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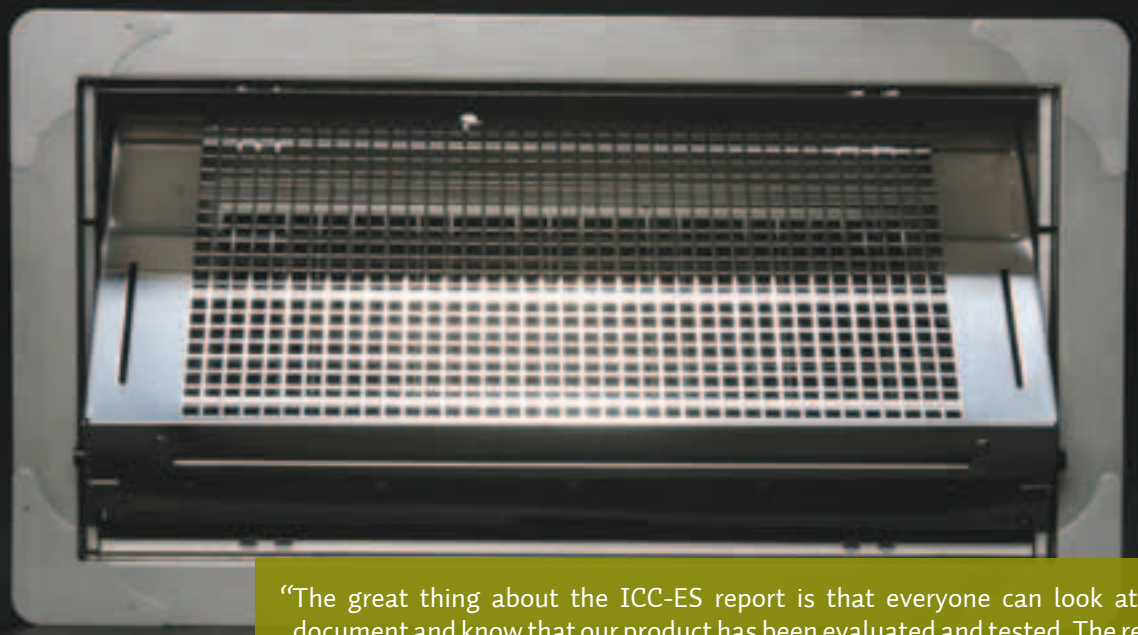

"The great thing about the ICC-ES report is that everyone can look at one document and know that our product has been evaluated and tested. The report gives us instantaneous credibility with building code officials."

MIKE GRAHAM, CFM, PRESIDENT, SMART VENT PRODUCTS, INC.

Smart Vents Prevent Foundation Flood Damage and Lower Flood Insurance Costs

Floods are heartbreaking. Damage to buildings often threatens the lives and safety of occupants due to structural failure. Even if people are safely evacuated, the harmful effects of water and water pressure can cause catastrophic damage to foundations, whether of poured concrete or block construction.

Foundation repair or replacement can be the single most expensive cost for remediation, and a failed foundation can destroy or compromise a structure.

These are the reasons why building owners in floodplains are turning to the automatic foundation flood vents manufactured by Smart Vent Products, Inc. Not dependent on electricity, but activated mechanically by floats in emergency flood situations, Smart Vents quickly equalize flood water pressure to help prevent catastrophic damage to foundations.

Lately, architects and builders planning projects are finding that flood zones are continually growing, leaving them to deal with the complexities of meeting the floodplain regulations. Smart Vent Products, Inc. offers educational programs along with products that meet demands for dealing with flooding. Architects specifying Smart Vent products are relieved to see compliance with floodplain regulations is not difficult.

Mike Graham, President of Smart Vent Products, Inc., explained why. "FEMA designates if a community is in a flood zone, but many FEMA maps are 10 to 20 years old. Over the past few years, FEMA has been re-mapping areas so today you're not in a flood zone but tomorrow you may be. Although architects

and builders are affected by these changes, it also shocks local building code officials. That's when our experience is appreciated."

Building code officials and floodplain managers across the country are recognizing the inherent value of foundation flood venting, not just to prevent major structural damage, but to expedite reoccupancy and thus relieve the pain and suffering of flood victims.

Smart Vent Products, Inc. is making their case to building departments, architects, engineers, developers and homeowners by relying heavily on two critical documents issued by ICC Evaluation Service (ICC-ES): AC364, the Acceptance Criteria for Automatic Foundation Flood Vents, which Smart Vent Products, Inc. originally helped to develop; and ICC-ES Evaluation Report ESR-2074, on the Smart Vent product line.

"Members of the International Code Council, unfortunately, witness firsthand the damage that can occur due to flooding," said Richard Beck, ICC-ES Principal Mechanical Engineer. "When Smart Vent Products, Inc. presented their concept, we saw an opportunity to help. Working through the normal evaluation process, the ICC-ES Evaluation Committee was pleased to specify testing requirements through the ICC-ES public hearing process. The result was a seamless combination of codes and standards applicable to this evaluation report."

"The great thing about the ICC-ES report is that everyone can look at one document and know that our product has been evaluated and tested. The report gives us instantaneous credibility with building code officials. They can see our code compliance, technical specs and installation information….everything they want to know including that we are a manufacturer that stands behind our product," said Graham.

Smart Vents are made of stainless steel and come in several models and sizes for installation in masonry, wood walls, and overhead garage doors. Smart Vents are latched closed to keep out animals and open automatically without human intervention.

The 16-by-8-inch Smart Vent unit, designed to fit into a standard cement block opening, shows the typical mechanical operation of Smart Vent. A hinged, bidirectional door is latched closed. When flood water rises, a patented float system in the vent unlatches to allow the door to pivot freely to let water flow in and then flow out as water recedes. There is also a temperature-activated louvered model, a damper for firewalls, and insulated models for garages or special conditions.

Each Smart Vent is rated to handle 200 square feet of enclosed flood area so an average 1,000-square-foot dwelling requires five units. For large commercial installations, custom configurations are available. Some hold 15 Smart Vent units stacked in three-high by five-wide configurations. Since flood vents are primarily installed in buildings in floodplains, Smart Vents are installed at ground level in crawl spaces or at the concrete slab level, but at no more than 12 inches above the adjacent grade level by code.

According to Graham, the cost of Smart Vents is negligible when compared to the damage they can prevent, and the possible ongoing savings on flood insurance. "The cost for a vent is about one dollar per square foot of enclosed space, not including installation. On a retrofit, for instance, the homeowner can very often recoup the investment on flood insurance rate reductions in a year to a year and a half, and continue to save over the life of the home."

Smart Vents were evaluated by ICC Evaluation Service for physical operation, water flow, and air ventilation. All models are in compliance with the 2006 *International Building Code*® (IBC®) and the 2006 *International Residential Code*® (IRC®).

To find out more about this product, view **ESR-2074**, Smart Vent® Automatic Foundation Flood Vents, reissued on January 1, 2011 and **AC-364**, Acceptance Criteria for Automatic Foundation Flood Vents, effective November 1, 2007. All ICC-ES Evaluation Reports can be accessed and downloaded free of charge at www.icc-es.org/evaluation reports, and are readily searchable based on attributes such as product type, manufacturer or report number.

** This article is intended to provide information on a new or innovative building product or system for which an ICC-ES Evaluation Report has recently been issued. It should not be construed as a product endorsement or a recommendation for its use.*