

Figure 15. "A" Cabinet Furnace on Coil Cabinet

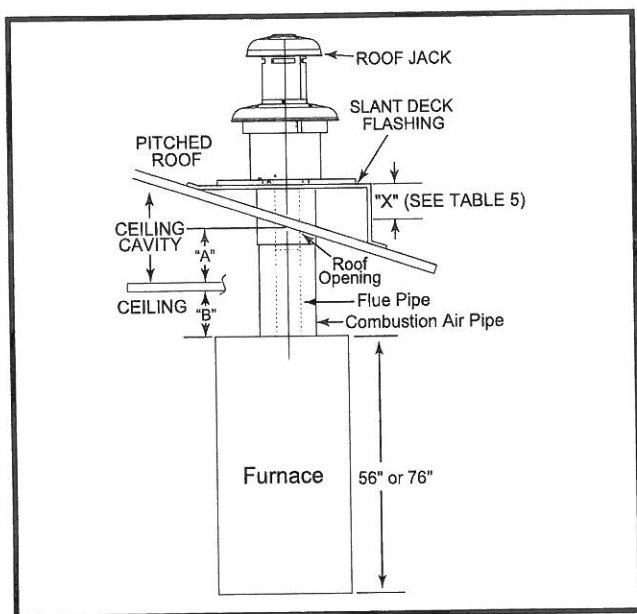


Figure 16. Ceiling Cavity Depth

MODEL NUMBER	APPROX. LENGTH BELOW FLASHING
(F,S)AW(T)1523-(0,2,4)(A,S)	15" - 23"
(F,S)AW(T)2135-(0,2,4)(A,S)	21" - 35"
(F,S)AW(T)2747-(0,2,4)(A,S)	27" - 47"
(F,S)AW(T)3563-(0,2,4)(A,S)	35" - 63"
(F,S)AW(T)5195-(0,2,4)(A,S)	51" - 95"

<p>F = FLAT FLASHING S = SLANT FLASHING</p> <p>AW= ALL WEATHER</p> <p>TYPE: BLANK = NON-TRANSIT T= TRANSIT MODE</p>	<p>S AW T 27 47 - 2 S</p> <p>MIN. ADJ. LENGTH</p> <p>MAX. ADJ. LENGTH</p>	<p>FLUE STEEL TYPE A= ALUMINIZED S=STAINLESS</p> <p>FLASHING PITCH/12" RISE 0=FLAT 2=2.5/12 4=4/12</p>
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Table 4. Roof Jack Assemblies

## ROOF JACK INSTALLATION

Required ceiling and roof cut-out openings must be carefully located to avoid misalignment of the furnace and Roof Jack. **NOTE:** Install only Roof Jack Assemblies listed in Table 4 on this heating appliance.

### Roof Jack Selection

1. Determine depth of ceiling cavity from center of roof opening to center of ceiling opening (Dimension A in Figure 16).
2. Determine ceiling height and subtract height of furnace (Dimension B in Figure 16).
3. Add dimensions A + B (and X from Table 5, (page 12) & Figure 6 if slant deck flashing is used). The total length of [A] + [B] + [X] must be within the minimum and maximum range of the Roof Jack listed in Table 4.

### Application Notes

- FAW, FAWT, SAW and SAWT Series Roof Jacks with a 5" diameter inner vent pipe may be used with all models of M1 Series gas and M5 Series oil furnaces.

F = Flat Flashing: flexes from 0/12 to 1/12 roof slope. See Figure 17 (page 11).

S = Slant Flashing: 2.5/12 Slope flexes from 1/12 to 4/12 roof slope, 4/12 flexes from 3/12 to 5/12.

See Figure 18 (page 12).

- Stainless steel roof jacks are available.
- M1/M5 furnaces may be used with roof jacks as tall as 170" (except M1M 056 & M1B 066 models, which are limited to 120"). An internal roof jack extension (p/n 901935 - 10", p/n 903107 - 18") can be used to increase roof jack height. All connections inside the home must be made below the ceiling.
- This furnace must never be connected to a chimney flue servicing a fireplace or other appliance designed to burn solid fuel.

**NOTE:** If the roof jack crown is covered or blocked with snow, the furnace will not operate properly. If the home is located in regions where snow accumulation exceeds 7" (HUD snowload zones) use an external roof jack extension (p/n 901937). Extensions are optional accessories and may be purchased through your NORDYNE distributor.

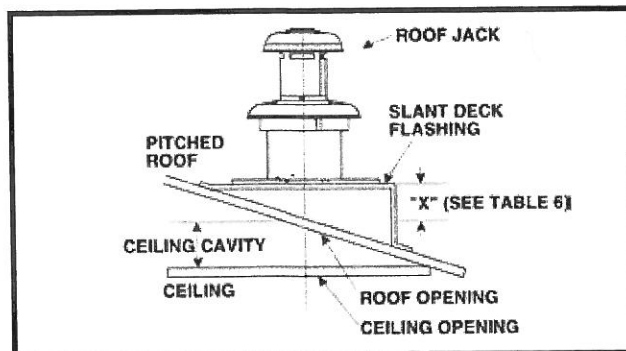


Figure 17. Example of Flat Jack with Flashing

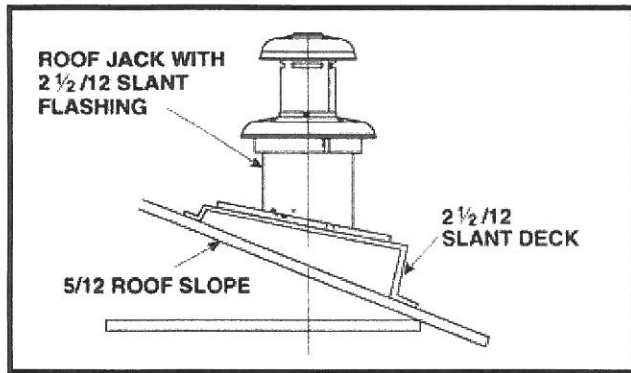


Figure 18. Example of 2 1/2 / 12 Slant Jack with Flashing

ROOF JACK SERIES	IF ROOF PITCH IS:	SLANT DECK FLASHING NUMBER	"X" FACTOR IS:
"F" Series	2" in 12"	903893 (2.5/12)	2-1/8"
	2-1/2" in 12"	903893 (2.5/12)	2-1/2"
	3" in 12"	903894 (3/12)	2-7/8"
	3-1/2" in 12"	903894 (3/12)	3-1/4"
	4" in 12"	903895 (4/12)	3-5/8"
"S" Series (2.5 / 12 Pitch only)	4-1/2" in 12"	903895 (2.5/12)	2-1/8"
	5" in 12"	903895 (2.5/12)	2-1/2"
	5-1/2" in 12"	903894 (3/12)	2-7/8"
	6" in 12"	903894 (3/12)	3-1/4"
	6-1/2" in 12"	903895 (4/12)	3-5/8"

Optional deck flashings for flat and 2.5/12 pitch roof jacks.  
4/12 pitch roof jacks not applicable.

Table 5. Slant Deck Flashings

## Locating & Cutting Roof/Ceiling Openings

### IMPORTANT NOTE:

Do not allow debris to fall into the furnace. This could cause unsafe operation and void the furnace warranty. Use the top cap that comes with the furnace packaging (or alternate protector) to prevent debris from falling into the furnace before the final roof jack connection is made.

**NOTE:** Refer to the installation instructions provided with optional air conditioning packages when installing furnaces with optional cooling coil cabinet or with optional C\* series indoor coils.

1. Locate center of Roof Jack opening, measure 13 1/2" from the rear wall of closet or alcove along the center line of furnace and floor opening. See Figure 19.
2. Cut ceiling and roof holes:
  - Ceiling = 8 3/4" (222 mm) diameter
  - Roof = 9 3/8" (238 mm) diameter

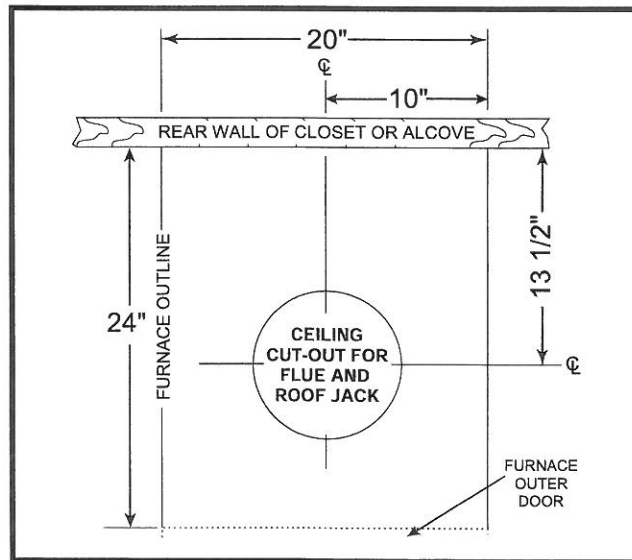


Figure 19. Cut-Out Dimensions for Flue & Roof Jack

## Installing The Roof Jack

1. Apply caulking compound on underside of roof flashing to form a continuous strip at least 3/8" wide around the underside of the perimeter of the flashing. See Figure 20 or Figure 21 (page 13).
2. Connect Roof Jack Assembly to the furnace. Insert telescoping Roof Jack Assembly through the opening cut on the roof.
3. Connect flue pipe to flue collar of furnace. See Figure 22 (page 13).
4. Connect combustion air pipe to furnace collar with sheet metal screw. See Figure 22.

### NOTES:

- It is recommended that the connection of the combustion air pipe to the furnace be made before the flashing is secured to the roof to maintain alignment of roof jack and furnace connections.
  - For replacement furnaces, be sure the inner flue pipe connects over the furnace vent collar. **DO NOT use a smaller diameter inner flue pipe which could slide inside the furnace vent collar and restrict the flow of furnace flue products.**
5. Attach Roof Flashing. If necessary, shift roof flashing slightly in the roof opening so that assembly is in alignment with furnace.
 

**NOTE:** If flashing is mounted on 12 degree angle, it may be necessary to adjust the angle to match the roof pitch; (1/12 - 4/12 maximum).
  6. Press down firmly on roof flashing (over caulking) to make the seal with roof water tight.
  7. Secure flashing with appropriate fasteners. **NOTE:** For added protection against leaks, coat the flashing plate and fasteners with approved roofing compound.

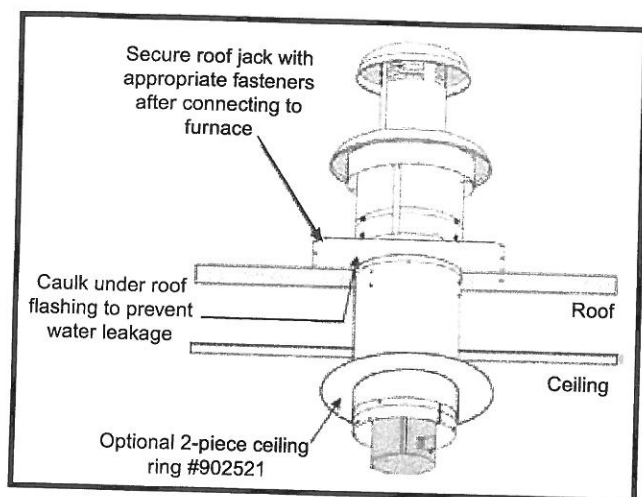


Figure 20. Flat Roof

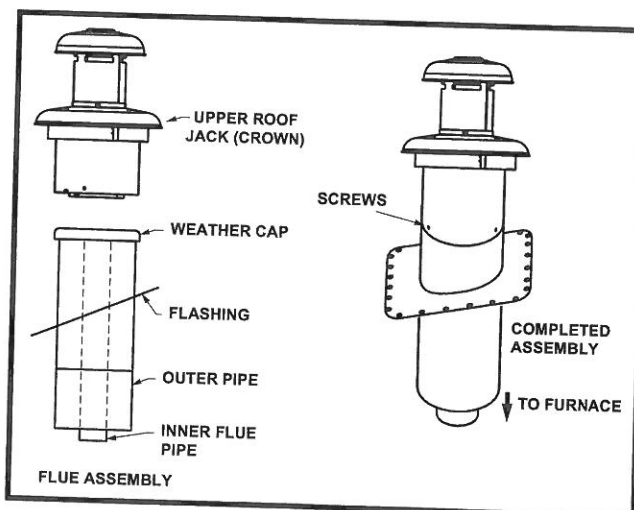


Figure 23. Roof Jack Crown

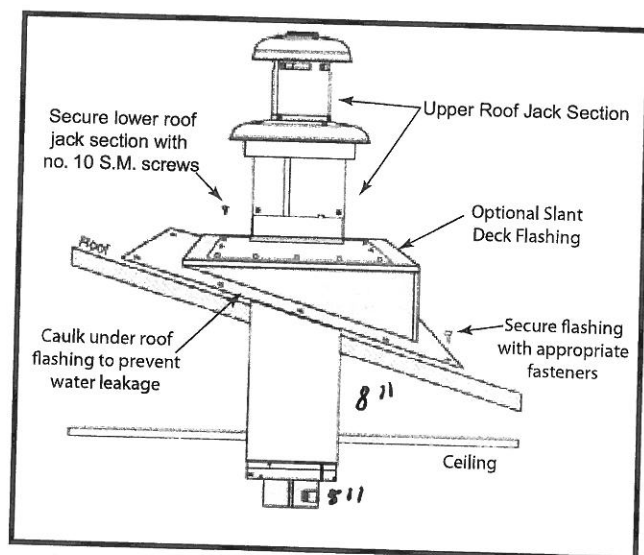


Figure 21. Pitched Roof

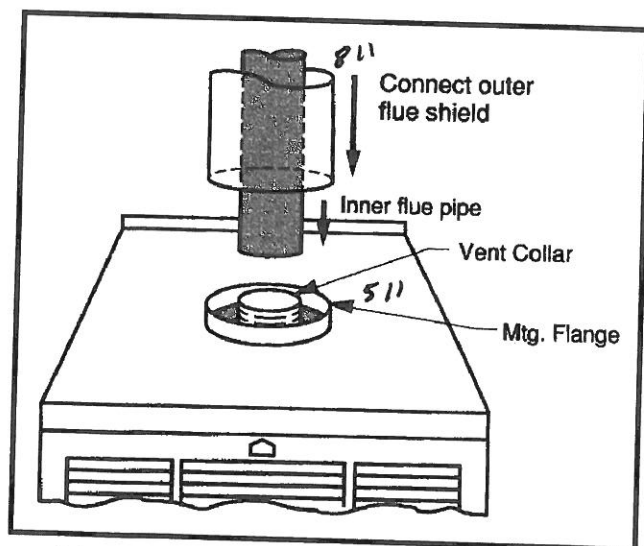


Figure 22. Combustion Air Pipe Connection

### Installation of Transit-Mode Venting System (Manufactured Home Factory)

1. Furnace must be installed in accordance to furnace installation manual.
2. Select appropriate Roof Jack from Table 4, (page 11)
3. Roof Jack (less upper Roof Jack crown), with weather cap to be installed as described under Install Roof Jack.

**NOTE:** Upper Roof Jack crown to be stored in a prominent location inside manufactured home until on-site installation.

4. The four warning tags supplied must be installed as follows:
  - To weather cap
  - To fuel line connection point (Gas) or furnace burner (Oil)
  - To furnace flame observation door (Gas or Oil)
  - To furnace wall thermostat
5. Transit-mode weather cap to be removed and upper Roof Jack crown installed. See Figure 23. Do Not Discard screws.
6. Place upper Roof Jack (crown) on the flue pipe assembly.

**NOTE:** Make sure inside flue pipe attaches over inner flue pipe and outer Roof Jack pipe fits over outer pipe.

7. Secure in place using three, #10, 1/2" sheet metal screws removed in step 5. Do not use the same holes which secured the rain cap in place.
8. Remove and discard venting system warning tags.

### **WARNING:**

Failure to properly secure the flue pipe to the furnace may result in fire, explosion or asphyxiation when operating the furnace.