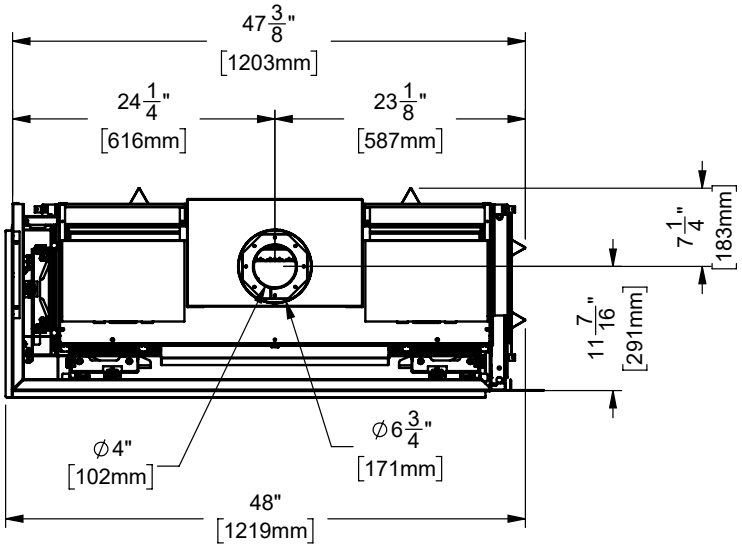
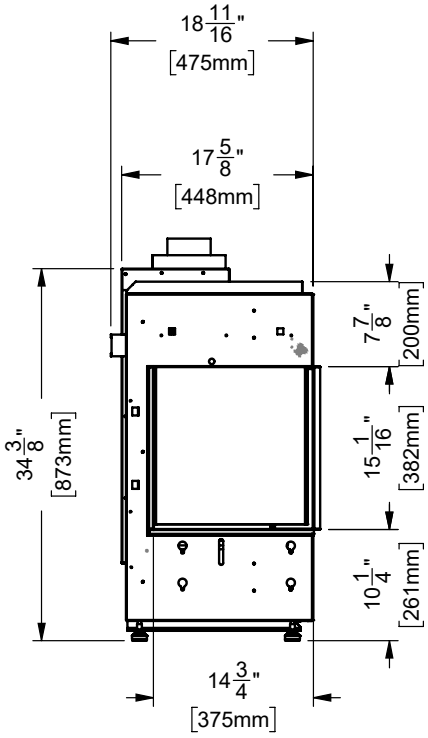
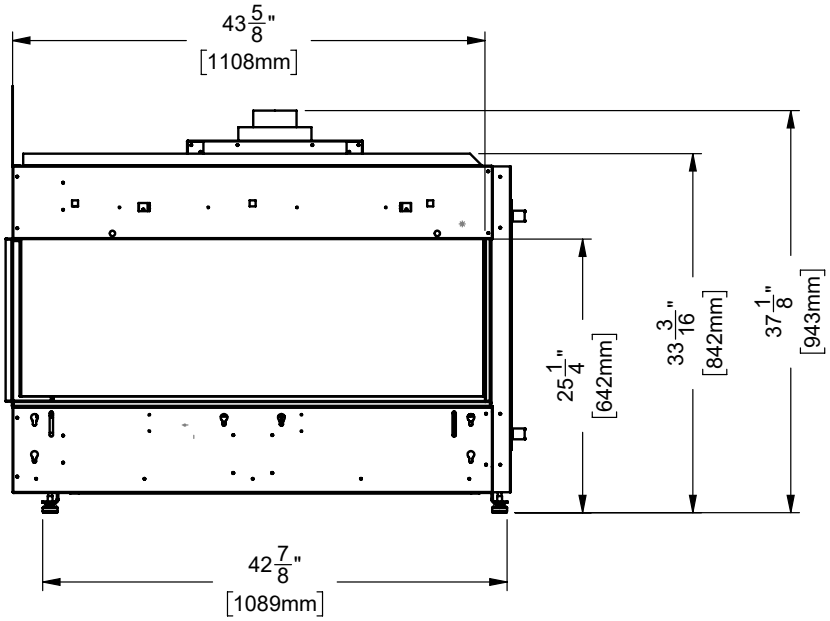
City Series CC40LE-12 Direct Vent Gas Fireplace

Model	CC40LE-NG12	CC40LE-LP12
Fuel Type	Natural Gas	Propane
Minimum Supply Pressure	5" W.C. (1.25 kPa)	11" W.C. (2.73 kPa)
Manifold Pressure - High	3.8" W.C. (0.94 kPa)	10.5" W.C. (2.62 kPa)
Manifold Pressure - Low	1.1" W.C. (0.27 kPa)	2.9" W.C. (0.72 kPa)
Orifice Size -Altitude 0-4500 ft.	#42 DMS	#53 DMS
Minimum Input Altitude 0-4500 ft. (0-1372m)	15,500 BTU/h (4.54 kW)	15,500 BTU/h (4.54 kW)
Maximum Input Altitude 0-4500 ft. (0-1372m)	28,500 BTU/h (8.33 kW)	28,500 BTU/h (8.33 kW)
Vent Sizing	4" Inner / 6-5/8" Outer	4" Inner / 6-5/8" Outer
CSA P.4.1	55.23%	56.06%







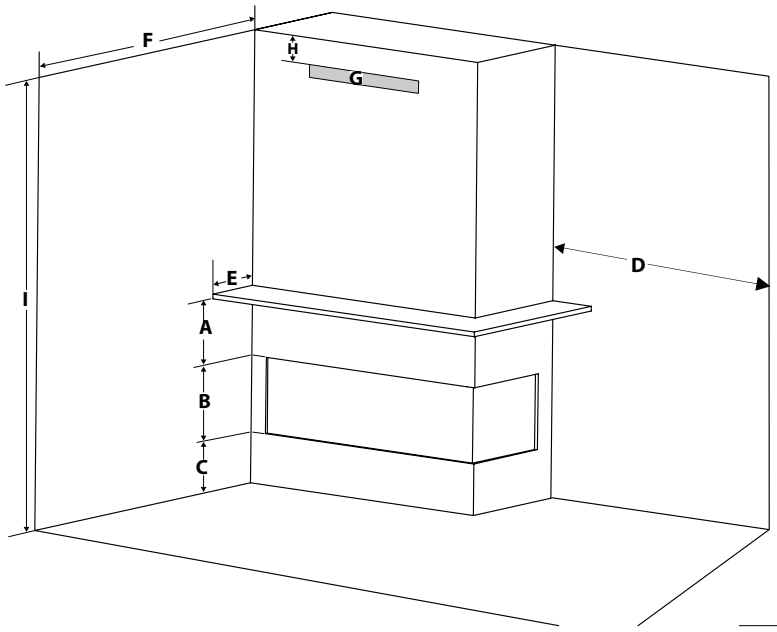
CLEARANCES

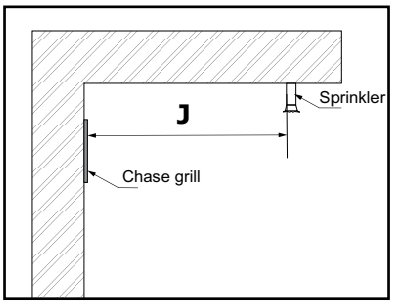
The clearances listed below are minimum distances unless otherwise stated:
A major cause of chimney related fires is failure to maintain required clearances (air space) to combustible materials. It is of the greatest importance that this fireplace and vent system be installed only in accordance with these instructions.

Clearance: single sided	Dimension	Measured From:
A: Mantel Height (min.)	**	Top of Fireplace Opening
B: Opening Height	15-1/16" (382mm)	Bottom/Top of Fireplace Opening
C: From Floor	Min. 0"	Bottom of Fireplace Opening
D: Sidewall (on one side)	Min. 36" (914mm)	Side of Fireplace Opening
E: Mantel Depth (Max.)	**	Front of Fireplace Opening
F: Alcove Depth	Min. 36" (914mm)	Front of Fireplace Opening
G: Convection Air Outlet	*	Top of Enclosure
H: Convection Air Outlet Opening Offset	0-3" (76mm)	Max. offset from top of chase enclosure
I: Chase Enclosure (Min.)	63" (1600mm)	From Base of Unit
J: Clearance to sprinkler head (Min.)	36" (914mm)	Perpendicular from chase grill
Hearth	0"	No hearth required
** See mantel clearances chart in this guide.		

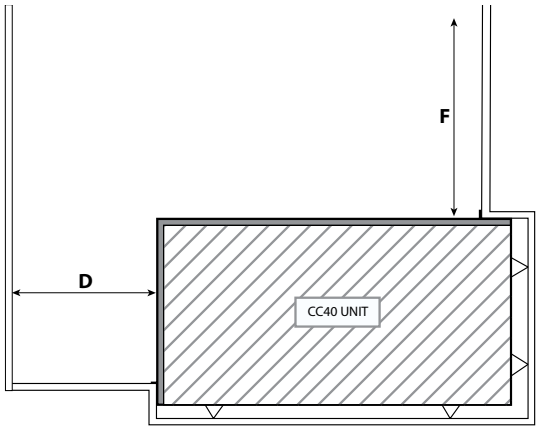
Flue Clearances to Combustibles	
Horizontal - Top	3"
Horizontal - Side	2"
Horizontal - Bottom	2"
Vertical	2"
Passing through wall/ floor/ceiling - when firestop is used.	1-1/2"

**A minimum of 120 square inches of open area, not lower than 3" from top of enclosure, required for all installations*





Side view



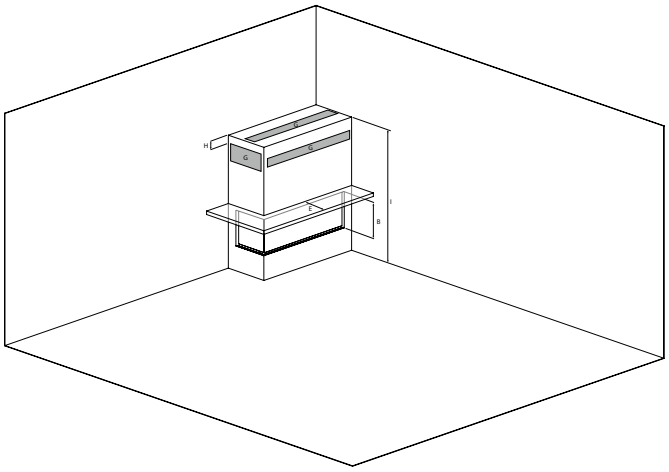
Top View Alcove

The ***HeatWave*** Duct Kit has different clearance and framing requirements, check the ***HeatWave*** manual for details.

Caution Requirements
The top, back and sides of the fireplace are defined by standoffs. The metal ends of the standoff may **NOT** be recessed into combustible construction.

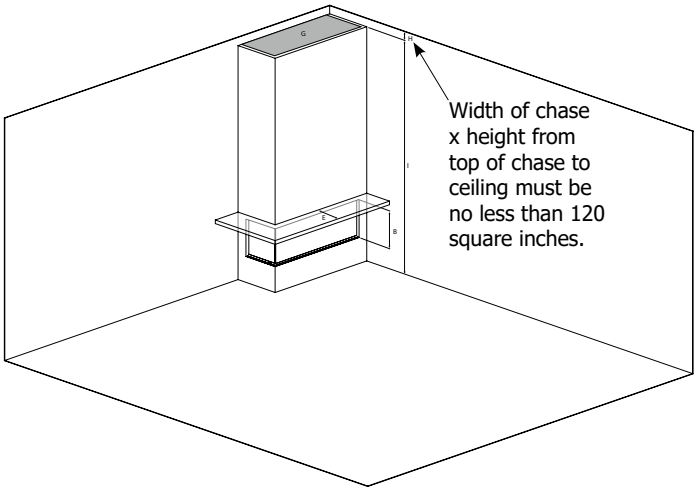
WARNING
Fire hazard is an extreme risk
if these clearances (air space) to combustible materials are not adhered to. It is of greatest importance that this fireplace and vent system be installed only in accordance with these instructions.

CLEARANCES



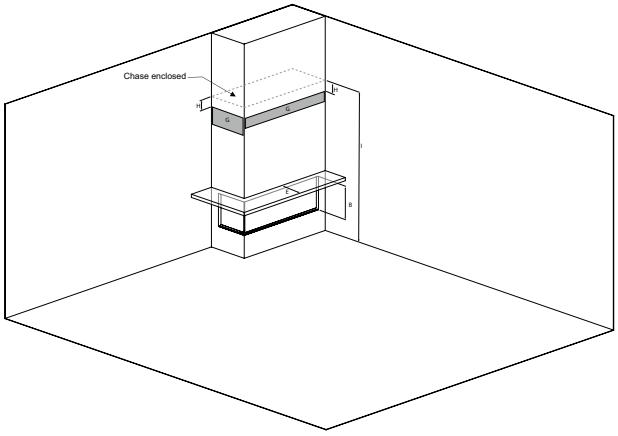
Low framing with vents in front/sides or top

NOTE: VENTILATION OPENING MAY NEVER BE ON ONE SIDE ONLY.



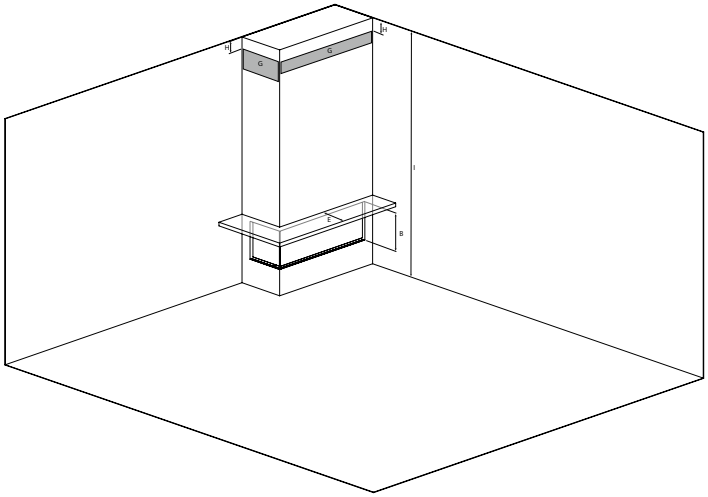
Floor to ceiling with top opening

NOTE: THE VENTILATION OPENING MAY ONLY BE PLACED ABOVE, ON SIDE/FRONT AND IN FRONT AS SHOWN ABOVE AND ON THE NEXT PAGE. VENTILATION GRILLS CAN NEVER BE PLACED BEHIND THE APPLIANCE.



Full framing with low vents in front or side/front

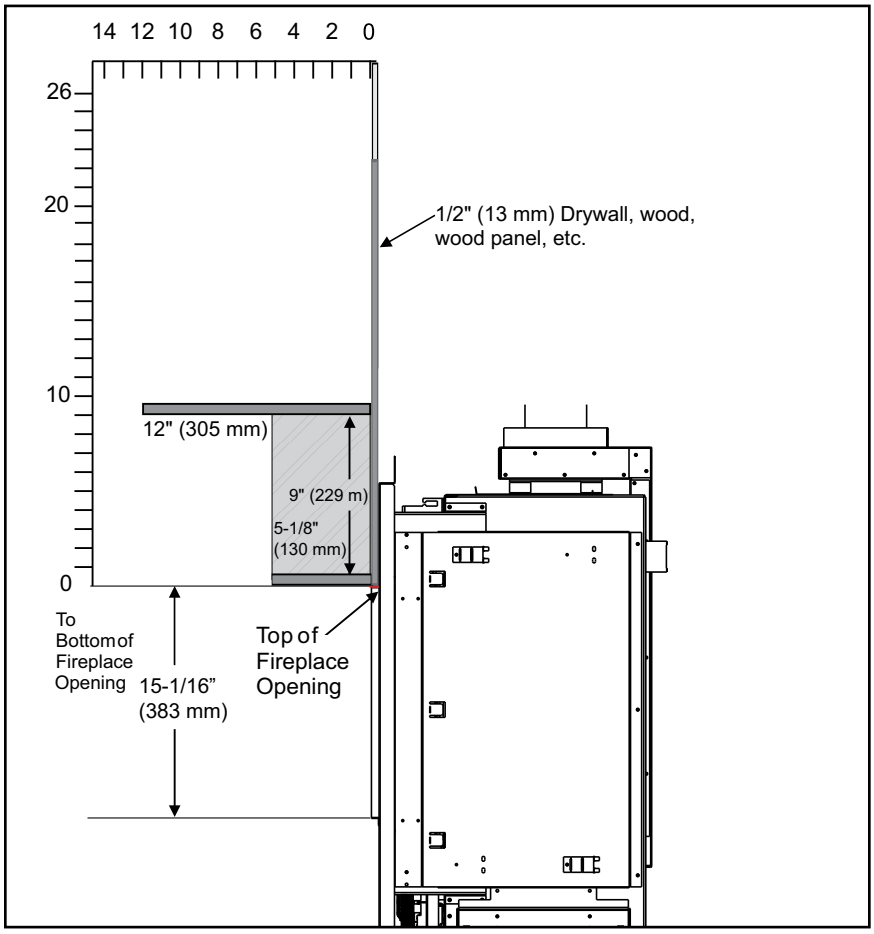
NOTE: VENTILATION OPENING MAY NEVER BE ON ONE SIDE ONLY.



Full framing with vents in front or sides

MANTEL CLEARANCES

Combustible mantel clearances from top of front facing are shown in the diagram on the right.



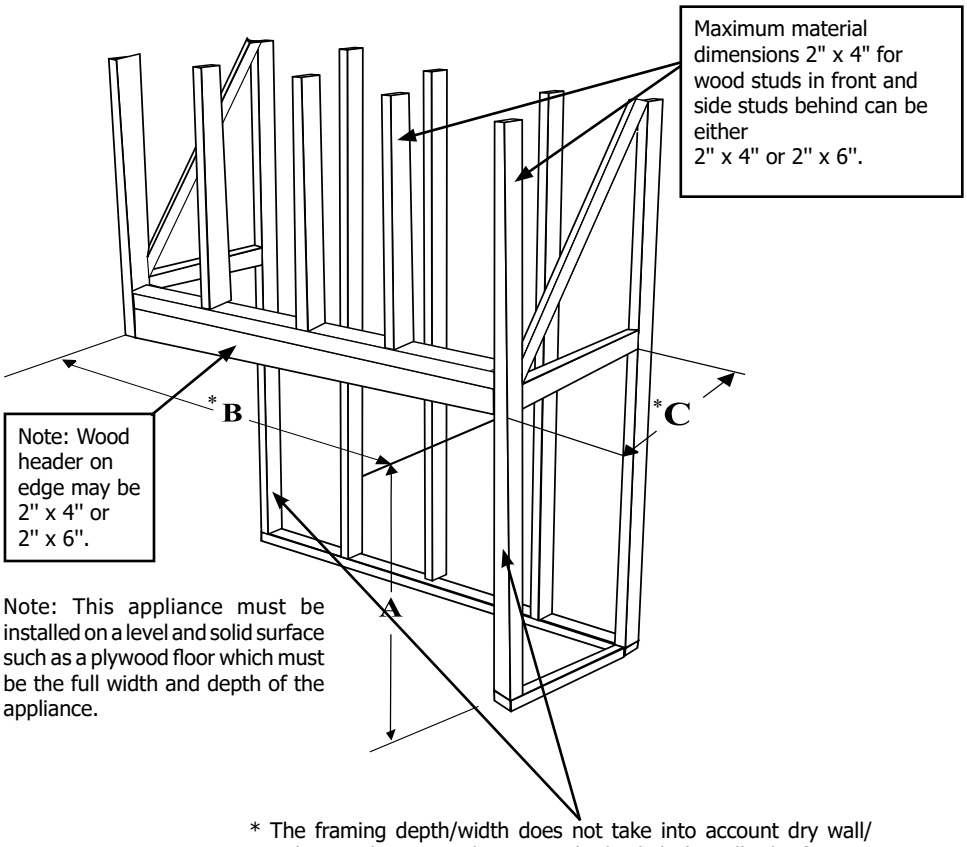
FRAMING DIMENSIONS (LEFT CORNER)

NOTE: Framing may be constructed of combustible material (ie. 2 x 4) and does not require steel studs.

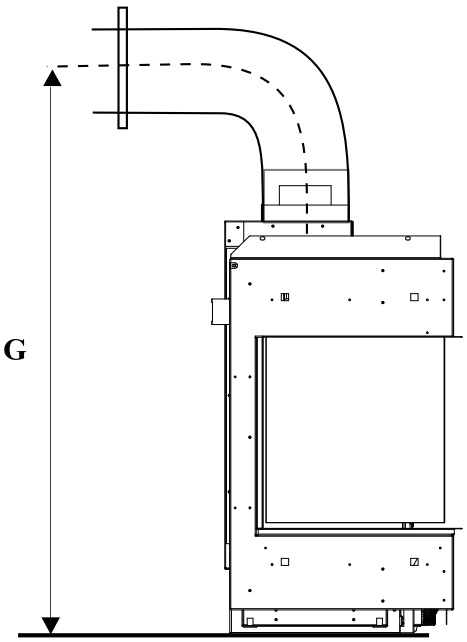
Framing Dimensions	Description	CC40LE
A	Framing Height	37-3/8" (949mm)
B*	Framing Width	48-1/4" (1226mm)
C*	Framing Depth	19" (483mm)
D	Unit Base to Top Enclosure (Min.)	63" (1600mm)
G	Vent Centerline Height	56-1/4" (1429mm)

Note: A combined minimum of 120 square inches of open area is required for the convection air outlet to cool the enclosure. Ensure clearances for Convection Air Outlets are met.
See clearances CC40LE/CC40RE (single sided) in this manual as there are different methods as to how this can be achieved.

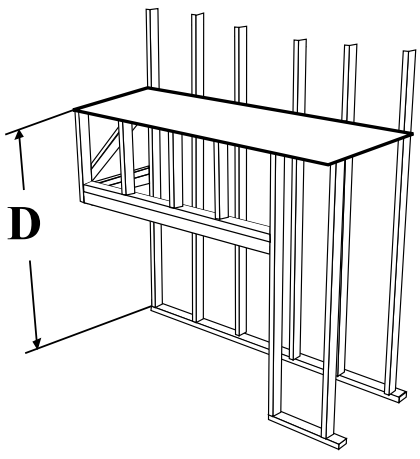
NOTE: Unit cannot be load-bearing. All finishing materials must be supported by the framing.



Note: This appliance must be installed on a level and solid surface such as a plywood floor which must be the full width and depth of the appliance.



* The framing depth/width does not take into account dry wall/ wood or similar materials against the back /side wall. The framing depth will need to change based on the thickness of the material (example: B - 48 1/4" framing width +1/2" drywall = 48 3/4") (example: C - 19" framing depth +1/2" drywall = 19 1/2")



WALL BOARD/DRYWALL INSTALLATION

WARNING! Risk of Fire! Comply with all minimum clearances to combustibles as specified.

Finishing Instructions

It is important to follow the framing and finishing instructions to ensure proper placement of fireplace into the surrounding framing/finishing materials. Wall board materials 1/2 in. thick are specified in this installation manual to properly align with the optional finishing methods offered with this appliance. The CC40LE/CC40RE may be finished to the appliance opening with 1/2 inch thick drywall.

- Ensure that the back and side clearances are maintained.

WARNING! Risk of Fire! Maintain specified air space clearances to combustibles. Inadequate air space could cause overheating and fire.

DO NOT use screws more than 3/4 inch in length on the lower access cover panel. Longer screws may penetrate gas line or damage valve or electrical components.

Note: It is acceptable to use a high temperature silicone sealant to adhere drywall to lower access cover panel.

The appliance is designed to be used with 1/2 in. wall sheathing materials such as drywall, plywood, wood composites, or non-combustible materials. Thicker materials may be used. Refer to facing and finishing details in this manual.

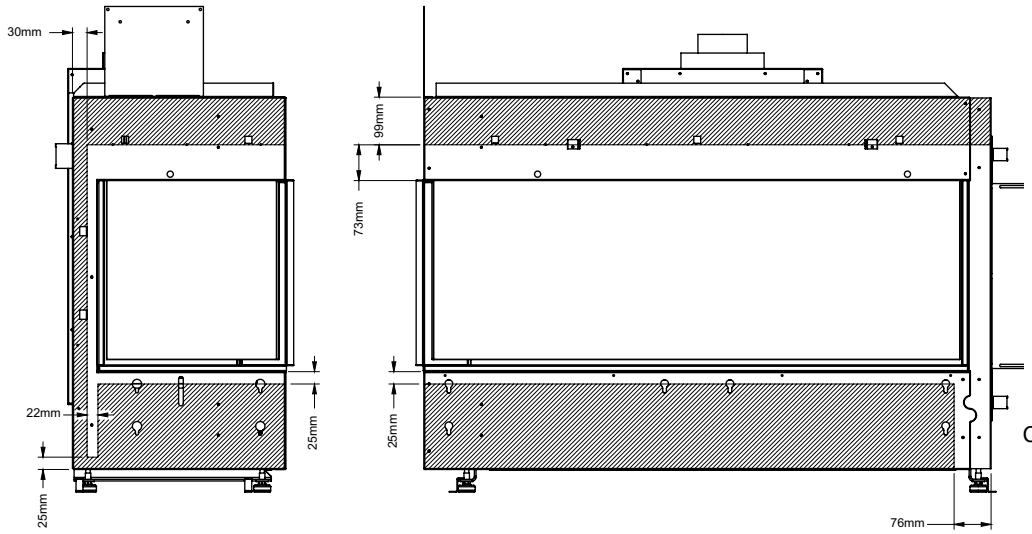
Facing Material

- Facing and/or finishing materials must never overhang into the glass opening.
- Facing materials may be combustible or non-combustible

WARNING! Risk of Fire! DO NOT apply combustible materials beyond the minimum clearances. Comply with all minimum clearances to combustibles as specified in this manual. Overlapping materials could ignite and will interfere with proper operation.

PAINTING

If desired finishing includes a painted wall, 100% acrylic latex, oil-based or standard acrylic paints may be used.
Follow paint manufacturer's instructions for paint and primer application.



CC40LE - screws in shaded area only

FRAMING AND FINISHING INSET INSTALLATIONS

1. Frame in the enclosure for the unit with framing material

Note: When constructing the framed opening ensure there is sufficient access to install the gas lines,electrical. Also the wiring harness must be wall mounted using the receptacle provided with the appliance. The wiring harness will be located on the right hand side of the appliance if facing the unit from the front. This must be done prior to any finishing.

2. For exterior walls, insulate the enclosure to the same degree as the rest of the house, apply vapour barrier and drywall, as per local installation codes. (Do not insulate the fireplace itself.)

WARNING: Failure to insulate and add vapor barriers to the inside of the exterior wall will result in operational and performance problems including, but not limited to: excessive condensation on glass doors, poor flame package, carbon, blue flames etc. These are not product related issues.

3. **IMPORTANT:**
   Exterior wall/Alcove enclosure: When installing into an exterior cavity or alcove enclosure (ceiling, back and sides), regardless of where appliance is placed within the home, requires the use of either drywall or other means such as plywood, wood studs, etc. to prevent heat from escaping anywhere above/through the enclosure other than the required grill/ventilation openings.
   Internal chase: When installing as an internal chase framing installation, regardless of where appliance is placed within the home, requires the use of either drywall or other means such as plywood, on the rear wall of the chase to eliminate heat escaping into the rear wall cavity. If the chase is extended to the ceiling ,the ceiling will also need to be finished in a manner to prevent heat escaping into floor joist/attic space. One of the following methods must be used to prevent the heat from escaping:
   a. If choosing drywall, ensure that the drywall is butt up tight with no gaps.
   b. Plywood, wood studs, etc. installed tightly with no gaps.
   As this appliance has been designed with all hot air escaping through the chase enclosure ventilation / grill openings only, if hot air is trapped as a result of the hot air escaping through joints, crevasses, open studs, or other openings within the enclosure above, this will change the clearances within the enclosure causing the enclosure to overheat. It is vital that all the hot air from within the enclosure exits through the ventilation openings only.
   Ensure that the ventilation openings are made as such to prevent debris, objects from falling into the enclosure.
   Warning: DO NOT cover or place objects in front of the ventilation opening air outlet(s).

Note that in all applications while there is a zero clearance to combustibles to the unit, all clearances to combustibles from the venting inside the chase still applies. Please see venting clearances in the specific product manual.

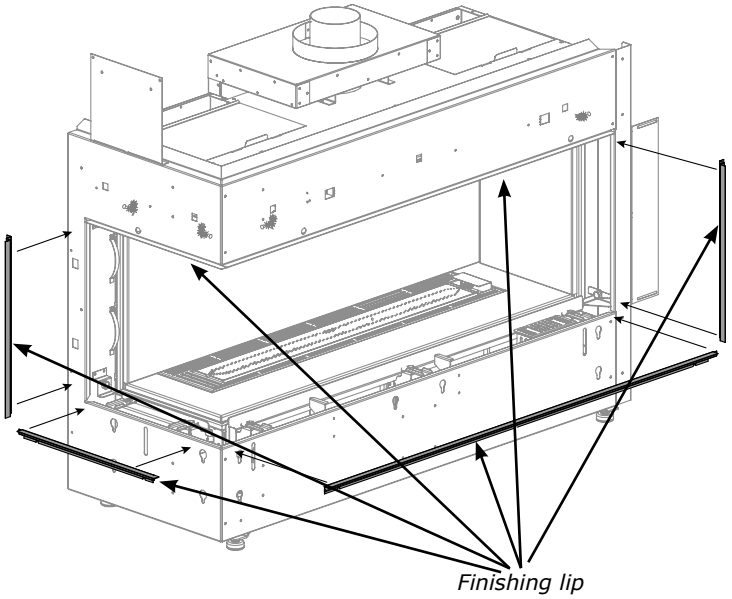
4. Combustible material (drywall, wood, wood panels, etc.) may be brought up to this appliance (top,bottom and sides)

5. Ensure that the material being used does not encroach anywhere in the area of the glass. This would cause dangerous operating conditions.

6. This appliance comes with a 1/2" lip at top, sides and bottom to hide the ends of the drywall. The 1/2" side and bottom, front and bottom side lips supplied with the appliance can alternatively be removed and replaced with J Style Trim or Metal Corner Bead purchased at your local hardware store to cover cut/exposed edges of the combustible facing material or any other finishing materials being used. Six (6) screws secure the bottom front lip. Two (2) secure the bottom side lips and 2 secure the side if deciding to remove these. These will be hidden so the outer panels (if installed) will need to be removed to access the screws. See outer panel removal in this manual.

7. This appliance can also be recessed (using combustible materials) with a hearth in front of the appliance. This can also extend to the top.

8. The wall behind the unit must be closed off.

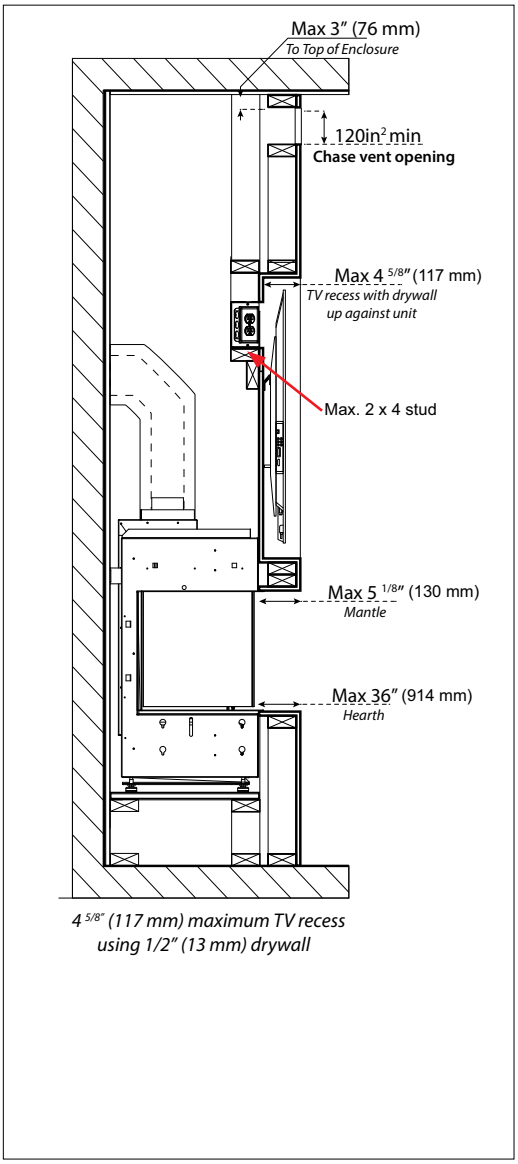


Note: an offset screwdriver is provided with the appliance for ease of removal/ installation.

**Combustible material may extend a minimum of 1/2" and to a maximum of 5-1/8" (130mm) from the Front top. See mantle clearance chart for details. The base and side (with smaller glass) have no limit when it comes to how far the combustible material may extend out from the appliance. Ensure that no material encroaches anywhere in the area of the glass as these are defined by the finishing lip above, below and to the sides of this appliance.

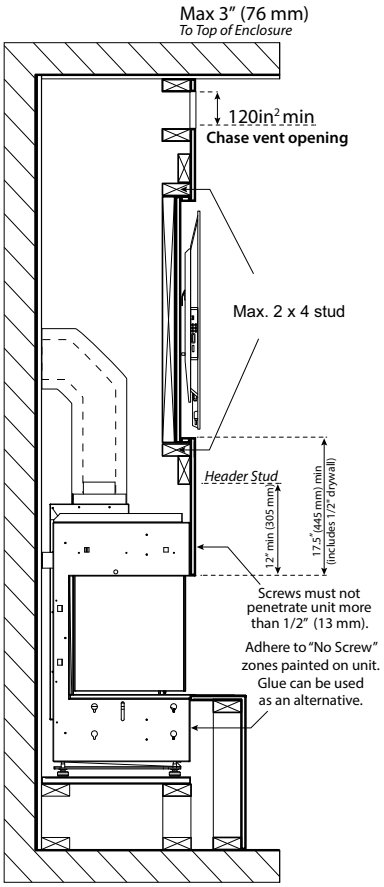
TV RECESSED INTO WALL- TYPICAL INSTALLS

MAXIMUM TV RECESS



4 5/8" (117 mm) maximum TV recess using 1/2" (13 mm) drywall

TV FLUSH WITH HEARTH



Flush wall TV recess using 1/2" (13 mm) drywall

VENTING INTRODUCTION

The CC40LE uses the "balanced flue" technology Co-Axial system. The inner liner vents products of combustion to the outside while the outer liner draws outside combustion air into the combustion chamber thereby eliminating the need to use heated room air for combustion and losing warm room air up the chimney.

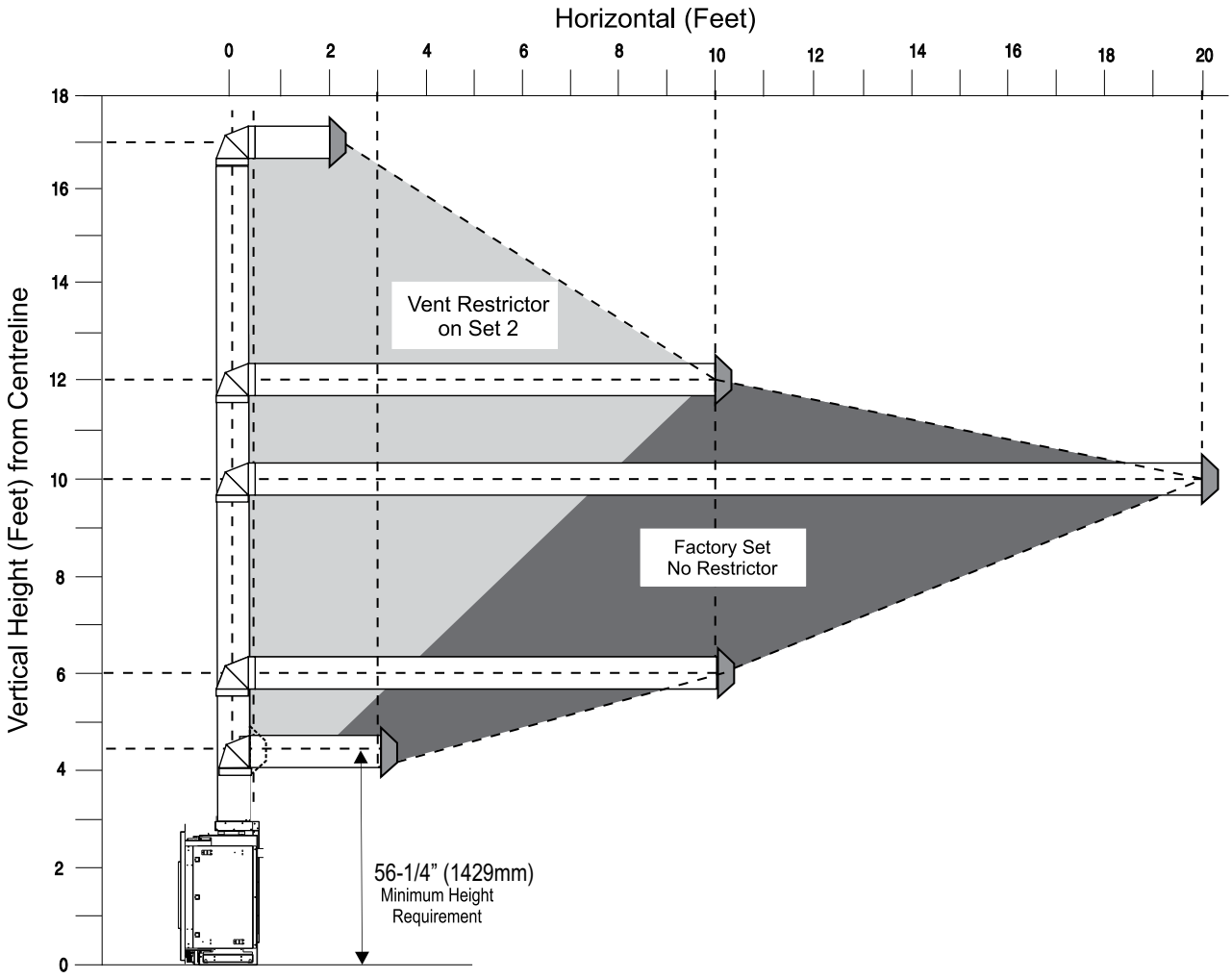
Note: These flue pipes must not be connected to any other appliance.

The gas appliance and vent system must be vented directly to the outside of the building, and never be attached to a chimney serving a separate solid fuel or gas burning appliance. Each direct vent gas appliance must use it's own separate vent system. Common vent systems are prohibited.

VENTING ARRANGEMENT FOR HORIZONTAL TERMINATIONS

The diagram shows all allowable combinations of vertical runs with horizontal terminations, using one 90° (two 45° elbows equal one 90° elbow).

Note: When using rigid vent pie systems, the rigid pipe adapter (Part# 510-994) must be used in all applications.



VENT RESTRICTOR SETTING:
Vent restrictor factory set at Set 0.
Refer to the "Vent Restrictor Position" section for details on how to change the vent restrictor from the factory setting of Set 0 to Set 2 if required.
NOTE: A minimum of 1' (305mm) vertical off the top of the unit is required before any horizontal runs can start.

Note: For horizontal terminations the Regency Direct Vent Flex System may be used for installations with a maximum continuous vent length of up to 10 feet. If longer runs are required, rigid pipe must be used.

- **Maintain clearances to combustibles as listed in "Clearances" section**
- **Horizontal vent must be supported every 3 feet.**
- **Firestops are required at each floor level and whenever passing through a wall.**
- **A vent guard should be used whenever the termination is lower than the specified minimum or as per local codes.**
- **Flex system can only be used up to 10 feet - otherwise rigid venting must be used.**

HORIZONTAL TERMINATIONS - RIGID PIPE 4" X 6-5/8"

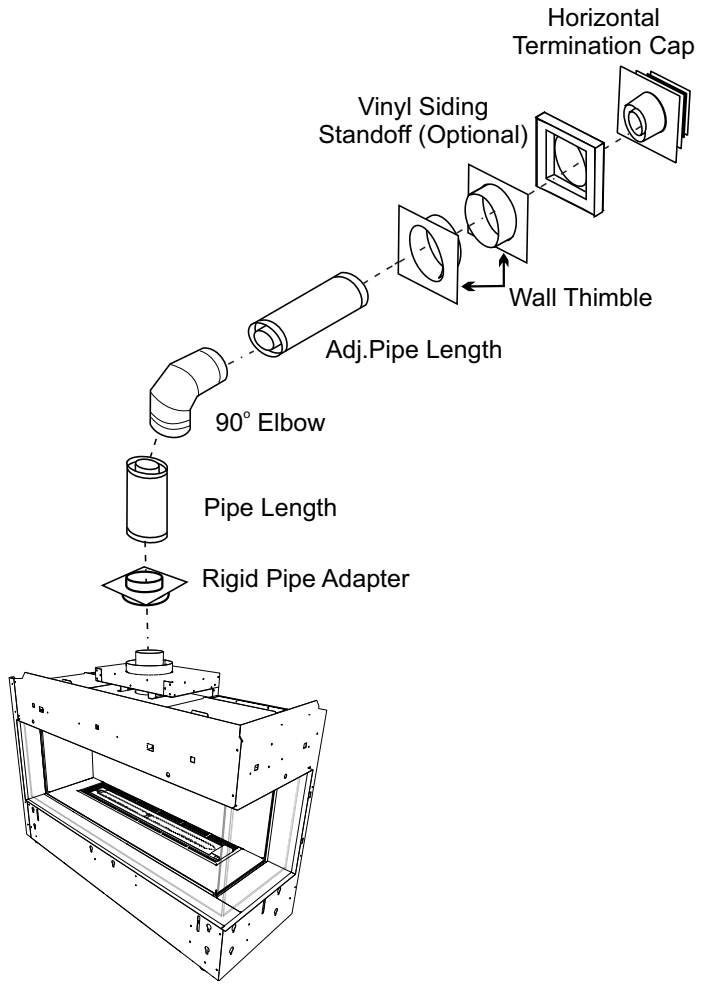
The minimum components required for a basic horizontal termination are:

1 Horizontal Termination Cap
1 Rigid Pipe Adaptor (510-994)
1 Wall Thimble
1 Length of pipe to suit wall thickness (see chart)

Wall thickness is measured from the back standoffs to the inside mounting surface of termination cap. For siding other than vinyl furring strips may be used instead of the vinyl siding standoff, to create a level surface to mount the vent terminal. The Terminal must not be recessed into siding. Measure the wall thickness including furring strips.

If a Vinyl Siding Standoff is required (it must be used with vinyl siding), measure to outside surface of wall without siding and add 2 inches.

Flat Wall Installation	
Wall Thickness (inches)	Vent Length Required (inches)
4" - 5-1/2"	6"
7" - 8-1/2"	9"
10" - 11-1/2"	12"
9" - 14-1/2'	11" - 14-5/8" Adj. Pipe
15" - 23-1/2"	17" - 24" Adj. Pipe



WARNING:

Do not combine venting components from different venting systems.

Use of the the AstroCap™ and FPI Riser is acceptable with all systems.

This product has been evaluated by Intertek for using a Rigid Pipe Adaptor in conjunction with Duravent Direct-Vent, Selkirk Direct-Temp, Ameri Vent Direct Venting, ICC Excel Direct, Olympia Chimney and Security Secure Vent systems. Use of these systems with the Rigid Pipe adaptor is deemed acceptable and does not affect the Intertek WHI listing of components.

When using Rigid Vent other than Simpson Dura-Vent, 3 screws must be used to secure rigid pipe to adaptor.

The FPI AstroCap™ and FPI Riser Vent terminal are certified for installations using FPI venting systems as well as Simpson Dura-Vent® Direct Vent, American Metal Products Ameri Vent Direct Vent, Security Secure Vent®, ICC Excel, Selkirk Direct-Temp and Olympia Chimney. AstroCap™ is a proprietary trademark of FPI Fireplace Products International Ltd. Dura-Vent® and Direct Vent are registered and/or proprietary trademarks of Simpson Dura-Vent Co. Inc.

HORIZONTAL TERMINATIONS - RIGID PIPE 4" X 6-5/8"

The diagrams below show examples of horizontal termination arrangements using one, two, or three 90° elbows (two 45° elbows equal one 90° elbow)

1. A maximum of three 90° elbows are permitted.

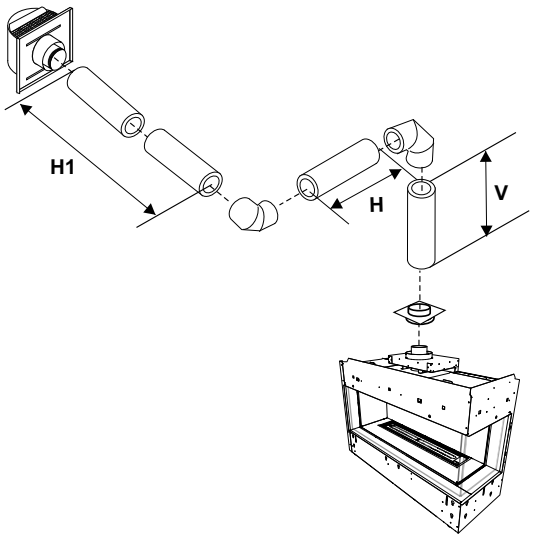
2. Minimum distance between elbows is 1 ft. (305mm).

- **Maintain clearances to combustibles as listed in the "Clearances" section.**
- **Horizontal vent must be supported every 3 feet.**
- **Firestops are required at each floor level and whenever passing through a wall.**
- **Must use optional rigid pipe adaptor (Part# 510-994) when using rigid pipe vent systems.**
- **A vent guard should be used whenever the termination is lower than the specified minimum or as per local codes.**
- **Flex system can only be used up to 10 feet - otherwise rigid venting must be used.**

Horizontal Venting with Two (2) 90° Elbows

One 90° elbow = Two 45° elbows.

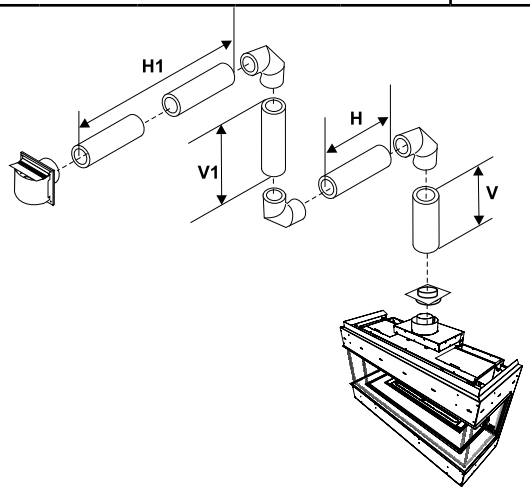
Option	V	H + H1	
A)	1' Min.	2' Max.	With these options, maximum total pipe length is 30 feet with minimum of 6 feet total vertical and maximum 8 feet total horizontal. ***Please note minimum 1 foot between 90° elbows is required.***
B)	2' Min.	4' Max.	
C)	3' Min.	5' Max.	
D)	4' Min.	6' Max.	
E)	5' Min.	7' Max.	
F)	6' Min.	8' Max.	
Restrictor Set 0 - Factory Setting			



Horizontal Venting with Three (3) 90° Elbows

One 90° elbow = Two 45° elbows.

Option	V	H	V + V1	H + H1	
A)	1' Min.	1' Max.	2' Min.	2' Max.	With these options, max. total pipe length is 30 feet with min. of 12 feet total vertical and max. 9 feet total horizontal. ***Please note min. 1 foot between 90° elbows is required.***
B)	1' Min.	2' Max.	3' Min.	3' Max.	
C)	2' Min.	2' Max.	5' Min.	4' Max.	
D)	3' Min.	2' Max.	7' Min.	5' Max.	
E)	4' Min.	3 Max.	9' Min.	6' Max.	
F)	5' Min.	4' Max.	10' Min.	7' Max.	
G)	6' Min.	5' Max.	11' Min.	8' Max.	
H)	7' Min.	6' Max.	12' Min.	9' Max.	
Restrictor Set 0 - Factory Setting					



VERTICAL TERMINATIONS - RIGID PIPE 4" X 6-5/8"

The minimum components required for a basic vertical termination are:

1 Vertical Termination Cap
1 Rigid Pipe Adaptor (510-994)
1 Ceiling Firestop
1 Flashing
1 Storm Collar
1 Length of pipe to suit wall thickness (see chart)

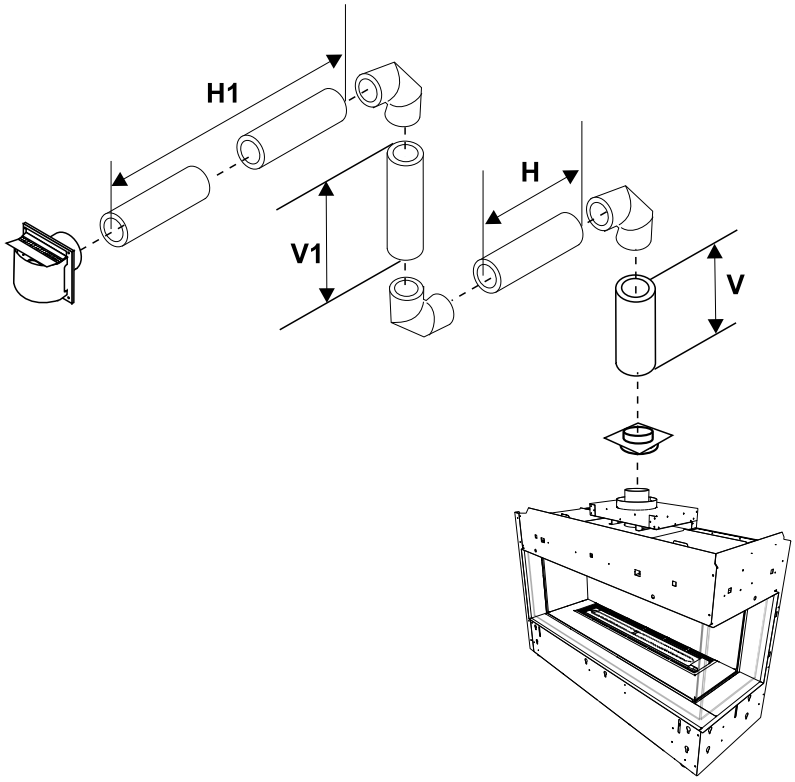


Diagram 1

Galvanized pipe is desirable above the roofline due to its higher corrosion resistance. Continue to add pipe sections through the flashing until the height of the vent cap meets the minimum height requirements specified in diagram 2 or local codes. Note that for steep roof pitches, the vertical height must be increased. A poor draft, or down drafting can result from high wind conditions near big trees or adjoining roof lines, in these cases, increasing the vent height may solve the problem.

Roof Pitch	Minimum Vent Height	
	Feet	Meters
flat to 7/12	2	0.61
over 7/12 to 8/12	2	0.61
over 8/12 to 9/12	2	0.61
over 9/12 to 10/12	2.5	0.76
over 10/12 to 11/12	3.25	0.99
over 11/12 to 12/12	4	1.22
over 12/12 to 14/12	5	1.52
over 14/12 to 16/12	6	1.83
over 16/12 to 18/12	7	2.13
over 18/12 to 20/12	7.5	2.29
over 20/12 to 21/12	8	2.44

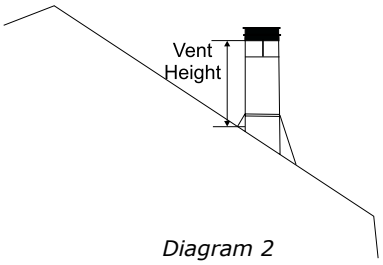


Diagram 2

WARNING:

Do not combine venting components from different venting systems.

Use of the the AstroCap™ and FPI Riser is acceptable with all systems.

This product has been evaluated by Intertek for using a Rigid Pipe Adaptor in conjunction with Duravent Direct-Vent, Selkirk Direct-Temp, Ameri Vent Direct Venting, ICC Excel Direct, Olympia Chimney, and Security Secure Vent systems. Use of these systems with the Rigid Pipe adaptor is deemed acceptable and does not affect the Intertek WHI listing of components.

When using Rigid Vent other than Simpson Dura-Vent, 3 screws must be used to secure rigid pipe to adaptor.

The FPI AstroCap™ and FPI Riser Vent terminal are certified for installations using FPI venting systems as well as Simpson Dura-Vent® Direct Vent, American Metal Products Ameri Vent Direct Vent, Security Secure Vent®, ICC Excel, Selkirk Direct-Temp and Olympia Chimney. AstroCap™ is a proprietary trademark of FPI Fireplace Products International Ltd. Dura-Vent® and Direct Vent are registered and/or proprietary trademarks of Simpson Dura-Vent Co. Inc.

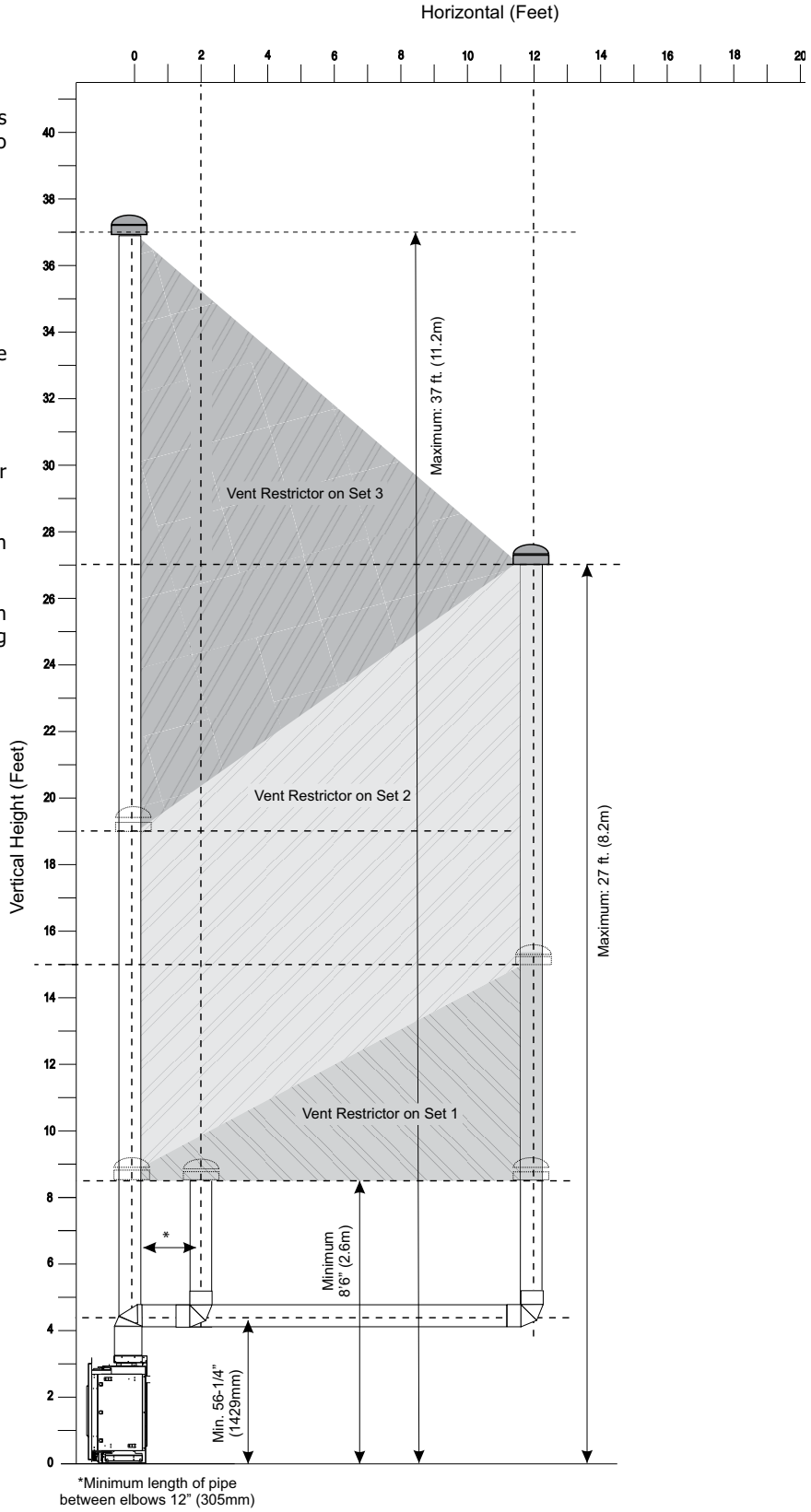
VENTING ARRANGEMENT FOR VERTICAL TERMINATIONS - STRAIGHT

VERTICAL VENTING AND/OR WITH A MAX. OF TWO (2) 90º ELBOWS (1 - 90º = 2 - 45º)

The shaded area in the diagram shows all allowable combinations of straight vertical and offset to vertical terminations, using two 90º elbows, with **Rigid Pipe Venting Systems**.

Two 45º elbows equal to one 90º elbow.

- Vent must be supported at offsets.
- Minimum distance between elbows is 1 ft. (305mm).
- Maintain clearances to combustibles as listed in the "Clearances" section.
- Horizontal vent must be supported every 3 feet.
- Firestops are required at each floor level and whenever passing through a wall.
- Must use optional rigid pipe adaptor (Part# 510-994) when using rigid pipe vent systems.
- Refer to the "Vent Restrictor Position" section for details on how to change the vent restrictor from the factory setting of Set 0 through to Set 3 if required.



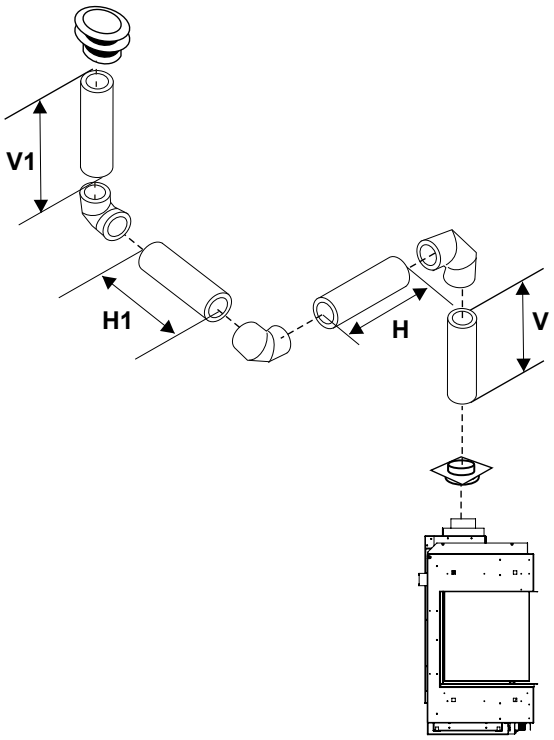
VERTICAL TERMINATIONS - RIGID PIPE 4" X 6-5/8"

- Two 45° elbows equal to one 90° elbow. Maximum of six 45° elbows allowed.
- Vent must be supported at offsets.
- Minimum distance between elbows is 1 ft. (305mm).
- Maintain clearances to combustibles as listed in the "Clearances" section.
- Horizontal vent must be supported every 3 feet.
- Firestops are required at each floor level and whenever passing through a wall.
- Must use optional rigid pipe adaptor (Part# 510-994) when using rigid pipe vent systems.

Vertical Venting with Three (3) 90° Elbows

One 90° elbow = Two 45° elbows.

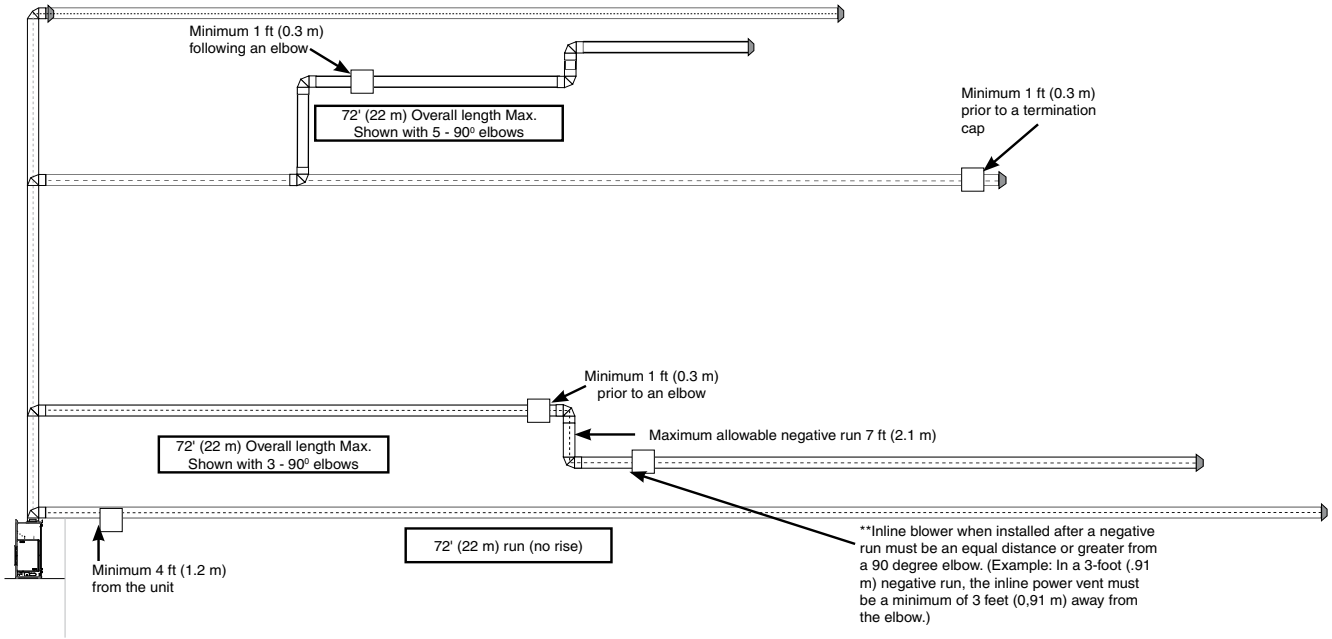
Option	V	H + H1	V + V1	
A)	1' Min.	2' Max	3' Min.	With these options, max. total pipe length is 30 feet with min. of 10 feet total vertical and max. 8 feet total horizontal. ***Please note min. 1 foot between 90° elbows is required.***
B)	2' Min.	3' Max	4' Min.	
C)	3' Min.	4' Max	6' Min.	
D)	4' Min.	5' Max	7' Min.	
E)	5' Min.	6' Max	8' Min.	
F)	6' Min.	7' Max	9' Min.	
G)	7' Min.	8' Max	10' Min.	
Lengths do not include elbow indicated				
Restrictor Set 0 - Factory Setting				



HORIZONTAL TERMINATIONS - INLINE HORIZONTAL VENT CHART
INLINE POWER VENT KIT # 666-945

NOTES
- Rigid pipe is approved for up to 72 feet (21.95 m).
- Flex pipe is approved for up to 40 feet (12.19 m) using 2 X 946-756-- 20 foot (6.10 m) flex kits.

The gas power vent system is designed to allow the installation of a gas appliance when typical vent configurations (Non-Power Vent Direct Vent Systems With no Fan Assist) are not possible.



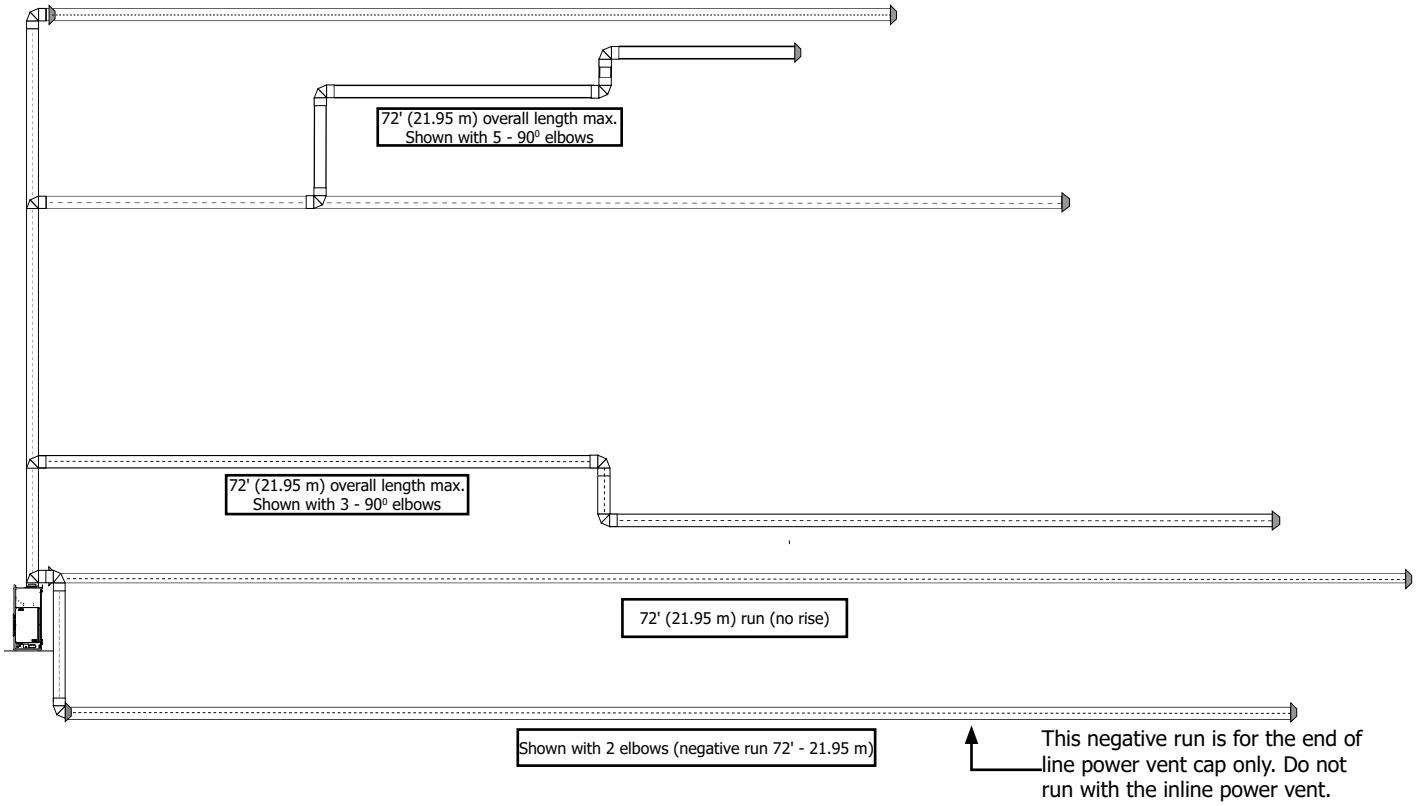
IMPORTANT
- **Maximum total vent length (based on overall length of combined chimney components) = 72' (22 m)**
- **Maximum total negative vent length = 7' (2.1 m).**
- **Do not run positive venting after a negative run.**
- **Maximum of six - 90° elbows permitted.**
- **One 90° elbow = two 45° elbows.**
- **Minimum 4' (1.2 m) from the unit prior to terminating.**

Inline power vent location restrictions:
Minimum 4 ft (1.2 m) from the unit
Minimum 1 ft (0.3 m) prior to an elbow.
Minimum 1 ft (0.3 m) following an elbow.
Minimum 1 ft (0.3 m) prior to a termination cap.
When the inline blower is installed after a negative run, for every foot of negative run the inline blower must be an equal distance or greater from the 90-degree elbow. See example above.

HORIZONTAL TERMINATIONS - END OF LINE HORIZONTAL VENT CHART
END OF LINE POWER VENT KIT # 946-535

NOTES
- Rigid pipe is approved for up to 72 feet (21.95 m).
- Flex pipe is approved for up to 40 feet (12.19 m) using 2 X 946-756-- 20 foot (6.10 m) flex kits.

The gas power vent system is designed to allow the installation of a gas appliance when typical vent configurations (Non-Power Vent Direct Vent Systems With no Fan Assist) are not possible.



IMPORTANT
- **Maximum total vent length (based on overall length of combined chimney components) = 72' (21.95 m)**
- **Maximum total negative vent length = 7' (2.1 m).**
- **Do not run positive venting after a negative run.**
- **Maximum of six - 90° elbows permitted.**
- **One 90° elbow = two 45° elbows.**
- **Minimum 4' (1.2 m) from the unit prior to terminating.**

VENTING ARRANGEMENT FOR VERTICAL TERMINATIONS
INLINE POWER VENT

Vertical venting with straight vertical venting and or with a max. of six (6) 90° Elbows (1 - 90° = 2 - 45°)

NOTES

- **Rigid pipe is approved for up to 72 feet (22 m).**
- **Flex pipe is approved for up to 40 feet (12.2 m) using two 20 foot (6.1 m) flex kits (part # 946-756).**

- Two 45° elbows equal to one 90° elbow.
- Vent must be supported at offsets.
- Minimum distance between elbows is 1 ft. (0.3 m).
- Maintain clearances to combustibles as listed in the "Clearances" section.
- Horizontal vent must be supported every 3 feet (0.91 m).
- Firestops are required at each floor level and whenever passing through a wall.

Restrictor set on 0 (fully open) regardless of vent run.

Inline power vent location restrictions:

- Minimum 4 ft (1.2 m) from the unit.
- Minimum 1 ft (0.3 m) prior to an elbow.
- Minimum 1 ft (0.3 m) following an elbow.
- Minimum 2 ft (0.6 m) prior to a termination cap.
- Minimum 2 ft. from inline PV to termination cap.
- Minimum 4' from top of unit to inline PV.
- Max. of 72' (22 m), using up to six 90° elbows
- (Example shows two 90° elbows).
- No negative runs.

NOTE

- **The inline power vent must be installed within the confines of the home/structure.**