

Condensing Vent Component & Installation Guide

Riva Plus

HEAT ONLY & COMBI BOILER

Please Read This Guide Carefully
and
Save for Future Reference

- This guide is intended to provide detailed information regarding venting components and installation.
- This guide must be used in conjunction with the boiler installation manual.

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Restrictor Sizing Chart

Vent Type	Length (ft)	Restrictor Size
Concentric	1.65 to 3	82
	3.3 to 8.8	NONE
Separate	3.3 to 39.4 (tot. in + out)	45
	39.4 to 99 (tot. in + out)	None
Vertical	3.3 to 27.8	None

Exterior Vent Warnings

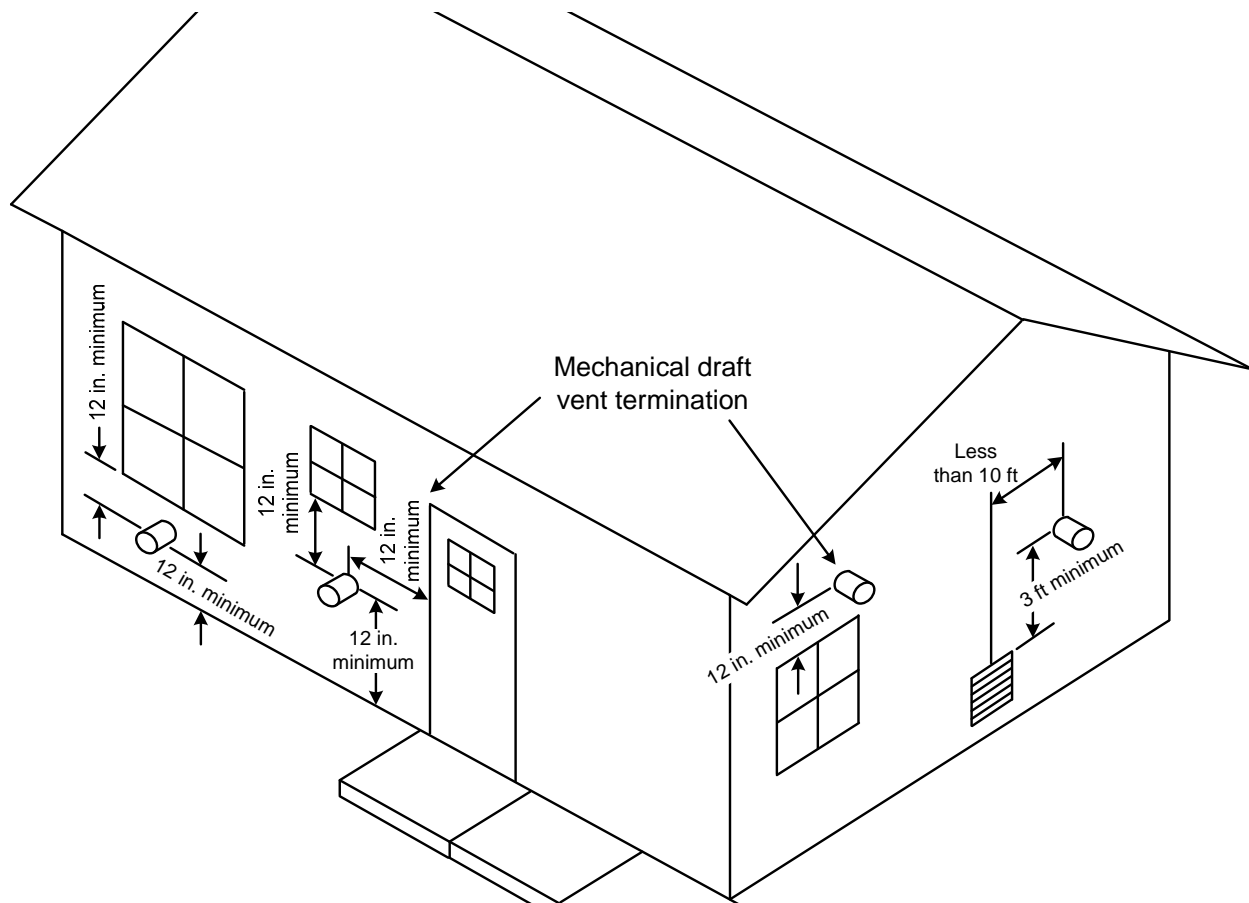
CAUTION

EXTERNAL VENT SURFACES ARE HOT.

IT IS THE RESPONSIBILITY OF THE HOMEOWNER TO KEEP THE VENT TERMINAL CLEAR OF SNOW AND ICE.

NOTE: USE ONLY LISTED COMPONENTS SUPPLIED WITH THE BOILER. SURFACE DISCOLORATION OF THE BUILDING MAY OCCUR DUE TO IMPROPER INSTALLATION. QHT, INC. WILL NOT ACCEPT RESPONSIBILITY OF LIABILITY FOR SUCH DISCOLORATION.

Exterior Vent Clearances



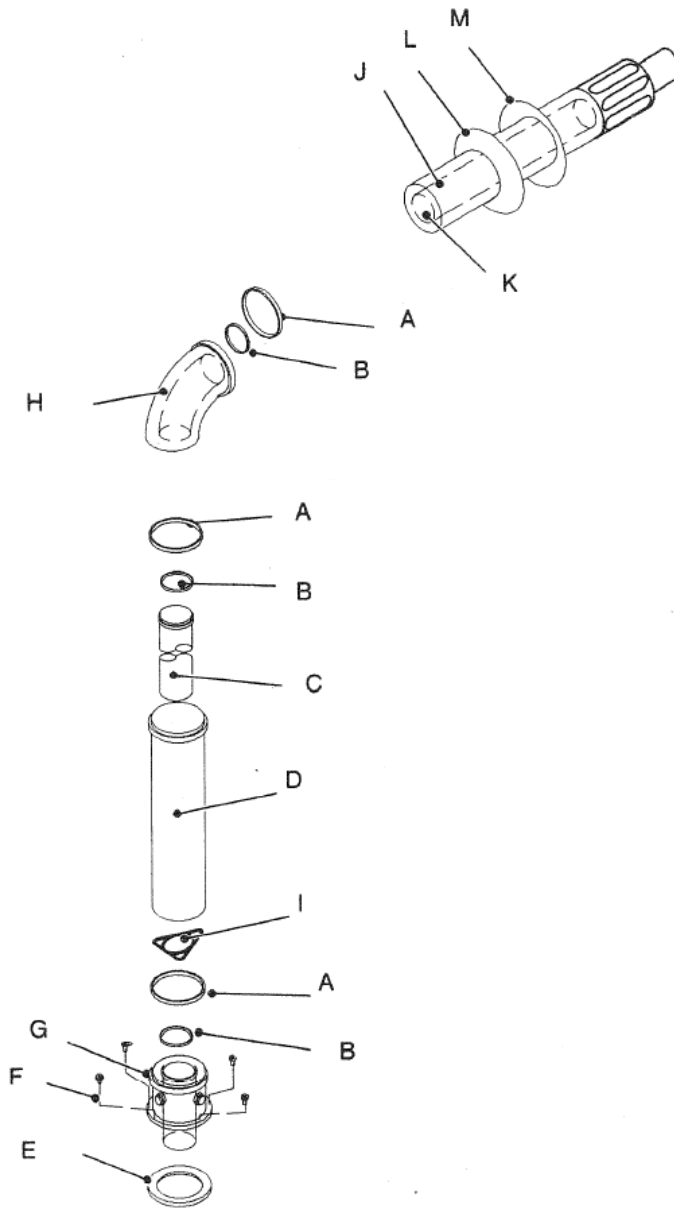
The Exhaust Hood should be installed on the leeward side of the house and conform to the following guidelines:

1. The vent hood shall not be less than 3 feet above any forced air inlet to the house.
2. The vent hood shall not be less than 1 foot below, 1 foot horizontally, or 1 foot above any door, window or gravity inlet into any building.
3. The vent hood shall not be less than 2 feet from an adjacent building.
4. The vent hood shall be not less than 7 feet above grade when located adjacent to a public walkway.
5. The vent hood shall be located so that flue gasses are not directed to jeopardize people, overheat combustible structures, materials or enter buildings. Do not install hood below a deck.
6. Minimum of 4' horizontal clearance from electric meters, gas meters, regulators and relief equipment.
7. **Care should be taken to ensure the rubber gaskets in ALL vent joints are properly assembled to prevent leakage of products of combustion in the building.**
8. Avoid installing exhaust the hood on the North, West, or the side of the house receiving the prevailing winds.

Concentric Riser Vent Kit - RI PLUS VC RIS - 10999.0389

Components included in kit:

- A. FRESH AIR GASKET 4IN (3)
- B. EXHAUST GASKET 2.5IN (3)
- C. RISE EXHAUST PIPE (18")
- D. RISE INTAKE PIPE (20")
- E. BOILER GASKET (1)
- F. FLANGE SCREWS (4)
- G. FLANGE (1)
- H. 90 DEG ELBOW (1)
- I. CENTERING SPRING (1)
- J. INTAKE TERMINATION(1)
- K. FLUE EXHAUST PIPE WITH TERMINATION (38")
- L. WALL GASKET (1)
- M. WALL GASKET (1)



Notes:

- Length 1' to 8.8' equivalent length
- 90 Elbow = 3.3' equivalent length
- 45 Elbow = 1.6' equivalent length

Concentric Riser Vent Kit Installation

Drill the wall in the chosen position.

Useful measurements concerning the position of the pipes and the limit lengths are enclosed in the mounting bracket instructions and in the documents enclosed with the boiler.

If it is necessary to cut the pipes C and D, insure that the pipes are cut at the opposite end of the seal hollows

The maximum measurements you can obtain with this kit are shown in the illustration.

More information can be obtained from the instructions of the other kits used.

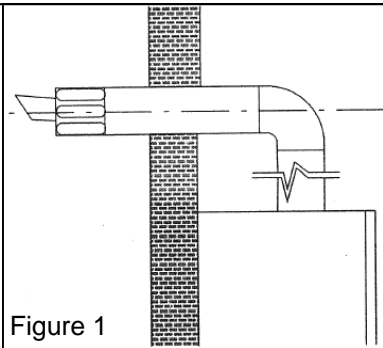


Figure 1

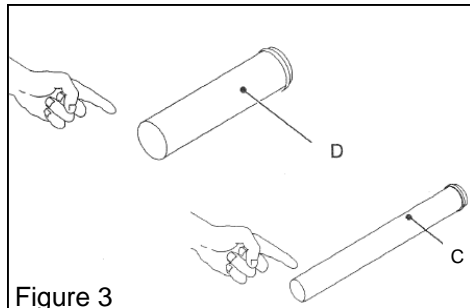


Figure 3

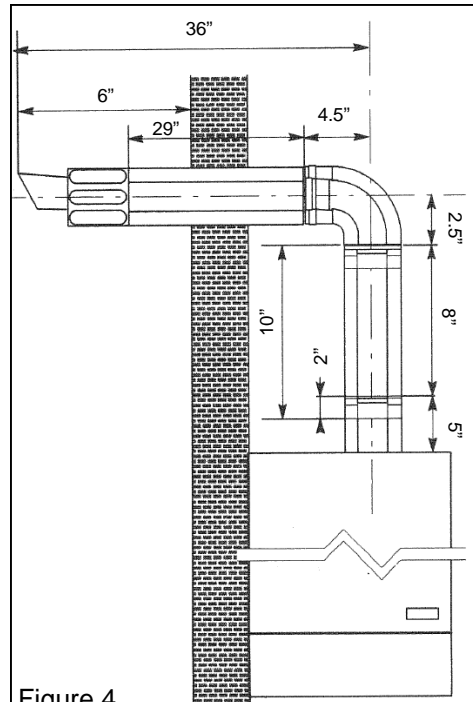


Figure 4

Concentric Riser Vent Kit Installation Cont.

Insert the gaskets A, B in the hollows of the elbow H.

Insert the gasket A in the hollow of the air intake pipe D.

Insert the gasket B in the hollow of flue exhaust pipe C.

Insert the gaskets A, B in the hollow of the flange G

Ensure that the seals are inserted in the correct orientation as shown in the enlarged detail views.

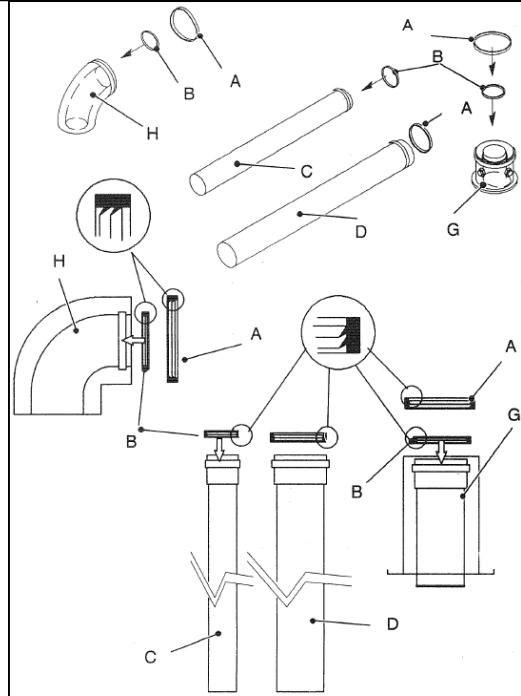


Figure 5

Insert the pipe C into the pipe D completely. Insert the centering spring I.

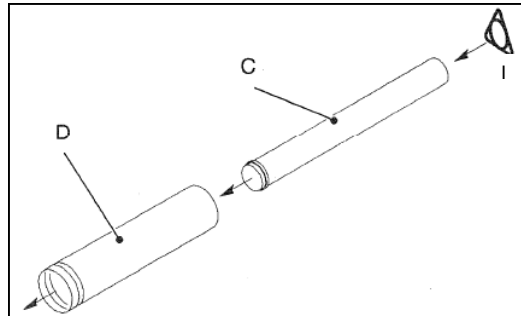


Figure 6

Fit the gasket E to the boiler.

Fix the flange G on the boiler using the screws F.

Fit the pipes C & D onto the flange G.

Be careful not to damage the gaskets during fitting.

Install the elbow H.

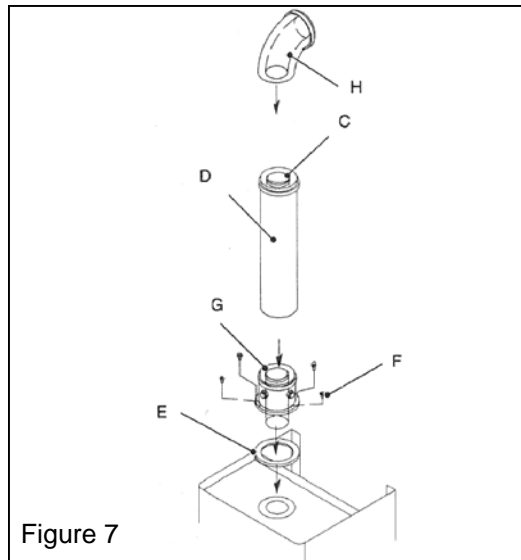
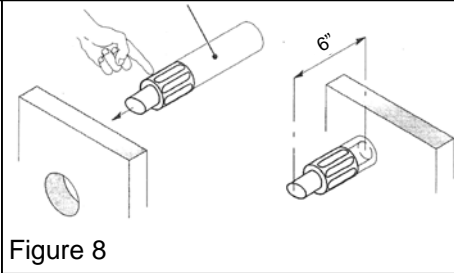


Figure 7

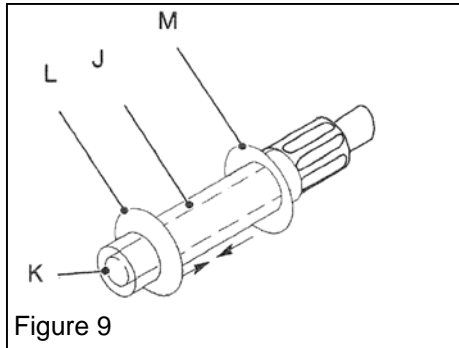
Concentric Riser Vent Kit Installation Cont.

Insert the pipe J and the pipe K through the hole in the wall with the terminal protruding out **not less** than the distance indicated.

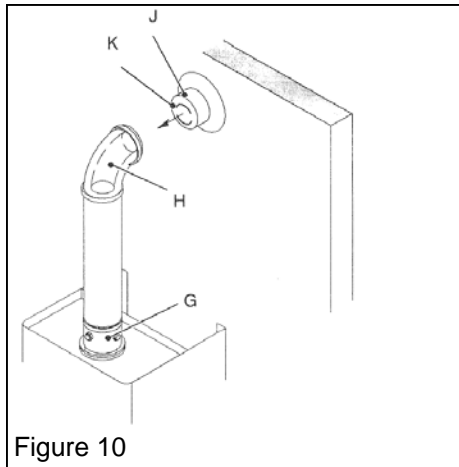


Insert the wall gaskets L and M on the pipe J.

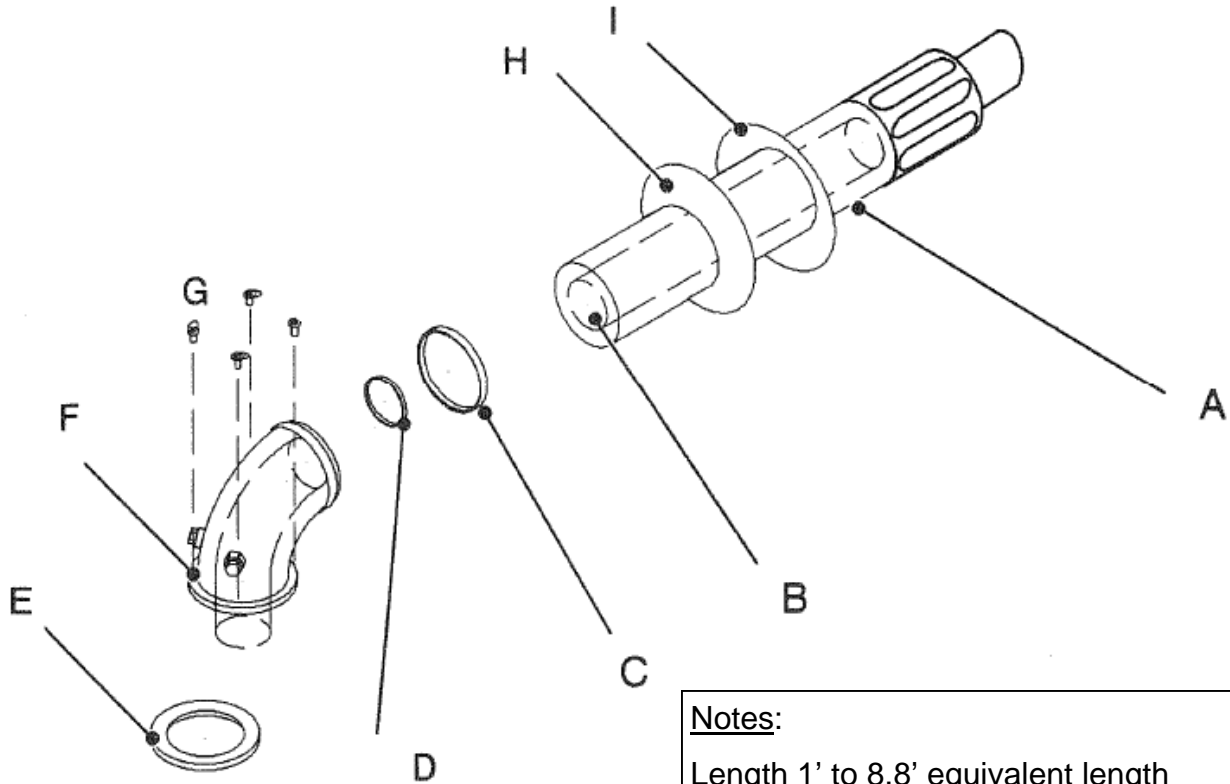
The plastic wall gasket L must be fit inside, the rubber wall gasket M must be fit outside the building.



Fix the exhaust pipe K and the air intake pipe J onto the elbow H.



Standard Concentric Vent Kit - RI PLUS VC - 10999.0387



Components included in kit:

- A. INTAKE TERMINATION (1)
- B. EXHAUST TERMINATION (1)
- C. FRESH AIR GASKET 4IN (1)
- D. EXHAUST GASKET 2.5IN (1)
- E. BOILER GASKET (1)
- F. 90 DEG ELBOW (W/ FLANGE) (1)
- G. FLANGE SCREWS (4)
- H. WALL GASKET (1)
- I. WALL GASKET (1)

Notes:

Length 1' to 8.8' equivalent length

90 Elbow = 3.3' equivalent length

45 Elbow = 1.6' equivalent length

Standard Concentric Vent Kit Installation

Drill the wall in the chosen position.

Useful measurements concerning the position of the pipes and the limit lengths are enclosed in the mounting bracket instructions and in the documents enclosed with the boiler.

If it is necessary, cut the pipes A and B from the elbow side.

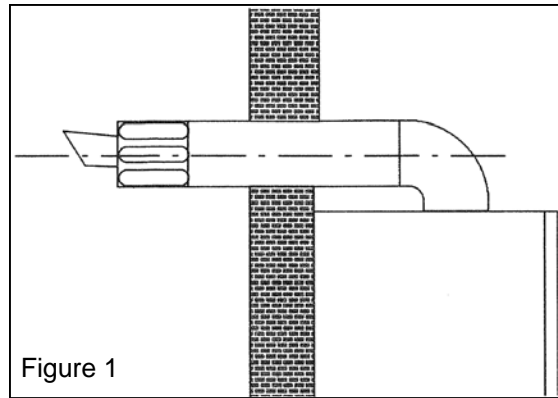


Figure 1

The maximum measurements you can obtain with this kit is shown in the illustrations.

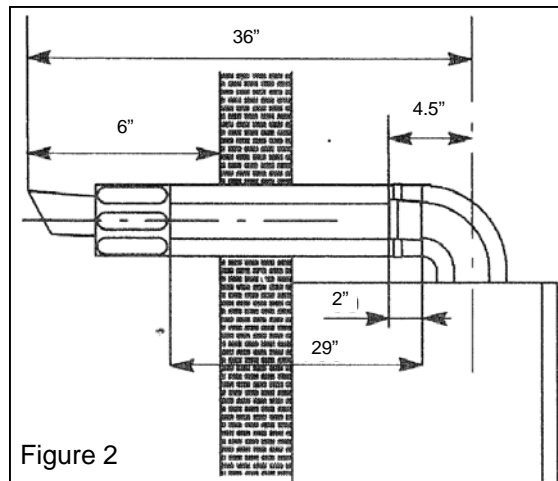


Figure 2

Insert pipe B and pipe A through the hole in the wall with the terminal protruding out not less than the indicated measurement.

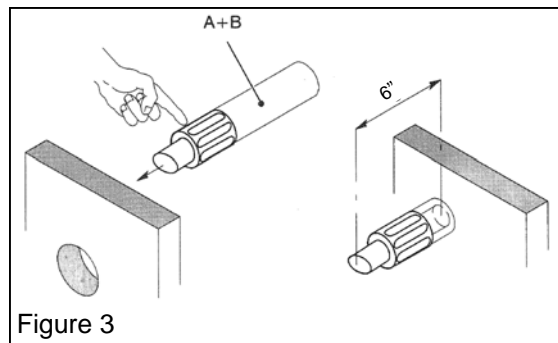


Figure 3

Install the wall gaskets H and I on pipe A. The plastic wall gasket H must be fitted inside, the rubber wall gasket I must be fitted outside the building.

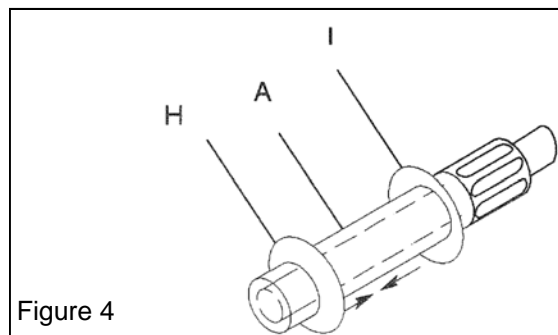


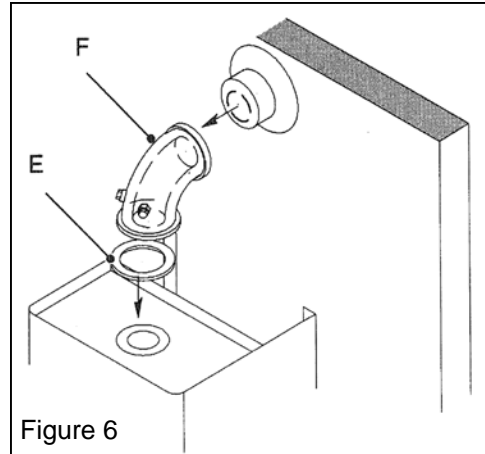
Figure 4

Standard Concentric Vent Kit Installation Cont.

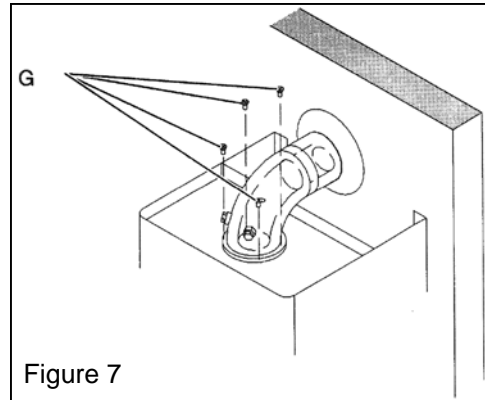
Fit gasket E to the boiler.

Insert the elbow F between the exhaust pipe and the boiler.

Be careful not to damage the gaskets inside the elbow.



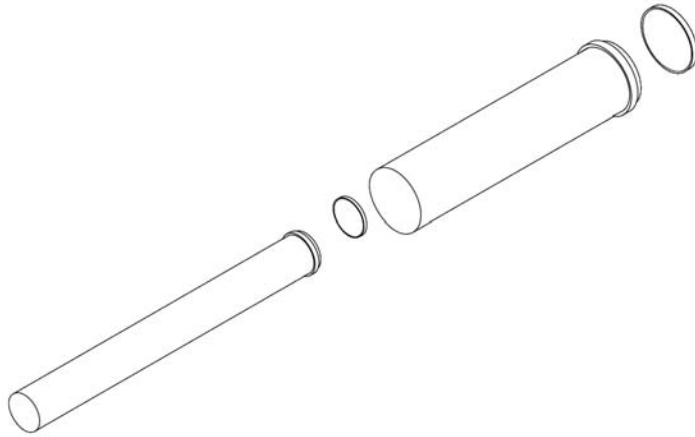
Fix the elbow F on the boiler using the screws G.



Concentric Vent Accessories (For use with riser and standard concentric kits)

Concentric Extension - RI PLUS VC EXT - 10999.0388

Equivalent Length: 3.3'

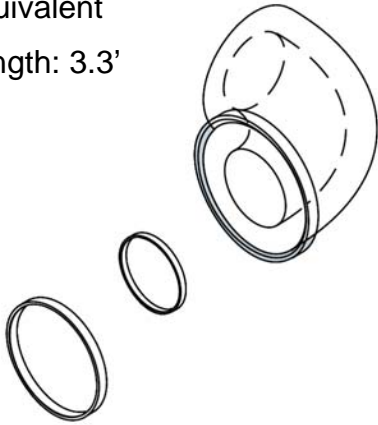


Components included in kit:

- A. INTAKE PIPE (38")
- B. EXHAUST PIPE (38")
- C. FRESH AIR GASKET 4IN (1)
- D. EXHAUST GASKET 2.5IN (1)

Concentric 90 Degree Elbow - RI PLUS VC 90 - 10999.0390

Equivalent Length: 3.3'

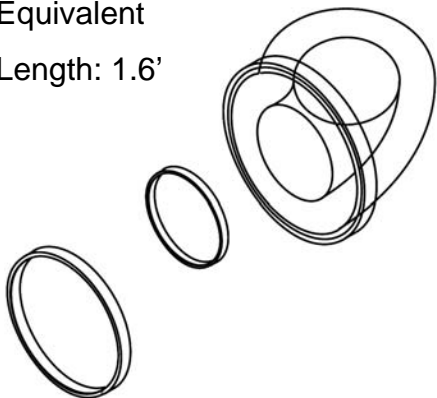


Components included in kit:

- A. 90 CONCENTRIC ELBOW (1)
- B. FRESH AIR GASKET 4IN (1)
- C. EXHAUST GASKET 2.5IN (1)

Concentric 45 Degree Elbow - RI PLUS VC 45 - 10999.0391

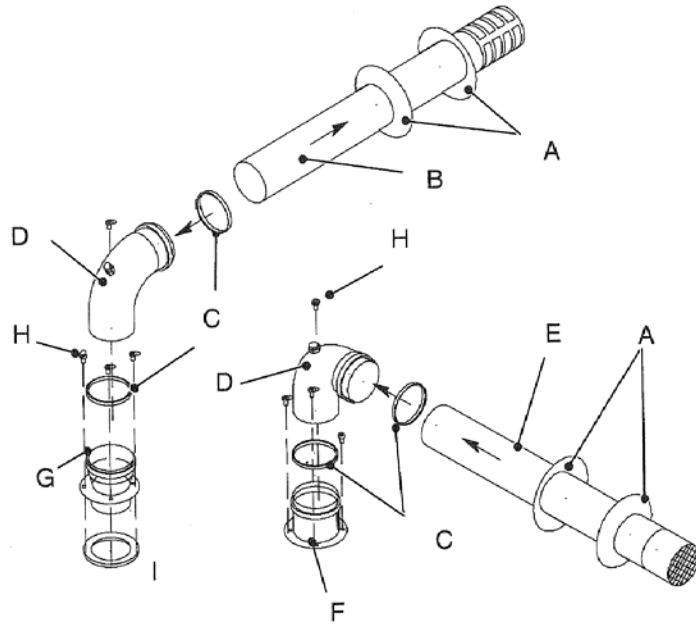
Equivalent Length: 1.6'



Components included in kit:

- A. CONCENTRIC ELBOW (1)
- B. FRESH AIR GASKET 4IN (1)
- C. EXHAUST GASKET 2.5IN (1)

Separate Vent Kit - RI PLUS VS - 10999.0393



- Components included in kit:
- A. WALL GASKETS (4)
 - B. FLUE EXHAUST PIPE (39")
 - C. PIPE GASKETS (4)
 - D. 90 DEG ELBOW (2)
 - E. AIR INTAKE PIPE (39")
 - F. INTAKE COLLAR (1)
 - G. EXHAUST COLLAR (1)
 - H. COLLAR SCREWS (8)
 - I. BOILER EXHAUST GASKET (1)
 - J. EXHAUST RESTRICTOR
(SUPPLIED WITH BOILER)

Notes:

Maximum length 99' equivalent length

90 Elbow = 3.3' equivalent length

45 Elbow = 1.6' equivalent length

Separate Vent Kit Installation

The flue exhaust pipe must have a slope of about 1.5 degrees. The termination must be higher than the top of the boiler.

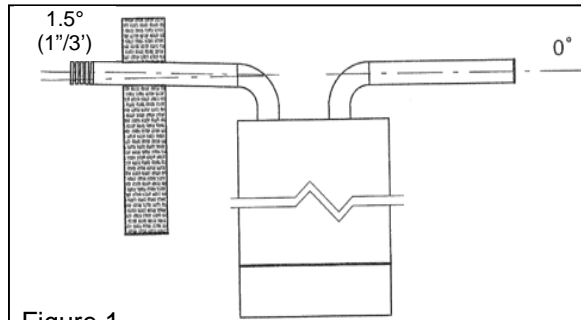


Figure 1

Drill the wall in the chosen position.

Useful measurements concerning the position of the pipes and the maximum lengths are included in the documents enclosed in the boiler.

Insert the gaskets C into the channels of elbows D and collars G and F.

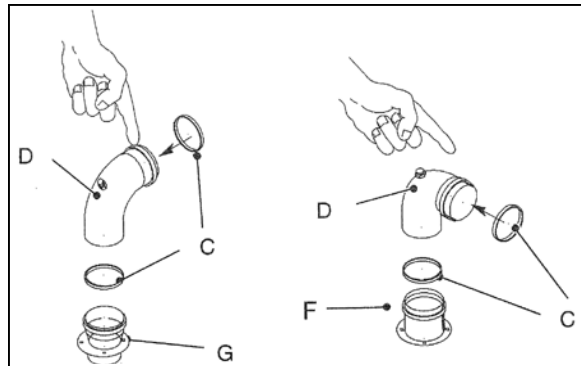
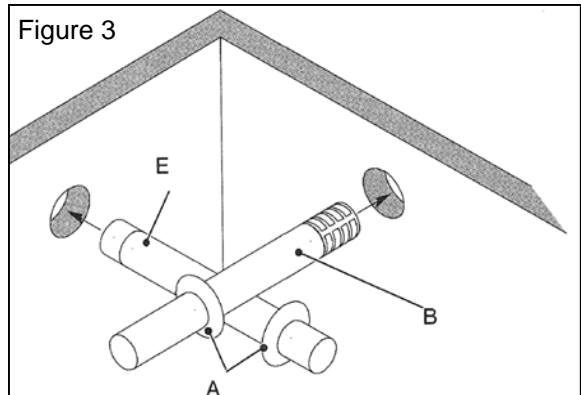


Figure 2

Install the interior wall gaskets A on pipes B and E.
Insert the pipes B and E through the holes in the wall.



Separate Vent Kit Installation Cont.

Place the gasket I on the boiler.

Secure the flue collar G in place utilizing the four screws H.

Be careful not to damage the gaskets.

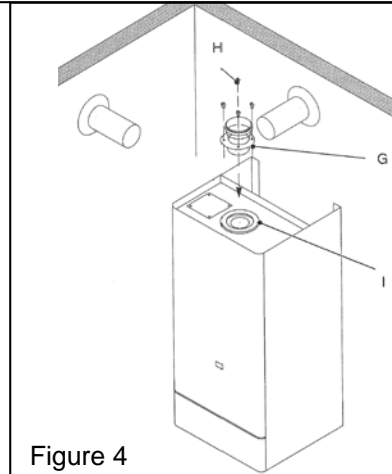


Figure 4

Install the intake collar F using the four screws H.

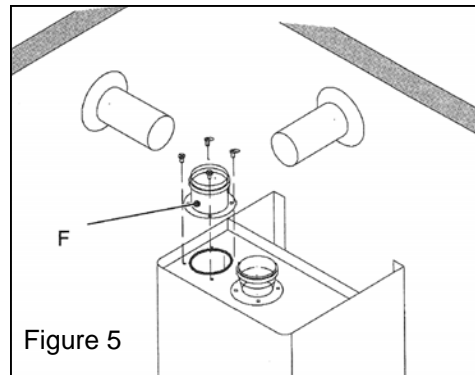


Figure 5

Insert the 90 degree elbows D into the adapters F and G. Slide the intake and exhaust pipes into the elbows D. Complete the installation inserting the wall gasket on the external edges of the pipes.

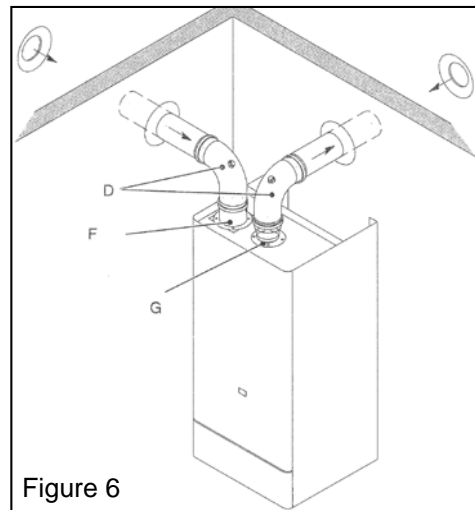
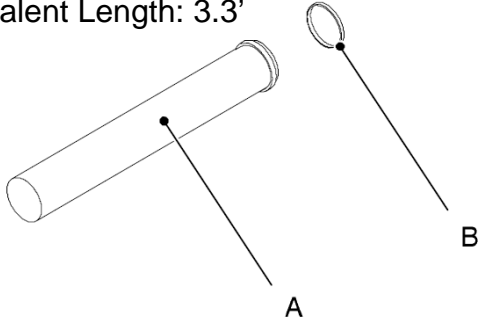


Figure 6

Separate Vent Accessories

Separate Extension - RI PLUS VS EXT - 10999.0394

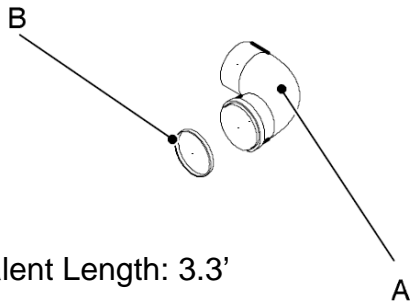
Equivalent Length: 3.3'



Components included in kit:

- A. INTAKE / EXHAUST EXTENSION (39")
- B. INTAKE / EXHAUST GASKET (1)

Separate 90 Degree M X F Elbow - RI VS 90M - 10999.0395

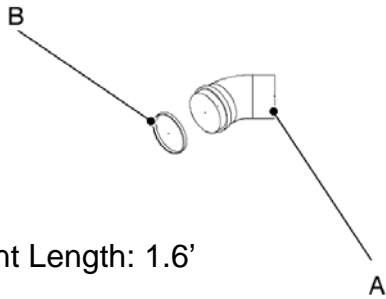


Equivalent Length: 3.3'

Components included in kit:

- A. 90 DEGREE MALE X FEM. ELBOW (1)
- B. INTAKE / EXHAUST GASKET (1)

Separate 45 Degree Elbow- RI PLUS VS 45 - 10999.0396

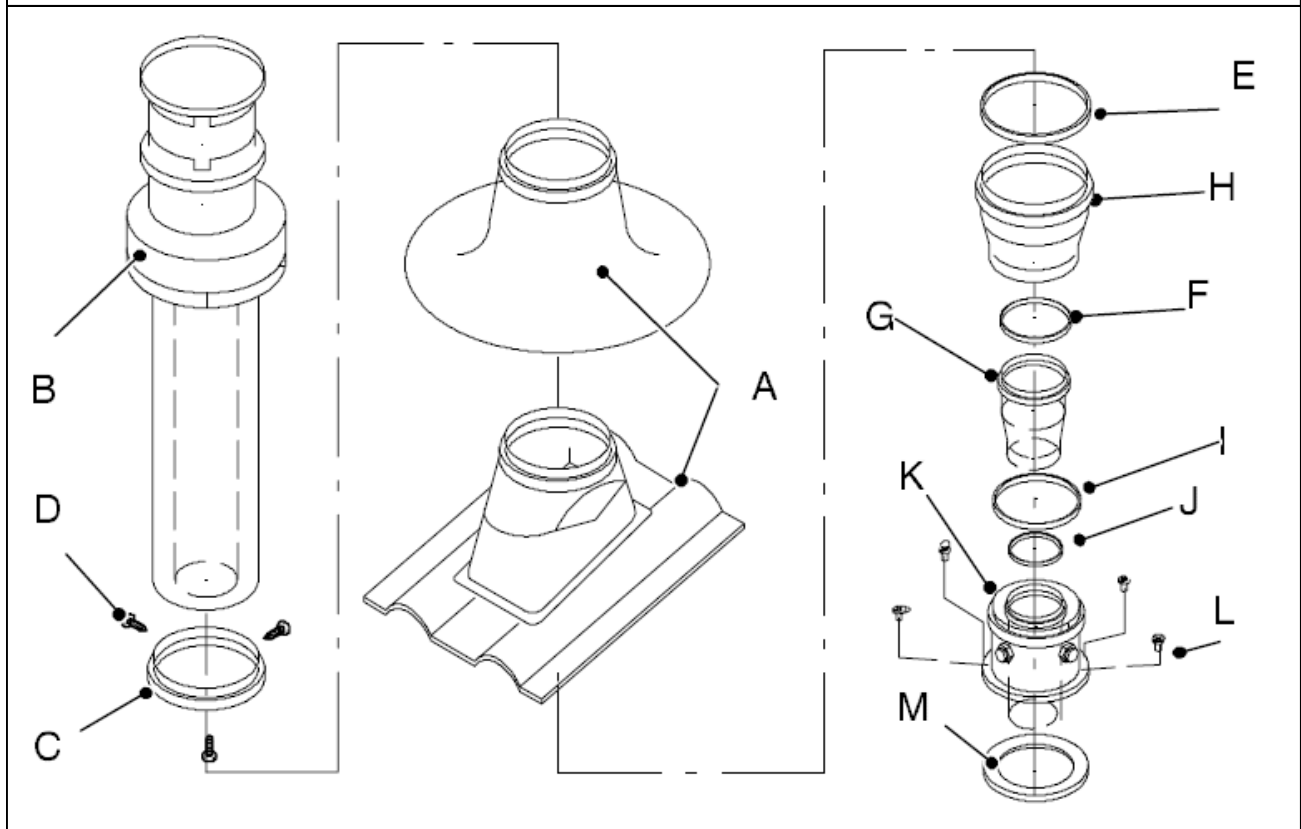


Equivalent Length: 1.6'

Components included in kit:

- A. 45 DEGREE MALE X FEM. ELBOW (1)
- B. INTAKE / EXHAUST GASKET (1)

Vertical Roof Vent Kit - RI PLUS RV - 10999.0392



Components included in kit:

- A. ROOF FLASHING - FLAT / PITCHED* (1)
- B. EXTERIOR TERMINATION (1)
- C. TERMINATION FLANGE (1)
- D. TERMINATION MOUNTING SCREW (3)
- E. FRESH AIR PIPE GASKET (1)
- F. EXHAUST PIPE GASKET (1)
- G. EXHAUST ADAPTER (1)
- H. FRESH AIR ADAPTER (1)
- I. FRESH AIR COLLAR GASKET (1)
- J. EXHAUST COLLAR GASKET (1)
- K. BOILER FLANGE COLLAR (1)
- L. BOILER FLANGE COLLAR SCREWS (4)
- M. BOILER FLANGE GASKET (1)

* Must be purchased separately. Part numbers can be found on page 22

Notes:

- Maximum height 27.8' equivalent length
- 90 Elbow = 3.3' equivalent length
- 45 Elbow = 1.6' equivalent length
- Maximum 4 elbows (45 or 90)

Vertical Roof Vent Kit Installation

Termination Location / Installation: Figure 1
Before installing the roof termination, ensure the proposed location meets the clearance requirements in the boiler installation manual and any local code requirements.

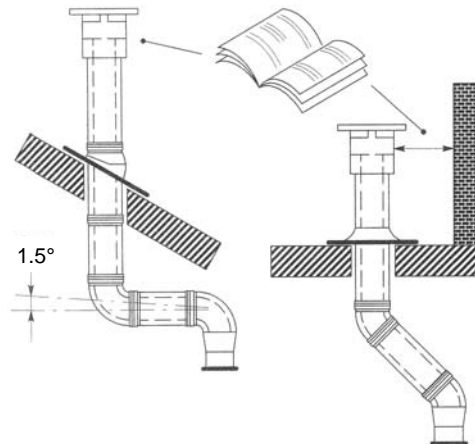


Figure 1

Standard Roof Vent Height:

The standard roof vent kit is 53.5 inches from the top of boiler to the top of the termination. Extensions and elbows can be added, as needed. These parts are shown on page 21. The pitched roof flashing can accommodate a 16° to 41° pitch, as shown in figure 2. Note: The roof flashing (pitched or flat) must be purchased separately.

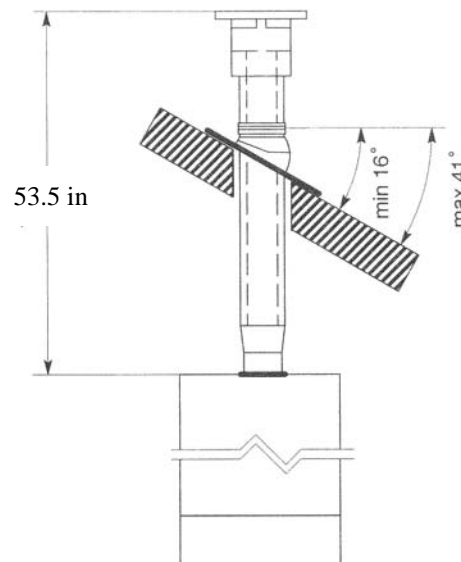


Figure 2

Termination Installation :

- Slide the termination flange (C) onto the termination pipe (B) as shown in figure 3.
- Align the roof flashing (A, purchased separately) with the hole cut through the roof.
- Slide the termination (B) down through the flashing and hole through roof until the termination flange (C) fits securely on the roof flashing.

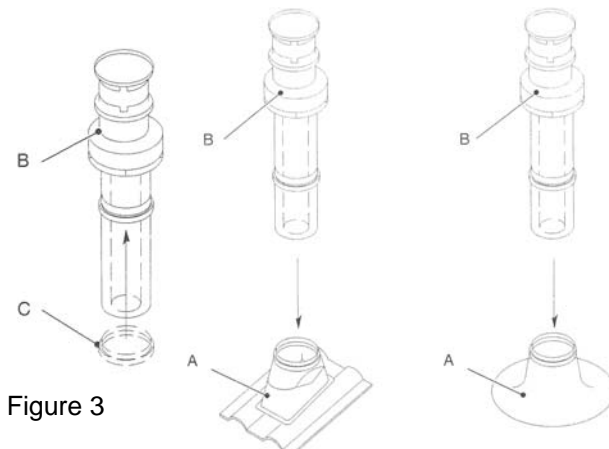


Figure 3

Figure 4

Vertical Roof Vent Kit Installation Cont.

Gasket Installation :

Insert the gaskets (E,F,I,J) into the corresponding adapters as shown in figure 5. Be sure to install the gaskets so the bevels of the gasket are oriented as shown.

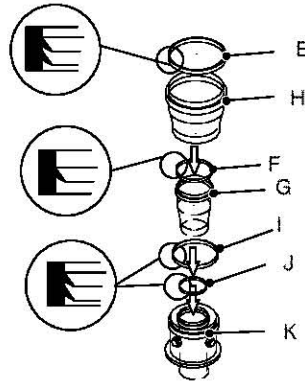


Figure 5

Boiler Collar Installation : Figure 6

- Install the boiler flange gasket (M) onto the outlet of the boiler.
- Attach the boiler flange collar (K) to the boiler using the 4 screws (L).
- Slide the adapters (G, H) into the flange collar (K). Be sure not to damage the gaskets.

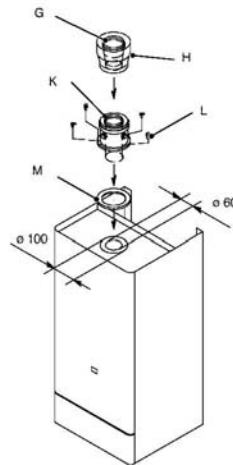


Figure 6

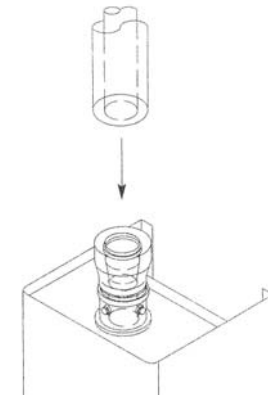


Figure 7

Termination connection :

Slide the termination or extension (if used) into the adapters (G, H) as shown in figure 7.

Final Installation :

Once the exhaust pipe has been connected to the boiler, installation is completed by sliding the termination flange (C) down onto the roof flashing (A). Secure the flange with the three supplied screws (D) as shown in figure 8.

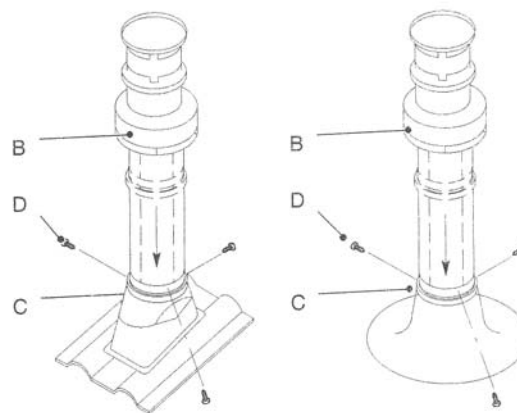
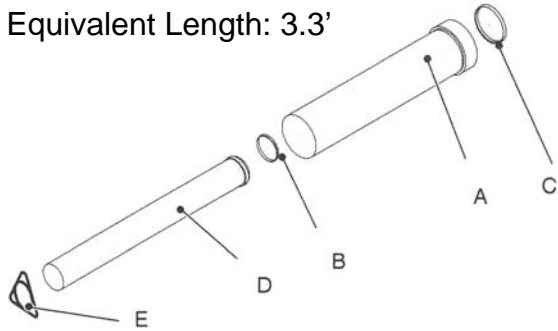


Figure 8

Vertical Roof Vent Accessories

Vertical Roof Vent Extension - RI PLUS RV EXT - 10999.0407

Equivalent Length: 3.3'

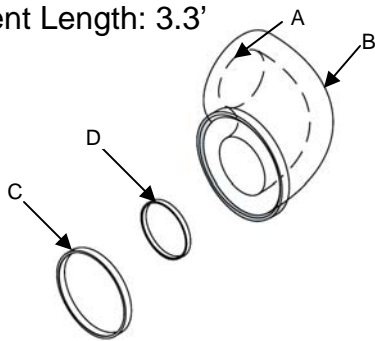


Components included in kit:

- A. INTAKE EXTENSION (39")
- B. EXHAUST GASKET (1)
- C. INTAKE GASKET (1)
- D. EXHAUST EXTENSION (39")
- E. CENTERING BRACKET (1)

Vertical Roof Vent 90 Degree Elbow - RI PLUS RV 90 - 10999.0408

Equivalent Length: 3.3'

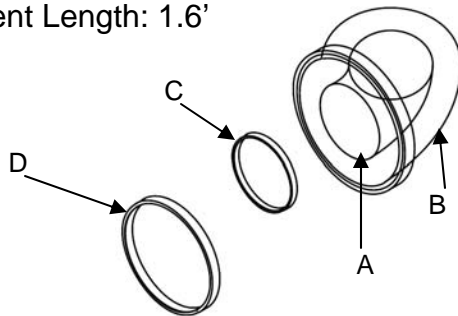


Components included in kit:

- A. EXHAUST PIPE (1)
- B. INTAKE PIPE (1)
- C. INTAKE GASKET (1)
- D. EXHAUST GASKET (1)

Vertical Roof Vent 45 Degree Elbow- RI PLUS RV 45 - 10999.0409

Equivalent Length: 1.6'

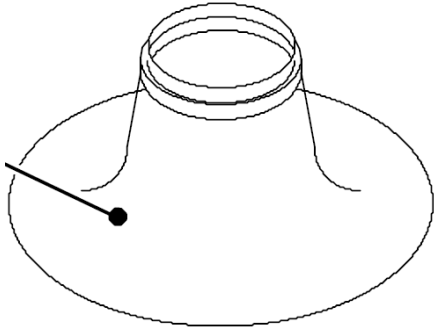


Components included in kit:

- A. EXHAUST PIPE (1)
- B. INTAKE PIPE (1)
- C. EXHAUST GASKET (1)
- D. INTAKE GASKET (1)

Vertical Roof Vent Accessories Cont.

Vertical Roof Vent Flat Flashing - RI RV FF - 10999.0280



Vertical Roof Vent Pitched Flashing - RI RV PF - 10999.0252

