



## ENVIRO C34 Cool Surface System Instructions

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C Series  
Cool Surface System  
SIDE VENT [50-3455] INSTRUCTION MANUAL

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### C34 Cool Surface System



#### PLEASE KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE

This Cool Surface System has been tested for compliance to Standards:

ANSI Z21.88 and CSA 2.33.

This Cool Surface System has been approved for use on the ENVIRO C34/44/60/72 Direct Vent fireplaces only and must be installed at the time of fireplace installation.

The following instructions must be followed in conjunction with the fireplace installation instructions to comply with the standards and allow safe operation of the installed fireplace.

50-3455

### General Information

The purpose of this optional Cool Surface System, or CSS, is to naturally re-direct the convective heat from the fireplace. Using this kit lowers the temperatures of the front wall for installations where a TV, artwork etc. is desired directly above the fireplace. It can also be used if you are intending to use combustible framing and combustible facing materials depending on configuration. The CSS must be vented directly into room where the appliance is installed. If using the maximum facing material thickness you will not be able to install a surround. A maximum total of 1" facing material (1/2" on top of cool wall layer) is allowed if you are installing a surround.

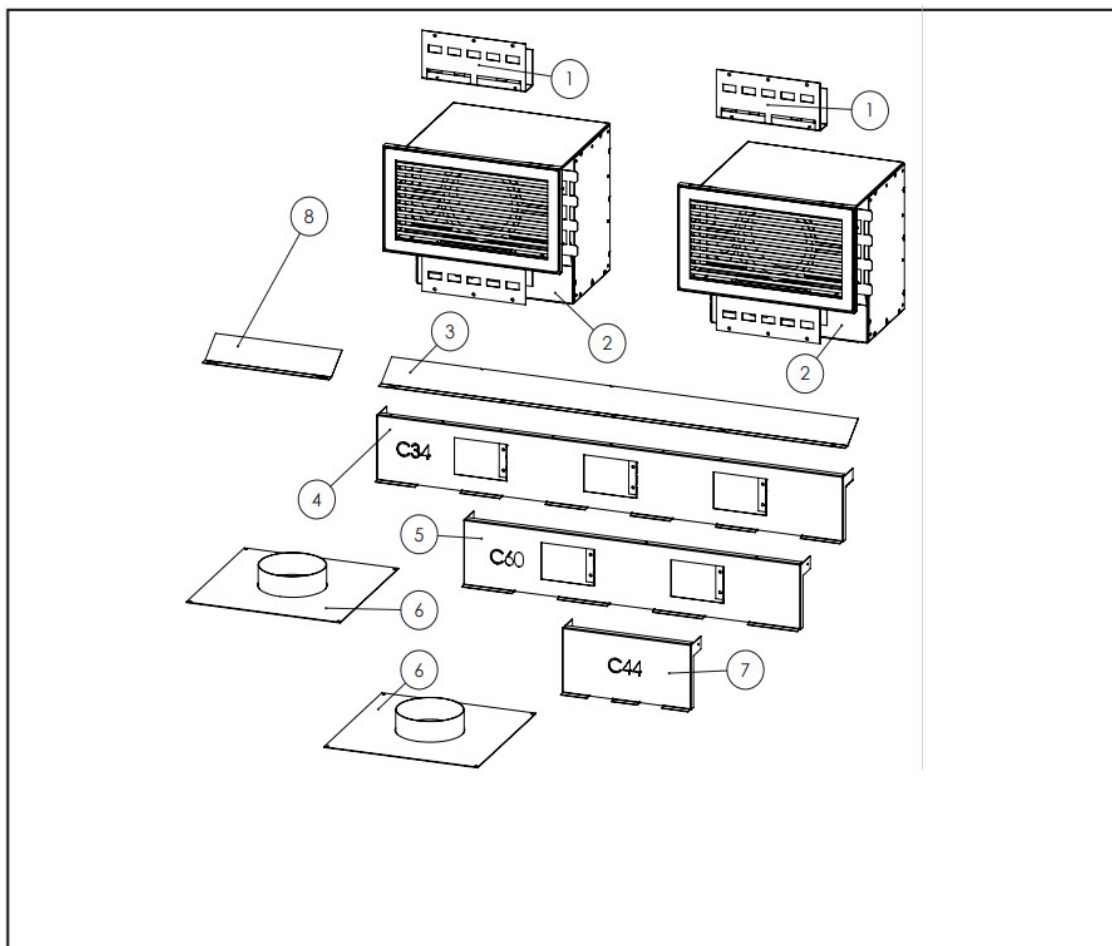
The Side Vented CSS is a modular system that can be installed in either a Horizontal or Vertical orientation.

**Note:** You can install the Cool Surface System without the Combustible Facing Kit. Doing so requires a non combustible facing material (see Owner's Manual for fireplace installation instructions).

**Note:** Dual Convection Fan Kit (50-3212) may not be used in conjunction with CSS.

Prior to installation of the CSS make sure the desired location is large enough to comply with the combustible clearances of both the CSS and the fireplace (see Owner's Manual for fireplace installation instructions). Refer to the Framing and Clearances section of this manual for the required installation dimensions of the CSS in its different configurations.

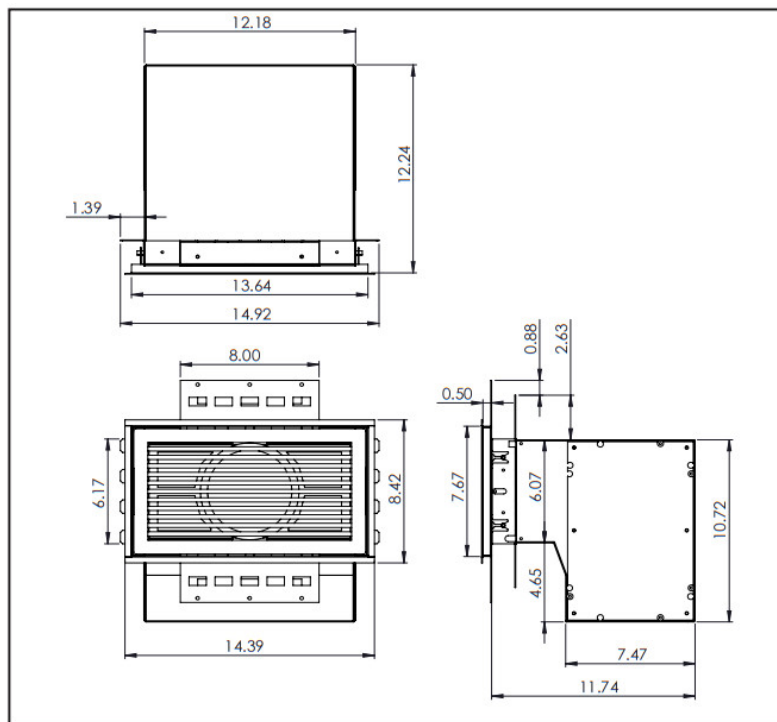
Please refer to Figure 1 to ensure that all CSS parts are accounted for and have not been damaged.



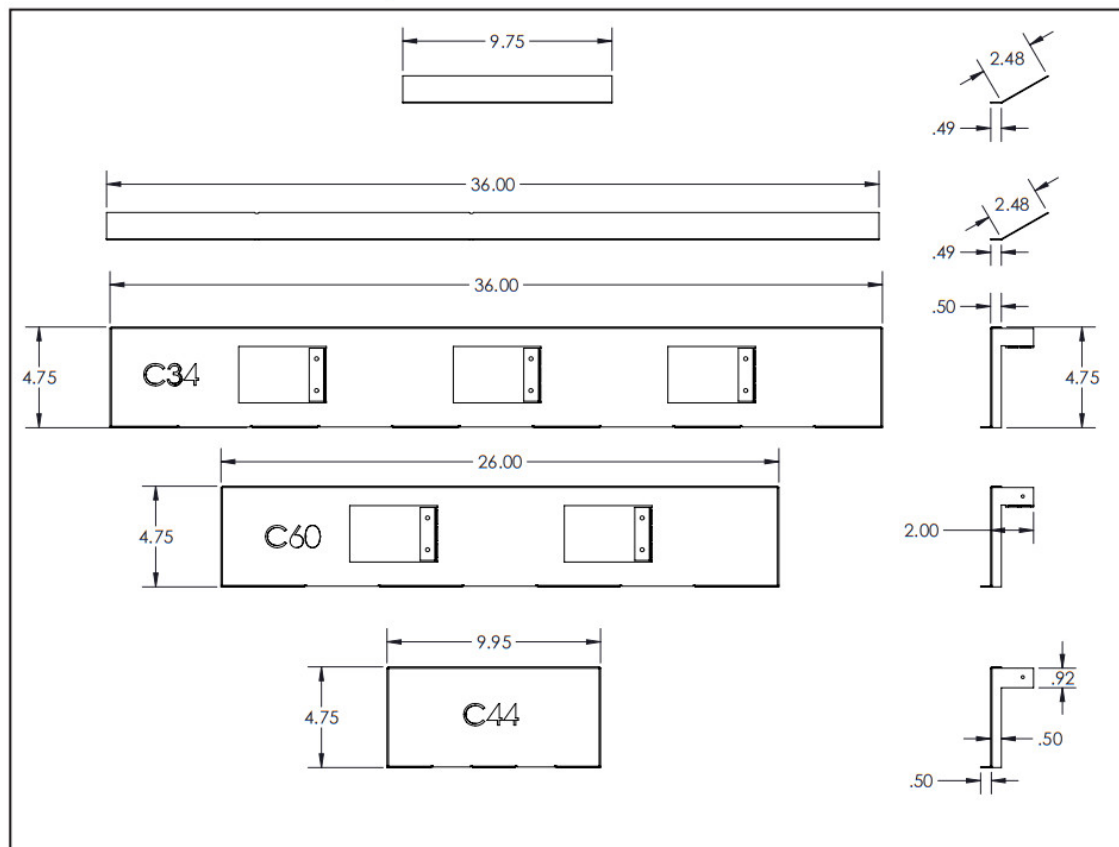
**Figure 1. Cool Surface System Side Vent - Parts Diagram**

| Item | Description         |
|------|---------------------|
| 1    | Top Standoff        |
| 2    | Main Body           |
| 3    | Trimable Deflector  |
| 4    | C34 Main Wall       |
| 5    | C60 Extension       |
| 6    | Vent Collars        |
| 7    | C44 Extension       |
| 8    | Deflector Extension |
|      | Bag of Screws       |

## Dimensions



**Figure 2. CSS Side Vent - Dimensions**



**Figure 3. Combustible Facking Kit - Dimensions**

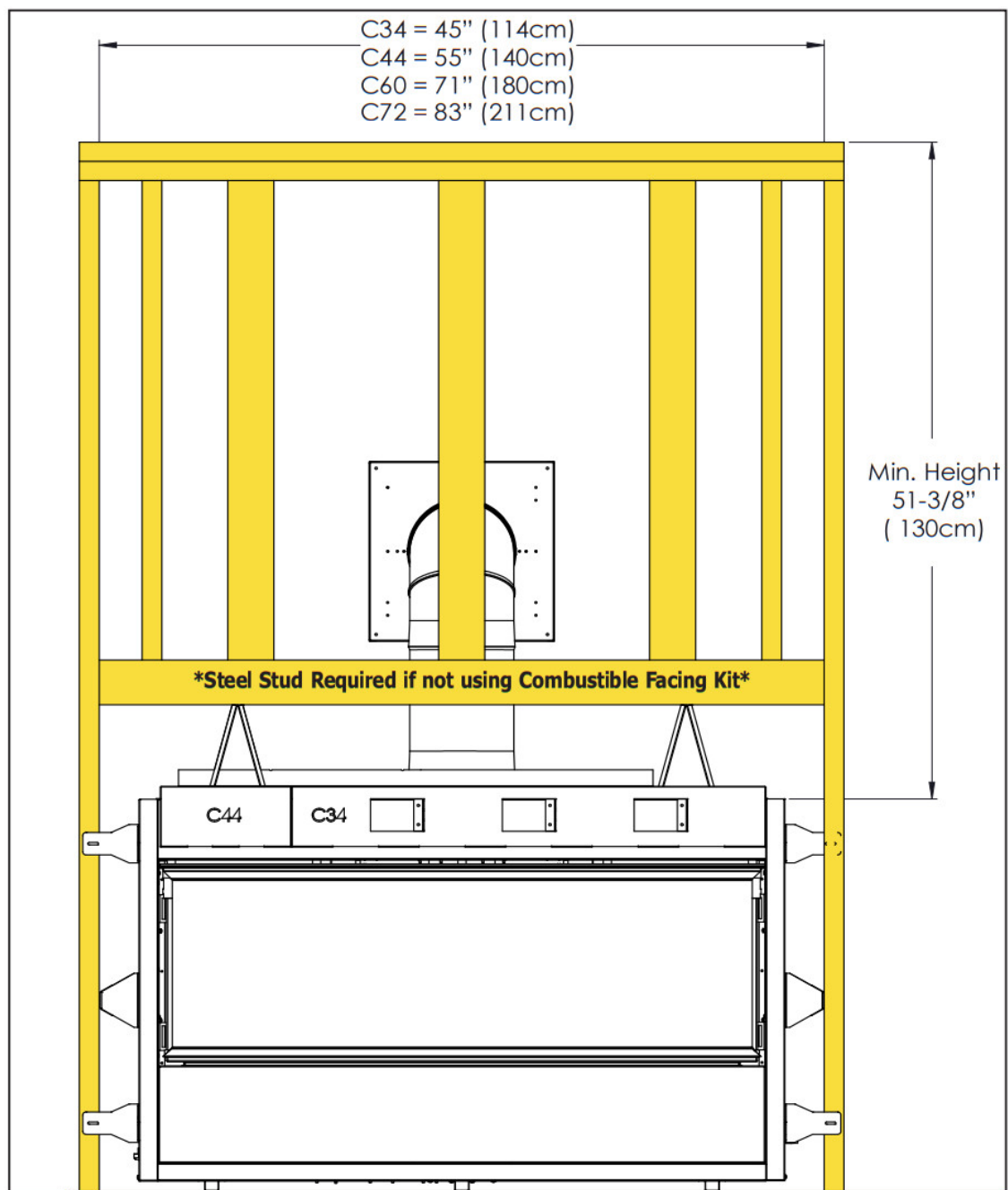
## Framing & Clearances

### QUALIFIED INSTALLERS ONLY

#### Front Framing & rough opening:

Min Framing and rough opening for C-Series. C44 Shown.

**⚠ WARNING:** CSS MUST NOT discharge outdoors or to any other room, it MUST vent into the room where the appliance is installed. The CSS is only approved for discharge into the same room and MUST NOT be installed into a floor or ceiling.

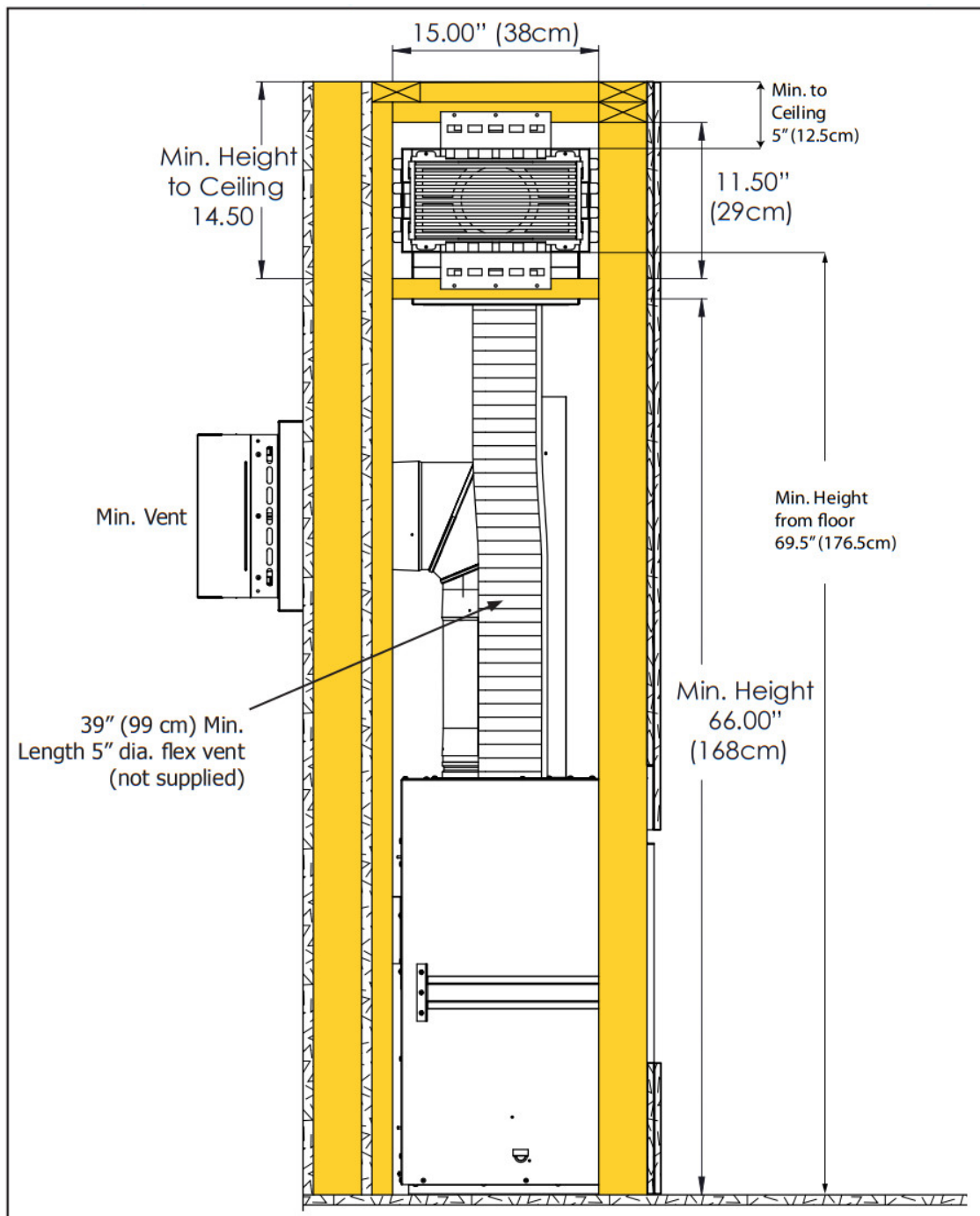


**Figure 4. C-Series - CSS Front Framing & Rough Opening**

#### **Minimum Clearances – horizontal installation – minimum vent:**

The CSS has been designed to allow for installations where a vertical run of vent is required without having to jog the vent pipe around the CSS. The horizontal vent shield supplied with the fireplace is not required (see Owner's Manual) when vertically venting and the vent pipe can simply be run straight up between the side vents of the CSS.

Shown below in Figure 5 are the minimum framing and clearances for the CSS with the side vents installed horizontally and when the fireplace is installed with the minimum allowable vent length:

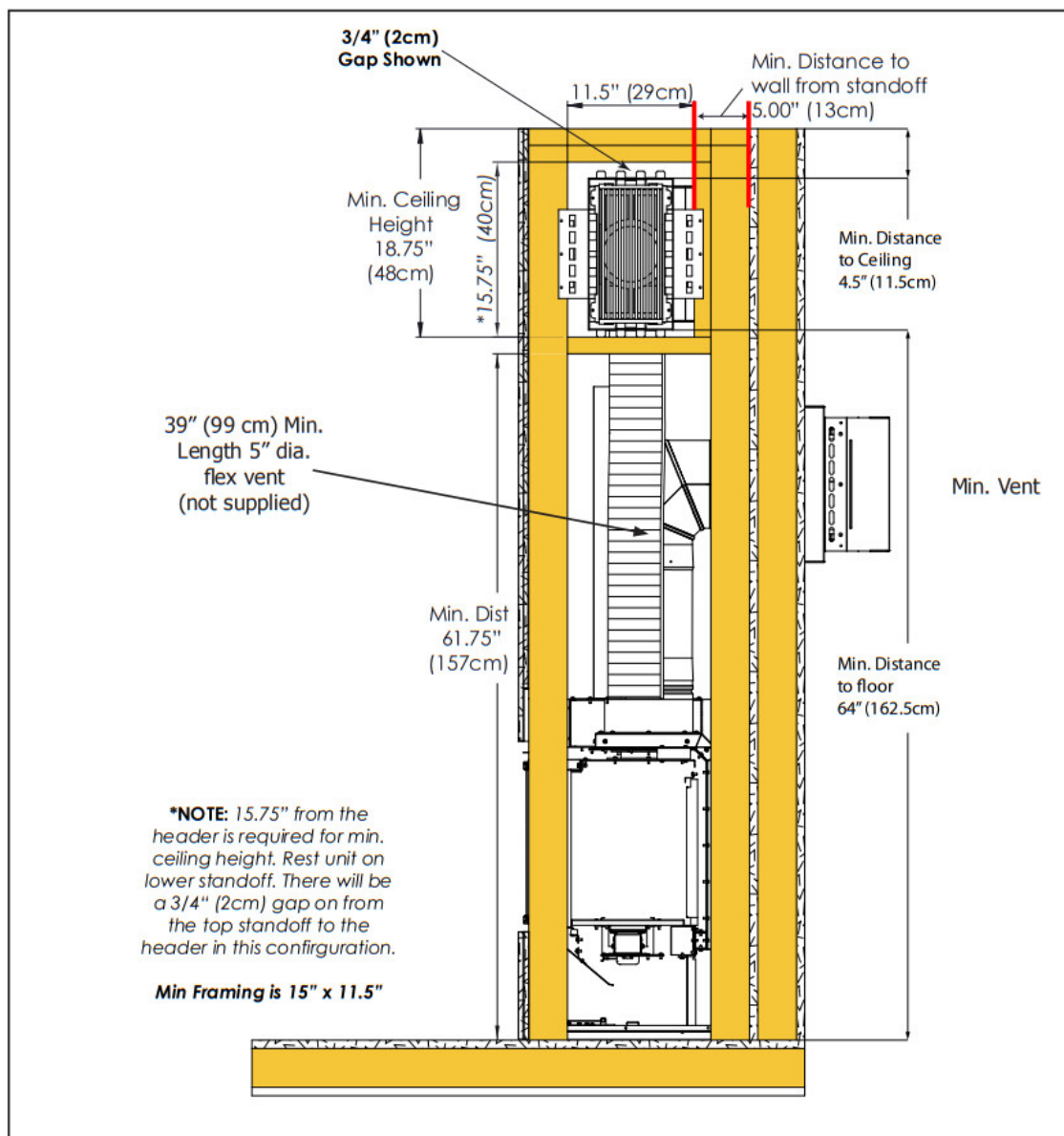


**Figure 5. CSS Horizontal Vent - Min. Framing & Clearances**

#### **Minimum Clearances – vertical vent – minimum vent:**

The CSS has been designed to allow for installations where a vertical run of vent is required without having to jog the vent pipe around the CSS. The horizontal vent shield supplied with the fireplace is not required (see Owner's Manual) when vertically venting and the vent pipe can simply be run straight up between the side vents of the CSS.

Shown below in Figure 6 are the minimum framing and clearances for the CSS with the vents installed vertically and when the fireplace is installed with the minimum allowable vent length:



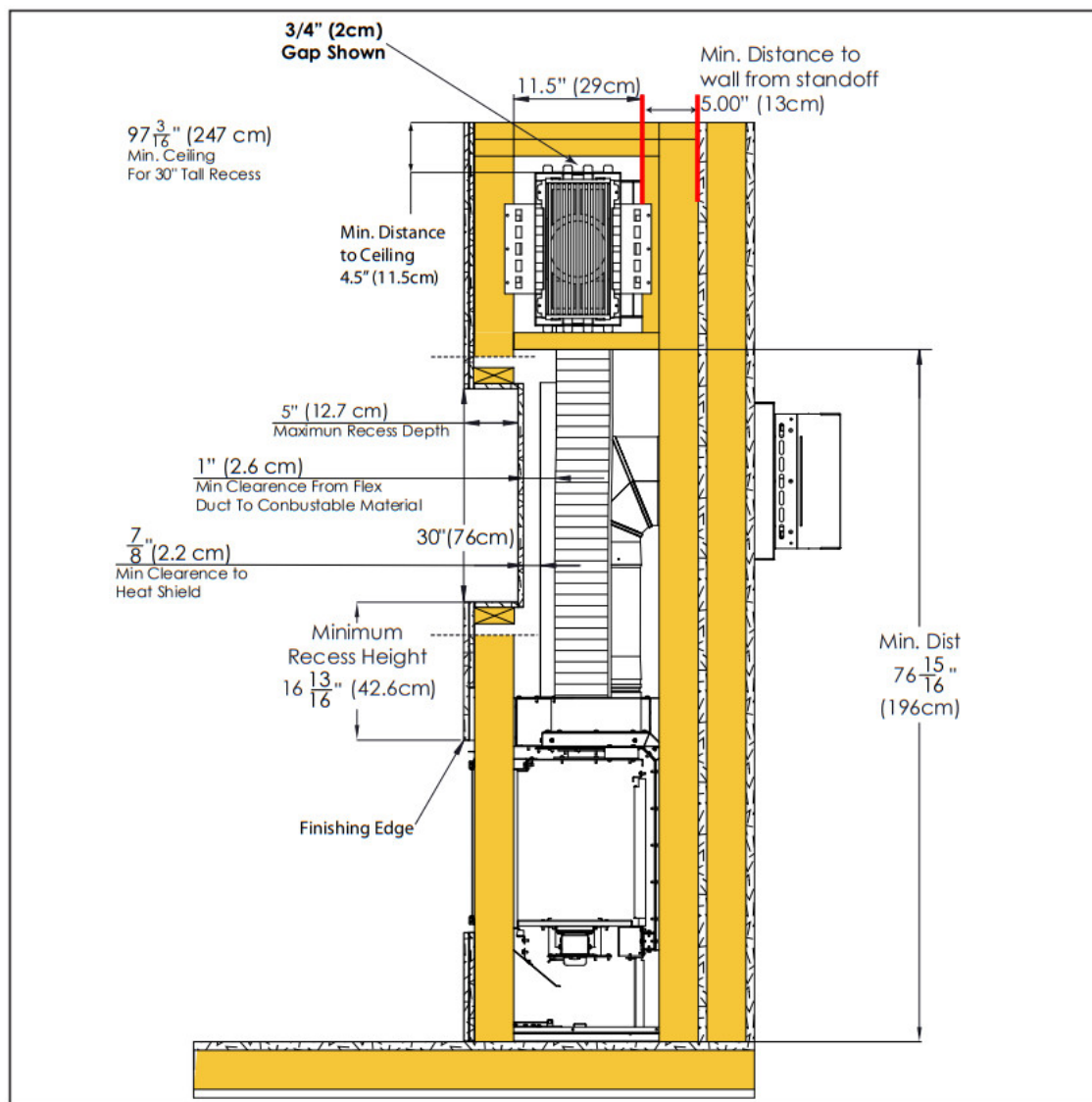
**Figure 6. CSS Horizontal Vent - Min. Framing & Clearances**

#### **Minimum ClearanCes – reCess Framing – minimum vent:**

Shown below are the minimum framing requirements and clearances for the CSS with a recess framed above the fireplace. Figure 7 shows the minimum framing requirements for a 30" tall recess. The recess height is adjustable as long as all minimum clearances are met. Vertical vent shown in figure but horizontal may be used as well.

**\*IMPORTANT NOTE\*** – The optional Combustible Facing Kit CANNOT BE USED when a recess is framed above the fireplace and non-combustible facing material must be used as outlined in the fireplaces Owner's Manual. If using a mantle, revised clearances CANNOT BE USED and mantle clearances must be followed as outlined in the fireplace's Owner's Manual.





**Figure 7. Minimum Recess Framing**

**Revised mantle requirements:**

Refer to Figure 8, 9 for a combustible mantel installation, measurement is from bottom of the unit to the bottom of the mantle.

If you are planning on installing a TV above the fireplace refer to page 10 to see the options available.

**Note:** Minimum height of mantle if you intend on using a surround is 31"



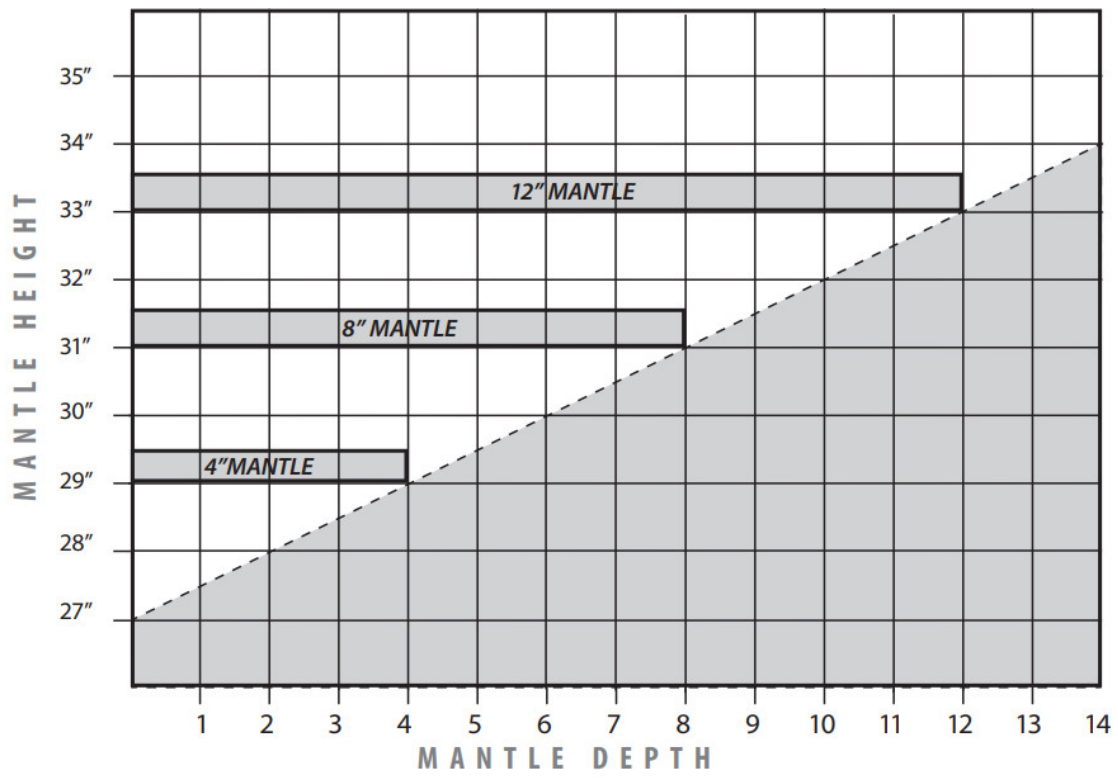
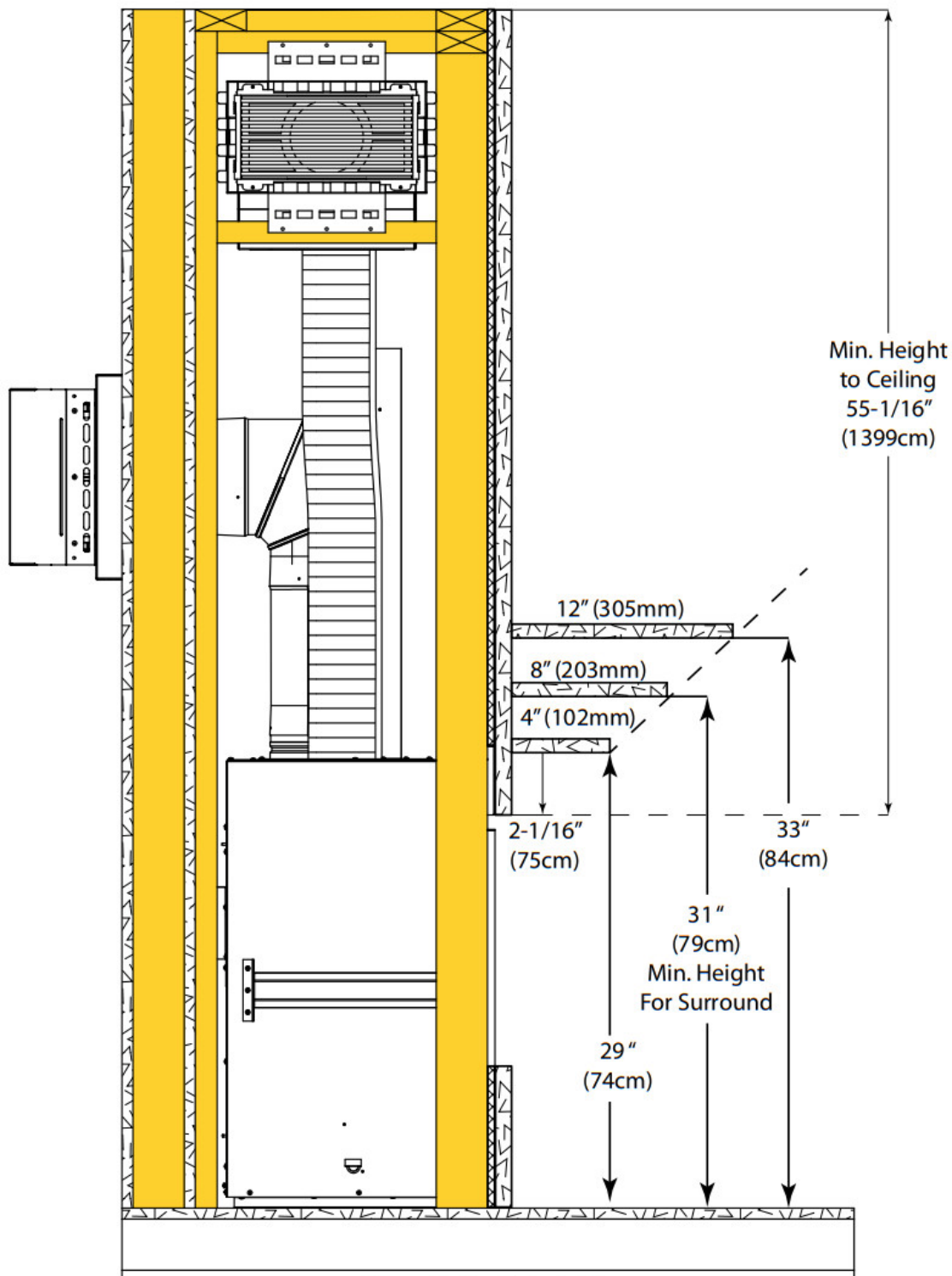


Figure 8: Minimum Mantel Height



**Figure 9. Mantle Installation**

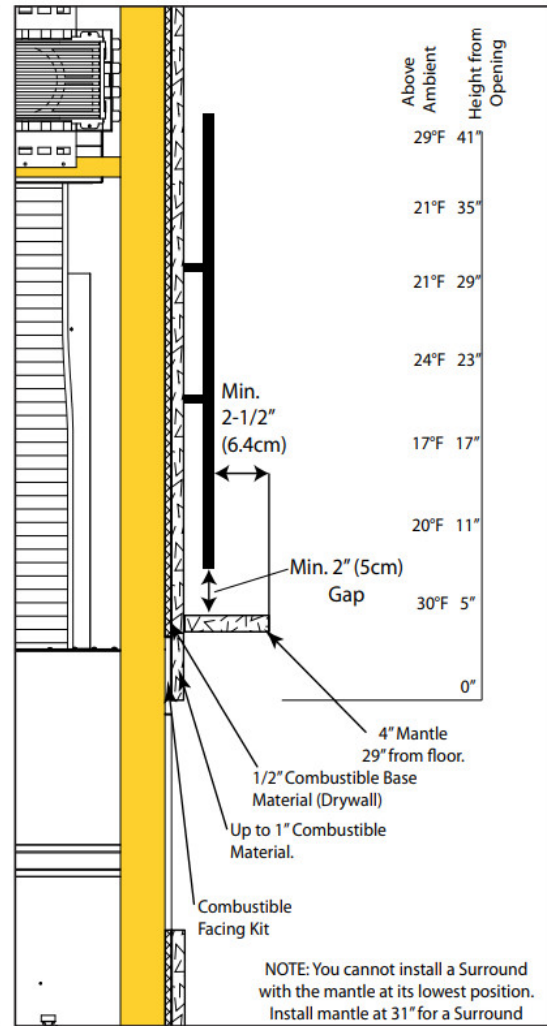
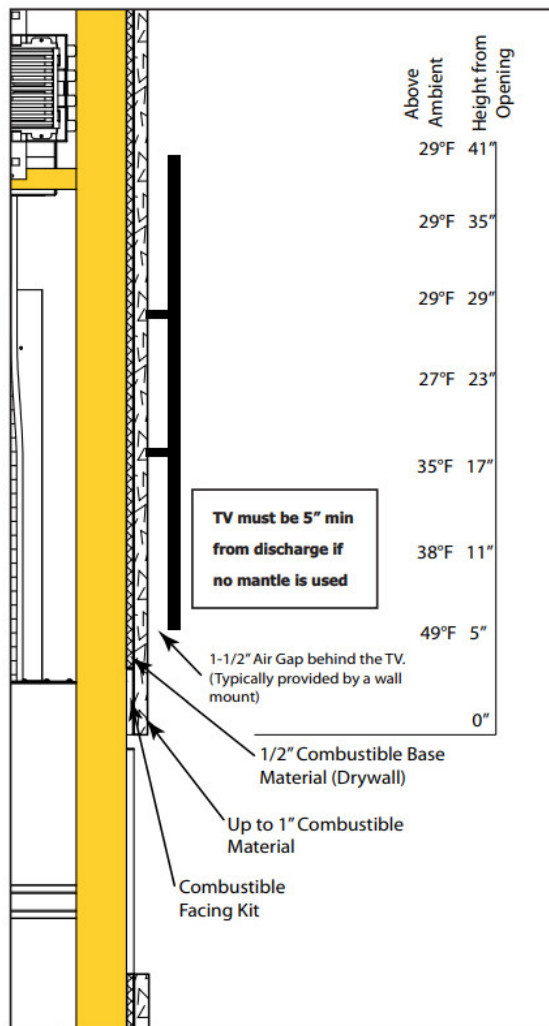
## Installation

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

### **Tv installation Considerations:**

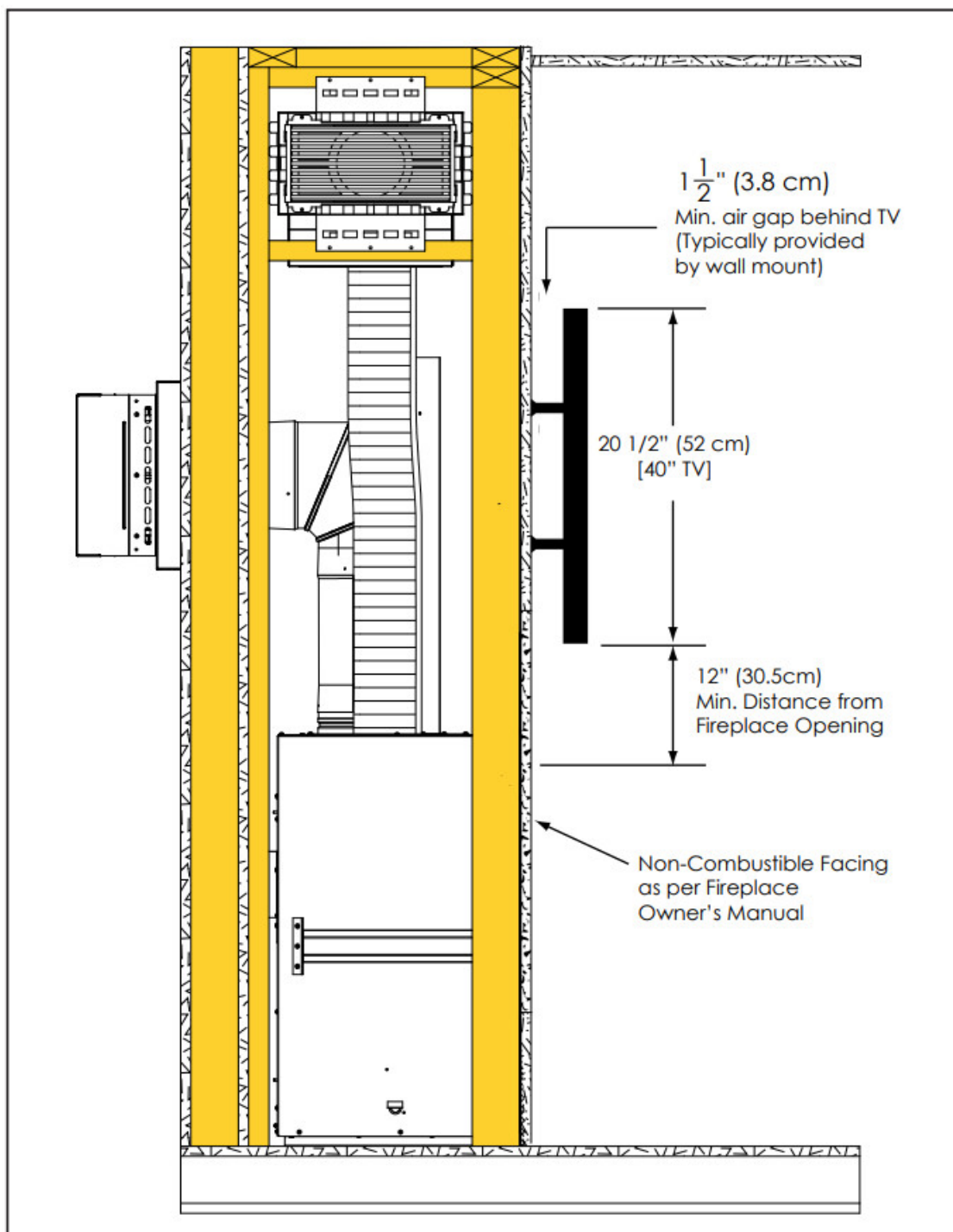
If you are planning to mount a TV above your fireplace some considerations must be made to ensure it is protected from the heat.

During testing temperatures did not exceed 121°F (49°C) midway up the front wall (Figure 10a & 10b). There is no guarantee that these temperatures will not harm the longevity of your TV. Make sure to consult your TV manufacturer's specifications to find the maximum allowable operating temperature. Since every home and installation is unique, temperatures should be verified at the time of install if possible. If desired, front wall temperatures can be lowered to 104°F (40°C) with the use of a mantle (Figure 10b). Refer to Owner's Manual for full mantle clearances. A TV should not be installed if temperatures exceed the manufacturers maximum allowable temperature.



If use of the Combustible Facing Kit or a mantle is not desired, although recommended, then a TV must be mounted higher on the wall as shown below (Figure 11).

The drawing below shows the suggested minimum TV installation height, based on observed testing, when using non-combustible facing without a mantle. It is the responsibility of the home owner to confirm that the TV is within its maximum allowable operating temperature range once installed. Sherwood Industries is not liable for any TV malfunctions or adverse effects that may be incurred.



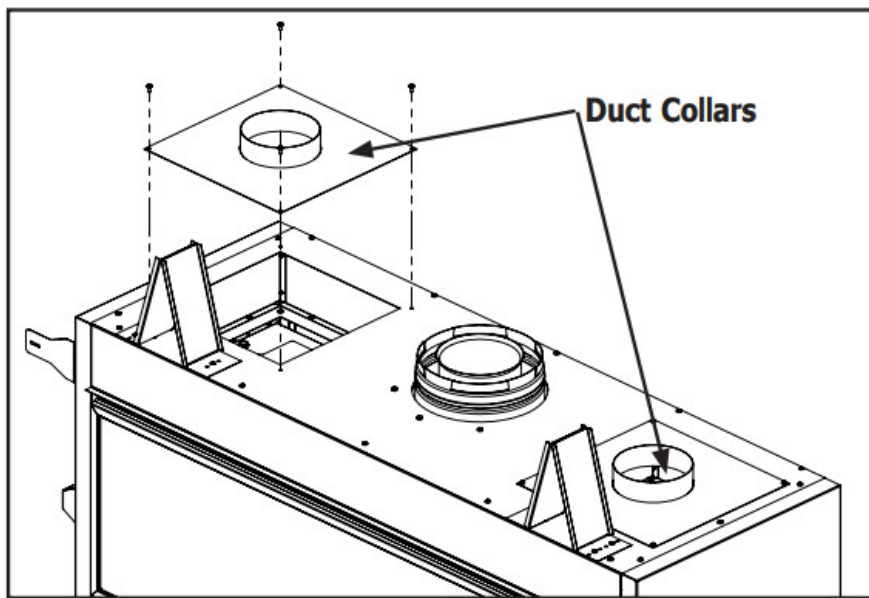
**Figure 11. CSS - TV Clearances without Combustible Facing Kit**

## **QUALIFIED INSTALLERS ONLY**

### **DuCt Collars:**

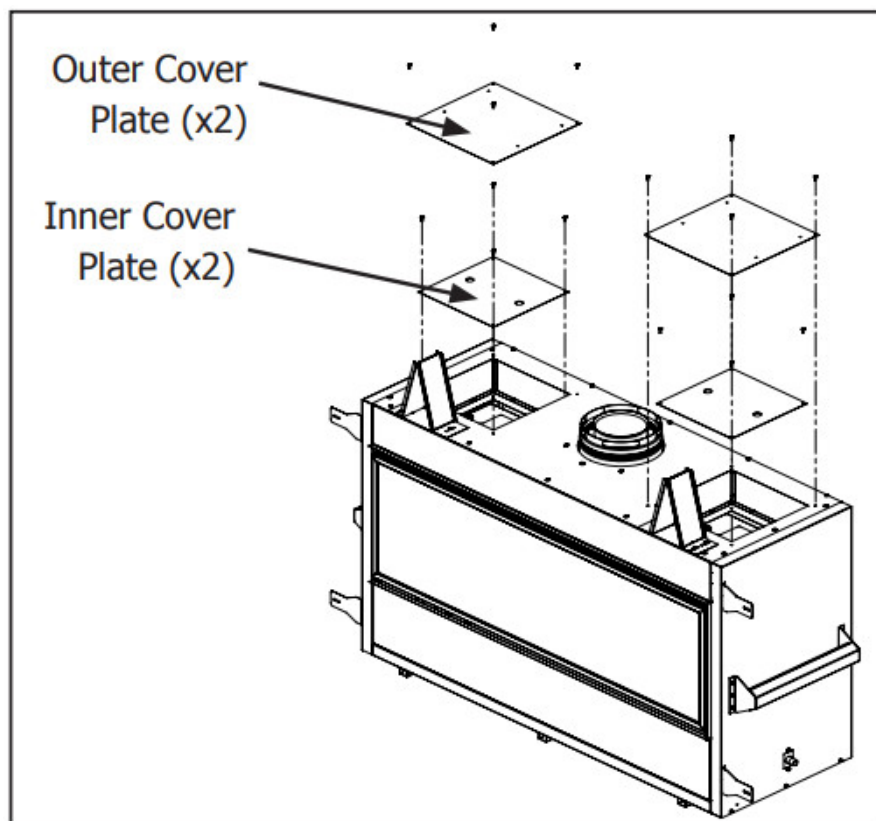
Prior to fireplace installation, the two supplied duct collars must be attached to the top of the fireplace as shown in the steps below:

Step 1: Using a T20 screwdriver, remove the inner and outer cover plates from the fireplace as shown (Figure 12). Each cover plate has four (4) mounting screws. Both sets of cover plates are no longer required and can be recycled. Retain eight (8) of the removed mounting screws to secure the duct collars.



**Figure 13. Duct Collars Installed**

Step 2: Attach the supplied duct collars to the top of the cabinet as shown (Figure 13). Secure the collars by re-using the eight (8) screws saved in the previous step.

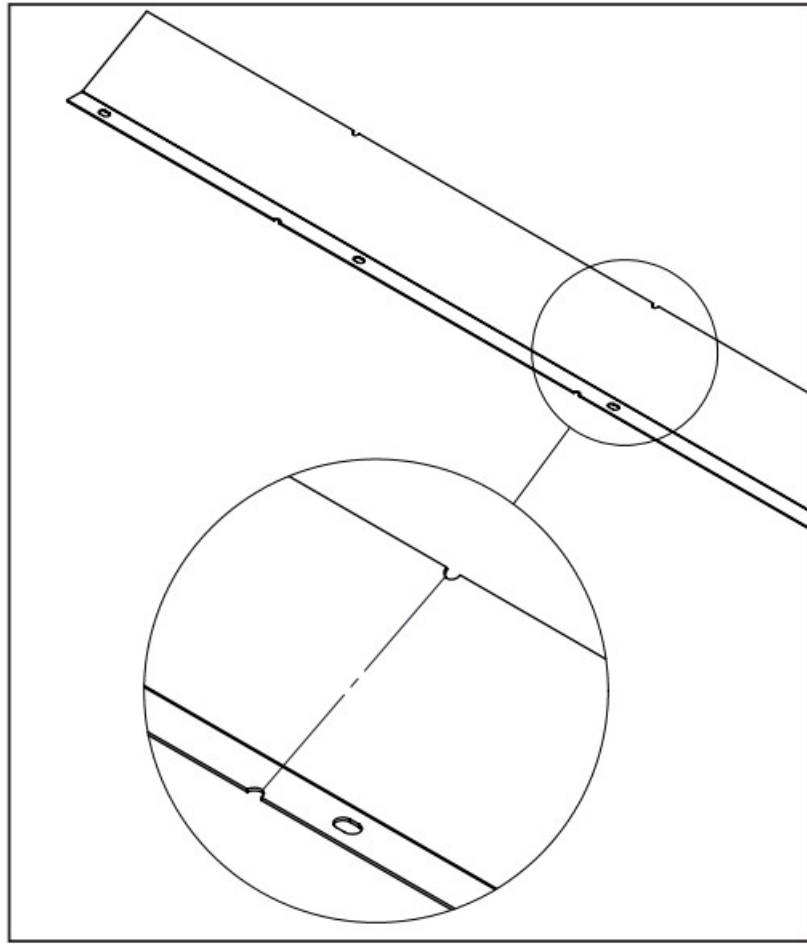


**Figure 12. Cover Plate Removal**

**Combustible FaCing Kit (optional):**

**Note:** You can install the Cool Surface System without the Combustible Facing Kit. Doing so requires a non combustible facing material (see Owner's Manual for fireplace installation instructions).

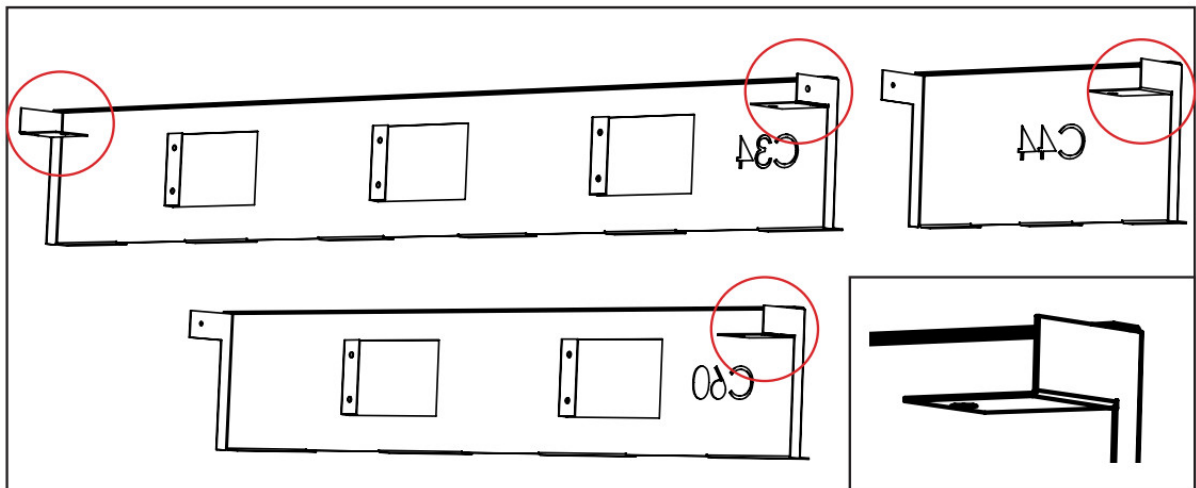
Step 1: Prior to installation of the CSS Combustible Facing Kit determine your unit. Then retrieve the trimable deflector. The deflector is trimable to fit the unit being installed. It comes in the length required to fit a C60 and must be trimmed to fit either the C44 or the C34. Notches on the top and bottom of the trimable deflector show where to cut it. The first notch on the far left will size it for a C44 and the second notch will size it for a C34.



**Figure 14. Trimmable Deflector trim notches**

**Combustible FaCing Kit (optional):**

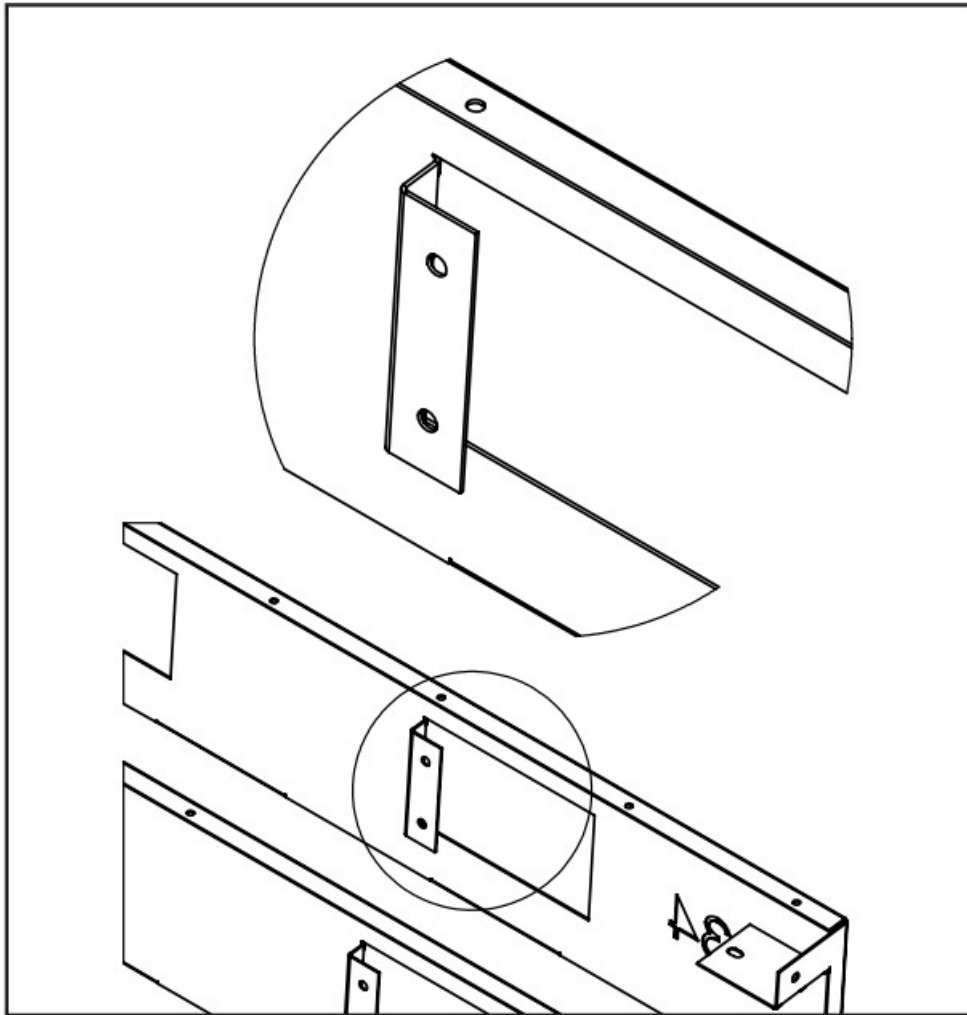
Step 2: All the Units use the C34 panel as a base. If installing a C44, use both the C34 and C44 panels. If installing a C60, use both the C34 and C60 panels. Once you have your required panels locate the flanges in the figure 15 below. Bend these flanges inwards 90deg to match the figure 15 below.



**Figure 15. Rear Panel hand bent flanges**

Step 3: Verify that all the hand bends shown above are bend inwards 90deg as shown.

Step 4: All the middle flanges must be bent 90deg inwards towards the unit as shown below.



**Figure 16. Rear Panel hand bent flanges**

**Combustible FaCing Kit (optional):**

Step 5: Make sure all your hand bend flanges are bent prior to assembly and that you have the correct length deflector before installation to the unit.

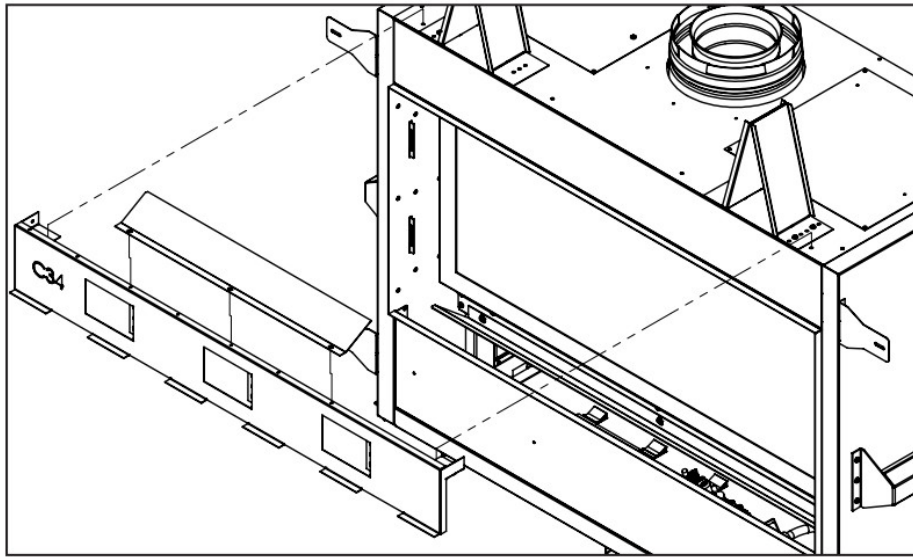
Step 6: If installing a C44 or C60, attach your extension piece to the C34 main panel. If installing a C72, attach all the extension pieces together in the order shown in Figure 19. Note, the c72 parts will not line up to the edge of the tiling flange.

Step 7: Attach your deflector to your panel configuration as shown below. Attach the extension deflector if installing a C72, shown in Figure 20.

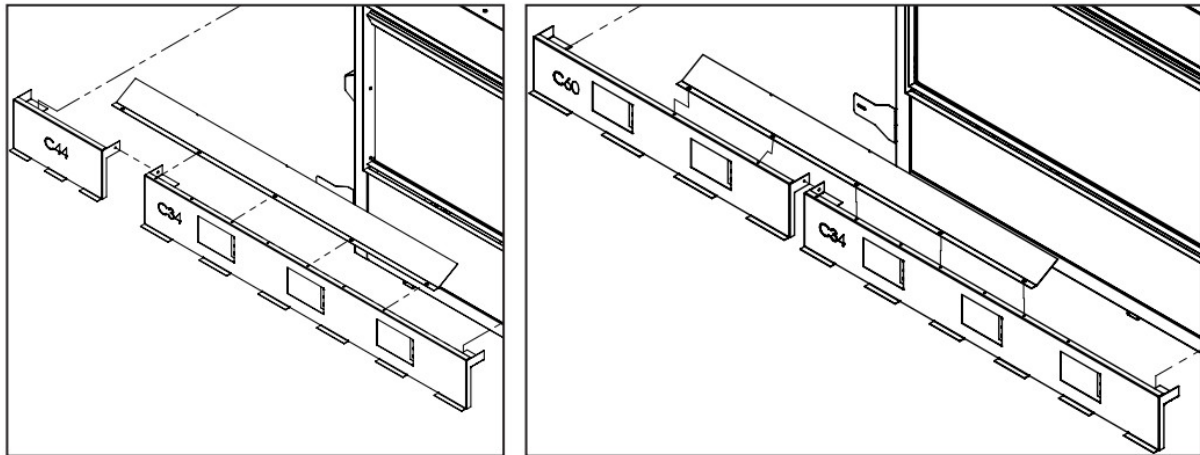
Step 8: Remove the top cabinet T20 screws on the left and right side so that you can reuse them to fasten the Combustible Facing Kit assembly to the unit.

Step 9: Use the provided self tapping screws to fasten the assembly via the remaining pilot holes.

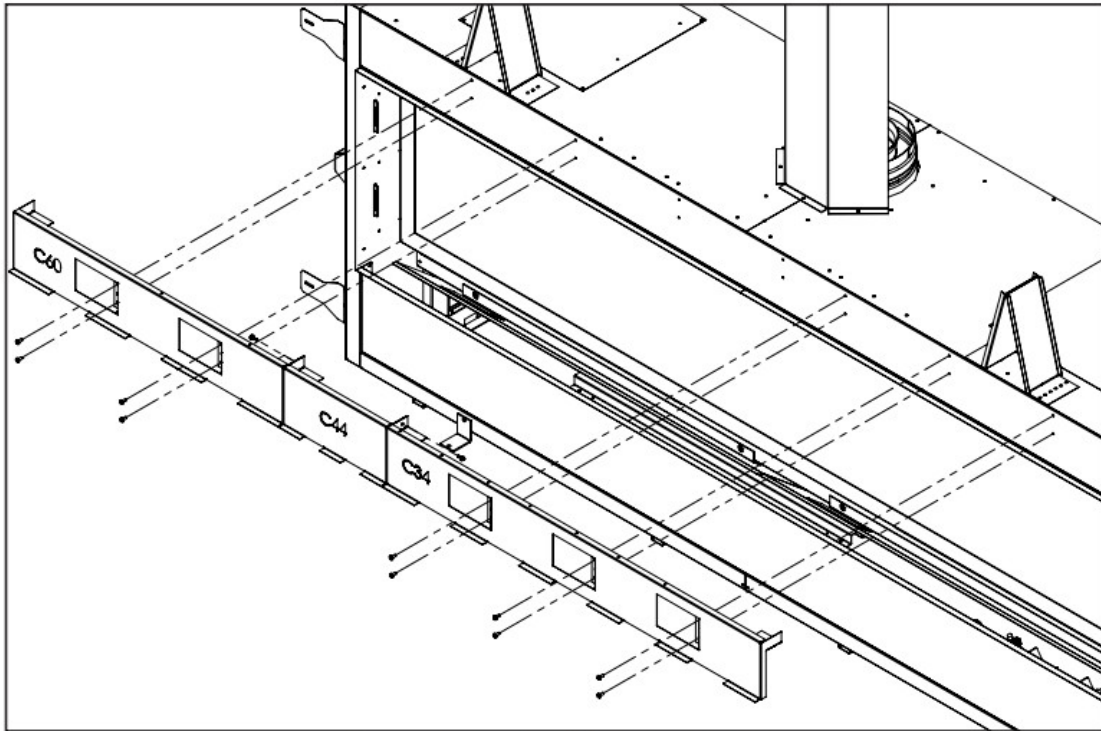




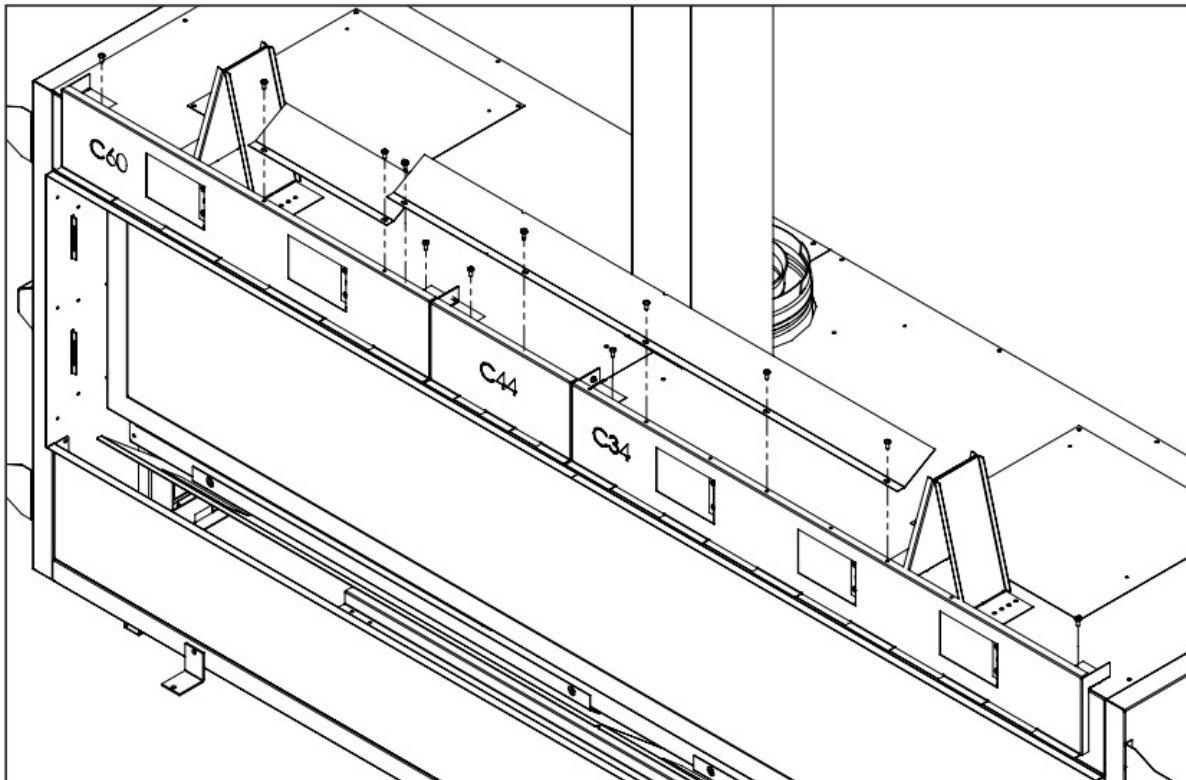
**Figure 17. Combustible Facing Kit C34**



**Figure 18. Combustible Facing Kit C44 Left, C60 Right**



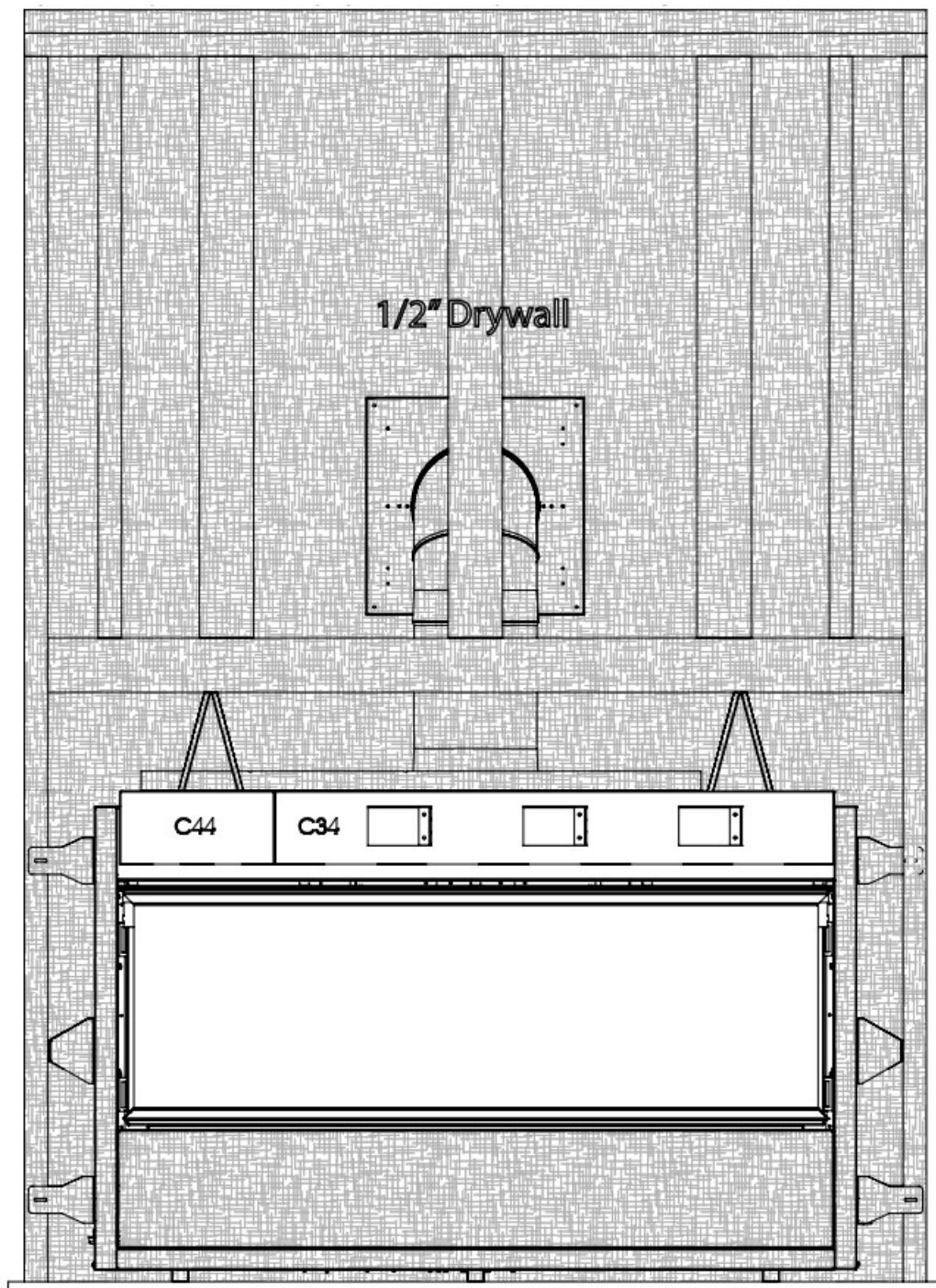
**Figure 19. Combustible Facing Kit C72**



**Figure 20. Combustible Facing Kit C72**

**Combustible FaCing Kit (optional):**

Before installing your chosen facing material, a 1/2" base layer must be placed over the framing up to the Combustible Facing Kit assembly as shown below. Up to a 1" thick material may be placed on top of the base layer and the combustible facing kit assembly afterwards. A maximum total of 1" facing material (1/2" on top of cool wall layer) is allowed if you are installing a surround.



**Figure 21. CSS - 1/2" Base Layer**

**Side vent:**

Prior to installing your Cool Surface System Side Vents you will need to set up your Side Vents in the configuration required for your installation. A T20 screwdriver is required for assembly and disassembly.

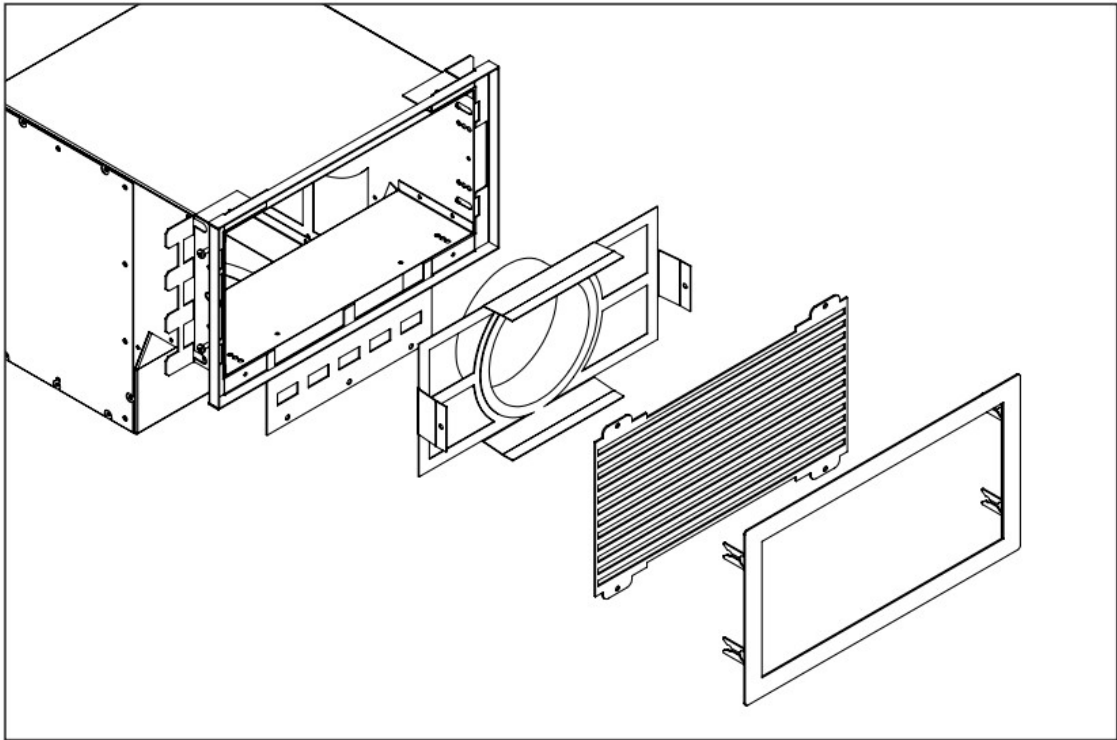
Step 1: Pop off your front bezel from the side vent. Its retained by clips on both sides.

Step 2: Remove the the grill by removing the 4 T20 screws.

Step 3: Remove the duct collar register.

Step 4: Attach your 5" flex vent to the duct collar register using self tapping screws.

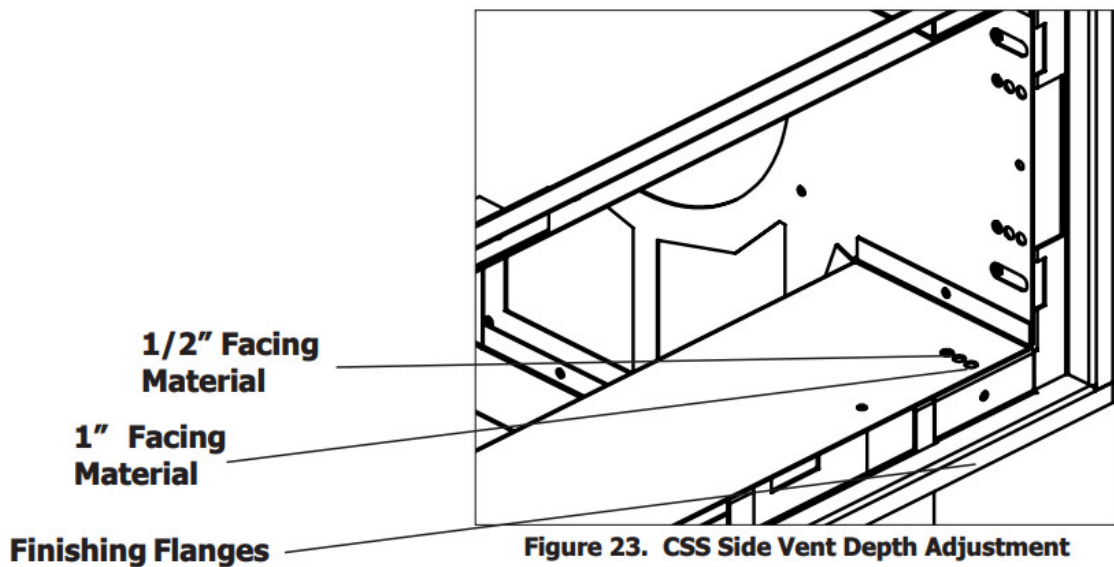




**Figure 22. CSS Side Vent Set-Up**

Step 5 [IMPORTANT]: Adjust the side vent brackets to account for the final facing material thickness. The side vent trim brackets have an integrated 3/8" deep finishing flange that can be adjusted to account for 1/2", 3/4" or 1" thick facing material.

**NOTE** – If not adjusted correctly the finishing material will not fit behind the finishing flange.



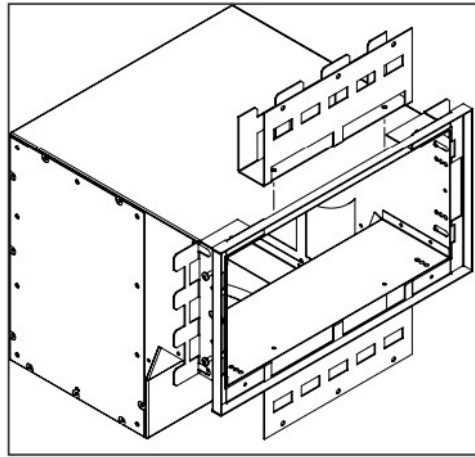
**Figure 23. CSS Side Vent Depth Adjustment**

#### **Side vent:**

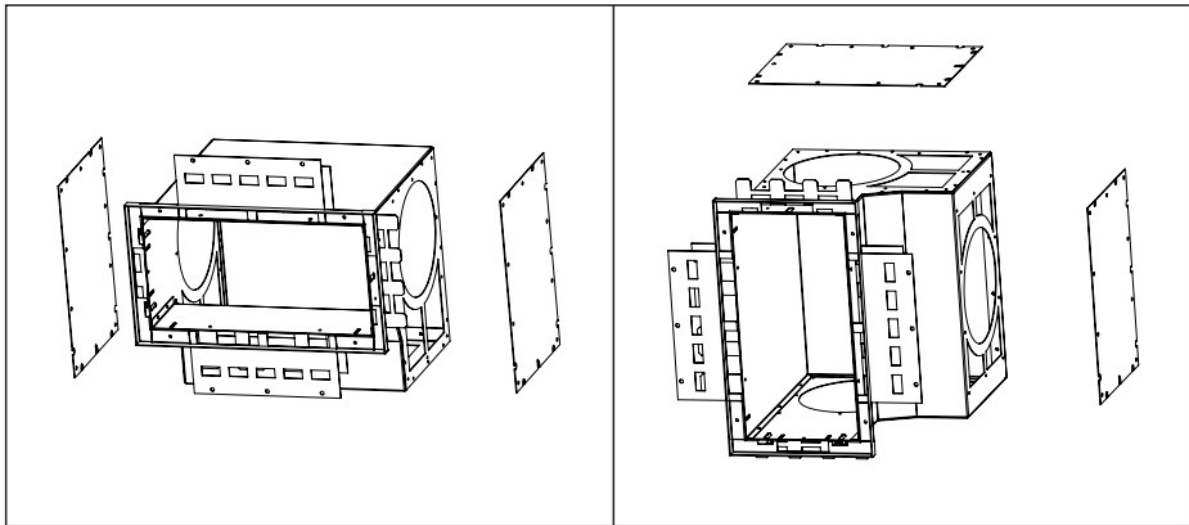
Step 6: Fasten the top standoff to the Side Vent body using your T20 screwdriver and T20 screws provided.

Step 7: Place your block off plates on the sides of the side vent body not in use.

**NOTE:** The Cool Surface System will not function properly if the block of plates are not installed.



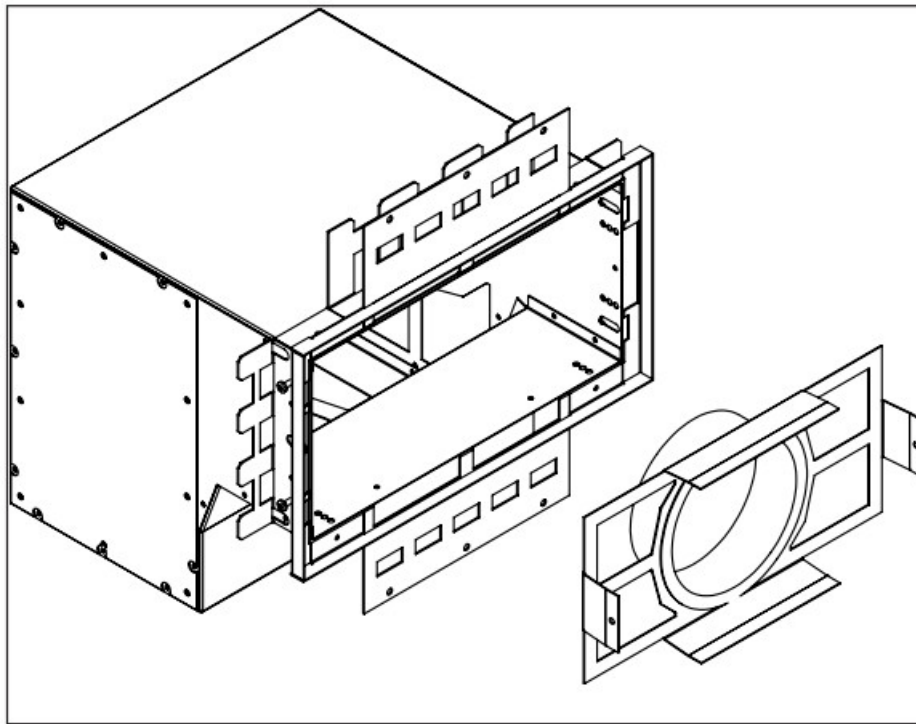
**Figure 24. CSS Side Vent Assembly**



**Figure 25. CSS Side Vent block off plate adjustment**

Step 8: Connect the required lengths of 5" dia. stainless steel or aluminium flex vent (not supplied) to the duct collar registers. Secure the venting to the collars using either sheet metal screws or band clamps. Both side vents of the CSS must be connected to the fireplace via 5" dia. flex vent. Feed the flex vent through the CSS Side vent body. This will facilitate instalation.

**Side vent:**



**Figure 26. Flex Vent Connection**

Step 9: Push the duct collar register into the side vent body while pulling the flex vent through the other side. Fasten the duct collar register to the inside of CSS Side by the screws on both sides.

Step 10: Insert the assembled CSS Side Vents into the framed rough opening by rotating them slightly to allow the side vent bodies to pass through.

Step 11: Confirm the CSS is centered within the rough opening and secure in place using screws or nails through the four (6) holes along the edges the standoffs.

Step 12: Connect the 5" dia. stainless steel or aluminium flex vent (not supplied) to the unit using either sheet metal screws or band clamps. Both side vents of the CSS must be connected to the fireplace via 5" dia. flex vent. Secure the flex venting where necessary to maintain standard venting clearances:

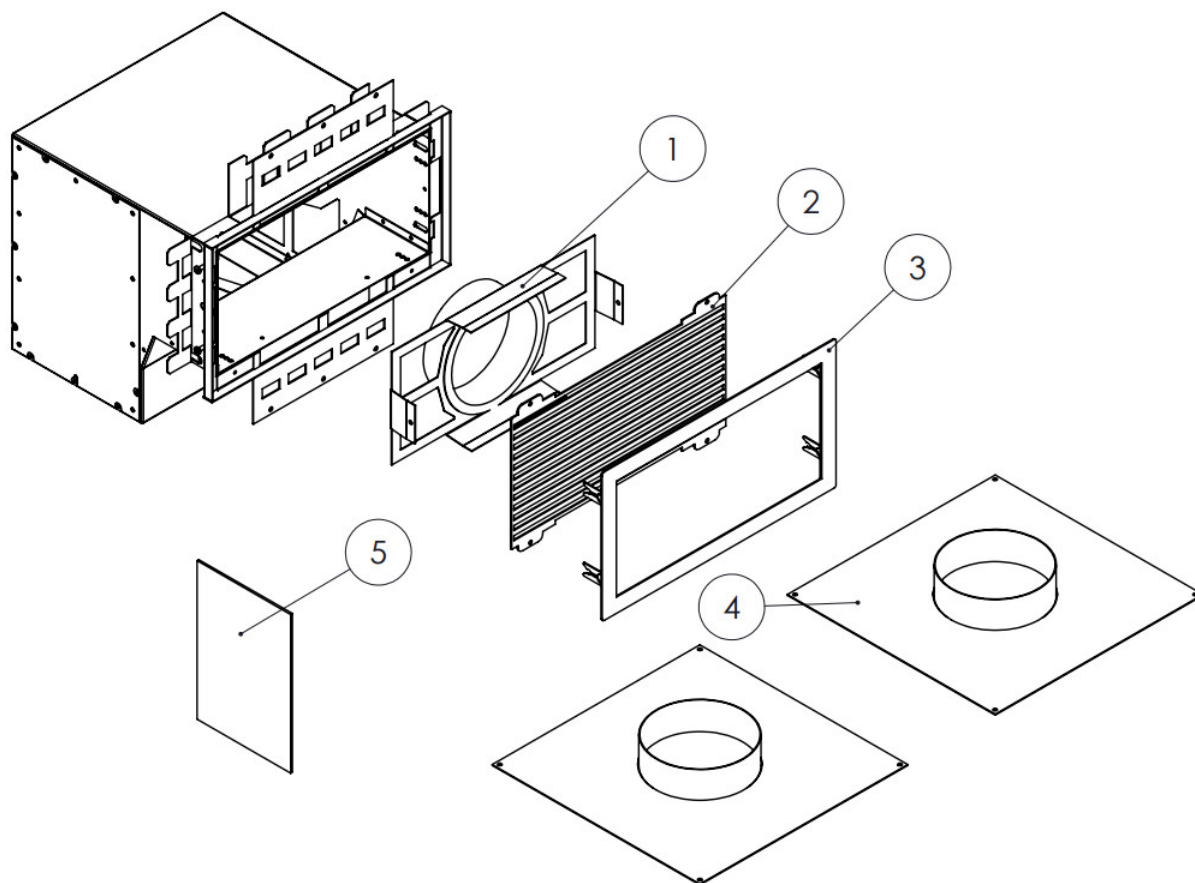
**Note:** Flex venting must be non-insulated and listed to UL 1777 and ULC S635 standards

| 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 |
|---------------------------------|---------------------------------------|-------------------------------|-----------------------------------|----------------------------|
| 1" (25.4 mm)                    | 1" (25.4 mm)                          | 3" (76.2 mm)                  | 3" (76.2 mm)                      | 2" (51 mm)                 |

Step 13: Replace the grill and bezel in reverse order of their removal. The grill and bezel can be painted to match the colour of the wall if desired (must be hi-temperature rated).

Step 14: The desired facing/finishing material can now be installed around the side vent outlets by tucking the cut edges in behind the integrated finishing flanges of the side brackets (see figure 23, page 16).

## Replacement Parts



| Item | Description                      | Part Number |
|------|----------------------------------|-------------|
| 1    | Side Vent Duct Collar            | 50-3483     |
| 2    | Side Vent Grill                  | 50-3484     |
| 3    | Side Vent Front Bezel            | 50-3485     |
| 4    | Vent Collars (Set of 2)          | 50-3309     |
| 5    | CSS Side Vent Instruction Manual | 50-3482     |

**MANUFACTURED BY:**  
**SHERWOOD INDUSTRIES LTD.**  
 6782 OLDFIELD RD. SAANICHTON, BC,  
 CANADA V8M 2A3  
[www.enviro.com](http://www.enviro.com)  
 September 2019  
 C-15844





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C34 Cool Surface System, C34, Cool Surface System, Surface System

## References

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- [🔥 enviro.com/fr.html](#)
- [User Manual](#)