

# Installation & Maintenance Instructions



## AmeriVent® Direct Retro Conversion Kits - 4DRCKA and 4DRCKM

FOR CONVERTING OVER TO A 4" x 6<sup>5</sup>/<sub>8</sub>" DIRECT VENT APPLIANCE FROM A FACTORY-BUILT 8" CLASS A ALL-FUEL METAL CHIMNEY OR A MASONRY CHIMNEY

### VERY IMPORTANT

It is very important to read not only these installation instructions, but the instructions furnished with the appliance that is connected to this AmeriVent direct vent system. If you fail to follow all of the relevant instructions, you may create a safety or a fire hazard. This will void the warranty for the vent system and possibly for the appliance, as well as your insurance protection. You must be very careful to follow the appliance manufacturer's installation instructions in regard to the requirements for both specific and general venting installations, as well as clearance to combustible materials. These requirements may vary from one appliance manufacturer to another and from one individual appliance to another.

### APPLICATIONS OF THE AMERIVENT DIRECT VENT SYSTEM

The restrictions, limitations and instructions found in these installation instructions for AmeriVent Direct Retro Conversion Kits are intended to apply solely to 8" Class A all-fuel, factory-built chimneys and masonry chimneys. This venting system has been tested by Warnock Hersey. It is very important to make sure that the manufacturer's installation instructions, as well as the appliance rating label, confirms that an AmeriVent Direct Retro Conversion Kit System is approved for use on the specific brand and model of appliance you have selected.

### INSTALLATION PRECAUTIONS

This AmeriVent direct vent system has been engineered, designed, and tested for use with a specific list of approved direct vent gas appliances. If any of the following conditions or actions exist, the AmeriVent warranty will be voided, and serious fire, health, or other safety hazards may result.

1. Any modification of the direct vent system not authorized by the AmeriVent engineering staff.
2. Installation of any damaged direct vent pipe section or component.
3. Installation in the vent system of any component part not manufactured or approved by AmeriVent.
4. Any vent system installation other than as instructed by AmeriVent and the appliance manufacturer.

**Note:** It is very important to consult the local building codes and requirements before starting the installation.

The existing all-fuel metal or masonry chimney must be inspected by a professional installer or a certified chimney sweep prior to converting to AmeriVent direct vent. The existing chimney system must be in serviceable condition, and THE DIRECT VENT CONVERSION DESCRIBED HEREIN APPLIES ONLY TO FACTORY-BUILT METAL CEILING-SUPPORTED TYPE SYSTEMS AND MASONRY THROUGH-THE-WALL TYPE SYSTEMS. **NOTE:** YOU CANNOT INSTALL A CONVERSION KIT IN A THROUGH-THE-WALL TYPE FACTORY-BUILT METAL CHIMNEY.

# AmeriVent Direct Retro Conversion Kits 4DRCKA and 4DRCKM Installation Instructions



## GENERAL

The AVD Retro Conversion Kit can be applied to two different applications: through an existing factory-built 8" Class A all-fuel metal chimney (Kit A) or a masonry chimney (Kit M).

Purchase of a 4" and a 7" chimney reliner kit is also required for both kits. Ref: 4AFL-35 and 7AFL-35K.

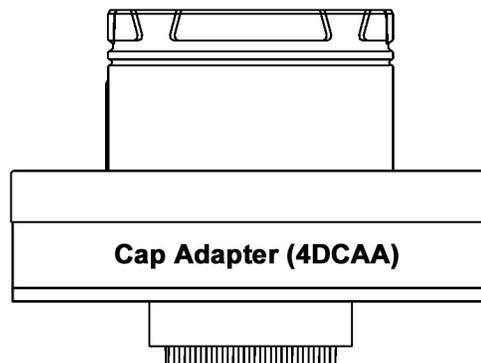
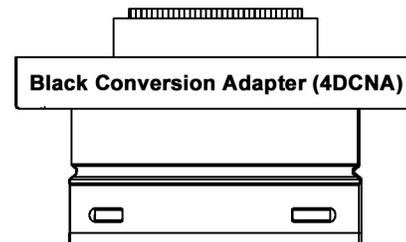
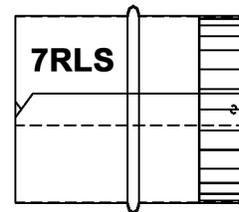
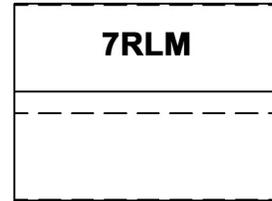
1. *Through an existing 8" Class A metal chimney:* Kit A contains a black conversion adapter (4DCNA) and an unpainted large cap adapter (4DCAA). Insert a UL-listed 4" aluminum flex pipe and 7" aluminum flex pipe (co-axially) through the center of the existing 8" Class A metal chimney from the top of the chimney. Connect both adapters at the crimped end to the 4" flex pipe, then fasten the 7" flex pipe to the cap adapter and conversion adapter with the fittings that come with the 7" flex pipe kit (7RLK25/35). Attach the cap adapter to the top of the chimney and the black conversion adapter to the ceiling support box. Fasten your direct vent pipe to the black conversion adapter and a termination cap to the unpainted cap adapter on your roof.

2. *Through an existing masonry chimney:* Kit M contains a black conversion adapter (4DCNA), an unpainted small cap adapter (4DCAB), a black face plate (4DFPB), and a square flashing. Cut a hole in your existing masonry chimney and wall (if your masonry is concealed). Insert a UL-listed 4" flex pipe and 7" flex pipe (co-axially) down through the masonry tile liner. Connect both flex pipes to the cap adapter using the fittings in the 7" flex kit. Pull both flex pipes through the masonry wall, and connect both flex pipes to the conversion adapter using the fittings in the 7" flex kit. Attach the conversion adapter to the black face plate. Attach the cap adapter to the flashing. Connect the conversion adapter to the direct vent pipe, and your cap adapter to the direct vent termination cap.

### 3. Tools/Hardware Needed:

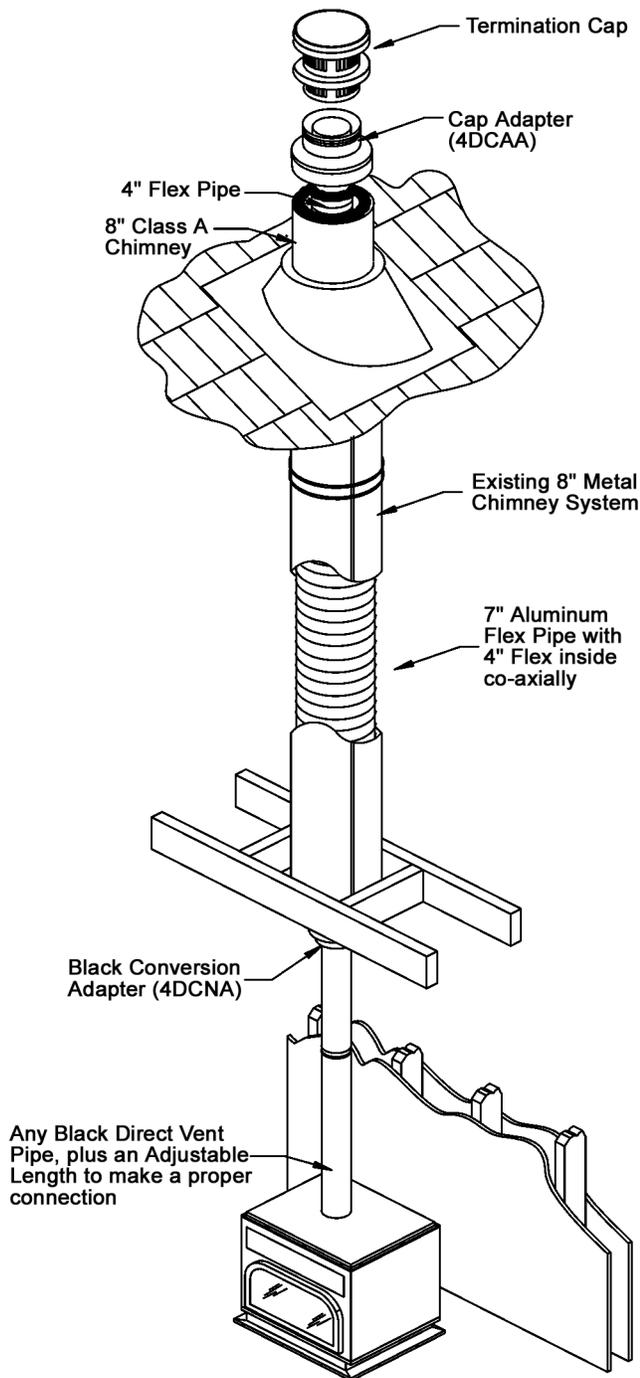
- Hi-Temp Sealant: Black for the black conversion adapter. Any other color for the remaining applications.
- Sheet Metal Screws: Various lengths up to 2" in length. Use SS screws for the exhaust gas 4" flex pipe.
- Pull cone
- Typical sheet metal fabrication tools
- Black touch-up paint. Reference part no. AVD-PTU can be used.
- #10 Masonry bolts

## Typical 8" Metal Chimney Retro Conversion - Kit A (both 7RLM and 7RLS come with 7" Flex Kit)



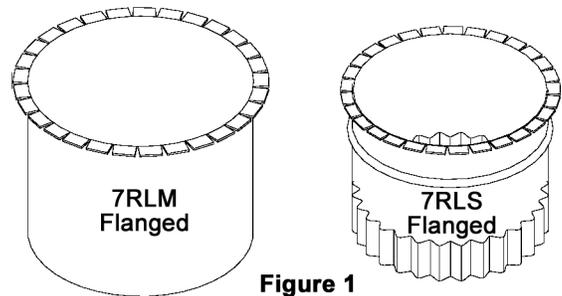
Any screws exposed to the combustion air or exhaust gases will need a bead of hi-temp sealant on the end of them before insertion. FURNISHED SS SCREWS ARE FOR ATTACHING THE 4" FLEX PIPE (EXHAUST) TO THE ADAPTERS.

This system requires a large amount of hi-temp sealant to maintain its listing. Any seam or joint between two mating parts needs sealing, including fasteners.



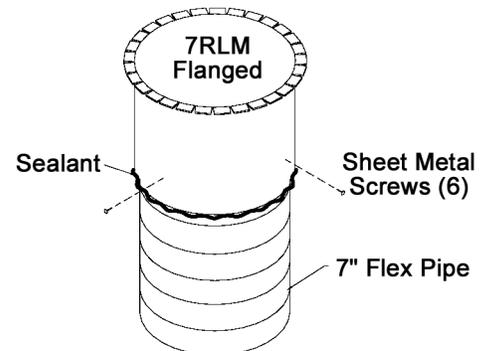
**PROFESSIONALLY CLEAN METAL CHIMNEY BEFORE INSTALLING**

1. *Outside:* Remove the existing metal chimney termination cap.
2. At one end of the galvanized mortar sleeve (7RLM- from 7" chimney reliner kit), cut approximate 1½" long slits around the circumference and peel back to create a fabricated flange on the end of the sleeve. Try to create a flange that is just under 11" in diameter. Do not go any larger than 11" or smaller than 9½". See Figure 1.
3. At the uncrimped end of the aluminum single-wall collar (7RLS- from 7" chimney reliner kit), cut approximately ¾" slits around the circumference and peel back to create a fabricated flange on the uncrimped end of the collar. Try to create a flange that is just under 9" in diameter. Do not go any larger than 9". See Figure 1.



**Figure 1**

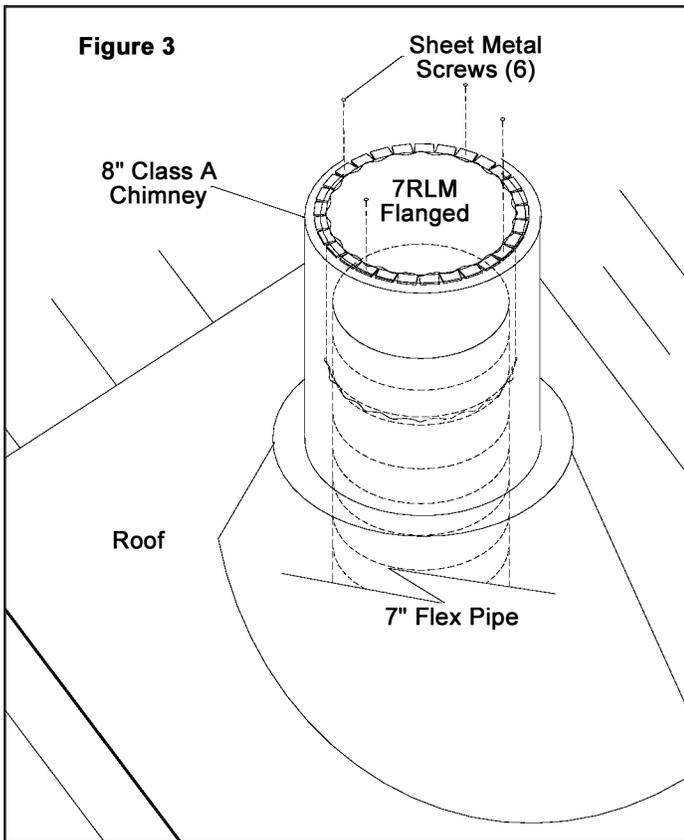
4. Measure the length from the top of the existing metal chimney to the bottom of the ceiling support box, and cut a section of 7" flex pipe to that length in its stretched position.
5. Attach the unflanged end of the 7RLM at the top end of the flex pipe about 3" down the length of the flex with sheet metal screws. Put a bead of sealant around the seam of the 7" flex and 7RLM. See Figure 2. Insert the flex pipe down the middle of the 8" Class A chimney, with the flanged 7RLM attached, and let the flex pipe hang by the flange of the 7RLM on the top of the metal chimney. See Figure 3.



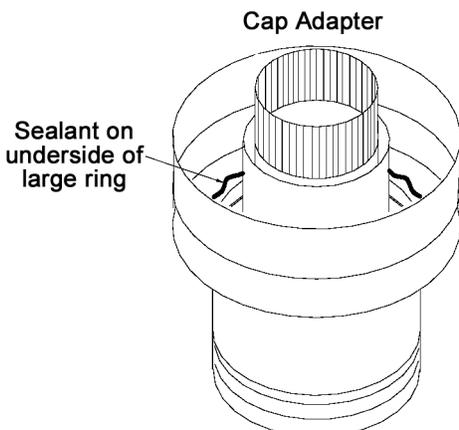
**Figure 2**

**AmeriVent Direct Retro Conversion Kits  
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Installation Instructions**

- Fasten the flange to the metal on the topside of the chimney with sheet metal screws. See Figure 3.

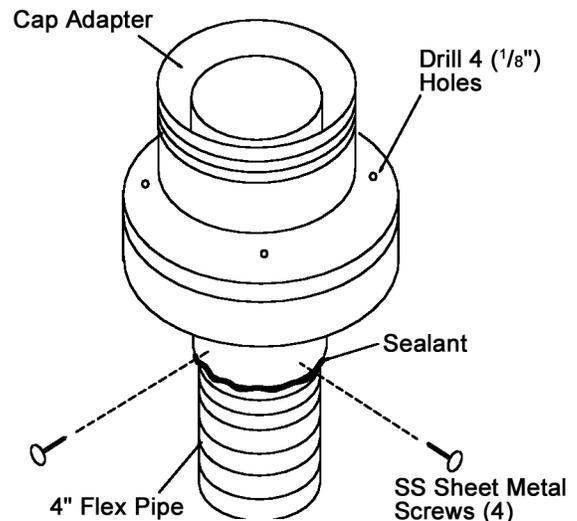


- Cut a section of 4" flex pipe the same length as the 7", in its stretched position, and add 3" to that length.
- Drill 4 holes around the circumference of the flat part (ledge) of the cap adapter. See Figure 5.
- Put a thick bead of sealant around the inside of the cap adapter on the underside of the larger ring (relative to where the flange on the 7RML will mate up). See Figure 4.



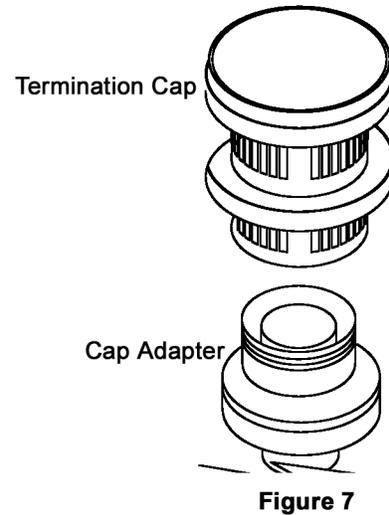
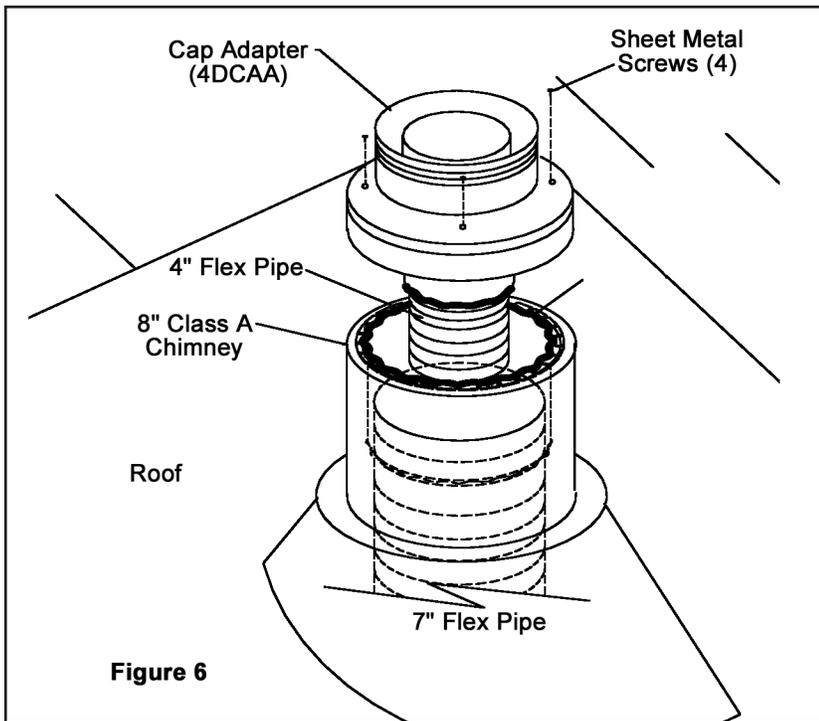
**Figure 4**

- Fastening the 4" flex to the cap adapter:* Put a thick bead of sealant around the end/edge of the 4" flex. Insert the flex in between the crimped and uncrimped SS sleeves, and use SS sheet metal screws (furnished) to attach to these sleeves. Put another bead of sealant around the seam between the uncrimped SS sleeve and the inserted, fastened 4" flex. See Figure 5.

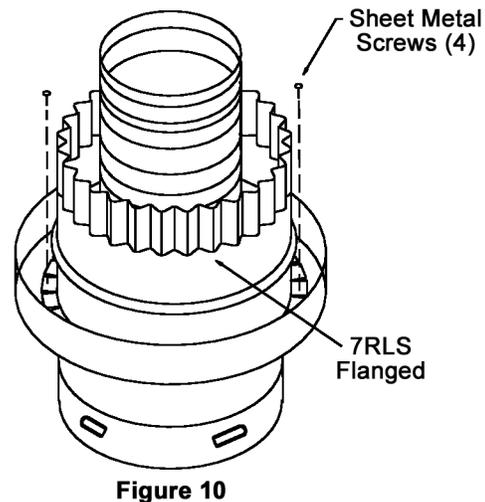
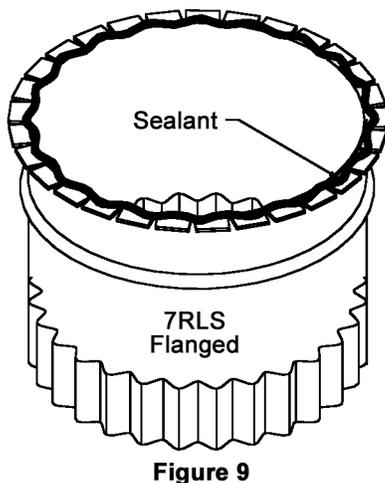
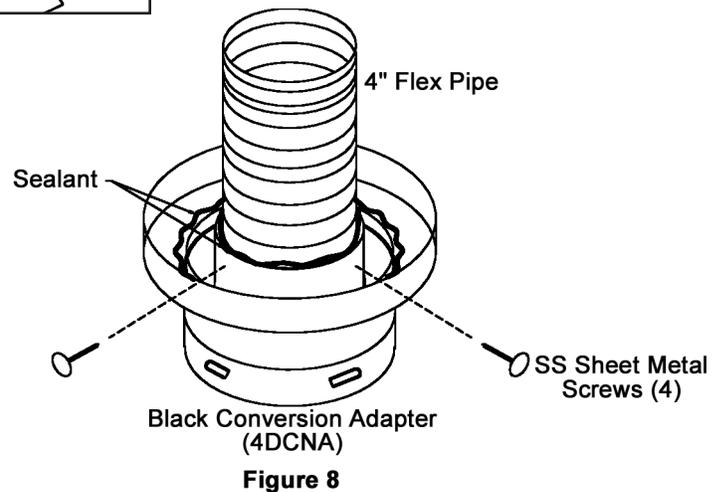


**Figure 5**

- Put a thick bead of sealant around the innermost part of the topside of the flange on the 7RML. See Figure 6.
- Insert the 4" flex pipe (attached to cap adapter) down through the 7" flex pipe. Position the cap adapter so that it is centered on the metal chimney.
- Using the 4 previously drilled holes, fasten with sheet metal screws (4) to the metal in the chimney (preferably to a spacer ring if your chimney has one). Also, ensure fastening through the flange on the 7RML. See Figure 6.
- Attach your direct vent termination cap (AMP 4DVC) to the cap adapter. See Figure 7.
- Inside:* Remove the black stovepipe adapter, if there is one that exists protruding from your ceiling support box.
- Pull out the 4" flex pipe from the ceiling support box. There should be about 3" of it below the support box.
- Slide the 7RLS (crimped end first) over the 4" flex, and temporarily insert it into the support box or 7" flex, so that it is hanging by itself.



18. Fasten the 4" flex pipe to the black conversion adapter in the same method as the cap adapter (Step 10). See Figure 8.
19. Put a thick bead of sealant around the innermost part of the bottom side of the flange (facing the floor) on the 7RLS. See Figure 9.
20. Put a thick bead of sealant around the inside of the black conversion adapter on the underside of the larger ring (relative to where the flange on the 7RLS will mate up). See Figure 8.
21. Pull the 7RLS out from its temporary position (Step 17), and fasten the flange to the underside of the flat part (ledge) of the conversion adapter with sheet metal screws, preferably from the decorative side if capable. See Figure 10.

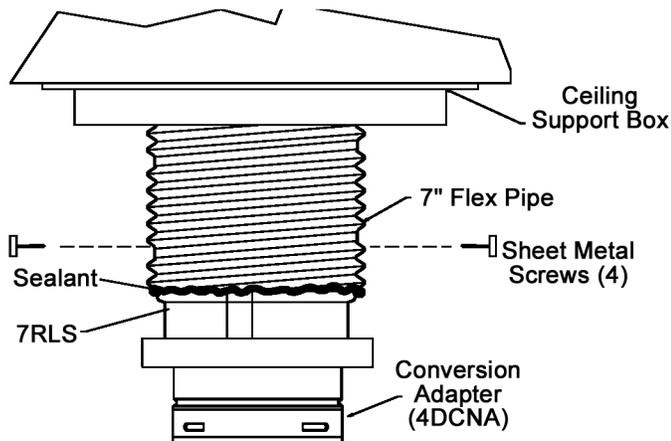
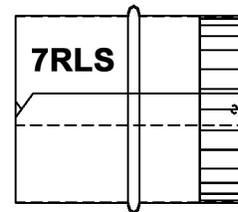
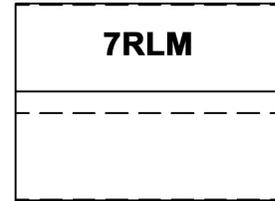


**AmeriVent Direct Retro Conversion Kits  
4DRCKA and 4DRCKM  
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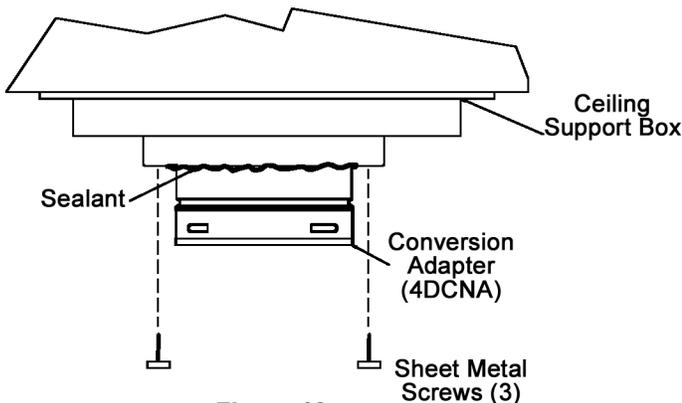


22. Insert the crimped end (unflanged) of the 7RLS into the bottom end of the 7" flex up to the point of the flared-out bead around the circumference of the 7RLS. Fasten it to the flex pipe with sheet metal screws. Put a bead of sealant around the seam of the 7RLS and the 7" flex. See Figure 11.
23. Push the whole assembly flush up against the bottom of the ceiling support box, and fasten the flat part (ledge) of the conversion adapter to the ceiling support box with sheet metal screws (approximately 1½" to 2" long). Hi-temp black paint may be required to touch up scrapes. See Figure 12.
24. Put a bead of black sealant around the seam of the direct vent fitting, of the conversion adapter, and the flat part (ledge) of the conversion adapter. See Figure 12.
25. Connect the conversion adapter to the direct vent pipe. An adjustable length section of direct vent pipe may be necessary to connect to the appliance.

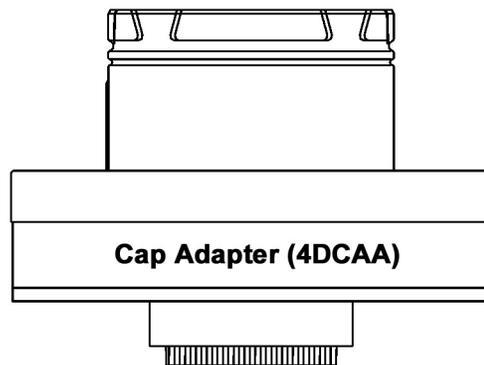
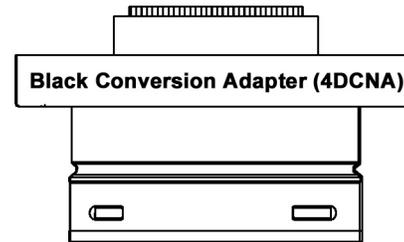
**Typical Masonry Chimney Retro Conversion - Kit M  
(both 7RLM and 7RLS come with 7" Flex Kit)**



**Figure 11**



**Figure 12**

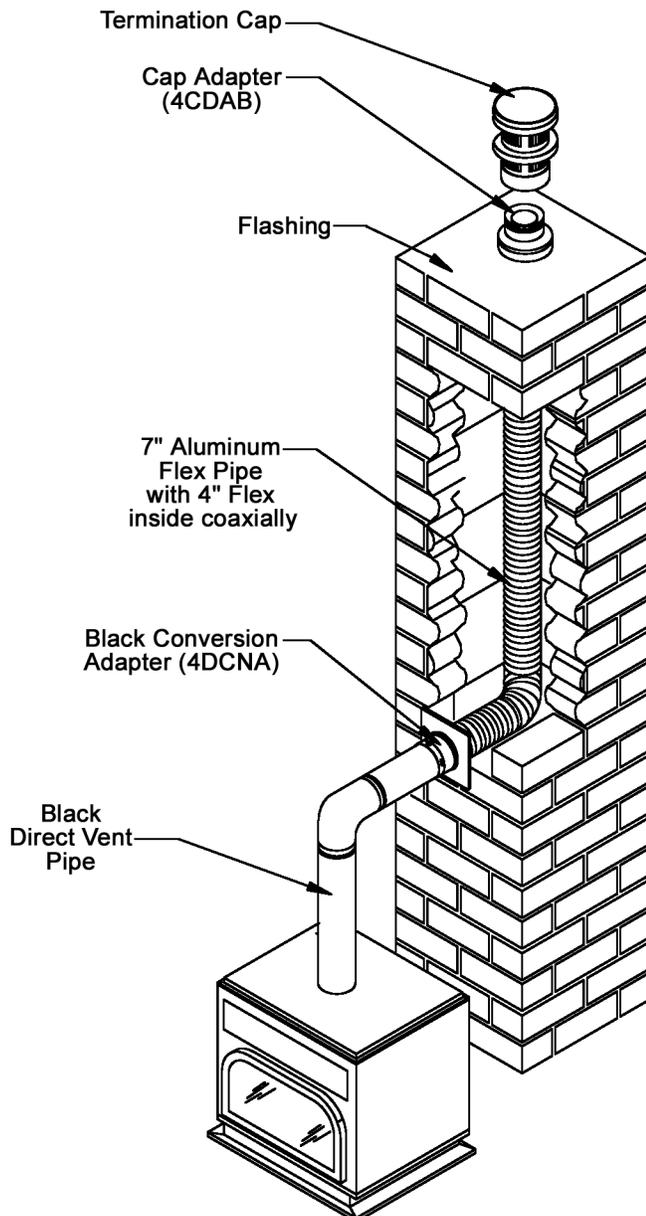


**INSTALLATION INSTRUCTIONS FOR A RETRO CONVERSION OF A MASONRY CHIMNEY (KIT M)**

**Note:** The existing masonry tile flue area opening must be capable of fitting a 7" diameter flexible pipe down through it and bending at a 90-degree angle at the bottom. Pull cones may be needed.

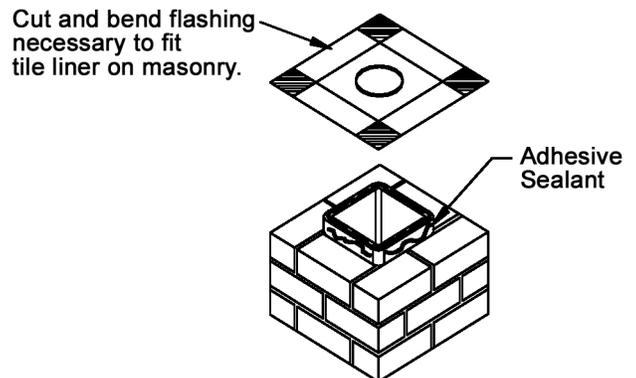
Any screws exposed to the combustion air or exhaust gases will need a bead of hi-temp sealant on the end of them before insertion. FURNISHED SS SCREWS ARE FOR ATTACHING THE 4" FLEX PIPE (EXHAUST) TO THE ADAPTERS

This system requires a large amount of hi-temp sealant to maintain its listing. Any seam or joint between two mating parts needs sealing, including fasteners.

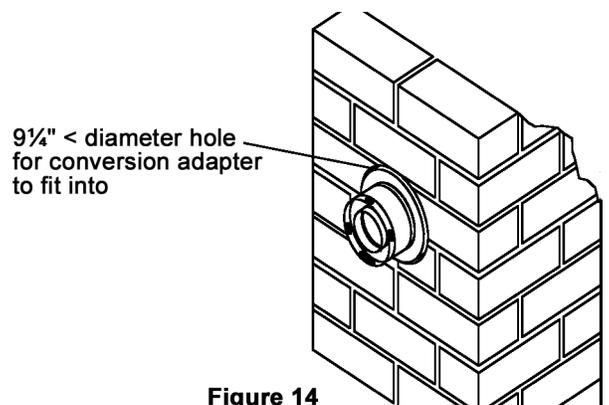


**PROFESSIONALLY CLEAN MASONRY CHIMNEY BEFORE INSTALLING**

1. Know where the appliance and direct vent pipe are going to be penetrating the masonry wall. You may have to preassemble the direct vent system to determine this, and then mark the center point on the masonry wall.
2. At the center point of the penetration, cut a 9¼" to 10" diameter hole in the masonry. This allows the black conversion adapter to fit inside the masonry. See Figure 14. If you have a concealed masonry chimney, you may have to cut a clear 10" square opening in the interior-preceding wall and only need a 8" diameter opening in the masonry. Some walls may have to be reframed around the 10" opening. Center the 10" square opening around the 8" round opening. The square opening provides the right amount of clearance to combustibles when cut in the proper location. See Figure 22.
3. *Outside:* Adhere the flashing to the top of the masonry tile liner (existing flue opening) with nonhardening sealant adhesive. Cut and fold the flashing, as needed, to get a proper fit around the tile liner. See Figure 13.



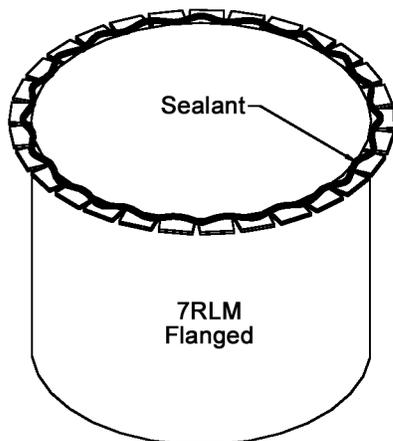
**Figure 13**



**Figure 14**

**AmeriVent Direct Retro Conversion Kits  
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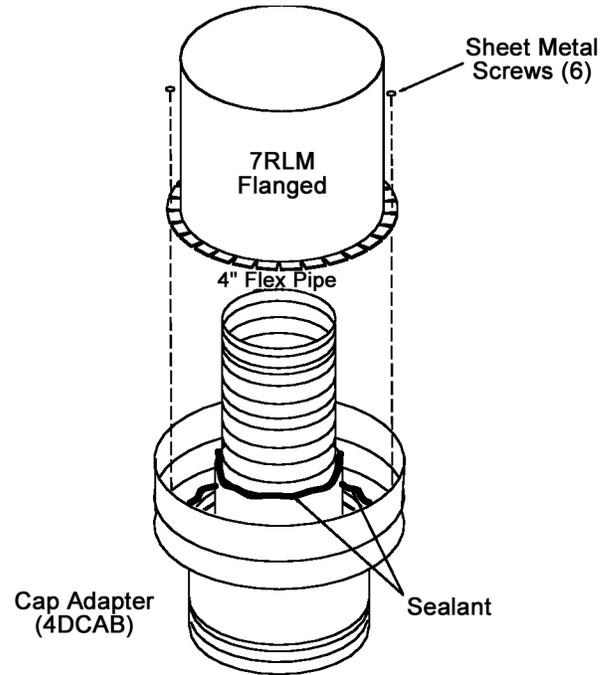
4. At one end of the galvanized mortar sleeve (7RLM- from 7" chimney reliner kit), cut approximately  $\frac{5}{8}$ " slits around the circumference, and peel back to create a fabricated flange on the end of the sleeve. Try to create a flange that is no larger than 9" in diameter. See Figure 1.
5. At the uncrimped end of the aluminum single-wall collar (7RLS- from 7" chimney reliner kit), cut approximately  $\frac{3}{4}$ " slits around the circumference, and peel back to create a fabricated flange on the uncrimped end of the sleeve. Try to create a flange that is no larger than 9" in diameter. See Figure 1.
6. Measure from the top of the tile liner to the bottom of the round opening in the masonry. Add to the measured length the distance from the middle of the masonry out through the opening. If you have an interior wall, add the length to protrude through the 10" square opening.
7. Cut a section of 7" and 4" flex pipe to that length in its stretched position.
8. Temporarily support and hang the 7" flex pipe down through the tile liner.
9. Temporarily slide the 7RLM over the top of the 7" flex (hanging down through the masonry).
10. Fasten the 4" flex pipe to the cap adapter (between the SS sleeves with sealant on the end/edge) in the same method as in Kit A (Step 10), and insert it down through the 7" flex pipe and the 7RLM. See Figure 5 and 6.
11. Put a thick bead of sealant around the innermost part of the topside of the flange on the 7RLM. See Figure 15.



**Figure 15**

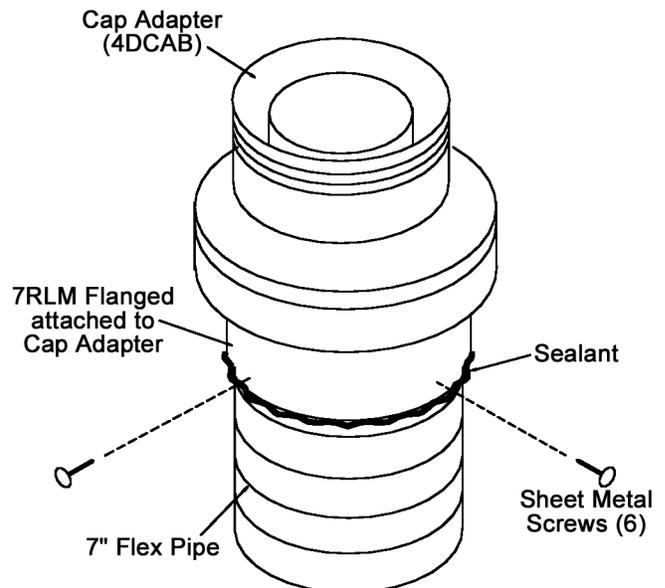
12. Put a thick bead of sealant around the inside of the cap adapter on the underside of the larger ring (relative to where the flange on the 7RLM will mate up). See Figure 4 and 16.

13. Fasten the flanged part of the 7RLM to the underside of the flat part (ledge) of the cap adapter with sheet metal screws. See Figure 16.



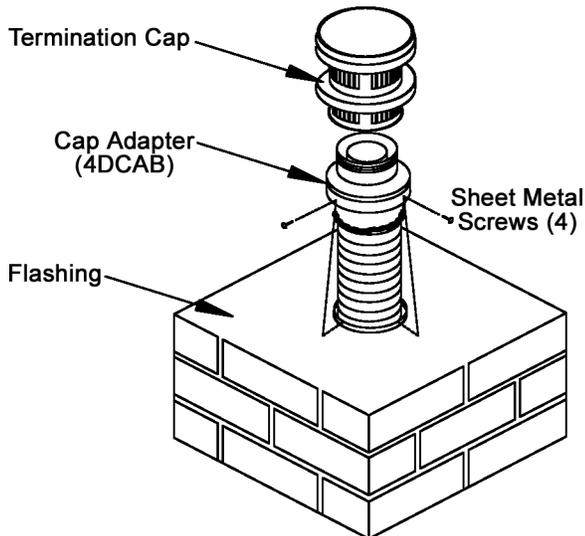
**Figure 16**

14. Remove the temporary support and attach the unflanged end of the 7RLM (attached to the cap adapter at this point) at the top end of the 7" flex pipe about 3" down the length of the flex with sheet metal screws. Put a bead of sealant around the seam of the 7RLM and the 7" flex. See Figure 17.



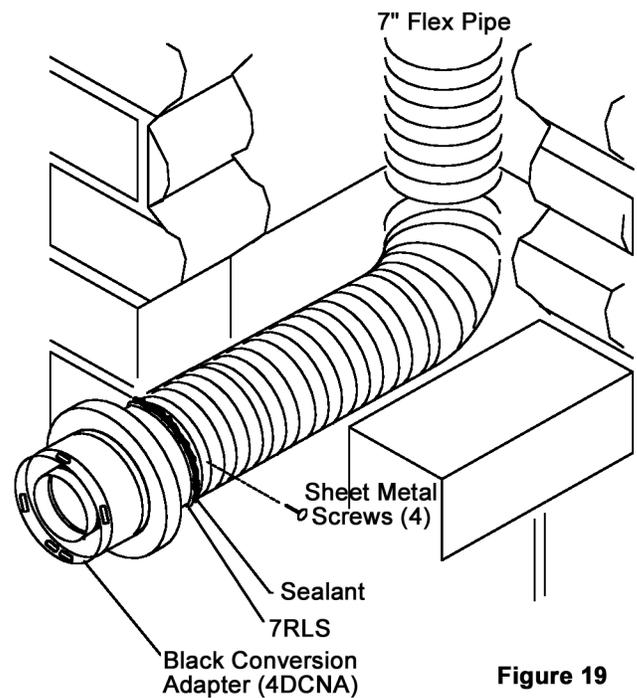
**Figure 17**

15. Position the cap adapter (with all the attachments) over the flashing, and screw (4) into the lip of the flashing from the outside sleeve of the cap adapter. See Figure 18.
16. Attach your direct vent termination cap to the cap adapter. See Figure 18.



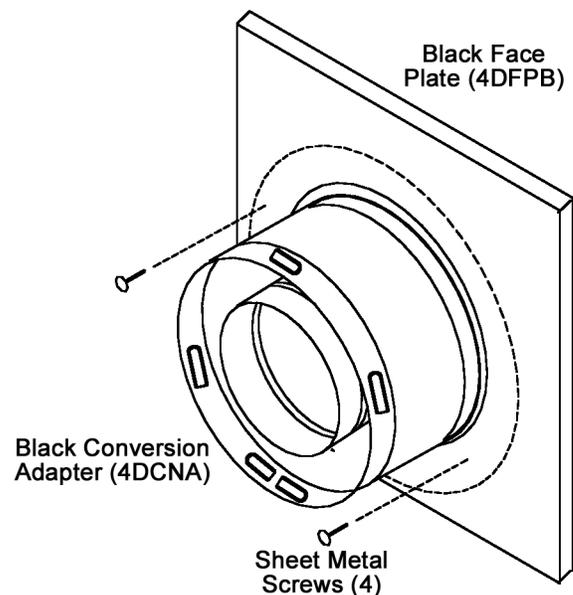
**Figure 18**

17. *Inside:* Pull out the flex pipes from the masonry chimney with a pull cone. There should be about 3" of flex pipe protruding through the hole to work with.
18. Slide the 7RLS (crimped end first) over the 4" flex, and temporarily insert it into the 7" flex.
19. Put a thick bead of sealant around the inside of the black conversion adapter on the underside of the larger ring (relative to where the flange on the single-wall collar will mate up). See Figure 8.
20. Fasten the 4" flex pipe to the conversion adapter in the same method as in Kit A (Step 18). See Figure 8.
21. Put a thick bead of sealant around the innermost part of the bottom side of the flange on the single-wall collar (7RLS). See Figure 9.
22. Fasten the flanged part of the 7RLS to the underside of the flat part (ledge) of the conversion adapter, preferably from the decorative side if capable. See Figure 10.
23. Insert the crimped end (unflanged) of the 7RLS into the bottom end of the 7" flex up to the point of the flared-out bead around the circumference of the 7RLS. Fasten it to the flex pipe with sheet metal screws. Put a bead of sealant around the seam of the 7RLS and the 7" flex. See Figure 19.



**Figure 19**

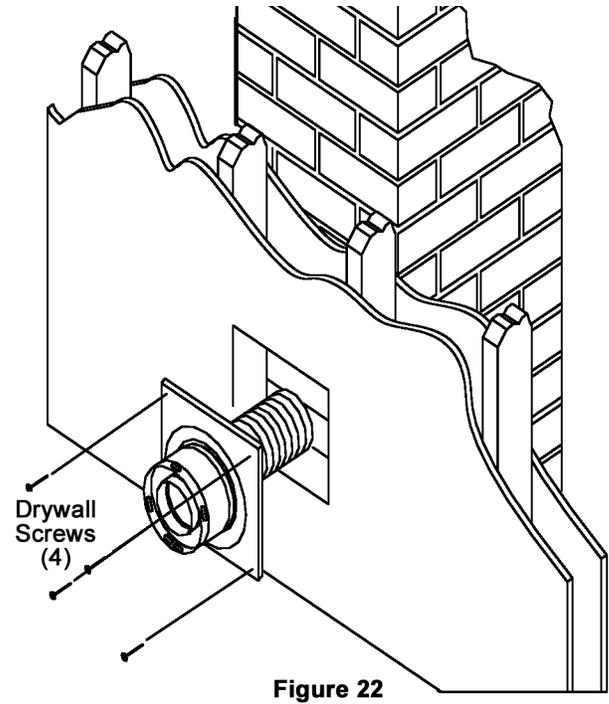
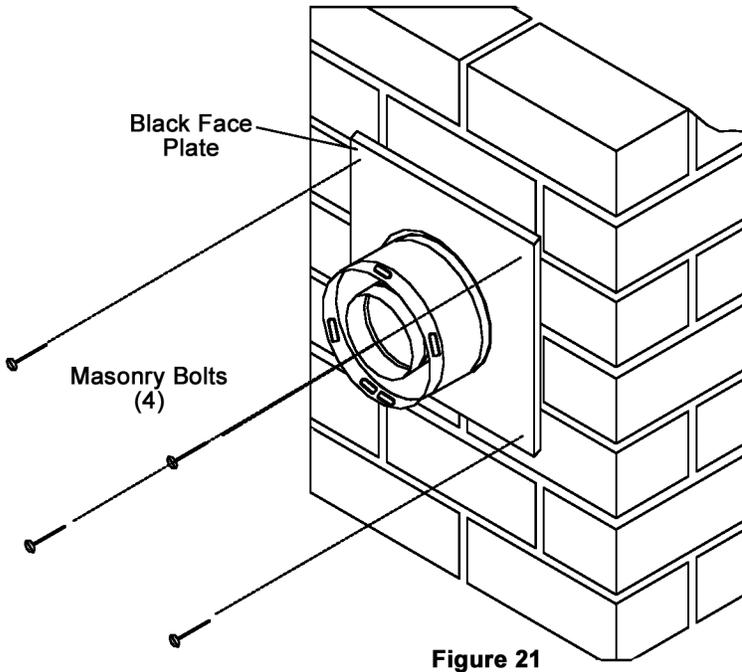
24. Put a bead of black sealant around the seam of the direct vent fitting, of the conversion adapter, and the flat part (ledge) of the conversion adapter. See Figure 12.
25. Slide the black face Plate onto the conversion adapter, and fasten it to the flat part (ledge) of the adapter with sheet metal screws. See Figure 20.



**Figure 20**

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26. Push the whole assembly against the masonry and attach the Face Plate to the masonry with masonry bolts. See Figure 21.
27. Connect the conversion adapter to the direct vent pipe. An adjustable length section of direct vent pipe may be necessary. Hi-temp black paint may be necessary to touch-up scrapes.



American Metal Products Group  
5030 Corporate Exchange Blvd. SE  
Grand Rapids, MI 49512  
www.americanmetalproducts.com

800-423-4270 toll-free  
616-656-8400 phone  
800-626-3825 toll-free fax  
616-656-6388 fax  
800-669-3190 technical services