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HOW TO PROTECT YOUR HOME AND SAVE MONEY WITH FEMA COMPLIANT FLOOD VENTS

It May Be A Lot Easier Than You Think

Would you like to understand the FEMA flood vent regulations that apply to your home? And reduce your flood insurance premiums by a sizable amount?

This document makes the regulations easy to understand, points out the benefits of installing flood vents, and will help you decide what kind of vents to install.

Properly positioned and installed flood vents in your home's foundation walls will not only help you protect your investment, they can help you save money. And, despite what you may have heard, the regulations governing their type and placement are easy to understand.

These regulations were stipulated by the National Flood Insurance Program (NFIP), a program of the Federal Emergency Management Agency (FEMA).

Requirements: the Basics

1 - Openings must be installed in foundation walls so that water can flow, unimpeded, in and out of the crawl space without damaging the walls' integrity. The regulation is easy to remember: one square inch of opening in the foundation wall for every square foot of the area of your house. For example, a 2,000-square-foot crawl space would need 2,000 square inches of opening. The number of flood vents you need to install depends on the size and type of vent you buy. (More on that later.)

2 - Each enclosed area must have a minimum of two openings. If there are multiple enclosed areas within the foundation walls, each area must have at least two openings in its exterior walls.

3 - Flood vents must be below flood level to work. The bottom of each opening must be no more than 1 foot above whichever of these is higher: the interior or exterior grade immediately under the opening.

4 - Any screens, grates, grilles, fixed louvers, or other covers or devices you install must not block or hinder the automatic flow of floodwaters into and out of the enclosed area.

Why Are Flood Vents Required?

The purpose of flood vents (also called "flood gates" or "flood ports") is to reduce structural damage from flooding. These permanent openings accomplish this objective by allowing water to pass into or out of a building's exterior foundation walls.

Why is that so important? In a flood situation, if the water pressure inside and outside your home can't equalize rapidly enough, the windows and doors could blow out. In addition, this pressure can compromise the foundation and make your home unsafe to live in. Studies have shown that houses with proper openings survive a flood; homes without such vents collapse.

Who Needs Flood Vents?

According to its website, the NFIP "requires flood vents for residential basements, crawl spaces, garages, and other enclosed structures that are below the Base Flood Elevation (BFE) in Special Flood Hazard Areas." BFE is the height of the base flood, usually in feet, in relation to the National Geodetic Vertical Datum of 1929 or other datum as specified.

When a Community participates in the NFIP every property owner in the community must follow all of FEMA's and NFIP's code requirements whether or not the property owner purchases flood insurance. One of the code requirements properly installed flood vents.

How Cost Savings Add Up

Properly installed and situated flood vents can pay for themselves very quickly. They allow you to save in two ways. The annual reduction on your flood insurance premiums can be considerable. Secondly, should floodwaters rise to your home, flood vents can reduce the risk of structural damage, which can be very costly to repair.

Which Type of Flood Vent Should You Install?

There are two types of flood vents on the market: non-engineered and engineered. Engineered vents have been designed in such a way that they provide a more efficient flood relief system, and thus fewer vents will need to be installed.

The opening size of the non-engineered flood vent is calculated by multiplying the width times the height of the opening. The opening size of the engineered flood vent is calculated using a mathematical formula that takes into account certain coefficients, net area and opening shapes. This formula calculation must be certified by a professional engineer. The main difference between the two types of flood vents is that fewer of the engineered flood vents are required to meet NFIP requirements. For example, a non-engineered 8" x 16" vent is rated at 128 square inches while an engineered 8" x 16" is rated at 200 square inches.

Other design and performance criteria for engineered openings are specified by the American Society of Civil Engineers:

1 - Engineered openings are to perform such that the difference between the exterior and interior water levels shall not exceed 1 foot during base flood conditions.

2 - Engineered openings are to be not less than 3 inches in any direction in the plane of the wall. This requirement applies to the hole in the wall, excluding any screen, grate, grille, louvers, or devices that may be placed in or over the opening. The 3-inch opening requirement applies to the hole in the wall; not the space between the grates, grilles or louvers.

In a Nutshell: Numbers to Remember

FEMA's flood insurance requirements boil down to this:

1 - One square inch of opening in a foundation wall per square foot of house.

2 - Vents must be less than 12 inches above the ground.

3 - Two vents per enclosed area, on different exterior walls.

That's it. Make sure you have the appropriate flood vents installed -- or do it yourself -- then call your flood insurance company to get a reduction in your premiums. You'll also enjoy the peace of mind of knowing that you're not only compliant, you're safer.

William G. Sykes is an inventor, product designer, flood vent specialist, member of the International Code Council, engineer and patent attorney. He specializes in crawl space and foundation protection products for flood protection, ventilation and encapsulation (flood vents, air vents, doors and fans). Learn more about crawl space and foundation protection and how to save money on your flood insurance premiums by visiting our website =>

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