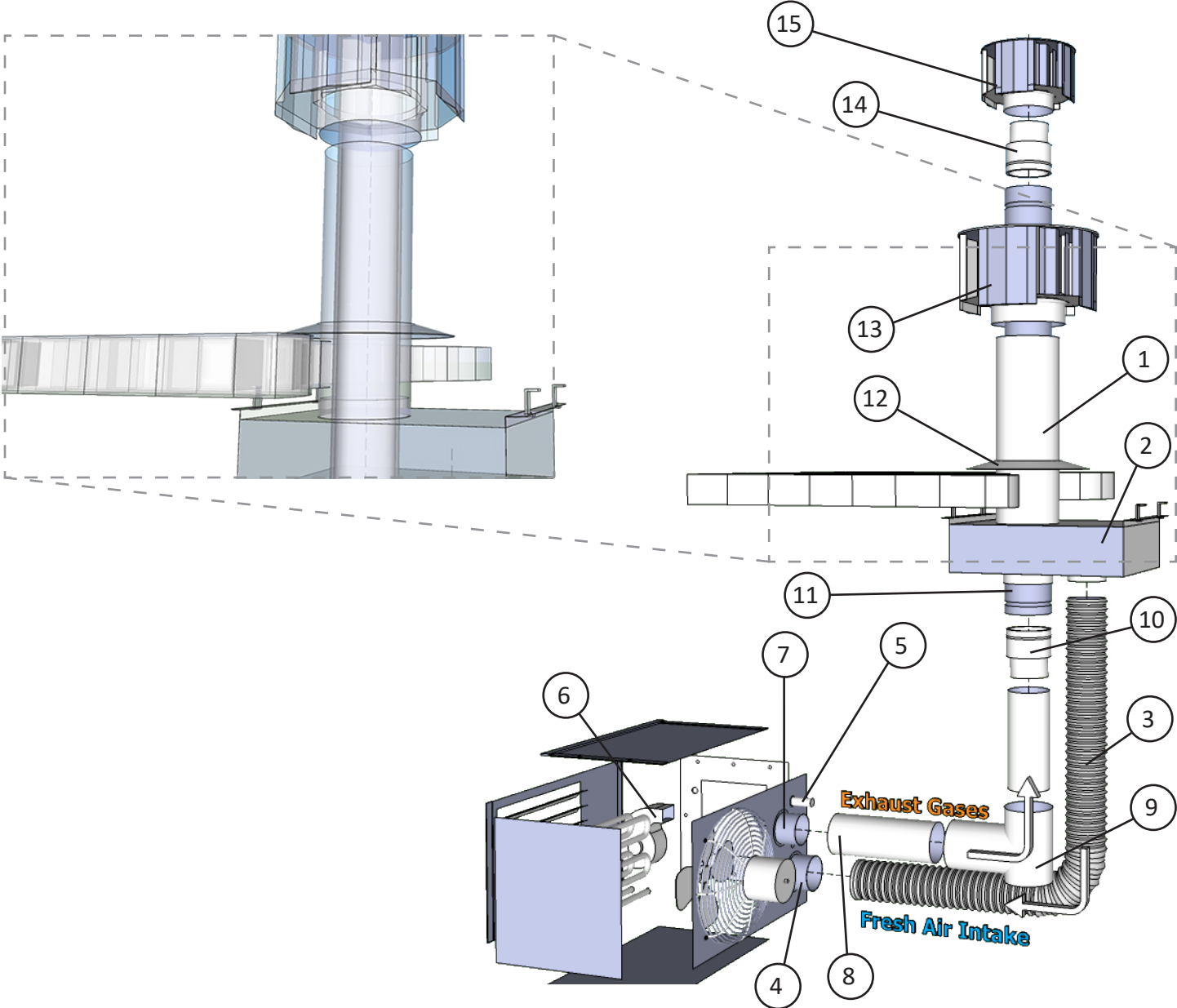


Vertical Concentric Vent Installation Supplement



Number	Description	Number	Description
1	Air Intake Vent Pipe (C-Vent) ³	9	Tee with Drip Leg & Cleanout Cap ³
2	Vertical Concentric Vent Box	10	Draft Hood Connector ³
3	Aluminum Flex Pipe (or C-Vent) ^{3,4}	11	B-Vent(Double-Wall, 1/4" Air Gap) ³
4	Combustion Air Inlet Pipe Connection	12	Flashing (field supplied) ³
5	Gas Pipe	13	Combustion Air Inlet Terminal
6	Power Exhauster	14	Reverse Draft Hood Connector (B - C) ³
7	Vent Pipe Connection ¹	15	Exhaust Vent Cap
8	C-Vent ^{2,3}		

¹ HDS models 30-45 are factory supplied with 3"-4" vent transitions for attaching the exhaust & air intake pipe to the heater.

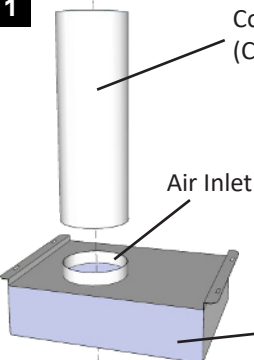
² Horizontal sections of vent pipe are to be installed with a minimum downward slope from the appliance of 1/4" per foot.

³ All C-Vent, B-Vent, Aluminum Flex Pipe and accessories are field supplied and installed.

⁴ Aluminum Flex Pipe (per local authority) &/or C-Vent, suggested 26 ga.

Vertical Concentric Vent Installation Supplement

1



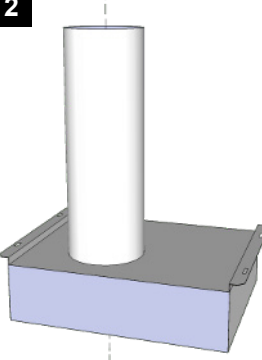
Combustion Air Intake Pipe (C-Vent)

Air Inlet

Concentric Adaptor Box

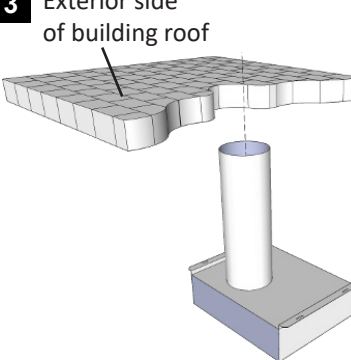
Slide the Combustion Air Intake Pipe (C-Vent) over the Air Inlet located on the concentric pipe side of the Concentric Adaptor Box.

2



Attach the C-Vent to the air inlet using at least 3 corrosion resistant sheet metal screws. Seal the joint and seam using sealant suitable for temperatures up to 400°F.

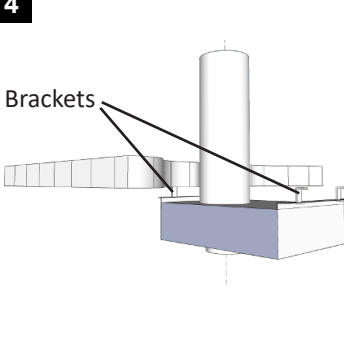
3



Exterior side of building roof

Place this assembly (the adapter box and combustion air intake pipe) through the properly prepared hole penetration/flashing in the roof ensuring combustion air intake pipe terminates above the snow line or at least 12" above the roof, whichever distance is greater.

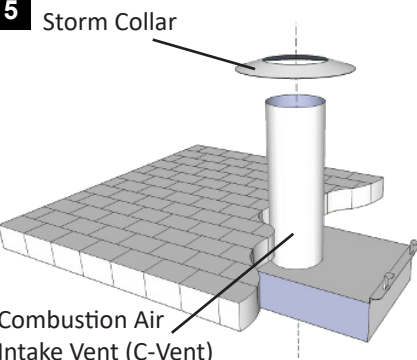
4



Brackets

The adapter box can be mounted flush to the roof. The box can also be offset from the roof by using field supplied brackets. If using field supplied brackets, they must be strong enough to rigidly secure the box to the roof and should be made from corrosion resistant material.

5

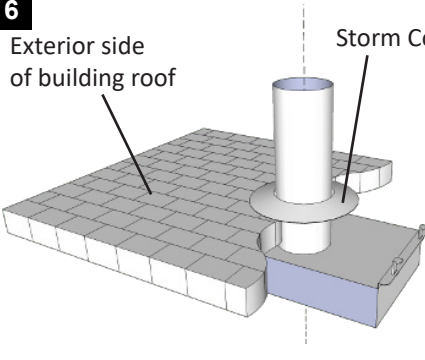


Storm Collar

Combustion Air Intake Vent (C-Vent)

From outside the building, caulk the gap between the combustion air intake vent and the building penetration.

6

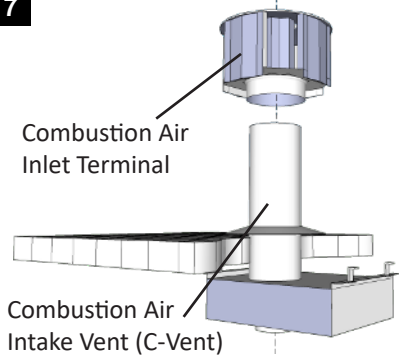


Exterior side of building roof

Storm Collar

Slide the Storm Collar over the Combustion Air Intake Vent (C-Vent) and attach it per local code.

7

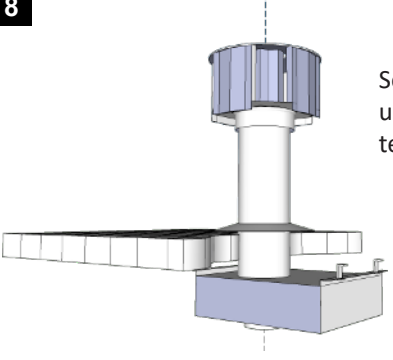


Combustion Air Inlet Terminal

Combustion Air Intake Vent (C-Vent)

Attach the Combustion Air Inlet Terminal to the Combustion Air Intake Vent (C-Vent). The bottom of the combustion air intake vent must terminate above the snow line, or at least 12 inches above the roof, whichever distance is greater.

8



Seal the joint and seam using sealant suitable for temperatures up to 400°F.

Vertical Concentric Vent Installation Supplement

9

Attach the Draft Hood Connector (C - B) to the B-Vent (Double-Wall, ¼" air gap) and the C-Vent (vertical section) to the Draft Hood Connector (C - B). Attach the Tee with Drip Leg & Cleanout Cap to the C-Vent (horizontal section).

Labels: Tee with Drip Leg & Cleanout Cap, B-Vent (Double-Wall, ¼" air gap), Draft Hood Connector (C - B), C-Vent

10

Insert the assembly (B-Vent {Double-Wall, ¼" air gap}, Draft Hood Connector (C - B) and C-Vent) through the hole on the non-concentric pipe side of the Concentric Adaptor Box to pass concentrically between the Air Intake Vent Pipe (C-Vent) and appear above the Combustion Air Inlet Terminal.

Labels: Concentric Adaptor Box

11

Attach the assembly (C-Vent and Tee with Drip Leg & Cleanout Cap) to the bottom end of the assembly (B-Vent (Double-Wall, ¼" air gap), Draft Hood Connector (C - B) and C-Vent). Horizontal sections of vent pipe are to be installed with a minimum downward slope from the appliance of ¼" per foot and suspended securely from overhead structures at points not greater than 3' apart.

Labels: B-Vent (Double-Wall, ¼" air gap), C-Vent

12

Connect the Combustion Air Inlet Pipe Connection of the unit heater with the Concentric Adaptor Box using Aluminum Flex Pipe or C-Vent.

Labels: Aluminum Flex Pipe (or C-Vent)

13

Attach the Reverse Draft Hood Connector (B - C) to the B-Vent (double-wall, ¼ inch air gap).

Labels: Reverse Draft Hood Connector (B - C), B-Vent (Double-Wall, ¼" air gap)

14

Attach the Exhaust Vent Cap to the Reverse Draft Hood Connector (B - C).

Labels: Exhaust Vent Cap, Reverse Draft Hood Connector (B - C), Combustion Air Inlet Terminal

15

The bottom of the Exhaust Vent Cap must terminate at least 6" above the top of the Combustion Air Inlet Terminal.

16

Refer to table on the next page for B-Vent, C-Vent and Concentric Adaptor Box dimensions recommended for corresponding unit heater model #s.

All seams and joints must be sealed with either tape, silicone sealant, or other appropriate sealants suitable for metal to metal contact and for temperatures up to 400° F. If using tape, wrap it two full turns around the vent pipe.

A minimum of 1 2" straight pipe is recommended from the flue outlet before turns in the vent pipe.

Vertical Concentric Vent Installation Supplement

Fig 1 - Vertical Concentric Venting Outdoor Clearances

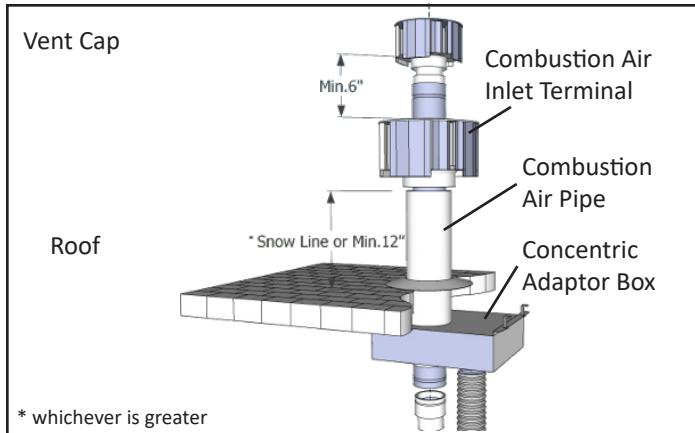
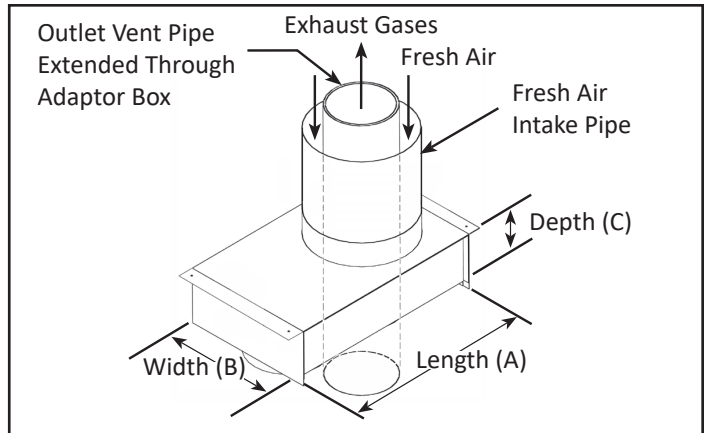


Fig 2 - Adapter Box with Combustion Air Intake Pipe attached

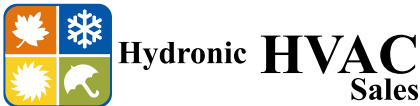
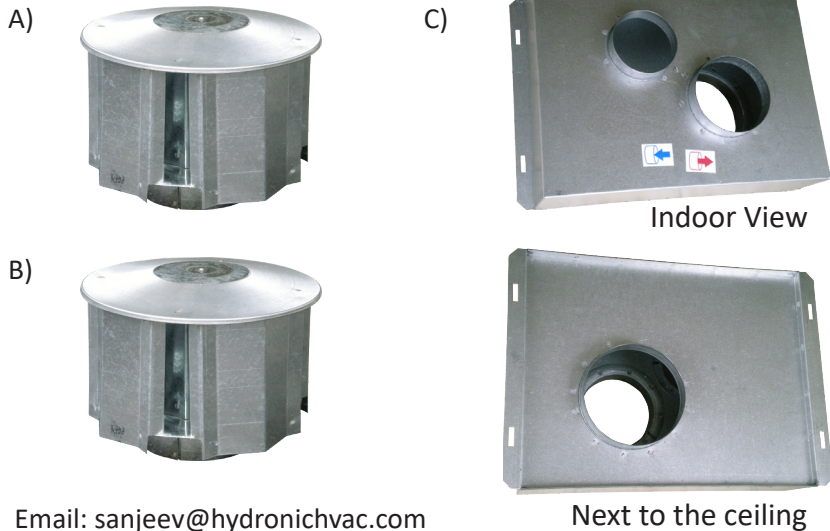


Model #	BTU/hr	Kit P/N	Exhaust Pipe ¹	B-Vent Pipe ²		Fresh Air Intake Pipe ³	Concentric Adaptor Box		
			(C-Vent)	ID	OD		Length (A)	Width (B)	Depth (C)
HDS	30-45	77793 ⁴	3"	4"	4.5"	6"	18.84"	13.33"	4.57"
HDS/HDC	60-125	33356 ⁵	4"	4"	4.5"	6"	18.84"	13.33"	4.57"
PTX/BTX ⁶	150-200	33356	4"	4"	4.5"	6"	18.84"	13.33"	4.57"
PTX/BTX ⁶	250-400	33357	6"	6"	6.5"	8"	15.27"	17.00"	4.57"
DFS	100-175	33356	4"	4"	4.5"	6"	18.84"	13.33"	4.57"
DFS	200-400	33357	6"	6"	6.5"	8"	15.27"	17.00"	4.57"

- 1 Exhaust pipe from unit heater up to the concentric vent kit adaptor box.
- 2 Opening in the adapter box accepts double-wall B-vent with 1/4" air gap between double-wall B-vent's inner and outer wall.
- 3 Fresh air intake pipe from the adapter box to the outside of the building. This pipe goes through the hole in the wall.
- 4 Comes with (2) qty. 3" to 4" transitions for attaching the 3" exhaust pipe to 4" B-vent & 3" fresh air intake pipe to the 4" collar on the adapter box.
- 5 Same kit as P/N 77793 except that this kit does not include the 3" to 4" transitions.
- 6 Same data applicable for previous models PTS and BTS.

Vertical Concentric Vent Kit Components

- A) Exhaust Vent Cap
- B) Combustion Air Inlet Terminal
- C) Concentric Adapter Box



Tech Support

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Disclaimer: This supplement is not an authorized document from Modine Manufacturing. It is strictly a supplement to assist in understanding how the concentric kit is assembled. Please refer to manufacturer's Installation & Operations Manual for detailed instructions.