Non-Engineered vs. Engineered Openings

Standard air vents with screen or slats don’t allow debris to flow through the opening. SMART VENTS pivot open to allow water and debris to flow freely through the enclosure.

The average 16” x 8” foundation air vents ARE NOT permanently disabled in the open position. An air vent that is not permanently open is rated at 0 inches of net opening for flood protection.

Additionally, screening and slats take up on average from 60–80% of the 128 sq. inches that is the size of a typical air vent. A standard air vent will only provide 42 sq. inches of net opening. Non-Engineered openings are rated at 1 net sq. in. of opening per 1 ft. of enclosed area.

In contrast, an engineered 16-in. x 8-in. SMART VENT is certified for 200 sq. ft. of flood protection per vent.

Placement Requirements

The bottom of each flood vent is to be located no higher than 1 foot above the highest interior or exterior adjacent grade below the vent (FEMA TB1-08, PAGE 7).

There must be at least 2 openings on different walls per each enclosed area below the Base Flood Elevation (FEMA TB1-08, PAGE 13).

WHAT IS A FLOOD VENT?

Smart Vent’s line of ICC-ES Certified, Engineered Flood Vents protect houses and buildings during floods by preventing hydrostatic pressure buildup that can destroy walls and foundations. This mitigation technique, referred to as Wet Floodproofing, allows floodwater to freely flow through an enclosure such as a crawlspace or garage.

WHEN ARE FLOOD VENTS REQUIRED?

The NFIP Regulations and Building Codes require that any residential building constructed in Flood Zone Type A have the lowest floor, including basements, elevated to or above the Base Flood Elevation (BFE).

Enclosed areas are permitted under elevated buildings provided that they meet certain use restrictions and construction requirements such as the installation of flood vents to allow for the automatic entry and exit of flood waters.

This wet floodproofing technique is required for residential buildings.