

PLEASE KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE



C Series

Cool Surface System

FRONT VENT [50-3463 & 50-3713]

INSTRUCTION MANUAL



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.

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 CSS lowers the temperatures of the front wall for installations where a TV, artwork etc. is desired directly above the fireplace.

The outlet of the CSS can be raised higher up the front wall, within 4" of the room's ceiling. 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.

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.

Please refer to Figure 1 and figure 2 to ensure that all CSS parts are accounted for and have not been damaged.

VERTICAL 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 through the cut out in the CSS.

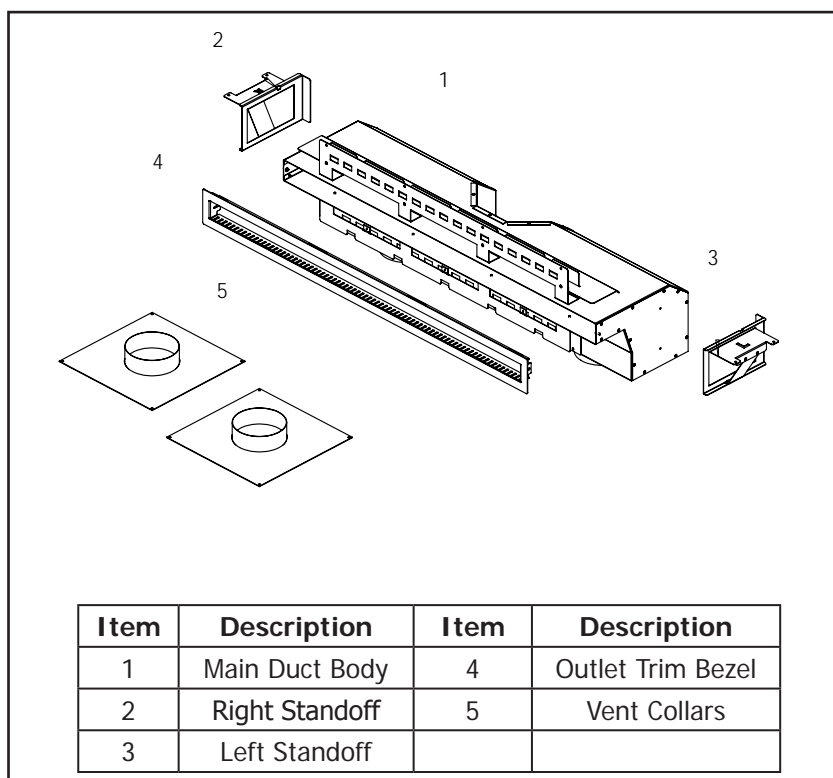
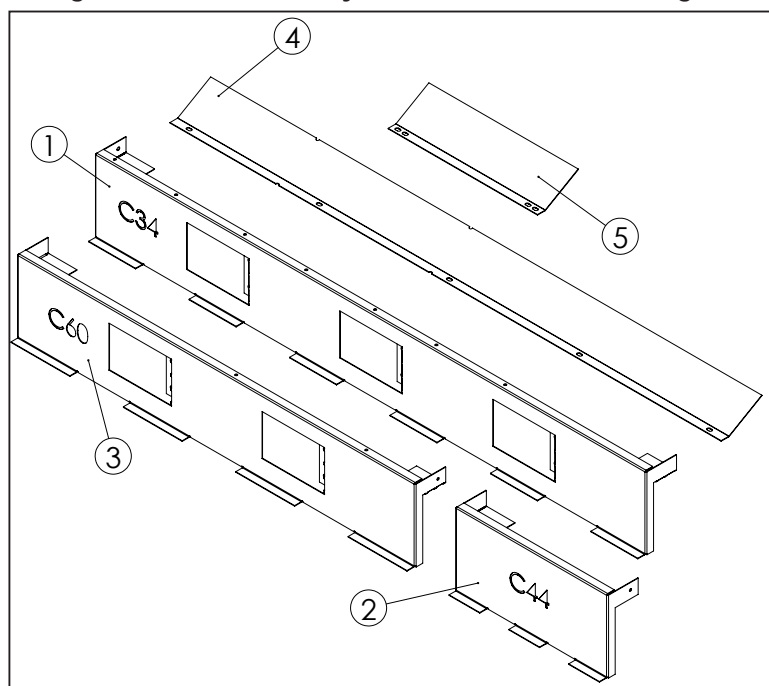


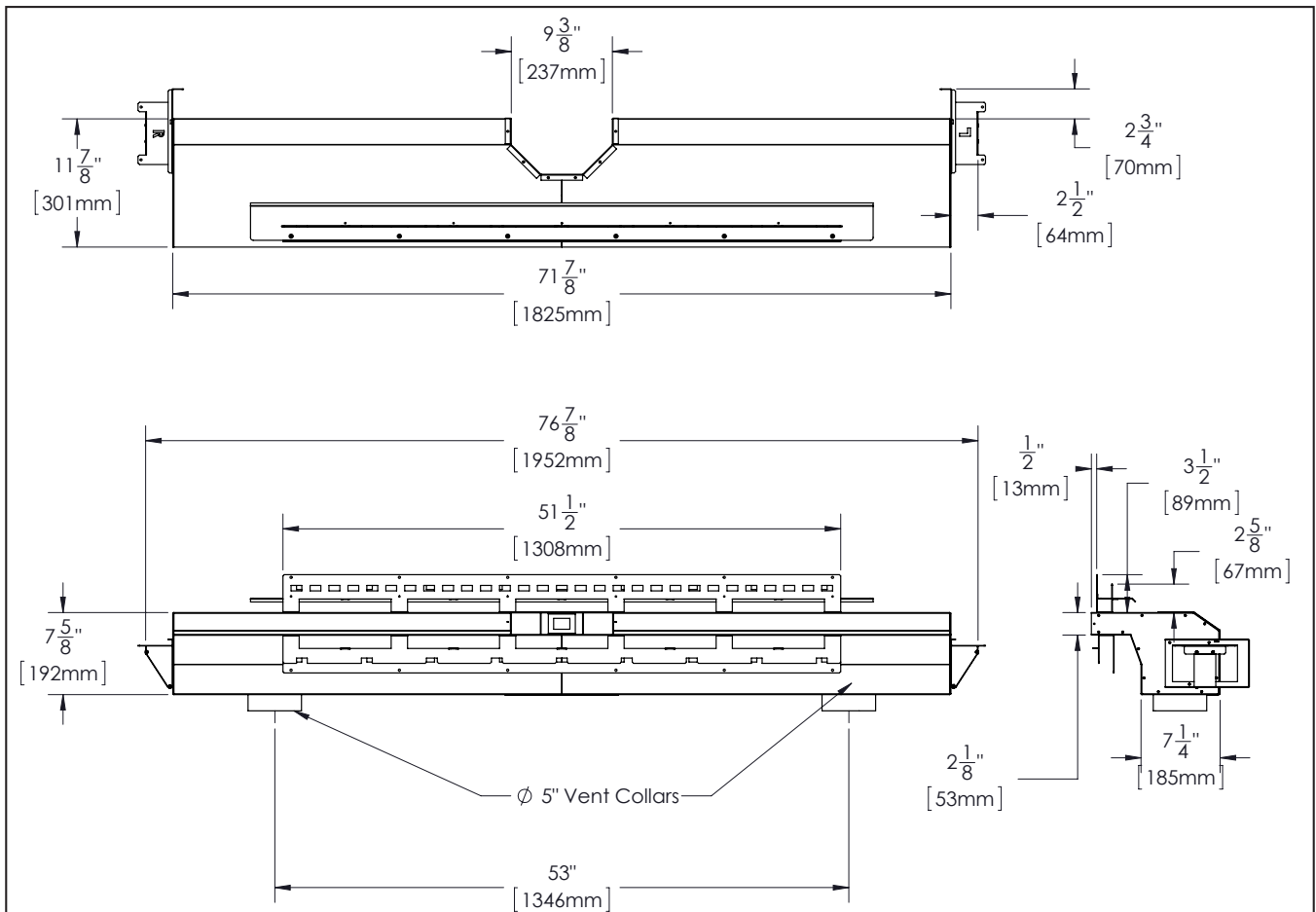
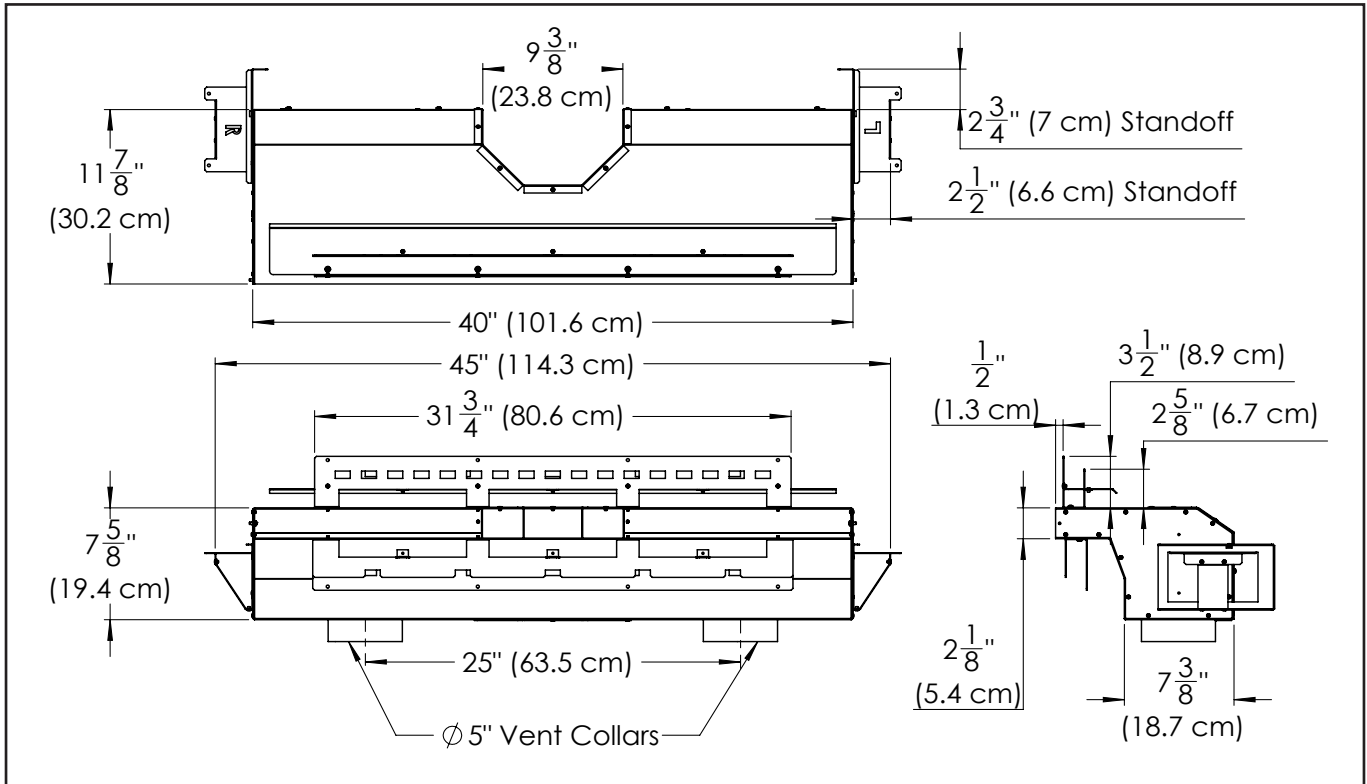
Figure 1. Cool Surface System Front Vent- Parts Diagram



Item	Description	Item	Description
1	C34 Main Panel	4	Trimable Deflector
2	C44 Extension	5*	Deflector Extension
3	C60 Extension	*50-3713 only	

Figure 2. Cool Surface System Combustible Facing Kit - Parts Diagram

DIMENSIONS



DIMENSIONS

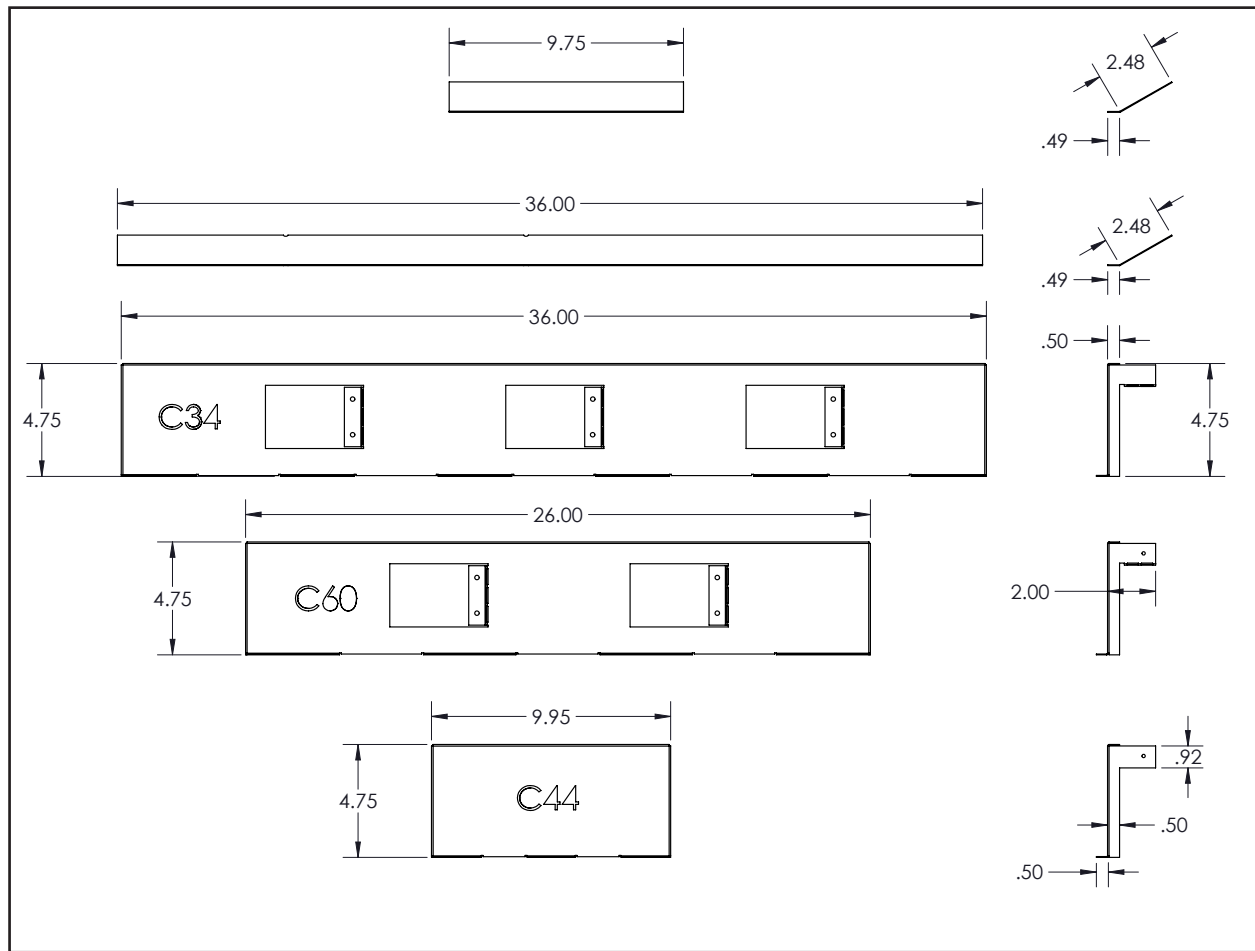


Figure 5. Cool Surface System Combustible Facing Kit Dimensions

FRAMING & CLEARANCES

QUALIFIED INSTALLERS ONLY

CSS Outlet Min. Top and Bottom standoff = $2\frac{5}{8}"$ (6.7 cm) *All C Series*

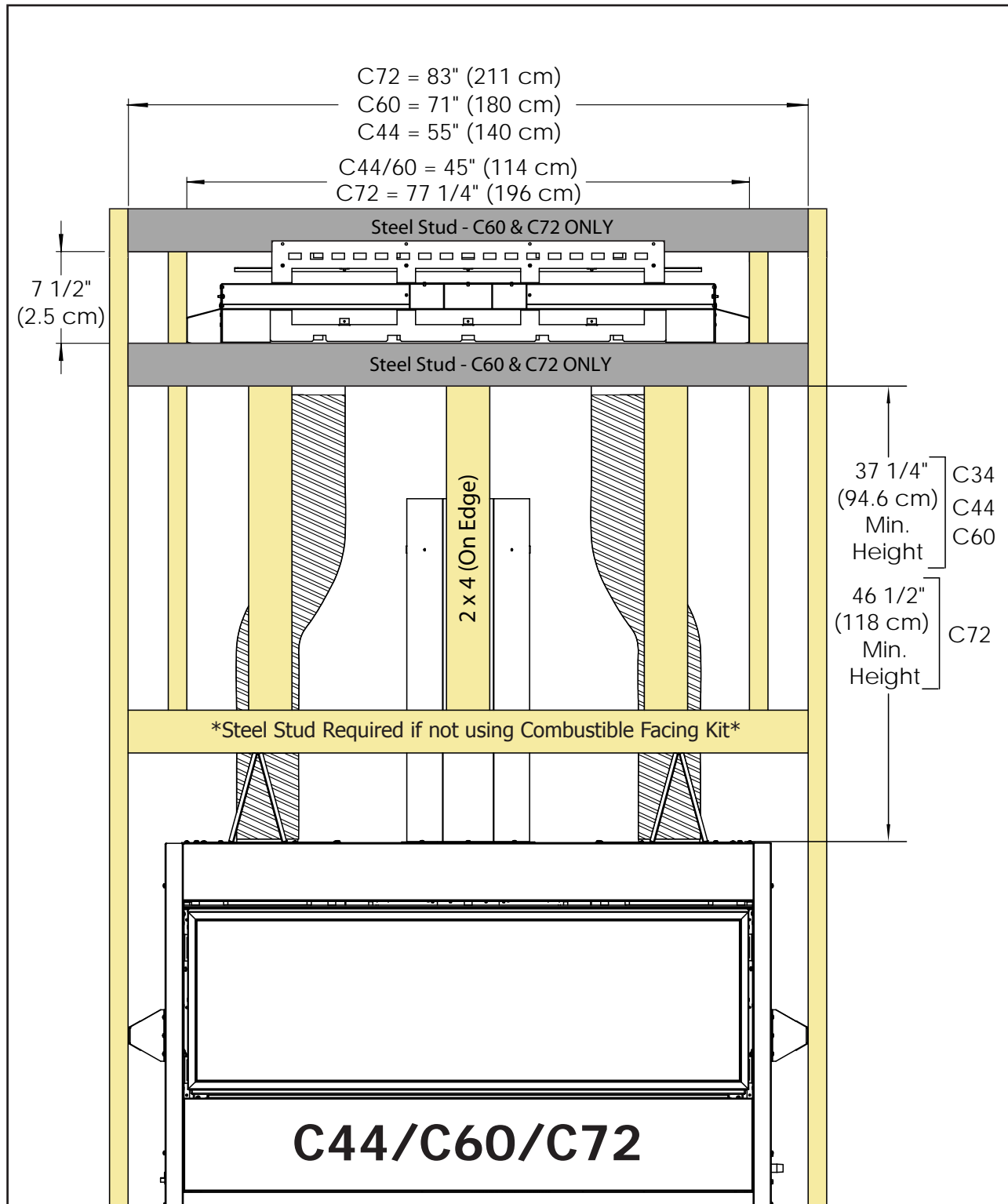


Figure 7. CSS Framing & Rough Opening

FRAMING & CLEARANCES

QUALIFIED INSTALLERS ONLY

MINIMUM CLEARANCES - MINIMUM VENT:

Shown below in Figure 8 are the minimum framing and clearances for the CSS when the fireplace is installed with the minimum allowable vent length:

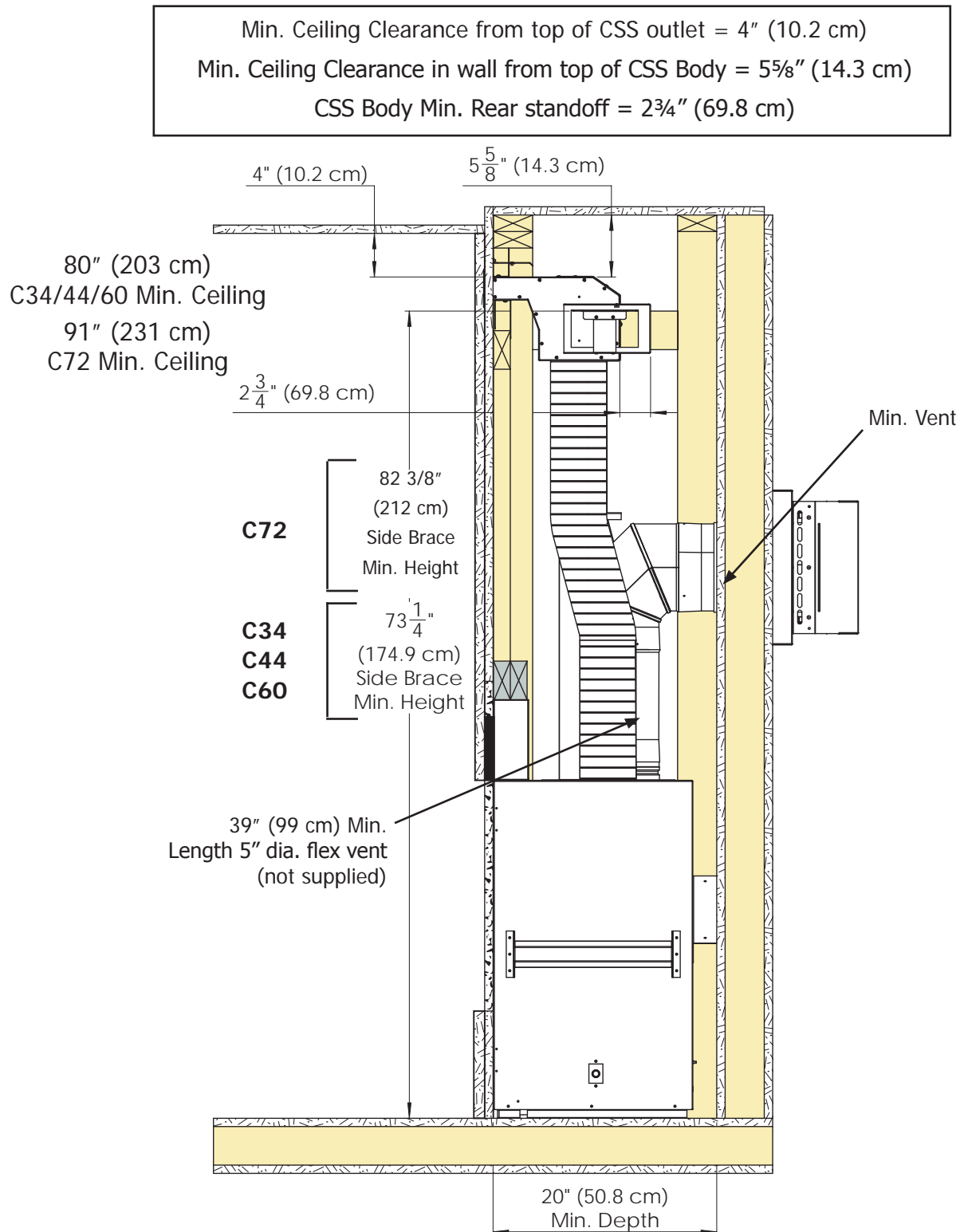


Figure 8. CSS - Min. Framing & Clearances

FRAMING & CLEARANCES

QUALIFIED INSTALLERS ONLY

MINIMUM CLEARANCES - RECESS FRAMING - MINIMUM VENT:

Shown below are the minimum framing requirements and clearances for the HDK with recess framed above the fireplace. Figure 9 shows the minimum framing requirements for a 30" tall recess. The recess height is adjustable as long as all minimum dimensions are met.

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.

C34/C44/C60 Min. Ceiling Height for 30" Tall Recess = $85 \frac{13}{16}$ " (218 cm)

C72 Min. Ceiling Height for 30" Tall Recess = $94 \frac{13}{16}$ " (241 cm)

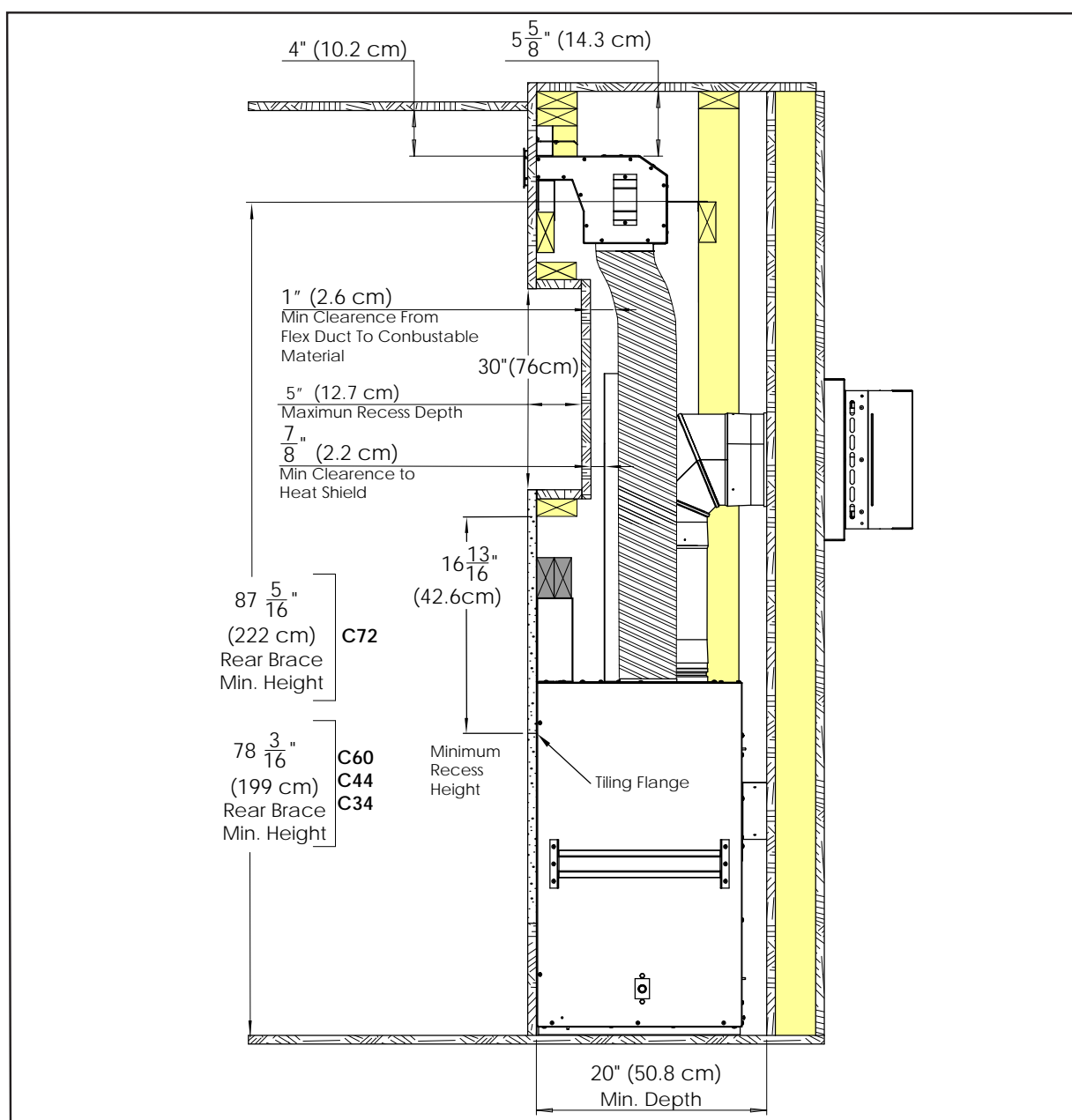


Figure 9. Minimum Recess Framing

FRAMING & CLEARANCES

QUALIFIED INSTALLERS ONLY

REVISED MANTEL REQUIREMENTS:

Refer to Figure 10 for a combustible mantel installation, measurement is from bottom of the unit to the bottom of the mantel.

If you are planning on installing a TV above the fireplace refer to page 12 to see the options available.

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

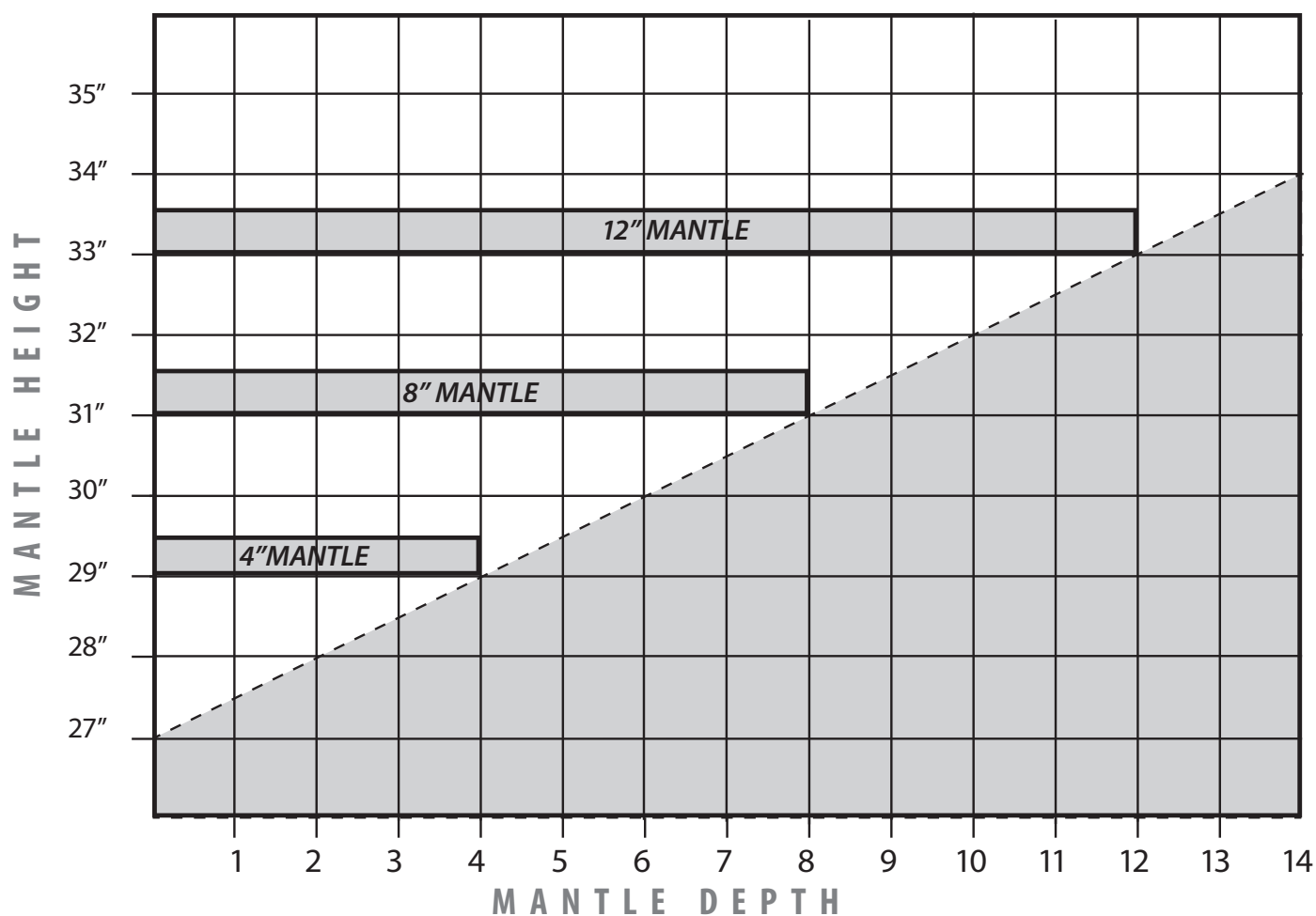


Figure 10. Minimum Mantel Height

FRAMING & CLEARANCES

QUALIFIED INSTALLERS ONLY

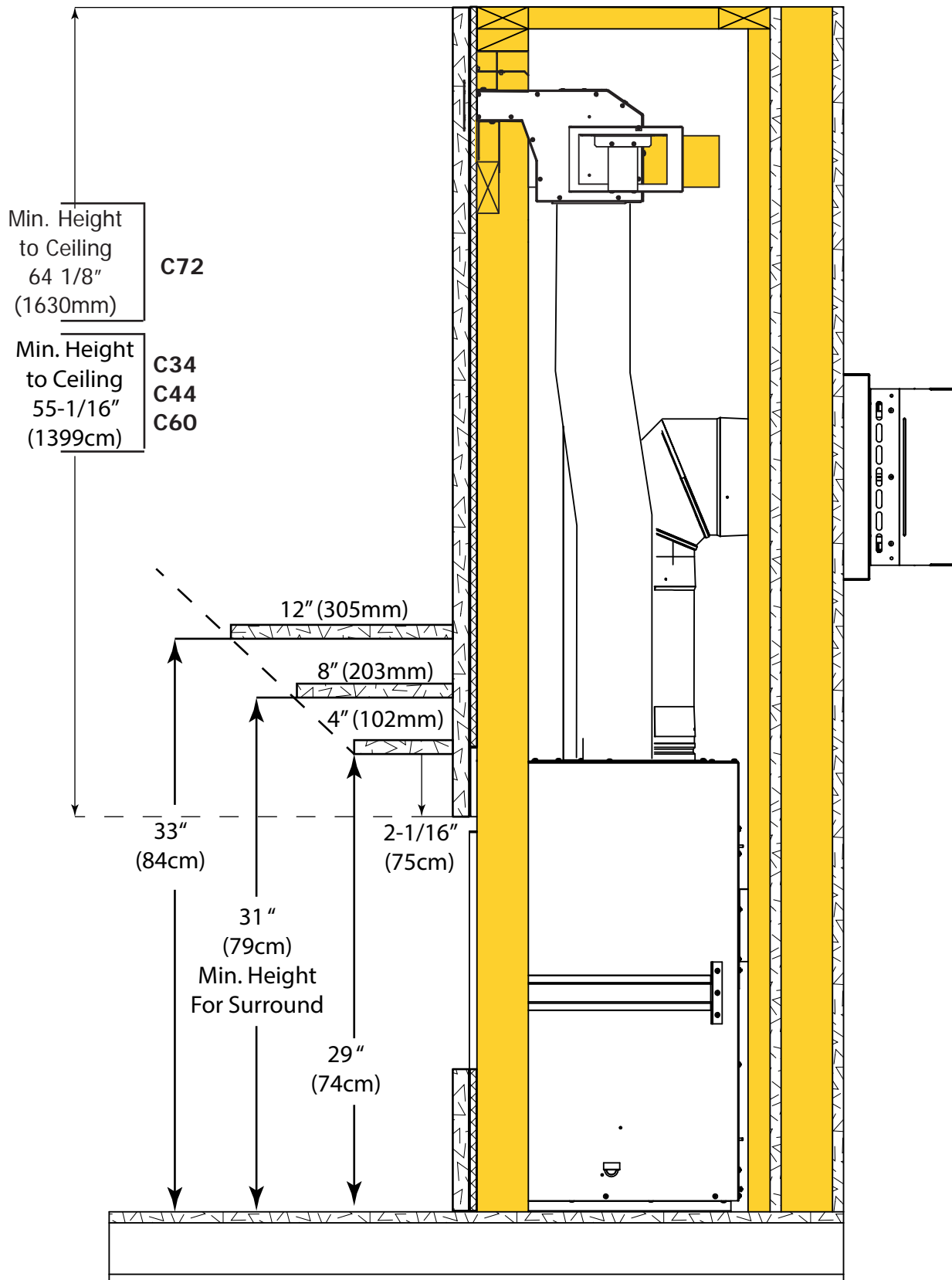


Figure 11. CSS - Min. Framing & Clearances

FRAMING & CLEARANCES

QUALIFIED INSTALLERS ONLY

FINISHED OPENING:

Combustible wall material i.e. drywall, shiplap etc. is permitted around the outlet of the CSS with a $\frac{3}{8}$ " (.95 cm) air gap required around the outside perimeter of the outlet. This creates a finished opening approx. $40\frac{3}{4}$ " x $2\frac{7}{8}$ " (103.5 x 7.3 cm) in size (Figure 12) for the C34/44/60 and $72\frac{3}{4}$ " x $2\frac{7}{8}$ " (184.8 x 7.3 cm) for the C72 (Figure 13).

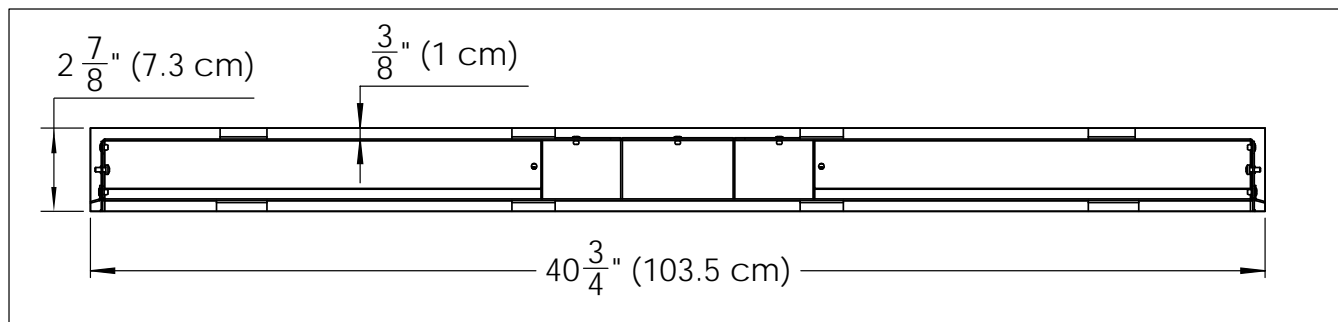


Figure 12. C34/44/60 CSS - Outlet Finished Opening

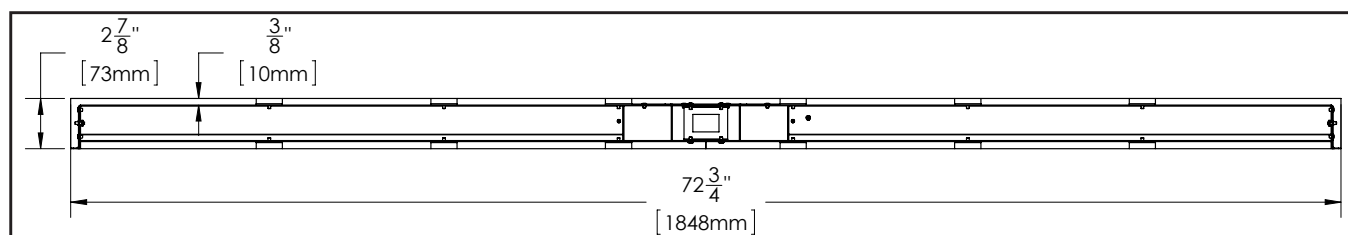


Figure 13. CSS - C72 Outlet Finished Opening

The supplied Outlet Trim Bezel, once installed, covers the air gap for a clean finished install (Figure 14). The Trim Bezel can be adjusted to accommodate finished walls $\frac{1}{2}$ "-1" (1.3-2.5 cm) thick and be painted to match the colour of the wall if desired (must be hi-temperature rated).

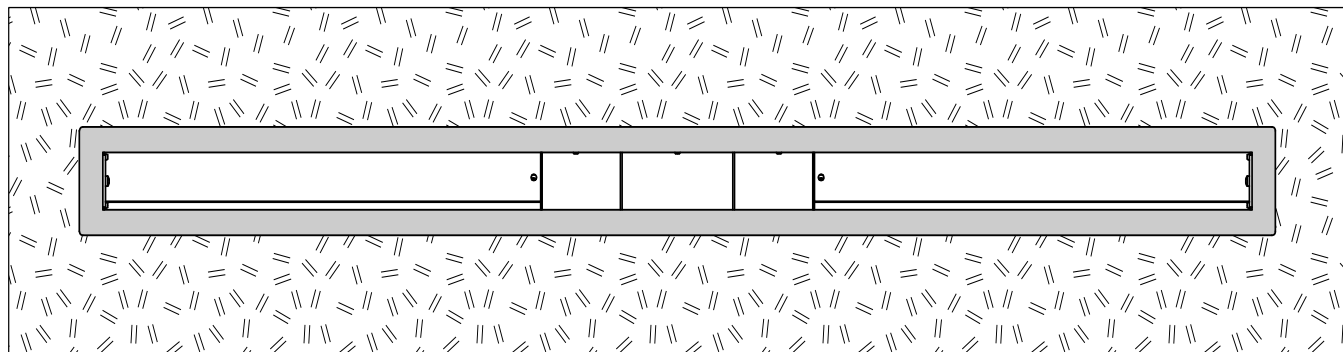


Figure 14. CSS - Outlet with Trim Bezel

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 15a & 15b). 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 16). Refer to page 9 for revised mantle clearances. A TV should not be installed if temperatures exceed the manufacturers maximum allowable temperature.

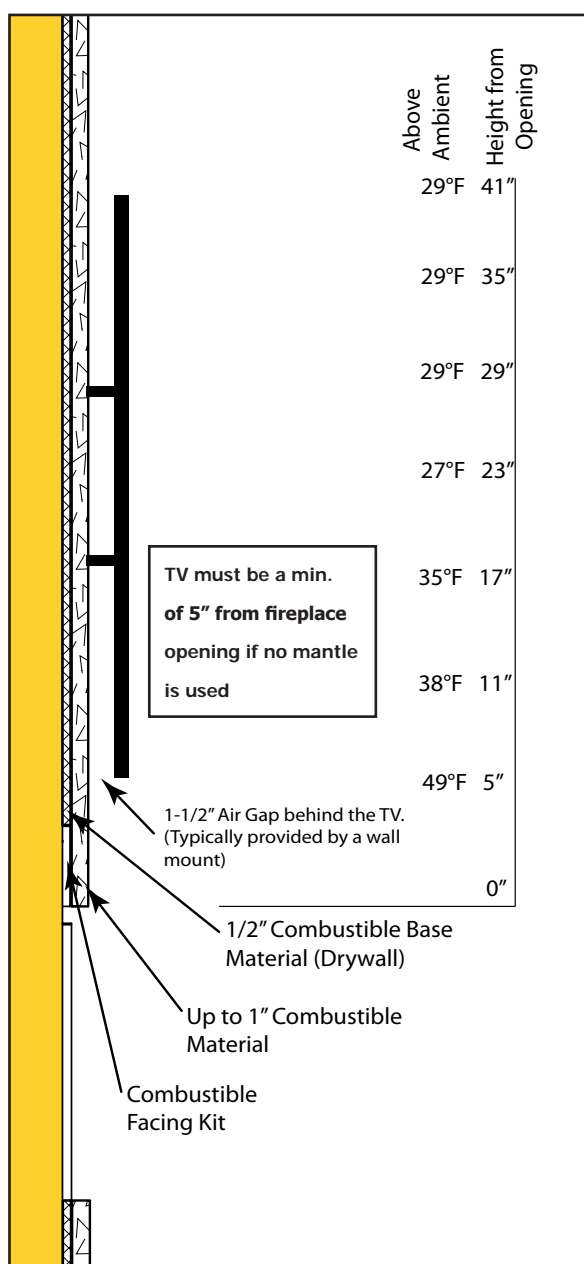


Figure 15a. CSS - TV Clearances

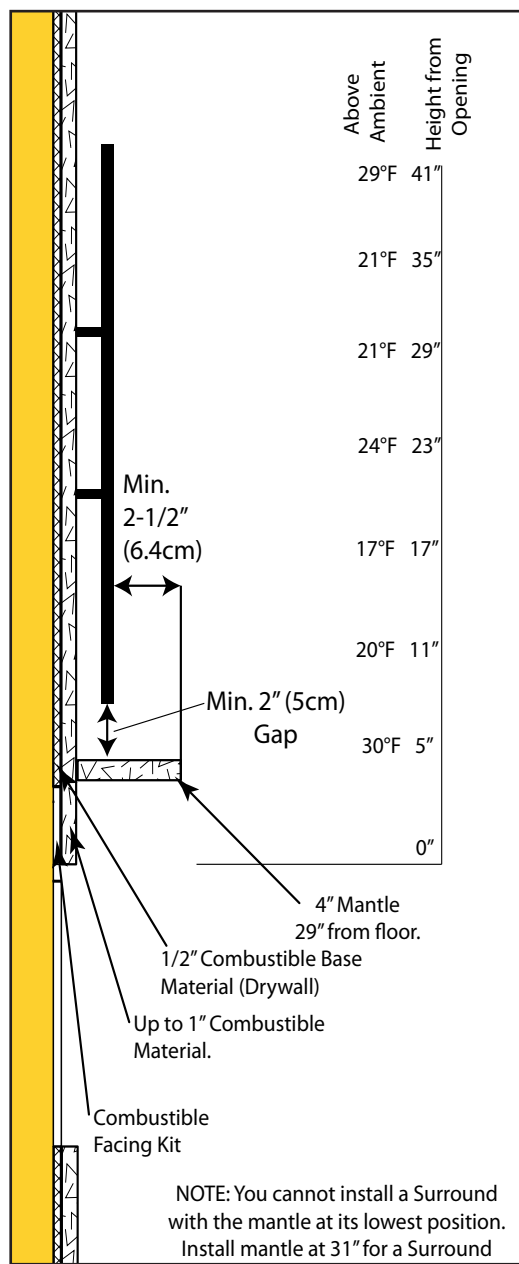


Figure 15b. CSS - TV Clearances

INSTALLATION

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 16).

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.

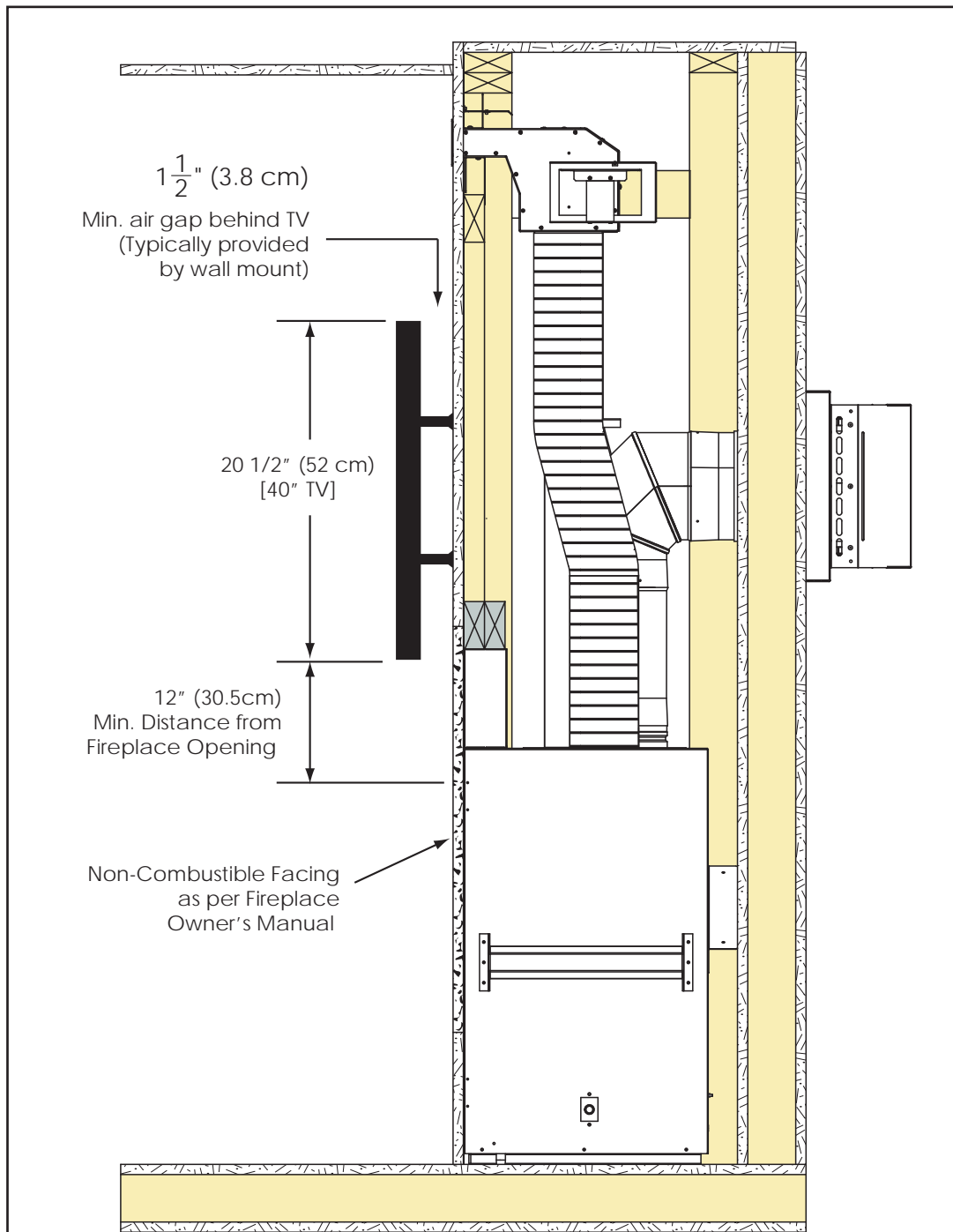


Figure 16. CSS - TV Clearances without Combustible Facing Kit

INSTALLATION

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 17). 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.

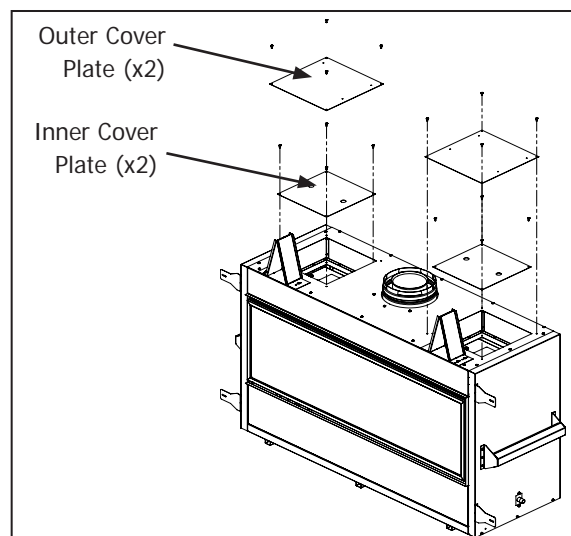


Figure 17. Cover Plate Removal

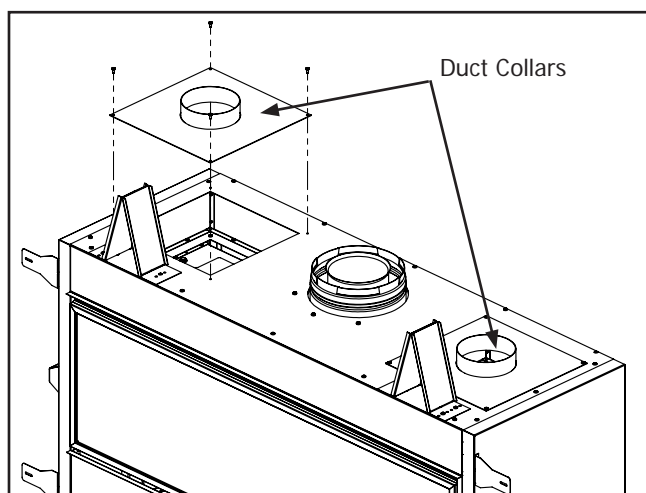


Figure 18. Duct Collars Installed

Step 2: Attach the supplied duct collars to the top of the cabinet as shown (Figure 18). Secure the collars by re-using the eight (8) screws saved in the previous step.

The fireplace is now CSS ready!

SIDE SUPPORTS / STANDOFFS:

Prior to installation of the CSS the supplied set of side support/standoffs need to be attached to the sides of the main duct body. The side supports also incorporate the rear standoff as shown in figure 19.

Using a T20 screwdriver and the supplied screws 6 screws (3 per side), attach the left support as shown in figure 19. Repeat for the right side support.

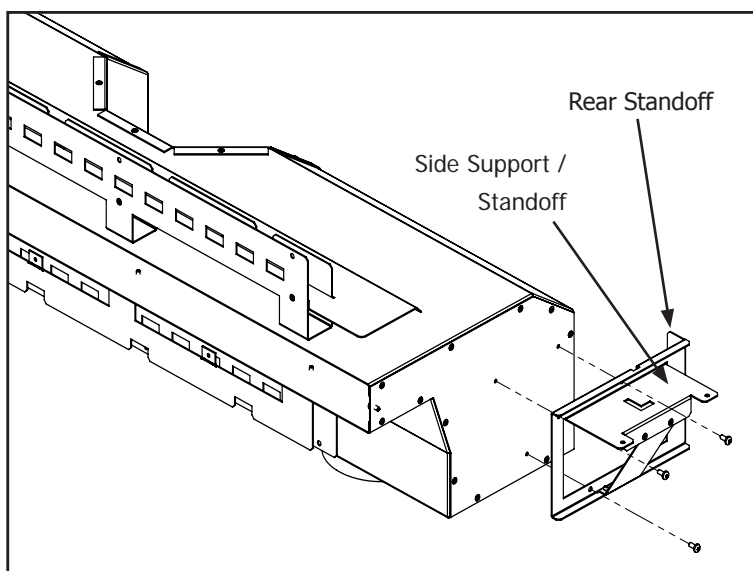


Figure 19. CSS - Side Supports

INSTALLATION

QUALIFIED INSTALLERS ONLY

COOL SURFACE SYSTEM - FRONT VENT:

Step 1: Frame in the rough opening for the CSS as shown in Figures 6 & 7 (Pages 5,6) in the desired location following all required clearances as stated in the FRAMING & CLEARANCES section.

Note: Light coloured ceilings may slightly discolour near the outlet when it is installed at minimum clearance (4" / 10.2 cm). Increasing the ceiling clearance will help prevent this.

Step 2: Using a T20 screwdriver, remove the screw on each side of the CSS outlet retaining the Outlet Trim Bezel and remove the Bezel (Figure 20).

Step 3: Insert the assembled CSS into the framed rough opening by rotating it down slightly to allow the outlet and standoffs to pass through. When installed correctly the front flange of the top standoff should be up against the front face of the top stud (Figure 21).

Step 4: Confirm the CSS is centered within the rough opening and secure in place using screws or nails through the four (4) holes along the top edge of the top standoff.

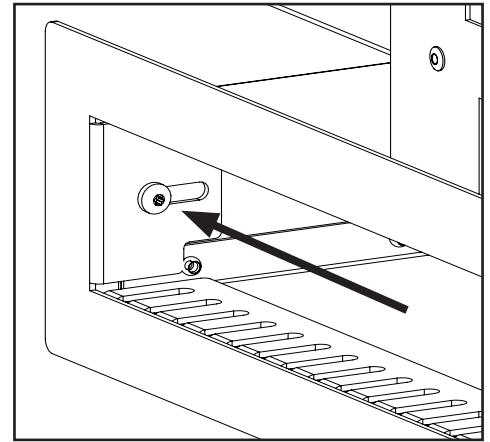


Figure 20. Outlet Trim Bezel Screw

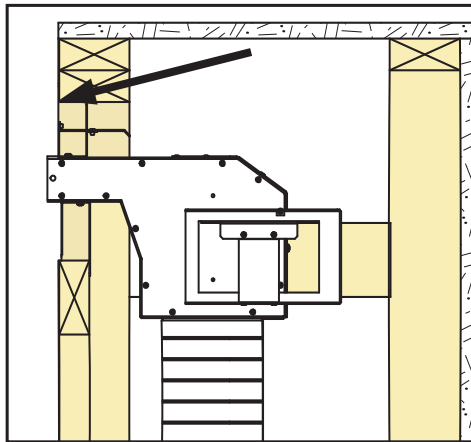


Figure 21. CSS - Top Standoff

Step 5: Secure the rear standoffs to support the remainder of the CSS ensuring it is level. If left unlevel, the outlet of the CSS will be out of square causing possible fitment issues with the Outlet Trim Bezel.

Step 6: Install the fireplace in the desired location as directed in the Owner's Manual. Leave the front wall open for installation of the flex venting.

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

Step 7: Connect the required lengths of 5" dia. stainless steel or aluminium flex vent (not supplied) between the collars on the fireplace and CSS. Secure the venting to the collars using either sheet metal screws or band clamps. **Both collars on the CSS must be connected to the fireplace via 5" dia. flex vent.** Secure the flex venting where necessary to maintain standard venting clearances:

Table 1. Flex Vent - 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
1" (25.4 mm)	1" (25.4 mm)	3" (76.2 mm)	3" (76.2 mm)	2" (51 mm)

INSTALLATION

QUALIFIED INSTALLERS ONLY

NOTE: If using the Combustible Facing kit, skip to end of page and install it now before proceeding to the final steps.

Step 8: Finish the front wall around the fireplace and CSS outlet as desired. Ensure the finished opening around the CSS outlet is as specified in the FINISHED OPENING section of this manual.



Warning: CSS outlet **MUST NOT** be covered or blocked in any way by drapes, furniture etc.

Step 9: Finally, install the Outlet Trim Bezel by sliding it into the outlet until the backside contacts the finished wall surface. Next, re-install the two (2) screws removed in Step 2 to secure the Outlet Trim Bezel in place. When installed correctly there is a $\frac{1}{4}$ " (6.4 mm) standoff between the back side of the Bezel and finished wall (Figure 22).

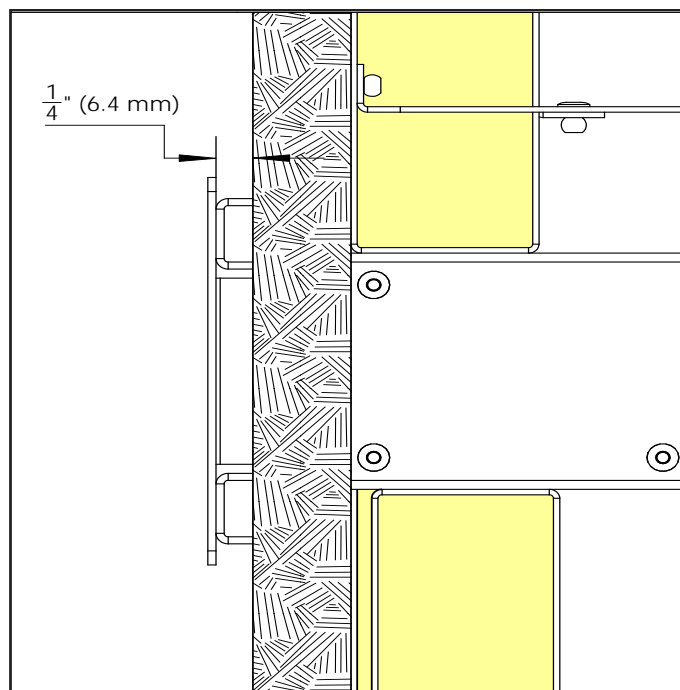


Figure 22. Outlet Trim Bezel - Standoff

Installation of the Cool Surface System is now complete and the remaining fireplace installation can be completed as directed in the Owner's Manual.

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 Combustible Facing Kit determine your unit.

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. If this kit is being installed for a C72, use both deflectors.

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. As shown in Figure 23.

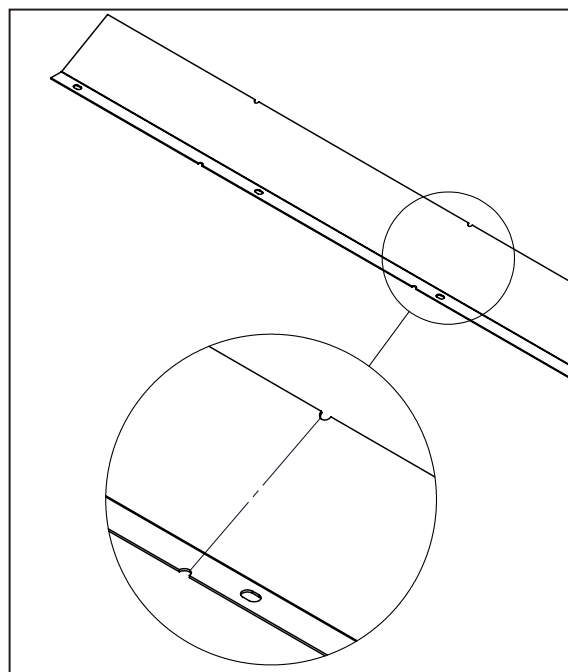


Figure 23. Trimmable Deflector trim notches

INSTALLATION

QUALIFIED INSTALLERS ONLY

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. If installing a C72, use all three panels. Once you have your required panels locate the flanges in the figure 23 below. Bend these flanges inwards 90deg to match the figure 24 below.

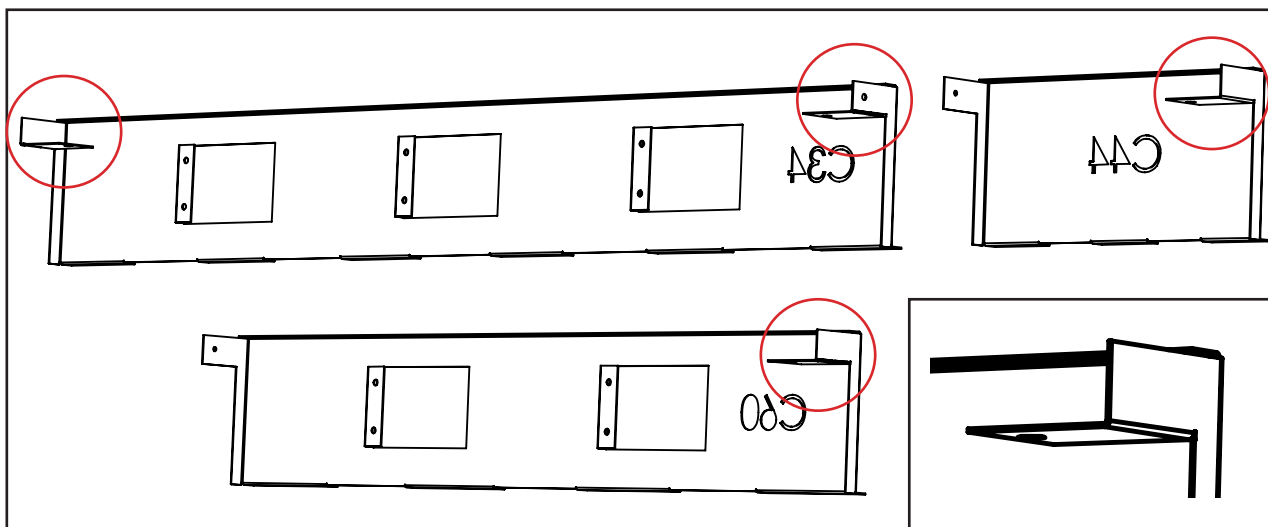


Figure 24. Rear Panel hand bent flanges

Step 3: Verify that all the hand bends shown above are bend inwards 90deg as shown in figure 24.

Step 4: All the middle flanges must be bent 90deg inwards towards the unit as shown below in figure 25.

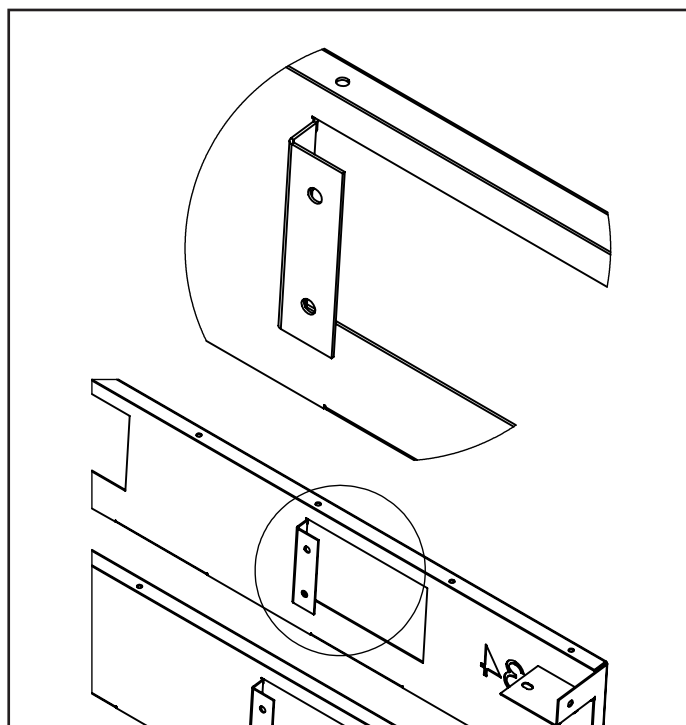


Figure 25. Rear Panel hand bent flanges

INSTALLATION

QUALIFIED INSTALLERS ONLY

COMBUSTIBLE FACING KIT (OPTIONAL):

Step 4: 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 5: If installing a C44 or C60, attach your extension piece to the C34 main panel (Figure 27). If installing a C72, attach all extension pieces together main panel. (Figure 28)

Step 6: 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 7: Use the provided self tapping screws to fasten the assembly via the remaining pilot holes on the front and top

Step 8: Attach your deflector to your panel configuration as shown below (Figure 26, 27, 29)

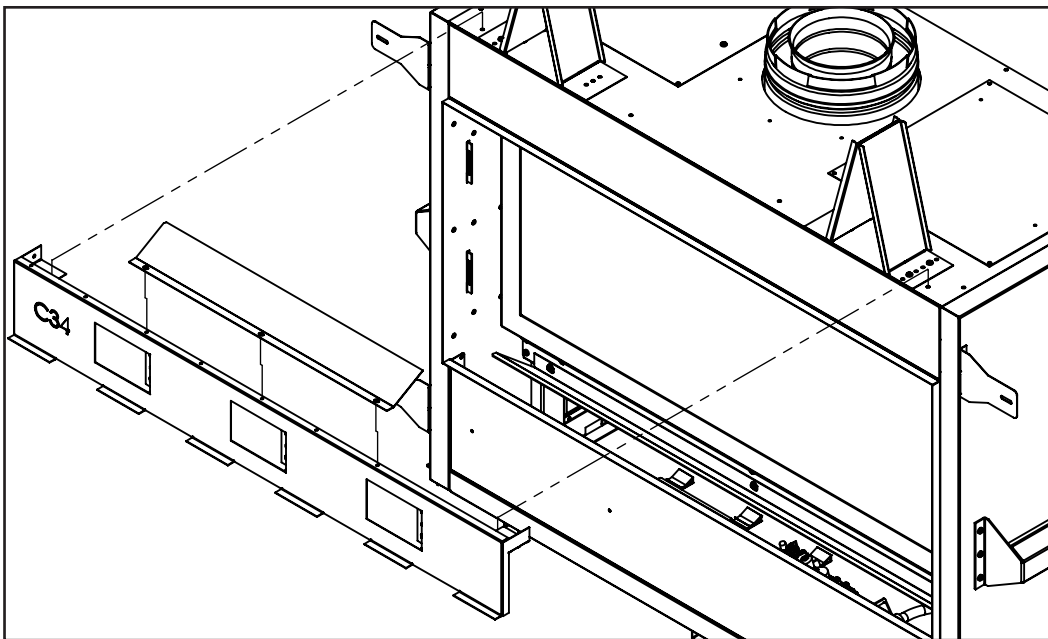


Figure 26. Combustible Panel C34

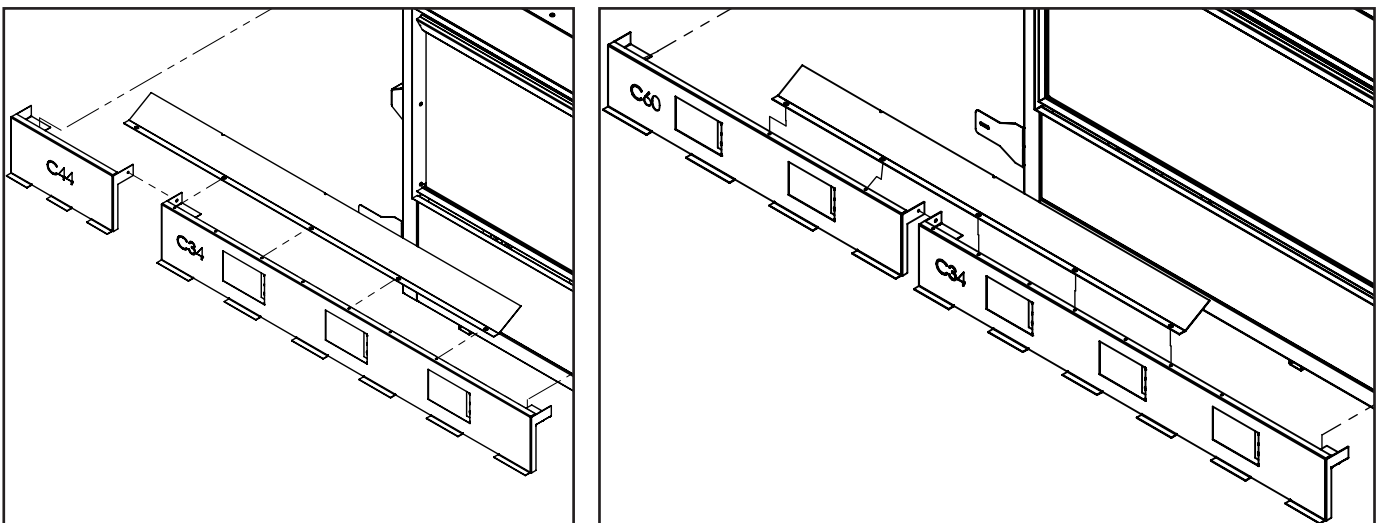


Figure 27. Combustible Panels C44 Left, C60 Right

INSTALLATION

QUALIFIED INSTALLERS ONLY

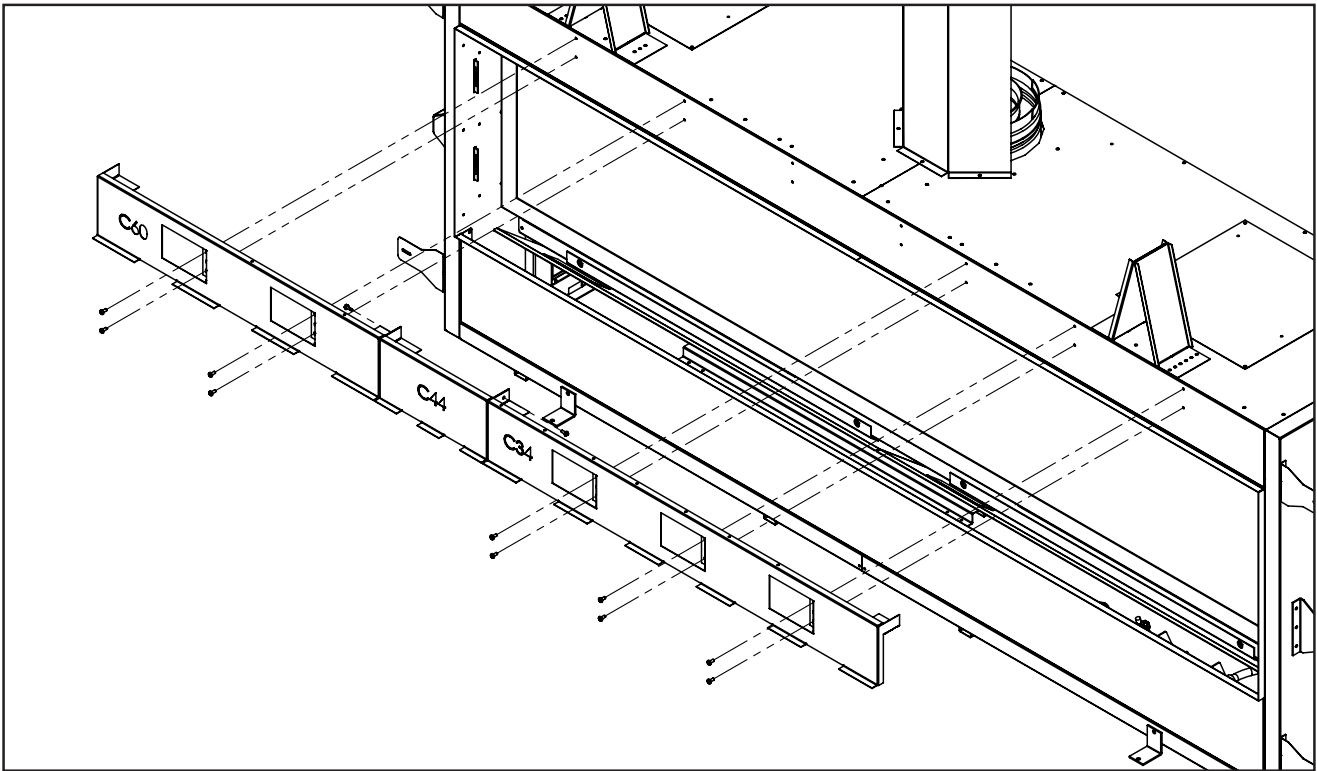


Figure 28. Combustible Panel C72

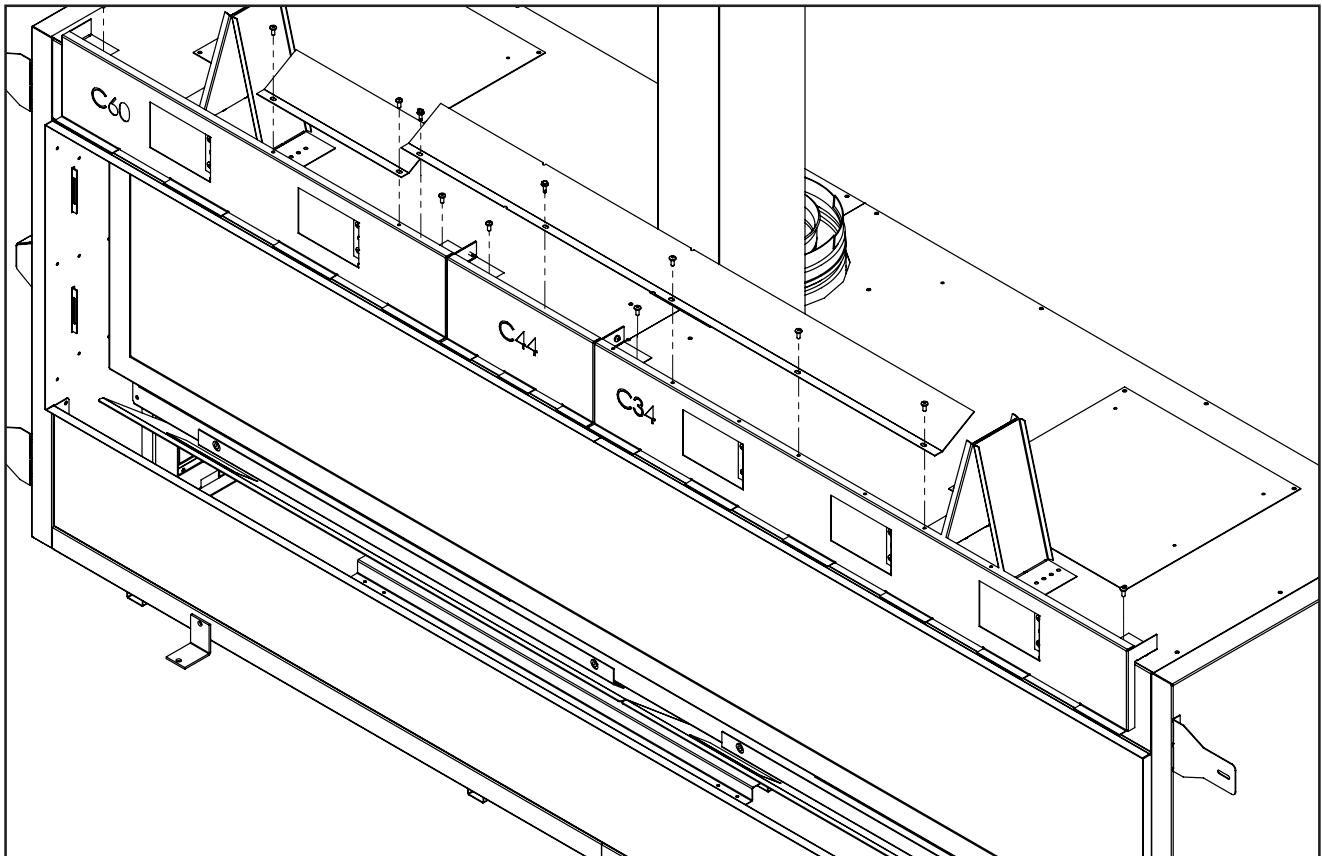


Figure 29. Deflectors C72

INSTALLATION

QUALIFIED INSTALLERS ONLY

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.

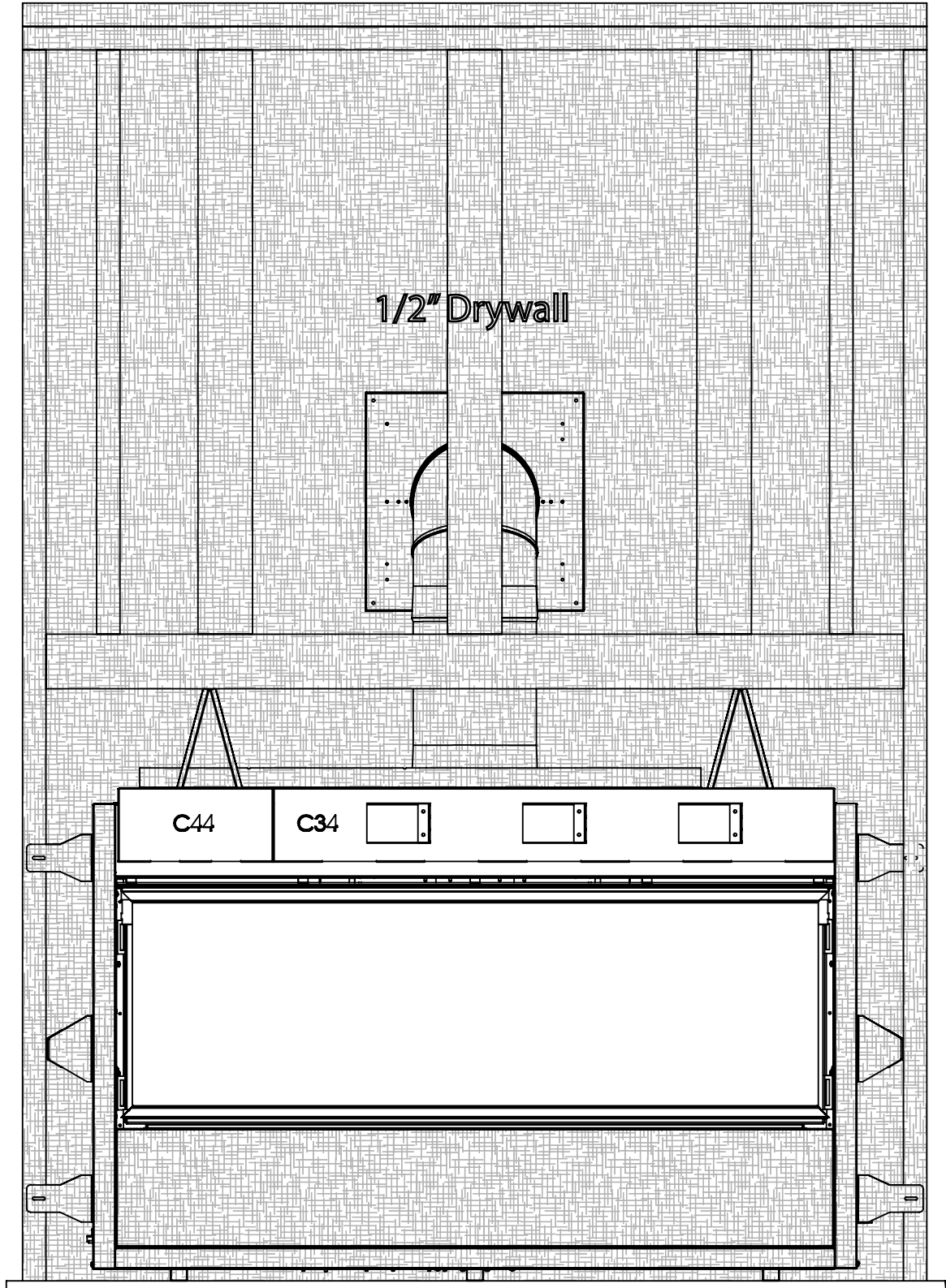
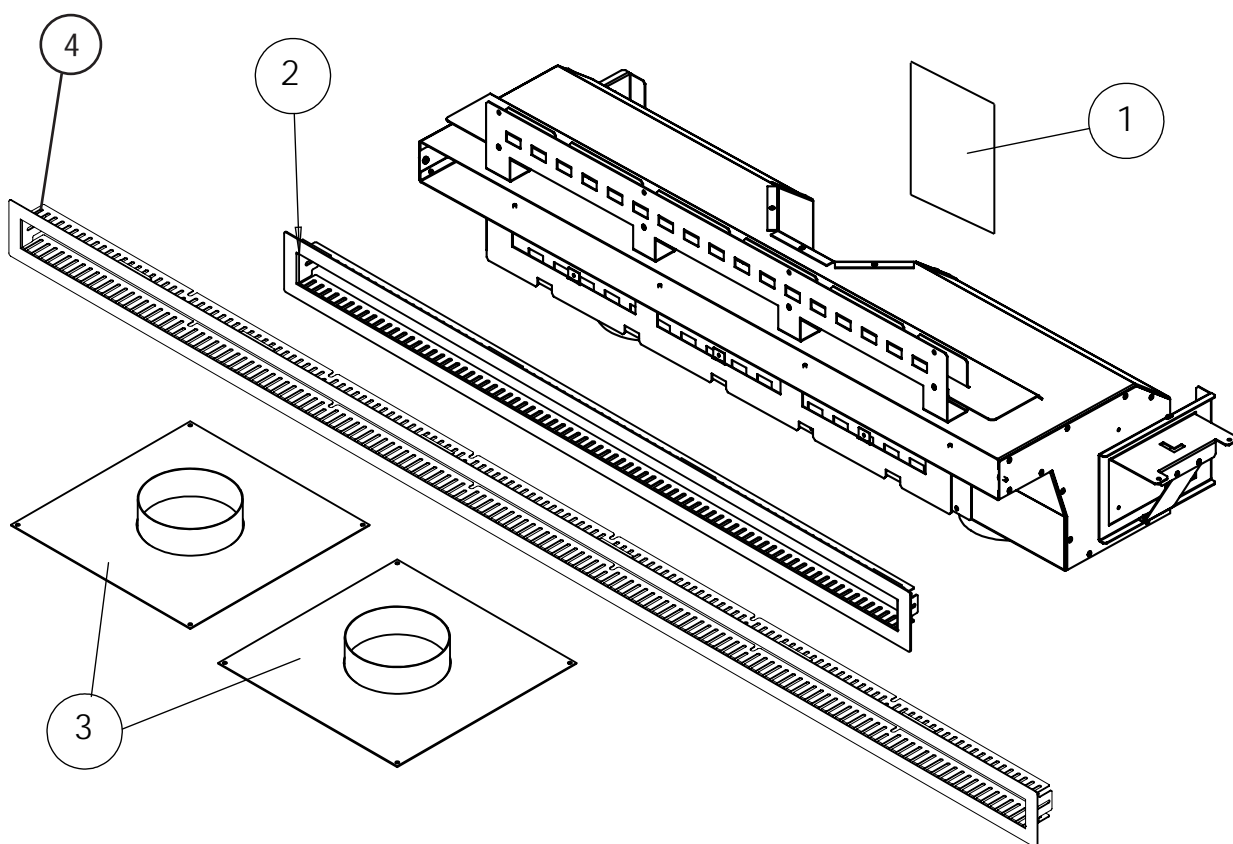


Figure 30. CSS - 1/2" Base Layer

REPLACEMENT PARTS



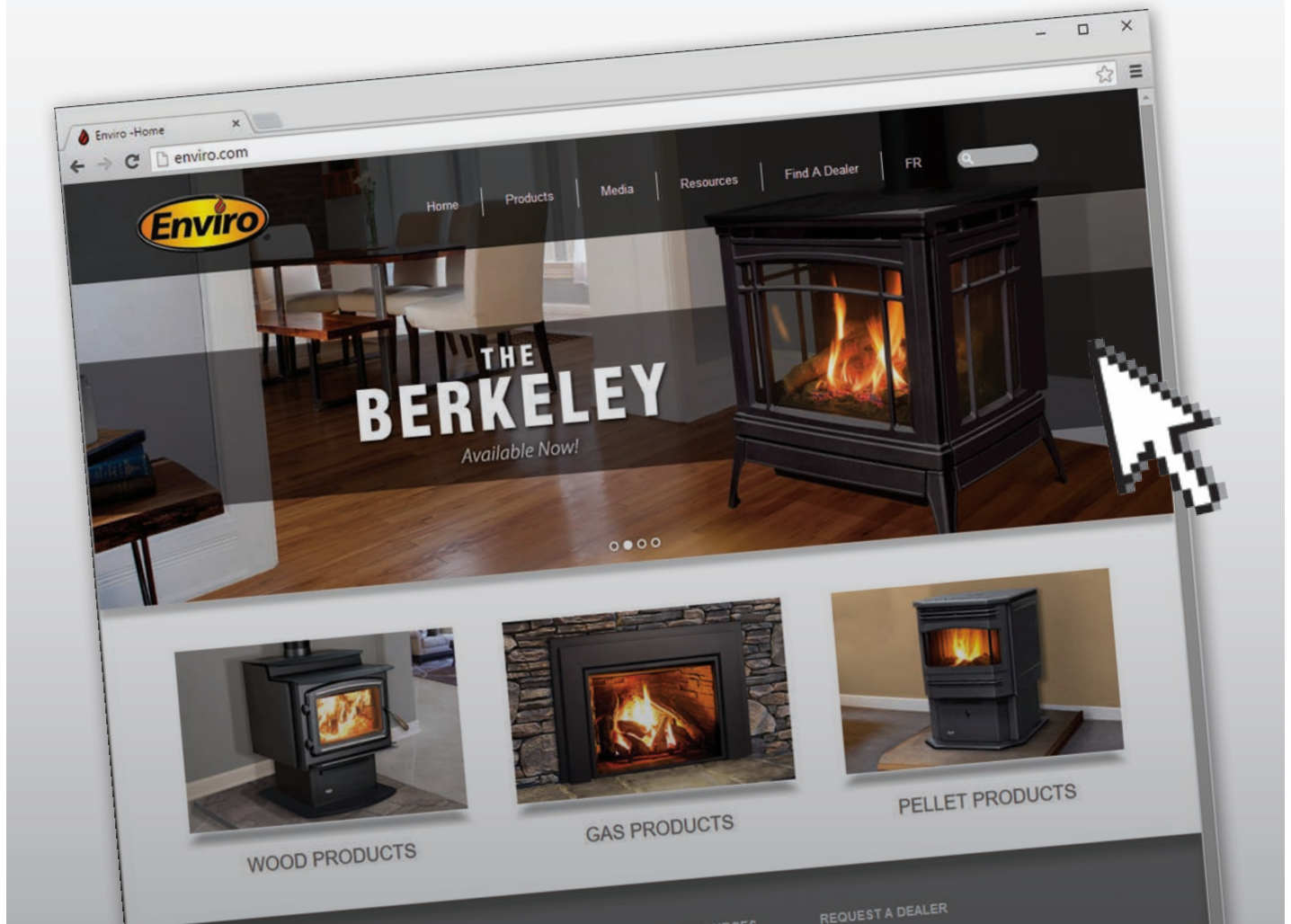
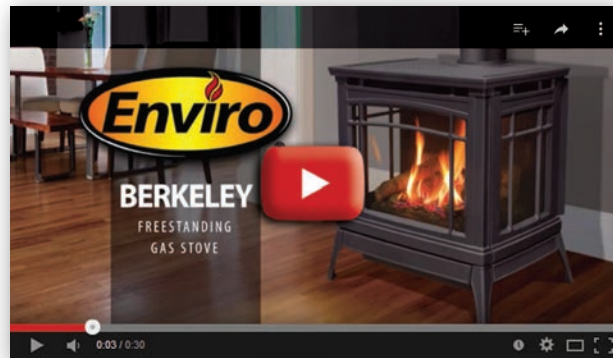
Item	Description	Part Number
1	CSS Instruction Manual	50-3481
2	Outlet Trim Bezel	50-3307
3	Vent Collars (Set of 2)	50-3309
4	C72 Outlet Trim Bezel	50-3792

NOTES

Learn more about our products at

enviro.com

- *Detailed Product Lineup*
- *Model Photo Galleries*
- *Downloadable Manual PDF's*
- *Unit Comparison Charts*
- *Youtube Burn Example Videos*
- *Online Brochures*
- *Dealer Locator Tool*



MANUFACTURED BY:
SHERWOOD INDUSTRIES LTD.
6782 OLDFIELD RD. SAANICHTON, BC, CANADA V8M 2A3
www.enviro.com
August 2019
C-15843