

# ELEVATION CERTIFICATE

HR  
8/19/09  
FR

OMB No. 1660-0008  
Expires March 31, 2012

Important: Read the instructions on pages 1-9.

## SECTION A - PROPERTY INFORMATION

A1. Building Owner's Name Malcolm and Patricia Johnson		For Insurance Company Use:
		Policy Number
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 4075 South Calgary Avenue		Company NAIC Number
City Tucson State AZ ZIP Code 85735		
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) Tax Code 212-48-025B Township 14S Range 12E Section 35		
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) <u>Accessory: Detached Garage</u>		
A5. Latitude/Longitude: Lat. <u>32.173392</u> Long. <u>-111.088105</u>		Horizontal Datum: <input type="checkbox"/> NAD 1927 <input checked="" type="checkbox"/> NAD 1983
A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.		
A7. Building Diagram Number <u>1A</u>		
A8. For a building with a crawlspace or enclosure(s):		A9. For a building with an attached garage: <u>Detached Garage</u>
a) Square footage of crawlspace or enclosure(s) <u>N/A</u> sq ft		a) Square footage of attached garage <u>615</u> sq ft
b) No. of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade <u>N/A</u>		b) No. of permanent flood openings in the attached garage within 1.0 foot above adjacent grade <u>4</u>
c) Total net area of flood openings in A8.b <u>N/A</u> sq in		c) Total net area of flood openings in A9.b <u>512</u> sq in
d) Engineered flood openings? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		d) Engineered flood openings? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

## SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number Pima County/040073		B2. County Name Pima County		B3. State AZ	
B4. Map/Panel Number 04019C 2225	B5. Suffix K	B6. FIRM Index Date 2/8/99	B7. FIRM Panel Effective/Revised Date 2/8/99	B8. Flood Zone(s) X	B9. Base Flood Elevation(s) (Zone AO, use base flood depth) 0.5
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9. <input type="checkbox"/> FIS Profile <input type="checkbox"/> FIRM <input checked="" type="checkbox"/> Community Determined <input type="checkbox"/> Other (Describe) _____					
B11. Indicate elevation datum used for BFE in Item B9: <input type="checkbox"/> NGVD 1929 <input type="checkbox"/> NAVD 1988 <input checked="" type="checkbox"/> Other (Describe) <u>Highest Adjacent Natural Grade</u>					
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? Designation Date <u>N/A</u> <input type="checkbox"/> CBRS <input type="checkbox"/> OPA <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					

## SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on:  Construction Drawings\*  Building Under Construction\*  Finished Construction  
\*A new Elevation Certificate will be required when construction of the building is complete.

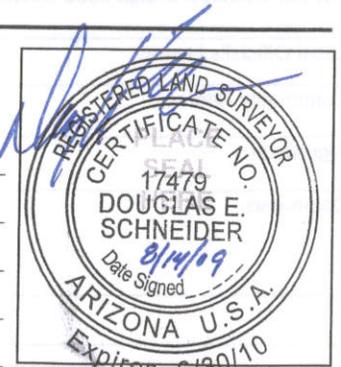
C2. Elevations - Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO. Complete Items C2.a-h below according to the building diagram specified in Item A7. Use the same datum as the BFE.  
Benchmark Utilized Finish Floor of Detached Garage 100.0 Vertical Datum N/A  
Conversion/Comments N/A

		Check the measurement used.	
a) Top of bottom floor (including basement, crawlspace, or enclosure floor)	<u>100.0</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)
b) Top of the next higher floor	<u>N/A</u>	<input type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)
c) Bottom of the lowest horizontal structural member (V Zones only)	<u>N/A</u>	<input type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)
d) Attached garage (top of slab)	<u>N/A</u>	<input type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	<u>N/A</u>	<input type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)
f) Lowest adjacent (finished) grade next to building (LAG)	<u>99.5</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)
g) Highest adjacent (finished) grade next to building (HAG)	<u>100.3</u>	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	<u>N/A</u>	<input type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)

## SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.  
 Check here if comments are provided on back of form. Were latitude and longitude in Section A provided by a licensed land surveyor?  Yes  No

Certifier's Name Doug Schneider	License Number RLS 17479
Title Survey Supervisor	Company Name Rick Engineering Company
Address 3945 E. Ft. Lowell Rd. Ste 111	City Tucson State AZ ZIP Code 875712
Signature	Date <u>8/14/09</u> Telephone (520) 795-1000

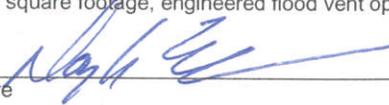


<b>IMPORTANT: In these spaces, copy the corresponding information from Section A.</b>	For Insurance Company Use:
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 4075 South Calgary Avenue	Policy Number
City Tucson State AZ ZIP Code 85735	Company NAIC Number

**SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION (CONTINUED)**

Copy both sides of this Elevation Certificate for (1) community official, (2) insurance agent/company, and (3) building owner.

Comments There is no equipment servicing the detached garage (C2.e). Highest adjacent natural grade is 99.6. Lowest adjacent natural grade is 99.5. Flood vent are engineered Smart Vents model # 1540-520 rated @ 1 per 200 sq ft of enclosed area. See the attached ICC-ES Evaluation Report. Section A9 used for square footage, engineered flood vent openings and openings square inches, even though structure is a detached garage.

Signature  Date 8/14/09

Check here if attachments

**SECTION E - BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO AND ZONE A (WITHOUT BFE)**

For Zones AO and A (without BFE), complete Items E1-E5. If the Certificate is intended to support a LOMA or LOMR-F request, complete Sections A, B, and C. For Items E1-E4, use natural grade, if available. Check the measurement used. In Puerto Rico only, enter meters.

- E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG).
  - a) Top of bottom floor (including basement, crawlspace, or enclosure) is \_\_\_\_\_  feet  meters  above or  below the HAG.
  - b) Top of bottom floor (including basement, crawlspace, or enclosure) is \_\_\_\_\_  feet  meters  above or  below the LAG.
- E2. For Building Diagrams 6-9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 8-9 of Instructions), the next higher floor (elevation C2.b in the diagrams) of the building is \_\_\_\_\_  feet  meters  above or  below the HAG.
- E3. Attached garage (top of slab) is \_\_\_\_\_  feet  meters  above or  below the HAG.
- E4. Top of platform of machinery and/or equipment servicing the building is \_\_\_\_\_  feet  meters  above or  below the HAG.
- E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community's floodplain management ordinance?  Yes  No  Unknown. The local official must certify this information in Section G.

**SECTION F - PROPERTY OWNER (OR OWNER'S REPRESENTATIVE) CERTIFICATION**

The property owner or owner's authorized representative who completes Sections A, B, and E for Zone A (without a FEMA-issued or community-issued BFE) or Zone AO must sign here. *The statements in Sections A, B, and E are correct to the best of my knowledge.*

Property Owner's or Owner's Authorized Representative's Name \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ ZIP Code \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_ Telephone \_\_\_\_\_

Comments \_\_\_\_\_

Check here if attachments

**SECTION G - COMMUNITY INFORMATION (OPTIONAL)**

The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8 and G9.

- G1.  The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who is authorized by law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)
- G2.  A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.
- G3.  The following information (Items G4-G9) is provided for community floodplain management purposes.

G4. Permit Number FPUP# 09-234E	G5. Date Permit Issued	G6. Date Certificate Of Compliance/Occupancy Issued
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- G7. This permit has been issued for:  New Construction  Substantial Improvement
- G8. Elevation of as-built lowest floor (including basement) of the building: \_\_\_\_\_  feet  meters (PR) Datum \_\_\_\_\_
- G9. BFE or (in Zone AO) depth of flooding at the building site: \_\_\_\_\_  feet  meters (PR) Datum \_\_\_\_\_
- G10. Community's design flood elevation \_\_\_\_\_  feet  meters (PR) Datum \_\_\_\_\_

Local Official's Name \_\_\_\_\_ Title \_\_\_\_\_

Community Name \_\_\_\_\_ Telephone \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

Comments \_\_\_\_\_

Check here if attachments

# Building Photographs

Continuation Page

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 4075 South Calgary Avenue	For Insurance Company Use:
	Policy Number
City Tucson State AZ ZIP Code 85735	Company NAIC Number

If submitting more photographs than will fit on the preceding page, affix the additional photographs below. Identify all photographs with: date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View."



EAST SIDE PHOTO 8/13/09



WEST SIDE PHOTO 8/13/09

FPUP# 09-234E

## Building Photographs

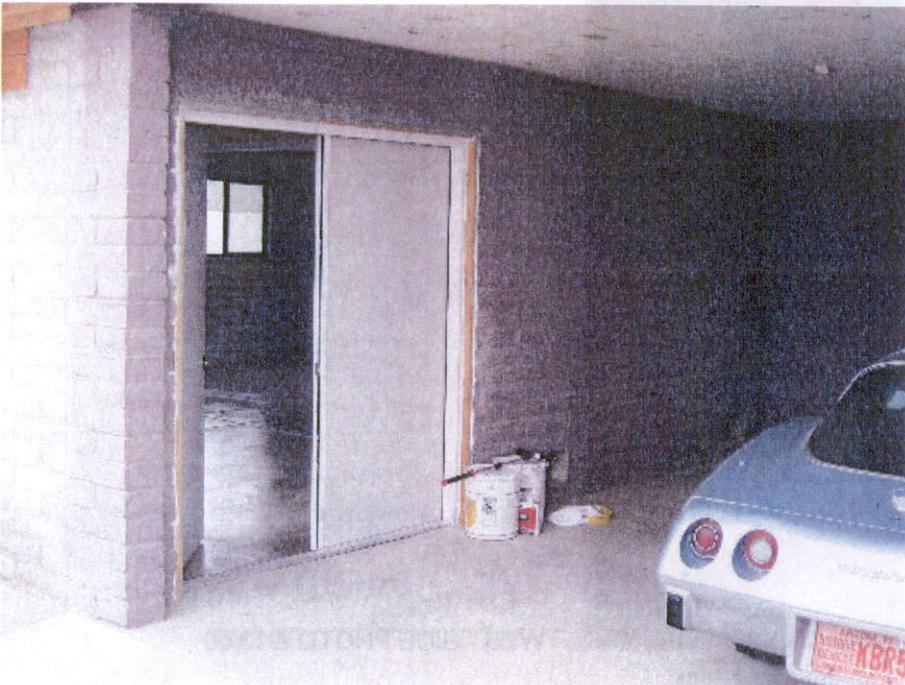
See Instructions for Item A6.

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 4075 South Calgary Avenue	For Insurance Company Use: Policy Number
City Tucson State AZ ZIP Code 85735	Company NAIC Number

If using the Elevation Certificate to obtain NFIP flood insurance, affix at least two building photographs below according to the instructions for Item A6. Identify all photographs with: date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." If submitting more photographs than will fit on this page, use the Continuation Page, following.



NORTH SIDE PHOTO 8/13/09



SOUTH SIDE PHOTO 8/13/09

# ICC-ES Evaluation Report

**ESR-2074**

Reissued February 1, 2009

This report is subject to re-examination in two years.

[www.icc-es.org](http://www.icc-es.org) | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

 DIVISION: 10—SPECIALTIES  
Section: 10230—Vents

**REPORT HOLDER:**
**SMART VENT®**, INC.  
450 ANDBRO DRIVE, SUITE 2B  
PITMAN, NEW JERSEY 08071  
(856) 307-1468  
[www.smartvent.com](http://www.smartvent.com)  
[eval@smartvent.com](mailto:eval@smartvent.com)
**EVALUATION SUBJECT:**
**SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS:  
FLOODVENT™ MODEL #1540-520; FLOODVENT™  
STACKING MODEL #1540-521; SMARTVENT™ MODEL  
#1540-510; SMARTVENT™ STACKING MODEL #1540-511;  
WOOD WALL FLOOD MODEL #1540-570; WOOD WALL  
FLOOD OVERHEAD DOOR MODEL #1540-574;  
FLOODVENT™ OVERHEAD DOOR MODEL #1540-524;  
SMARTVENT™ OVERHEAD DOOR MODEL #1540-514**
**1.0 EVALUATION SCOPE**
**Compliance with the following codes:**

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)

**Properties evaluated:**

- Physical operation
- Water flow

**2.0 USES**

The Smart Vent® units are automatic foundation flood vents (AFFVs) employed to equalize hydrostatic pressure on nonfire-resistance-rated foundation walls, rolling-type overhead doors and building walls subject to rising or falling flood waters. Certain models also allow natural ventilation in accordance with Section 1203 of the IBC or Section 408.1 of the IRC.

**3.0 DESCRIPTION**
**3.1 General:**

When subjected to pressure from rising water, the Smart Vent® AFFVs disengage, then pivot open to allow flow in either direction to equalize water level and hydrostatic pressure from one side of the foundation to the other. The AFFV pivoting door is normally held in the closed position by a buoyant release device. When subjected to rising water, the buoyant release device causes the unit to

unlatch, allowing the plate to rotate out of the way and allow flow. The water level stabilizes, equalizing the lateral forces. Each unit is fabricated from stainless steel, and each opening provides 76 square inches (49 032 mm<sup>2</sup>) of net free area for flood mitigation in the open position. The SmartVENT™ Stacking Model #1540-511 and FloodVENT™ Stacking Model #1540-521 units each contain two vertically arranged openings per unit, providing 152 square inches (98 064 mm<sup>2</sup>) of net free area for flood mitigation in the open position.

**3.2 Engineered Opening:**

The AFFVs comply with the design principle noted in Section 2.6.2.2 of ASCE/SEI 24 for a maximum rate of rise and fall of 5.0 feet per hour (0.423 mm/s). In order to comply with the engineered opening requirement of ASCE/SEI 24, Smart Vent AFFVs must be installed in accordance with Section 4.0.

**3.3 Model Sizes:**

The FloodVENT™ Model #1540-520, SmartVENT™ Model #1540-510, FloodVENT™ Overhead Door Model #1540-524, and SmartVENT™ Overhead Door Model #1540-514 units measure 15<sup>3</sup>/<sub>4</sub> inches wide by 7<sup>3</sup>/<sub>4</sub> inches high (400 by 196.9 mm). The Wood Wall Flood Model #1540-570 and Wood Wall Flood Overhead Door Model #1540-574 units measure 14 inches wide by 8<sup>3</sup>/<sub>4</sub> inches high (355.6 by 222.25 mm). The SmartVENT™ Stacking Model #1540-511 and FloodVENT™ Stacking Model #1540-521 units measure 16 inches wide by 16 inches high (406.4 by 406.4 mm).

**3.4 Ventilation:**

The SmartVENT® Model #1540-510 and SmartVENT® Overhead Door Model #1540-514 both have screen covers with 1/4-inch-by-1/4-inch (6.35 by 6.35 mm) openings, yielding 51 square inches (32 903 mm<sup>2</sup>) of net free area to supply natural ventilation. The SmartVENT™ Stacking Model #1540-511 consists of two Model #1540-510 units in one assembly, and provides 102 square inches (65 806 mm<sup>2</sup>) of net free area to supply natural ventilation. Other AFFVs recognized in this report do not offer natural ventilation.

**4.0 INSTALLATION**

SmartVENT® and FloodVENT™ are designed to be installed into walls or overhead doors of existing or new construction from the exterior side. Installation of the vents must be in accordance with the manufacturer's instructions, the applicable code and this report. The mounting straps allow mounting in wood, masonry and concrete walls up to 12 inches (305 mm) thick. In order to

comply with the engineered opening design principle noted in Section 2.6.2.2 of ASCE/SEI 24, the Smart Vent® AFFVs must be installed as follows:

- With a minimum of two openings on different sides of each enclosed area
- With a minimum of one AFFV for every 200 square feet (18.6 m<sup>2</sup>) of enclosed area, except that the SmartVENT™ Stacking Model #1540-511 and FloodVENT™ Stacking Model #1540-521 must be installed with a minimum of one AFFV for every 400 square feet (37.2 m<sup>2</sup>) of enclosed area.
- Below the base flood elevation
- With the bottom of the AFFV located a maximum of 12 inches (305.4 mm) above grade.

#### 5.0 CONDITIONS OF USE

The Smart Vent® AFFVs described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The Smart Vent® AFFVs must be installed in accordance with this report, the applicable code and the manufacturer's installation instructions. In the event of a conflict, the instructions in this report govern.
- 5.2 The Smart Vent® AFFVs must not be used in the place of "breakaway walls" in coastal high hazard areas, but are permitted for use in conjunction with breakaway walls in other areas.

#### 6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Automatic Foundation Flood Vents (AC364), dated October 2007.

#### 7.0 IDENTIFICATION

The Smart VENT®, models recognized in this report must be identified by a label bearing the manufacturer's name (Smart Vent, Inc.), the model number, and the evaluation report number (ESR-2074).

To: Brett Gould  
1870 W. Prince Road, Suite 5  
Tucson, Arizona 85705

444-3719

From: Sean Laird / cj

Date: August 14, 2009

Subject: 4075 S. CALGARY AVENUE – ELEVATION CERTIFICATION

Job No.: 3650-R

How Sent: To Be Picked Up

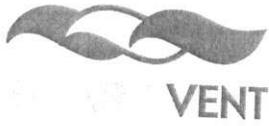
**We are transmitting the following attached items:**  
If items are not attached as indicated, please notify us immediately

No. of Copies	Document Date	Description
1	8-14-09	Original, Elevation Certificate

Transmitted For: Your Use / As Requested

Remarks:

Copy To: File



**Brian Shaw**  
Marketing & Technical Assistant

Smart VENT® Inc.  
450 Andbro Drive  
Suite 2B  
Pitman, NJ 08071

[www.smartvent.com](http://www.smartvent.com)  
[bshaw@smartvent.com](mailto:bshaw@smartvent.com)

OFFICE 877-441-8368  
FAX 856-612-5000

Sales, Technical Support and Customer Service 877.441.8368



**Smart VENT**

**877 - 441 - 8368**

**www.smartvent.com**

# INSTALLATION INSTRUCTIONS

## & DETAILS

MODEL 1540-510

REV. 1-18-06

### INSTALLATION INSTRUCTIONS

### DUEL FUNCTION FLOOD AND VENTILATION VENT

1. Remove vent door from vent frame. (Turn upside down, rotate bottom of door outward and slide out)
2. Prepare a CLEAN 16.25" wide by 8.25" high rough opening (approx. 1 block wide X 1 block high) for each vent. Ensure the bottom of the rough opening is no more than 12" above the finished grade.
3. Apply a bead of polyurethane caulk around the back of the flange on the vent frame. (FIG. 2)
4. Bend the 4 steel straps to the thickness of the wall measuring from the end with the teeth see STRAP DETAIL
5. Insert the top straps into the top two strap slots about two clicks.
6. Insert the vent frame in the cut opening. The bent strap ends go in then up behind the inside of the wall. Push the frame tight against the face of the wall. Ensure the frame is flush and square in the opening. (FIG. 3)
7. Reach through the vent opening and click the two straps in while holding the front of the vent against the wall face. The straps should not extend past the front of the vent face. Install the two remaining bottom straps.
8. Re-check that frame is square and slots are clear of debris, and caulk.
9. Install the door into frame by grasping the bottom of door (with float pins down) and front (small screen in front). Slide door into frame and rotate until it is latched.
10. To open the door insert two credit cards into the float slots as shown in the diagram. This will unlatch the door for removal and cleaning.

#### DETAILED SPECIFICATIONS:

MATERIAL: STAINLESS STEEL

OPERATION FLOOD: AUTOMATIC NON-POWERED ACTIVATION AND OPERATION  
VENT REMAINS CLOSED AND LOCKED UNTIL ACTIVATED

OPERATION AIR: AUTOMATIC LOUVERS FULLY OPEN AT 75 DEG. FULLY CLOSED AT 35 DEG. NO POWER REQUIRED

#### INSTALLATION:

SECURED W/ 4 STAINLESS STEEL STRAPS SUPPLIED

HYDROSTATIC RELIEF: 200 Sq. Ft per Vent

VENTILATION: 51 Sq. Ft per Vent NOTE: VAPOR BARRIER ALLOWS FOR REDUCED VENTILATION

REQUIREMENTS FLOOD: MINIMUM OF 2 VENTS PER ENCLOSED AREA MOUNTED ON AT LEAST TWO DIFFERENT WALLS

COLORS: STAINLESS (STANDARD)  
EXTERIOR POWDER COATED WHITE, TAN, GRAY, AND RUST (AVAILABLE)

MEETS THE REQUIREMENTS FOR ENGINEERED OPENINGS AS SET FORTH BY:

FEMA, NFIP, ICC, & ASCE

SUPPORTIVE DOCUMENTS, TB 1-93, 44CFR 60.3(C)(5), ASCE 24-98  
ICC EVALUATION # NER-624

is more online at [www.smartvent.com](http://www.smartvent.com)

### the Smart Facts:

FEMA Elevation Certificate requires evidence that flood-prone enclosed areas are vented properly. Avoid liability by using Smart VENT<sup>®</sup> code compliant vents.

Flood insurance rates increase dramatically if builders use non-compliant vents or do not vent enclosed areas below the BFE (Base Flood Elevation).

ICC-ES E-1075 Evaluated, FEMA Accepted and approved by the Florida Building Code Commission.

Each Smart VENT<sup>®</sup> protects 200 sq/ft of area below the base flood elevation, thus requiring 2/3 less vents than any other vent on the market, increasing the aesthetic appearance of a home dramatically.

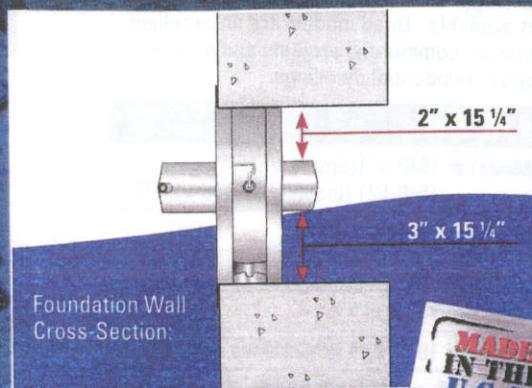
Do not substitute an air vent for a Certified Flood Vent. An air vent offers no protection.



rapidly rising floodwater can put extreme pressure on the foundation walls causing properly vented structures to buckle and collapse. Smart VENTS<sup>®</sup> quickly and efficiently equalize the pressure and minimize damage.

### How it works:

Flood Protection: The Flood VENT door is latched closed until floodwater enters. Entering floodwater lifts the patented internal floats, unlatching and rotating the door open. This allows the flood water to automatically enter and exit through the frame opening, relieving the pressure from your foundation.



### Smart VENTS<sup>®</sup> Are Easy to Install

Whether you are retrofitting an existing home, or using Smart VENTS<sup>®</sup> in new construction, our flood vents are a breeze to install. With some basic skills and a couple of tools, most applications can be completed in less than 30 minutes.

### Your Customers Will Save Money on Flood Insurance Premiums.

Because Smart VENTS<sup>®</sup> are code compliant, FEMA accepted and ICC-ES Evaluated, homeowners across the country are realizing

### Use Fewer Vents

Preserve the aesthetic beauty of a home by requiring 2/3 fewer vents. Each Smart VENT<sup>®</sup> protects 200 sq/ft of area below the base flood elevation, covering significantly more area than non-compliant vents.



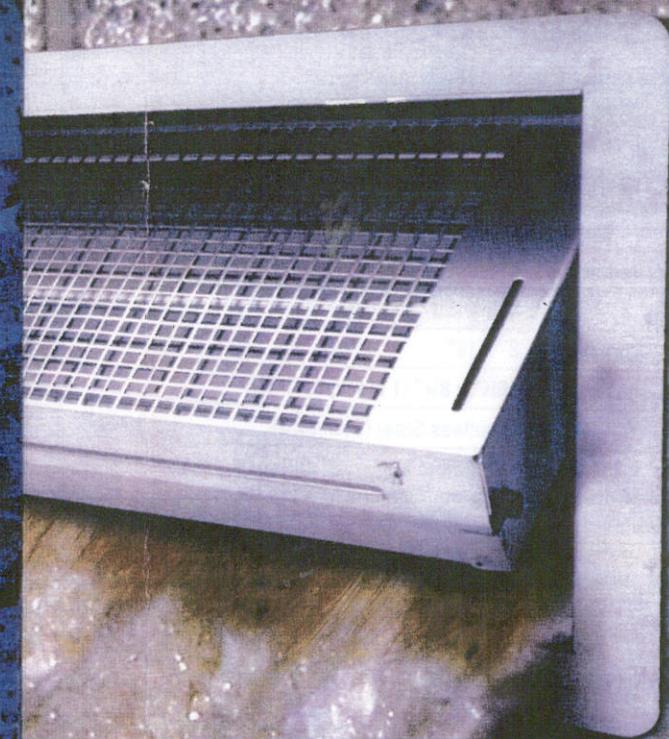
### How does one of your vents provide so much coverage?

You may have heard that FEMA requires flood openings to provide one sq/in of opening per one sq/ft of enclosed area, referring to dimensions of the opening in proportion to the space to be vented. This is only partially correct. FEMA's regulations and guidelines do state that a non-engineered flood vent solution must (among other requirements) provide one sq/in of opening per square foot of enclosed area to be vented. However, all Smart VENT<sup>®</sup> products are certified engineered openings. They have been designed, engineered, tested, rated, and



**Building in a Floodplain?  
Get Smart and Get the Facts.**

**Smart VENT<sup>®</sup> Advanced  
Foundation Flood Vents**

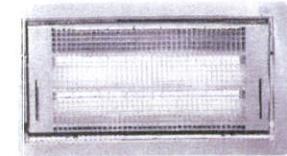




# SMART VENT®

## Choose the correct style:

In addition to sizing options, we offer two style choices. The first is a dual function model that will give you automatic flood protection along with automatic ventilation. The second is our insulated model that seals out the cool or warm air, but opens as flood water rises.



### Smart VENT®

**Model #:** 1540-510

**Installation Type:** Masonry Wall

**Style:** Louvered

**Dimensions:** 8" x 16"

**Rough Opening:** 16¼" x 8¼" (1 block, or CMU)

**Finish:** Stainless Steel (Standard)

The 8" x 16" vent is certified to cover 200 sq/ft of enclosed area for flood protection and 51 sq/in for ventilation.



### Flood VENT

**Model #:** 1540-520

**Installation Type:** Masonry Wall

**Style:** Insulated



### Overhead Garage Door

Easy installation (all hardware is included) makes this model ideal to retrofit into an existing garage door. A white powder coated stainless steel frame cleanly installs into the garage door with only four (supplied) stainless steel screws and nuts.

**Model#:** 1540-514 (Smart VENT®)  
1540-524 (Insulated Flood VENT)  
1540-574 (Insulated Flood VENT)

**Installation Type:** Overhead Garage Doors

**Style:** Louvered or Insulated

#### 2 Sizes Available:

**Dimension:** 8" x 16" (514-524)

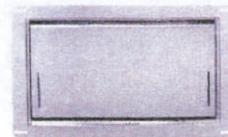
**Rough Opening:** 16¼" x 7 ¾" (cut through door)

**Dimension:** 14½" x 8½" (574)

**Rough Opening:** 14 ½" x 8 ¾"

**Finish:** White (Standard)

One 8" x 16" or 14½ x 8½ vent is certified to cover 200 sq/ft of enclosed area for flood protection.



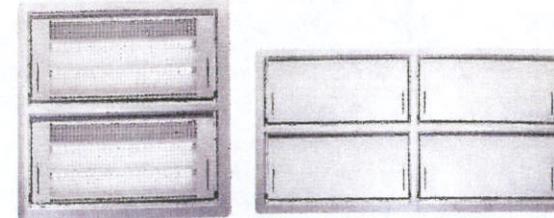
### Wood Wall Model

The Wood Wall Flood Vent is designed to fit between wood studs spaced on 16" centers. One vent covers 200 sq/ft of enclosed area, and it is an easy retrofit. This vent is only available in our insulated model.

**Model #:** 1540-570

**Installation Type:** Wood Stud Wall

**Style:** Insulated



### Configuration Options

Single vents are available in stacked or quad configurations. Stacked models are twice as efficient as a single unit and are generally used to provide protection in larger dwellings or where adequate wall space is not available. Quad models are an excellent solution for larger commercial projects and are not normally used in residential dwellings.

### Stacked Model

**Model #:** 1540-511 (Smart VENT®)  
1540-521 (Insulated Flood VENT)

**Installation Type:** Masonry Wall

**Style:** Louvered or Insulated

**Dimensions:** 16" x 16"

**Rough Opening:** 16¼" x 16 ¾" (2 blocks, or CMU)

One 16" x 16" vent certified for 400 sq/ft. of enclosed area for flood, and 102 sq/in for ventilation.

### Quad Model

**Model #:** 1540-550 (Smart VENT®)  
1540-560 (Insulated Flood VENT)

**Installation Type:** Masonry Wall

**Style:** Louvered or Insulated

**Dimensions:** 32" x 16"

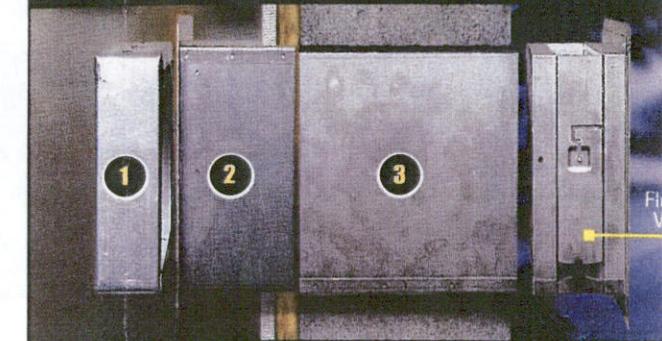
**Rough Opening:** 32 ½" x 16 ¾" (4 blocks, or CMU)

One 32" x 16" unit certified for 800 sq/ft of enclosed area for flood, and 204 sq/in for ventilation

### Masonry Wall Buck

The Smart VENT® Masonry Wall Buck is made of high strength PVC. Each buck accepts model 1540-510 or 1540-520. Fully assembled units are shipped ready to install with a protective film and wood bracing that

## The Smart VENT® Accessory System Can Accommodate Any Installation Application



### 1-Fire Damper

Smart VENT® offers two UL-certified Fire Damper models. A masonry installation model (1540-530) and a wood wall installation model (1540-537). The fire damper is certified to provide two hours of fire resistance. It is intended to be used where fire proofing is required on a wall in which flood venting is installed, usually in a garage or vestibule.

### 2-Interior Trim Flange

The Trim Flange unit fits into the rough opening to provide a clean finished look on the interior wall. Trim flanges are available for use with standard masonry flood vents (1540-533) and Smart VENT® Wood Wall Models (3.5" depth 1540-573 and 9" depth 1540-573-9). Optional colors are available (Please refer to color chart).

### 3-Inner Sleeve

The stainless steel sleeve lining is available in two sizes. Model 1540-532-12 is adjustable from 8" to 12" and model 1540-532-15 is adjustable from 10" to 15".

### Color Options

All vents, with the exception of our Overhead Garage Door models, come in a standard stainless steel finish. The Overhead Garage Door models are available in a standard white finish. Color is applied to units using a specially formulated powder coating process. Color finishes are consistent, durable and extremely weather-resistant. Optional colors shown below are