ECONOMY SERIES 5040

5040I

Insert Installation Instructions

This stove has been tested to ULC-628 Standard For Fireplace Inserts.

C ETL US LISTED
Intertek

INSTALLATION 2

SPECIFICATIONS

FREESTANDING:
Width: 21 ½”
Height: 28 ½” (with legs or pedestal)
Depth: 24”
Weight: 185 lbs.
Pedestal: 40 lbs.
Legs: 13 lbs.
Flue size: 3” or 4”
Hopper Capacity: Up to 45 lbs.
(this can vary widely depending on pellet size, length, and diameter)
EPA status: exempt
Burn time: 1 lb. to 4 ½ lbs. per hour
BTU range: 8,200 to 40,000
Approved installations: mobile home, alcove, conventional

FIREPLACE INSERT:
Width: 21 ½” (With flashing: 39”)
Height: 20” (With flashing: 30”)
Depth: 24” (In fireplace: 10 ¾”)
Weight: 185 lbs.
Flashing: 13 lbs.
Flue size: 3” or 4”
Hopper Capacity: Up to 45 lbs.
(this can vary widely depending on pellet size, length, and diameter)
EPA status: exempt
Burn time: 1 lb. to 4 ½ lbs. per hour
BTU range: 8,200 to 40,000
Approved installations: zero-clearance, masonry, as a built-in.

PREPARATION

Factory packaging must be removed, and some minor assembly work is required prior to installation. Access to the rear of the stove is necessary.

The circuit board/control panel must be unpacked and installed in the side flashing on the insert or side panel on the freestanding. (See installation instructions provided with the circuit board)

NOTE: Normally, your dealer will perform these functions.

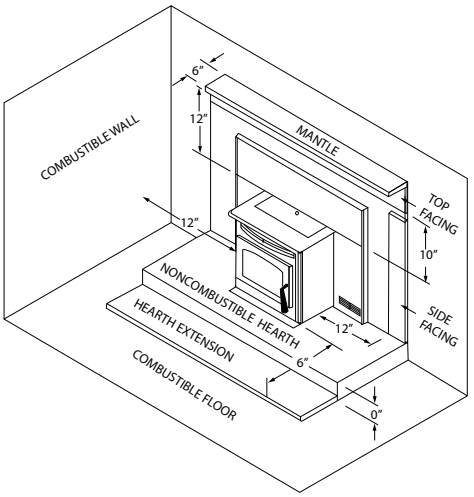


FIGURE 3

CLEARANCES

The US Stove 5040 Freestanding has been tested and listed for installation in residential, mobile home and alcove applications.

The 5040 Insert is approved for installation into code complying masonry fireplaces. It is also approved for use in listed factory built fireplaces (UL 127) and standard residential built-ins (see As A Built-In Fireplace), including Mobile Home built-in installations, of the following description: all brands at least 34” wide and 20 ½” high.

FLOOR PROTECTION: Freestanding installations, minimum 21” wide by 28” deep. The stove must be placed on a continuous (grouted joints) noncombustible material such as ceramic tile, cement board, brick, 3/8” millboard or equivalent, or other approved or listed material suited for floor protection.

THE MATERIAL(S) USED MUST HAVE, OR COMBINE TO HAVE, A MINIMUM INSULATIVE RATING OF ‘R1’.

NOTE: ceramic tile, or any tile, requires a continuous sheet beneath to prevent the possibility of embers falling through to the combustible floor if cracks or separation should occur in the finished surface, this would include floor protection for Built-in raised hearths. Check local codes for approved alternatives.

Clearances are measured from the sides, back and face (door opening) or stove body (refer to fig. 4).

DO NOT USE MAKESHIFT MATERIALS OR COMPROMISES IN THE INSTALLATION OF THIS UNIT.

INSTALL VENT WITH CLEARANCES SPECIFIED BY THE VENT MANUFACTURER. CAUTION: DO NOT CONNECT TO OR USE IN CONJUNCTION WITH ANY AIR DISTRIBUTION DUCTWORK UNLESS SPECIFICALLY APPROVED FOR SUCH INSTALLATIONS.

3 INSTALLATION

COMBUSTION AIR SUPPLY

If outdoor combustion air is supplied the heater must be attached to the structure.

For a mobile home installation the stove must be connected to an outside source of combustion air. A 2" inside diameter metallic pipe, either flexible or rigid, may be attached to the inlet at the stove's rear (refer to figures 5a, 5b, and 6). A rodent guard (minimum ¼" wire mesh)/wind hood must be used at the terminus (refer to figure 7). All connections must be secured and airtight by either using the appropriately sized hose clamp and/or UL-181-AP foil tape.

For mobile home installations only: 2" inside diameter pipe may be used for the first 5 feet of combustion air supply run. From 5 to 10 feet use 2 ¾" inside diameter pipe. No combustion air supply may exceed 10 feet.

Sources of Outside Combustion Air

In fireplaces

- Chimney top.
- Ash clean out door.

WHEN OUTSIDE AIR IS NOT USED

If outside air is not used, it is important that combustion air is easily available to the air inlet. A closeable outside air register can be used in tightly insulated homes. In insert installations, flashing vents should not be restricted. The flashing should not necessarily seal the fireplace face.

VENTING

The US Stove 5040 Freestanding is certified for use with listed TYPE PL-Vent, 3" or 4" diameter in size. The stove was tested with Simpson Duravent brand. Class "A" chimney is not required. Refer to the instructions provided by the vent manufacturer, especially when passing through a wall, ceiling or roof. This is a pressurized exhaust system. All vent connector joints must be sealed with 500°F (260°C) RTV silicone sealant to ensure consistent performance and avoid smoke spillage. All horizontal connector joints must be sealed with UL-181-AP foil tape. We recommend that all vertical vent connector joints be secured with a minimum of 3 screws.

It is strongly recommended that you have a minimum of 6' of vertical pipe in your exhaust system. For best performance of the stove limit the number of elbows and horizontal pipe as much as possible.

A chimney connector shall not pass thorough an attic or roof space, closet or similar concealed space, or a floor, or ceiling. Where passage through a wall, or partition of combustible construction is desired, the installation shall conform to CAN/CSA-B365, installation code for solid-Fuel-Burning appliances and equipment.

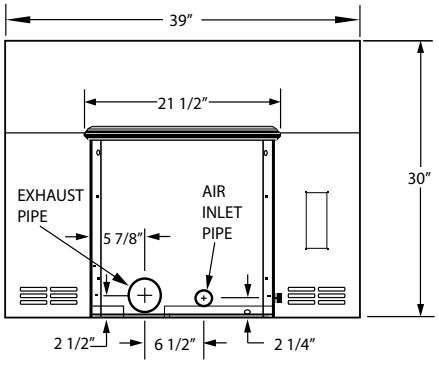


FIGURE 6

DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

DO NOT INSTALL A FLUE DAMPER IN THE EXHAUST VENTING SYSTEM OF THIS UNIT.

INSTALL VENT AT CLEARANCES SPECIFIED BY THE VENT MANUFACTURER.

E. VERTICALLY INTO EXISTING MASONRY FIREPLACE

NOTE: Follow PL-Vent chimney manufacturer's instructions.

1. Have the masonry chimney inspected by a qualified chimney sweep or installer to determine its structural condition.
2. You will need a pipe length equal to the chimney height from the hearth. If outside combustion air is to be used, you will need a pipe length equal to the chimney height plus 18 inches.
3. Install a blanking plate and the chimney pipe, and if used the outside air pipe, as shown in Figure 12.
4. Attach the PL-Vent adapter, a section of pipe and clean out tee, making sure the clean out tee is centered in the chimney flue area. Use RTV, metallic tape, and a minlmum of three self-taping screws at all joint connections to ensure a tight seal.
5. Position the stove, adhering to the clearances in Figures 1 & 2.
6. Measure and build chimney top plate. Cut out holes for chimney pipe, and if used the outside air pipe. Install and seal with non-hardening mastic to prevent water leakage. Install vent cap.

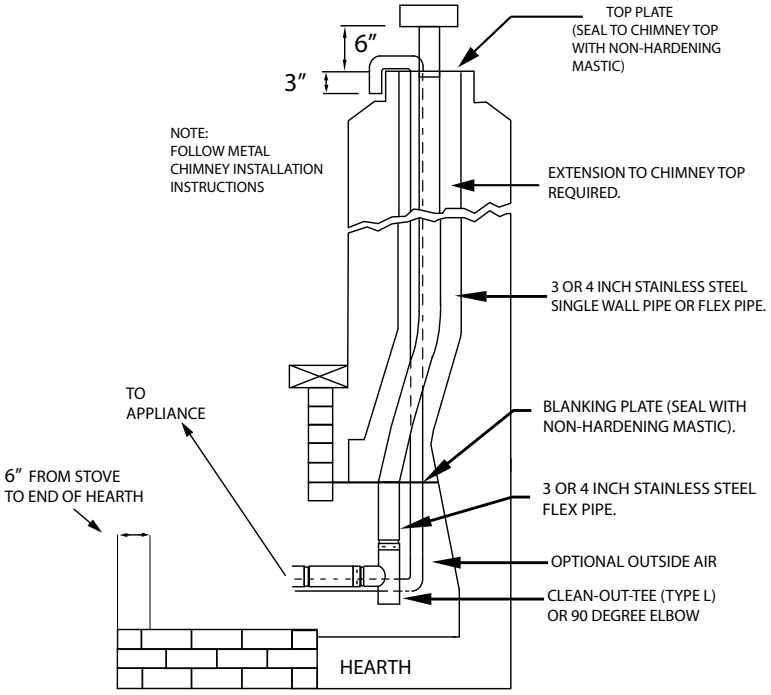


FIGURE 12

F. INSTALLATION THROUGH SIDE OF MASONRY CHIMNEY

NOTE: Follow PL-Vent chimney manufacturer's instructions.

1. Position the stove, adhering to the clearances in Figures 1 & 2. Mark the center of the hole where the pipe is to pierce the masonry chimney.
2. It will be necessary to break out the masonry around the location of the pipe center mark. Use a 4-inch diameter hole for 3-inch pipe and 5-inch diameter hole for 4-inch pipe.
3. Measure and build chimney top plate. Cut out holes for chimney pipe, and if used the outside air pipe.
4. Install the tee on the bottom of the vertical pipe system and lower it down the chimney until the center branch of the tee is level with the center of the hole in the masonry, as shown in Figure 13.
5. Install and seal the top plate from step 3 with non-hardening mastic. Slip the storm collar over the pipe, and while holding the pipe at the proper elevation, affix the collar with a minimum of three ¼" stainless steel sheet metal screws. Seal all joints and seams around the collar.
6. Connect the horizontal pipe by pushing it through the hole in the masonry and lining it up with the branch in the tee. Push the pipe into the tee while twisting it to lock it into the tee.
7. If desired, once the horizontal pipe is in place, the space between the pipe and masonry may be filled with high-temperature grout.
8. Install the trim collar. An adjustable pipe length and adapter may be needed to finish the connection to the stove.

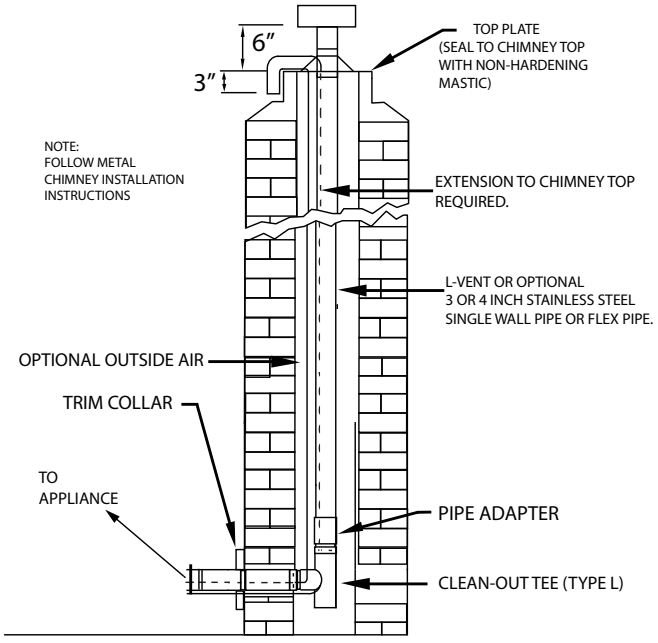


FIGURE 13

5 INSTALLATION

INSERT INSTALLATIONS

Insert installations must be vented with 3” or 4” pipe. Pipe may be single wall stainless steel flexible pipe. Vent may terminate within chimney beyond a blanking plate or extend to the chimney top. See **“COMBUSTION AIR SUPPLY”** for outside air access information.

The fireplace and chimney should be cleaned thoroughly before starting the installation. We suggest painting the interior of particularly old and dirty fireplaces to seal any odors. In zero-clearance fireplace installations, when the fireplace opening is above the floor or raised hearth, the adjustable “US Stove 5040 Z-C Legs” can be used to bridge the gap between the hearth and stove bottom. Refer to figure 14.

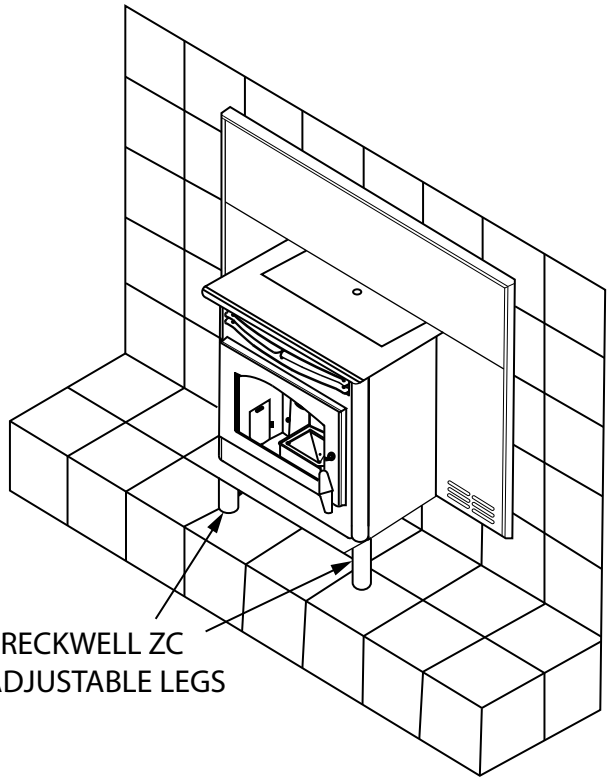


FIGURE 14

A. ASSEMBLING THE FLASHING SET

Follow the instructions packaged with the 5040 Flashing set part C-5040-MED (refer to Figure 15).

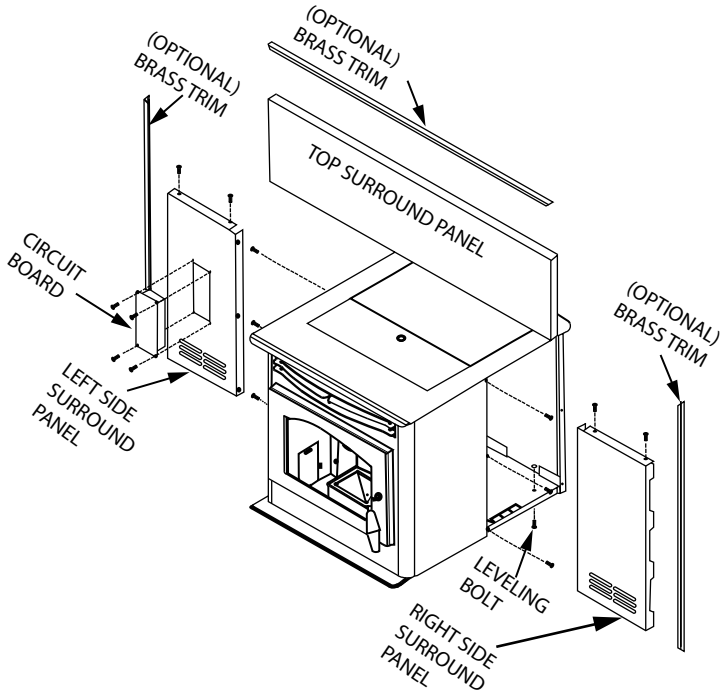
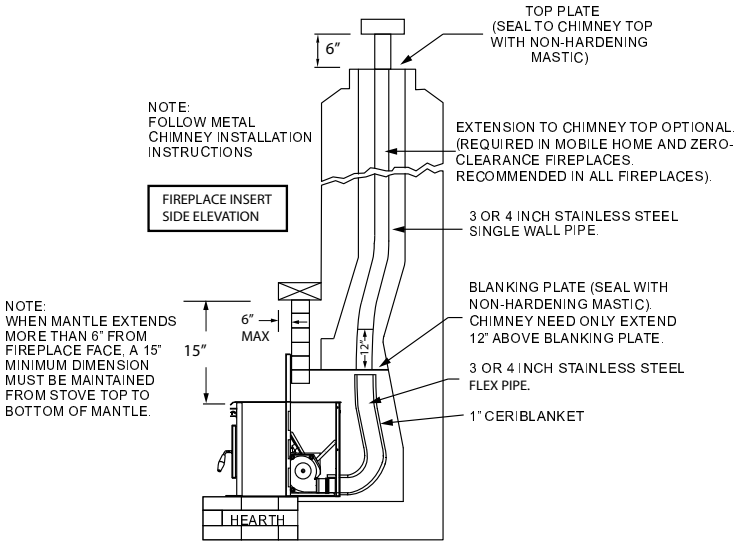


FIGURE 15

B. WHEN VENT PIPE EXTENDS TO CHIMNEY TOP
(Refer to Figures 16 and 17)

1. You will need a pipe length equal to the chimney height (from hearth) plus 6 inches. If outside combustion air is to be used, you will need a pipe length (see **"COMBUSTION AIR SUPPLY"**) equal to the chimney height plus 12 inches.
2. Attach cerablanket wrap (not included) to that end of vent pipe that will connect to the stove. Use 12-inch lengths of light gauge metal wire (not included) or metallic tape (not included). This is to protect interior components from excess heat.
3. Set the insert on the hearth and slide it in far enough to attach the vent pipe (and combustion pipe if used).
4. Attach flashing (refer to Figure 15), route power cord out the side nearest a 120V receptacle. Slide in insert.
5. Measure and build chimney top. Cut out hole for vent pipe (and combustion air intake pipe, if used). Install and seal with a non-hardening mastic to prevent water leakage. Install the vent cap.

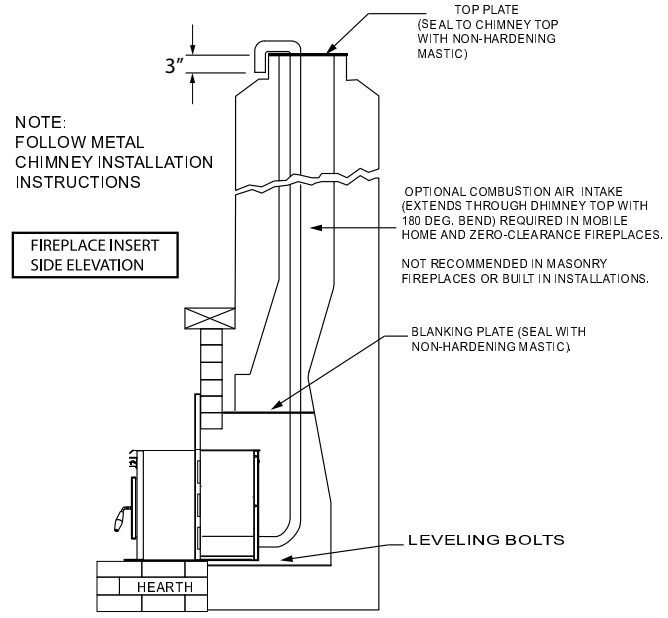


EXHAUST PIPE INSTALLATION

FIGURE 16

C. WHEN VENT PIPE EXTENDS THROUGH CHIMNEY BLANKING PLATE
Masonry Fireplaces Only)
(Refer to Figures 16 and 17)

1. You will need a pipe length that extends 12" above the blanking plate. **NOTE:** This installation is optional but not recommended. Outside combustion air cannot be drawn from the chimney cavity in this installation.
2. Attach cerablanket wrap (not included) to that end of vent pipe that will connect to the stove. Use 12-inch lengths of light gauge metal wire (not included) or metallic tape. This is to protect interior components from excessive heat.
3. Measure and build blanking plate. Cut out hole for vent pipe (and combustion air intake pipe, if used). Install and carefully seal blanking plate with non-hardening mastic. Failure to properly seal may result in smoke spillage.
4. Slide vent pipe (and intake pipe if used) up through the blanking plate hole, leaving enough to pull back down.
5. Set the insert on the hearth, adjust the leveling bolts on the rear sides, slide it in far enough to attach the vent pipe (and combustion air pipe if used). Be sure to seal where the pipe passes through the blanking plate.
6. Attach flashing (refer to Figure 15), route power cord out the side nearest a 120V receptacle. Slide in insert.



OUTSIDE COMBUSTION AIR INSTALLATION

FIGURE 17

D. AS A BUILT-IN FIREPLACE

Figures 18 and 19 describe a 5040 installation vented into either a special chase built outside an outer wall or a false inside wall. This is especially suited for new construction or remodeling.

The equipment compartment (sides and rear of the stove in fireplace) must be enclosed per the applicable electrical standards. This can be accomplished by the use of US Stove's panel kit part #A-PANEL-22.

NOTE: Floor protection for Built-in raised hearths requires a continuous sheet beneath to prevent the possibility of embers falling through to the combustible floor if cracks or separation should occur in the finished surface.
This fireplace insert must be installed with a continuous chimney liner of 3" or 4" diameter extending from the fireplace insert to the top of the chimney. The chimney liner must conform to the Class 3 requirements of CAN/ULC-S635, Standard for Lining Systems for Extending Masonry or Factory-Built Chimneys and Vents, or CAN/ULC-S640, Standard for Lining Systems for New Masonry Chimneys.

The existing fireplace damper may be removed or locked into the open position.

The chase dimensions shown are minimums and must be maintained.

IF THE FIREPLACE HAS BEEN MODIFIED TO ACCOMMODATE THE FIREPLACE INSERT A METAL TAG SHALL BE ATTACHED TO THE FIREPLACE.

DO NOT USE MAKESHIFT COMPROMISES DURING INSTALLATION.

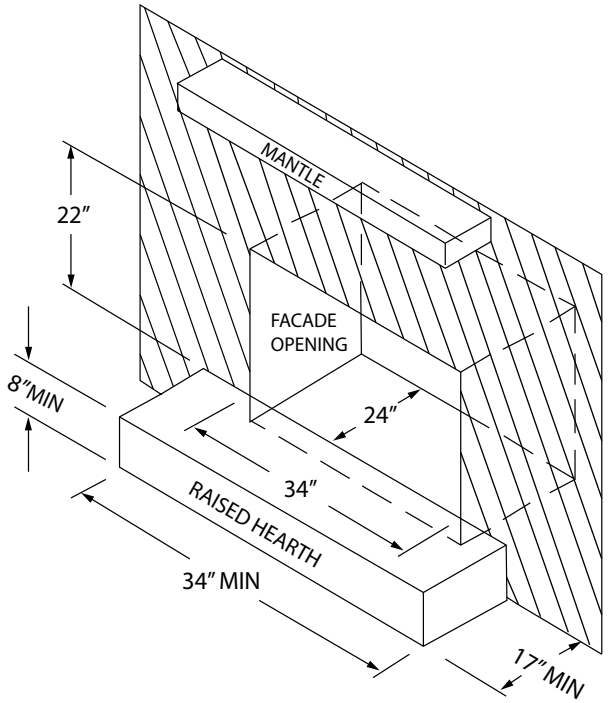
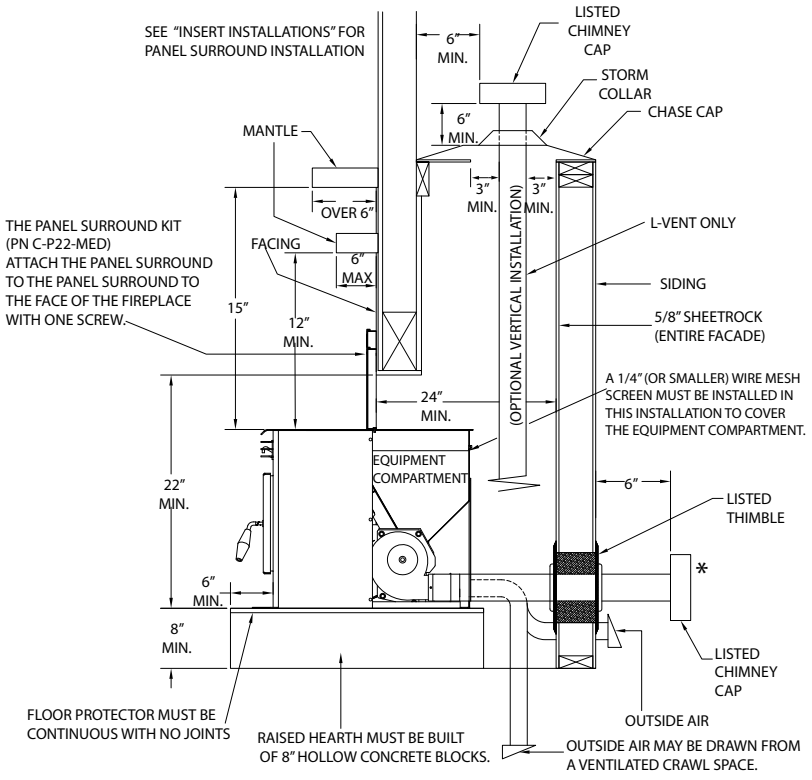


FIGURE 18



* IF CHOOSING TO VENT HORIZONTALLY THROUGH THE WALL, WE RECOMMEND TERMINATING VERTICALLY WITH AN ADDITIONAL RUN OF AT LEAST 5 FEET.

FIGURE 19

E. INSTALLATION IN TO A FACTORY BUILT (METAL) FIREPLACE

(Refer to figure 20)

When installing into a factory built fireplace, the firebox must accept the insert without modification other than removing bolted or screwed together pieces such as smoke shelf/deflectors, ash lips, screen or door tracks and damper assemblies. These items must be reinstalled to restore the fireplace to its original operating condition if the insert is removed and not replaced. The removal of any part must not alter the integrity of the listed fireplace in any way. In zero-clearance fireplace installations, when the fireplace opening is above the floor or raised hearth, the adjustable "US Stove 5040 Z-C Legs" can be used to bridge the gap between the hearth and stove bottom. Refer to figure 14.

The factory built fireplace must be listed per UL 127. Installation must include a full height listed chimney liner meeting type HT requirements (2100° F) per 1777 (U.S.). The liner must be securely attached to the insert flue collar and the chimney top. The damper area must be sealed to prevent room air passage to chimney cavity.

Alteration of the fireplace in any manner is not permitted except with the following exceptions:

- External trim pieces, which do not affect the operation of the fireplace, may be removed proving they can be stored on or within, the fireplace for re-assembly if the insert is removed.
- The fireplace damper may be removed to install the chimney liner.

Circulating air chambers, louvers or cooling air inlet or outlet ports (i.e. in a steel fireplace liner or metal heat circulator) shall not be blocked.

Means must be provided for removal of the insert to clean the chimney flue.

A permanent metal warning label must be attached to the back wall of the fireplace opening stating the following:

- "This fireplace has been altered to accommodate a fireplace insert and should be inspected by a qualified person prior to re-use as a conventional fireplace."
- This label is available upon request.

Final approval is contingent on the authority having jurisdiction.

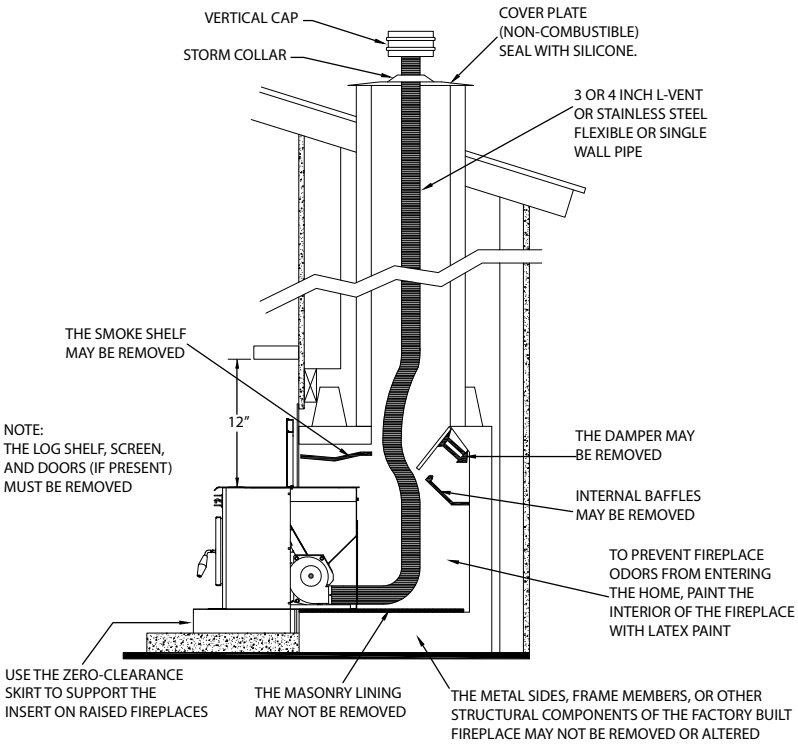


FIGURE 20

ELECTRICAL INSTALLATION

This stove is provided with a 6-foot grounded electrical cord extending from the rear of the stove. **We recommend connecting to a good quality surge protector that is plugged into a standard three-prong, 120V, 60hz electrical outlet.** Voltage variations can lead to serious performance problems. The US Stove electrical system is designed for 120V AC with no more than 5% variation. US Stove cannot accept responsibility for poor performance or damage due to inadequate voltage. If connected to an older, two-prong outlet, a separate ground wire should be run to a proper ground (refer this to a qualified technician). Always route the electrical cord so that it will not come in contact with any hot part of the stove.

SPECIAL MOBILE HOME REQUIREMENTS

WARNING: DO NOT INSTALL IN A SLEEPING ROOM.

NOTE: Installation should be in accordance with the Manufactured Home and Safety Standard (HUD), CFR 3280, Part 24

For installation in a mobile home, an outside source of combustion air must be used (see **"COMBUSTION AIR SUPPLY"**).

The 5040 must be grounded to the steel chassis of the home with 8 Ga. copper wire using a serrated or star washer to penetrate paint or protective coating to ensure grounding.

The 5040 must be securely fastened to the floor of the mobile home through the two holes in the rear of the stove using 2, ¼" lag bolts that are long enough to go through both a hearth pad, if used, and the floor of the home. (See figure 21)

Refer to **"VENTING"** for proper exhaust configurations.

CAUTION: THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL AND CEILING/ROOF MUST BE MAINTAINED.