

System Design and Installation Guides

The following installation guideline has been prepared to assist you in your particular application and in installing a vent correctly.

Before laying out a gas vent system for any gas appliance, the installer should first consult the local code and the appliance manufacturer's installation requirements. Only then should you pick your components and design your vent system.

Ameri-Vent offers a wide range of round and oval pipe sizes and adjustable components to provide maximum design flexibility. All 3 basic gas vent installations (as defined by Underwriters Laboratories, Inc.) can be constructed using Ameri-Vent. These 3 are:

- 1. TYPE B**—Ameri-Vent (Sizes 3" through 30" round and sizes 4", 5" and 6" oval) may be installed with 1" minimum clearance to combustibles.
- 2. TYPE BW**—Four inch Oval Ameri-Vent (when installed in 2x4 stud wall with recessed heater) requires clearances as determined by use of 40HD Hold-Down Plate, 40PS Ceiling Plate Spacers and 40FS Firestop Spacers.
- 3. TYPE B-2X4**—Four and five inch Oval Ameri-Vent (when installed in 2x4 stud wall with other than recessed heater) requires clearance as determined by use of 40FS or 50FS Firestop Spacers at each ceiling level.

To graphically illustrate use of Ameri-Vent components in typical installations, we offer the diagrams on the next page. Here you'll see just about every Ameri-Vent part and how each in its natural setting contributes to the whole.

To guide you in these and other installations, the following general rules should be followed:

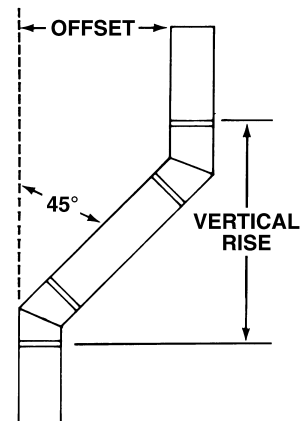
1. Provide an adequate air supply. Remember, you must meet local code minimum requirements for both combustion air and draft hood dilution air.
2. Attach vent to appliances draft hood with sheet metal screws and terminate the vent at least 5 ft. above the draffhood. For wall furnaces, vents must terminate at least 12 ft. from bottom of heater. See Vent Termination Table (opposite page) for require height above roof.
3. One gas vent may serve more than one gas appliance. Prudent advance planning (see diagrams on next page) can save you time.
4. Keep offsets and lengths of laterals to a minimum to reduce vent resistance.
5. Strap the vent securely in position, always maintaining at least 1" clearance to combustibles. Firestops should be used where vents pass through floors, walls or ceilings. (See Product Description section for Round Wall Thimble, Vent Collar, Ameri-Bucket, Support Plate, Firestop Support Plate and Oval Firestop Spacer.)
6. The vent termination must be securely guyed or braced if it extends more than 5 feet above the roof.
7. For longer-lasting durability and better appearance, all vents exposed to the weather (except caps) *should be painted*.
8. Outside vents reduce venting action; therefore, such installations are not recommended.

Table of Gas Vent Offsets

This table is used to determine the offset produced by two AMERI-VENT 45° Adjustable Elbows set at the maximum angle of 45°. Also shown are the offsets produced by introducing various lengths of AMERI-VENT between the two Elbows.

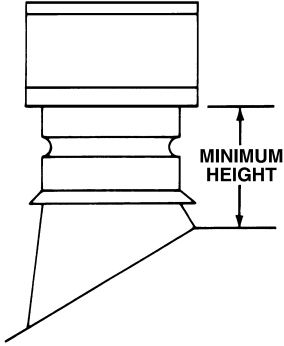
MAXIMUM OFFSET IN INCHES

Vent Size	With Two 45° Elbows ONLY	WITH TWO 45° ELBOWS AND:						
		One 6" Length	One 12" Length	One 18" Length	One 24" Length	One 3' Length	One 4' Length	One 5' Length
3	3 1/4	6 3/4	11	15 1/4	19 1/2	28	36 1/2	45
4	3 1/2	7	11 1/4	15 1/2	19 3/4	28 1/4	36 3/4	45 1/4
5	4 1/4	7 3/4	12	16 1/4	20 1/2	29	37 1/2	46
6	4 1/2	8	12 1/4	16 1/2	20 3/4	29 1/4	37 3/4	46 1/4
7	5	8 1/2	12 3/4	17	21 1/4	29 3/4	38 1/4	46 3/4
8	5 1/2	9	13 1/4	17 1/2	21 3/4	30 1/4	—	47 1/4
9	6	—	13 3/4	18	22 1/4	30 3/4	—	—
10	7 1/4	—	15	19 1/4	23 1/2	32	—	—
12	7 1/4	—	15	19 1/4	23 1/2	32	—	—
14	8 1/2	—	16 1/4	20 1/2	24 3/4	33 1/4	—	—
16	9 1/4	—	17	21 1/4	25 1/2	34	—	—
18	10	—	17 3/4	22	26 1/4	34 3/4	—	—
20	10 1/4	—	18	22 1/4	26 1/2	35	—	—
22	10 1/4	—	18	22 1/4	26 1/2	35	—	—
24	11 1/4	—	19	23 1/4	27 1/2	36	—	—
26	12	—	19 3/4	24	28 1/4	36 3/4	—	—
28	12 3/4	—	20 1/2	24 3/4	29	37 1/2	—	—
30	13 1/2	—	20 1/4	25 1/2	29 3/4	38 1/4	—	—



Note: The vertical rise can also be closely estimated by adding one "A" and one "B" dimension to Maximum Offset figures. (See page 4 for "A" and "B" dimensions of Round Adjustable 45° Elbows.)

Gas Vent Termination Table



Ameri-Caps in 3" - 12" sizes may be installed in accordance with the Gas Vent Termination Table if the vent is at least 8 ft. from any vertical wall.

For installation of caps 14" and larger, or for caps which are less than 8 ft. from a vertical wall, the cap is to be located no less than 2 ft. above the highest point where the vent passes through the roof and at least 2 ft. higher than any portion of a building within 10 ft.

ROOF PITCH	MINIMUM HEIGHT
flat to $\frac{7}{12}$	1.0 feet
over $\frac{7}{12}$ to $\frac{8}{12}$	1.5 feet
over $\frac{8}{12}$ to $\frac{9}{12}$	2.0 feet
over $\frac{9}{12}$ to $\frac{10}{12}$	2.5 feet
over $\frac{10}{12}$ to $\frac{11}{12}$	3.25 feet
over $\frac{11}{12}$ to $\frac{12}{12}$	4.0 feet
over $\frac{12}{12}$ to $\frac{14}{12}$	5.0 feet
over $\frac{14}{12}$ to $\frac{16}{12}$	6.0 feet
over $\frac{16}{12}$ to $\frac{18}{12}$	7.0 feet
over $\frac{18}{12}$ to $\frac{20}{12}$	7.5 feet
over $\frac{20}{12}$ to $\frac{21}{12}$	8.0 feet