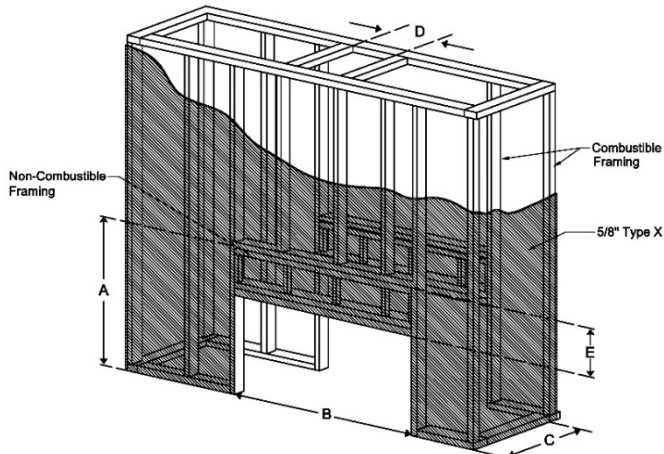


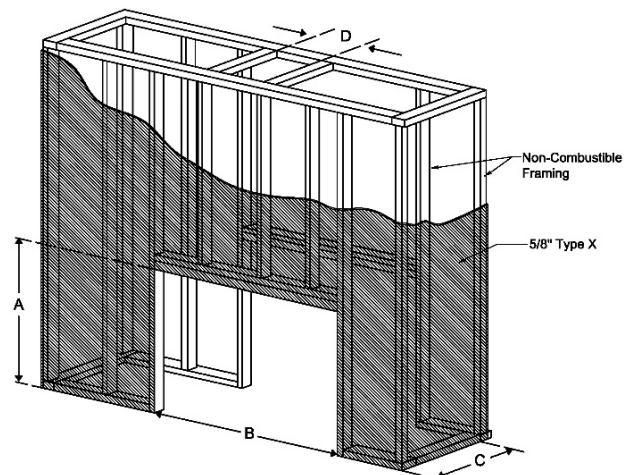
## Tunnel Series Framing

### Combustible Framing



Dimension A: Rough Combustible Framing Opening Height  
 Dimension B: Rough Framing Opening Width  
 Dimension C: Framing Depth  
 Dimension D: Firestop Opening  
 Dimension E: Non-combustible Framing Zone

### Non-Combustible Framing



Dimension A: Rough Framing Opening Height  
 Dimension B: Rough Framing Opening Width  
 Dimension C: Framing Depth  
 Dimension D: Firestop Opening

**⚠ WARNING – MAINTAIN AIR FLOW CLEARANCE: Firebox top vent must have minimum 4" of clearance to any material achieve sufficient airflow. Failure to do so could result in improper fireplace operation, property damage, or physical injury.**

Model	Framing	Dimension A	Dimension B	Dimension C	Dimension D	Dimension E
40H70 TN	Combustible	55 <sup>3</sup> / <sub>8</sub> "	24 <sup>5</sup> / <sub>8</sub> "	18 <sup>7</sup> / <sub>8</sub> "	Refer to pipe manufacturer's firestop dimensions	14 <sup>3</sup> / <sub>8</sub> "
	Non-Combustible	41"				N/A
75x65 TN	Combustible	53 <sup>3</sup> / <sub>8</sub> "	38 <sup>3</sup> / <sub>8</sub> "	18 <sup>7</sup> / <sub>8</sub> "		15 <sup>1</sup> / <sub>8</sub> "
	Non-Combustible	38 <sup>3</sup> / <sub>8</sub> "				N/A
31H TN (75x65H TN)	Combustible	92 <sup>9</sup> / <sub>16</sub> "	38 <sup>13</sup> / <sub>16</sub> "	19 <sup>1</sup> / <sub>16</sub> "		13 <sup>13</sup> / <sub>16</sub> "
	Non-Combustible	74 <sup>13</sup> / <sub>16</sub> "				N/A
60x80 TN	Combustible	57"	29 <sup>3</sup> / <sub>8</sub> "	18 <sup>7</sup> / <sub>8</sub> "		14 <sup>5</sup> / <sub>8</sub> "
	Non-Combustible	42 <sup>3</sup> / <sub>8</sub> "				N/A
110 TN	Combustible	41 <sup>5</sup> / <sub>8</sub> "	51 <sup>7</sup> / <sub>8</sub> "	19"		14 <sup>1</sup> / <sub>8</sub> "
	Non-Combustible	27 <sup>1</sup> / <sub>2</sub> "				N/A
110H TN	Combustible	49 <sup>1</sup> / <sub>2</sub> "	51 <sup>7</sup> / <sub>8</sub> "	19"		14 <sup>1</sup> / <sub>8</sub> "
	Non-Combustible	35 <sup>3</sup> / <sub>8</sub> "				N/A
130 TN	Combustible	41 <sup>5</sup> / <sub>8</sub> "	58 <sup>5</sup> / <sub>8</sub> "	19"		14 <sup>1</sup> / <sub>8</sub> "
	Non-Combustible	27 <sup>1</sup> / <sub>2</sub> "				N/A
130H TN	Combustible	49 <sup>1</sup> / <sub>2</sub> "	58 <sup>5</sup> / <sub>8</sub> "	19"	14 <sup>1</sup> / <sub>8</sub> "	
	Non-Combustible	35 <sup>3</sup> / <sub>8</sub> "			N/A	
150 TN	Combustible	41 <sup>5</sup> / <sub>8</sub> "	68 <sup>1</sup> / <sub>2</sub> "	19"	14 <sup>1</sup> / <sub>8</sub> "	
	Non-Combustible	27 <sup>1</sup> / <sub>2</sub> "			N/A	
150H TN	Combustible	49 <sup>1</sup> / <sub>2</sub> "	68 <sup>1</sup> / <sub>2</sub> "	19"	14 <sup>1</sup> / <sub>8</sub> "	
	Non-Combustible	35 <sup>3</sup> / <sub>8</sub> "			N/A	
170 TN	Combustible	41 <sup>5</sup> / <sub>8</sub> "	76 <sup>3</sup> / <sub>8</sub> "	19"	14 <sup>1</sup> / <sub>8</sub> "	
	Non-Combustible	27 <sup>1</sup> / <sub>2</sub> "			N/A	
170H TN	Combustible	49 <sup>1</sup> / <sub>2</sub> "	76 <sup>3</sup> / <sub>8</sub> "	19"	14 <sup>1</sup> / <sub>8</sub> "	
	Non-Combustible	35 <sup>3</sup> / <sub>8</sub> "			N/A	
200 TN	Combustible	41 <sup>5</sup> / <sub>8</sub> "	85 <sup>3</sup> / <sub>4</sub> "	19"	14 <sup>1</sup> / <sub>8</sub> "	
	Non-Combustible	27 <sup>1</sup> / <sub>2</sub> "			N/A	
200H TN	Combustible	49 <sup>1</sup> / <sub>2</sub> "	85 <sup>3</sup> / <sub>4</sub> "	19"	14 <sup>1</sup> / <sub>8</sub> "	
	Non-Combustible	35 <sup>3</sup> / <sub>8</sub> "			N/A	
250 TN	Combustible	43 <sup>5</sup> / <sub>8</sub> "	104 <sup>1</sup> / <sub>4</sub> "	19"	14"	
	Non-Combustible	29 <sup>5</sup> / <sub>8</sub> "			N/A	

250H TN	Combustible	49 1/2"	104 1/4"	19"		14"
	Non-Combustible	35 1/2"				N/A

## Building Around the Fireplace

### Building Checklist

The following building checklist is a quick reference for a typical Ortal Built-In Series fireplace installation. This list is not exhaustive and does not supplement thorough review of the installation manual.

- Fireplace Location:** Ensure the location allows for min. 36" clearance from viewing area to combustibles and 12" to non-combustibles. Make sure a clear path is established to allow the fireplace to be safely transported to installation location.
- Venting:** Confirm vent size (either 4"x6" or 5"x8" for natural vent and 3"x5" for power vent), vent clearance (1" on sides and bottom, 3" on top), vent configuration, and termination location.
- Height from Floor:** Fireplace leg height is 9 13/16" (to bottom viewing area). Legs cannot be removed/altered. If desired viewing area location on the wall is higher than 9 13/16", a platform can be built for the fireplace to stand on.
- Chase Floor/Platform:** Fireplace can stand on the chase floor or a platform. Floor or platform must be able to bear the weight of the fireplace. It can be constructed out of wood, concrete, metal, or any other solid materials (not required to be non-combustible).
- Chase Construction:** No materials can be attached directly to the fireplace (exception: 5/8" Type X Drywall). The area of the chase interior must meet minimum chase area requirements (depending on the model). All chases require a heat release, and double glass fireplaces require and air intake (details below).
- Framing:** Adhere to minimum framing dimensions (or greater). Keep min. 2" clearance from back and sides (as applicable by model) of fireplace to any material. The first 18" above the top of the fireplace viewing area must always be non-combustible framing. Maintain min. 1/4" clearance from front face of fireplace and front metal off-set to the framing. Maintain min. 4" space between air vents at top of fireplace to any material. For recessed fireplaces, do not exceed 12" max. front overhang depth limit. No material is permitted to extend past the metal lip surrounding the fireplace viewing area to allow for glass removal.
- 5/8" Type X Drywall Requirements:** One layer of 5/8" Type X Drywall (or equivalent) must be installed on the exterior of the chase framing.
- TV/Artwork:** TV/Art must be min. 4" above top of fireplace viewing area.
- Gas Supply Line and Power Location:** Locate gas line with manual shut off according to local code. Power provided by single gang 120V outlet in same area as gas line.
- Access Panel:** Access panel highly recommended to access gas and electrical components for servicing. Depending on the model, access panel can be placed at side or back of the fireplace within 3' of the pilot. Access panel or some other form of clear access to the chase is required for power-vented fireplaces. Size recommendation: as large as possible depending on application. Min. recommended size 10"x10".
- Heat Release:** *Crucial for Cool Wall Technology.* Must start within 6" (max.) from the chase's ceiling. Heat release must meet minimum size (depending on the model) of net free air space. Height of the heat release must not exceed 1/3 of the width.
- Air Intake:** Only required for double glass heat barrier. Must be located at or below level of double glass fans. Air intake must meet minimum size (depending on the model) of net free air space.
- Finishing:** For finishes flush to the fireplace, no clearances are required. For finishes where the fireplace is recessed to the finish, maintain 1/8" from the finish to the front face of the fireplace.

## Framing

Fireplace chase may be framed with either combustible (typically wood studs) or non-combustible framing (typically metal studs). **Any framing within 18 inches from the top of the fireplace glass (viewing area) must be non-combustible.** This does not apply to the framing to the back or side(s) of the fireplace; these may be combustible.

The fireplace is non-load bearing. The framing of the fireplace chase must be designed to carry the entire weight of the wall and finish material. Surrounding material must not transfer weight to the fireplace (exception:  $\frac{5}{8}$ " Type X drywall or equivalent), or be connected in any way to the fireplace.

**No material is permitted to extend past the metal lip surrounding the fireplace viewing area. This area must be unobstructed to allow the heat barrier and inside glass panel to be removable.**

**⚠ IMPORTANT:** To ensure the glass is removable after installation, Magnetic Screw (Part #M03) under the fireplace lip must be secured tightly to the firebox and screwed in as far as possible prior to installation of framing and finish material. If the magnet is not completely screwed down into the firebox, the lip will sit ajar to the firebox, preventing glass removal.

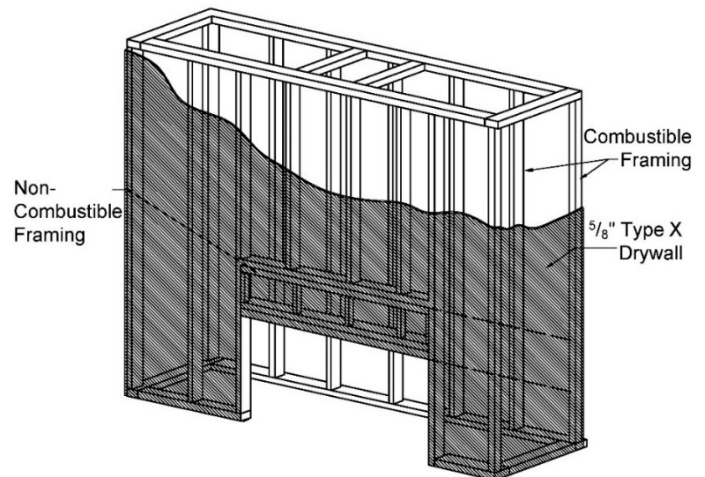
## $\frac{5}{8}$ " Type X Drywall Requirements

Exterior side (i.e., room-facing side) of the framing must be covered with  $\frac{5}{8}$ " Type X Drywall (or equivalent). Finish material is installed on top of the drywall. This applies to combustible and non-combustible framing.

Drywall is not required on the exterior portion of an insulated outside-facing wall.

$\frac{5}{8}$ " Type X Drywall may rest on the metal lip surrounding the opening of the fireplace. Drywall must not be attached to the fireplace as heat transfer from attaching materials (such as screws) can cause the drywall to crack.

**No material is permitted to extend past the metal lip surrounding the fireplace viewing area. This area must be unobstructed to allow the heat barrier and inside glass panel to be removable.**

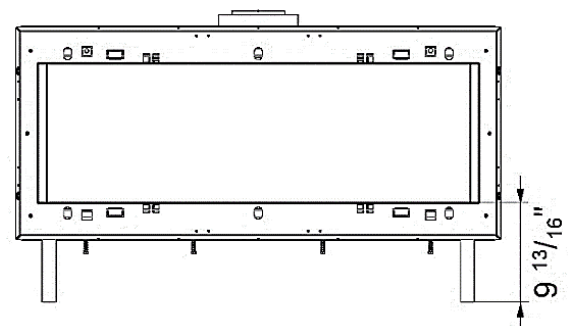


## Chase Floor/Platform

The fireplace must be installed on a flat, solid, continuous surface. Surface can be wood, concrete, metal, and other typical solid floor types. Surface material is not required to be non-combustible.

Fireplace leg height is  $9 \frac{13}{16}$ " (measured to bottom of viewing area). Legs cannot be removed, cut, or adjusted.

**Raised Platform Option:** To raise the fireplace higher than  $9 \frac{13}{16}$ " height, build a platform for the fireplace to stand on. Platform must be stable and able to bear the full weight of the fireplace. Platform can be constructed out of wood, concrete, metal, or any other solid materials. Platform material is not required to be non-combustible.



Fireplace Leg Height

**⚠ NOTE:** For fireplaces with the double glass heat barrier, an air intake might be necessary to incorporate into the platform depending on the design. See "Air Intake for a Platform" for details.

## Hearth Extension

A hearth extension is not required. Any hearth extension used is for appearance only and does not have to conform to a standard hearth extension installation requirement.

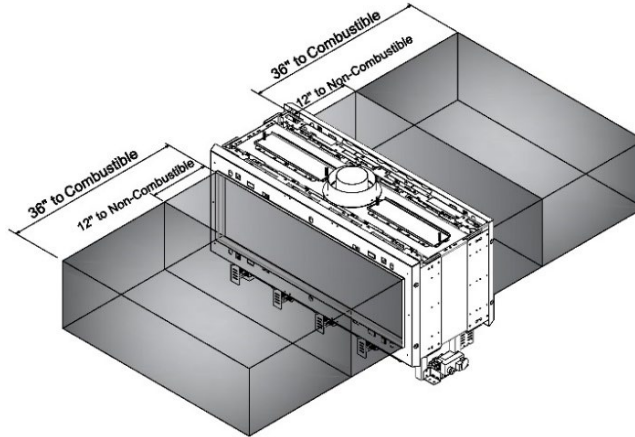
# General Clearances

## Viewing Area Clearances

The viewing area clearance zone is an area that extends perpendicular from the fireplace viewing area. The depth of the viewing area clearance zone depends on the combustibility of the material in question. Distance is measured from the fireplace heat barrier.

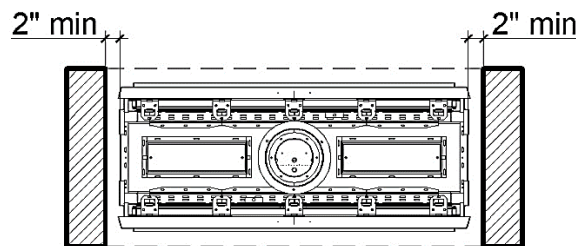
<b>Non-Combustible Materials</b>	Must be minimum <b>12 inches</b> from fireplace viewing area.
<b>Combustible Materials</b>	Must be minimum <b>36 inches</b> from fireplace viewing area.

Materials (including combustible flooring and combustible finish material) are permitted below and around the viewing area clearance zone.



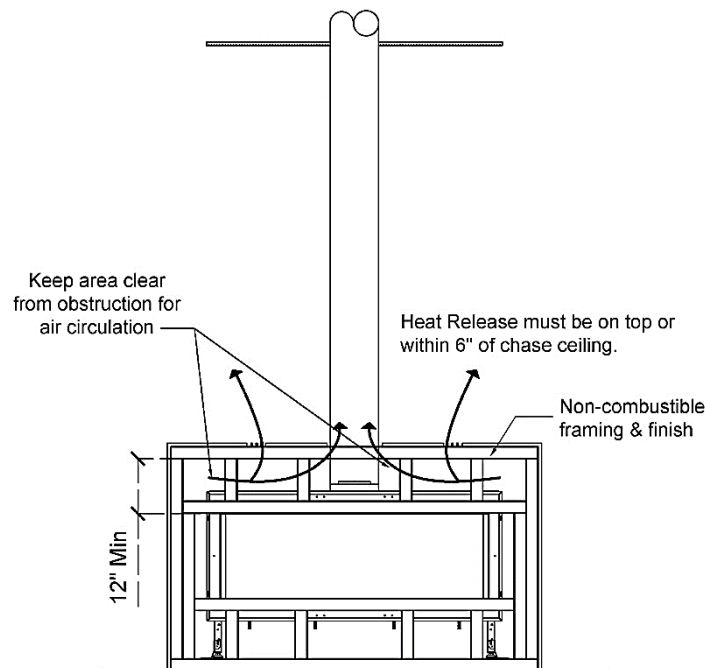
## Firebox Clearance

Maintain a **2-inch** clearance from the back and/or side of the fireplace (depending on the model) to any material.



## Clearance to Chase Ceiling

Maintain a **12-inch** clearance from the top of the fireplace viewing area to the lowest point of the ceiling or to any building materials.

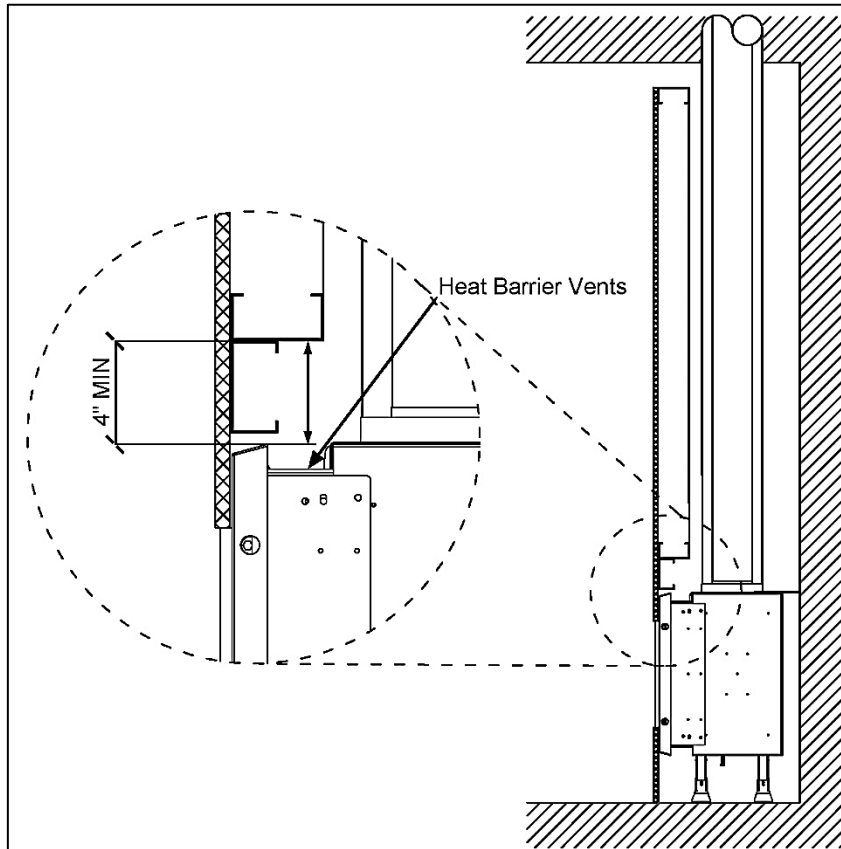


**NOTES:**

- A heat release is required for every installation, but it is not required to be split between the two sides of the chase as shown in the diagram above. It is shown in this diagram for illustrative purposes only. See the "Heat Release Requirements" section of the installation manual for details.
- Clearance around the vent pipe must be maintained (1" clearance on the sides and bottom, 3" on top).

### Air Flow Clearance

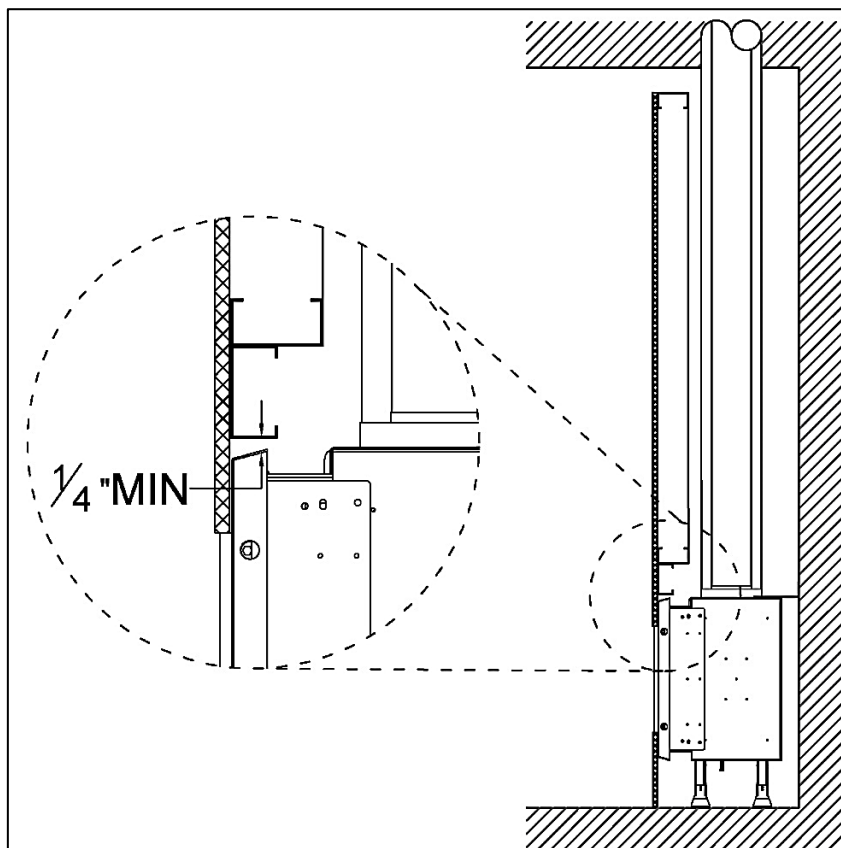
A **4-inch** clearance from the heat barrier vent openings along the top of the fireplace is required. Framing and building material is **NOT** permitted in this area. Doing so will block the vents and cause the entire surrounding to overheat.



**!** NOTE: It is acceptable if the flat stud immediately above the fireplace hangs over heat barrier vents *slightly* when using standard metal framing (as shown in diagram above).

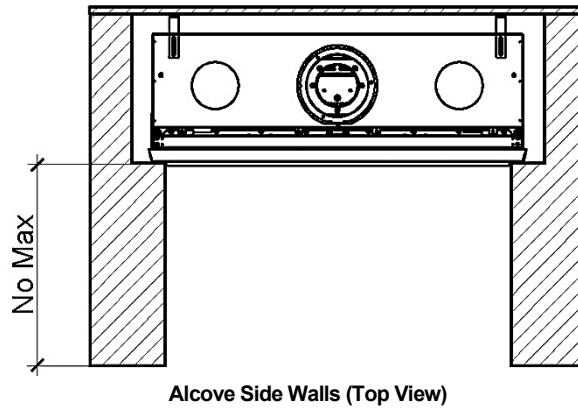
### Framing Clearance


Maintain a minimum **1/4 inches** of space between the framing and the face of the fireplace.



### ***Clearance to a Side Wall***

The fireplace viewing area is zero-clearance to a side wall. A side wall is defined as a wall that meets the viewing area at a 90° angle.



 = Building Material

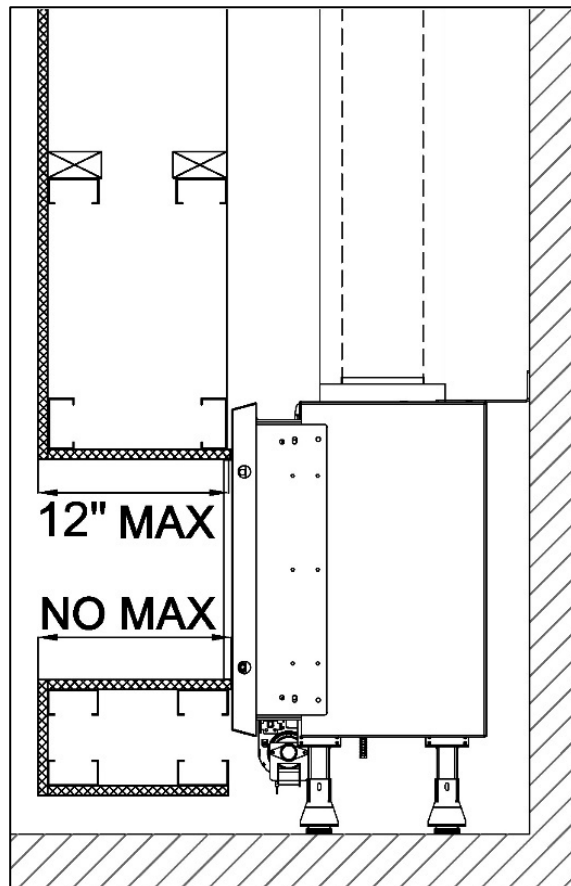
The temperature on the side wall can get as high as 150°F above ambient temperature. While the fireplace certification allows for this temperature variance, building and finish materials will have their own limitations. Consult the material manufacturer to ensure the material can safely withstand this temperature range.

This information does not apply to a wall that is constructed in front of the viewing area. For materials that will be in front of a main or side viewing area, please refer to the "Viewing Area Clearances" section.

### ***Maximum Overhang Depth***

Overhang depth of a recessed fireplace must not exceed the clearances shown in the diagram below. Overhang depth is measured from the edge of the fireplace lip to the out-most part of the wall (including finish material).

Bottom recess (or "hearth extension") has no minimum or maximum depth requirement. If bottom recess depth exceeds 12 inches, ensure the structure is capable of supporting the weight of a fireplace technician for servicing.





# Heat Release

A heat release is an opening in the fireplace chase that allows the heat inside the chase to passively circulate into an interior room. This heat is generated convectively as the fireplace heats up. It is separate from exhaust heat produced at the combustion chamber of the fireplace. For safety purposes, a **heat release is required** to keep the wall around the fireplace cool.

## Heat Release Requirements

- The heat release must be located at or near the top of the fireplace chase and **start within 6 inches (0-6 inches max)** of the chase ceiling/firestop. It can start at the chase ceiling. It can be located on the front, sides or back of the chase. It can be released into any interior space that shares a wall with the chase.
- Minimum heat release size requirement depends on heat release orientation:

Fireplace Series	Horizontal Heat Release	Vertical Heat Release
40-75	Minimum 50 sq. in. of free air space	Minimum 65 sq. in. of free air space
110-130	Minimum 120 sq. in. of free air space	Minimum 156 sq. in. of free air space
150-200	Minimum 200 sq. in. of free air space	Minimum 260 sq. in. of free air space
250	Minimum 250 sq. in. of free air space	Minimum 325 sq. in. of free air space

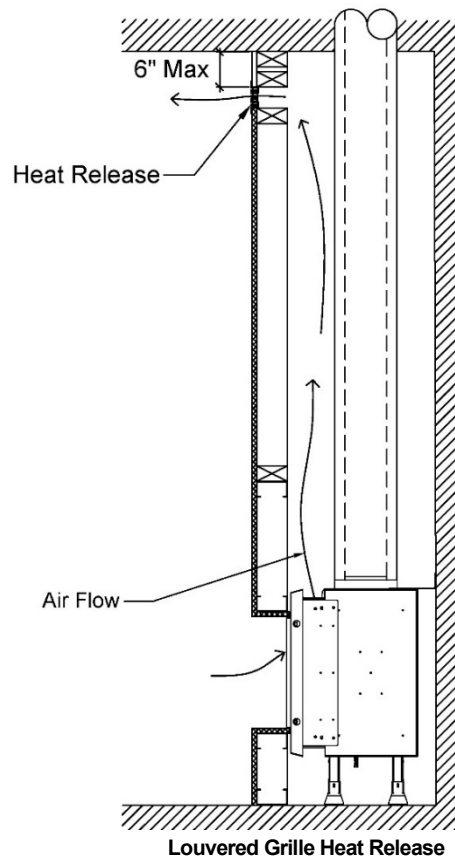
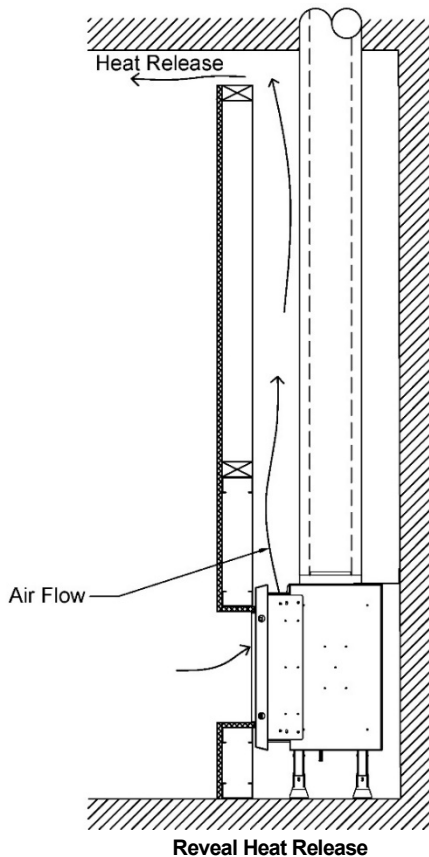
**\*Includes Built-In Curve & Island fireplaces. Heat release requirements do not apply to Stand-alone Curve & stand-alone Island fireplaces.**

- For horizontal heat releases only, the height of the heat release must not exceed 1/3 of the width. (This does not apply to vertical heat releases.)
- The space the heat release vents into must have a minimum volume of 184 ft<sup>3</sup>.
- The heat release can be in the form of (but not limited to) a louvered ventilation grille, gap, or reveal.
  - For louvered/perforated ventilation grilles, the net free air space allowed in the louvered area must be equal or greater than the minimum number of square inches required per fireplace.
- The interior area of the narrowest part of the fireplace chase (in square inches) must never be less than your required heat release size (see "Chase Area Minimum" section of the installation manual for details).
- The heat release cannot be vented outdoors or to an unconditioned space.

**NOTE: An angled heat release is not permitted.**

The following diagrams are examples of potential heat release options. These drawings serve as illustrative purposes only.

### Horizontal Heat Release



## Air Intake

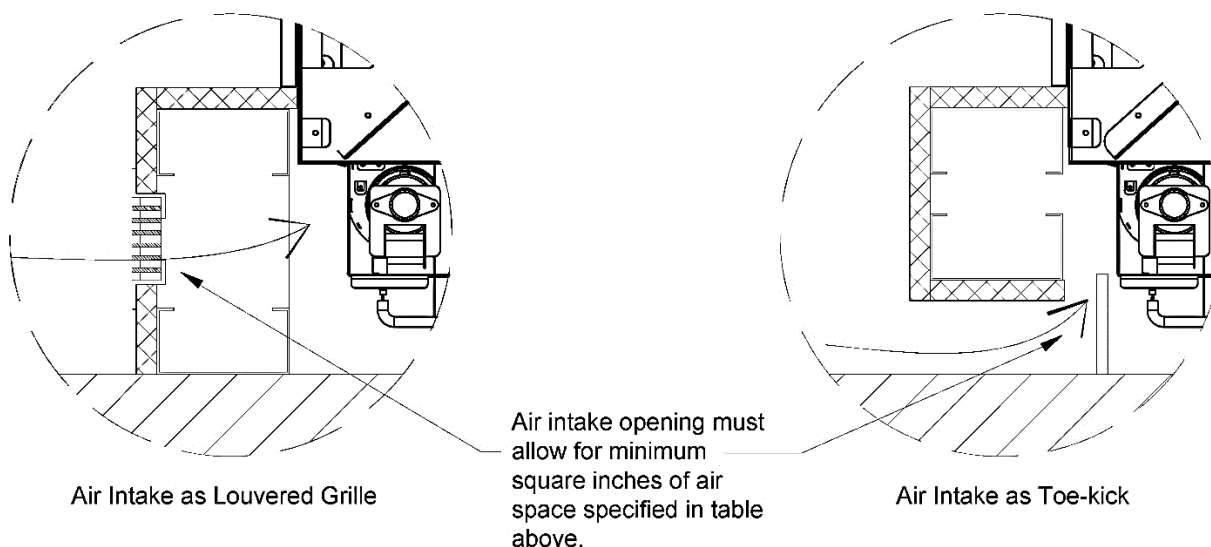
When installing a fireplace with a double glass heat barrier, it is essential to maintain cool air flow between the double glass panels. For this purpose, an opening must be provided toward the bottom of the wall to allow the double glass fans to circulate room air through the glass panels and up into the chase. This opening, called an air intake, needs to be made before closing the wall surface below the fireplace. Air intake must meet the minimum size requirement.

Fireplace Series	Air Intake
40-130*	Minimum 124 sq. in. of free air space
150-200	Minimum 200 sq. in. of free air space
250	Minimum 250 sq. in. of free air space

\*Includes Built-In Curve & Island fireplaces. Stand alone Curve & Island fireplaces have an air intake already built into the base.

The air intake can be in the form of a louvered/perforated ventilation grille, gap, or toe-kick (reveal). For louvered ventilation grilles, the net free air space allowed in the louvered area must be equal or greater than the minimum number of square inches required per fireplace.

**The entire air intake must be located at or below the level of the double glass fans.** The air intake is not required to be on the front wall of the fireplace. The air intake cannot be on a wall that allows air from outside the house directly into the fireplace chase. Air must be from a conditioned space.



## Access Panel

An access panel is not required (see notes below for exception), but it is **highly recommended**. It allows for access to the fireplace's gas and electrical components for servicing.

**NOTE:** An access panel, or some other form of clear access, is required for power vented fireplaces. For servicing purposes, the power vent control box (located at the fireplace) must be easily accessible in a way that does not require removal of the fireplace glass.

Access Panel Size and Location Recommendations:

- Minimum of 10 inches x 10 inches in size
- Located within 36 inches of the pilot to the side or back of the fireplace (see "Routing the Gas Line")

The size and location of the access panel may vary, but in all cases, it must allow the technician to comfortably access and service the fireplace's gas and electrical components. These components are attached to the pilot on a flexible gas line and can be moved within 36 inches of the pilot (located at the center front of the burner).

For ease of access, move the fireplace's gas and electrical components as close to the access panel as possible. **If there is any distance between the access panel and the gas and electrical components, the access panel size must be increased accordingly.** Prior to installation, fireplace dealers/installers should work with the owner, builder, project architects and/or interior designers to determine the best size and location of their access panel.

If an access panel cannot be incorporated, the alternative method of servicing the gas and electrical components is through the fireplace. This procedure requires removing the glass panel(s) and interior design media, and lifting the grill, burner, and bottom pressure release valve. This will increase service time and difficulty. An access panel is always preferred. Fireplace dealers/installers are advised to consult with their clients regarding the advantages and disadvantages of each service option.