

# HeatShift™ System

## Planning and Installation: LX1 with HeatShift®

For use with **2100K Valor Heaters ONLY**

### Application

The HeatShift® convection duct kit redistributes the warm air flow away from the fireplace opening to a more desirable location using natural convection without use of a fan.

**HeatShift Canopy Kit 2100HSC:** the warm air flow is gathered in a canopy hood attached to the fireplace and relocated to an outlet in the same room. The chase does not extend all the way to the ceiling, resulting in a visual space above the fireplace.

**Plenums LDK3, LDK4, or LDK9:** the warm air flow is relocated to a position higher up the wall, out the sidewalls, or even to an adjacent room.

**Termination Plates LDK7:** the warm air flow is discharged through a gap (min. 2-1/2") between the wall above the fireplace and the ceiling. **LDK7's discharge opening must be located in the same room as the fireplace.**

The result is much cooler wall temperatures above the fireplace opening for locating televisions, artwork, etc.

Only the HeatShift kits listed below may be used with the LX1.

### Kits

There are 5 kits to choose from:

- 2100HSC—HeatShift Canopy kit for LX1
- LDK3—14" Plenums (2), includes grilles
- LDK4—38" Plenum
- LDK7—Duct Termination Plates (2)—for wall valance discharge ONLY
- LDK9—30" plenum

Optional accessories:

- LDK5—38" Finishing Frame, to use with LDK4
- LDK6— 5" dia Aluminum 2-ply Flex Kit— 2 x 10'-0" lengths, may be cut to required length
- LDK10—30" Finishing Frame, to use with LDK9



### WARNING

**DO NOT cover or place objects in front of or on top of air outlet(s). AVOID locating outlet within 7 feet above floor level as discharge temperatures are hot!**



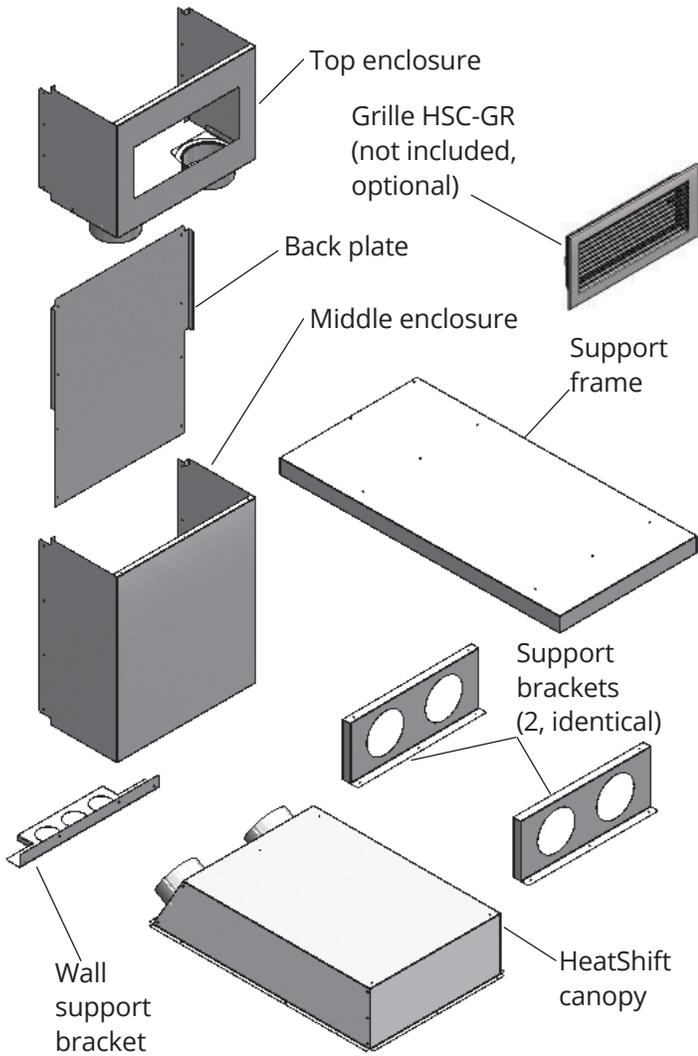
### WARNING

**When placing discharge close to ceilings, staining or streaking may occur on light colored ceilings due to any dust, etc. in air flow; placing plenum(s) lower on the wall will help reduce the possibility of staining or streaking.**

### Note

5-inch diameter duct used with this kit must be metal and meet requirements of UL-181 Class 1 Air Duct. Flexible aluminum duct is acceptable provided it meets the UL-181 Class 1 requirements.

## 2100HSC Kit Contents

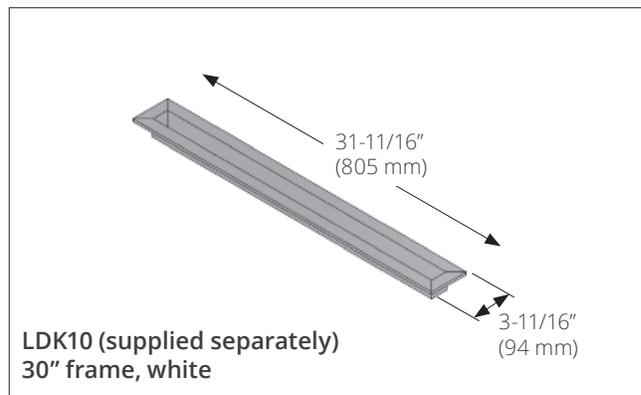
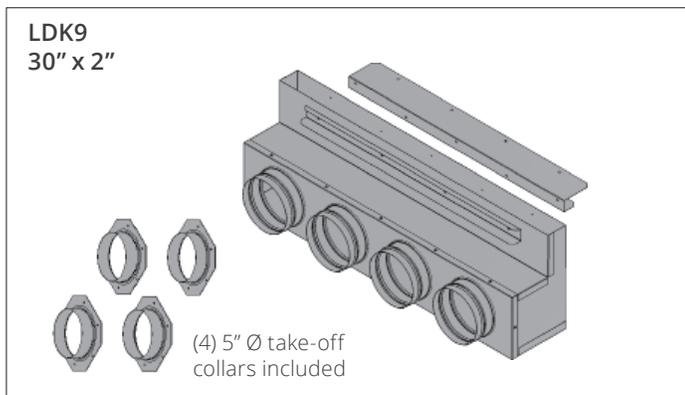
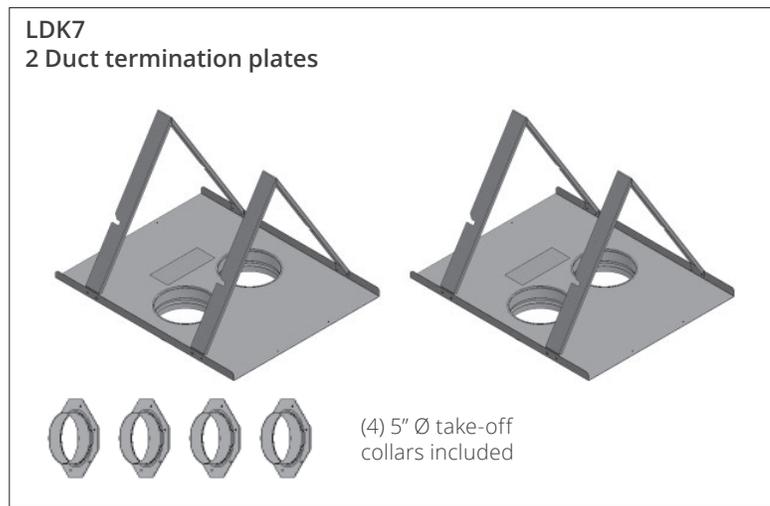
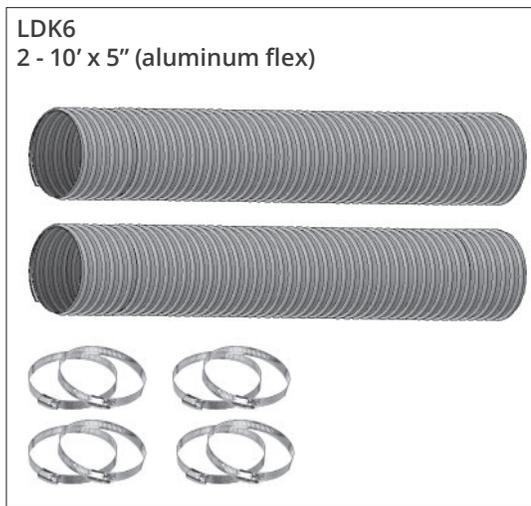
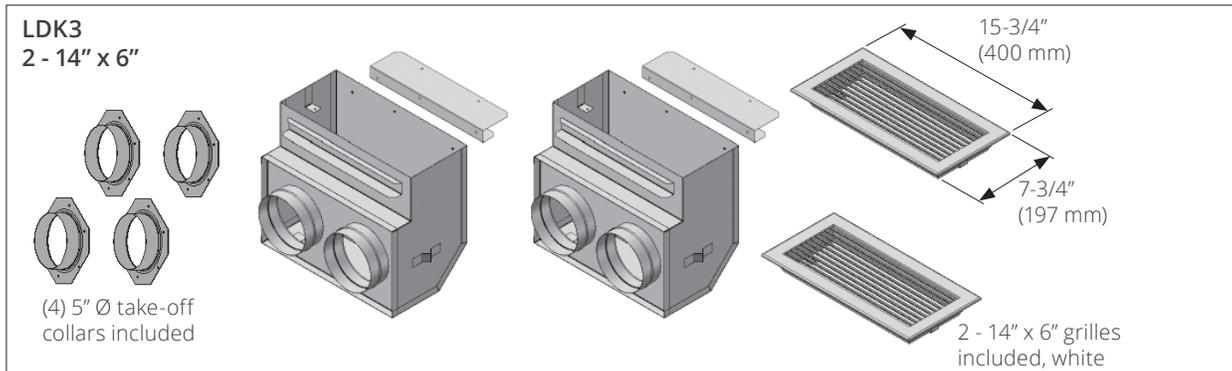
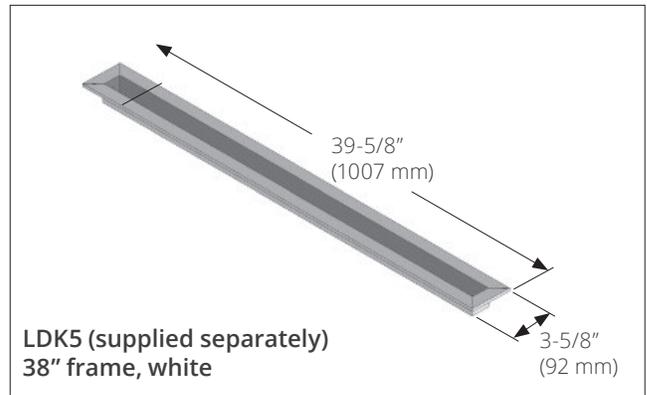
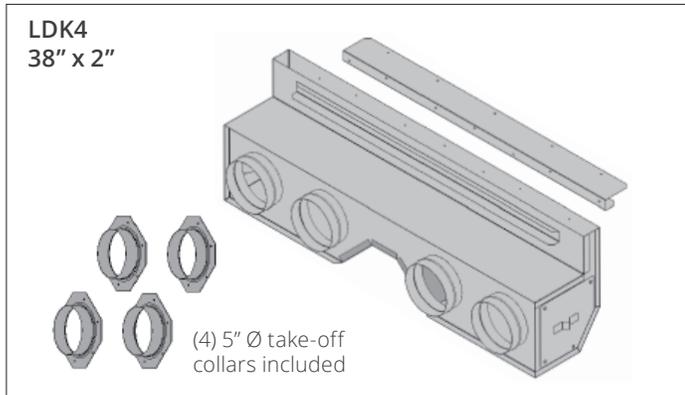


### 2100HSC

Takeoff collars not required.

Qty (2) 2x4 cut to planned height  
required (not included)

# LDK Kits Contents

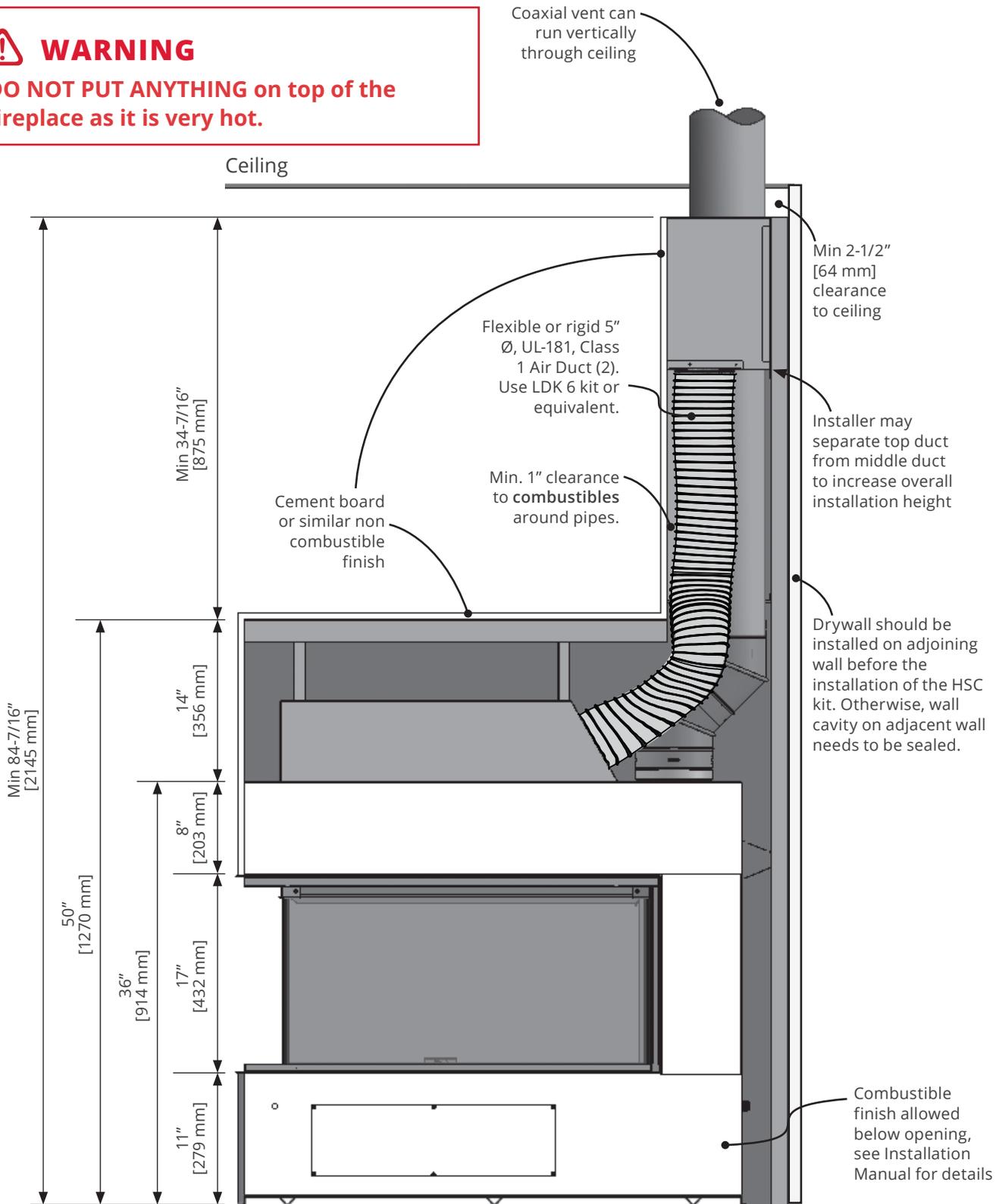


## Overview - 2100HSC kit

See Installation manual provided with 2100HSC for all details of installation.

### **WARNING**

**DO NOT PUT ANYTHING on top of the fireplace as it is very hot.**

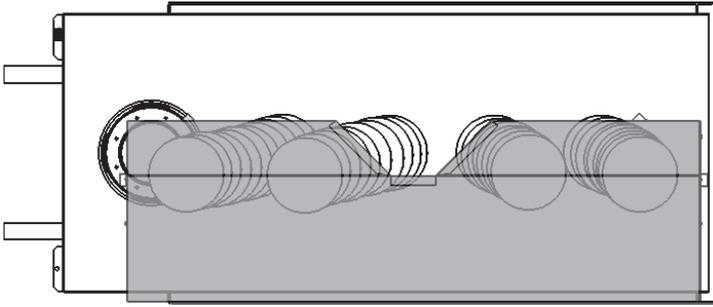


See 2100HSC Installation Manual for more details.

## Suggested Configurations Not to scale

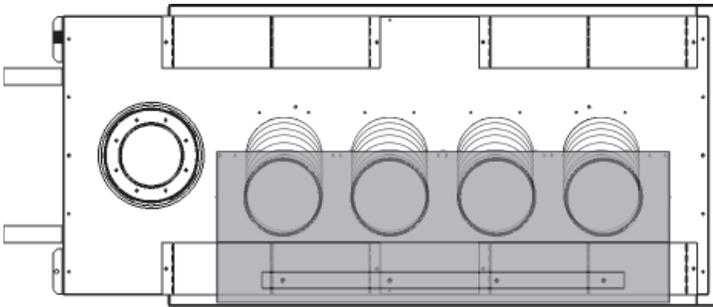
### LX1 Series with LDK Kits

#### Front or rear wall outlet using LDK4

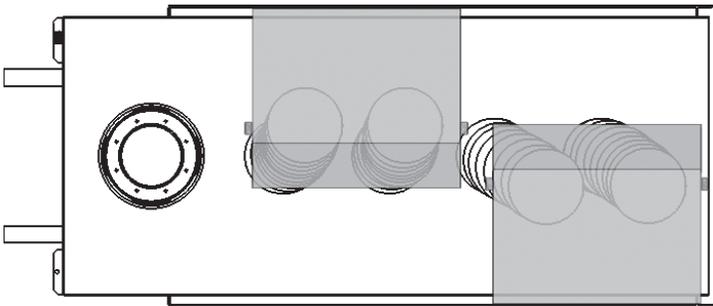


Note: Coaxial vent must be diverted toward the wall to bypass the HeatShift outlet overhead when vented vertically.

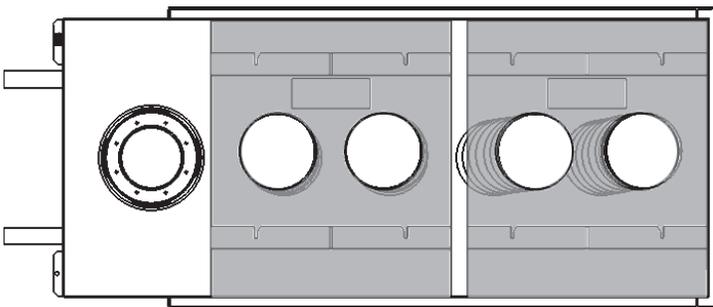
#### Front or rear wall outlet using LDK9



#### Front and rear wall outlet using LDK3



#### Top outlet using LDK7



Note: When using the LDK7, the discharge must be located in the same room as the fireplace. The termination plates may be trimmed to fit.

## **!** WARNING

The plenum duct kits are approved for horizontal discharge **ONLY**. The termination duct plates are approved for vertical upward discharge **ONLY**. **DO NOT** install plenum or termination plates in floor or ceiling. **DO NOT COVER OR PLACE** objects in front of or on top of air outlet(s). **AVOID** locating outlet within 7 feet of the floor level as discharge air temperatures are hot!

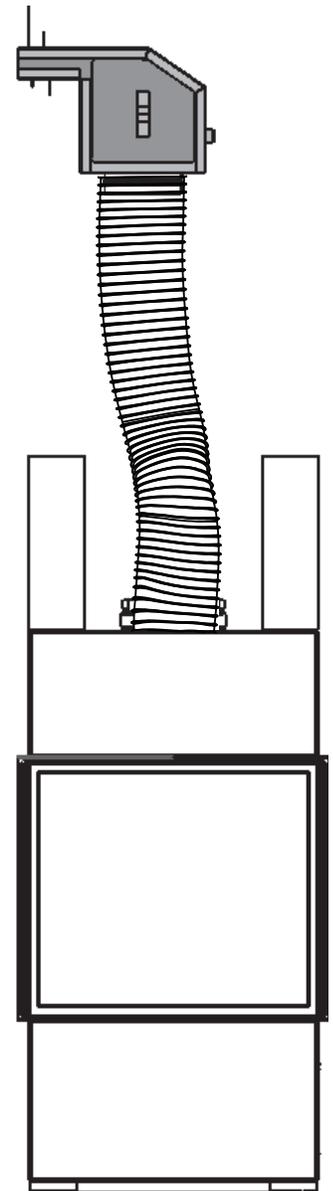
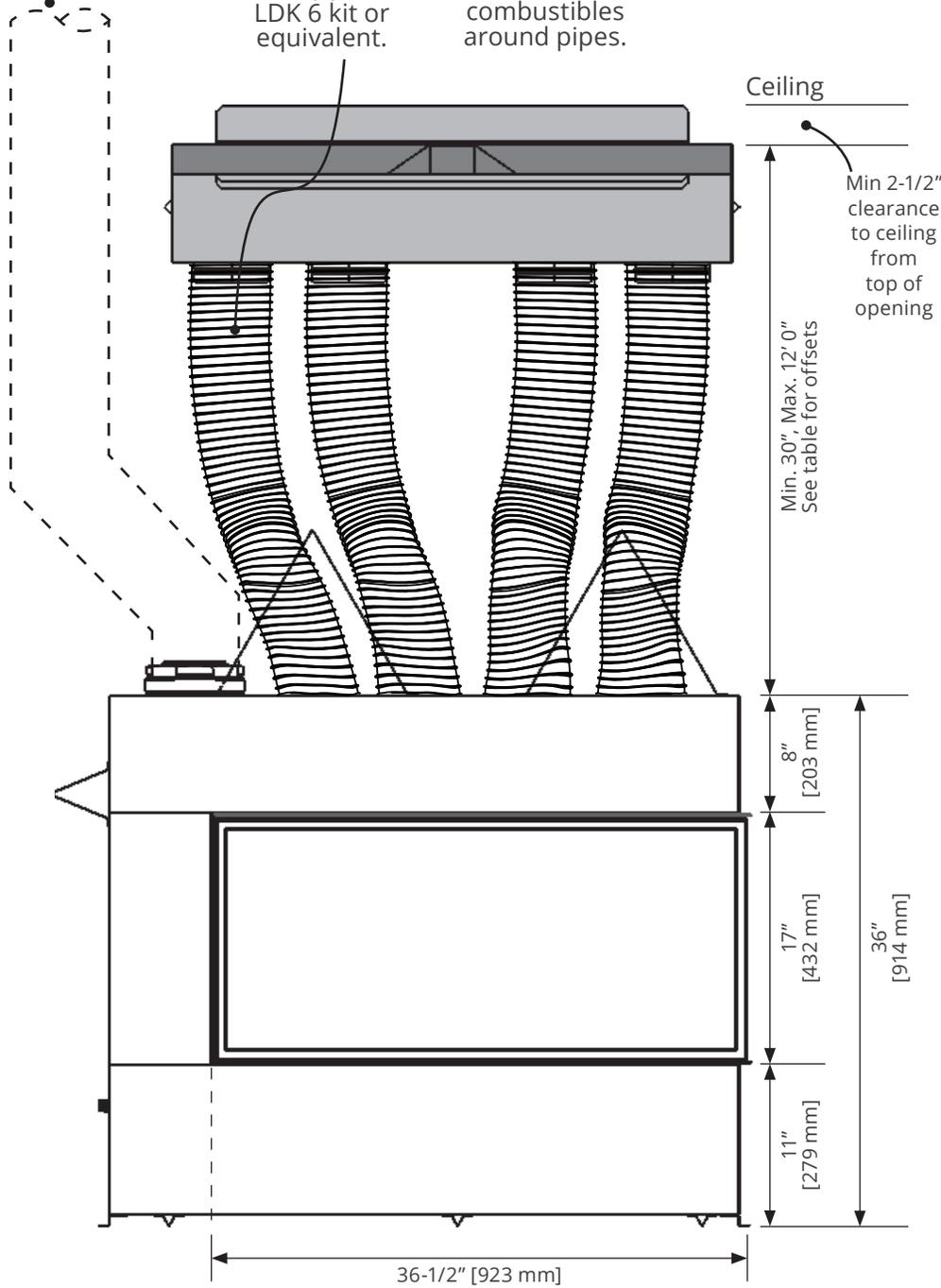
**DO NOT DISCHARGE THROUGH EXTERIOR WALLS!**

# Overview - LDK3, LDK4, and LDK9 kits

Note:  
Venting  
must be  
offset  
around 38"  
plenum  
(LDK4)

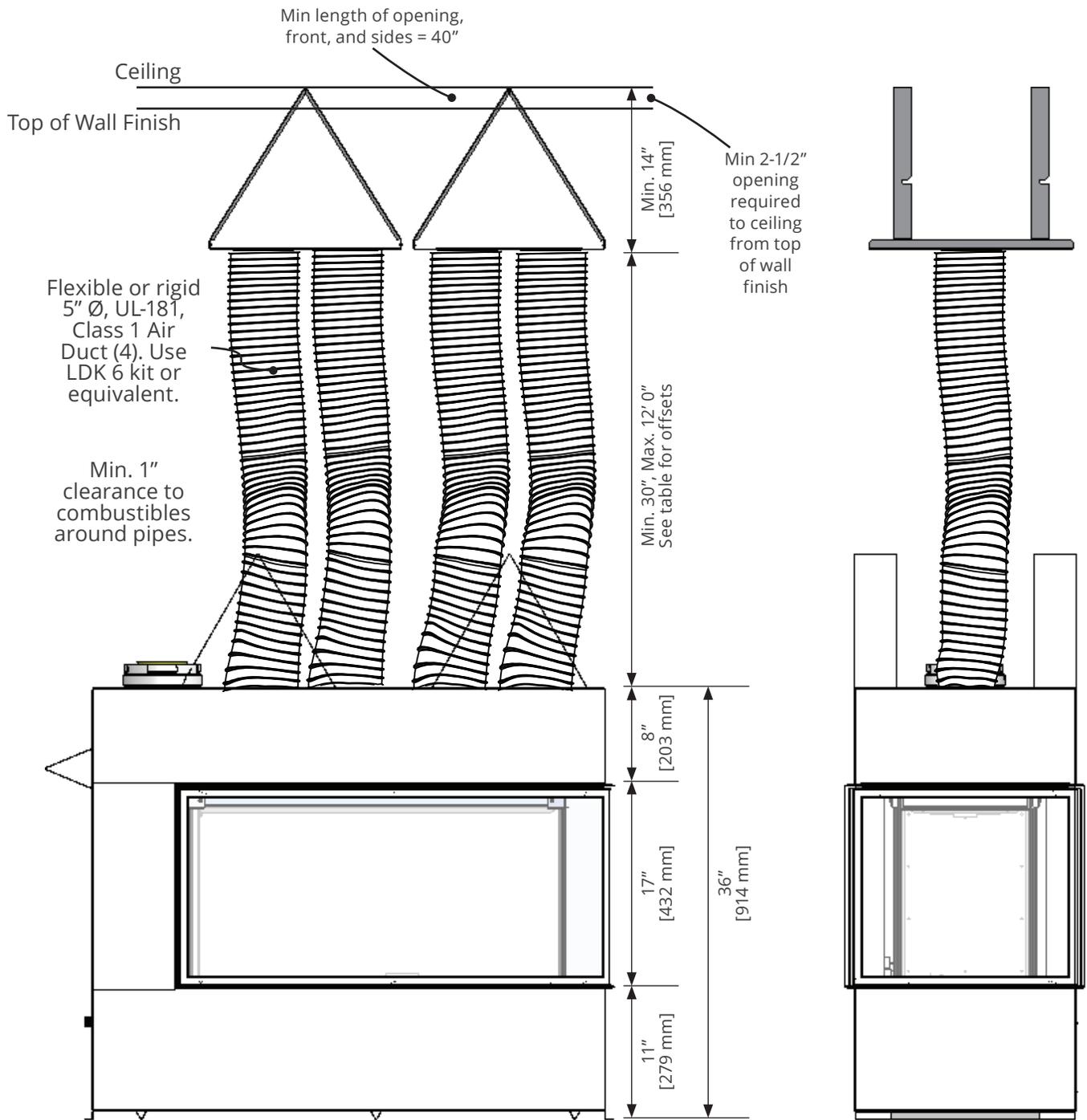
Flexible or rigid  
5" Ø, UL-181,  
Class 1 Air  
Duct (4). Use  
LDK 6 kit or  
equivalent.

Min. 1"  
clearance  
to combustibles  
around pipes.

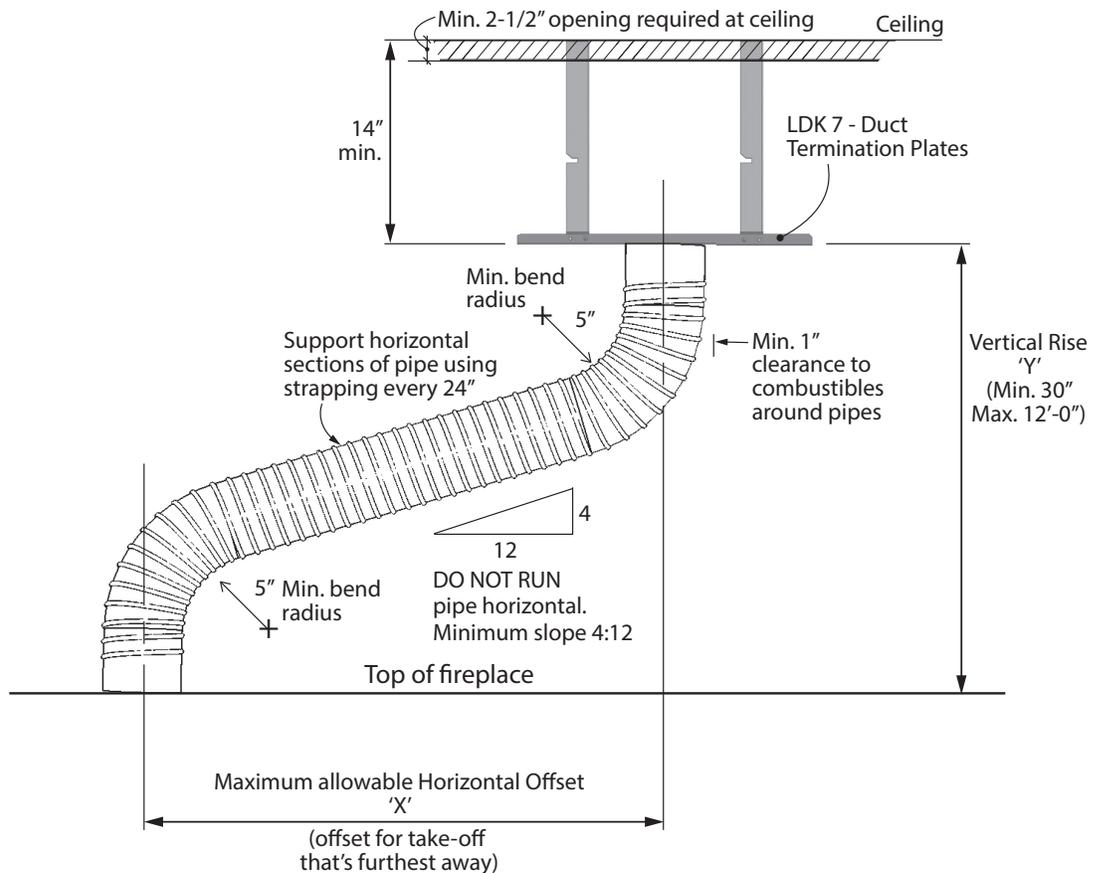
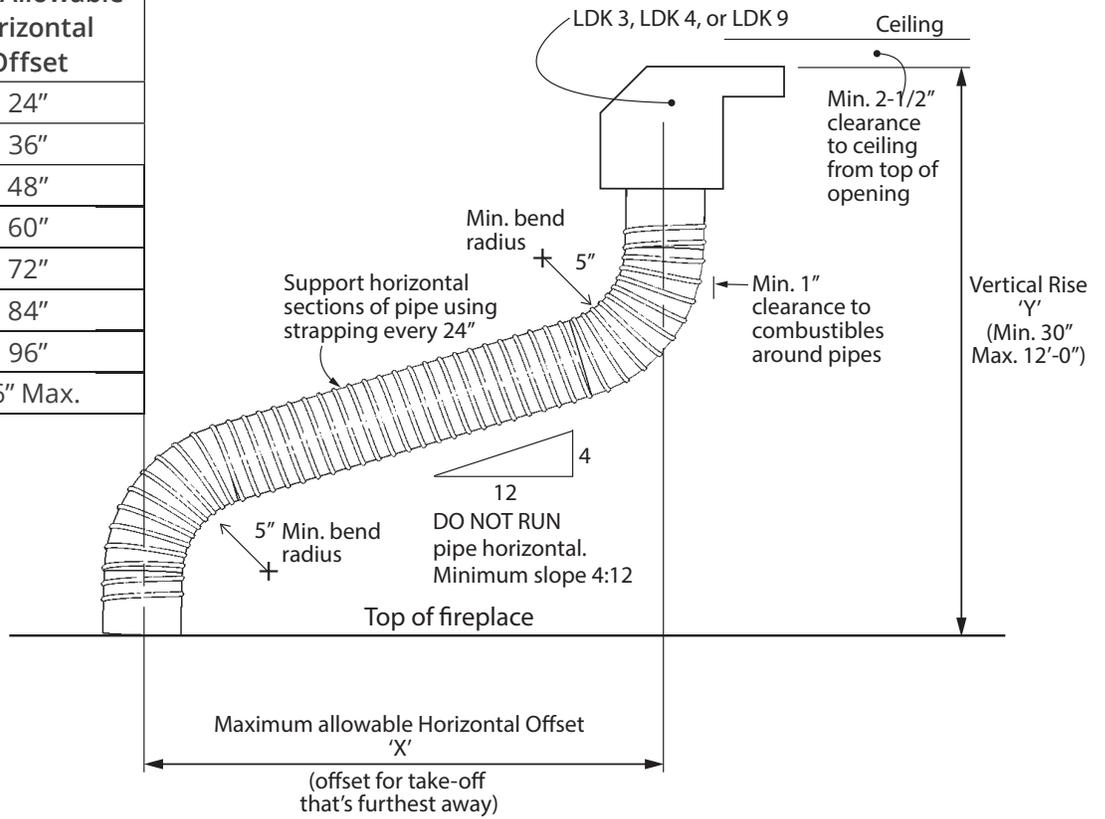


# Overview - LDK7 kit

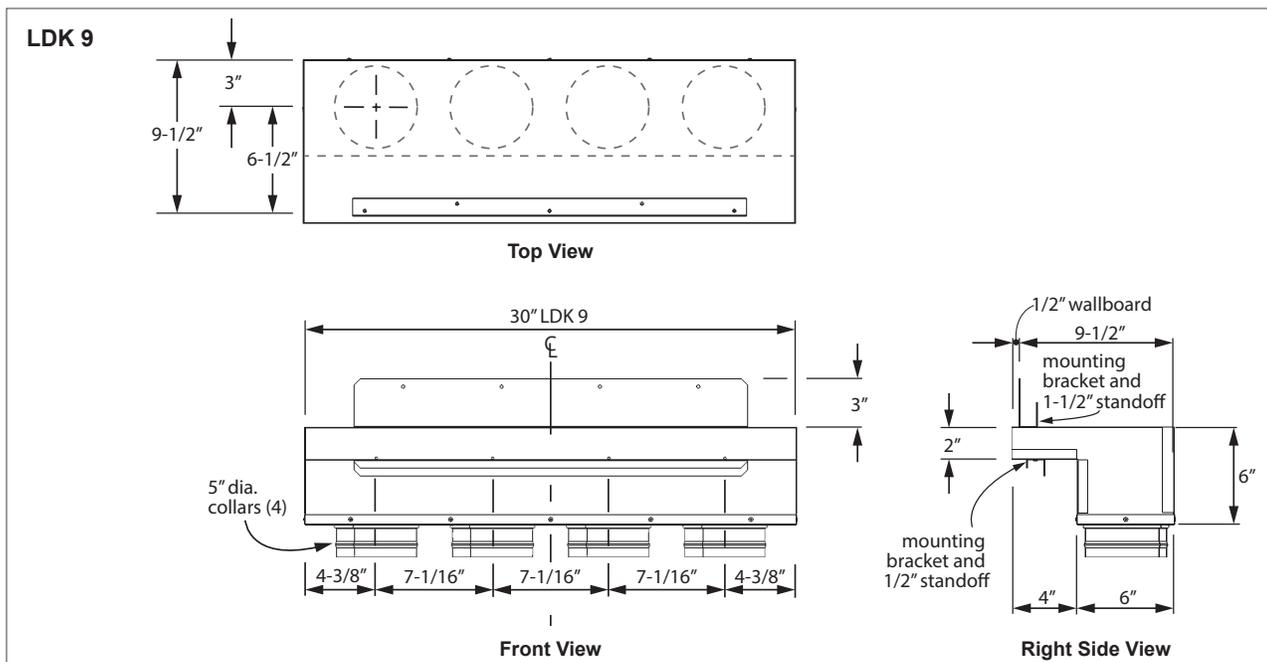
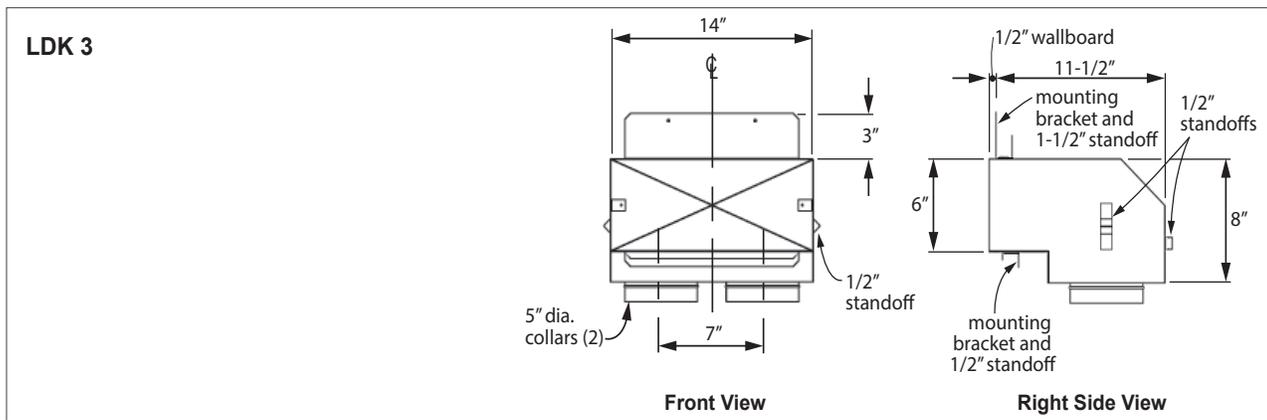
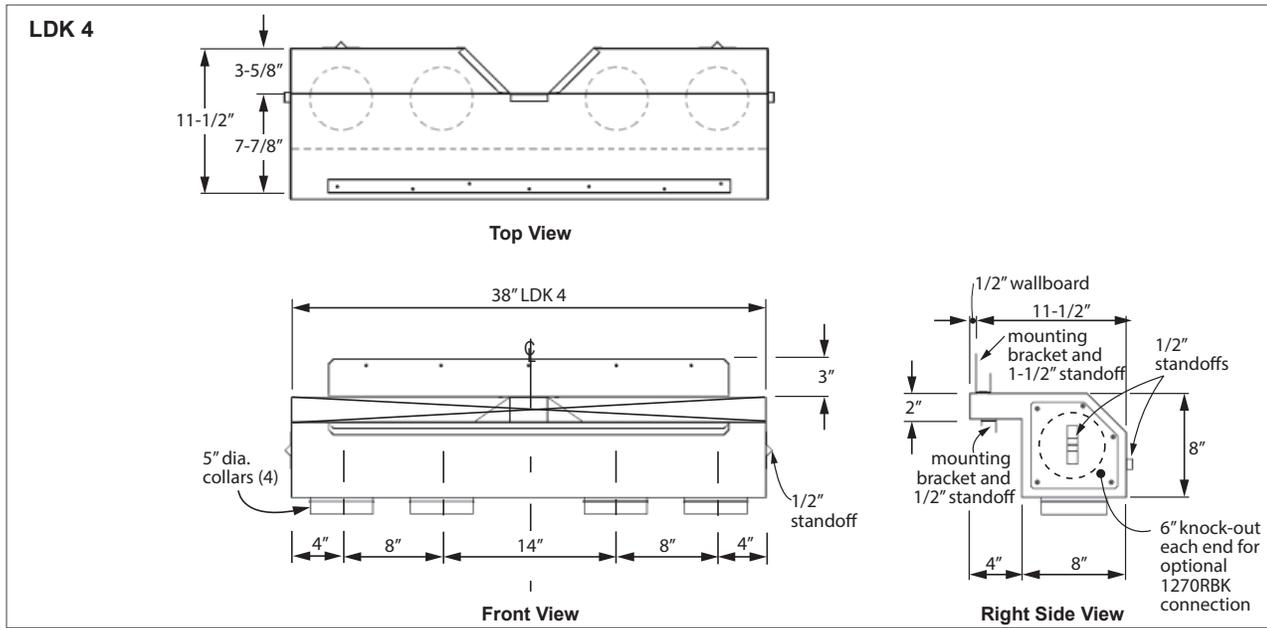
Note - Discharge opening must be located in the same room as fireplace when using LDK7.



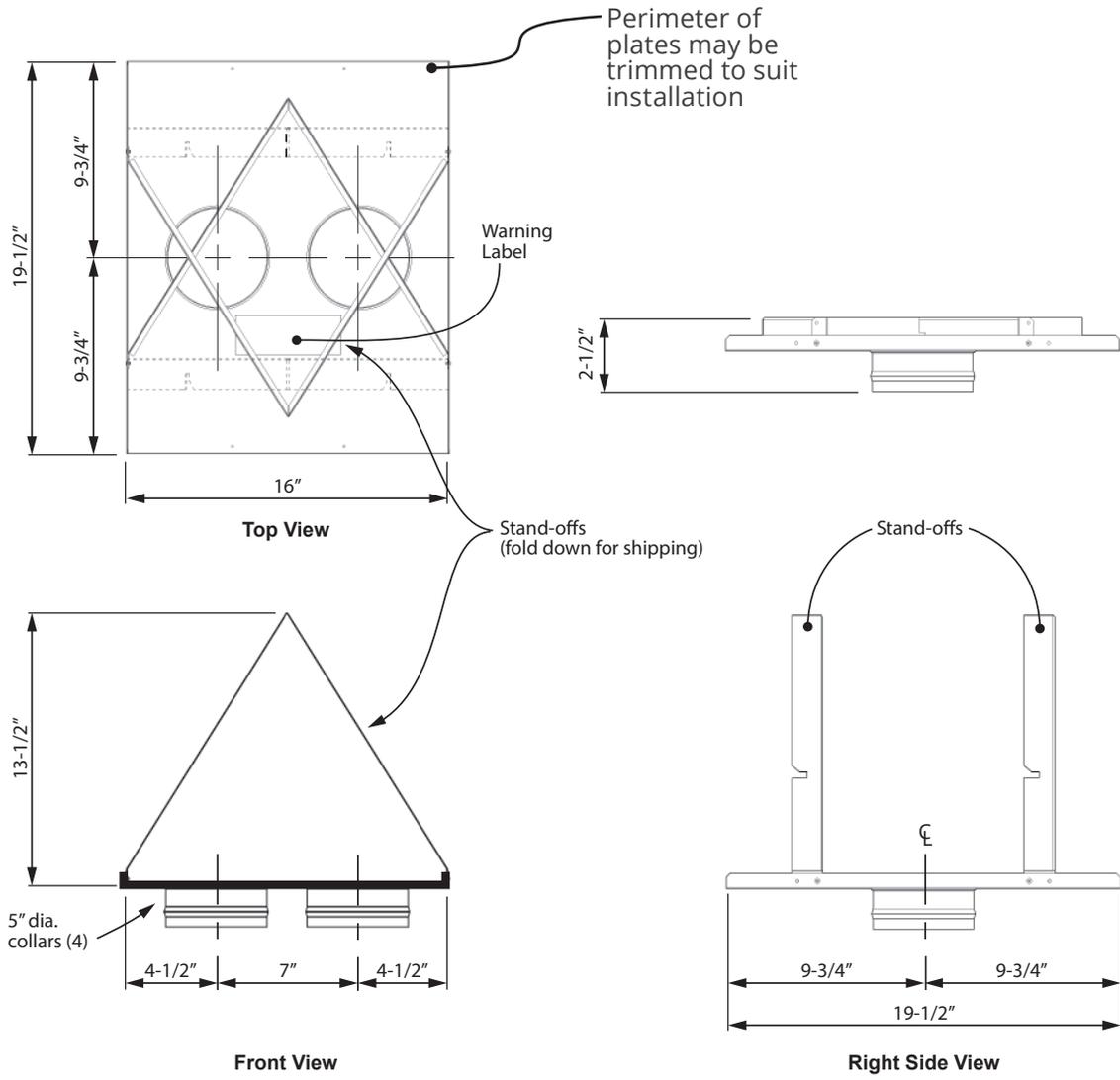
Y Vertical Rise	X Max. Allowable Horizontal Offset
30"	24"
36"	36"
42"	48"
48"	60"
54"	72"
60"	84"
66"	96"
12'-0"	96" Max.



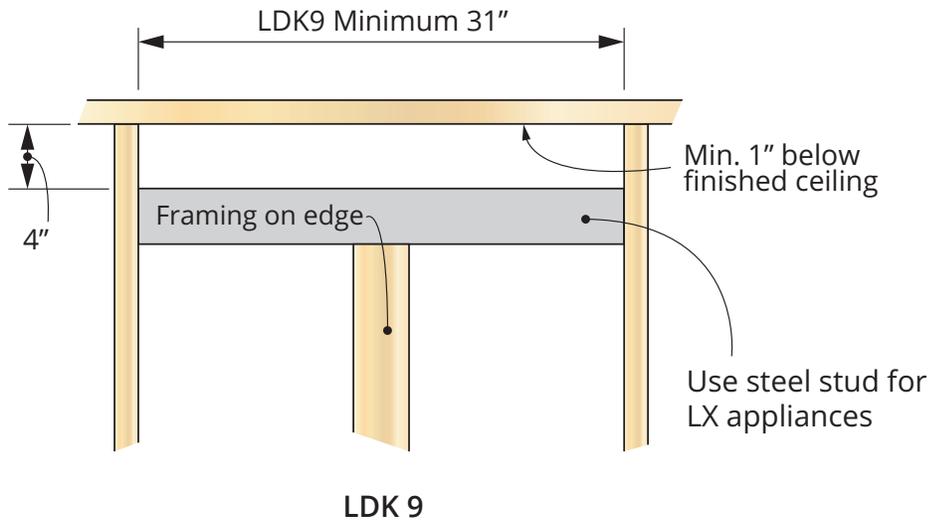
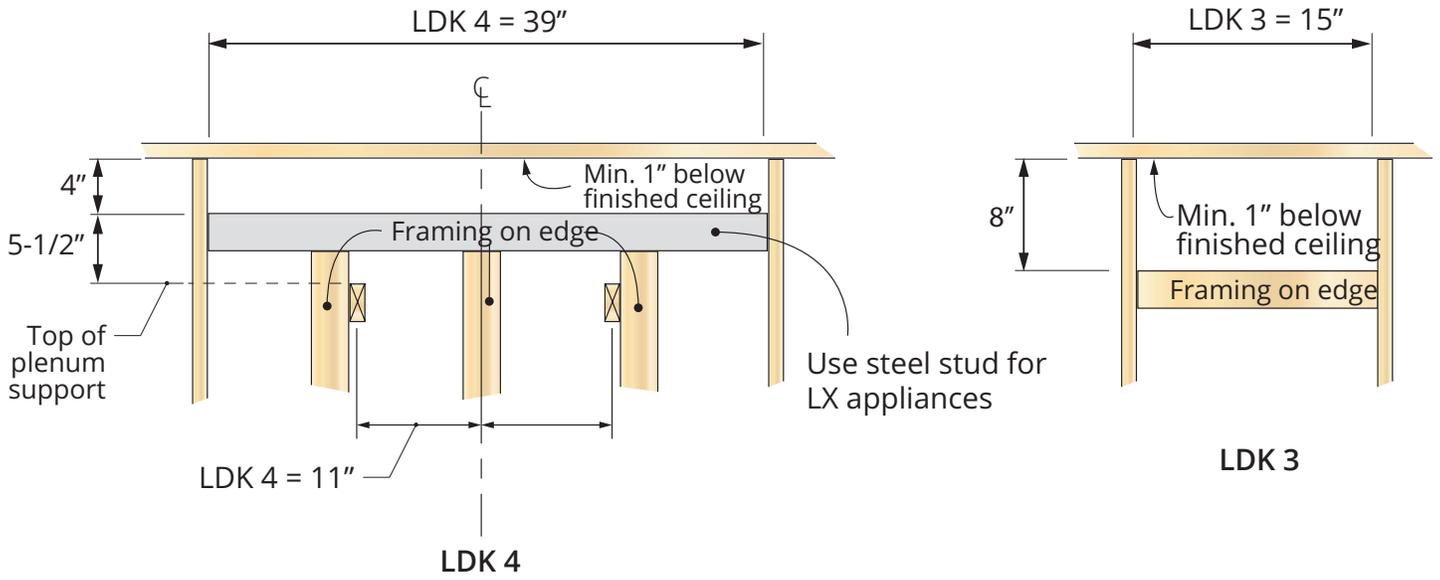
# Plenum Dimensions



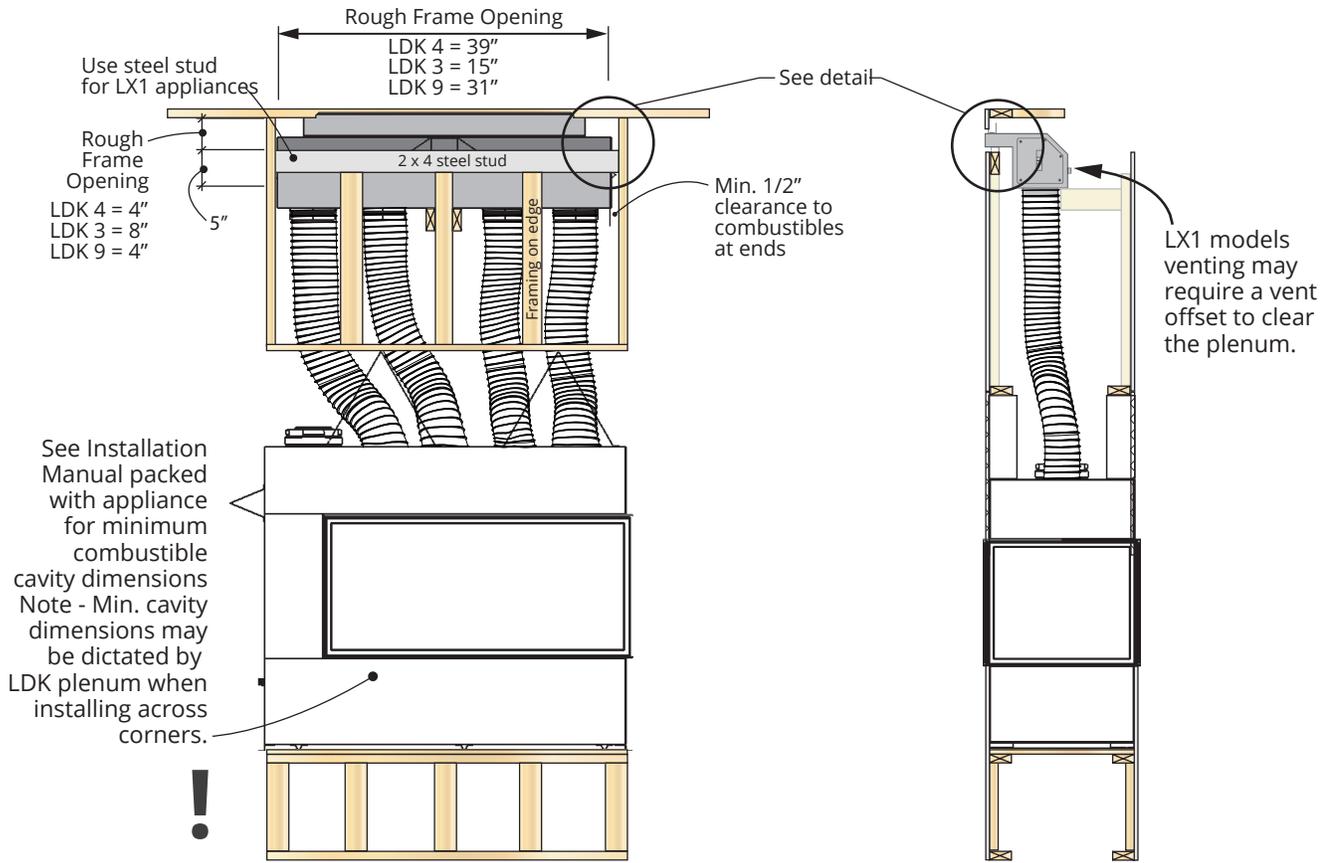
# LDK7 Plates Dimensions



# Rough Frame Openings

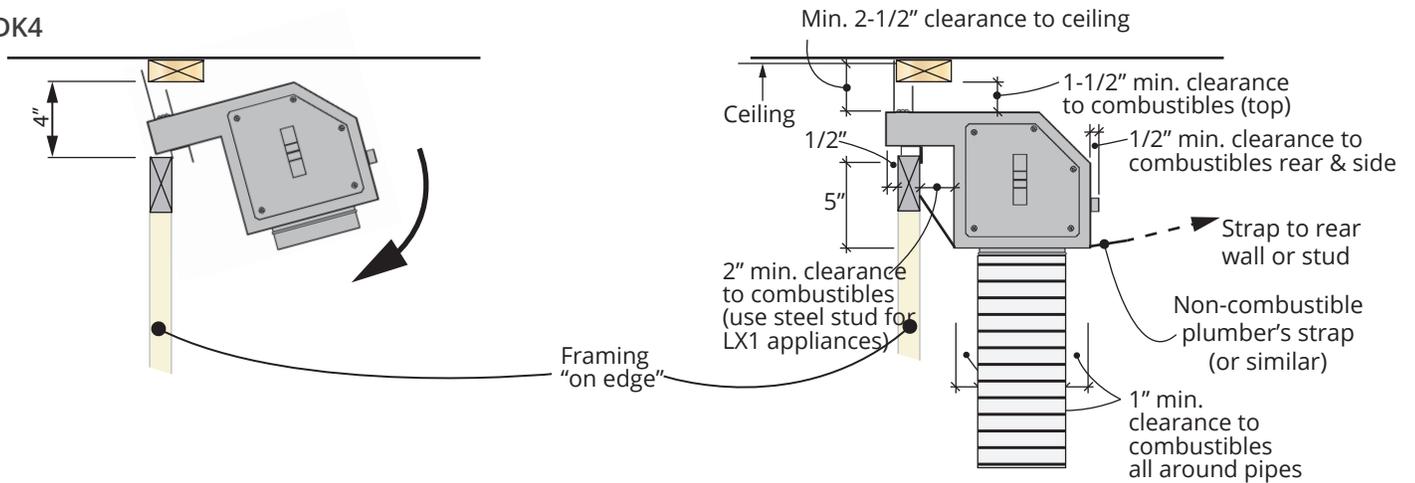


# Framing and Clearances

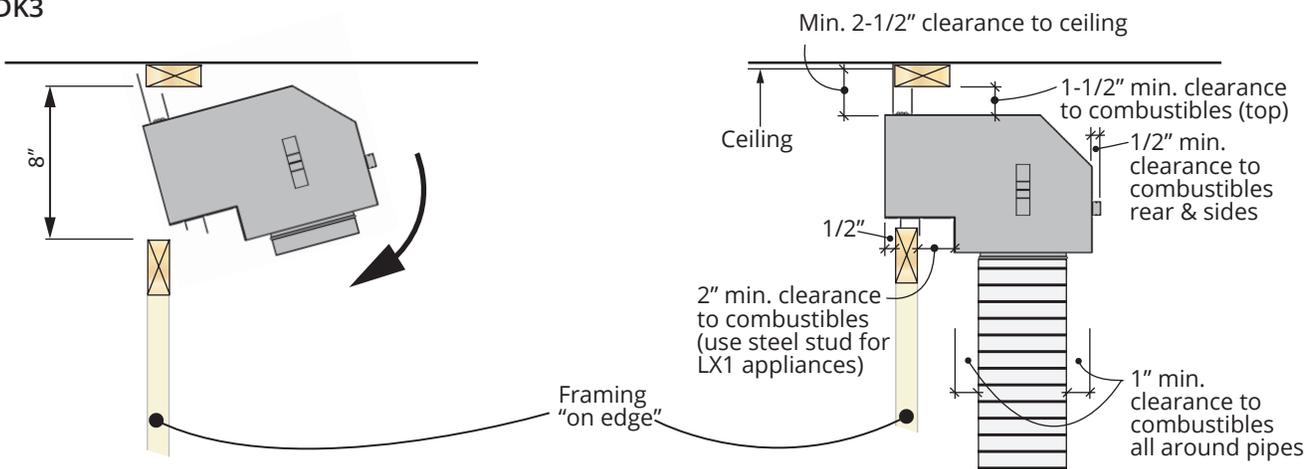


# Framing and Clearances

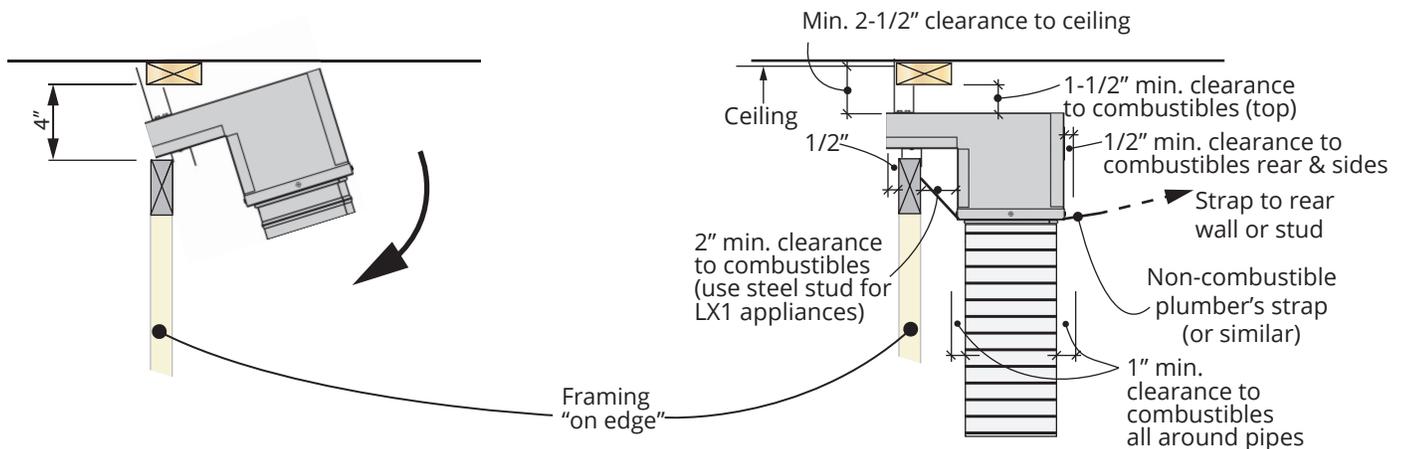
LDK4



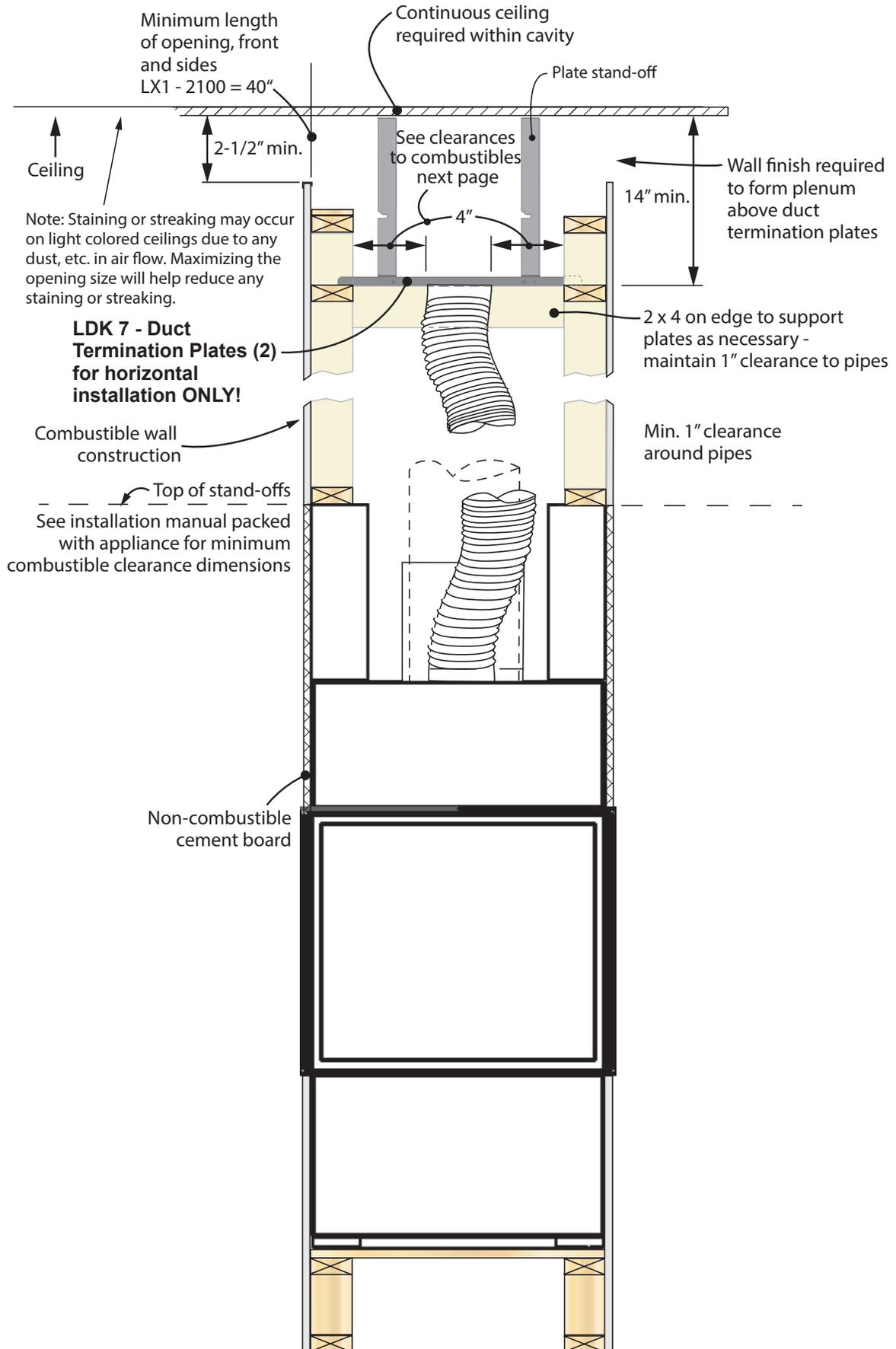
LDK3



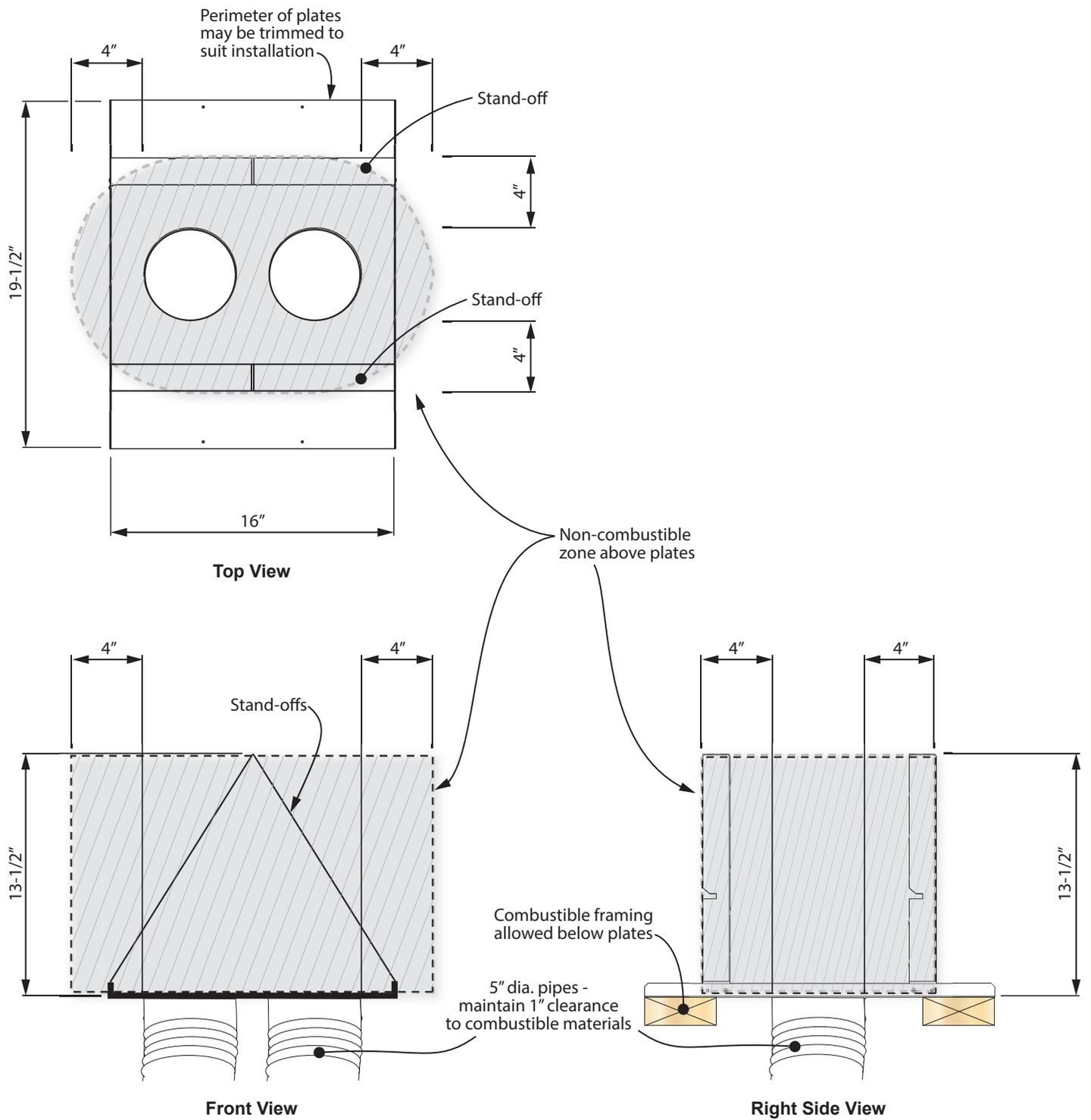
LDK9



# Wall Valance Discharge Opening using LDK7—Duct Termination Plates



# LDK7 Clearances to Combustibles



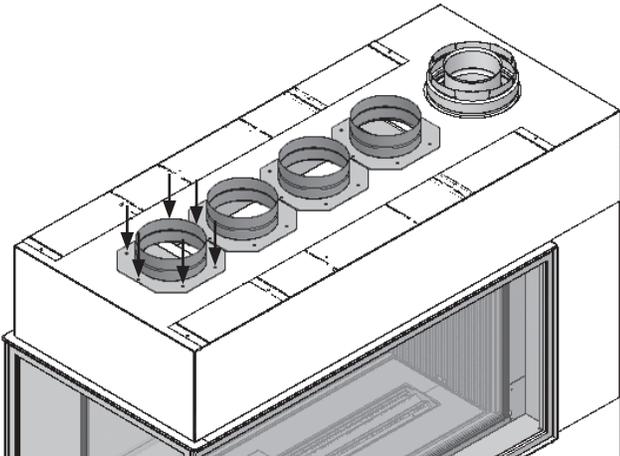


## WARNING

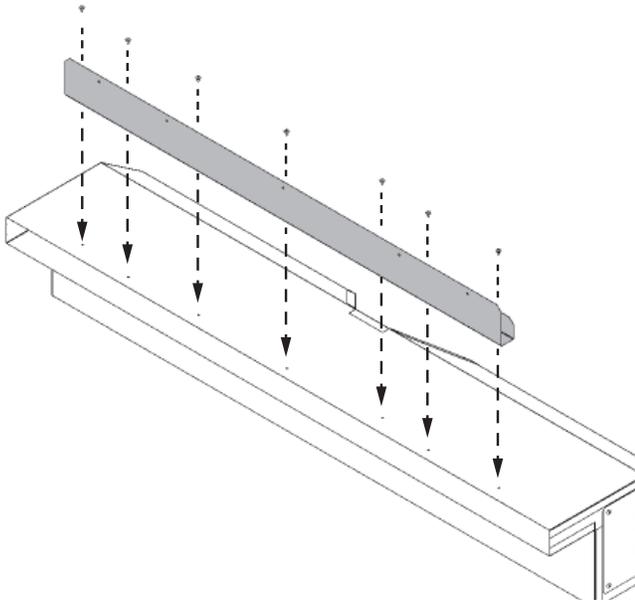
All FOUR (4) takeoffs MUST BE CONNECTED TO PLENUM(S).

### Install Plenum Kits (LDK3, LDK4, LDK9)

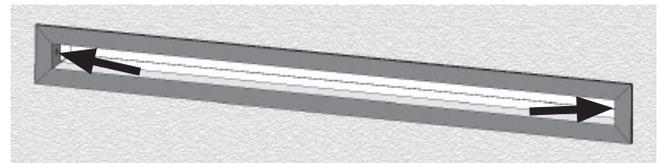
1. Install all four collars onto the top of the appliance (6 screws each).



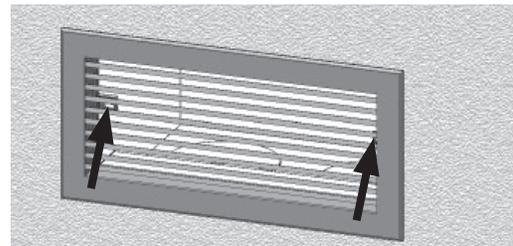
2. Frame a rough opening at the desired location—see earlier sections of this manual for allowable plenum positions and rough frame opening sizes.
3. Install top mounting bracket(s) to the plenum using screws provided (use the short sheet metal screws provided otherwise the screw tails (ends) will interfere with the finishing frame when installed).



4. Install the plenum(s) into the rough frame opening maintaining minimum clearances to combustibles as previously listed. Fix the plenum to the framing using nails or screws through the top mounting bracket. **Note that the mounting brackets are not intended to carry the weight of the plenum and pipes. Provide support to the underside of the plenum and ensure the plenum is level and its outlet is not distorted.** Use metal strapping (all-round, not supplied) as required to further secure the plenum to framing.
5. Attach one section of UL-181, Class 1 approved air duct to each of the collars and secure it with gear clamps provided. **DO NOT SPLICE DUCTS!**
6. Attach the top of the pipe sections to the plenum securing them with the gear clamps provided. An upward slope must be maintained in horizontal sections of pipes for proper convection. Use straps as necessary to maintain the pipes positions. Support horizontal sections every 24 inches.
7. Paint the inside surfaces of the plenum using high-temperature flat black spray paint for installations where the inside of the plenums may be visible. **Note:** The flanges of the white finishing frame (when used) will insert approximately 1-1/4" into the plenum covering the shiny sheet metal.
8. Install the finishing frame or louver to the plenum after the wall finish is completed:  
**LDK4:** Use the LDK5. **LDK9:** Use the LDK10.



**LDK3:** Use the grilles provided with the kit.



**Note:** The frame/louvers are finished white but may be painted another color if desired; use high temperature paint (250°F). You may also finish up to the perimeter of the plenum opening with your material of choice and not use the frame or louver. Do not finish over any of the opening in the plenum outlet.

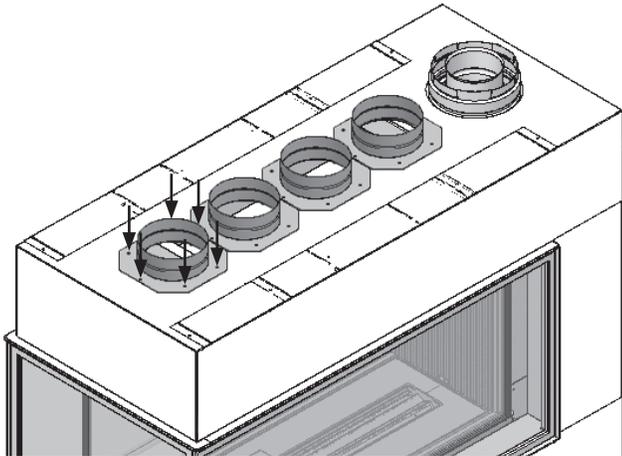
9. Continue with the fireplace installation.

**WARNING**

**All FOUR (4) takeoffs MUST BE CONNECTED TO PLENUM(S).**

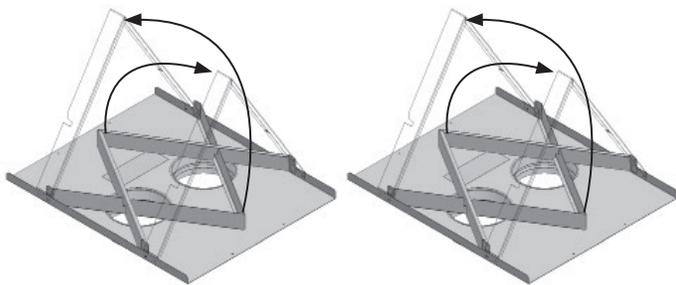
**Install Duct Termination Plates (LKD7)**

1. Install all four collars onto the top of the appliance (6 screws each).



2. Frame a rough opening and platform at the desired location—see earlier sections of this manual for allowable duct termination plates positions and rough frame opening sizes.
3. On each duct termination plate, rotate both stand-offs to the vertical position and secure in place using screws provided.

2 stand-offs per plate



4. Install the termination plates into the framing ensuring collars/pipes on underside of plates maintain 1 inch clearance to combustibles and clearance to combustible above the plates are maintained as listed in preceding pages. The termination plates perimeter may be trimmed as necessary to accommodate framing. Secure the termination plate to framing using screws or nails to avoid movement.
5. Attach one section of UL-181, Class 1 approved air duct to each of the collars and secure it with gear clamps provided. **DO NOT SPLICE DUCTS!**

6. Attach the top of the pipe sections to the duct termination plates securing them with the gear clamps provided. An upward slope must be maintained in horizontal sections of pipes for proper convection. Use straps as necessary to maintain the pipes positions. Support horizontal sections every 24 inches.
7. Continue with the fireplace installation.

**Repair Parts List**

	Description	Part no.
<b>2100HSC</b>	2100 HeatShift Canopy Kit	
	Canopy with collars	4007699
	Drywall frame support	4007689
	Support brackets (2)	4007690
	Middle duct	4007691
	Back cover plate	4007695
	Top duct with collars	4007698
	#8 x 1/2" S/T screws (29)	4004560
<b>LDK3</b>	14" Double Hot Air Plenums Kit	
	14" x 6" double plenums (2)	4005464
	5" take-off collars (4)	4005478
	DABL-00-C-SPL 14" x 6" Grilles white (2)	4005614
	Top mounting bracket/standoffs (2)	4005566
	#8 slotted drive screws 1/4" (6)	798601
<b>LDK4</b>	38" Quad Hot Air Plenum Kit	
	38" x 2" quad plenum	4005477
	5" take-off collars (4)	4005478
	Top mounting bracket/standoffs	4007213
	#8 slotted drive screws 1/4" (7)	798601
<b>LDK5</b>	38" Outlet Frame Kit for LDK4	
	Aux Frame-SPL 38" x 2" white	4005613
<b>LDK6</b>	5" Aluminum 2-ply Flex Kit	
	5" dia 10' (uncompressed) aluminum chimney liners (2)	4005635
	4.5" - 6.5" ss gear clamps (8)	4005642
<b>LDK7</b>	Duct Termination Plates	
	Plate and collar assembly (2)	4006747
	5" take-off collars (4)	4005478
	Screws 8 x 3/8 tap PN HD PH (12)	100A757
<b>LDK9</b>	30" Quad Hot Air Plenum Kit	
	30" x 2" quad plenum	4007903
	5" take-off collars (4)	4005478
	Top mounting bracket/standoff	4007601
	#8 slotted drive screws 1/4" (5)	798601
<b>LDK10</b>	30" Outlet Frame Kit for LDK9	
	Aux Frame-SPL 30" x 2" white	4007951

Each kit is sold separately.