

### Zero-Clearance Stand-Offs

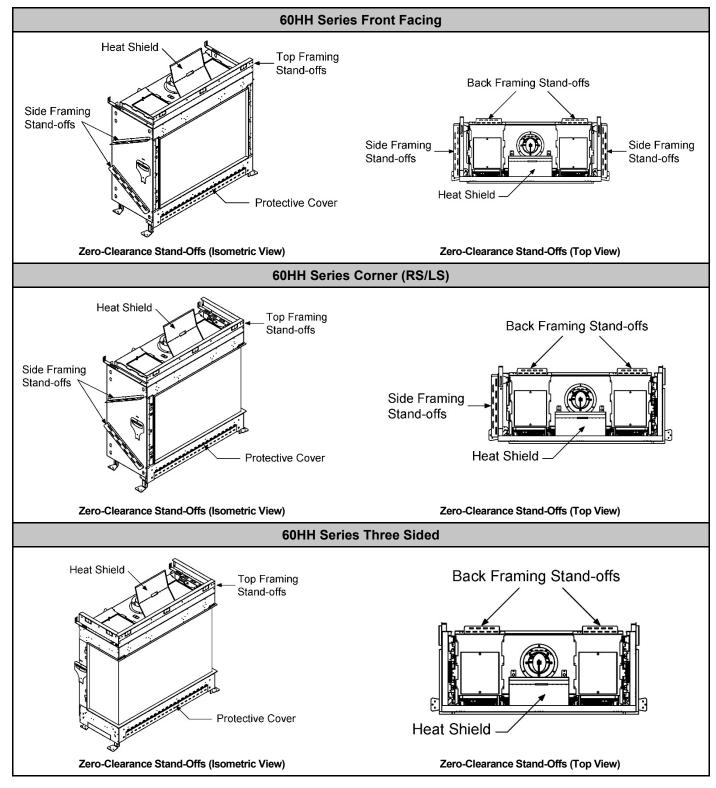
The fireplace has zero-clearance stand-offs fastened to the body of the fireplace as shown in the figures below. Stand-offs must be fully extended upon installation.

<u>Heat Shield</u>: Attached to the top front part of the fireplace. It is foldable at the attachment site on top of the fireplace and 2/3 to the top of the shield. The heat shield serves to direct the heat coming out the of the heat barrier vents at the top of the fireplace and maintains clearance to the vent pipe.

<u>Side & Back Framing Stand-offs</u>: Attached to the sides and back of the fireplace. These stand-offs keep enough distance from the fireplace to the framing to allow for proper airflow inside the chase. These stand-offs can directly touch combustible framing.

**Top Framing Stand-offs**: Attached to the front top portion of the fireplace above the glass viewing area. It keeps a clearance above the heat barrier vents on the top of the fireplace to ensure proper air flow inside the chase. The top of this stand-off can directly touch combustible framing. Any framing in front of the stand-off must be non-combustible.

**Protective Cover**: Attached under the bottom front part of the fireplace to protect the double glass fans during shipping and installation.



### **Building Checklist**

The following building checklist is a quick reference for a typical 60HH 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. 40" clearance from viewing area to furniture and other combustibles. Make sure a clear path is established to allow the fireplace to be safely transported to installation location.
- Exhaust Vent: Confirm vent size (3"x5" for Power Vent, 5"x8" for Passive Vent), vent clearance (1" on sides and bottom, 3" on top), vent configuration, and termination location.
- $\square$  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: <sup>5</sup>/<sub>8</sub>" Type X Drywall). The area of the chase interior must be min. 200 square inches at any given point within the chase.
- Framing: Adhere to minimum framing dimensions (or greater). The first 10<sup>7</sup>/<sub>16</sub>" above the top of the fireplace viewing area must always be non-combustible framing. For recessed fireplaces, do not exceed 12" max. front overhang depth limit. For Corner and TS models, side overhang has no limit. No material is permitted to extend past the metal lip surrounding the fireplace viewing area.
- ✓ <sup>5</sup>/<sub>8</sub>" Type X Drywall Requirements: One layer of <sup>5</sup>/<sub>8</sub>" Type X Drywall (or equivalent) must be installed on the exterior of the chase framing. <sup>5</sup>/<sub>8</sub>" Type X Drywall (or equivalent) may be fastened to the top framing stand-off(s) only, with 1" self-tapping drywall screws 16" on center.
- ☑ TV/Artwork: TV/Art must be min. 4" above top of fireplace viewing area for flush-mounted TVs, and 12" for TVs recessed into the wall. First 10<sup>7</sup>/<sub>16</sub>" min. above the viewing area must have non-combustible framing (top front metal stand-off + non-combustible studs).
- ☑ **Gas Supply Line and Power Location:** Locate gas line with manual shut off according to local code. Power provided by a duplex outlet receptacle (120V, 15 amp, 60Hz) in same area as gas line.

### ☑ Access Area:

- Standard For Driftwood 100-3 burner: An access panel, or some other form of clear access, is required at the power vent control box and the power vent fan box to access components for servicing. At the control box, min. size requirement is 12"x12". Min size requirement at the power vent is 18"x18".
- Optional For Driftwood 70-3 burner: An access panel is 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 feet 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. Min. horizontal heat release size is 200 sq.in. of net free air space (vertical heat release requires 260 sq.in.). Height of the heat release must not exceed 1/3 of the width.
- Air Intake: Must be located at or below level of double glass fans. Min. 200 sq.in. of net free air space.
- $\square$  **Finishes:** For finishes flush to the fireplace, no clearances are required. For finishes where the fireplace is recessed to the finish, maintain  $\frac{1}{8}$ " from the finish to the front face of the fireplace.

### Framing

### Framing Requirements

Fireplace chase may be framed with either combustible (typically wood studs) or non-combustible framing (typically metal studs). Any framing within  $10^{7}/_{16}$ " from the top of the fireplace glass (viewing area) must be non-combustible. Any framing after that point may be combustible.

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 or be connected in any way to the fireplace, with the exception of  $\frac{5}{8}$ " Type X drywall or its equivalent.  $\frac{5}{8}$ " Type X drywall may be fastened to the *top framing stand-offs only*, with 1-inch self-tapping drywall screws 16 inches on center.

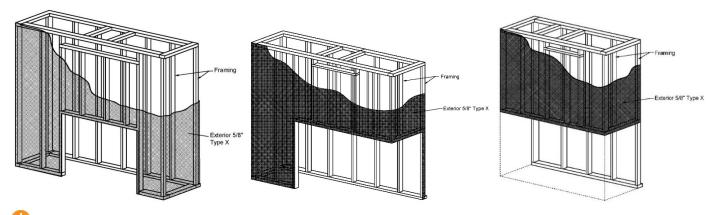
No material is permitted to extend past the <sup>5</sup>/<sub>8</sub>" deep metal drywall lip surrounding the fireplace viewing area. This area must be unobstructed to allow the heat barrier and inside glass panel to be removed.

See next page for "Framing Dimensions" section.

### <sup>5</sup>/<sub>8</sub>" Type X Drywall Requirements

Exterior of the framing must be covered with <sup>5</sup>/<sub>8</sub>" Type X Drywall (or equivalent). Chase interior does not require a layer of <sup>5</sup>/<sub>8</sub>" Type X Drywall. This applies to both combustible and non-combustible framing.

UNOTE: <sup>5</sup>/<sub>8</sub>" DensGlass® Fireguard® Sheathing is an approved <sup>5</sup>/<sub>8</sub>" Type X Drywall equivalent. This may be necessary for use with heavier finishes.



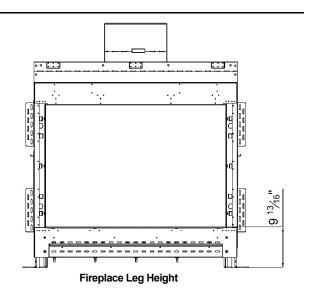
NOTE: 5/8" Type X Drywall (or equivalent) is not required on the exterior portion of an insulated outside-facing wall.

### **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  $^{13}/_{16}$ ", measured to the bottom viewing area. Legs cannot be removed, cut, or adjusted.

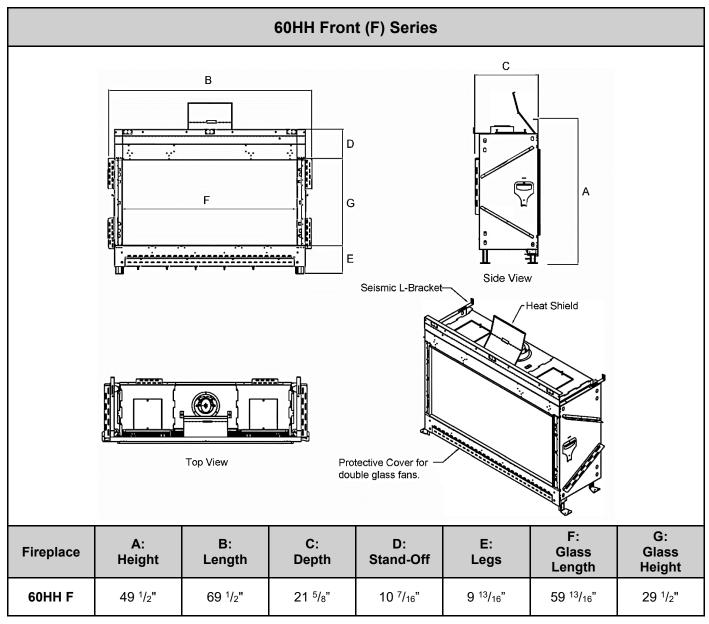
**Raised Platform Option:** To raise the fireplace higher than  $9^{13}/_{16}$ " height, build a platform for the fireplace to stand on. Platform must be stable and able to bear the full weight of the fireplace. Platform can be constructed out of wood, concrete, metal, or any other solid materials. Platform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



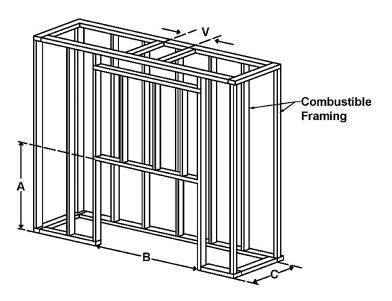
NOTE: An air intake might be necessary to incorporate into the platform depending on the platform design. See "Air Intake Platform" section on page 19 for details.

## **Framing Dimensions**

The following framing information applies to combustible and non-combustible framing material. The diagrams presented are for illustrative purposes only. There are multiple approved framing scenarios. A flush application is not the only permitted application. The fireplace may be recessed into the wall. Refer to diagrams and values below and in the following pages for details.



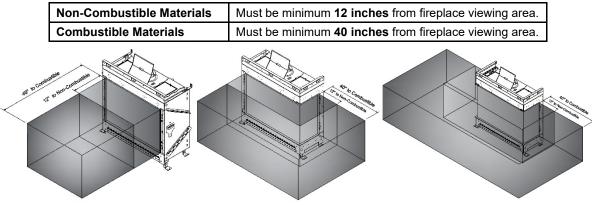
Framing	
Fireplace	60HH F
A: Height	49 <sup>1</sup> / <sub>2</sub> "
B: Length	69 <sup>1</sup> / <sub>2</sub> "
C: Depth	21 <sup>5</sup> / <sub>8</sub> "
V: Firestop	Refer to pipe manufacturer's firestop dimensions



### **General Clearances**

### Viewing Area Clearance Zone

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.

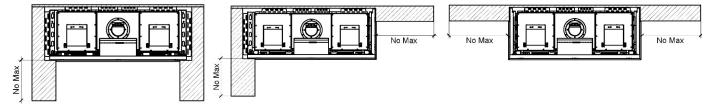


Materials (including combustible flooring and combustible finish material) are permitted below and around the viewing area clearance zone.

IMPORTANT NOTE: When placing material near the glass, take care to consider fireplace serviceability. It is strongly recommended that any items/materials placed in front of the front (long) glass be movable for easy access to the fireplace during servicing.

#### 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

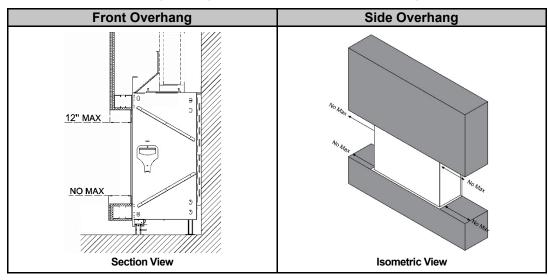
The temperature on the side wall can get as high as 150°F above ambient temperature. While the fireplace certification allows for this temperature variance, building and finish materials will have their own limitations. Consult the material manufacturer to ensure the material can safety withstand this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

#### Maximum Overhang/Mantel Depth

Overhang (aka Mantel) depth of a recessed fireplace must not exceed **12 inches**. Overhang depth is measured from the edge of the fireplace lip to the out-most part of the wall (including finish material). **Side overhang has no limit.** Finish material on the underside of the overhang may be combustible or non-combustible.

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 in the combustion chamber of the fireplace. For safety purposes, a **heat release is required** in order to keep the wall around the fireplace cool. Heat release requirements are the same for all 60HH series models.

#### 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	
60HH	Minimum 200 sq. in. of free air space	Minimum 260 sq. in. of free air space	

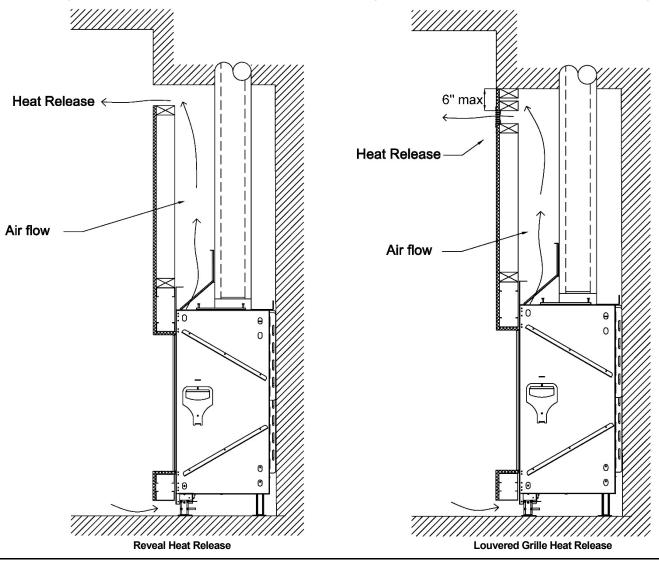
- For horizontal heat releases only, the height of the heat release must not exceed 1/3 of the width. (This does not apply to vertical heat releases.)
- The space the heat release vents into must have a minimum volume of 184 ft<sup>3</sup>.
  - The heat release can be in the form of (but not limited 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 on page 23 for details).
- The heat release cannot be vented outdoors or to an unconditioned space.

#### INOTE: 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

Note: The chase ceiling and the room ceiling are difference reference points. The chase ceiling may be lower than, equal to, or higher than the room ceiling. The heat release must start within 6" of the chase ceiling. It cannot start lower than 6" from the chase ceiling.

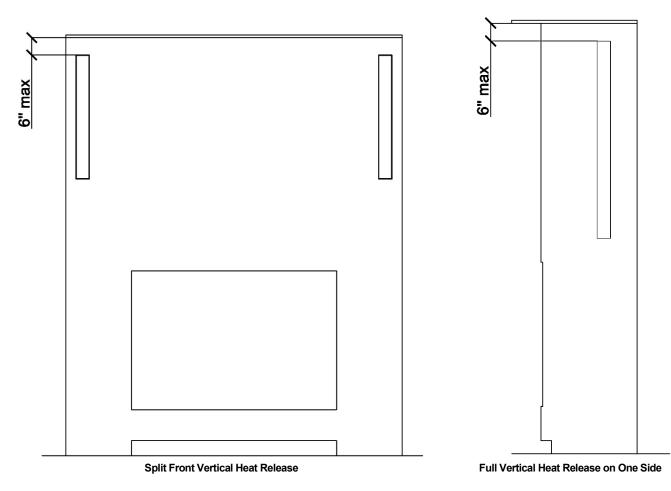


#### Vertical Heat Release: Split Front

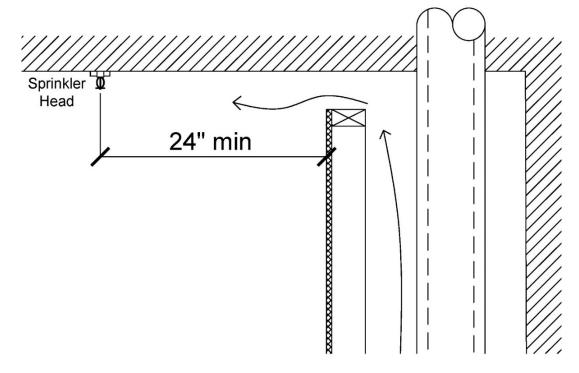
The heat release is oriented vertically and split between the two sides of the chase.

#### Vertical Heat Release: Full Side

The heat release is oriented vertically. Entire heat release is on one side of the fireplace chase.



Sprinkler Clearance to Heat Release In a situation where a sprinkler head is near the heat release, the sprinkler head must be minimum 24 inches (linear length) from every point of the heat release opening.



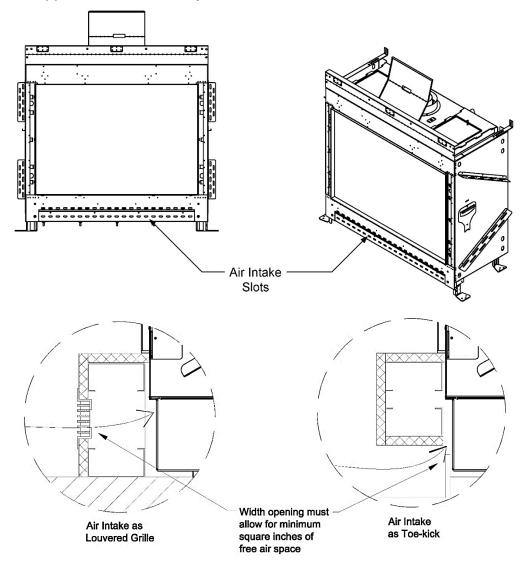
### Air Intake Opening

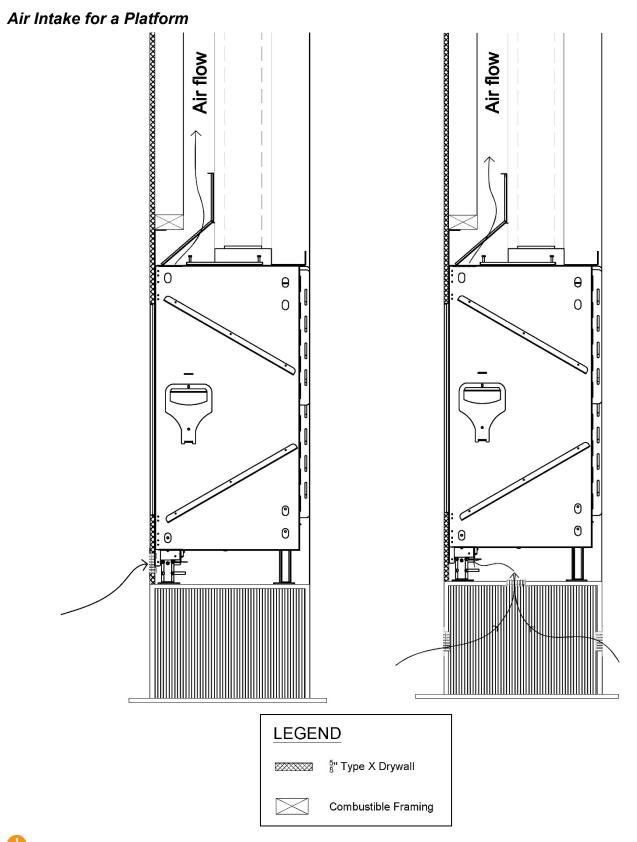
An air intake opening must be incorporated into the framing and finish around the fireplace. The air intake opening is essential to maintain cool air flow between the double glass panels by allowing the double glass fans to circulate room air through the glass panels and up into the chase. The opening must meet the minimum size requirement, as stated in the table below.

Fireplace Series	Air Intake Opening Size
60HH	Minimum 200 sq. in. of free air space

The air intake opening can be finished in the form of a louvered 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 opening 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. Air flow must be able to get to the double glass fans through the air intake slots in the protective cover(s) at the bottom of the fireplace.





IV NOTE: Please refer to the "Chase Floor/Platform" section on page 11 for details on platform construction.

### Mounting a TV/Artwork

Ortal's Cool Wall Technology is a technique that reduces the convective heat from the fireplace and prevents heat buildup inside the fireplace chase, mitigating any damage that may result from the wall reaching high temperatures. Ortal's Cool Wall system enables the option of safely installing artwork, a TV, or other similar electronic components above the fireplace by reducing the wall temperature above the fireplace.

Location	Wall Temperature
0-6 inches above fireplace	100°F - 120°F
6-12 inches above fireplace	90°F - 100°F
12 inches above fireplace	80°F - 90°F

Maintain the following general requirements to mount a TV or artwork above the fireplace and prevent heat damage:

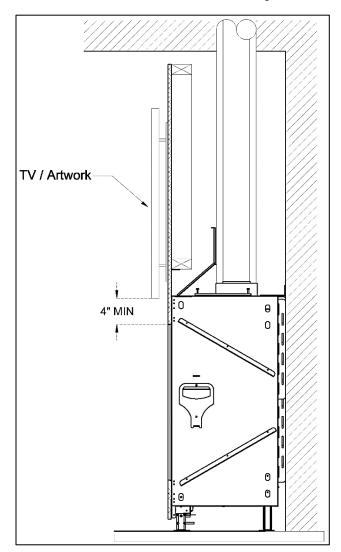
- Mount the TV or artwork at the minimum clearance above the top of the fireplace viewing area. Minimum clearance amount depends on flush or recessed installation. See sections below for more information.
- Wires inside the chase are not permitted to cross over the fireplace. Wires must be installed against a wall.

The decision to install a television above an Ortal fireplace is up to the discretion of the owner. TV and art manufacturers may specify that their product should not be installed on, near or above a heat source. Ortal will not be held liable for any adverse effects on a TV, artwork or other equipment located near the Ortal fireplace. It is the owner's responsibility to verify that their TV or artwork can withstand the wall temperatures as outlined in the above wall temperature chart.

The following diagrams can be used as a guide for customers who do decide to locate their TV and artwork above their Ortal fireplace. These drawings illustrate ways of reducing the amount of heat impact to the area surrounding the fireplace.

#### Flush Mounted TV/Artwork

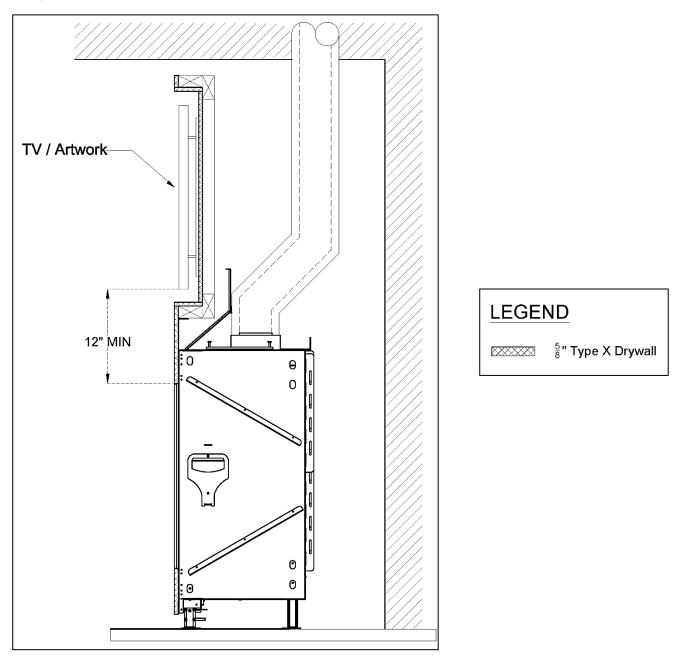
When the TV is mounted on a wall that is flush to the fireplace, the TV must be at least **4 inches** from the top of the fireplace glass viewing area. Ensure all clearances are maintained. See diagram below for details.



LEGE	ND
	$\frac{5}{8}$ " Type X Drywall

### Recessed TV/Artwork

When the TV is mounted on a wall that recesses over fireplace, the TV must be at least **12 inches** from the top of the fireplace glass viewing area.



NOTE: Vent clearances must be maintained. See "Vent Clearances" section on page 32 for details.

### **Access Area Requirements**

#### Access Area Requirements for Standard 100-3 Burner

For fireplaces with the Driftwood 100-3 burner, an access panel, or some other form of clear access, is **required** at each of the following two locations for servicing purposes:

- Power Vent Control Box
- Power Vent Fan Box

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 depending on project design needs.

#### Power Vent Control Box Access Area

#### Location

The Power Vent Control Box is connected to the rest of the fireplace's gas and electrical components at the fireplace. These components are movable and can be located within **36 inches of the pilot** to the side or back of the fireplace (see "Routing the Gas Line" section on page 40).

#### Size

**Minimum** recommended access area/panel size is **12 inches x 12 inches**. If there is any distance between the access area and the power vent control box, the access panel size must be increased accordingly. Access area size and location may also need to increase depending on the needs of the project and design around the fireplace. In all cases, the access panel must allow a technician to comfortably access and service the fireplace's gas and electrical components.

#### Power Vent Fan Box Access Area

#### Location

The access area for the power vent fan box must allow for easy access to the service door on the power vent fan box.

#### Size

Minimum recommended access area/panel size is **18 inches x 18 inches**. If there is any distance between the access area and the power vent fan box, the access panel size must be increased accordingly. Access area size and location may also need to increase depending on the needs of the project and design around the fireplace. In all cases, the access panel must allow a technician to comfortably access and service the fireplace's gas and electrical components.

#### Access Area Recommendations for Optional 70-3 Burner

An access panel for fireplaces with the Driftwood 70-3 burner is not required (see note below for exception), but it is <u>highly</u> <u>recommended</u>. It allows for access to the fireplace's gas and electrical components for servicing.

# **W** NOTE: An access panel at the fireplace is <u>required</u> for fireplaces with a power vent to allow access to the power vent control box for servicing.

Access Panel Size and Location Recommendations:

- Size: as large as possible depending on application. Minimum is 10"x10".
- Located within 36 inches of the pilot to the side or back of the fireplace (see "Routing the Gas Line", page 40)

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) to the side or back of the fireplace.

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.

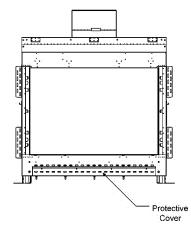
If an access panel cannot be incorporated, the alternative method of servicing the gas and electrical components is though the fireplace. This will increase service time and difficulty. An access panel is always preferred. Fireplace dealers/installers are advised to consult with their clients regarding the advantages and disadvantages of each service option.

#### INOTE: If local code requires an access panel, defer to local code requirements.

### Protective Cover for Double Glass Fans

Fireplaces with the double glass heat barrier come equipped with a bottom cover to protect the fans from damage. This protective cover blocks service access to gas and electrical components. The protective cover is installed under the front and sides of the fireplace.

The gas and electrical components are accessible in the following locations on each model (as shown in the table below).



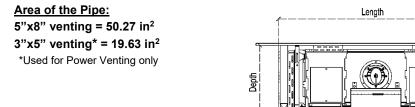
Model	Access Location			
	Right	Left	Back	Front
Front	$\checkmark$	$\checkmark$	$\checkmark$	
Left Side (LS)	$\checkmark$		$\checkmark$	
Right Side (RS)		$\checkmark$	$\checkmark$	
Three Side (TS)			$\checkmark$	

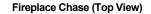
NOTE: Access location is referenced from a front elevation viewpoint.

### **Chase Area Minimum**

The narrowest part of your fireplace chase cannot be smaller than the minimum required heat release size (see "Heat Release Requirements" on page 16). This ensures the convective heat within the chase passively moves to the heat release at an optimal rate. To determine if your chase meets this requirement, use the following equation at the narrowest part of the chase.

#### Chase Area = (Chase Length x Chase Depth) – (Area of the Pipe)

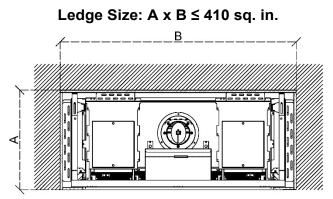




If the heat release is split into 25/75 portions due to an oversized ledge, the chase only needs to be the size of 75% of the heat release because 25% of the heat is already being released at the ledge (see "Recessed Ledge Detail" section on next page for details).

### **Recessed Ledge Detail**

A ledge over the top of a fireplace that is less than 24 inches from the top of the fireplace viewing area must maintain a minimum of **12 inches from the top of the viewing area to the top of the framing**. Entire structure must be non-combustible (framing and finish).

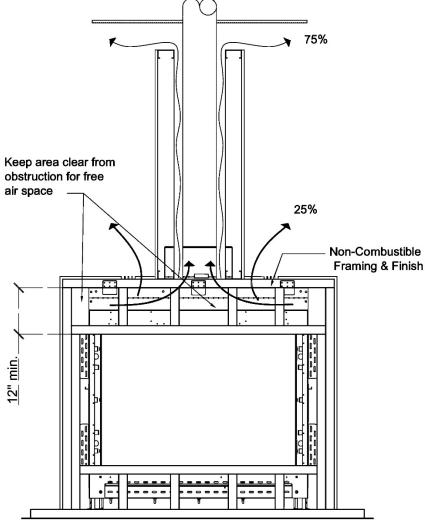


A = ledge depth, B= ledge width (Top View)

#### **Oversized Ledge**

If ledge surface area exceeds 410 sq. in., the heat release must be divided between the ledge and the chase ceiling: 25% at the ledge and 75% at the chase ceiling.

UNOTE: Chase area minimum requirements must be met throughout the entire fireplace chase. See "Chase Area Minimum" section above for details.

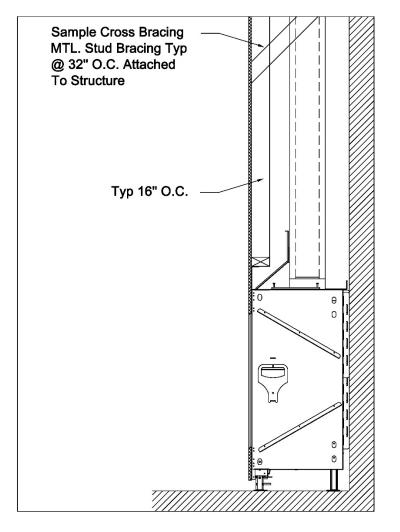


**Oversized Ledge** 

### **Structural Weight Support**

The fireplace must not carry any structural weight. The framing must be supported by another surface. Consult with the project structural engineer and refer to your local building codes for proper wall support.

The following drawing shows a recommended approach to this type of installation. Please note that these drawings are not to scale. All fireplace drawings with correct dimensions are available on the Ortal website.





⊠ Type X Drywall

### Step-by-Step Chase Construction

The following checklist is a simplified overview of typical chase construction for a 60HH series fireplace installation. This list is not exhaustive and does not supplement thorough review of the installation manual.

### Step 1

#### BUILD BACK AND SIDE WALLS

- $\square$  Frame the back and side walls according to framing requirements.
- Build the platform (if necessary) to the desired height and install inside fireplace chase.
  - 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. Material is not required to be non-combustible.

### Step 2

#### INSTALL FIREPLACE AND VENTING, RUN GAS AND ELECTRICAL

- Install the fireplace and venting. This must be completed by an authorized Ortal dealer (unless otherwise authorized by Ortal with written approval).
- Move the gas valve and receiver unit to the designated access area location. If the fireplace will not have an access area, keep gas valve and receiver unit directly underneath the fireplace.
- Run gas and electric to the gas valve and receiver unit location.

### Step 3

#### BUILD FRONT WALL

☑ Install front chase wall:

- Build front wall according to framing requirements.
- Stand up the front wall and move into place.
- Secure front wall to the rest of the chase structure.
- Cover the exterior of each wall (sides, front, and back, as applicable to your design) with <sup>5</sup>/<sub>8</sub>" Type X Drywall (or equivalent) and seal gaps with a non-combustible fire sealant.

PNOTE: 5/8" Type X Drywall (or equivalent) is not required on the exterior portion of an insulated outside-facing wall.

☑ Check to make sure constructed chase meets the requirements for heat release and air intake.

## Step 4

### APPLY FINISHES

- ☑ Apply finishes and install accessories, following all clearances and building requirements.
- Ensure furniture and other combustible materials maintain a minimum 40 inches of clearance directly in front of the fireplace viewing area for both front and side viewing areas (as applicable).

### Finishing

The following diagrams show various finish applications. Diagrams apply to both combustible and non-combustible finish material.

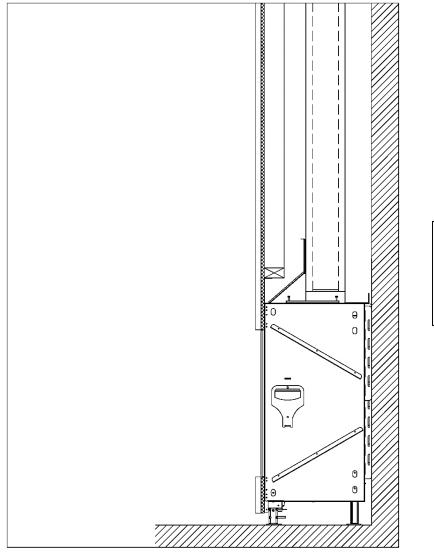
IMPORTANT NOTES:

- All recessed installations must comply with applicable maximum overhang limit and side wall clearances. See "Maximum Overhang/Mantel Depth" and "Clearance to a Side Wall" sections on page 15 for details.
- 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.
- MANUFACTURED STONE: A minimum 2-inch recess is suggested. Consult stone manufacturer for clearance requirements.
- <sup>5</sup>/8" DensGlass® Fireguard® Sheathing is an approved <sup>5</sup>/8" Type X Drywall equivalent. This may be necessary for use with heavier finishes.

WARNING: Wood finish or floor/hearth extension may dry out, crack, warp or become discolored over time. Consult with floor manufacturer for required clearances to a heat source.

### **Flush Installation**

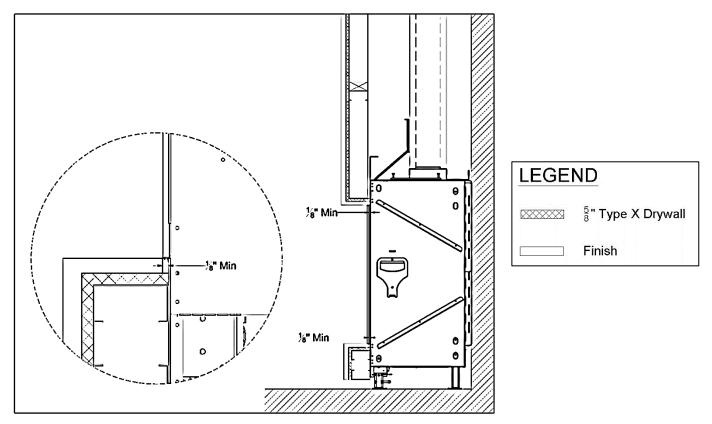
Diagram applies to both combustible and non-combustible finish material.



LEGEND		
	$\frac{5}{8}$ " Type X Drywall	
	Finish	

### **Recessed Installation**

**Diagram applies to both combustible and non-combustible finish material.** The finish must maintain at least a <sup>1</sup>/<sub>8</sub>" clearance to the fireplace to both the top and bottom recesses.



### Maximum Overhang Depth

Overhang depth of a recessed fireplace must not exceed **12 inches**. Overhang depth is measured from the edge of the fireplace lip to the out-most part of the wall (including finish material). **Side overhang has no limit.** Finish material on the underside of the overhang may be combustible or non-combustible.

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.

