ENVIRO

C Series

Cool Surface System

FRONT VENT [50-3463]

INSTRUCTION MANUAL

C ETL **US**
LISTED
CM

Intertek
4001609

**This Cool Surface System has been tested for compliance to Standards:
ANSI Z21.88-2016 and CSA Z2.33-2016.**

This Cool Surface System has been approved for use on the **ENVIRO C34/44/60** 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.

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.

Note: Recessed framing above the fireplace **may not** be used in conjunction with 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.
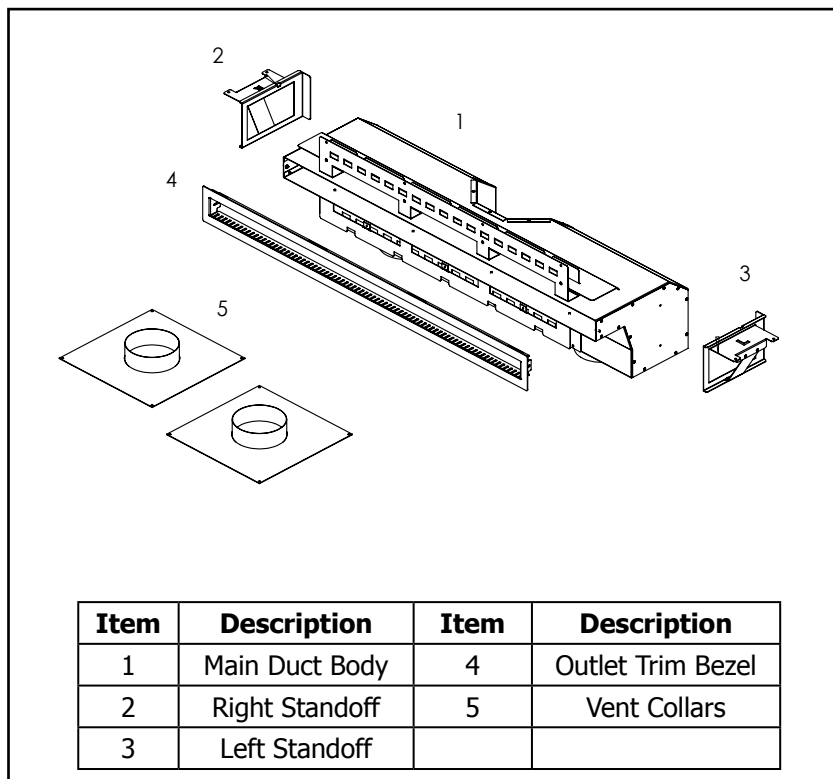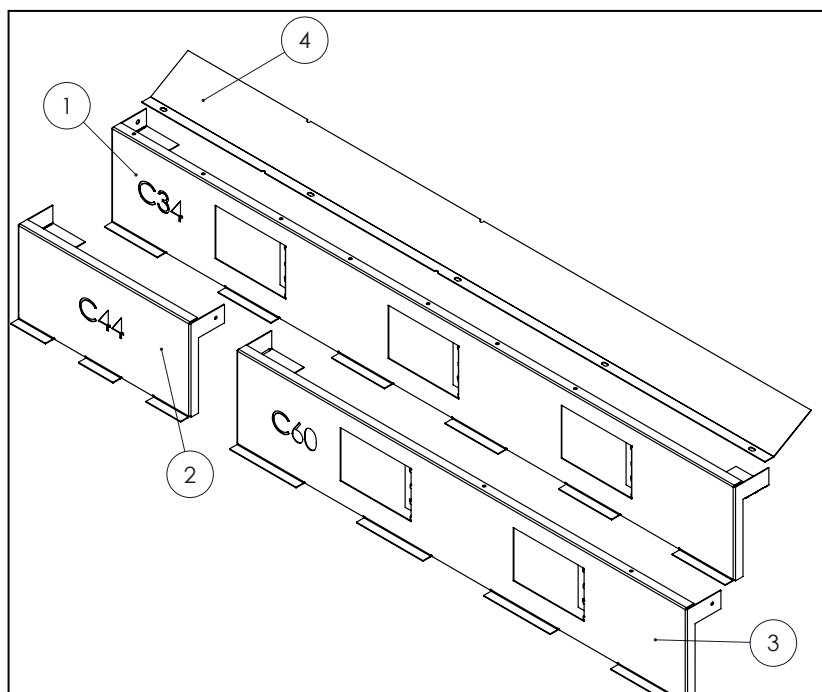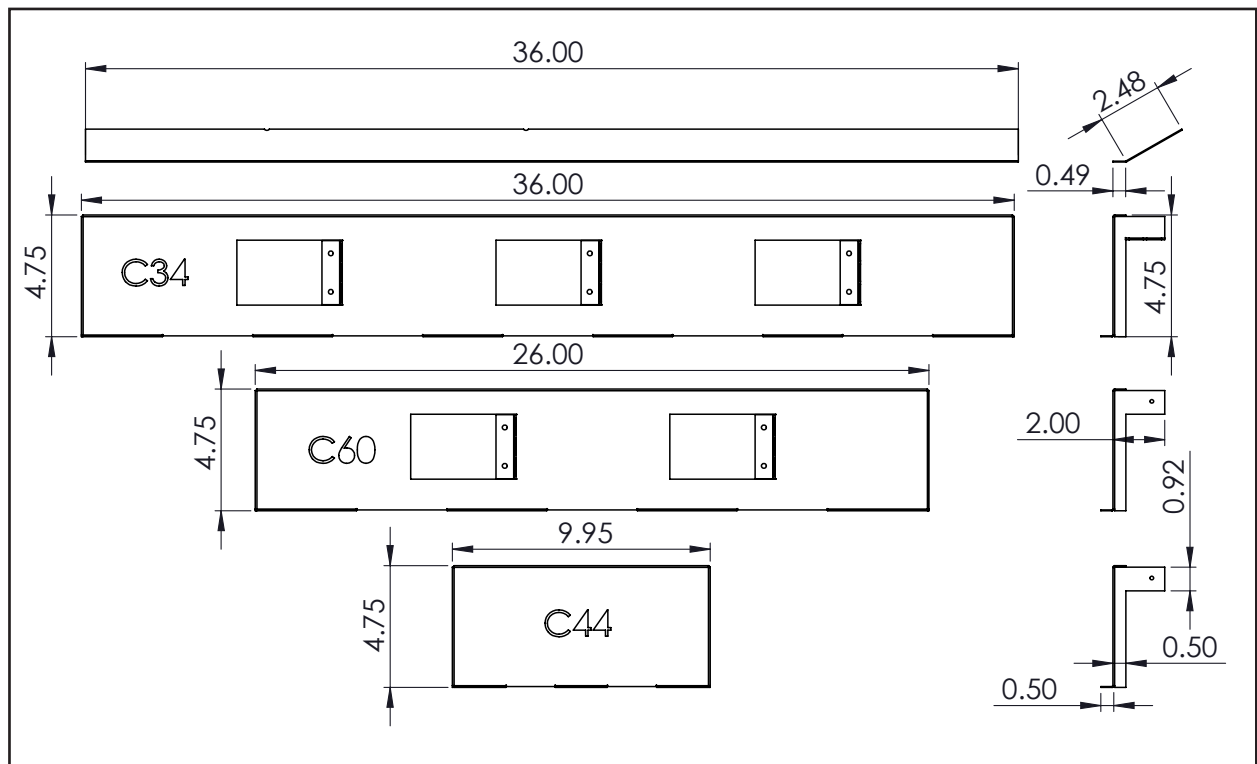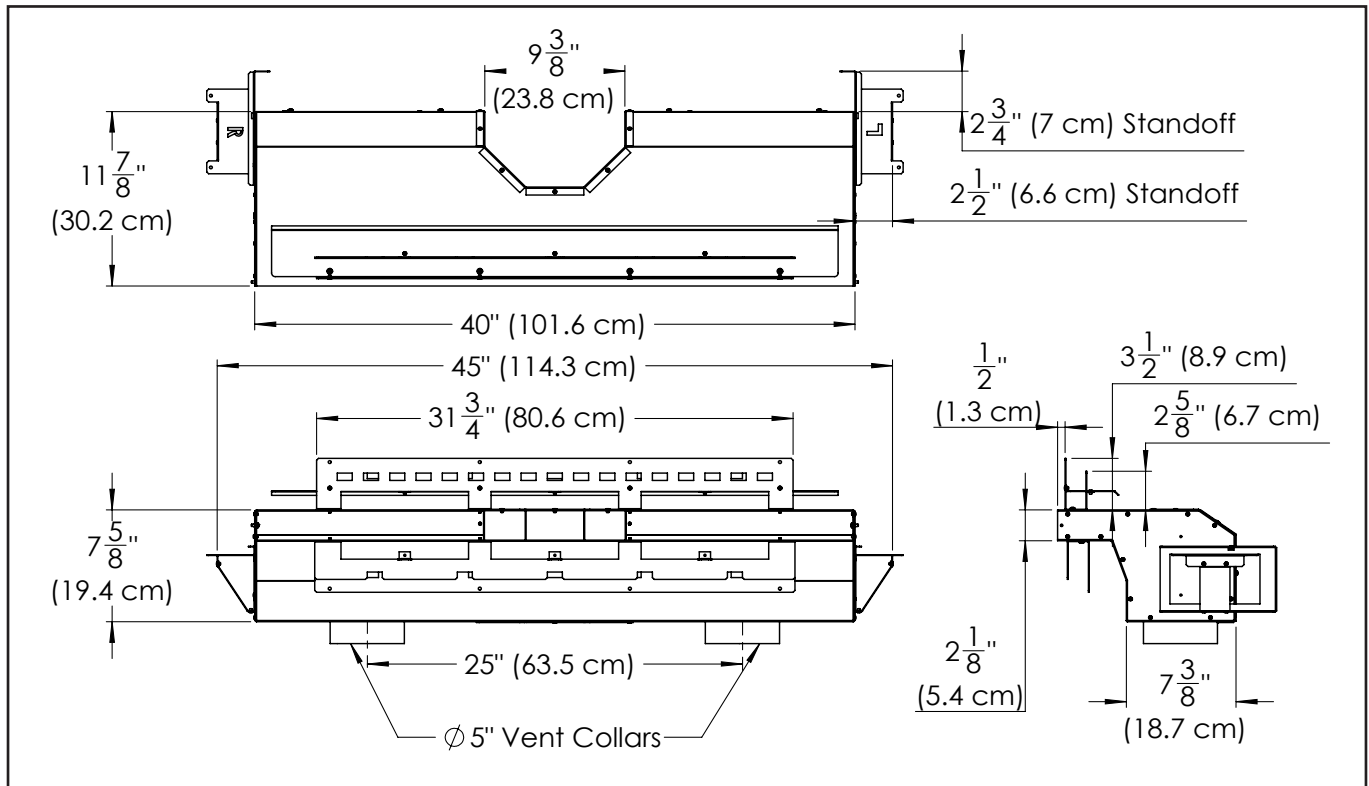

Item	Description	Item	Description
1	Main Duct Body	4	Outlet Trim Bezel
2	Right Standoff	5	Vent Collars
3	Left Standoff		

Figure 1. Cool Surface System Front Vent- Parts Diagram

Item	Description	Item	Description
1	C34 Main Panel	4	Trimable Deflector
2	C44 Extension		
3	C60 Extension		

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

Dimensions

Figure 3. Cool Surface System Front Vent - Overall Dimensions

Figure 4. Cool Surface System Combustible Facing Kit Dimensions

Framing & Clearances

FRAMING & ROUGH OPENING:

Refer to Figures 5 & 6 for the minimum allowable framing and rough opening of the CSS.

⚠ **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.

CSS Outlet Min. Top and Bottom standoff = 2⅝" (6.7 cm) *All C Series*

45" (114 cm)
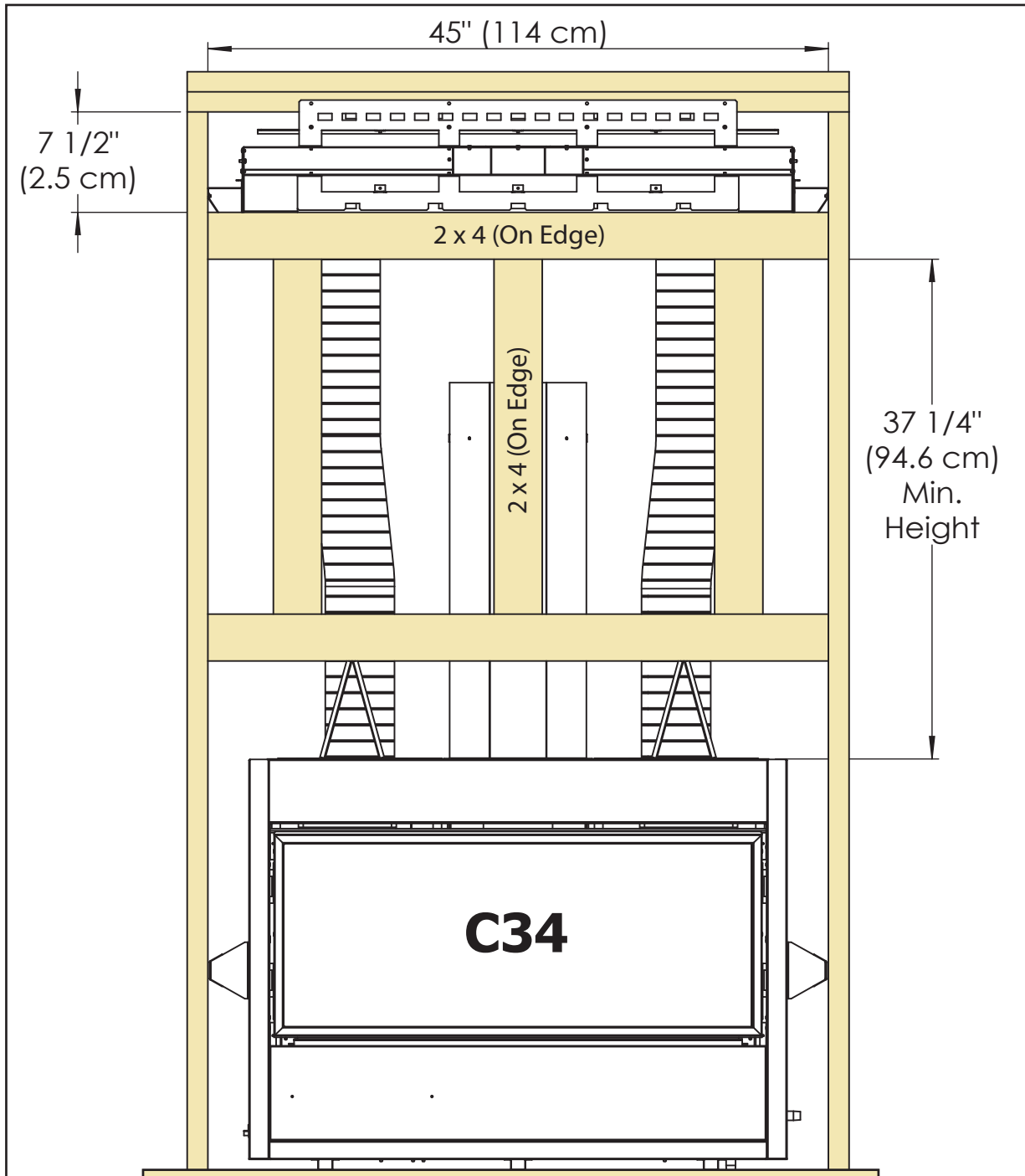
7 1/2" (2.5 cm)

2 x 4 (On Edge)

2 x 4 (On Edge)

37 1/4" (94.6 cm) Min. Height

C34

Figure 5. C34 - CSS Framing & Rough Opening

Framing & Clearances

QUALIFIED INSTALLERS ONLY

CSS Outlet Min. Top and Bottom standoff = 2⅝" (6.7 cm) *All C Series*

C60 = 71" (180 cm)
C44 = 55" (140 cm)

45" (114 cm)

Steel Stud - C60 Only

7 1/2"
(2.5 cm)

Steel Stud - C60 Only
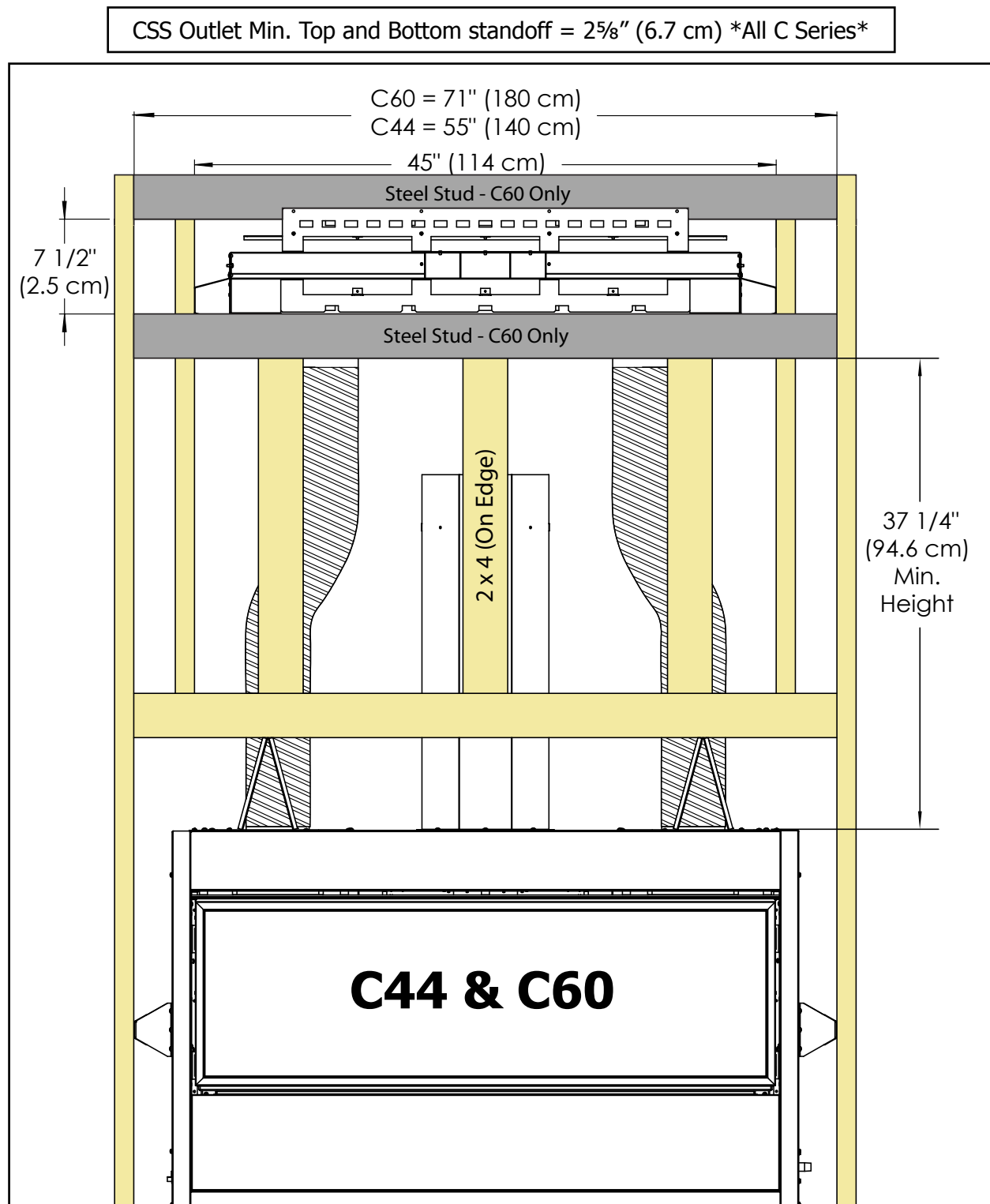
2 x 4 (On Edge)

37 1/4"
(94.6 cm)
Min.
Height

C44 & C60

Figure 6. C44/60 - CSS Framing & Rough Opening

5

QUALIFIED INSTALLERS ONLY

MINIMUM CLEARANCES - MINIMUM VENT:

Shown below in Figure 7 are the minimum framing and clearances for the CSS when the fireplace is installed with the minimum allowable vent length:
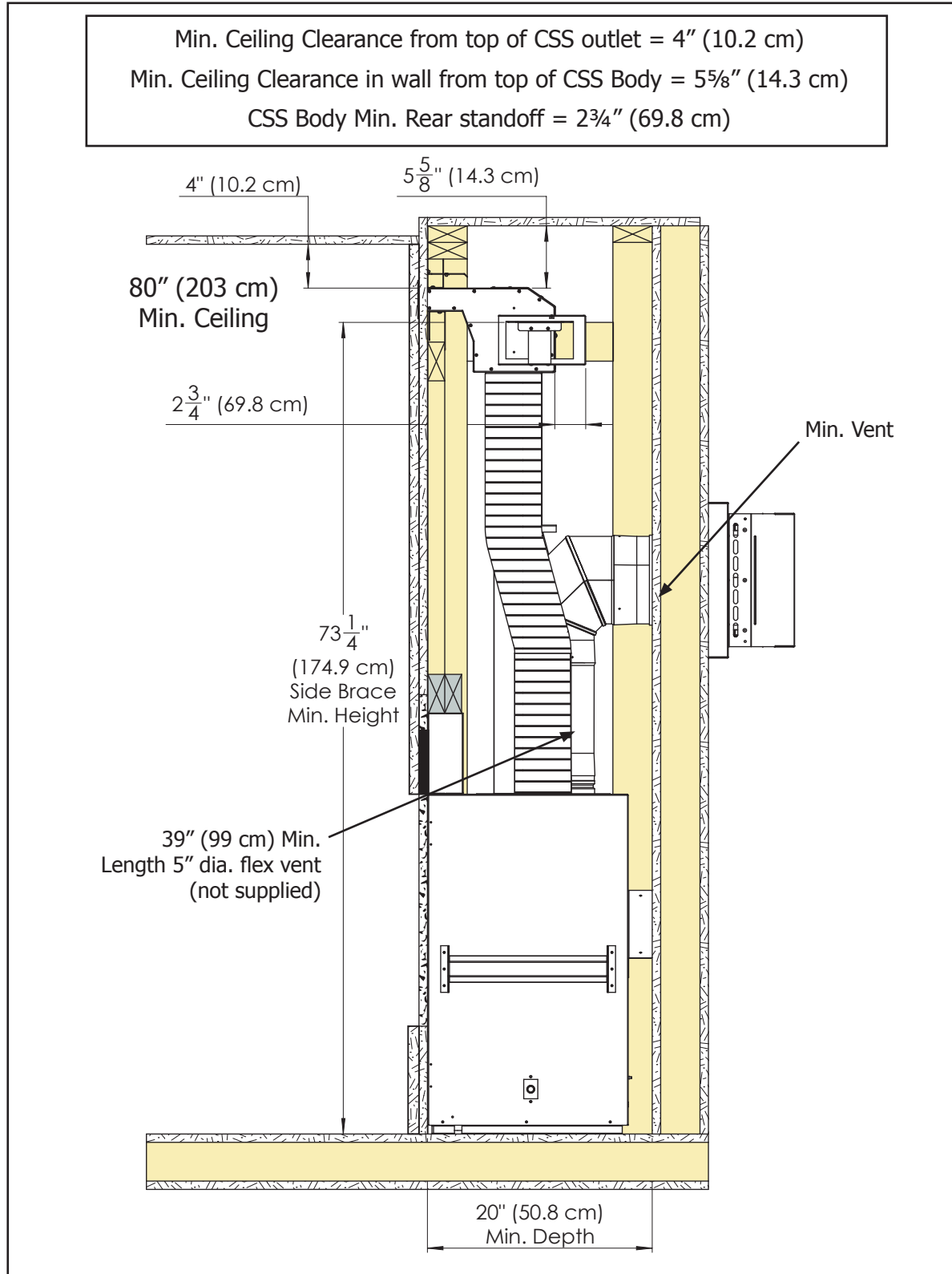
Min. Ceiling Clearance from top of CSS outlet = 4″ (10.2 cm)

Min. Ceiling Clearance in wall from top of CSS Body = 5⅝″ (14.3 cm)

CSS Body Min. Rear standoff = 2¾″ (69.8 cm)

4" (10.2 cm)

$5\frac{5}{8}$" (14.3 cm)

80″ (203 cm) Min. Ceiling

$2\frac{3}{4}$" (69.8 cm)

Min. Vent

$73\frac{1}{4}$" (174.9 cm) Side Brace Min. Height

39″ (99 cm) Min. Length 5″ dia. flex vent (not supplied)

20" (50.8 cm) Min. Depth

Figure 7. CSS - Min. Framing & Clearances

Framing & Clearances

REVISED MANTEL REQUIREMENTS:

Refer to Figure 8 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 10 to see the options available.

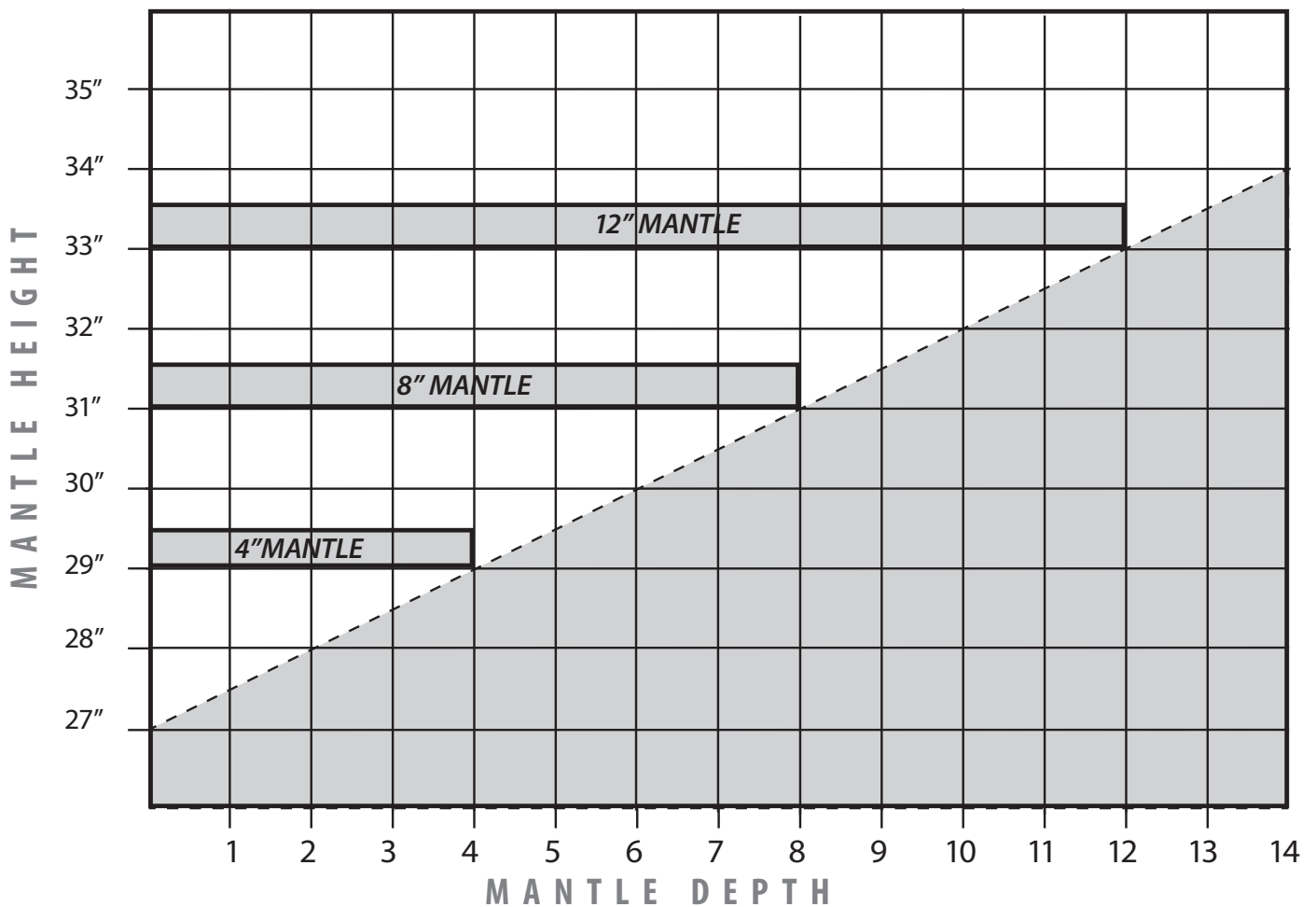**Note**: **Minimum height of mantle if you intend on using a surround is 31"**

Figure 8: Minimum Mantel Height

QUALIFIED INSTALLERS ONLY

Min. Height
to Ceiling
55-1/16"
(1399cm)

12" (305mm)

8" (203mm)

4" (102mm)

33"
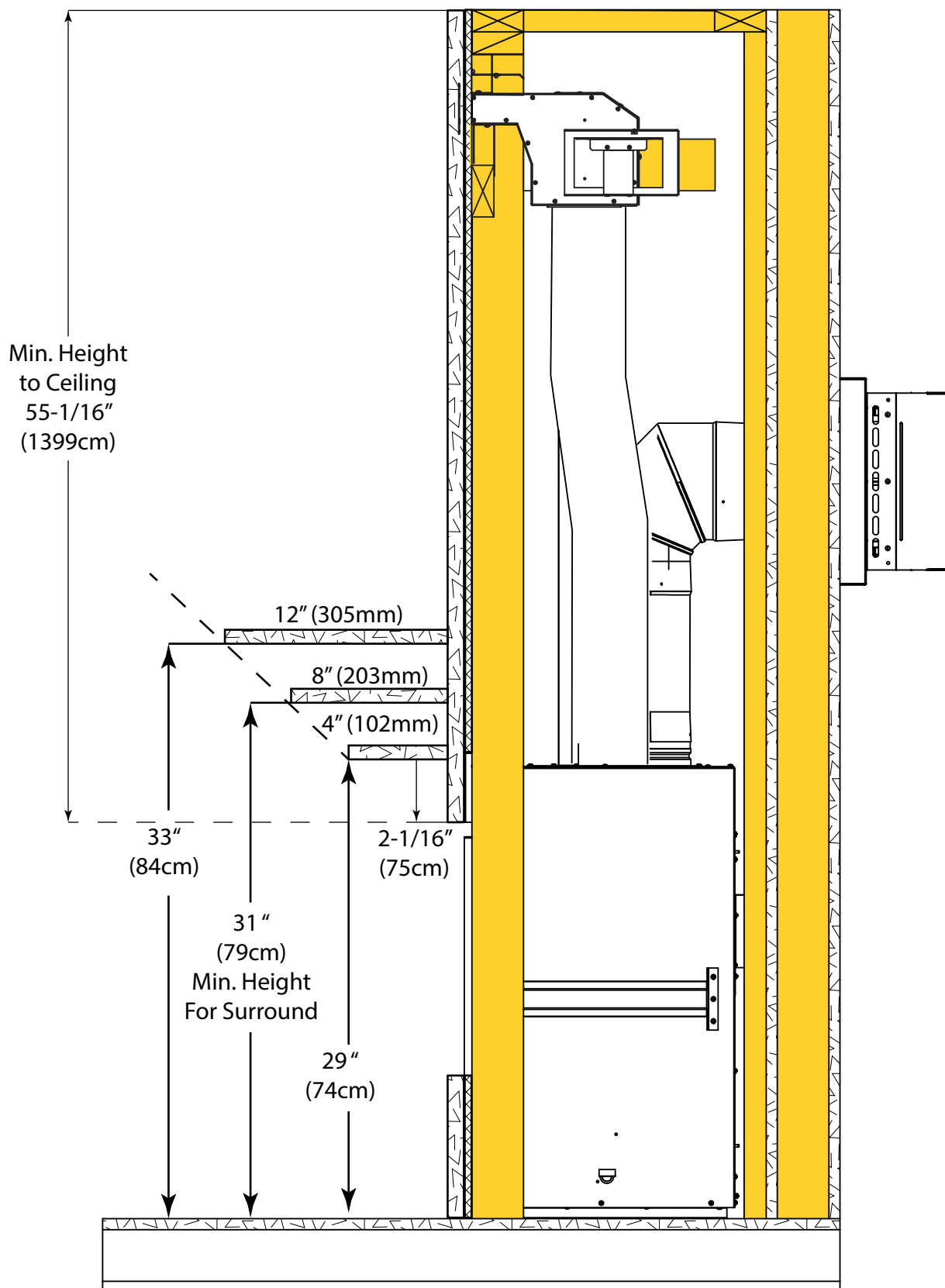(84cm)

2-1/16"
(75cm)

31"
(79cm)
Min. Height
For Surround

29"
(74cm)

Figure 9. CSS - Min. Framing & Clearances

Framing & Clearances

FINISHED OPENING:

Combustible wall material i.e. drywall, shiplap etc. is permitted around the outlet of the CSS with a 3/8"
(.95 cm) air gap required around the outside perimeter of the outlet. This creates a finished opening
approx. 40¾" x 2⅞" (103.5 x 7.3 cm) in size (Figure 7).

$2\frac{7}{8}$" (7.3 cm) $\frac{3}{8}$" (1 cm)
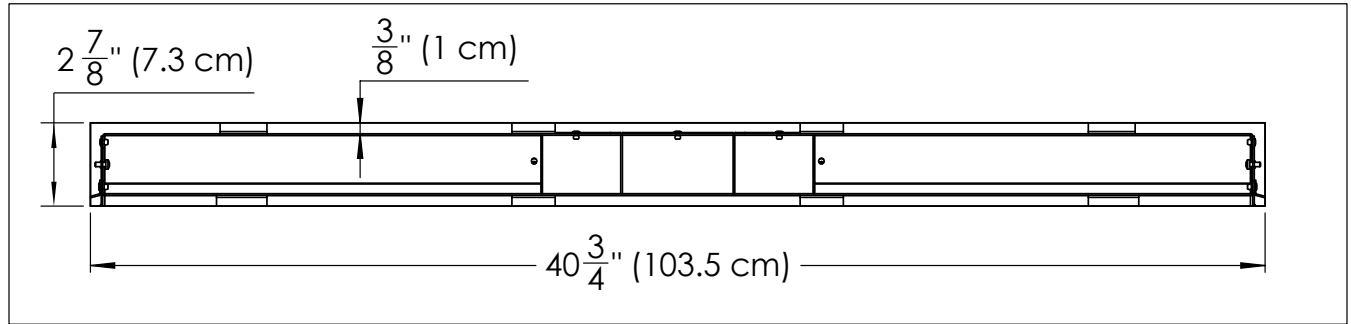
$40\frac{3}{4}$" (103.5 cm)

Figure 10. CSS - Outlet Finished Opening

The supplied Outlet Trim Bezel, once installed, covers the air gap for a clean finished install (Figure
8). The Trim Bezel can be adjusted to accommodate finished walls ½"-1" (1.3-2.5 cm) thick and be
painted to match the colour of the wall if desired (must be hi-temperature rated).

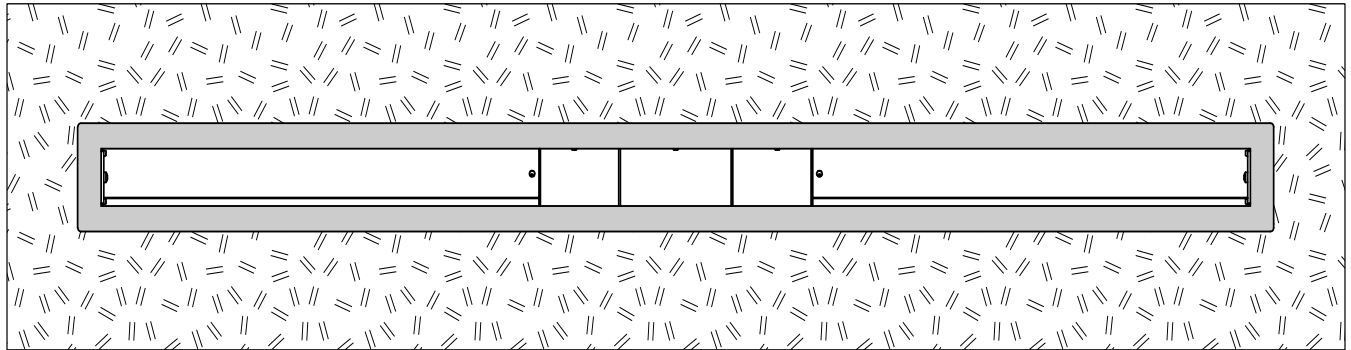**Figure 11. CSS - Outlet with Trim Bezel**

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 12 & 13)**.** 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 13). Refer to page 7 for revised mantle clearances. A TV should not be installed if temperatures exceed the manufacturers maximum allowable temperature.

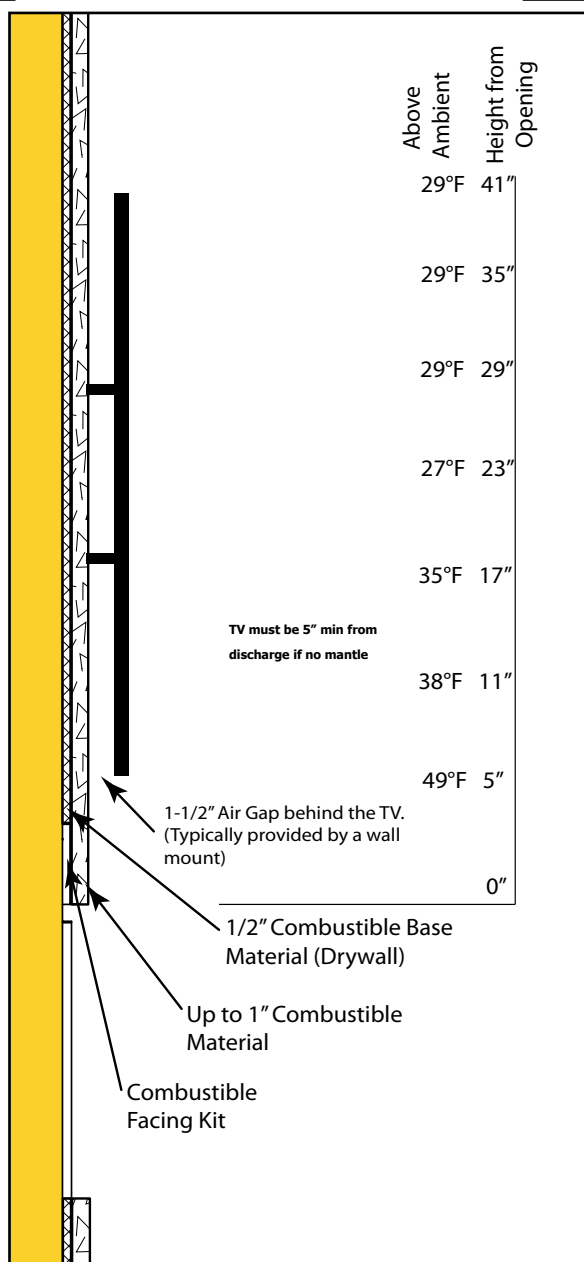**Note**: Recessed framing above the fireplace **may not** be used in conjunction with CSS.

Above Ambient	Height from Opening
29°F	41"
29°F	35"
29°F	29"
27°F	23"
35°F	17"
38°F	11"
49°F	5"
	0"

TV must be 5" min from discharge if no mantle

1-1/2" Air Gap behind the TV. (Typically provided by a wall mount)

1/2" Combustible Base Material (Drywall)

Up to 1" Combustible Material

Combustible Facing Kit

Figure 12. CSS - TV Clearances

Above Ambient	Height from Opening
29°F	41"
21°F	35"
21°F	29"
24°F	23"
17°F	17"
20°F	11"
30°F	5"
	0"

Min. 2-1/2" (6.4cm)

Min. 2" (5cm) Gap

4" Mantle 29" from floor

1/2" Combustible Base Material (Drywall)

Up to 1" Combustible Material

Combustible Facing Kit

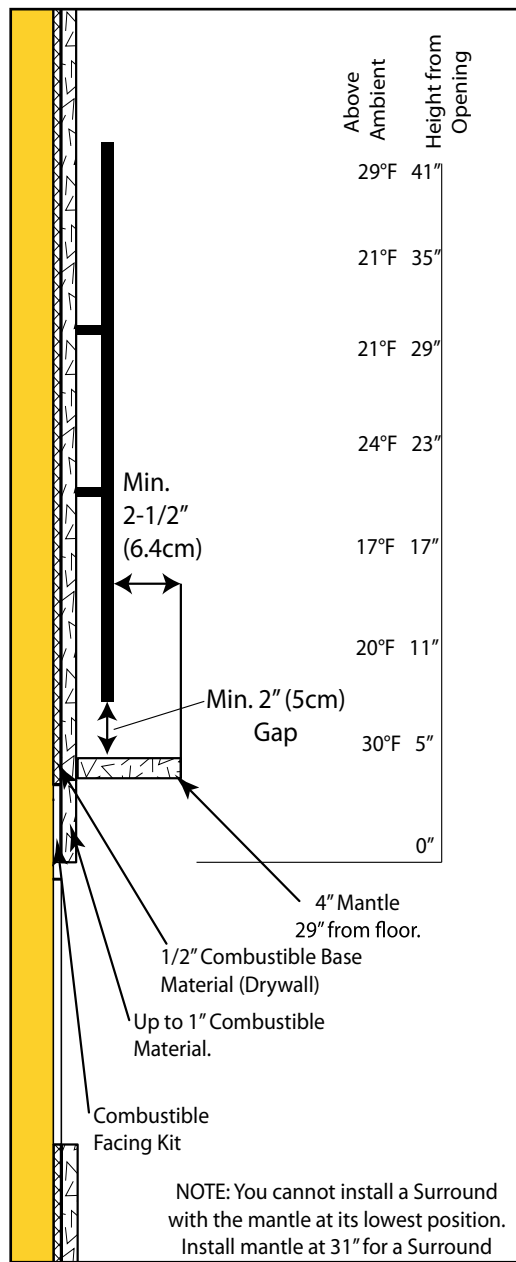NOTE: You cannot install a Surround with the mantle at its lowest position. Install mantle at 31" for a Surround

Figure 13. CSS - TV Clearances

Installation

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 14). 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.
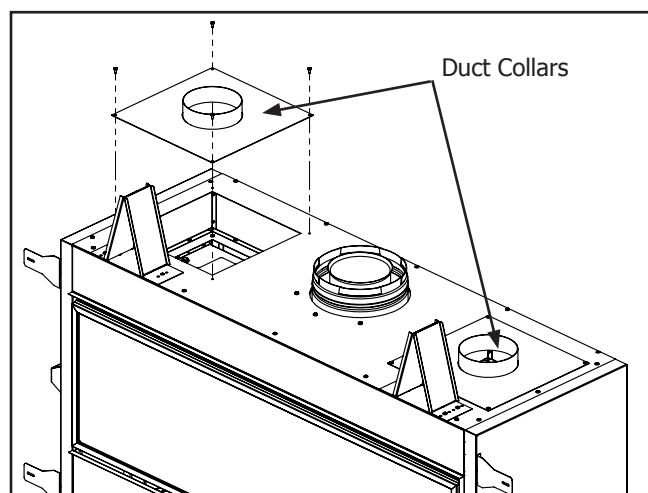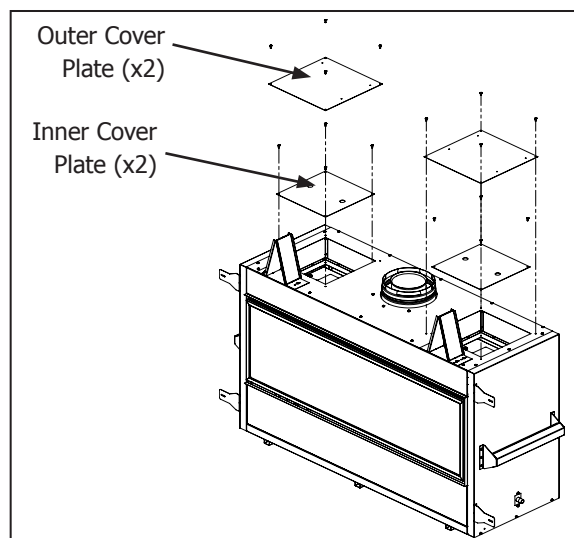
Outer Cover Plate (x2)

Inner Cover Plate (x2)

Figure 14. Cover Plate Removal

Step 2: Attach the supplied duct collars to the top of the cabinet as shown (Figure 15). Secure the collars by re-using the eight (8) screws saved in the previous step.

The fireplace is now CSS ready!

Duct Collars

Figure 15. Duct Collars Installed

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 16.

Using a T20 screwdriver and the supplied screws 6 screws (3 per side), attach the left support as shown in figure 16. Repeat for the right side support.
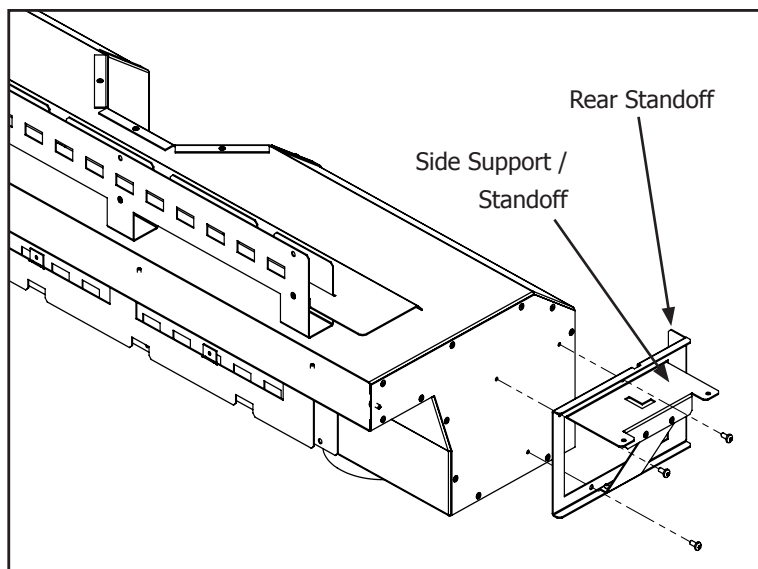
Rear Standoff

Side Support / Standoff

Figure 16. CSS - Side Supports

Installation

COOL SURFACE SYSTEM - FRONT VENT:

Step 1: Frame in the rough opening for the CSS as shown in Figures 5 & 6 (Pages 4,5) 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 16).

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 18).

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.
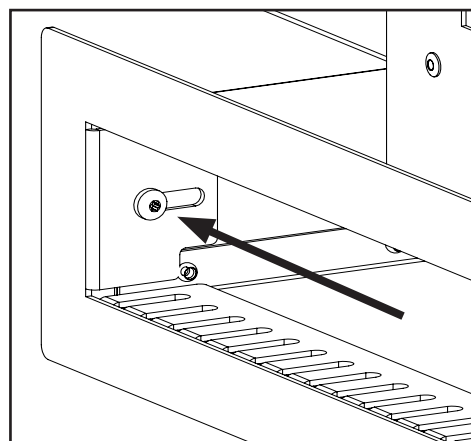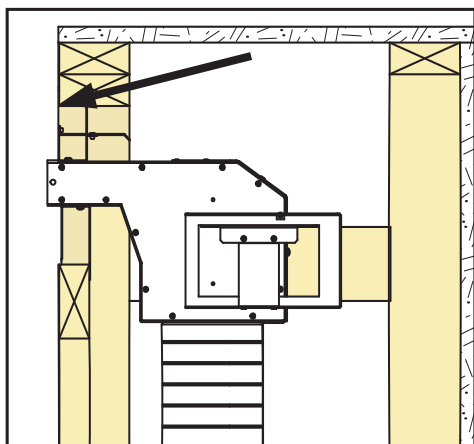

Figure 17. Outlet Trim Bezel Screw

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

Figure 18. CSS - Top Standoff

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)

QUALIFIED INSTALLERS ONLY

NOTE: If using the Combustible Facing kit, skip to end of page and install it now before proceding 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 ¼" (6.4 mm) standoff between the back side of the Bezel and finished wall (Figure 19).

$\frac{1}{4}$" (6.4 mm)

Figure 19. 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.

Retreive the trimable defelctor. 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. As shown ins Figure 20
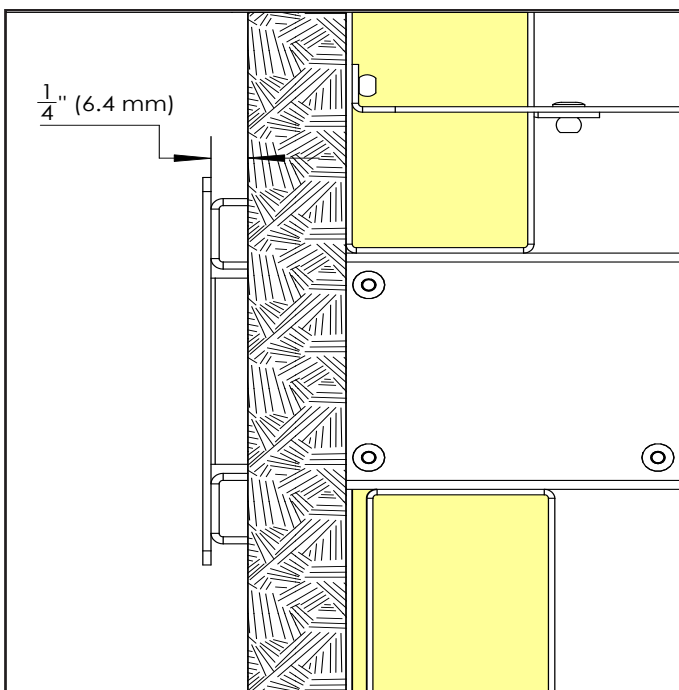

Figure 20. Trimmable Deflector trim notches
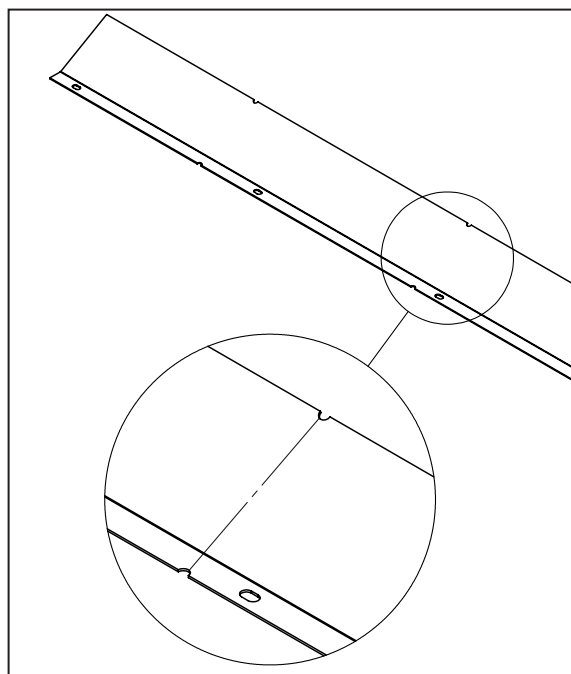
Installation

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 21 below. Bend these flanges inwards 90deg to match the figure 21 below.
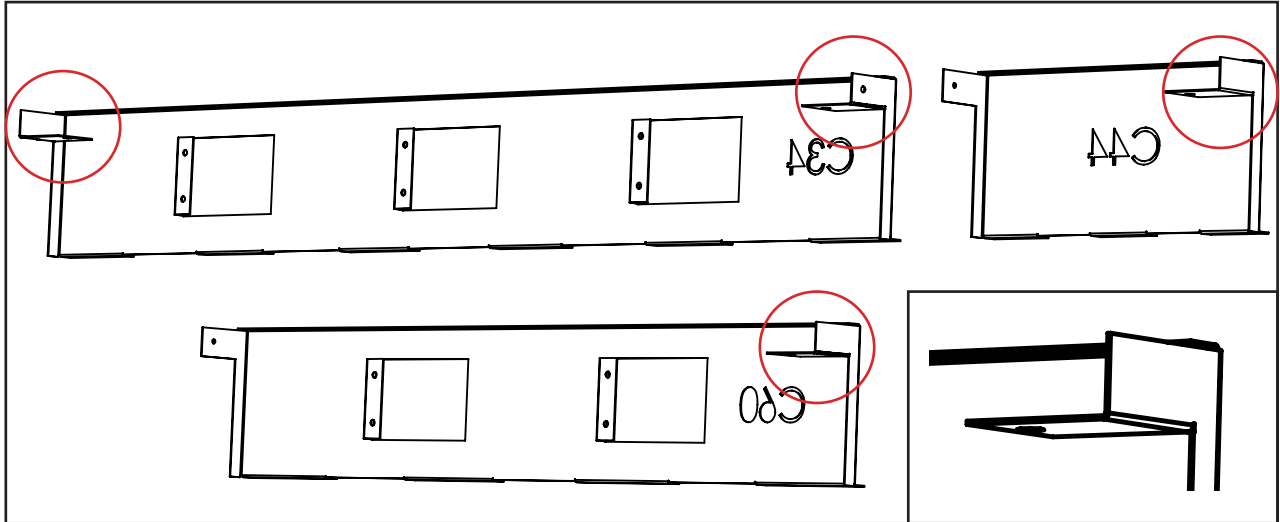

Figure 21. Rear Panel hand bent flanges

Step 3: Verify that all the hand bends shown above are bend inwards 90deg as shown in figure 21.

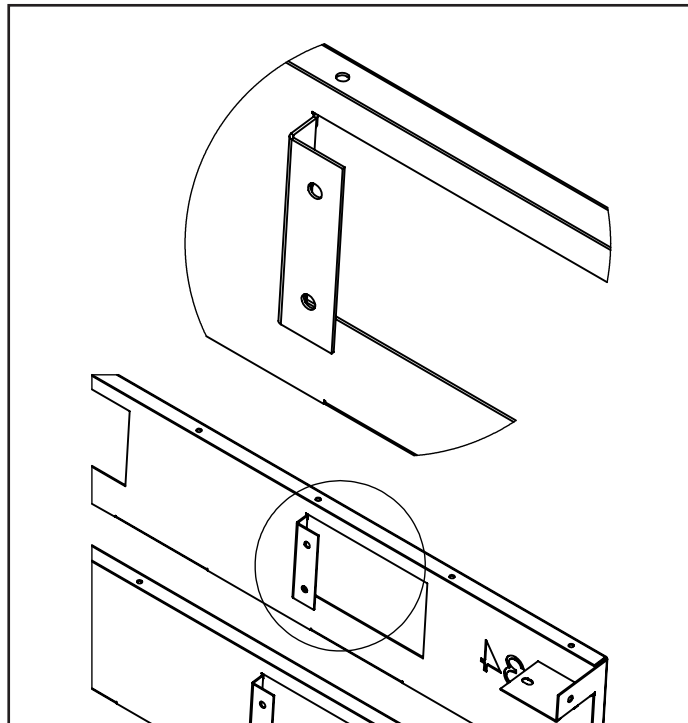**Step 4**: All the middle flanges must be bent 90deg inwards towards the unit as shown below in figure 22.

Figure 22. Rear Panel hand bent flanges

Installation

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 instalation to the unit.

Step 5: If installing a C44 or C60, attach your extension piece to the C34 main panel. (Figure 24)

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 asembly 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 23, 24)
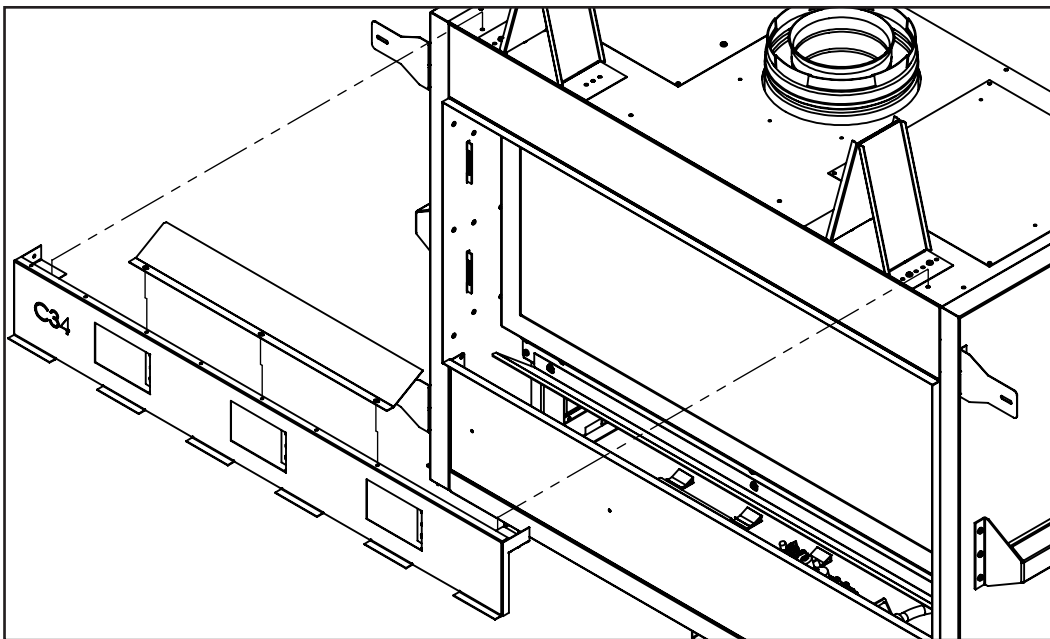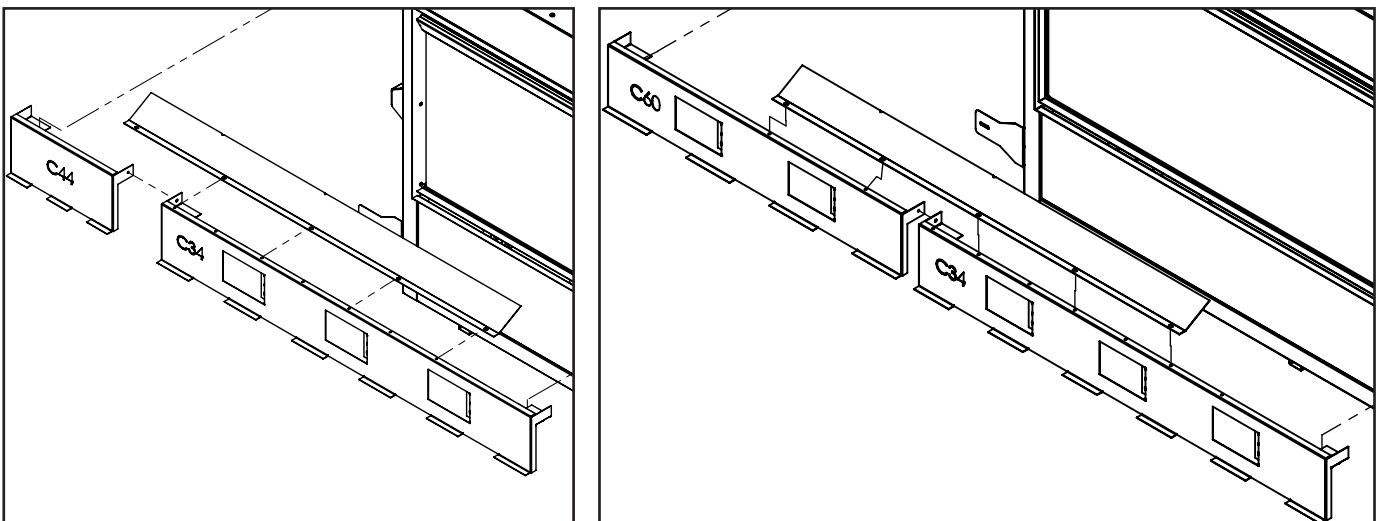
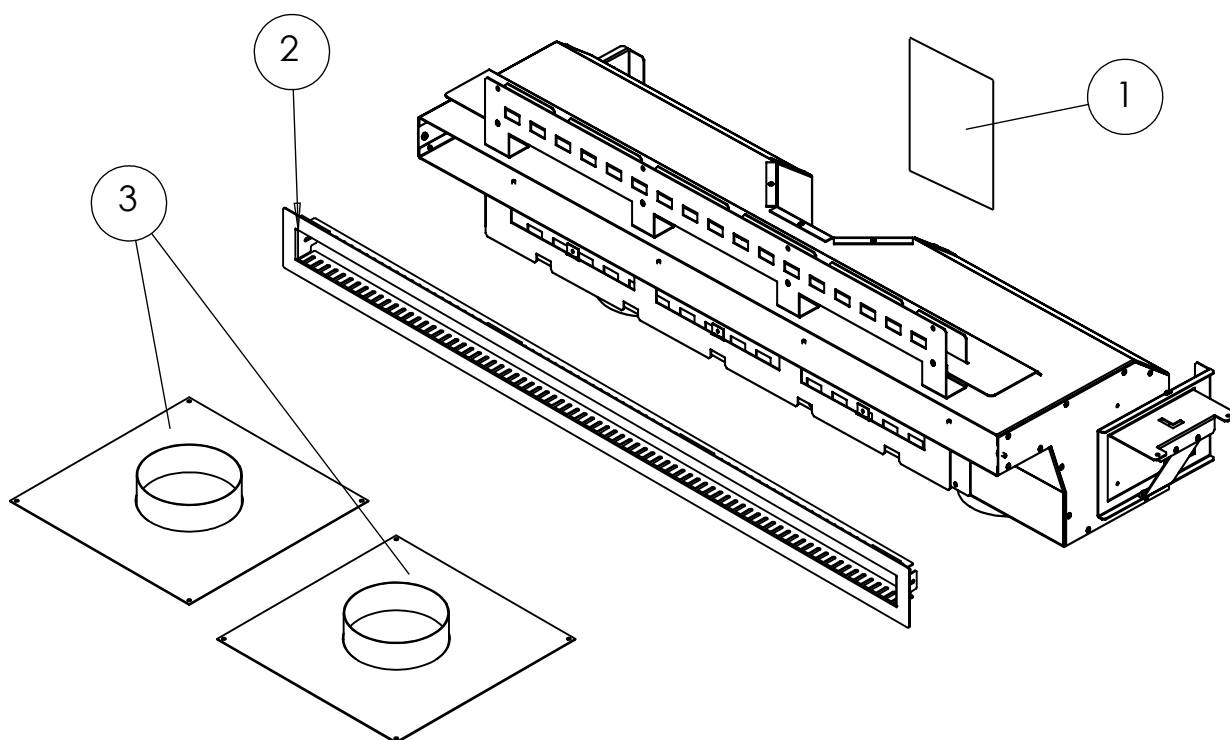

Figure 23. Combustible Panel C34

Figure 24. Combustible Panels C44 Left, C60 Right

Installation

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 25. 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

Notes

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