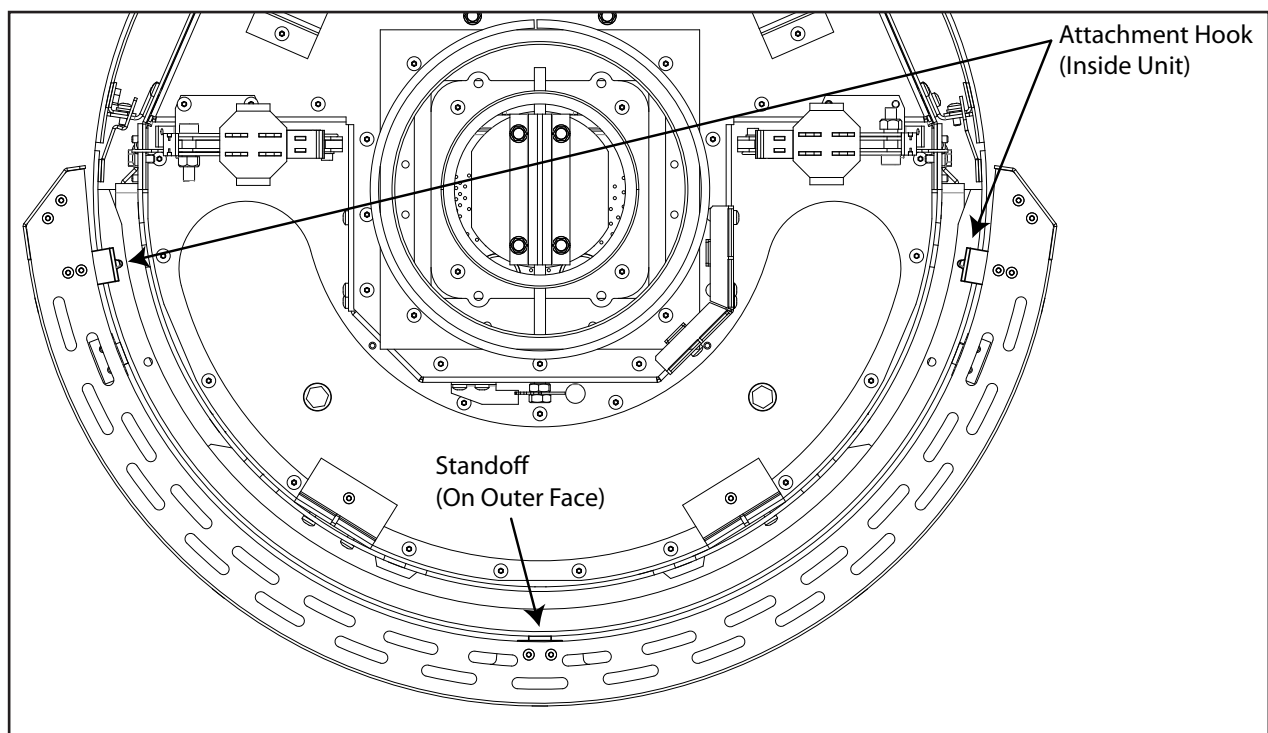


Figure 14: Safety Screen Attachment (Top-Down View)

MAINTENANCE AND SERVICE

The safety screen mounting position can be adjusted slightly to maintain parallelism with the fireplace body lines. The outer standoffs on the lower screen can be repositioned by loosening the two T20 screws and adjusting via slots, retighten screws.

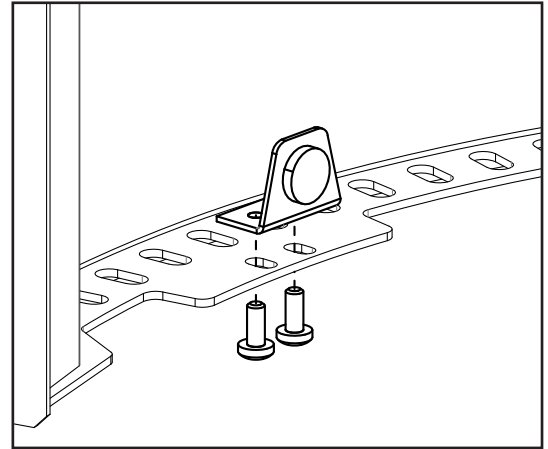


Figure 15: Safety Screen Adjustments

REMOVING THE DOOR FRAME/SKIRT

The door frame and skirt will need to be removed to gain firebox and component access. Take care not to scratch any painted surfaces.

REMOVING/MOUNTING THE DOOR FRAME

The door frame is attached with four hooks (two on each side) that interlock with slots on the chassis.

Remove: Lift top plate and set support hinges (see "Lifting The Top Plate" section for details), then grab the frame on either side and lift up to disengage hooks and bring out.

Mounting: There are two different sections in each mounting slot (see Figure 16). The door frame should fit relatively easily into section 1, it may be easier to mount one side first then the other. Once all hooks are engaged in their respective slots, push in one side of the door frame (top and bottom) until the hooks drop into the section 2; repeat this on the opposite side. This will firmly lock the door frame into position and close up any excessive gaps.

NOTE: If door frame mounting is proving difficult, the curved glass may not be clamped properly creating an interference with the door frame.

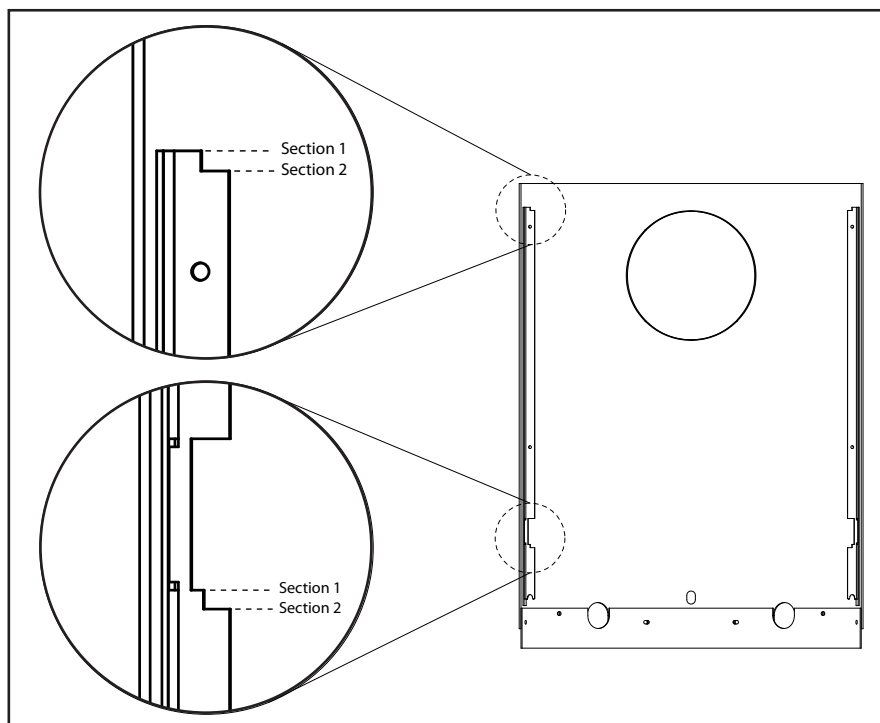


Figure 16: Chassis Mounting Slots

MAINTENANCE AND SERVICE

REMOVING THE FRONT SKIRT

Remove: After the door frame is removed, the skirt can be removed to gain component access by lifting up at either end to disengage the hooks and brought out.

Mounting: Place the skirt hooks into their respective chassis slots and the center stud support rest in the finger groove. Ensure proper hook setting is used for your pedestal option.

The notches closest to the end of the hook should be used when installed with a pole pedestal. The notches closest to the body of the skirt should be used when installed with a wood pedestal (see Figure 18 for detailed view).

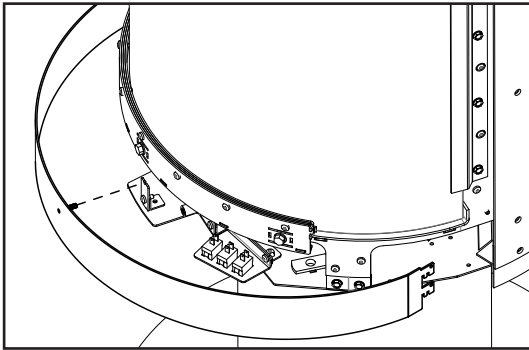


Figure 17: Front Skirt Attachment

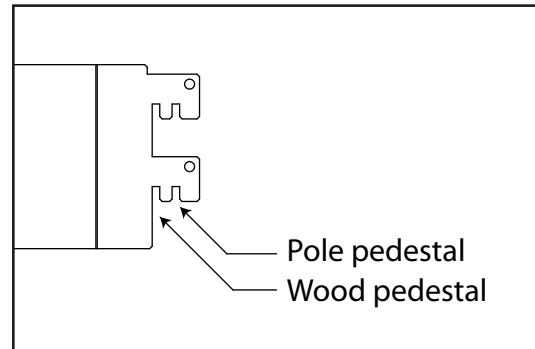


Figure 18: Front Skirt Attachment

REMOVING THE GLASS

WARNING: No substitute materials or parts can be used. **ONLY** glass supplied from the manufacturer may be used (replacement part number: 50-4188).

Remove the door frame (see previous section for details). The curved glass is retained using four clamps: one on each side, one on the top and bottom. To remove the glass: Loosen the two side retainers using a 5/16" socket (see Figure 19 and 19). Next, fully remove the top and bottom curved retainers using a 3/8" socket (see Figure 20). Shimmy the glass forward then grab it top and bottom by hand and carefully remove.

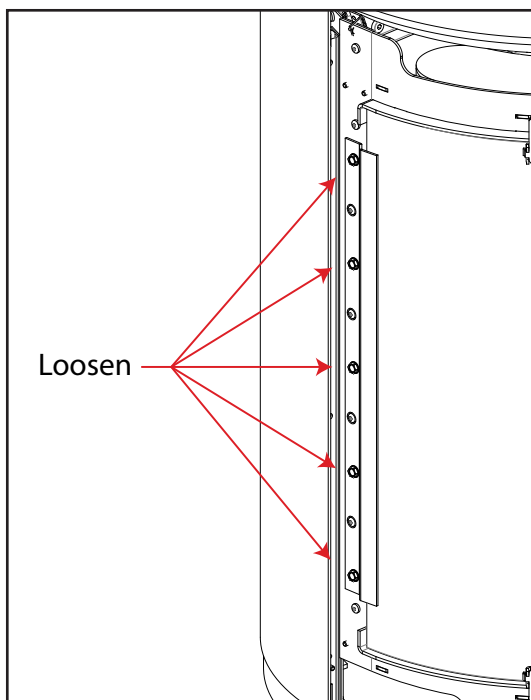


Figure 19: Glass Side Retainer

***NOTE:** To reattach the glass, perform the above instructions in reverse order. **IT IS IMPORTANT THAT THE TOP AND BOTTOM RETAINERS ARE INSTALLED FIRST AND FULLY TIGHTENED.** Not doing so can result in door frame mounting interference.

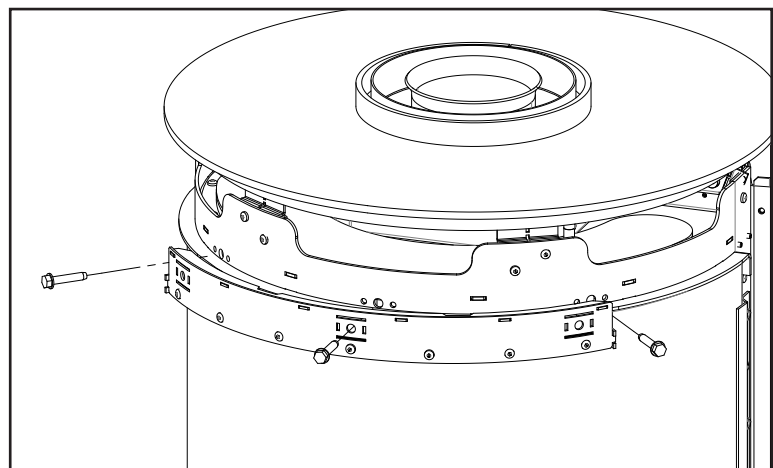


Figure 20: Glass Top/Bottom Retainer

MAINTENANCE AND SERVICE

REMOVING THE REAR CHASSIS

1. Remove the door frame and skirt (see REMOVING DOOR FRAME/SKIRT section on page 15).
2. Remove the venturi knob located on the back of the unit (see Figure 6). It can unscrewed by hand and put aside.
3. Position yourself in a way that allows you to support the chassis once detached. Remove the four mounting screws using a 5/16" socket (see Figure 21). There are two spacers at the bottom on the backside that support the rear chassis weight (see Figure 22). The chassis will pivot backwards once fully detached.
4. Lift up to disengage the slot from the spacers and pull away from the unit (See Figure 23).

When remounting, position chassis slots over both spacers and pivot up and reattach screws. Due to mild warping, the chassis may need to be squeezed inward to align slots.

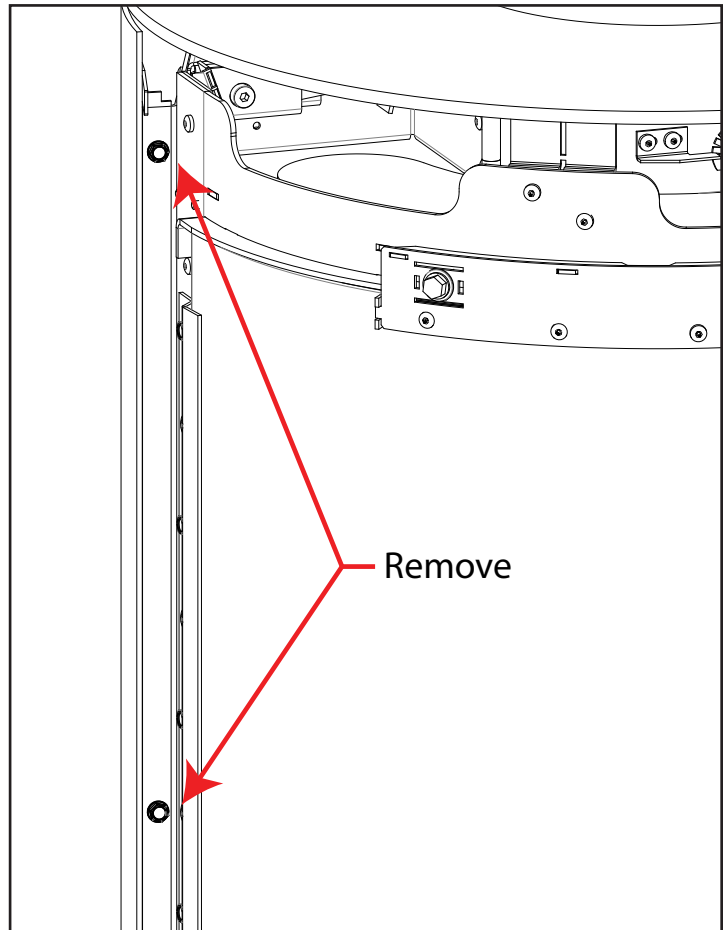


Figure 21: Rear Chassis Detachment

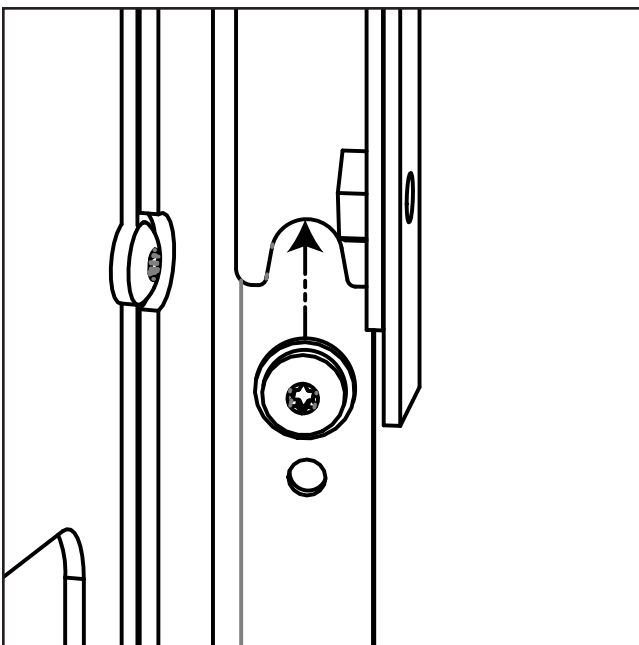


Figure 22: Rear Chassis Spacers

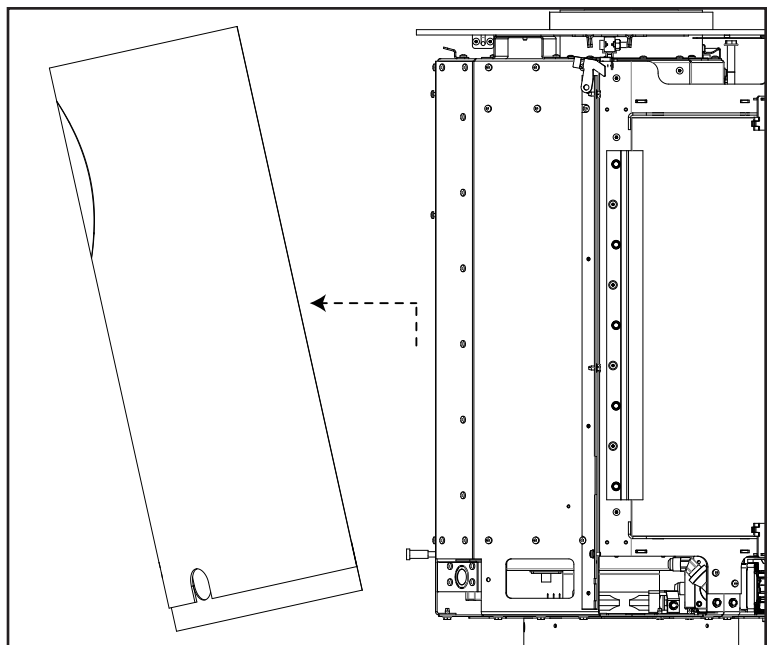


Figure 23: Rear Chassis Removal

MAINTENANCE AND SERVICE

TOP LIGHT REPLACEMENT

Top light replacement bulb: G9 25W 120V (50-4119). Disconnect power cord before proceeding. To replace the bulb, first remove the door frame and curved glass (see page 15 and page 16 for details). Remove top light cover plate (see Figure 24) take care not to damage ceramic fiber gasket, replace if needed. Gently lower the top light assembly and let it hang from the wires. Grab the top light glass on either side at the end with the two metal finger retainers and pull, the glass should rotate outward. Remove bulb by hand, be careful not to break it. Replace bulb taking caution never to touch the bulb with bare fingers. Use the foam sleeve provided to handle the bulb or wear clean gloves. Reassemble top light in the reverse order, attach spring clip to glass before reclipping to casing.

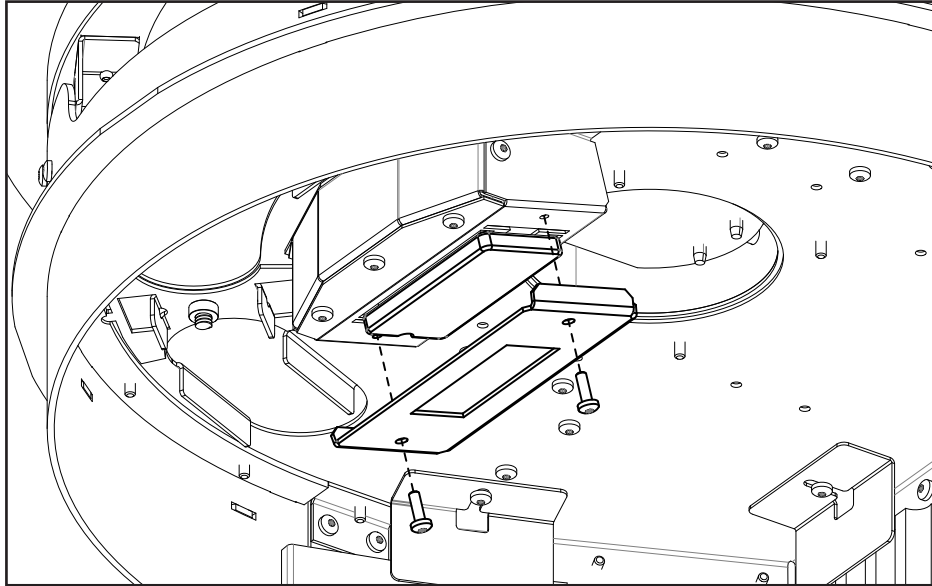


Figure 24: Safety Screen Removal

OPTIONAL FAN REPLACEMENT (50-4174)

The S50 has an optional fan kit that can be added to the unit (50-4174). Disconnect power cord proceeding. To replace the fan, first remove the door frame and skirt (refer to page 15 and 16 for details). On the left side of the unit there is a cavity that allows access to the fan (see Figure 25). Remove the fan retainer screw (see Figure 26) and remove retainer. Shimmy the fan loose and work it out of the fireplace, disconnect the electrical wires once you're able to (see Figure 27).

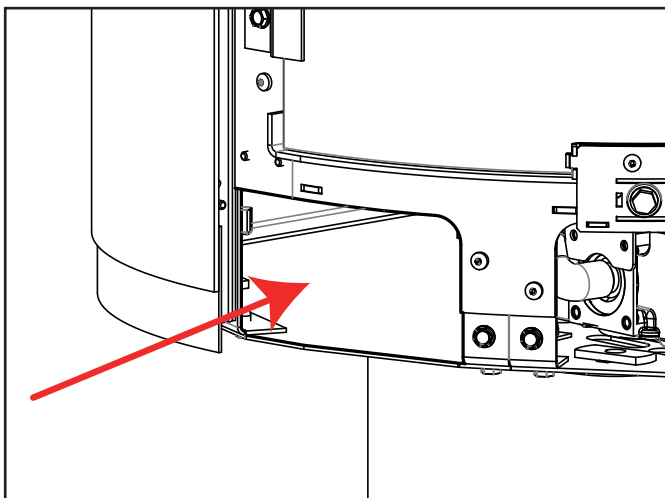


Figure 25: Fan Access Cavity

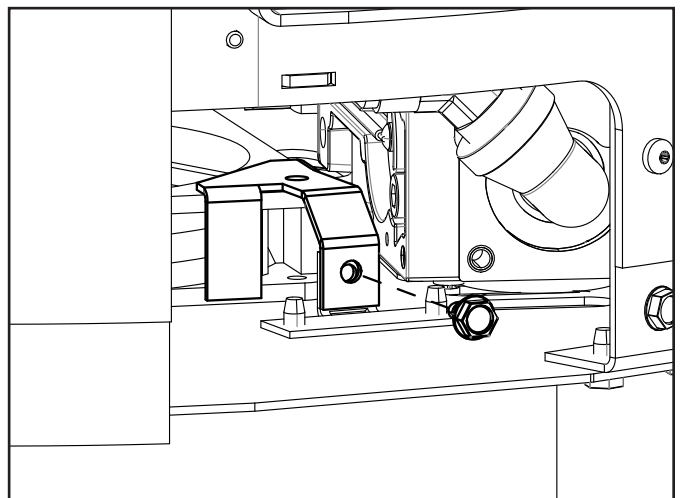


Figure 26: Fan Retainer Detachment

MAINTENANCE AND SERVICE

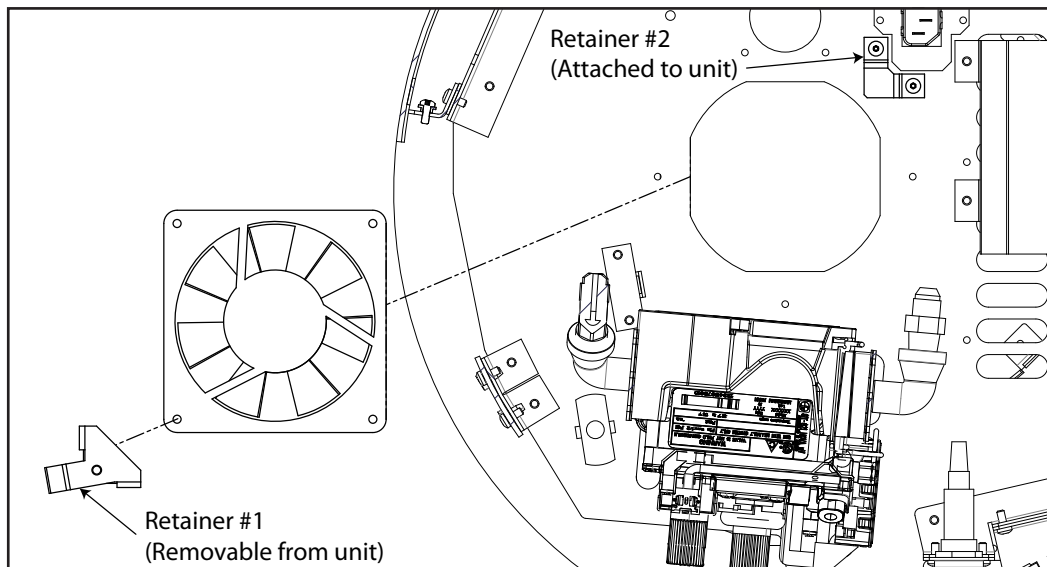


Figure 27: Fan Removal (Top-Down View)

When replacing the fan, ensure the label-side is facing down and electrical contacts are positioned at the same corner as retainer #1 (see Figure 27). Re-attach the electrical harness and work fan into position by wedging the respective corner into retainer #2 (see Figure 27). Try not sliding the fan on the foam gasket, it's for compression only. Once in place, position retainer #1 back over the respective corner and hold in place while reattaching retainer screw; the fan should now feel secure. Reconnect power and test fan.

REPLACING TRIM PARTS

All powder coated trim pieces on the S50 can be removed and replaced if damaged. This section will go over how to remove these pieces from the unit to then be replaced.

DOOR HOOKS

First, remove the door frame from the unit (refer to the REMOVING THE DOOR FRAME/SKIRT section on page 15).

The door frame hooks are each attached to five (5) studs on the main door frame. Remove the nuts retaining the hooks and remove from the door frame (refer to Figure 28).

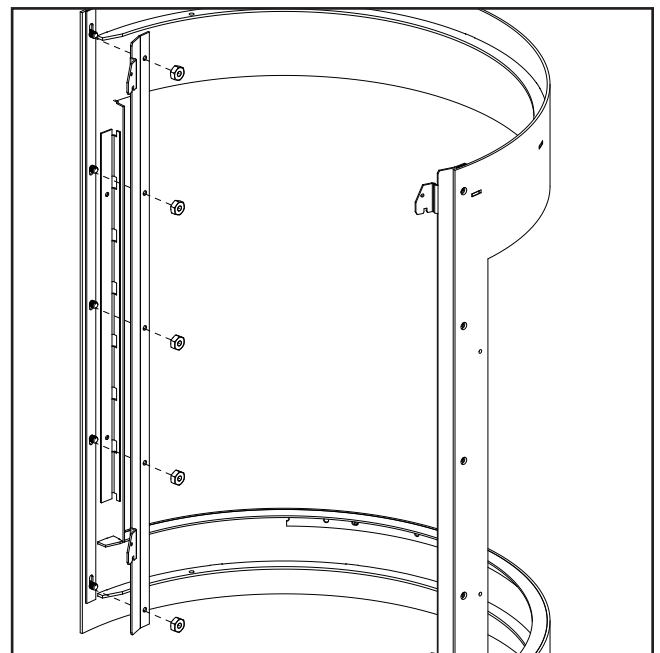


Figure 28: Door Frame Hook Removal

MAINTENANCE AND SERVICE

FRONT SKIRT

First, remove the door frame from the unit (refer to the REMOVING THE DOOR FRAME/SKIRT section on page 15).

The front skirt is hooked onto the rear chassis using two hooks on each side of the skirt. Simply lift the skirt up and away from the unit.

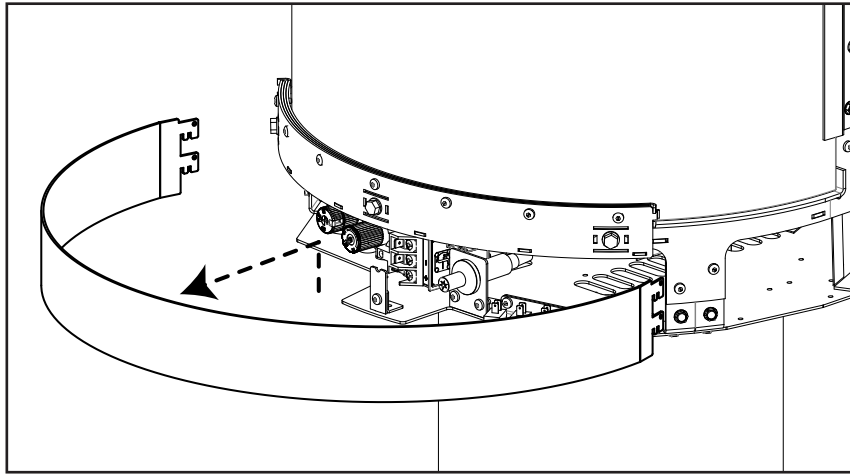


Figure 29: Front Skirt Removal

REAR SKIRT

Remove the door frame from the unit (refer to the REMOVING THE DOOR FRAME/SKIRT section on page 15).

Next, remove the rear chassis from the unit (refer to the REMOVING THE REAR CHASSIS section of page 17).

Remove the six (6) nuts retaining the rear skirt using a 3/32" (or 9mm) socket (see Figure 30).

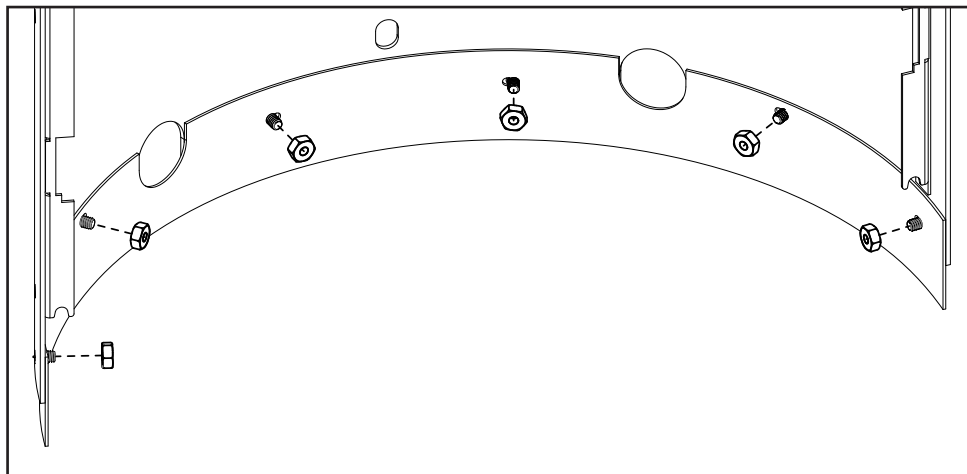


Figure 30: Rear Skirt Removal

MAINTENANCE AND SERVICE

TOP PLATE FASCIA BAND

First, remove the top plate from the unit (refer to the REMOVING THE TOP PLATE section on page 21).

Remove the four (4) nuts retaining the fascia band using a 3/32" (or 9mm) socket (see Figure 31).

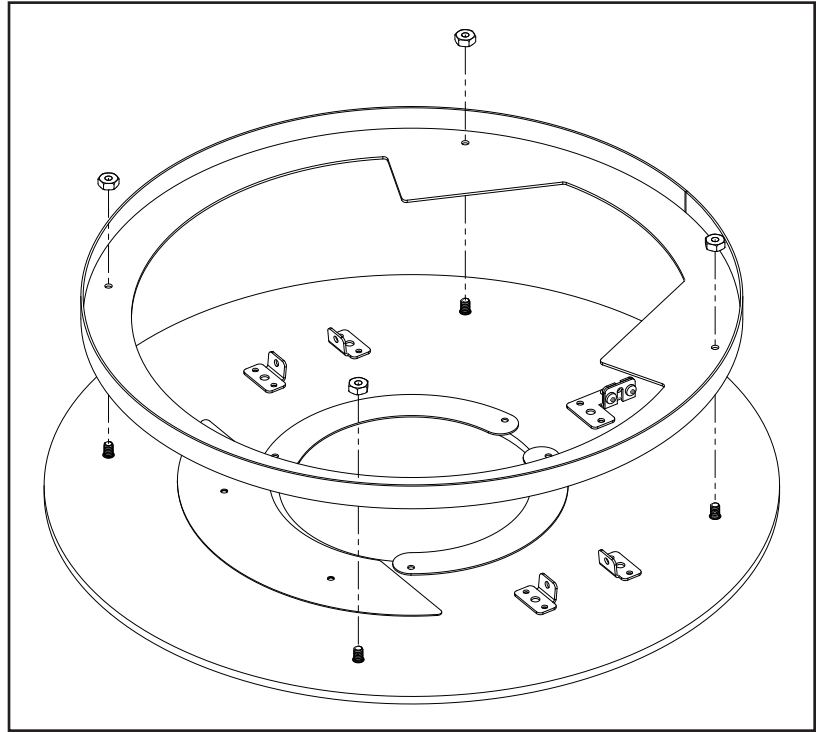


Figure 31: Top Plate Fascia Band Removal

REMOVING TOP PLATE

WARNING: A helper must be used to support the top plate weight while support system is being disconnected.

To remove the top plate, first lift the plate and set the support hinges (refer to the "Lifting the Top Plate" section on page 13 for instructions). The top plate is connected to the firebox via two hinge mechanisms and tensioned safety cable.

DETACHING THE HINGES

For each hinge, remove the two mounting screws using a 5/16" socket. The mounting cradle flanges are slightly overbent to ensure the hinges remain connected to the top plate after the screws have been removed. When ready, the hinge base will need to slide inward to release from the cradle (refer to Figure 32).

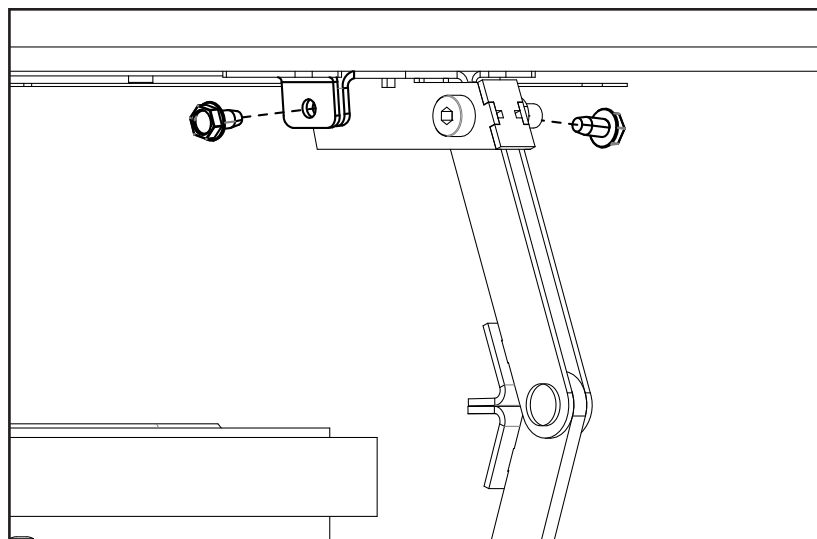


Figure 32: Top Plate Hinge Detachment

MAINTENANCE AND SERVICE

DETACHING THE TENSION CABLE

The top plate support system uses a tensioned safety cable to establish hinge stability. Should the top plate need to be removed, disconnect the cable retainer by removing the two T20 screws (see Figure 33).

WARNING: Always ensure tensioned safety cable is attached to the top plate.

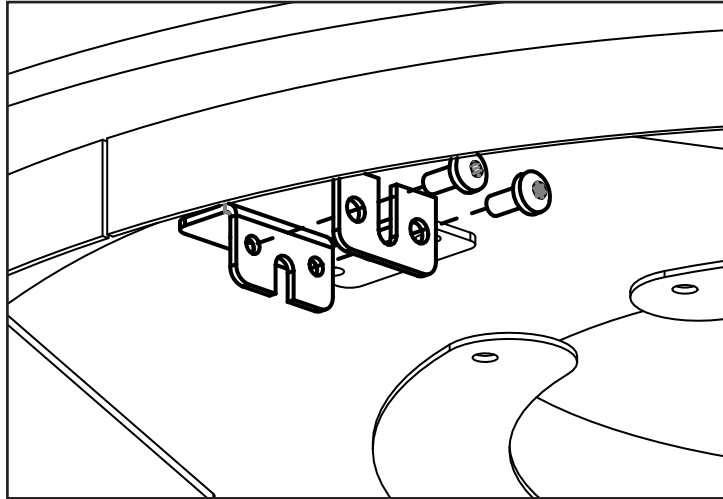


Figure 33: Top Plate Cable Detachment

BURNER REMOVAL

The stainless steel burner pan will need to be checked seasonally for corrosion and foreign debris. Ensure no material is obstructing the segregated pilot area or air servicing channels as illustrated in Figure 99. Remove the burner for inspection.

To remove the burner, first remove the door frame and glass (refer to page 15 and page 16 for details). Remove the nine (9) screws securing the burner platform using a T20 screwdriver (see Figure 34).

Remove the pilot fence by hand taking care not to damage the ceramic fiber gasket (see Figure 35). This gasket is used to prevent drafts from interfering with the pilot flame so replace if damaged.

Remove the four (4) screws securing the burner pan using a T20 screwdriver. Rotate the burner upward and lift out (see Figure 36).

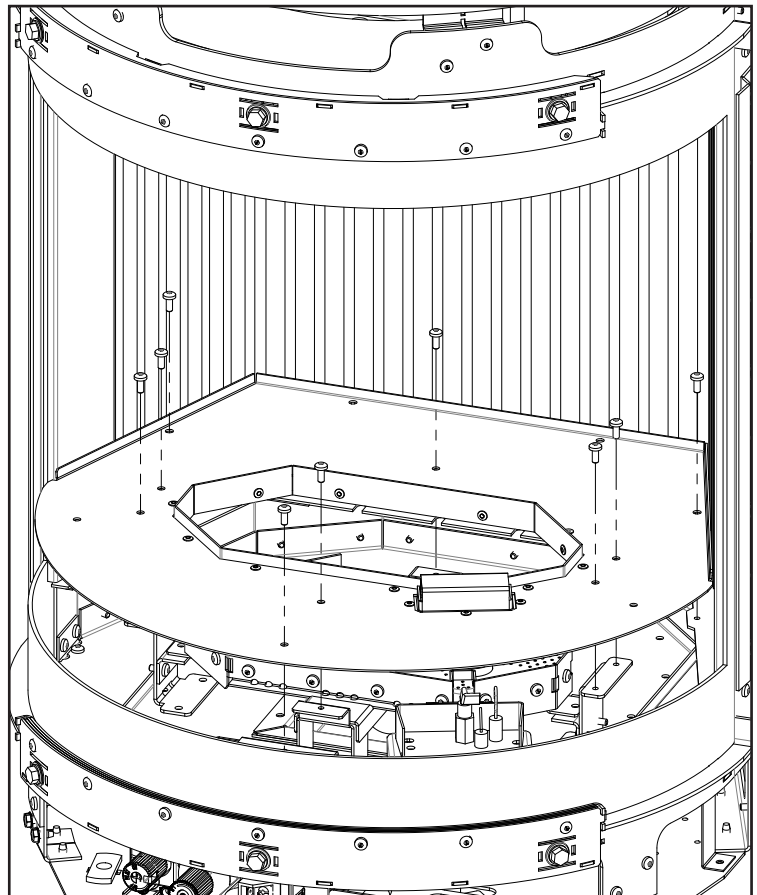


Figure 34: Burner Platform Removal

MAINTENANCE AND SERVICE

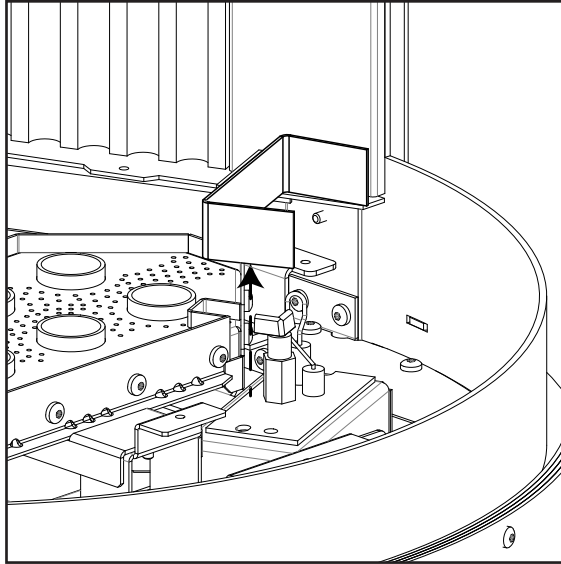


Figure 35: Pilot Fence Removal

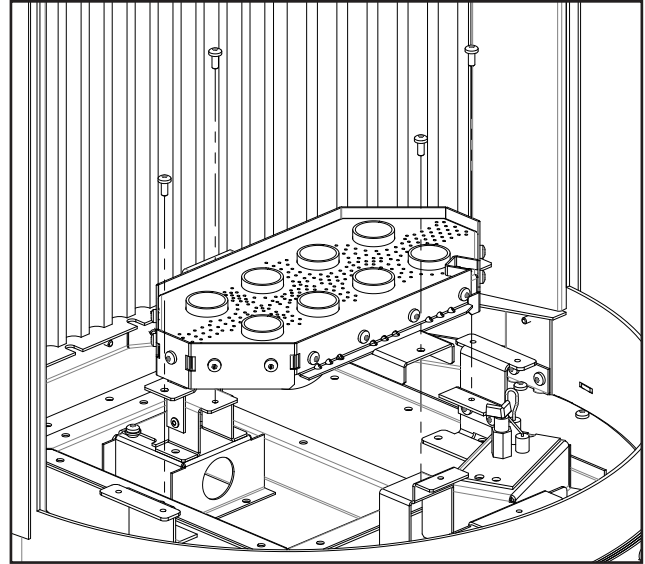


Figure 36: Burner Removal

FUEL CONVERSION

TO BE INSTALLED BY A QUALIFIED SERVICE AGENCY ONLY

Please read and understand these instructions before installing.

Warning: This conversion kit shall be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper installation of this kit. The installation is not proper or complete until the operation of the converted appliance is checked as specified in the manufacturer's instructions supplied with the kit.

Kit Parts List for all S50 models:

- | | |
|---|------------------------------------|
| 1 - Orifice (NG: #37) or (LP: #53) | 1 - Conversion label |
| 1 - Pilot Orifice (LP orifice supplied with unit) | 1 - Installation instruction sheet |

Carefully inspect all parts supplied with this conversion kit. If any parts have been damaged or are missing, contact your dealer, distributor or courier company to have them replaced before starting this installation.

Conversion Kit Installation:

1. Turn control knob on the gas valve to the "OFF" position and shut the gas supply off at the shut-off valve upstream of the unit. **CAUTION:** The gas supply must be shut off prior to disconnecting the electrical power and before proceeding with the conversion. Allow the valve and unit to cool down to room temperature.

MAINTENANCE AND SERVICE

2. Remove the door frame and glass as shown in their respective sections on page 15 and page 16.
3. Carefully remove the log set.
4. Remove the burner as shown in the BURNER REMOVAL section on page 22.
5. Convert the pilot orifice:
 - a) Using a $\frac{7}{16}$ " wrench, loosen the pilot head counter clockwise and remove
 - b) Remove the existing orifice and replace with the one supplied in the kit (Figure 37)
 - c) Re-install the pilot head and tighten until it is back in the proper position (Figure 38)



Figure 37: Pilot Orifice

6. Convert the burner orifice:
 - a) Remove the main burner orifices with a $\frac{1}{2}$ " deep socket
 - b) Put a bead of pipe-thread sealant into the orifice mount. DO NOT OVERTIGHTEN
 - c) Install the new orifice.



Figure 38: Proper Pilot Position

7. Convert the SIT gas valve:
 - a) Remove the black protection cap from the HI/LO knob by hand shown in Figure 39.
 - b) Insert a $\frac{5}{32}$ " or 4 mm Allen wrench into the hexagonal key-way of the screw (see Figure 40), rotate it counter-clockwise until it is free and extract it.
 - c) Check that the screw is clean and if necessary remove dirt.
 - d) Flip the screw (refer to Figure 41).
 - e) Using the Allen wrench as shown in Figure 40, rotate the screw clockwise until a torque of 9 inch lbs. **WARNING!** Do not over tighten the screw. It is recommended that you grip the wrench by the short side.

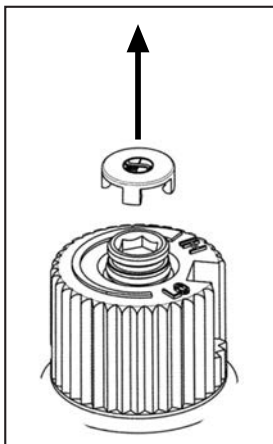


Figure 39: Removing valve cap.

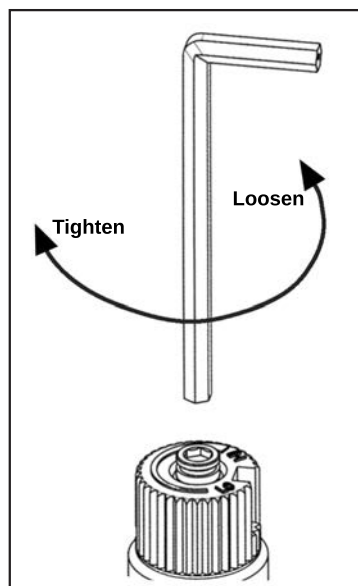


Figure 40: Removing valve screw.

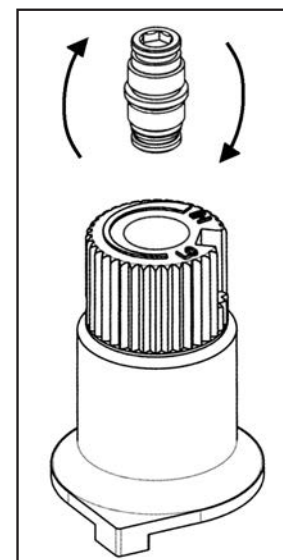


Figure 41: Flip valve screw.

MAINTENANCE AND SERVICE

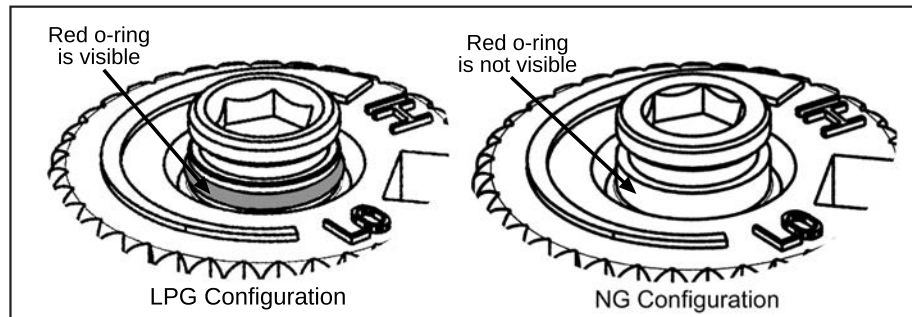


Figure 42: O-ring on valve screw.

- f) Verify that if the conversion is from NG to LPG, the screw must be re-assembled with the red o-ring visible (refer to Figure 42). If the conversion is from LPG to NG, the red o-ring of the screw must be not visible.
- g) Re-attach the black protection cap that was removed in step a (Figure 39).
9. Reinstall the burner, burner platform, log set, glass, and door frame. Also refer to the LOG SET INSTALLATION section on page 52.
10. Reconnect the main gas line if it was disconnected and open the shut-off valve at the gas line to the unit.
11. Reconnect the electrical power to the unit.
12. Use a small brush to apply a warm soapy water solution to all gas connections (use a half dish soap and half warm water). If a gas leak is present, bubbling will occur. Gas leaks can be repaired by using an approved pipe thread sealant or approved Teflon tape. **NEVER USE AN OPEN FLAME WHEN TESTING FOR LEAKS.**
13. Relight the pilot and confirm the flame properly covers both the thermocouple and thermopile (see Figure 5). Should the pilot require adjustment, turn the adjustment screw clockwise to decrease or counterclockwise to increase until the correct flame is achieved.
14. Relight the main burner in both the "HI" and "LO" positions to verify proper burner ignition, operation and proper flame appearance (page 38). Confirm the inlet and manifold pressures are within the acceptable ranges as directed in the GAS LINE CONNECTION section on page 41. **If the S50 has been installed at an altitude higher than 2000ft (610m) it is required to de-rate the unit accordingly:**

In the USA: The appliance may be installed at higher altitudes. Please refer to your American Gas Association guidelines which state: the sea level rated input of Gas Designed Appliances installed at elevations above 2000 (610 m) feet is to be reduced 4% for each 1000 feet (305 m) above sea level. Refer also to local authorities or codes which have jurisdiction in your area regarding the de-rate guidelines.

In Canada: When the appliance is installed at elevations above 4500 feet (1372 m), the certified high altitude rating shall be reduced at the rate of 4% for each additional 1000 feet (305 m).

15. **MAKE SURE** that the conversion label is installed on or close to the rating label to signify that the unit has been converted to a different fuel type.

INITIAL INSTALLATION

QUALIFIED INSTALLERS ONLY

INTRODUCTION

This section of the owner's manual is for the use of qualified technicians only. Fireplace placement, hearths, and venting terminations will be covered, as well as the gas and electrical systems. There are several installation safety guidelines that must be adhered to. Please carefully read the safety precautions at the front of this manual.

PREPARATION FOR INSTALLATION

- Remove the packaging from the appliance and check to make sure there is no damage. If damage is found, please report it to both the carrier and your dealer as soon as possible. Take care not to strike the finish when unpacking the S50. Damage created by a utility knife (or the like) during unpacking will not be covered under warranty.
- Before beginning, carefully check the glass door and log set.
- Locate a position where the flue system of the stove can be properly installed without damaging the integrity of the building; e.g. cutting a wall or ceiling joist.
- Check store and flue system clearance requirements.
- Locate the stove where it can be accessed by a gas supply line

INITIAL INSTALLATION

QUALIFIED INSTALLERS ONLY

CLEARANCE TO COMBUSTIBLES

Warning: Clearances must be sufficient to allow for maintenance and service.

A. Side Wall to Edge of unit:	12" [30.5 cm]
B. Side Wall to Center of unit:	22" [55.9 cm]
C. Back Wall to Edge of unit:	3" [7.6 cm]
D. Back Wall to Center of unit:	13" [33.0 cm]
E. Ceiling to unit:	16" [40.6 cm]
F. Floor (hard wood & linoleum)	0" [0 cm]

***Note:** When installing on a carpeted surface, a hearth pad must be used (not supplied) for air flow reasons.

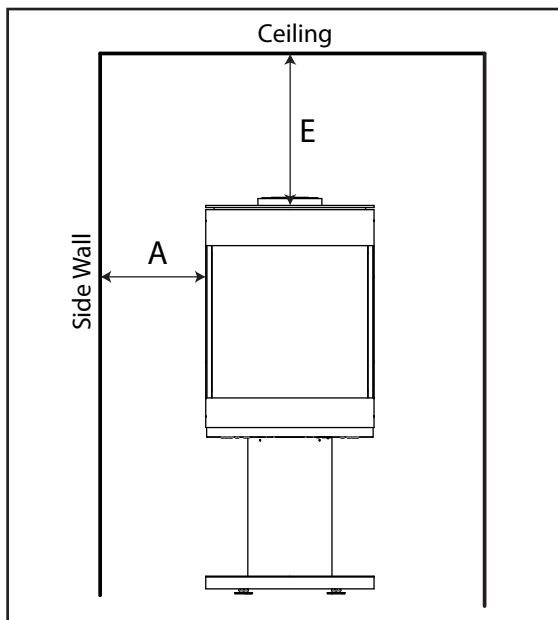


Figure 44: Clearance to Combustibles - Ceiling

MINIMUM DIMENSIONS - CORNER INSTALL

Warning: Clearances must be sufficient to allow for maintenance and service.

G. Wall to Edge of unit:	6" [15.2 cm]
H. Wall to Center of unit:	16" [40.6 cm]

MINIMUM ALCOVE DIMENSIONS:

Width	48" [121.9 cm]
Height	63" [160.0 cm]
Depth (Max.)	43" [109.2 cm]

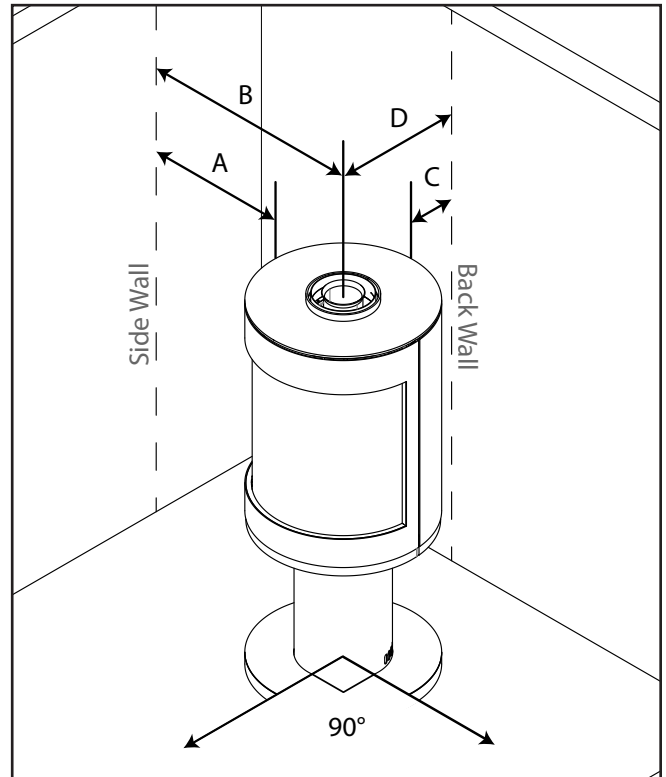


Figure 43: Clearance to Combustibles

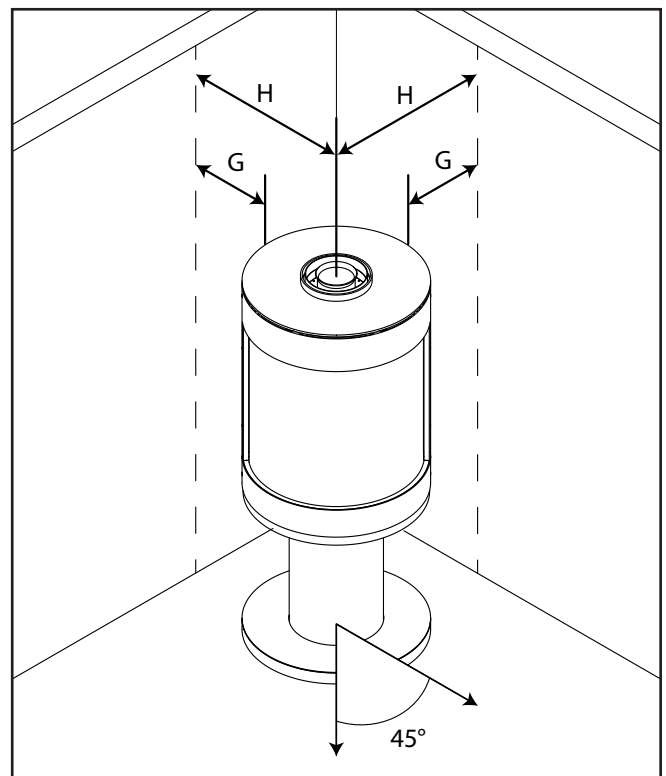


Figure 45: Clearance to Combustibles - Corner Install

INITIAL INSTALLATION

QUALIFIED INSTALLERS ONLY

DIRECT VENT

WARNING: This appliance has been designed to draw room air for proper heat circulation from the bottom of the unit, and out the top front. Blocking or modifying these openings in any way can create hazardous situations.

The vent length for the S50 must be between 21" (53.3 cm) and 40 ft (12.2 m). This model is vented with co-axial 4" intake, 6 5/8" exhaust aluminum or stainless steel approved rigid vent leading into a vertical or horizontal termination cap. The flue collar of this model will fit inside of a standard 4" x 6 5/8" vent and must be either correctly interlocked or fastened, with three screws directly to the vent.

Check periodically that the vents are unrestricted. Also ensure that all direct vent pipes have been properly sealed and installed after routine inspection or cleaning. The air intake and exhaust pipes must be installed in the correct location on top of the S50.

VENTING CLEARANCES

A 1" (25 mm) clearance to combustibles must be maintained around any vertical vent pipe. Around a horizontal vent pipe, the clearance to combustibles should be 2" (51 mm) above and 1½" (38 mm) on the sides and bottom. When combustible materials are directly above a 90° elbow, 3" (76 mm) of clearance are necessary.

Table 2: Vent Pipe Minimum Clearances.

	Vertical Pipe to the Side Walls	Horizontal Pipe to the Sides & Bottom	Above an Elbow Above the Unit	Above an Elbow Not Above the Unit	Above Horizontal Vent Pipe	Wall Frame 8" (203mm) or less
Hard Pipe	1" (25.4 mm)	1½" (38.1 mm)	3" (76.2 mm)	3" (76.2 mm)	2" (51 mm)	10"x10" (25x25cm)

A 10" (254 mm) x 10" (254 mm) frame (see Figure 46) will assure the proper support and spacing for the vent pipe as it passes through the wall. Installations in Canada require that a wall thimble be used for passing through walls and ceilings. All sealing and vapour barriers must comply with local building codes.

The configuration of the venting pipes depends on the locations of walls, ceilings, and studs. However, the pipes cannot be of arbitrary length and arrangement. Because the length of the vertical and horizontal sections dramatically affects the burning efficiency of the fireplace, certain guidelines have been set in the vent configuration sections starting on page 32. Venting terminals can not be recessed into a wall or siding.

WARNING: This gas appliance must not be connected to a chimney flue serving a separate solid-burning appliances.

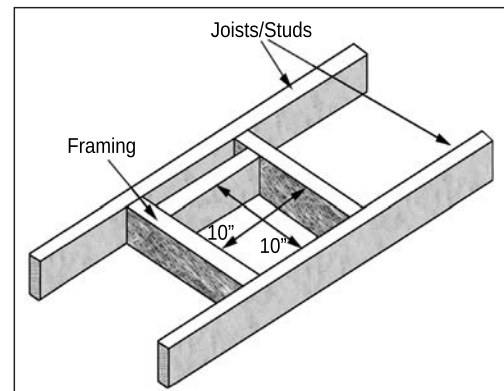


Figure 46: Vent Framing For Wall or Ceiling.

APPROVED VENTING PARTS

The S50 fireplace has been tested and certified for use with the venting systems shown in Table 3 & Table 4. Refer to the table below for part numbers of commonly used parts for both venting systems. For more venting parts please visit the respective manufacturers' website.

Table 3: Approved Vent Manufacturers

Manufacturer	Trade Name	Nominal Sizes
ICC	EXCELDirect	4" x 6 5/8"
M&G DuraVent	DirectVent Pro	
Selkirk	Direct-Temp	
Amerivent	Direct Vent	

INITIAL INSTALLATION

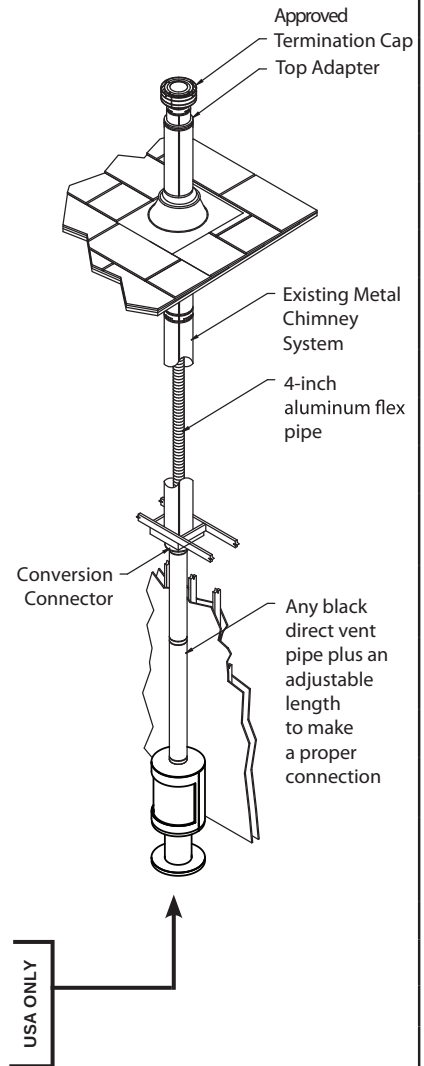
QUALIFIED INSTALLERS ONLY

WARNING: Do not mix parts from different vent manufacturers' systems.

EXCEPTION TO WARNING: This product has been evaluated by Intertek for using a DirectVent Pro starting collar in conjunction with other venting systems. Use of this system with the DirectVent Pro starting collar is deemed acceptable and does not affect the Intertek listing of the appliance.

Table 4: Vent part numbers (Must state if galvanized or black wanted, PART NUMBERS).

Direct Vent	Direct-Temp	DirectVent Pro	EXCELDirect	Description
4D7 (7")	4DT-06	46DVA-06	DL6	6" Pipe Length
	4DT-09	46DVA-09	DL9	9" Pipe Length
4D2	4DT-12	46DVA-12	DL1	12" Pipe Length
	4DT-18	46DVA-18		18" Pipe Length
	4DT-24	46DVA-24	DL2	24" Pipe Length
4D3	4DT-36	46DVA-36	DL3	36" Pipe Length
4D4	4DT-48	46DVA-48	DL4	48" Pipe Length
		46DVA-60		60" Pipe Length
4D26A	4DT-TL14	46DVA-24TA	DLA30	Adjustable Length
4D45L	4DT-EL45	46DVA-E45	4DE45	45° elbow
4D90L	4DT-EL90S	46DVA-E90	4DE90	90° elbow
4DHVS	4DT-VS	46DVA-VSS	VSS	Vinyl siding standoff/sheild
4DWT	4DT-WT	46DVA-WT	4WT	Wall thimble
4DSC	4DT-SC	46DVA-SC	SC	Storm collar
4DFSP	4DT-FS	46DVA-WFS	4CS	Fire stop
4DWS	4DT-WS	46DVA-WS	WS	Wall strap/ support/band
4DF	4DT-AF6	46DVA-F6	4FA	Flashing, standard roof pitch
4DF12	4DT-AF12	46DVA-F7	4FB	Flashing, steep (up to 12/12) roof
		46DVA-FF	4F	Flat flashing
		46DVA-VCH	SVT	High wind vertical termination
4DHCS	4DT-HC	46DVA-HC	HT	High wind horizontal termination
	4DT-HKA / 4DT-HKB	46DVA-KHC	4HTK	Horizontal
	4DT-CCKA	46DVA-KCA	4CA6	Chimney
4DRCKA	4DT-CCKB	46DVA-KCB	4CA7	Chimney
		46DVA-KCC	4CA8	Chimney
	4DT-ST14	46DVA-SNK14	ST14	14" Snorkel
	4DT-ST36	46DVA-SNK36	ST36	36" Snorkel



INITIAL INSTALLATION

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VENT TERMINATION RESTRICTIONS

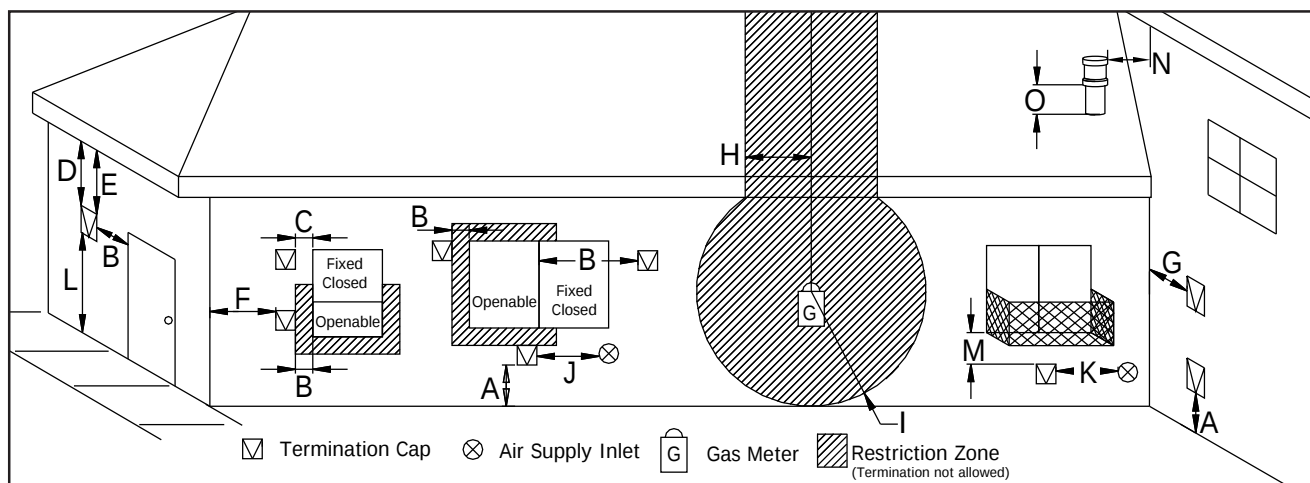


Figure 47: Vent Termination Restrictions, refer to Table 5.

Table 5: Vent termination clearances.

Letter	Canadian Installation ¹	US Installation ²	Description
A	12 in (30 cm)		Clearance above grade, verandah, porch, deck, or balcony.
B	12 in (30 cm)	9 in (23 cm)	Clearance from window or door that may be opened.
C	12 in (30 cm)*		Clearance from permanently closed window (to prevent condensation).
D	18 in (15.7 cm)*		Vertical clearance to ventilated soffit located above the terminal, within a horizontal distance of 2 ft (60 cm) from center line of terminal.
E	18 in (15.7 cm)		Clearance to unventilated soffit.
F	12 in (30 cm)*		Clearance to outside corner.
G	12 in (30 cm)		Clearance to inside corner.
H	3 ft (91 cm) within a height of 15 ft (4.5 m) above the meter/regulator assembly	3 ft (91 cm) within a height of 15 ft (4.5 m) above the meter/regulator assembly*	Clearance to each side of center line extended above meter/regulator assembly.
I	3 ft (91 cm)	3 ft (91 cm)*	Radial clearance around service regulator vent outlet.
J	12 in (30 cm)	9 in (23 cm)	Clearance to non-mechanical air supply inlet to building, or the combustion air inlet to any other appliance.
K	6 ft (1.83 m)	3 ft (91 cm) above if within 10 ft (3 m) horizontally	Clearance to mechanical air supply inlet.
L	7 ft (2.13 m) ^t	7 ft (2.13 m)* ^t	Clearance above paved sidewalk or paved driveway located on public property.
M	14 in / 35.5 cm ⁺	14 in / 35.5 cm ⁺	Clearance under verandah, porch, deck, or balcony.
N	12 in (30 cm)*		Clearance horizontally to any surface (such as an exterior wall) for vertical terminations.
O	12 in (30 cm)		Clearance above roof line for vertical terminations.

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

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

* These numbers are only estimates.

^t A vent shall not terminate directly above a side walk or paved driveway that is located between two single family dwellings and it serves both dwellings.

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

Clearances are in accordance with local installation codes and the requirements of the gas supplier.

NOTE: Venting terminals shall not be recessed into walls or siding.

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EXHAUST RESTRICTOR SETTINGS

The S50 has an internal exhaust restrictor that can be adjusted externally. Depending on the venting configuration this may need to be adjusted. The restrictor dial is accessed from the top of the fireplace, below the top plate (refer to the section "Lifting the Top Plate" on page 13 for instructions). Using a 7/16" socket, rotate the restrictor CLOCKWISE until the required setting is in-line with the finger catch. Refer to the graphs in the following sections for approximate restrictor setting. The proper setting is crucial for an efficient burn and best flame appearance.

It may be necessary to deviate from the recommended setting as different altitudes and climates can vary the operation of the fireplace. With propane (LP) fueled fireplaces, it is always a good idea to offer slightly less restriction for higher altitudes to reduce the potential of sooting over an extended period.

*Note: The restrictor is set in the fully open position from the factory.

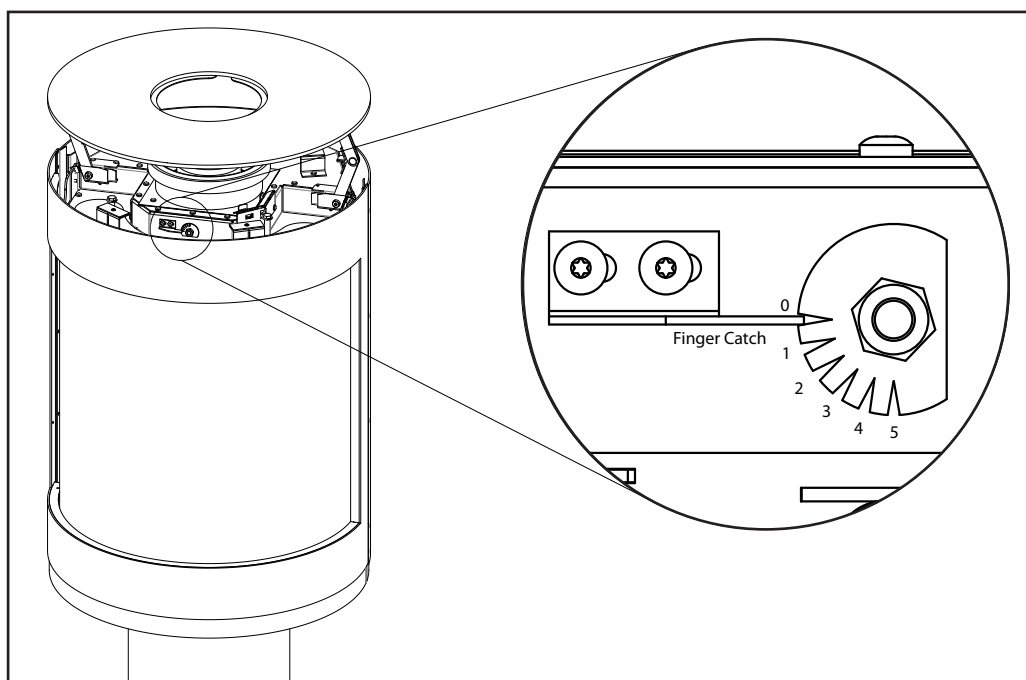


Figure 48: Exhaust Restrictor

INITIAL INSTALLATION

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MINIMUM TOP VENT CONFIGURATIONS

Refer to Table 6 and Figure 49 below for the minimum allowable top venting setup for the S50.

Table 6: Minimum Top Vent Configurations

	"A" [Vertical Rise]	"B" [Horizontal Run]	Termination Type
NG	12" [Min.]	12" Max Out	Straight Termination
		48" Max Out	36" Snorkel
	18"	18" Max Out	Straight Termination
	24"	48" Max Out	Straight Termination
LP	24" [Min.]	18" Max Out	Straight Termination
		24" Max Out	14" Snorkel
		48" Max Out	36" Snorkel

*Note: When installing above minimum allowable venting any horizontal termination listed in Table 4 on page 29 is permitted for use.

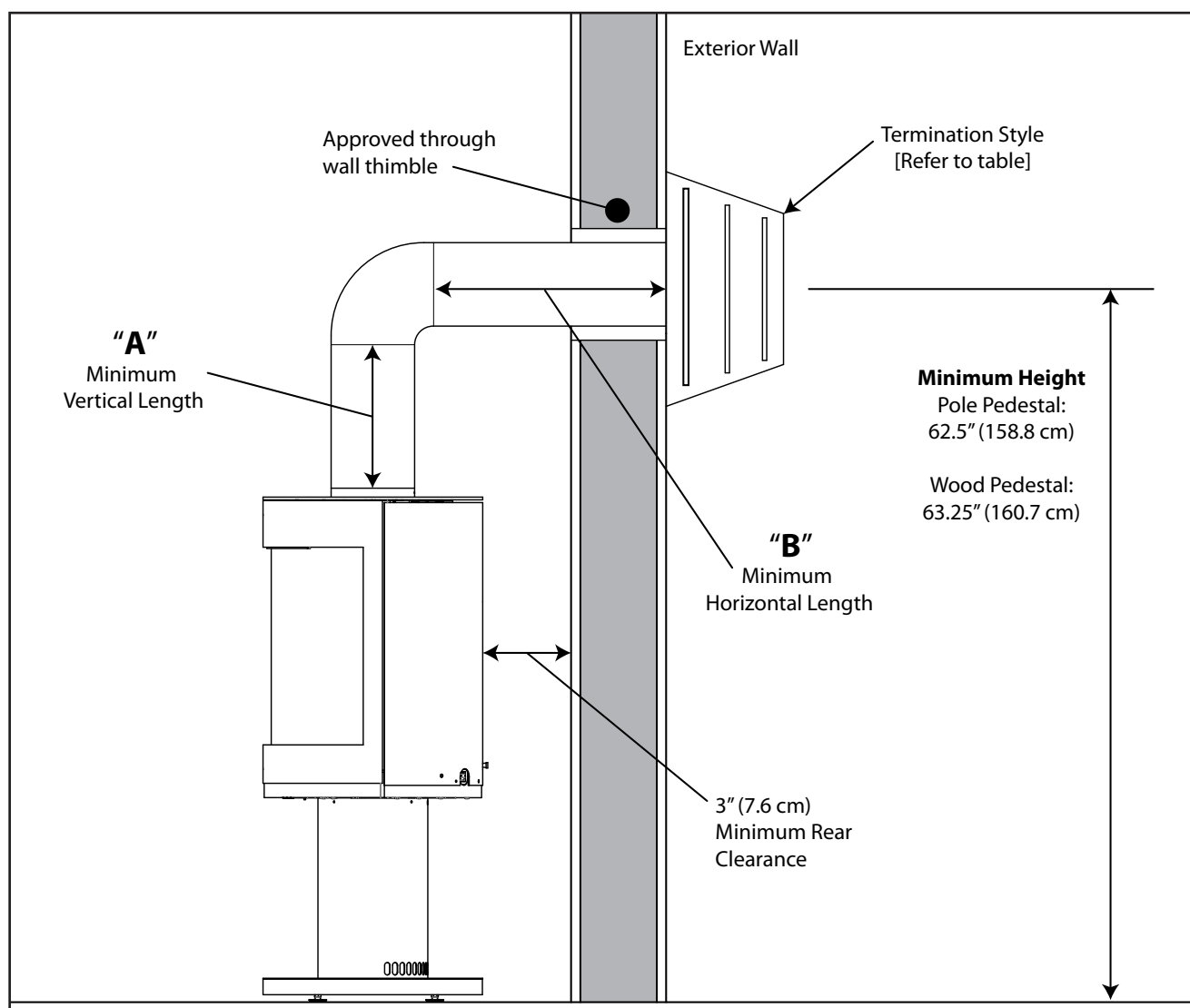


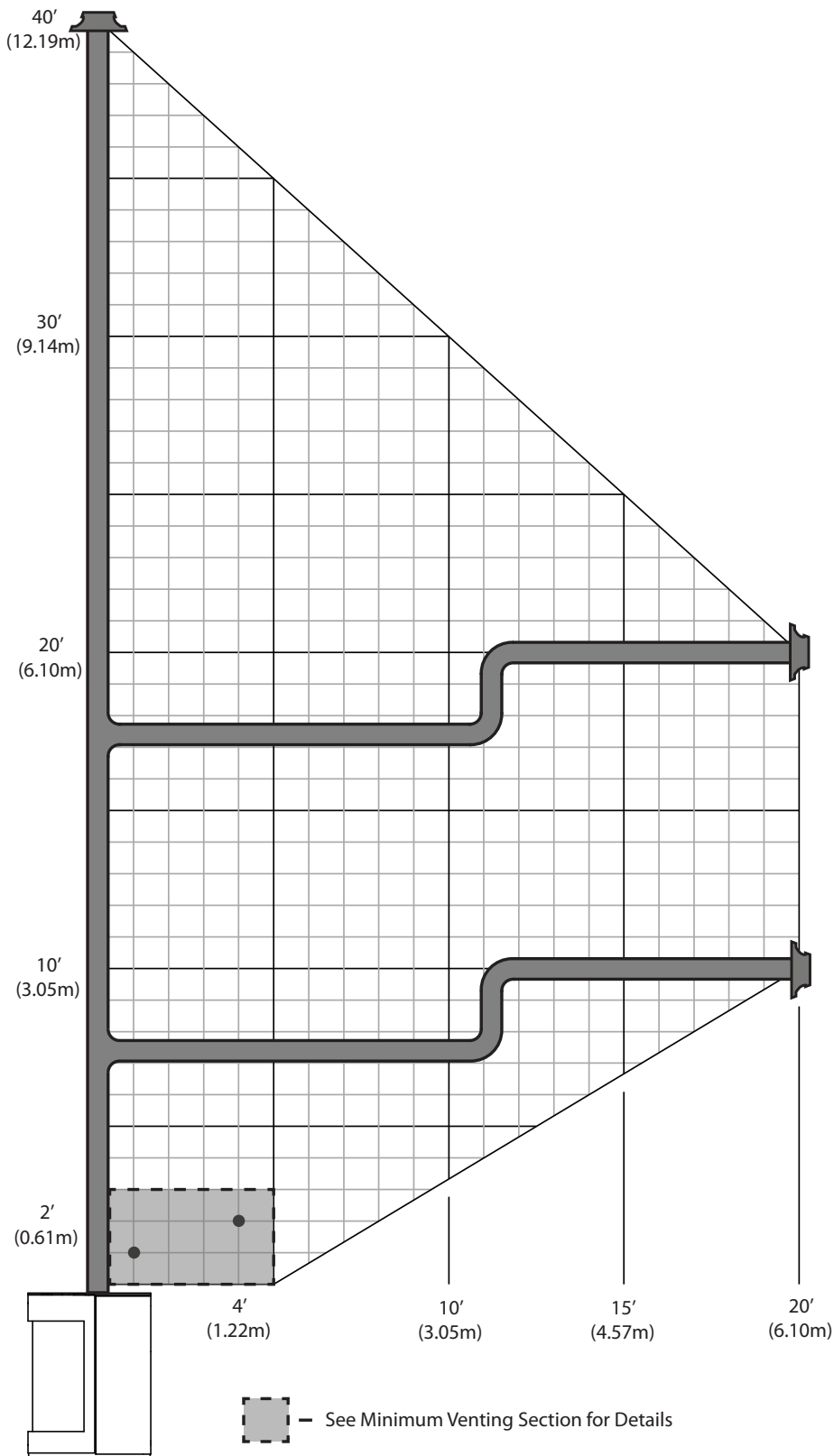
Figure 49: Minimum Vent Configuration - Top Vent

INITIAL INSTALLATION

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TOP VENT CONFIGURATION - NATURAL GAS (NG)

NG Top Vent Configurations



The following charts show the range of venting options available for top vent configurations using either vertical or horizontal terminations in conjunction with 0 - 3 90° elbows in the vertical plane. Having the fewest number of elbows is ideal as they restrict air flow. The total length of horizontal vent pipe can not exceed 20ft (6.1m) and the total vertical length can not exceed 40ft (12.2m). Any combination of rise and run can be used as long as it lays within the shaded areas of the following charts. A total of three (3) 90° elbows or six (6) 45° elbows can be used as shown in Figure 50 & Figure 51. In addition to what is shown, if a 90° elbow is used in the horizontal plane, 3 ft (91.4cm) must be subtracted from the allowable horizontal run (for each 45° elbow, 1.5ft (45.7cm) must be subtracted).

Figure 50: Top Vent Configuration Diagram - NG

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QUALIFIED INSTALLERS ONLY

TOP VENT CONFIGURATION - PROPANE (LP)

LP Top Vent Configurations

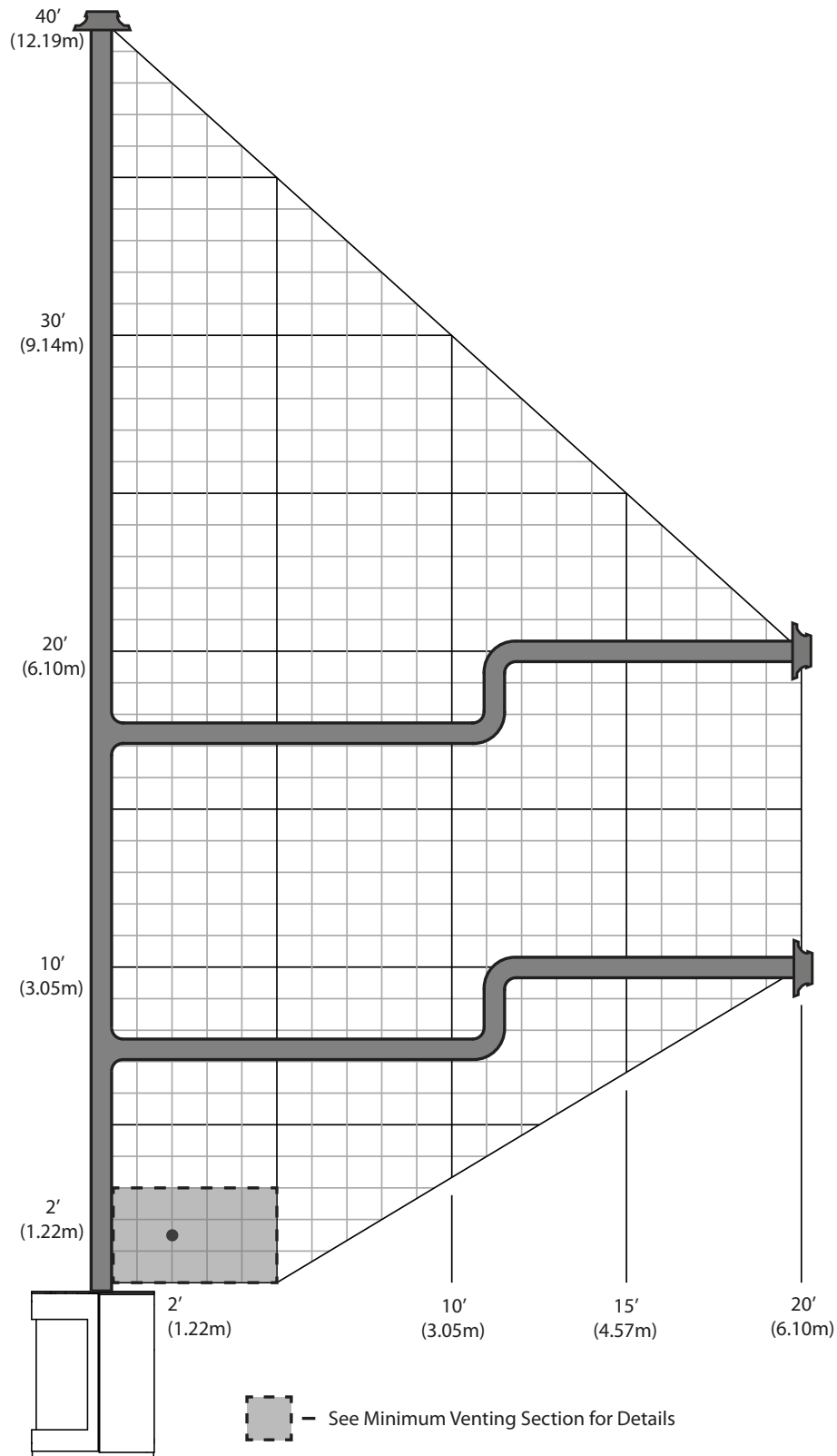


Figure 51: Top Vent Configuration Diagram - LP

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MINIMUM REAR VENT CONFIGURATIONS

Refer to Table 7 and Figure 52 below for the minimum allowable rear venting setup for the S50.

Table 7: Minimum Rear Vent Configurations

	"A" [Horizontal Run]	Termination Type
NG	18" [Max]	14" Snorkel
	up to 36"	36" Snorkel
LP	9" [Min.] - 18" [Max]	36" Snorkel

***Note:** ALL rear vent configurations require a snorkel style termination.

***Note:** When performing an **LP Rear Vent Corner Install with 45° Elbow**, a **DURAVENT 36" SNORKEL MUST BE USED**. The 45° elbow accounts for 6" of vent run.

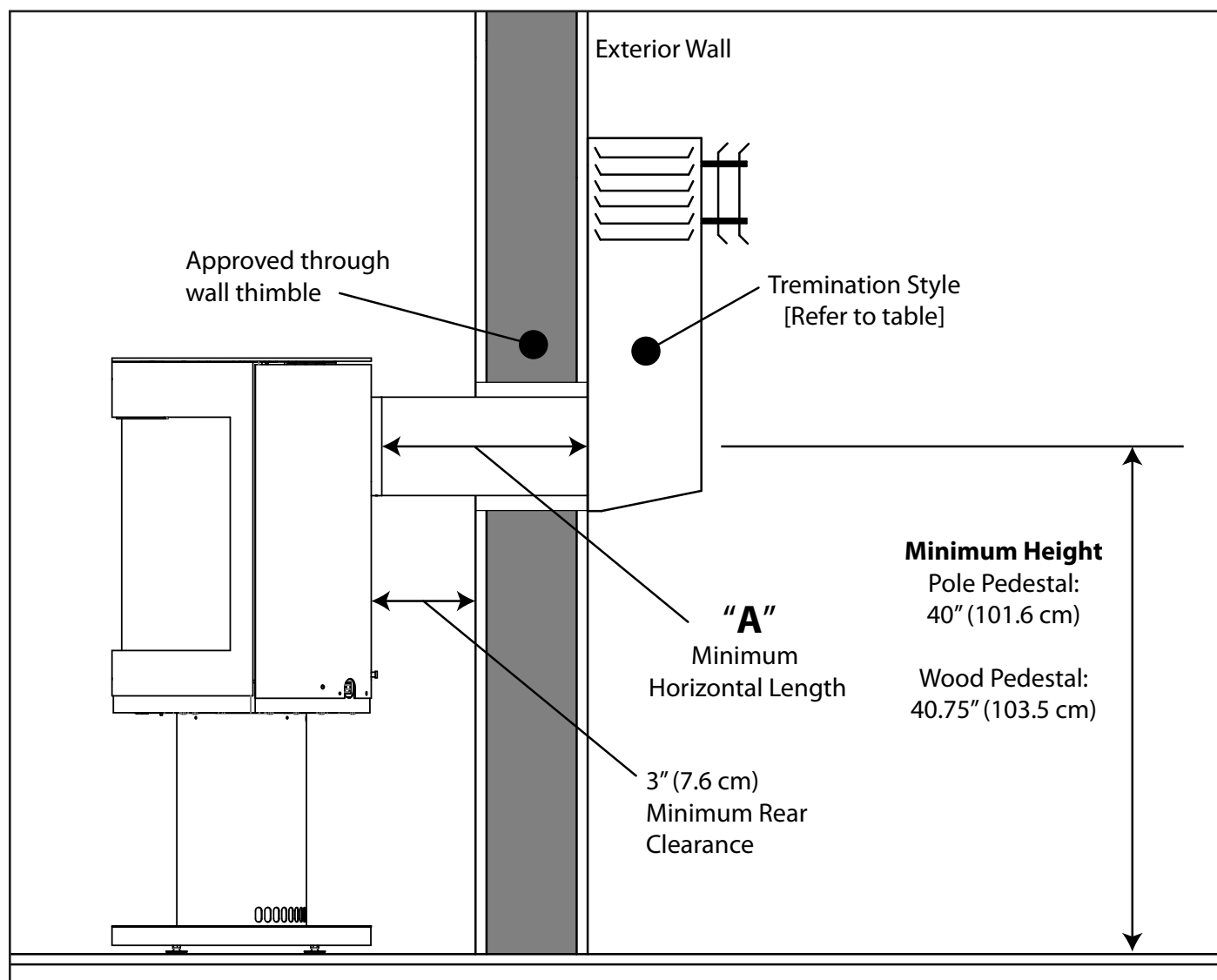


Figure 52: Minimum Vent Configuration - Rear Vent

INITIAL INSTALLATION

QUALIFIED INSTALLERS ONLY

REAR VENT - CORNER INSTALLATION

ATTENTION

When performing an **LP Rear Vent Corner Install with 45° Elbow**, a **DURAVENT 36" SNORKEL MUST BE USED**. No other brand venting can be used for LP corner installations.

Rear vent corner installs have the same vent run restrictions as a typical rear vent installations. Refer to Table 7 in the previous section for details.

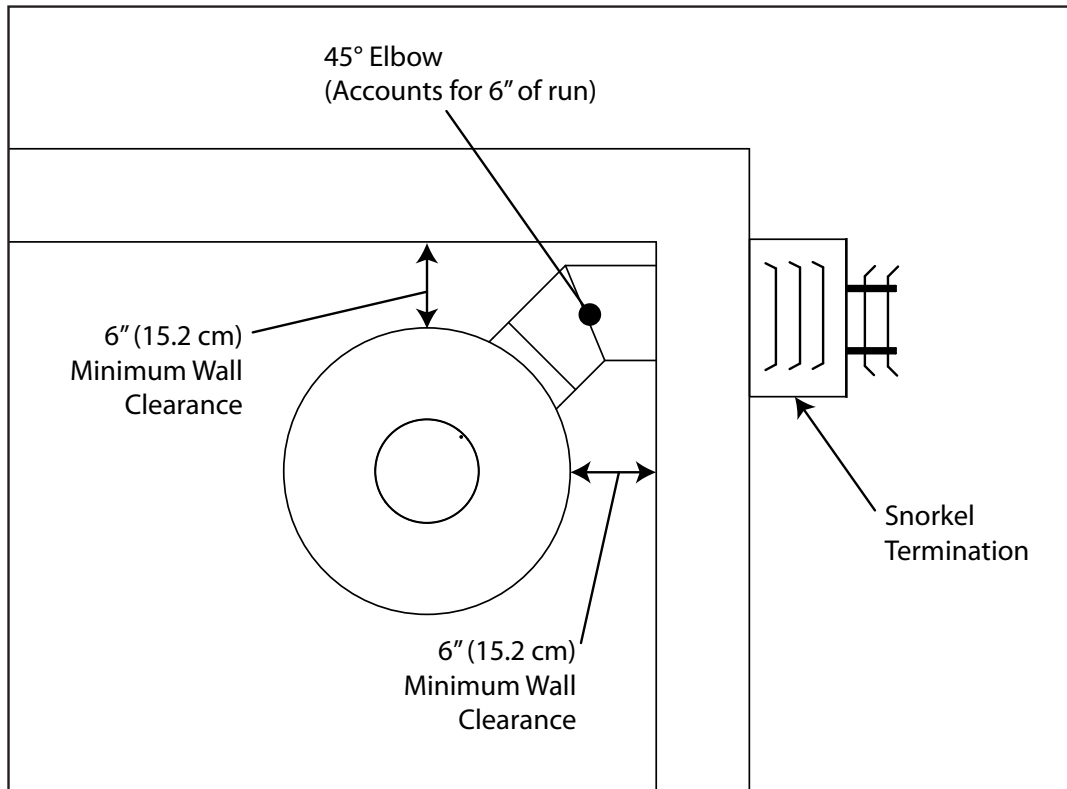


Figure 53: Rear Vent Corner Install Venting - Top View

INITIAL INSTALLATION

HORIZONTAL TERMINATION QUALIFIED INSTALLERS ONLY

NOTES:

- 1. Horizontal pipes must not be level. For every 12 inches (305 mm) of horizontal travel (away from the stove), there should be at least 1/4 inch (6.4 mm) of vertical travel. Never allow the vent to run downward, as this could cause high temperatures or even present the possibility of a fire.**
- The exterior of the horizontal vent termination must not be blocked or obstructed.
- If the vent termination is not being attached to wood, the four wood screws provided should be replaced with material appropriate fasteners.
- For buildings with vinyl siding, a vinyl standoff should be installed between the vent cap and the exterior wall. Attach the vinyl siding standoff to the horizontal termination. Note that the termination bolts onto the flat portion of the standoff, providing an air space between the wall and the vent termination. The air gap prevents excessive heat from possibly melting the vinyl siding.
- Horizontal pipes must be supported every 3 feet (914 mm). Plumber's all round strap will suffice.

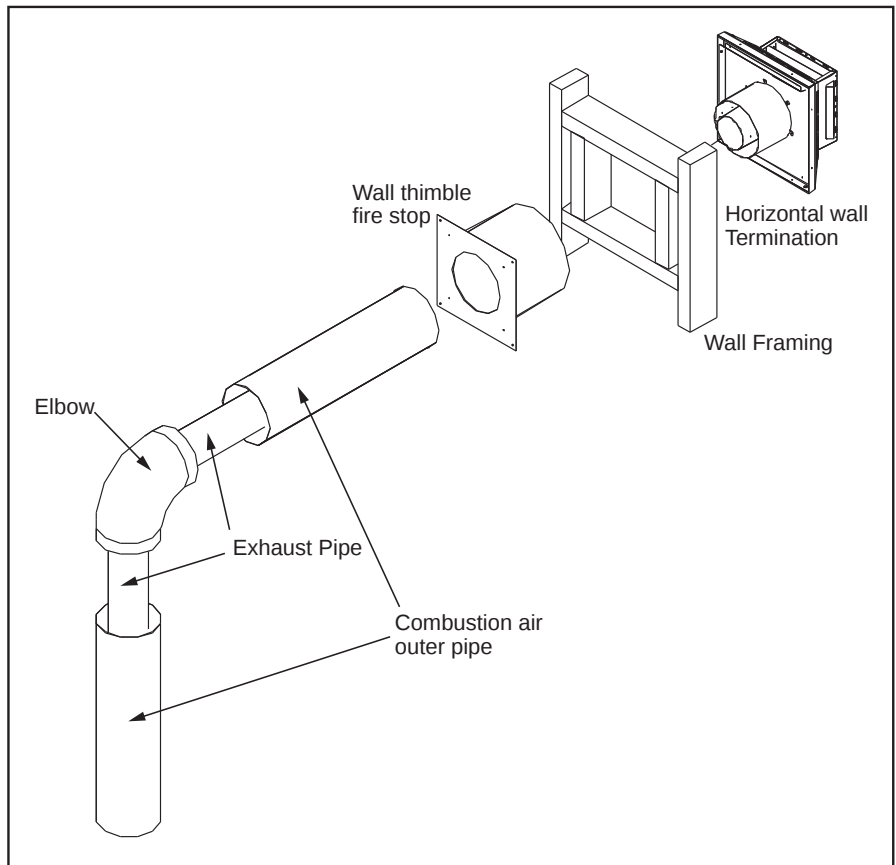


Figure 54: Horizontal Vent Termination

- When running horizontal pipe, clearances to combustibles must be maintained 1½ inches (38 mm) sides, 1½ inches (38 mm) bottom, and 2 inches (51 mm) top.
- Step 1.** Set the fireplace in the desired location. Check to determine if wall studs will be in the way when the venting system is attached. If this is the case, the location of the fireplace may have to be adjusted or the venting may have to be offset.
- Step 2.** Direct vent pipe sections are designed with special twist-lock connections. Dry fit the desired combination of pipe and elbows to the appliance adaptor.
- Step 3.** With the pipe in the correct position and attached to the fireplace, mark the wall for a 10 inches (25.4 cm) x 10 inches (25.4 cm) square hole (see Figure 46). The center of the hole should match the center line of the horizontal pipe. Cut and frame the hole in the exterior wall where the vent will be terminated. If the wall being penetrated is made of a non-combustible material (i.e. masonry or concrete) a 7 inches (17.8 cm) hole is acceptable.

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- Step 4.** With the hole now framed, the wall thimble installed, and the pipe extending into the wall, proceed to the outside. Attach the termination to the pipe using RTV and Mil-Pac or Rutland No 78 Stove and Gasket Cement to seal joints. The vent pipe must extend into the vent cap at least 1¼ inches (3.2 cm). Secure the connection between the vent cap and the pipe by attaching the two (2) sheet metal straps, which extend from the vent cap assembly to the outer wall of the vent pipe. Bend any remaining portion of the strap back towards the vent cap. Security Secure Vent uses a twist lock cap.
- Step 5.** Position the horizontal vent termination in the center of the 10 inches (25.4 cm) square hole and attach to the exterior wall with the four screws provided. The arrow on the vent termination should be pointing up. Run a bead of non-hardening mastic around the edges of the vent cap, to make a seal with the wall. Ensure the proper clearances to combustibles have been maintained.

VERTICAL TERMINATION

- Step 1.** Check the instructions for required clearances (air spaces) to combustibles when passing through ceilings, walls, roofs, enclosures, attic rafters, or other nearby combustible surfaces. Do not pack air spaces with insulation.
- Step 2.** Set the gas appliance in the desired location. Drop a plumb bob down from the ceiling to the position of the appliance flue exit, and mark the location where the vent will penetrate the ceiling. Drill a small hole at this point. Next, drop a plumb bob from the roof to the hole previously drilled in the ceiling, mark the spot where the vent will penetrate the roof. Determine if ceiling joists, roof rafters, or other framing will obstruct the venting system. You may wish to relocate the appliance, or to offset, to avoid cutting load bearing members.
- Step 3.** To install the Round Support Box/Wall Thimble in a flat ceiling, cut a 10 inch (25.4 cm) square hole in the ceiling, centered in the hole drilled in Step 2. Frame the hole as shown in Figure 46.

- Step 4.** Assemble the desired lengths of black pipe and elbows necessary to reach from the appliance adapter up through the Round Support Box. Insure that all pipe and elbow connections are in their fully twist-locked position.

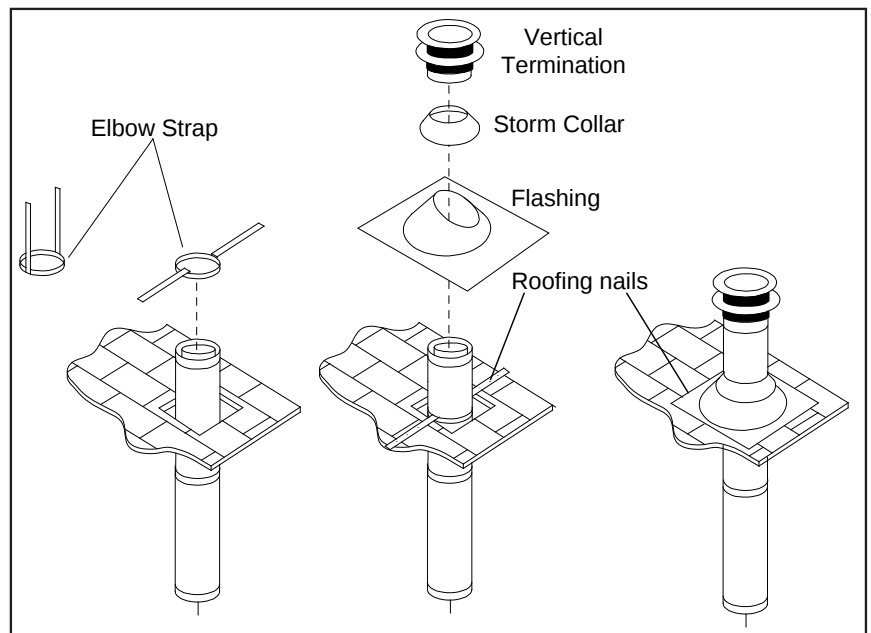


Figure 55: Vertical Vent Termination

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QUALIFIED INSTALLERS ONLY

- STEP 5.** Cut hole in the roof centered on the small hole placed in the roof from Step 2. The hole should be of sufficient size to meet minimum requirements for Clearance to Combustibles, as specified. Continue to assemble lengths of pipe and elbows necessary to reach from the ceiling support box up through the roof line. Galvanized pipe and elbows may be utilized in the attic, as well as above the roof line. The galvanized finish is desirable above the roof line, due to the higher corrosion resistance.
- STEP 6.** Once the pipe sections have been joined, and run up through the hole in the roof, slip an elbow strap over the exposed sections, bend the support straps outwards, and push the elbow strap down to the roof level, as shown in Figure 55. Tighten the clamp around the pipe section. Use a level to make sure the pipe is truly vertical. With roofing nails, secure the support straps to the roof. Seal the nails holes heads with non-hardening mastic. Trim the excess length of the support straps that extend out beyond the edge of the flashing.
- STEP 7.** Slip the flashing over the pipe section protruding through the roof. Secure the base of the flashing to the roof with roofing nails. Use a non-hardening sealant between the uphill edge of the flashing and the roof. Insure the roofing material overlaps the top edge of the flashing. Verify that you have at least the minimum clearance to combustibles at the roof line.
- STEP 8.** Continue to add pipe sections until the height of the vent cap meets the minimum code requirements. Refer to Figure 56 and Table 8. Note that for steep roof pitches, the vent height must be increased. In high wind conditions, nearby trees, adjoining roof lines, steep pitched roofs, and other similar factors can result in poor draft, or down drafting. In these cases, increasing the vent height may solve the problem.
- STEP 9.** Slip the storm collar over the pipe, and push it down to the top of the roof flashing as shown in Figure 55. Use the non-hardening sealant around the joint between the pipe and the storm collar.
- STEP 10.** Twist-lock the vent cap.

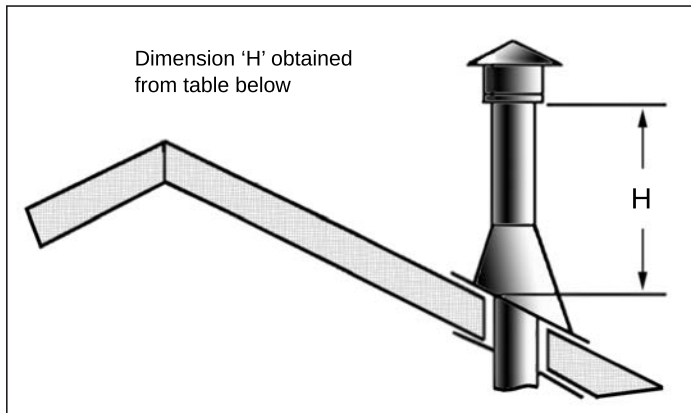


Figure 56: Height of Vertical Termination; Reference Table 8.

Table 8: Minimum 'H' for Figure 56.

Roof Pitch	Minimum Height (H)	
	Feet	Meters
Flat to 7/12	1	0.3
Over 7/12 to 8/12	1.5	0.46
Over 8/12 to 9/12	2	0.61
Over 9/12 to 10/12	2.5	0.76
Over 10/12 to 11/12	3.25	0.99
Over 11/12 to 12/12	4	1.22
Over 12/12 to 14/12	5	1.52
Over 14/12 to 16/12	6	1.83
Over 16/12 to 18/12	7	2.13
Over 18/12 to 20/12	7.5	2.29
Over 20/12 to 21/12	8	2.44

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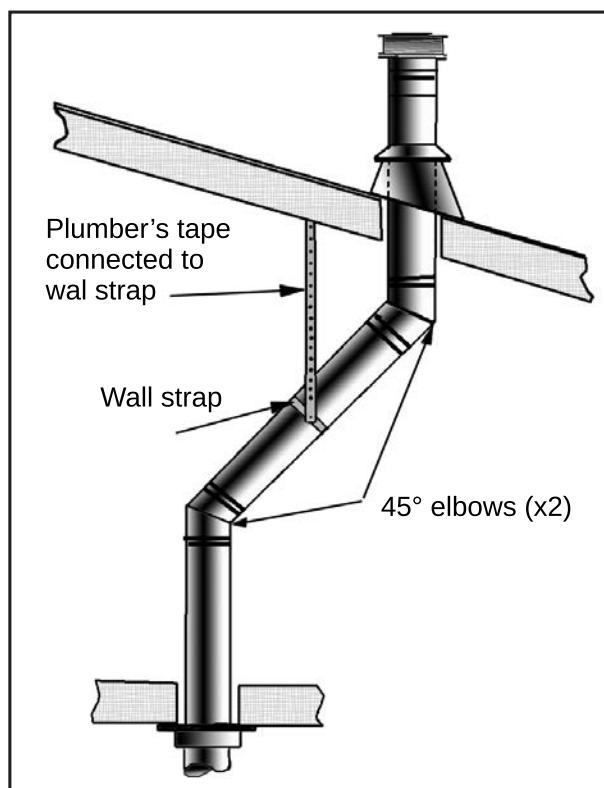


Figure 57: Use of Wall Straps.

closets and storage spaces, which the vertical vent passes through, must be enclosed. The enclosure may be framed and sheet-rocked with standard building materials. However consult the appliance manufactures installation instructions for the minimum allowable clearance between the outside of the vent pipe, and the combustible surfaces of the enclosure. Do not fill any required air spaces with insulation.

NOTES:

- (1) If an offset is necessary in the attic to avoid obstructions, it is important to support the vent pipe every 3 feet (914 mm), to avoid excessive stress on the elbows, and possible separation. Wall straps are available for this purpose (see Figure 57).
- (2) When ever possible, use 45° degree elbows instead of 90° degree elbows. The 45° degree elbow offers less restriction to the flow of flue gases and intake air.
- (3) For multi story installations; a ceiling firestop is required at the second floor, and any subsequent floors (see Figure 58). The opening should be framed to 10" (254 mm) x 10" (254 mm) inside dimensions, in the same manner as shown in Figure 46.
- (4) Any occupied areas above the first floor, including

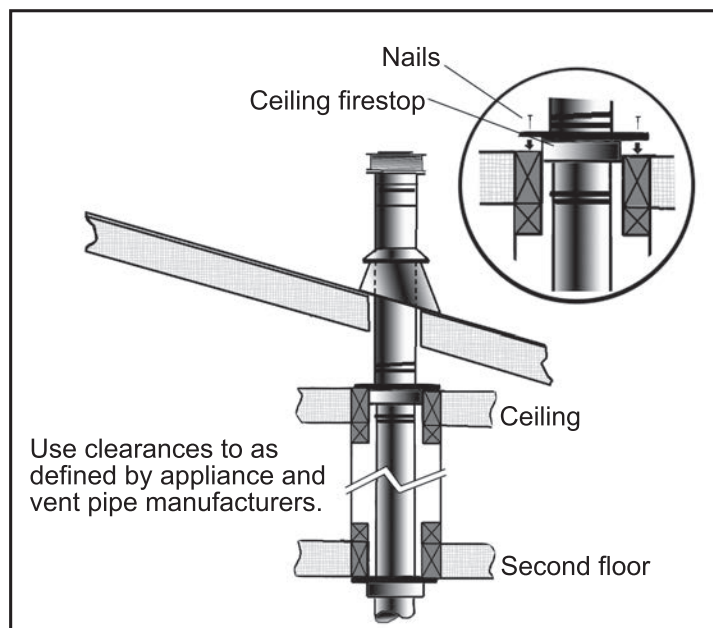


Figure 58: Multi-Story Vent Pipe Installation.

INITIAL INSTALLATION

QUALIFIED INSTALLERS ONLY

GAS LINE CONNECTION

WARNING: Only persons licensed to work with gas piping may make the necessary gas connections to this appliance.

GAS LINE CONNECTION

This stove is equipped with a certified flexible pipe located on the left side of the unit terminating in a 3/8" female NPT fitting. Consult your local authorities codes or the CAN/CGA B 149 (1 or 2) installation code in Canada, or in the USA gas installations follow either local codes or the current edition of the National Fuel Gas Code ANSI Z223.1.

The efficiency rating of this appliance is a product thermal efficiency rating determined under continuous operating conditions and was determined independently of any installed system.

The appliance and its shutoff valves must be disconnected from the gas supply piping system during any pressure testing where the pressure exceeds 1/2 PSIG (3.45 KPa) or damage will occur to the valve.

The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 PSIG (3.45 KPa).

***Note: Always check for gas leaks with a soap and water solution after completing the required pressure test.**

The pressure taps are located on the bottom left of the valve as shown in Figure 59.

- Turn the set screw 1 turn counter clockwise to loosen.
- Place 5/16" (8 mm) I.D. hose over pressure tap system.
- Check pressures using a manometer.
- When finished, release pressure, remove hose, and tighten set screw.

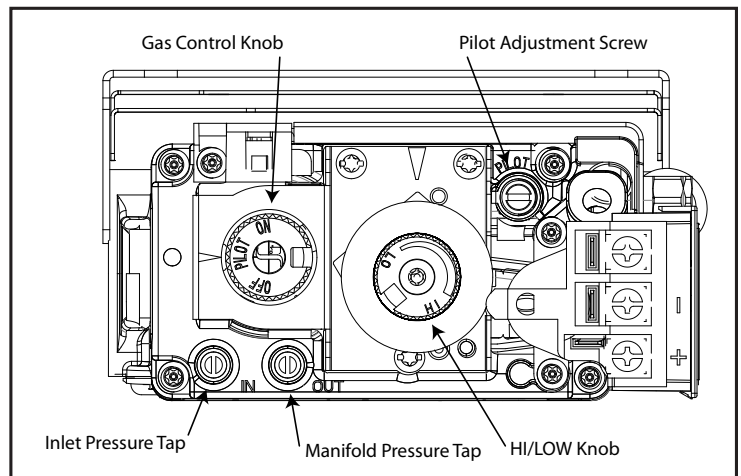


Figure 59: Fully Labeled Gas Valve

Table 9: Pressure and BTU Information

	Natural Gas [NG]	Propane [LP]
Main Orifice	#37	#53
Max Manifold Pressure	3.6 inch W.C. (0.89 kPa)	10 inch W.C. (2.49 kPa)
Min. Manifold Pressure	1.6 inch W.C. (0.39 kPa)	6.4 inch W.C. (1.59 kPa)
Max Supply Pressure	7 inch W.C. (1.74 kPa)	11 inch W.C. (2.74 kPa)
Min. Supply Pressure	4.5 inch W.C. (1.12 kPa)	10.4 inch W.C. (2.59 kPa)
Max BTU/hr Input	30,000 BTU/hr (8.79 kWh)	25,500 BTU/hr (7.47 kWh)
Min. BTU/hr Input	19,000 BTU/hr (5.57 kWh)	20,600 BTU/hr (6.04 kWh)

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ELECTRICAL REQUIREMENTS

WARNING: This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove the grounding prong from this plug.

The appliance, when installed, must be electrically grounded in accordance with local codes or, in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical Code, CAN/CSA C22.1.

The S50 does not require power to operate the flame. However, a 120V 15A circuit is required to operate included top light and convection fan (optional).

All electrical connections for the S50 are done internally and come pre-wired directly from the factory. Connect the supplied IEC power cord into the receptacle at the back of the unit (see Figure 60) and into a wall outlet.

The electrical and/or gas connection can alternatively be reconfigured to come up through the pedestal for a cleaner look.

An internal wiring diagram of the electrical components can be found at the back of this manual on page 58.

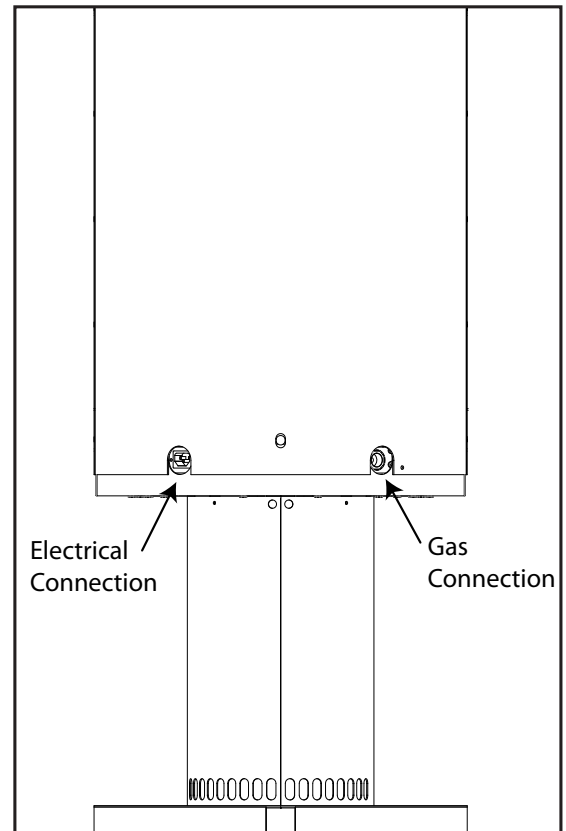


Figure 60: Electrical and Gas Connections

TOP PLATE COLLAR INSTALLATION

The top plate collar is an aesthetic band that helps hide the venting connection for top vent applications. Prior to installing the venting, place the collar on top of the unit around the vent adaptor (see Figure 61). The collar does not fasten to the unit but is heavy enough to sit in place securely.

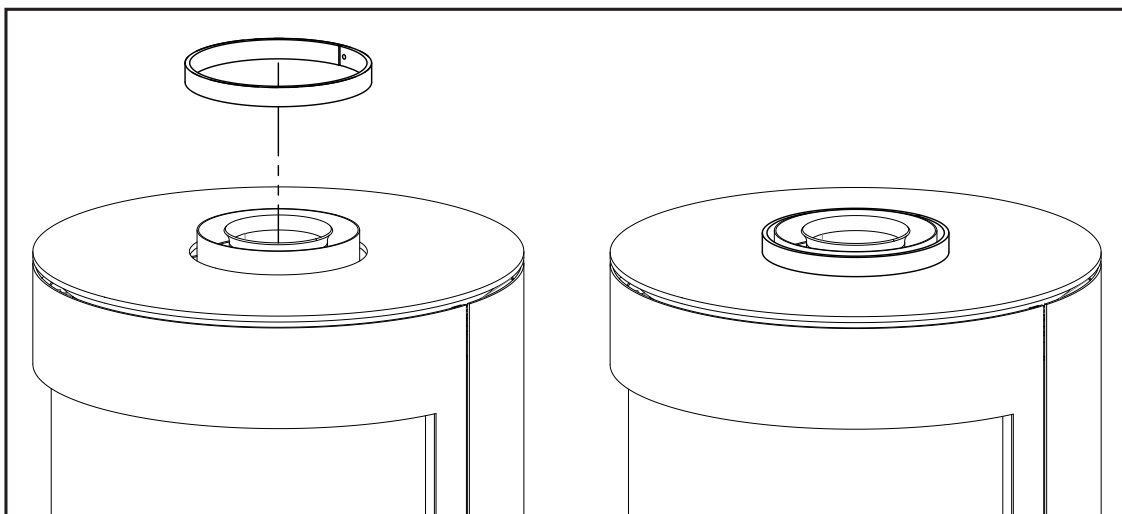


Figure 61: Top Plate Collar Placement

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REAR VENT CONVERSION

The S50 has the option to be top or rear vented. By default, it comes configured as top vented from the factory. This can be changed by following these steps:

1. Remove the top plate from the unit (see section REMOVING TOP PLATE on page 21).
2. Remove the door frame and skirt from the unit (see section REMOVING DOOR FRAME/SKIRT on page 15).
3. Remove the glass from the unit (see section REMOVING GLASS on page 16).
4. Remove the rear chassis from the unit (see section REMOVING REAR CHASSIS on page 17).
5. Rotate the restrictor disk by hand from inside the firebox until the four (4) screw heads are exposed; remove them using a 5/16" socket (see Figure 62). The finger catch can be loosened and moved if it is inhibiting the movement of the restrictor.
6. Remove the threaded rod from the exhaust spigot (see Figure 63). A power drill with a 7/16" socket and extension will be helpful here.
7. Remove the vent adapter from the top of the unit by removing the four (4) T20 screws (see Figure 64). Be delicate with the gasket, you will be reusing this.

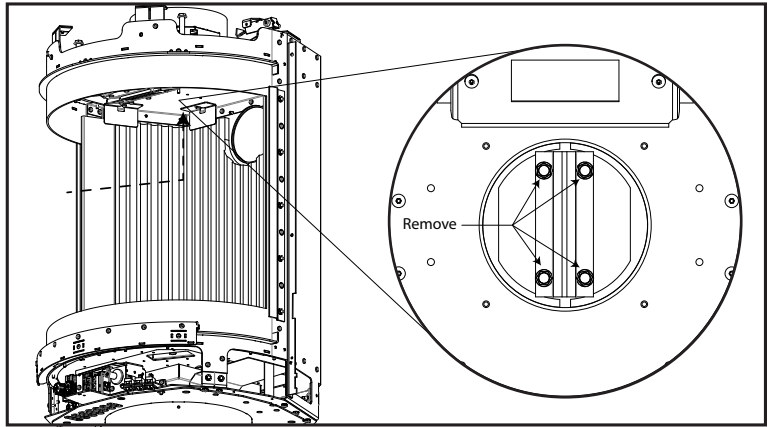


Figure 62: Restrictor Plate Removal

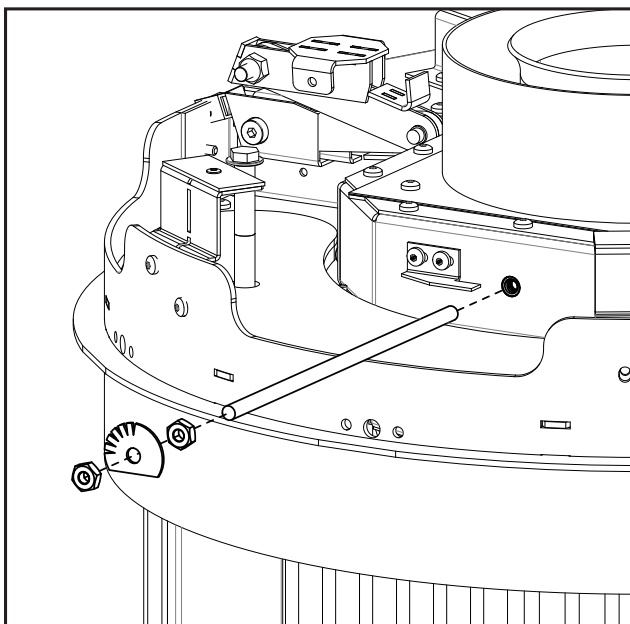


Figure 63: Restrictor Rod Removal

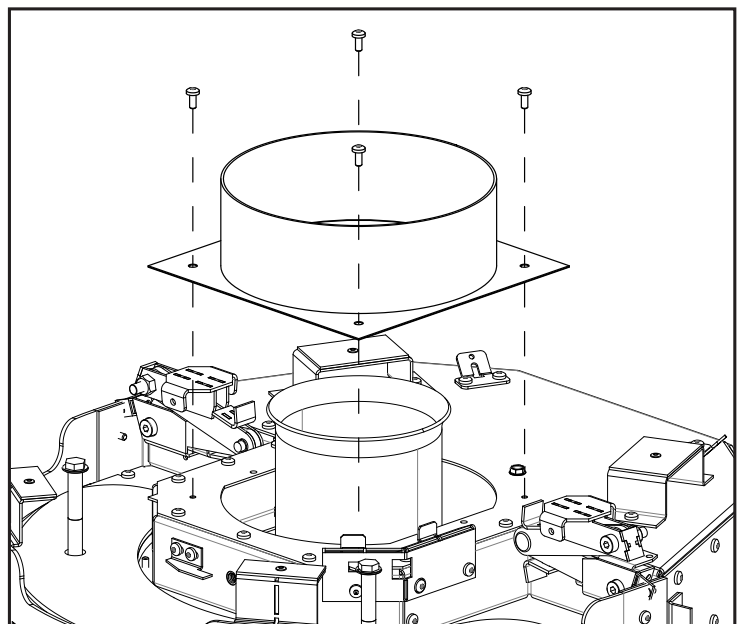


Figure 64: Vent Adapter Removal

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8. Remove the exhaust spigot from the top of the unit by removing the four (4) T20 screws (see Figure 65). Be delicate with the gasket, you will be reusing this.

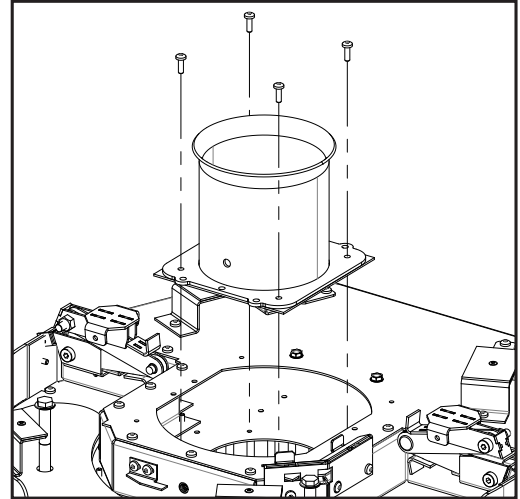


Figure 65: Exhaust Spigot Removal

9. Remove the outer and inner block-off plates from the back of the unit and attach them to the top of the unit where the exhaust spigot and vent collar were attached (see Figure 66).

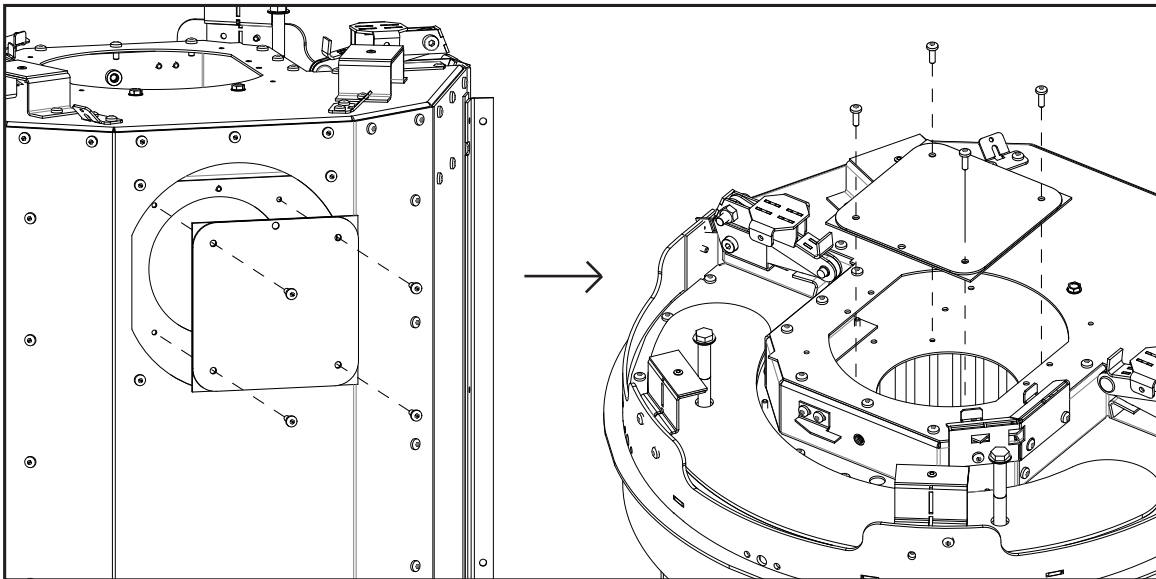


Figure 66: Inner Block-Off Plate Removal and Attachment

10. Attach the exhaust spigot to where the block-off plate was removed (see Figure 67).

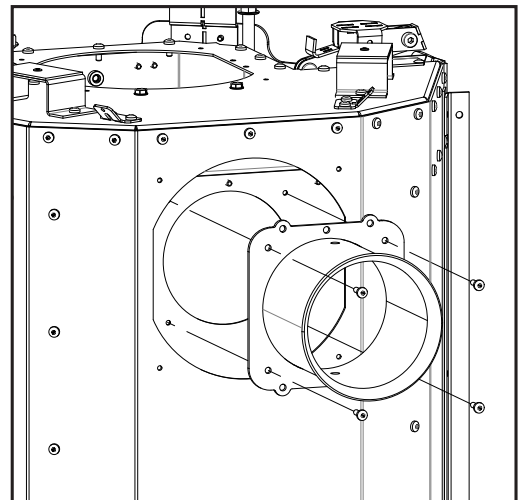


Figure 67: Exhaust Spigot Attachment

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11. Attach the vent adapter over top of the exhaust spigot (see Figure 68).

12. Remove the punchout from the rear chassis using a sizeable hammer (see Figure 69). Place a cloth down around the perimeter to prevent damage to the chassis in case you accidentally strike the painted surface.

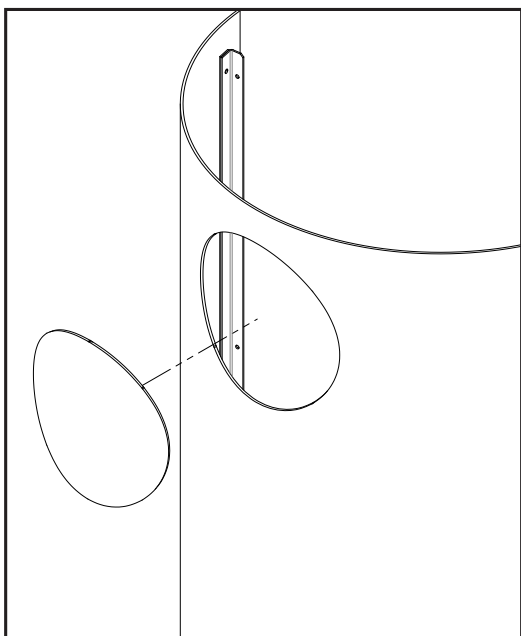


Figure 69: Rear Chassis Punchout

13. Install the two top plate blank supports and nuts (included in the manual bag) on the four (4) studs underneath the top plate (see Figure 70).
14. Reattach the rear chassis, glass, door frame, and top plate to the unit.
15. Place the top plate blank (included with the unit) into the top plate (see Figure 71).

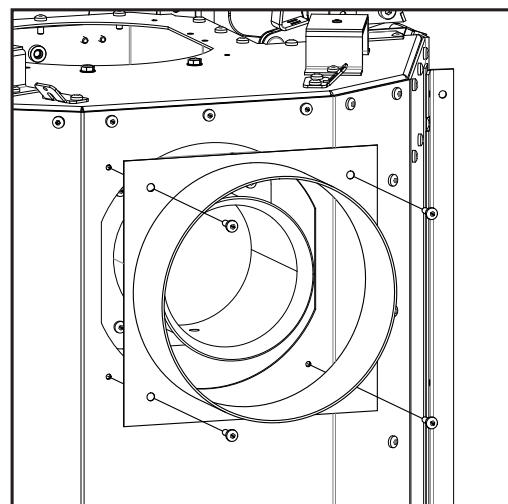


Figure 68: Vent Adapter Attachment

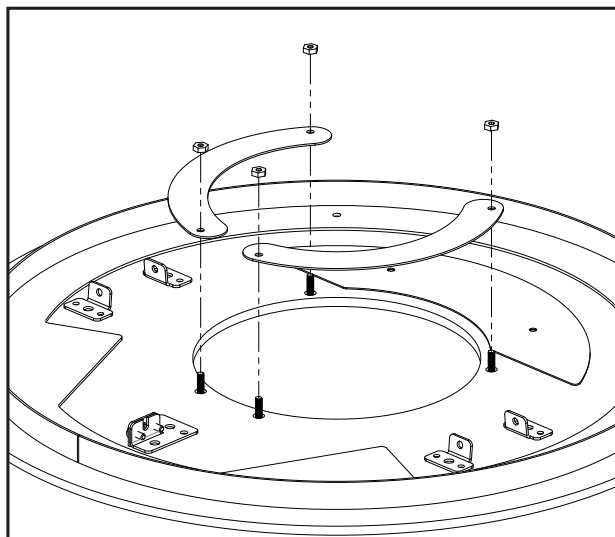


Figure 70: Top Plate Blank Supports

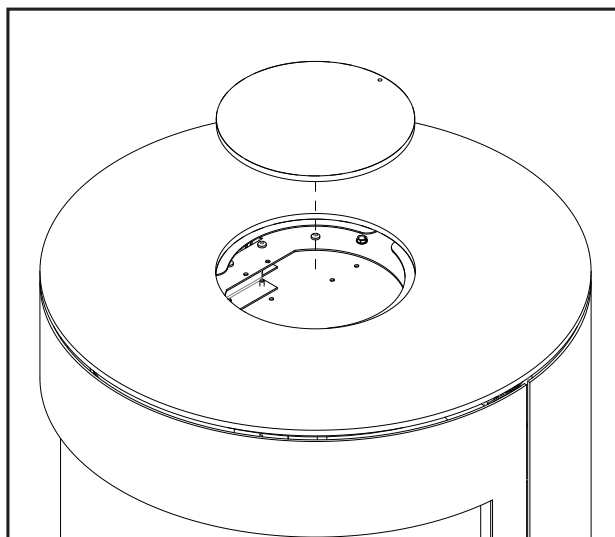


Figure 71: Top Plate Blank

INITIAL INSTALLATION

QUALIFIED INSTALLERS ONLY

PEDESTAL INSTALLATION

The pedestal **MUST** be anchored to the floor.

***Note:** If planning to reroute the electrical and gas connections through the pedestal, complete the steps in section **RELOCATING GAS/ELECTRICAL** on page 48 before proceeding.

The pedestal comes packaged with rigid foam to help secure and cushion it during transportation. To aid with the pedestal installation, save this foam as it can be used as a cushion for the unit.

Remove the 3 straps securing the unit to the pallet. Lay the foam behind the pallet and tip the unit back onto the cushion so there is easy access to its bottom.

Remove the four (4) leveling legs from the bottom of the unit (see Figure 72). These levelling legs will be reinstalled on the pedestal.

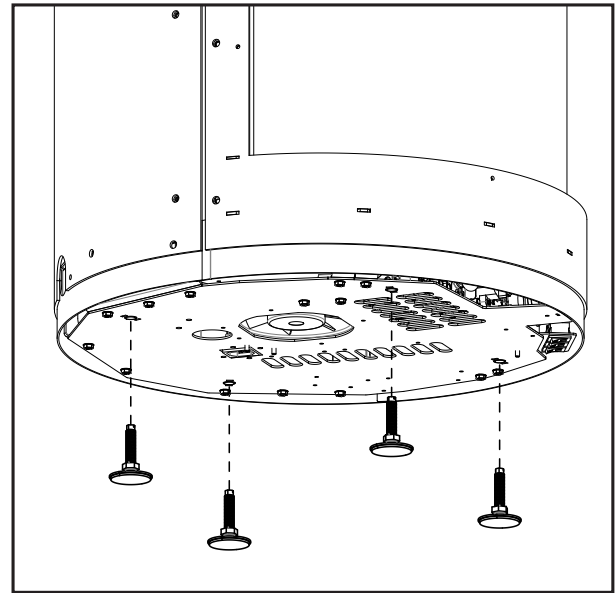


Figure 72: Leveling Leg Removal

POLE PEDESTAL (50-4072 / 50-4078)

Take the leveling legs that were removed from the unit and install them on the pole pedestal (see Figure 73).

The pole pedestal comes packaged with four (4) hex head bolts and four (4) washers used to secure the pedestal onto the unit. Align the pedestal vent slots with those on the bottom of the unit. Fasten the pole pedestal to the unit using the same threaded holes that the leveling legs were installed in (see Figure 74).

***Note:** If rerouting the Gas/Electrical connections through the pedestal, make sure to complete the relocation prior to fully installing the pedestal.

Raise the unit upright.

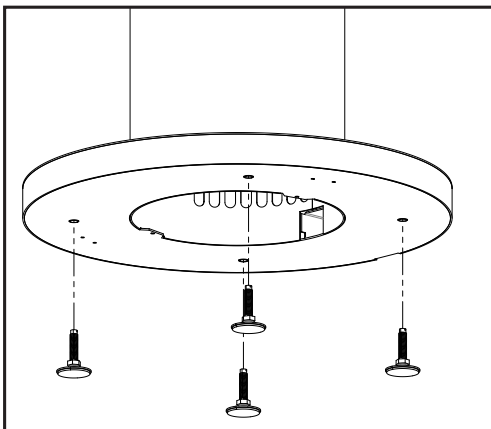


Figure 73: Pole Pedestal Leveling Feet

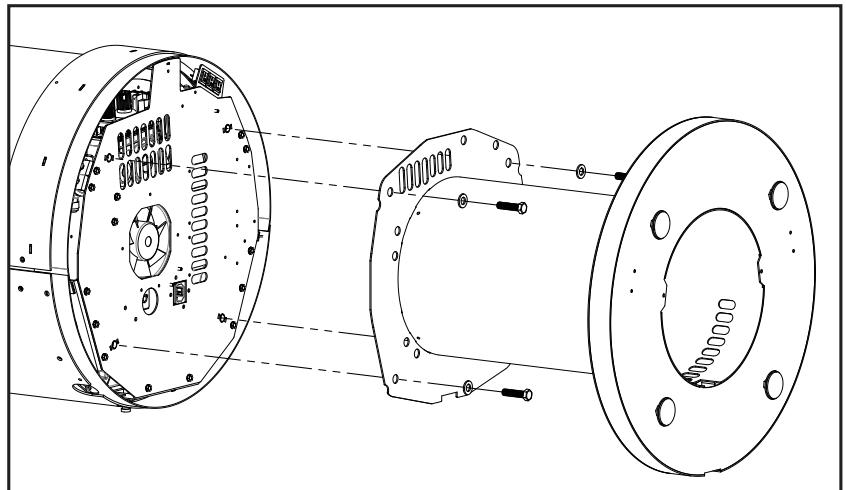


Figure 74: Pole Pedestal Installation

INITIAL INSTALLATION

QUALIFIED INSTALLERS ONLY

The pole pedestal comes with an anchor plate to help secure it to the floor (see Figure 75 for geometry and orientation).

To install:

- Mark desired center location for the unit on the floor and align with crosshair on the anchor.
- Fasten anchor to floor using two screw (lag screws included) through the curved slots above and below the crosshair.
- Test fit unit on anchor plate to verify orientation. The brackets on the pedestal will fit on the OUTER SIDE of the anchor flanges. Loosen bolts and rotate anchor if needed.
- Once orientation is finalized, fully secure anchor using the six (6) holes on the ends on the plate.
- Secure the unit to the anchor using the supplied 2 screws with a 5/16" socket with extension.

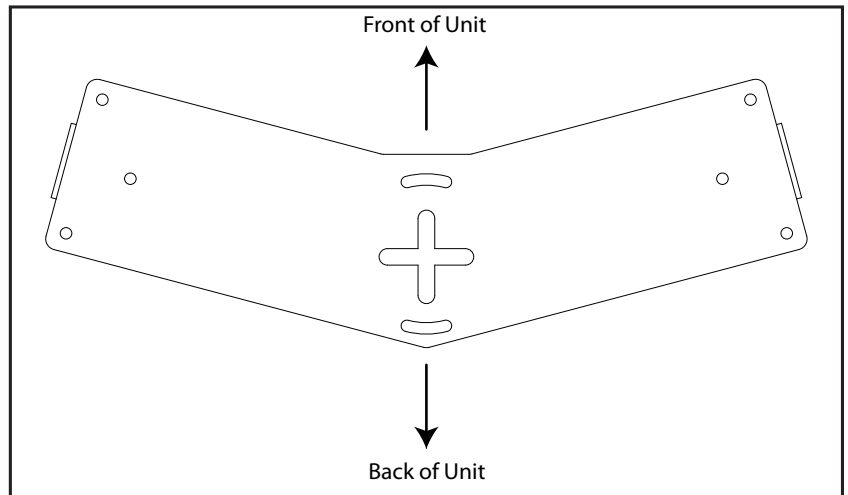


Figure 75: Pole Pedestal Anchor

WOOD PEDESTAL (50-4073 / 50-4079)

Take the leveling legs that were removed from the unit and install them on the wood pedestal (see Figure 76).

The wood pedestal comes packaged with four (4) hex head bolts and four (4) washers used to secure the pedestal onto the unit. Fasten the wood pedestal to the unit using the same threaded holes that the leveling legs were installed (see Figure 77).

***Note:** If rerouting the Gas/Electrical connections through the pedestal, make sure to complete the relocation prior to fully installing the pedestal.

Raise the unit upright.

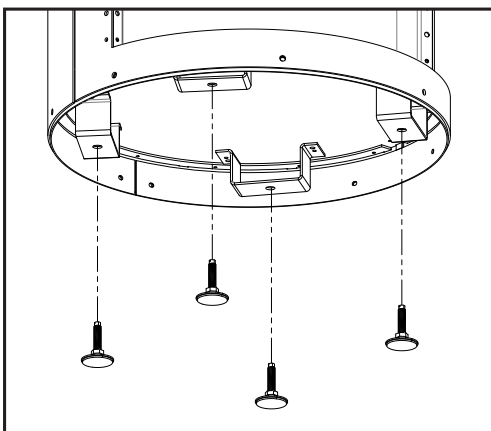


Figure 76: Wood Pedestal Leveling Feet

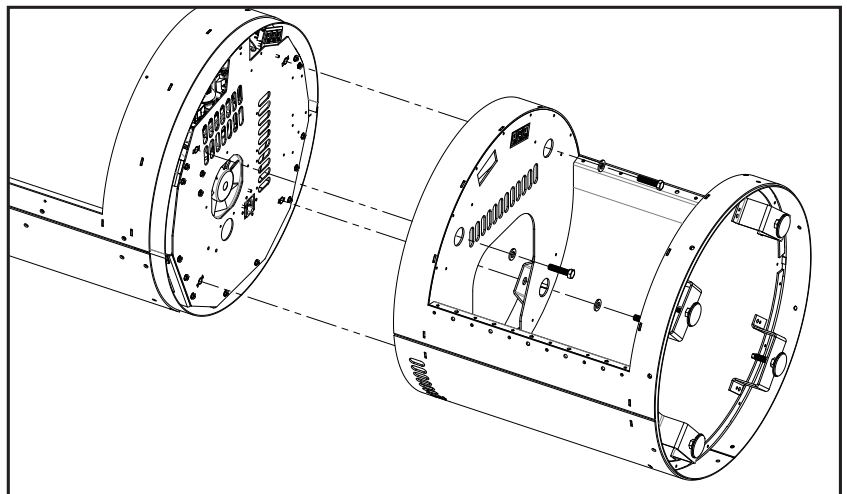


Figure 77: Wood Pedestal Installation

INITIAL INSTALLATION

QUALIFIED INSTALLERS ONLY

RELOCATING GAS/ELECTRICAL

By default, the electrical and gas connections are found at the back of the unit. There is an option to reroute the gas and electrical connections through the pedestal for a more concealed look.

The conversion must be done before pedestal installation. The conversion can be made while the unit is still on the pallet - use the pedestal foam packaging as a cushion to tip the unit back onto for bottom access.

Start by removing the door frame, front skirt, and rear chassis (refer to their respective sections on page 15 to page 17 for more detailed instructions).

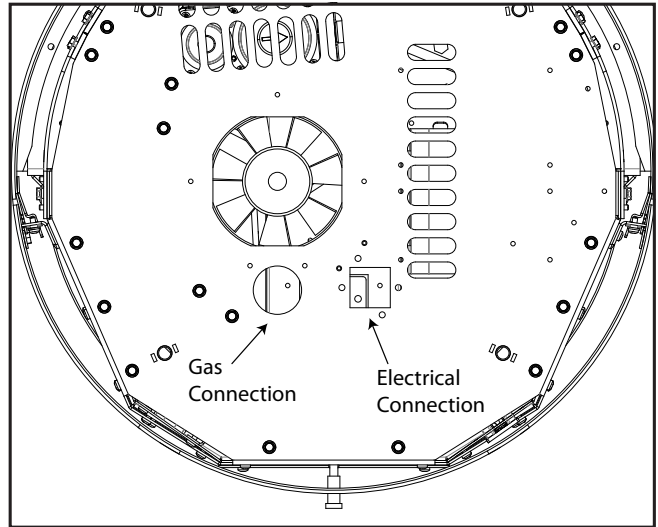


Figure 78: Gas & Electrical Connection Points (Bottom View)

RELOCATING ELECTRICAL CONNECTION

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

1. Disconnect the IEC outlet plate (see Figure 79).
2. Disconnect the wires attached to the IEC electrical outlet and remove the outlet from the steel plate. Make note of how the plug is wired as it will need to be rewired shortly after.
3. Press the IEC outlet into the adapter plate (included in the manual bag). Refer to Figure 80 for proper geometry and orientation. **Make sure tangs are completely seated of the plug will not engage fully.**
4. Rewire the IEC electrical outlet and position over the hole shown in Figure 78.
5. Attach the adapter plate through the firebox reusing the two (2) T20 screws (see Figure 81).

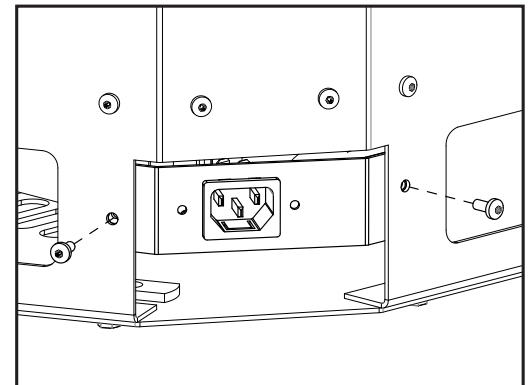


Figure 79: Electrical Plug Disconnect

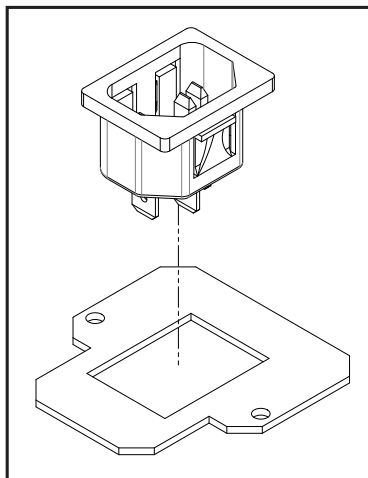


Figure 80: Electrical Adapter Plate

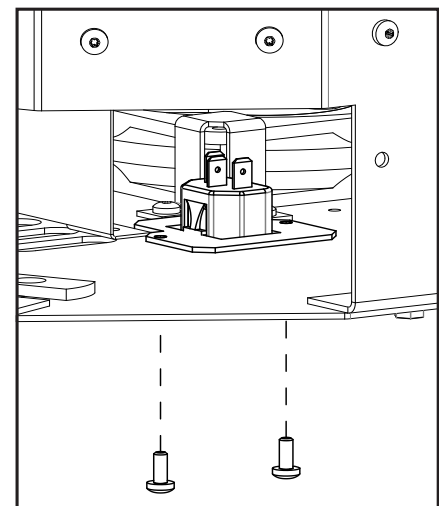


Figure 81: Electrical Plug Connection

INITIAL INSTALLATION

QUALIFIED INSTALLERS ONLY

RELOCATING GAS CONNECTION

1. Disconnect the two (2) T20 screws securing the ball valve plate (see Figure 82).
2. Disconnect the four (4) T20 screws securing the ball valve.
3. Loosen off ball valve jam screw and reattach ball valve cradle onto the relocation plate (included in the manual bag, refer to Figure 84 for proper geometry and orientation). Re-tighten jam screw and ensure ball valve is secure.
4. Use appropriate thread sealant and connect the 1/2" elbow fitting (included in the manual bag). Orientate the fitting downward.
5. Work the flex line and get the gas connection assembly into position as shown in Figure 86. Attach the assembly to the firebox using two (2) 5/16" hex head bolts from below.

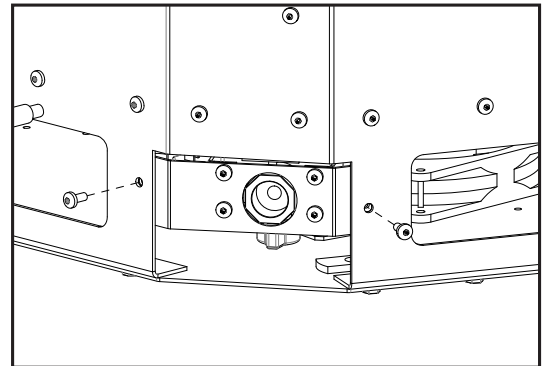


Figure 82: Gas Plate Disconnection

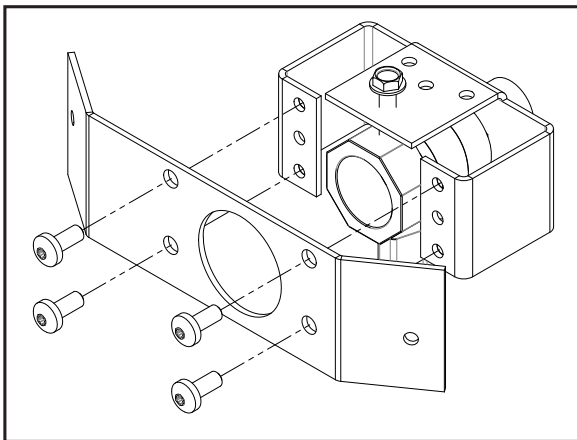


Figure 83: Gas Plate Removal

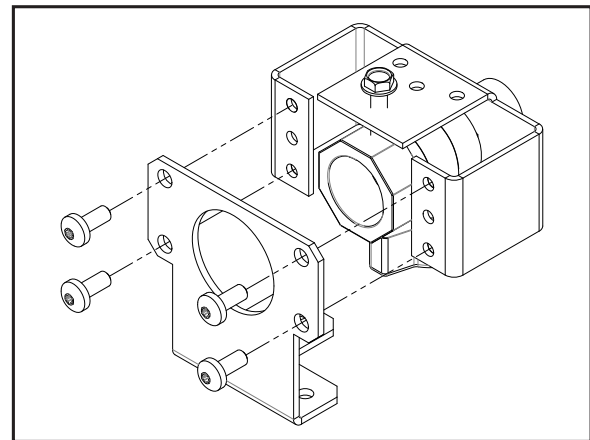


Figure 84: Gas Adapter Connection

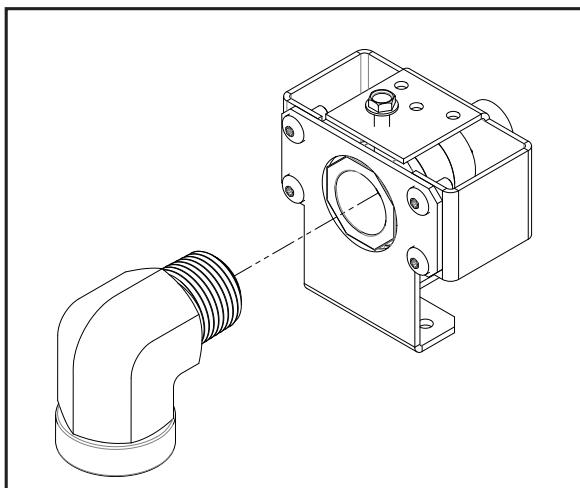


Figure 85: 1/2" Elbow Fitting Connection

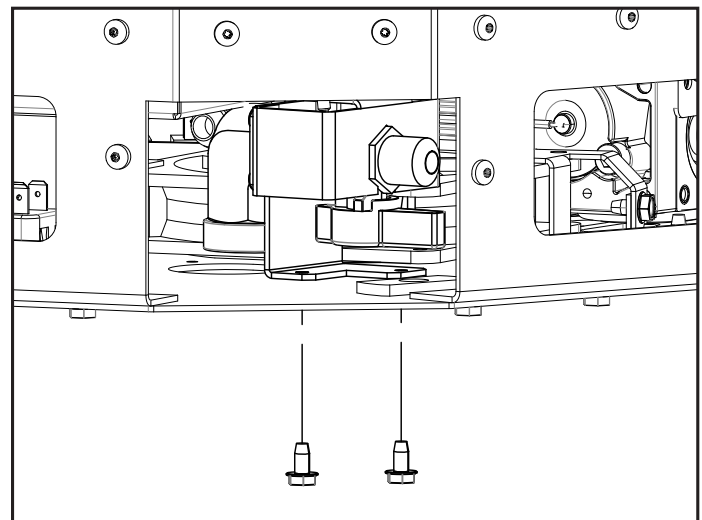


Figure 86: Gas Connection Re-installation

INITIAL INSTALLATION

QUALIFIED INSTALLERS ONLY

REROUTING GAS/ELECTRICAL CONNECTIONS - POLE PEDESTAL

The electrical and gas line conduit can run straight up the pole from the floor below. Alternatively you could run them through the channel at the rear of the pedestal base (see Figure 87).

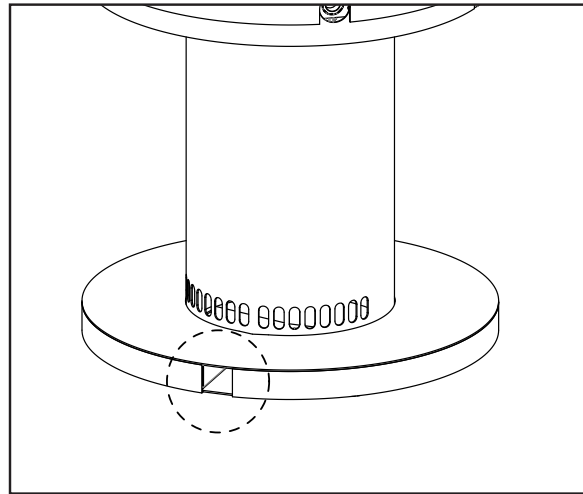


Figure 87: Pole Pedestal Gas & Electrical Rerouting

REROUTING GAS/ELECTRICAL CONNECTIONS - WOOD PEDESTAL

In addition to the previous modifications in this section, the wood pedestal has a cutout for the rocker switches to provide easier access. Disconnect the rocker switch mount from the firebox as shown in Figure 88. There is a rectangular hole on top side of the wood pedestal near the front that the rocker switch mount will fit into. Remount the switch panel on the pedestal tray using 5/16" hex head screws provided (see Figure 89).

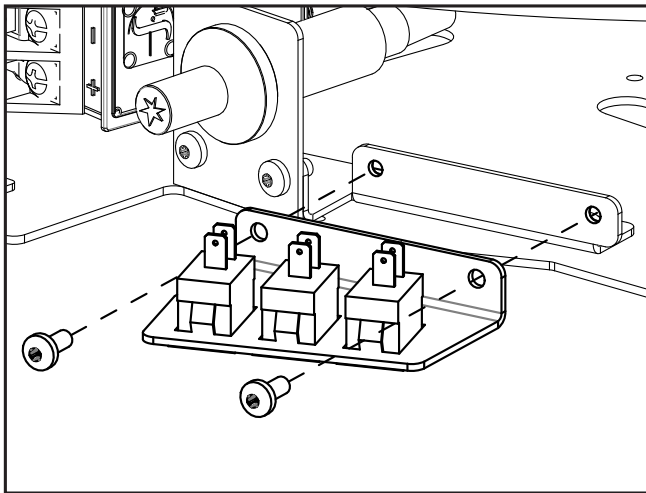


Figure 88: Rocker Switch Mount Disconnect from Firebox

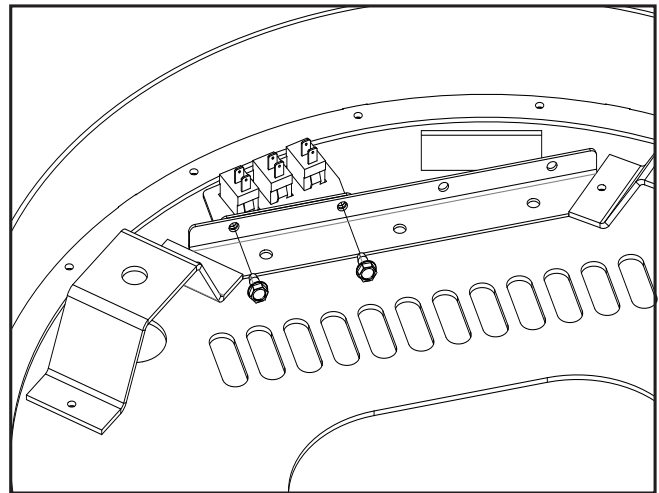


Figure 89: Rocker Switch Mount Attachment to Wood Pedestal

The wood pedestal has a knockout located at the top of its back wall that will allow the gas and electrical connection to pass through. This knockout allows access to the hollow back wall of the pedestal, which then leads to two (2) openings at the back of the pedestal (see Figure 90).

INITIAL INSTALLATION

QUALIFIED INSTALLERS ONLY

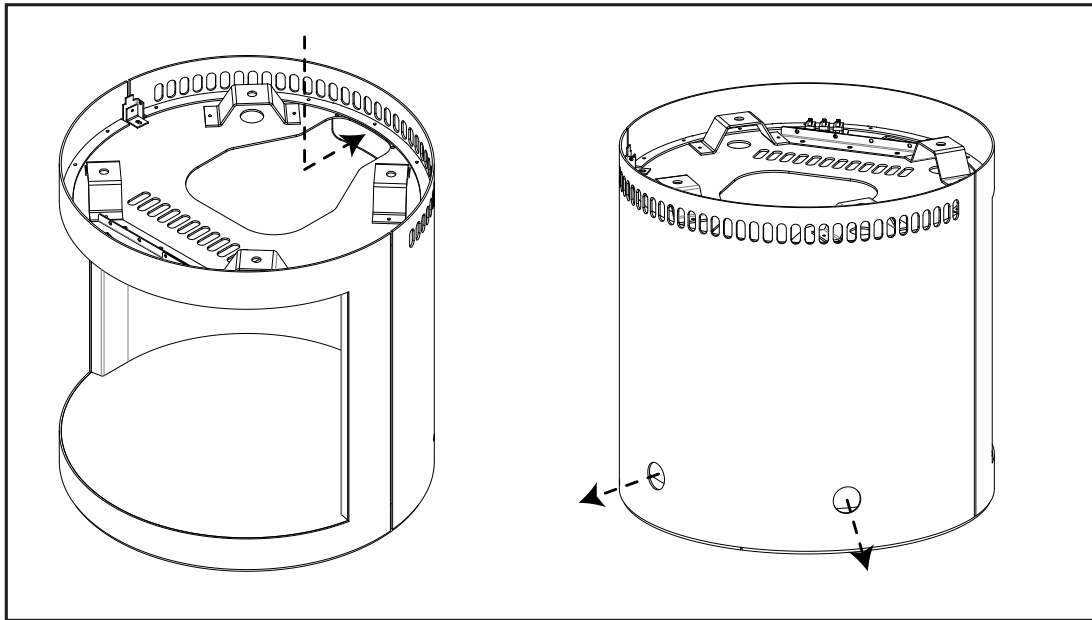


Figure 90: Wood Pedestal Gas & Electrical Rerouting

MOBILE HOME INSTALLATION:

All S50 models can be installed in a mobile home and must be securely fastened to the floor as directed below:

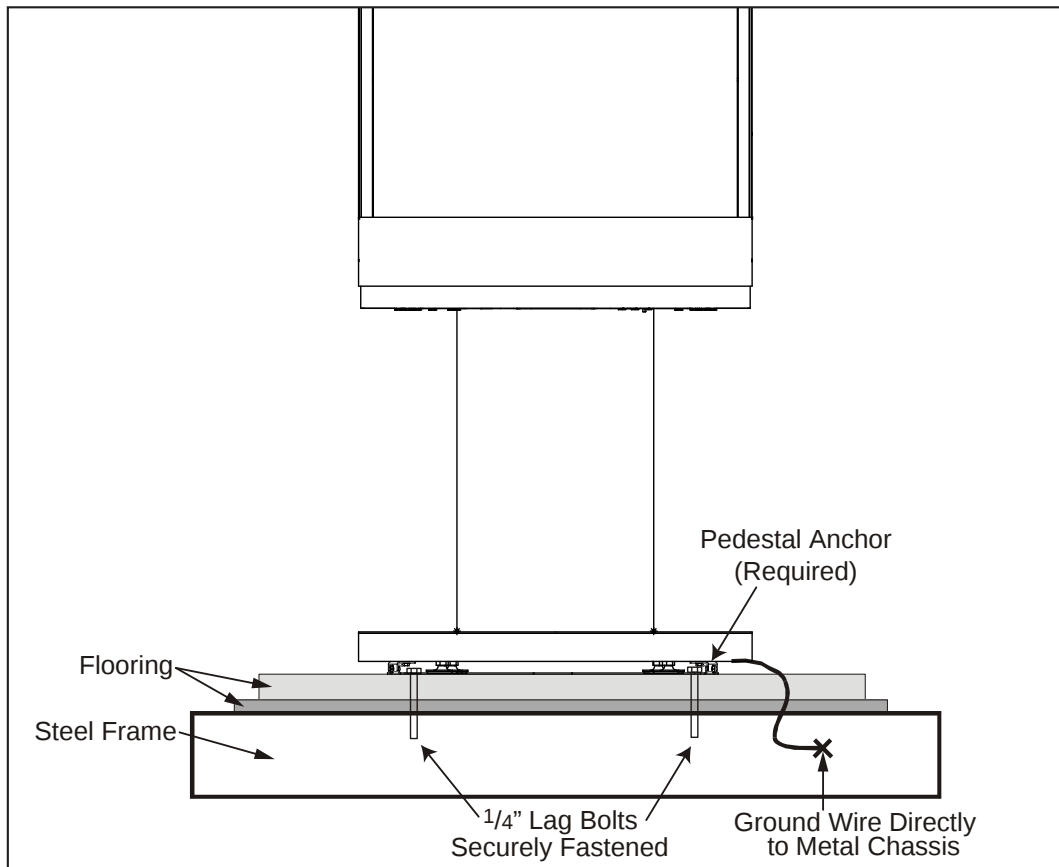


Figure 91: Correct Mobile Home Installation

Caution: The structural integrity of the manufactured home's floor, wall, and ceiling/roof must be maintained

SECONDARY INSTALLATION

LOG SET INSTALLATION

Prior to setting up the log set, remove the door frame and glass from the unit. Refer to their respective sections on page 15 and page 16 for detailed instructions.

STEP 1: Place burner media on burner. Use either vermiculite or ember wool; if using ember wool, tear it apart into fine thin strands with your fingers - wear gloves. Do not cover up meshed air ports or burner air slots, these must remain clear.

STEP 2: Place Log 1 and into position as shown. Log 2 will support Log 1 in a distinctive area. Each log should be contacting side and rear liners and spaced off burner air slots by 1/4" (6mm). See Figure 92.



Figure 92: Step 2 - Log 1 & 2

STEP 3: Place the divot underneath Log 3 over the rear base screw head. Pivot the log slightly counterclockwise. Place shale and/or vermiculite on either side on the log as desired. See Figure 93.



Figure 93: Step 3 - Log 3

STEP 4: Place the divot underneath Log 4 over the front base screw head. The orientation will need to be adjusted during the next step. See Figure 94.



Figure 94: Step 4 - Log 4

STEP 5: The backside of Log 5 should be parallel to the burner but spaced off the air slot by 1/4" (6mm). Rotate Log 4 until the tip of Log 5 slots into the nook. See Figure 95.



Figure 95: Step 5 - Log 5

SECONDARY INSTALLATION

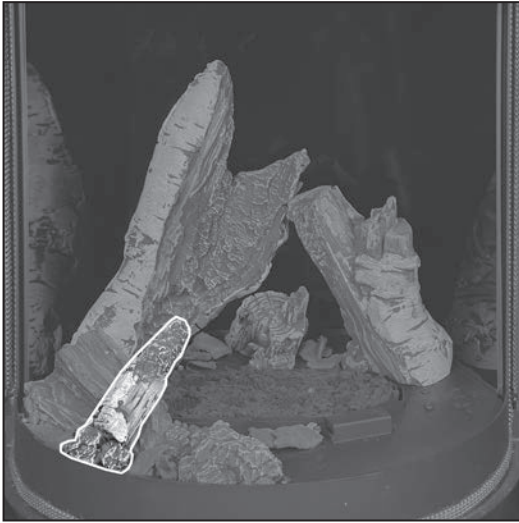


Figure 96: Step 6 - Log 6

STEP 7: Place the narrow notch underneath Log 7 into the groove on Log 4. The right side of the log should contact the firebox edge and spaced off the burner slot by 1/4" (6mm). See Figure 97.



Figure 97: Step 7 - Log 7

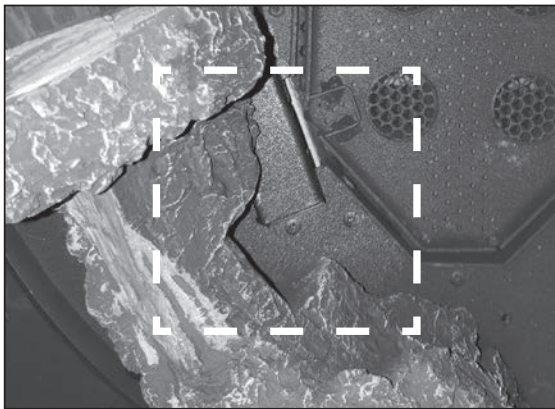


Figure 99: Log 7 Placement (Top View)

***Note:** It is important that Log 7 is placed correctly as specified in the instructions. There is a notch located on its back side (facing the burner) that should be placed to the right of the pilot as shown in Figure 99. Failure to place the log properly could result in problems with the pilot.

STEP 8: Log 8 should notch onto Log 7 nicely. See Figure 98.

STEP 9: Continue placing shale and/or vermiculite between the logs as desired. Do not cover up any air slots.

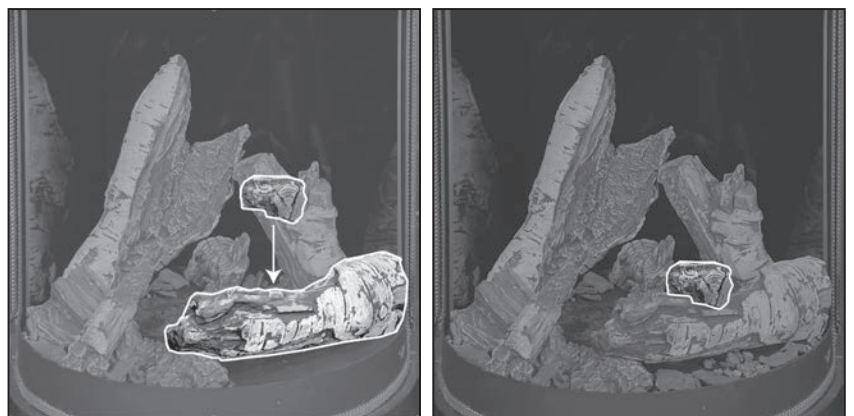


Figure 98: Step 8 - Log 8

SECONDARY INSTALLATION



Figure 100: Proper Log Setup/Burn

MEDIA INSTALLATION

To install media into your unit, perform the following steps:

1. Remove the door frame (refer to section REMOVING THE DOOR FRAME/SKIRT on page 15).
2. Remove the glass (refer to section REMOVING THE GLASS on page 16).
3. Place your burner media into the burner platform creating a thin layer that evenly covers the entire burner pan; pat it down gently.

***Note:** Ensure that the areas highlighted in Figure 101 are not covered by media. These areas must be clear to allow the proper flow of air. Failure to do so will cause the fireplace to not burn properly.

4. Reinstall the glass and door frame.

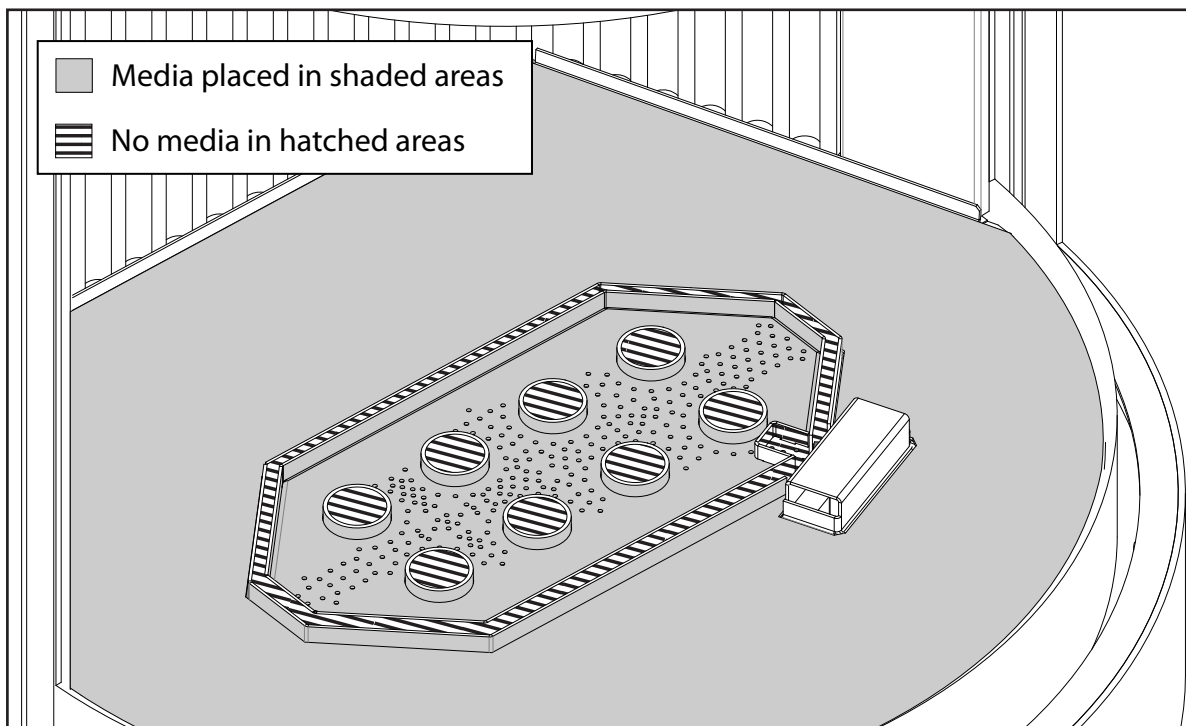


Figure 101: Media Installation Area

TROUBLE SHOOTING

Problem	Possible Cause	Solution
Difficulty mounting door frame	Curver glass not clamped properly	• Reseat glass by fully clamping front before sides.
	Door frame hooks not seating right	• Follow the 2-stage procedure using the different hook reciever steps.
The main burner does not ignite when called for. *Assuming pilot is lit	The gas valve may not be on.	• Check that the gas control knob is in the "ON" position. • Check burner switch is ON or in center thermostat position. Check switch for continuity.
	Thermostat is not calling for heat.	• Adjust the thermostat several degrees below ambient temperature.
	Problem with gas valve.	• Use a DC voltmeter to measure the voltage across the TPTH and TP terminals. Main operator voltage: Open circuit $\geq 325\text{mV}$ Closed circuit $\geq 100\text{mV}$ • If voltage is not present, replace thermopile.
Spark will not light the pilot after repeatedly pressing the spark ignitor.	Defective piezo ignitor.	• Check connections to ignitor. • If ignitor connections are good but no spark, replace ignitor. Visually check for spark
	Broken or misaligned electrode.	• Check for broken ceramic insulation, replace electrode if broken. • If spark is not arcing from electrode to pilot adjust electrode rod distance (closer doesnt mean better).
	Pilot gas not coming through.	• Ensure pilot know is pushed all the way down while pressing piezo. • Check gas pressure at the valve ports • Remove pilot head and check for micro debris.
Pilot will not remain lit (or pilot wandering).	7-Day Shutdown (Does not apply to S50-820)	• The pilot has been in operation for 7 continuous days without main burner operation. Turn fireplace ON to reset pilot timer.
	Problem with thermocouple circuit.	• Check polarity of thermopile is correct if charge time is excessive. • Check thermocouple voltage at valve. It must be greater than 5 mV. If low, replace thermocouple. • Check pilot for full flame around thermocouple. If flame is too small, check gas pressure, adjust pilot rate screw, check pilot head for micro debris. • Check thermocouple connection at rear of the valve is not loose.
	Drafty firebox conditions	• Ensure curved glass is properly sealed • Ensure pilot draft shield is in place and gasket is intact. • Ensure restrictor is set properly, may need to close some.
Burners will not remain lit.	Problem with thermopile circuit.	• Check gas line pressure. • Check for healthy flame characteristics • Check for healthy pilot flame characteristics • Check thermopile for minimum of 300 mV when burner is switched on. • Check thermopile polarity is correct (821 valve)
Flame lifting	Leak in vent pipe	• Check for leaks in vent connections.
	Trouble establishing draft	• Check vent configuration with manual. • Exhaust may be over restricted. • Burner air supply is obstructed.
	Windy outdoor conditions	• Check to see if termination is on correctly. • Ensure approved high wind termination cap is used. • May need to install high wind guard.
Blue Flames long after warm up	Adjust the air shutter and/or exhaust restrictor.	
Flames are burning "dirty" or sooting	Flame impingement	• Check log positioning. • Increase primary air by opening the air shutter and/or by opening the exhaust restrictor.

PARTS LIST

Table 10: Parts List

Reference Number	Description	Part Number
1 (S50-820 Models Only)	S.I.T. 820 Nova Valve 33% Turn Down Convertible	50-4125
1 (S50 Models Only)	S.I.T. 821 Nova Valve 33% Turn Down Convertible	50-4126
2	Pilot Assembly (PSE-NA479)	50-4083
-	S50 Nova LP to NG Conversion Kit	50-4171
-	S50 Nova NG to LP Conversion Kit	50-4172
3	S.I.T. Piezo Ignitor	EC-023
4	Top Light Assembly	50-4057
-	G9 25W 120V Bulb	50-4119
5	2-Pole Rocker Switch (Top Light, Fan)	50-3892
6	3-Pole Rocker Switch (Burner)	EC-026
7	S50 Fan Only	50-4177
8	S50 Pilot Fence w/ Gasket	50-4178
9	S50 Burner Assembly	50-4179
10	S50 Burner Platform Assembly	50-4180
11	S50 Top Plate - Carrara White	50-4181
12	S50 Top Plate Collar	50-4182
13	S50 Top Plate Blank - Carrara White	50-4183
14	S50 Top Plate Blank Support	50-4184
15	S50 Top Plate Fascia Band	50-4185
16	S50 Top Plate Hinge - Left	50-4186
17	S50 Top Plate Hinge - Right	50-4187
18	S50 Curved Glass	50-4188
19	S50 Door Frame - Carrara White	50-4189
20	S50 Door Frame Hooks	50-4190
21	S50 Front Skirt	50-4191
22	S50 Rear Skirt	50-4192
23	S50 Rear Chassis - Carrara White	50-4193
24	S50 Fluted Liner Set	50-4076
-	S50 Black Glass Liner Set	50-4075
25	S50 Pole Pedestal - Metallic Black	50-4072
-	S50 Pole Pedestal - Carrara White	50-4078
26	S50 Wood Pedestal - Metallic Black	50-4073
-	S50 Wood Pedestal - Carrara White	50-4079
27	S50 Safety Screen	50-4141
-	S50 River Rock Set with Twigs	50-3838
-	S50 Traditional Log Set	50-4069
-	S50 Birch Log Set	50-4070
-	S50 Diamond Glass Media	50-4071
-	S50 Nova Circulation Fan Kit - 70 CFM	50-4174
-	S50 Owner's Manual	50-4194

PARTS LIST

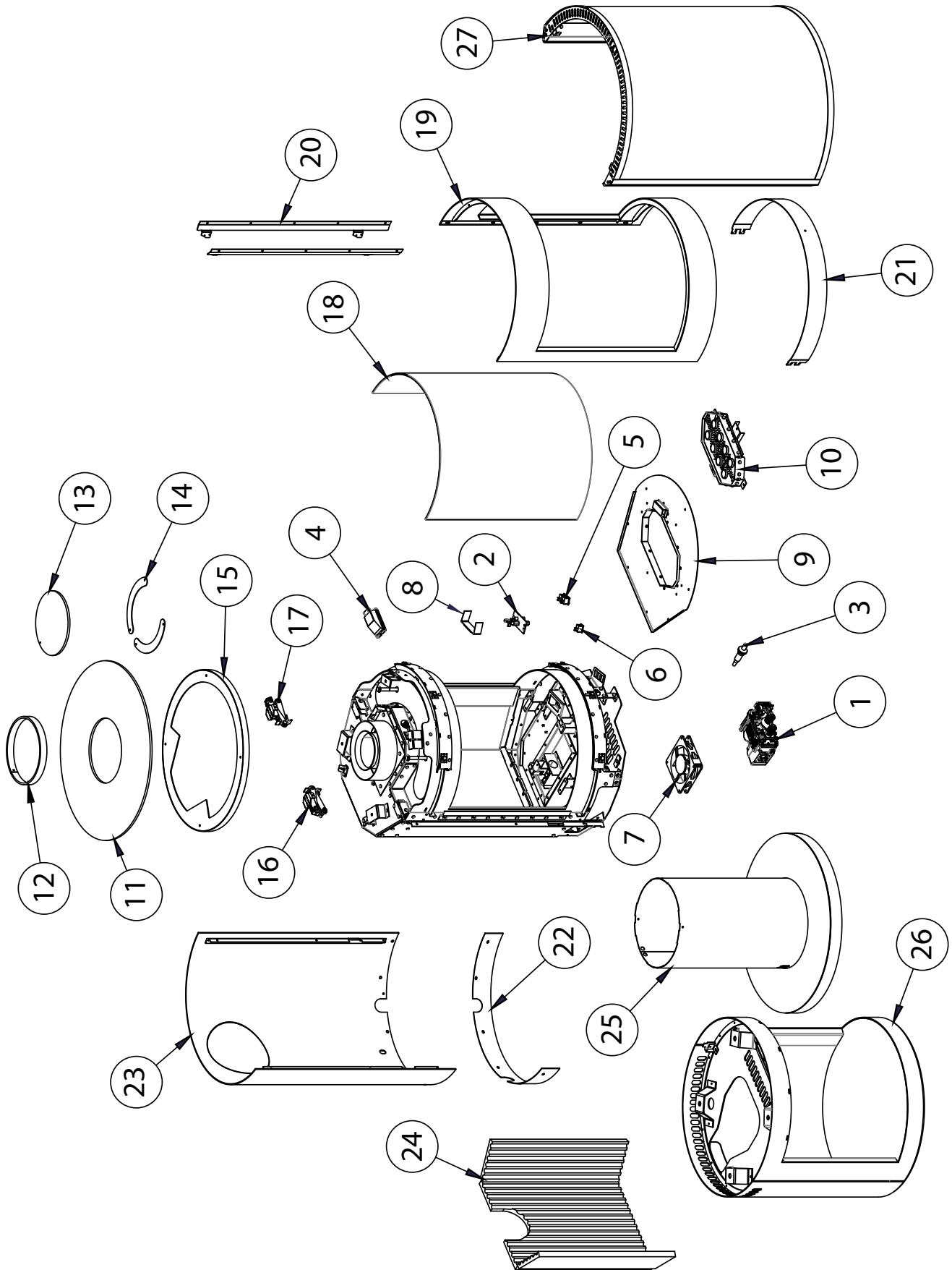
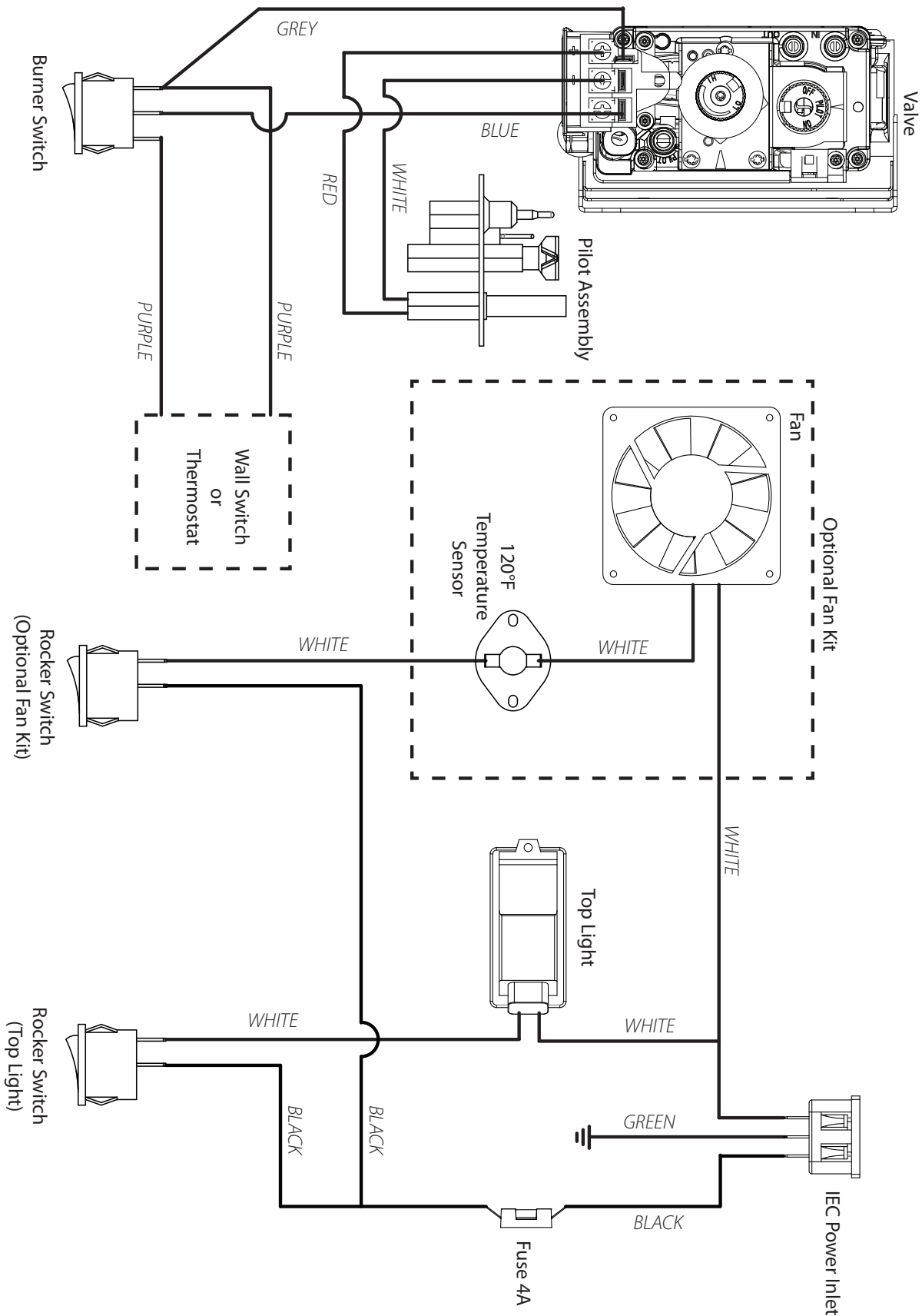


Figure 102: Parts List Diagram

WIRING SCHEMATIC

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





Warranty for Enviro Gas Products

Sherwood Industries Ltd. ("Sherwood") hereby warrants, subject to the terms and conditions herein set forth, this product against defects in material and workmanship during the specified warranty period starting from the date of original purchase at retail. In the event of a defect of material or workmanship during the specified warranty period, Sherwood reserves the right to make repairs or to assess the replacement of a defective product at Sherwood's factory. The shipping costs are to be paid by the consumer. All warranties by Sherwood are set forth herein and no claim shall be made against Sherwood on any oral warranty or representation.

Conditions

- A completed warranty registration must be submitted to Sherwood within 90 days of original purchase via the online warranty registration page or via the mail-in warranty registration card provided. Have the installer fill in the installation data sheet in the back of the manual for warranty and future reference.
- This warranty applies only to the original owner in the original location from date of install.
- The unit must have been properly installed by a qualified technician or installer, and must meet all local and national building code requirements.
- The warranty does not cover removal and re-installation costs.
- Sherwood Industries Ltd. reserves the right to make changes without notice.
- Sherwood Industries Ltd. and its employees or representatives will not assume any damages, either directly or indirectly caused by improper usage, operation, installation, servicing or maintenance of this appliance.
- A proof of original purchase must be provided by you or the dealer including serial number.
- This warranty does not cover any discoloration of the safety screen mesh.

Exclusions

An expanded list of exclusions is available at www.enviro.com/help/warranty.html

This warranty does not cover:

- Damage as a result of improper usage or abuse.
- Damage caused from over-firing due to incorrect setup or tampering.
- Damage caused by incorrect installation.

To the Dealer

- Provide name, address and telephone number of purchaser and date of purchase.
- Provide date of purchase. Name of installer and dealer. Serial number of the appliance. Nature of complaint, defects or malfunction, description and part # of any parts replaced.
- Pictures or return of damaged or defective product may be required.

To the Distributor

- Sign and verify that work and information are correct.

Sherwood Industries Ltd.

6782 Oldfield Road, Victoria, BC . Canada V8M 2A3
Online warranty registration: www.enviro.com/warranty/

Category	One Year	Two Year	Limited Lifetime (7yr)
Parts ^{1,2} (unit serial number required)		✓	
Firebox Liner Panels ³		✓	
Firebox			✓
Heat Exchanger			✓
Burner			✓
Ceramic Logs ⁴			✓
Ceramic Glass ⁵	✓		
Pedestal / Legs (excluding finish)			✓
Door Assembly			✓
Surround Panels (excluding finish)			✓
Exterior Panels (excluding finish)			Up to 5 years
Electrical Components		✓	
Exterior Surface Finishing	✓		
Labour	✓		

¹ Whereas warranty has expired, replacement parts will be warrantied for 90 days from part purchase date. Labour not included. Unit serial number required.

² 50-173 Westport Fan Kit covered for up to 5 years from purchase date. Labour not included. Unit serial required.

³ Excluding damage to the finish caused by improper setup of the appliance, or color changes.

⁴ Log set and panels excludes wear and tear or breakage caused by cleaning or service.

⁵ Glass is covered for thermal breakage. Photos of box, inside of door, and unit serial # must be supplied for breakage due to shipping.

⁶ Exterior Surface finishing covers plating, enamel or paint and excludes colour changes, chipping, and fingerprints. Travel costs not included.

INSTALLATION DATA SHEET

The following information must be recorded by the installer for warranty purposes and future reference.

NAME OF OWNER:

ADDRESS:

PHONE: _____

NAME OF DEALER:

ADDRESS:

PHONE: _____

MODEL: _____

SERIAL NUMBER: _____

DATE OF PURCHASE: _____ (dd/mm/yyyy)

DATE OF INSTALLATION: _____ (dd/mm/yyyy)

☐ NATURAL GAS (NAT) ☐ PROPANE(LPG)

INLET GAS PRESSURE: _____ in wc

MAIN BURNER ORIFICE: _____ # DMS

PILOT ORIFICE # _____ OR _____ in diam.

INSTALLER'S SIGNATURE:

NAME OF INSTALLER:

ADDRESS:

PHONE: _____

MANUFACTURED BY:
SHERWOOD INDUSTRIES LTD.
6782 OLDFIELD RD. SAANICHTON, BC, CANADA V8M 2A3
www.enviro.com
Winter 2021
C-16395