

8. Vent Pipe Installation (Indoor Installation Only)

Vent Piping

- Use only listed category III vent materials.
- Follow the vent pipe manufacturer's installation instructions.

Pipe diameter	4"
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No. of Elbows	Max. Straight Vent Length
3	15'
2	27'
1	39'

- Make the vertical section of the exhaust vent as short as possible.
- Maintain the same vent pipe diameter from the heater flue to the vent termination.

Clearances

Manufacturer and Product	Enclosed		Unenclosed	
	Hor.	Vert.	Hor.	Vert.
Noritz N-Vent	10" (sides) 15" (top) 6" (bottom)	4"	3"	3"
Protech FasNSeal	8" (sides) 12" (top) 4" (bottom)	4"	3"	3"
Protech FasNSeal W2	6"	4"	3"	3"
HeatFab SafTVent	6"	6"	2"	2"
Z-Flex Z-Vent	8"	4"	1"	1"
Flex-L StaR-34	8"	4"	1"	1"

These clearances are subject to change. Refer to the UL listing for the proper clearances.

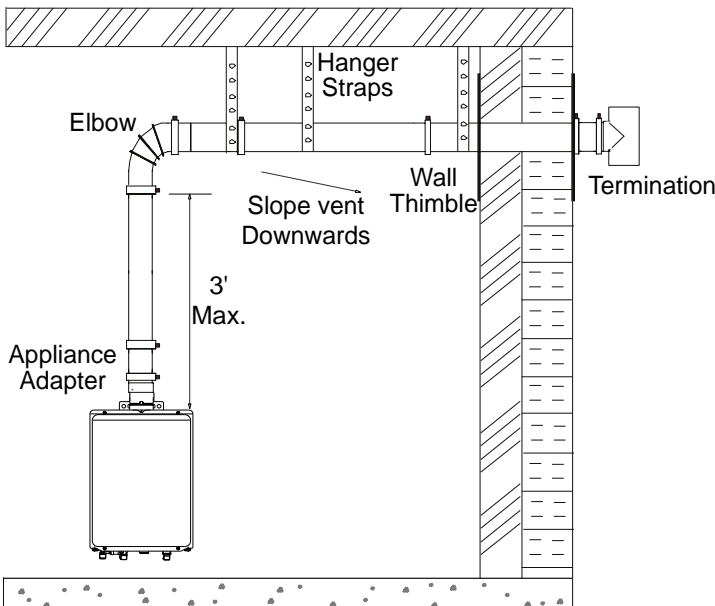
- The first vertical run from the top of the heater should be no longer than 3'.
- Make sure vent pipe is gas tight and will not leak. Use silicon sealant wherever necessary.
- Do not common vent or connect more than one appliance to this venting system.
- The total vent length including horizontal & vertical vent runs should be no less than 3'.
- Do not place any dangerous objects at the end of the exhaust vent.
- Steam (smoke) or water drops may come out from the end of the exhaust pipe. Select the location for the end of the vent so that steam is not visible, and the vent is not wet with dripping water.
- If snow is expected to accumulate, take care the end of the pipe is not covered with snow or hit by falling lumps of snow.
- Consult the vent pipe manufacturer's installation instructions for chimney connections.

Appliance Adapters

- Use the following adapters to connect the unit to the venting system.

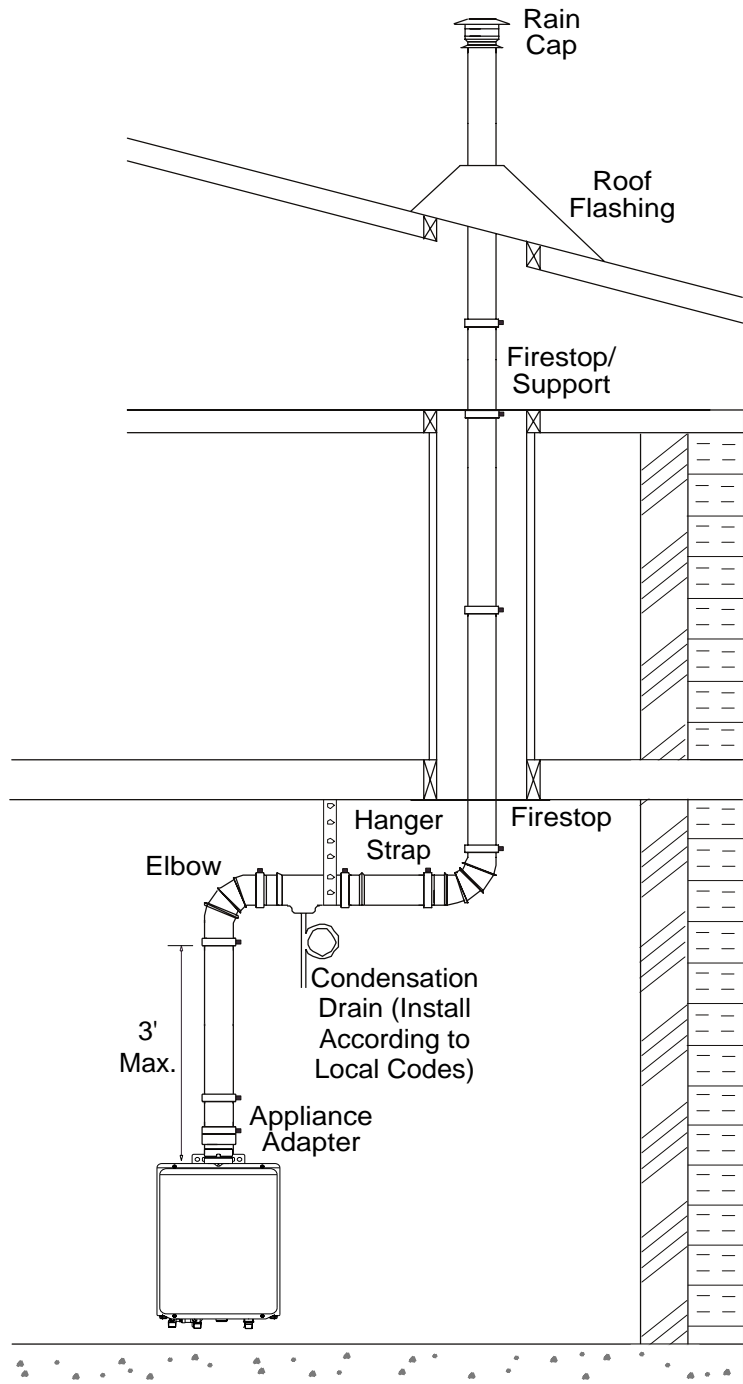
Manufacturer and Product	Part No.
Protech FasNSeal	FSA4
HeatFab SafTVent	9401RYPK
Z-Flex Z-Vent	2SVWA04
Flex-L Star-34	SRASPSA4

Horizontal Vent Termination



- Terminate at least 12" above grade or above snow line.
- Terminate at least 7' above a public walkway, 6' from the combustion air intake of any appliance, and 3' from any other building opening, gas utility meter, service regulator etc.
- Terminate at least 3' above any forced air inlet within 10', 4' below, 4' horizontally from or 1' above any door, window, or gravity air inlet into any building per National Fuel Gas Code ANSI Z223.1/NFPA 54.
- Slope the horizontal vent 1/4" downwards for every 12".
- Use a condensation drain if necessary.

Vertical Vent Termination



- Terminate at least 6' from the combustion air intake of any appliance, and 3' from any other building opening, gas utility meter, service regulator etc.
- Enclose exterior vent systems below the roof line to limit condensation and protect against mechanical failure.
- When the vent penetrates a floor or ceiling and is not running in a fire rated shaft, a firestop and support is required.
- Terminate the vent system at least 3' above, but not more than 6' above the roof line, or according to the vent pipe manufacturer's instructions.
- Provide vertical support every 12' or as required by the vent pipe manufacturer's instructions.
- Slope the horizontal vent 1/4" downwards for every 12".
- Do not vent straight upwards. Always have a horizontal section of venting.
- Install a condensation drain in the horizontal section of the venting.

Combustion Air

Supply combustion air to the units as per the National Fuel Gas Code, ANSI Z223.1.

- Provide two permanent openings to allow circulation of combustion air.
- Make each opening 194 square inches if they provide indoor air, and 100 square inches for outdoor air.
- If the unit is installed in a mechanical closet, provide a 24" clearance in front of the unit to the door.
- If combustion air will be provided through a duct, size the duct to provide 60 cubic feet of fresh air per minute.

