### U.S. DEPARTMENT OF HOMELAND SECURITY FEDERAL EMERGENCY MANAGEMENT AGENCY National Flood Insurance Program

# **ELEVATION CERTIFICATE**

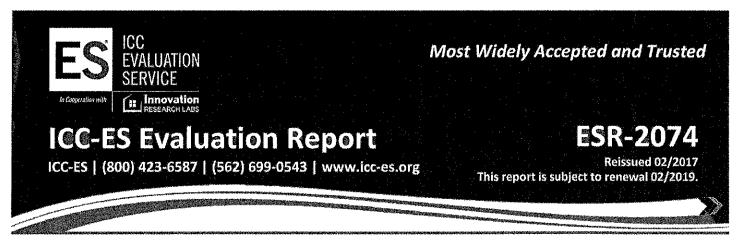
Important: Read the instructions on pages 1-9.

OMB No. 1660-0008

Expiration Date: July 31, 2015

SECTION A - PROPERTY INFORMATION	FOR INSURANCE COMPANY USE.		
^ ' Building Owner's Name SWARTZ	Policy Number:		
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 9 SOUTH RUMSON AVENUE	Company NAIC Number:		
City MARGATE CITY State NJ ZIP Code 08402	Control of the Contro		
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) BLOCK 118 LOT 4			
or enclosure(s) within 1.0 foot above adjacent grade 9 within 1.0 foot above c) Total net area of flood openings in A8.b 1800 sq in c) Total net area of flood openings? Yes No d) Engineered flood openings?	attached garage sq ft nent flood openings in the attached garage ive adjacent grade ood openings in A9.b sq in openings? Yes No		
SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMA	TION		
B1. NFIP Community Name & Community Number MARGATE  B2. County Name ATLANTIC	B3. State NEW JERSEY		
B4. Map/Panel Number 34001C0434 B5. Suffix F 1/30/15 B6. FIRM Index Date 1/30/15 B7. FIRM Panel Effective/Revised Date 20ne(s) AE	B9. Base Flood Elevation(s) (Zone AO, use base flood depth) 9.00'		
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9.  FIS Profile FIRM Community Determined Other/Source:  B11. Indicate elevation datum used for BFE in Item B9: NGVD 1929 NAVD 1988 Other/Source Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA Designation Date: OPA	ce: <u>PRELIMINARY FIRM MAP</u> .)?		
SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQ	UIRED)		
C1. Building elevations are based on: ☐ Construction Drawings* ☐ Building Under 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, AB below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters.  Benchmark Utilized: RM-4 Vertical Datum: NAVD 1988  Indicate elevation datum used for the elevations in items a) through h) below. ☐ NGVD 1929 ☒ NAVD 1988  Datum used for building elevations must be the same as that used for the BFE.	4/29/15		
Check the measurement used.			
a) Top of bottom floor (including basement, crawlspace, or enclosure floor)  b) Top of the next higher floor  c) Bottom of the lowest horizontal structural member (V Zones only)  d) Attached garage (top of slab)  e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	☑ feet       ☐ meters		
f) Lowest adjacent (finished) grade next to building (LAG) 6.26 g) Highest adjacent (finished) grade next to building (HAG) 7.78 h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support 6.98	☐ feet ☐ meters ☐ me		
SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICA	TION		
This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify ele 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 I licensed land surveyor?   Yes □ No  Title LAND SURVEYOR Company Name ARTHUR W. PONZIO COMPANY  Address 400 NOUTH DOVER AVENUE City ATLANTIC CITY State NJ ZIP Code 08401  Signature Date 4/29/15 Telephone 609-344-8194	1.		

	Section A.	FOR INSURANCE COMPANY USE
iding Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and SOUTH RUMSON AVENUE	d Box No.	Policy Number:
ty MARGATE CITY State NJ	ZIP Code 08402	Company NAIC Number:
SECTION D – SURVEYOR, ENGINEER, OR ARCHI	ITECT CERTIFICATION	ON (CONTINUED)
ppy both sides of this Elevation Certificate for (1) community official, (2) insurance ag	ent/company, and (3) bu	ilding owner.
omments 21009 **GENERATOR ELEV= 11.10' HEATER ELEV =11.20' BOTTOR ENT MODEL 1540-110 ***ELEX- DITACHED GARAGE = 8.25'	M OF DUCT ELEV=10.0	0' A/C UNIT ELEVATION= 11.10' SMA
gnature Date	4/29/15	
SECTION E - BUILDING ELEVATION INFORMATION (SURVEY NOT R	REQUIRED) FOR ZON	IE AO AND ZONE A (WITHOUT BFE)
or Zones AO and A (without BFE), complete Items E1–E5. If the Certificate is intende	ed to support a LOMA or	LOMR-F request, complete Sections A, B,
d C. For Items E1–E4, use natural grade, if available. Check the measurement used	l. In Puerto Rico only, en	ter meters.
<ol> <li>Provide elevation information for the following and check the appropriate boxes to grade (HAG) and the lowest adjacent grade (LAG).         <ul> <li>a) Top of bottom floor (including basement, crawlspace, or enclosure) is</li> <li>b) Top of bottom floor (including basement, crawlspace, or enclosure) is</li> </ul> </li> <li>For Building Diagrams 6–9 with permanent flood openings provided in Section A (elevation C2.b in the diagrams) of the building is feet meters abov</li> <li>Attached garage (top of slab) is feet meters abov</li> <li>Top of platform of machinery and/or equipment servicing the building is</li> <li>Zone AO only: If no flood depth number is available, is the top of the bottom floor adjacence.</li> </ol>	feet   me	eters  above or below the HAG. eters  above or below the LAG. eges 8–9 of Instructions), the next higher flowelow the HAG.  above or below the HAG.
ordinance? Yes No Unknown. The local official must certify this int		CERTIFICATION
e property owner or owner's authorized representative who completes Sections A, B		
ie property owner or owner's authorized representative who completes sections A, B Zone AO must sign here. The statements in Sections A, B, and E are correct to the b	pest of my knowledge.	Sat a 7 Elvir (100ded of community-100ded Di
y Owner's or Owner's Authorized Representative's Name		
dress City		State ZIP Code
uless		
		Telephone
gnature Date		Telephone
gnature Date		
nature Date		
mments  SECTION G – COMMUNITY INFOR	MATION (OPTIONAL	☐ Check here if attachr
gnature Date  mments  SECTION G – COMMUNITY INFOR  local official who is authorized by law or ordinance to administer the community's floods	MATION (OPTIONAL	☐ Check here if attachn  Check here if attachn  Check here if attachn  Check here if attachn
SECTION G – COMMUNITY INFOR  local official who is authorized by law or ordinance to administer the community's flood is Elevation Certificate. Complete the applicable item(s) and sign below. Check the meaning of the community	MATION (OPTIONAL plain management ordina asurement used in Items en signed and sealed by	Check here if attachmone.
SECTION G – COMMUNITY INFOR  local official who is authorized by law or ordinance to administer the community's floody is Elevation Certificate. Complete the applicable item(s) and sign below. Check the media to the information in Section C was taken from other documentation that has been is authorized by law to certify elevation information. (Indicate the source and do the community official completed Section E for a building located in Zone A (with	MATION (OPTIONAL plain management ordina asurement used in Items en signed and sealed by late of the elevation data nout a FEMA-issued or co	Check here if attachnois)  nce can complete Sections A, B, C (or E), at G8–G10. In Puerto Rico only, enter meters, a licensed surveyor, engineer, or architect in the Comments area below.)  community-issued BFE) or Zone AO.
SECTION G – COMMUNITY INFOR  local official who is authorized by law or ordinance to administer the community's flood is Elevation Certificate. Complete the applicable item(s) and sign below. Check the media is authorized by law to certify elevation information. (Indicate the source and decommunity official completed Section E for a building located in Zone A (with	MATION (OPTIONAL plain management ordina asurement used in Items en signed and sealed by late of the elevation data nout a FEMA-issued or co	Check here if attachnois)  nce can complete Sections A, B, C (or E), at G8–G10. In Puerto Rico only, enter meters, a licensed surveyor, engineer, or architect in the Comments area below.)  community-issued BFE) or Zone AO.
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SECTION G – COMMUNITY INFOR    local official who is authorized by law or ordinance to administer the community's flood; is Elevation Certificate. Complete the applicable item(s) and sign below. Check the medis authorized by law to certify elevation information. (Indicate the source and decommunity official completed Section E for a building located in Zone A (with the following information (Items G4–G10) is provided for community floodplain. Permit Number    G5. Date Permit Issued   G5. Date Permit Issued   G5. Date Permit Issued   G6. Dat	MATION (OPTIONAL plain management ordina asurement used in Items en signed and sealed by late of the elevation data nout a FEMA-issued or con management purposes.  G6. Date Certificate  provement  feet meter  feet meter	Check here if attachn  Check here if attachn
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SECTION G – COMMUNITY INFOR  local official who is authorized by law or ordinance to administer the community's flood, is Elevation Certificate. Complete the applicable item(s) and sign below. Check the medis authorized by law to certify elevation information. (Indicate the source and decommunity official completed Section E for a building located in Zone A (with the following information (Items G4–G10) is provided for community floodplain.  4. Permit Number  G5. Date Permit Issued  This permit has been issued for:    New Construction   Substantial Immunity Elevation of as-built lowest floor (including basement) of the building:   BFE or (in Zone AO) depth of flooding at the building site:   Community's design flood elevation:   Cal Official's Name   AMES GALANTINO   Temmunity Name   MARGATE   N. J.   Temmunit	MATION (OPTIONAL plain management ordina asurement used in Items en signed and sealed by late of the elevation data nout a FEMA-issued or con management purposes.  G6. Date Certificate  provement  feet meter  feet meter  feet meter	Check here if attachm  Check here if attachm



**DIVISION: 08 00 00—OPENINGS** 

SECTION: 08 95 43—VENTS/FOUNDATION FLOOD VENTS

## REPORT HOLDER:

# SMARTVENT PRODUCTS, INC.

430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071

## **EVALUATION SUBJECT:**

SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514



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# **ICC-ES Evaluation Report**

## ESR-2074

Reissued February 2017 Revised November 2017

This report is subject to renewal February 2019.

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A Subsidiary of the International Code Council®

DIVISION: 08 00 00—OPENINGS

Section: 08 95 43—Vents/Foundation Flood Vents

#### REPORT HOLDER:

SMARTVENT PRODUCTS, INC. 430 ANDBRO DRIVE, UNIT 1 PITMAN, NEW JERSEY 08071 (877) 441-8368 www.smartvent.com info@smartvent.com

#### **EVALUATION SUBJECT:**

SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

#### 1.0 EVALUATION SCOPE

#### Compliance with the following codes:

- 2015, 2012, 2009 and 2006 International Building Code® (IBC)
- 2015, 2012, 2009 and 2006 International Residential Code® (IRC)
- 2013 Abu Dhabi International Building Code (ADIBC)<sup>†</sup>

<sup>†</sup>The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

#### Properties evaluated:

- Physical operation
- Water flow

### 2.0 USES

The Smart Vent® units are engineered mechanically operated flood vents (FVs) employed to equalize hydrostatic pressure on walls of enclosures subject to rising or falling flood waters. Certain models also allow natural ventilation.

## 3.0 DESCRIPTION

### 3.1 General:

When subjected to rising water, the Smart Vent<sup>®</sup> FVs internal floats are activated, 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 FV 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 door to rotate out of the way and allow flow. The water level stabilizes, equalizing the lateral forces. Each unit is fabricated from stainless steel. Smart Vent® Automatic Foundation Flood Vents are available in various models and sizes as described in Table 1. The SmartVENT® Stacking Model #1540-511 and FloodVENT® Stacking Model #1540-521 units each contain two vertically arranged openings per unit.

#### 3.2 Engineered Opening:

The FVs comply with the design principle noted in Section 2.7.2.2 and Section 2.7.3 of ASCE/SEI 24-14 [Section 2.6.2.2 of ASCE/SEI 24-05 (2012, 2009, 2006 IBC and IRC)] 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 FVs must be installed in accordance with Section 4.0.

#### 3.3 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 mm²) 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 mm²) of net free area to supply natural ventilation. Other FVs recognized in this report do not offer natural ventilation.

# 4.0 DESIGN AND 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. Installation clips allow mounting in masonry and concrete walls of any thickness. In order to comply with the engineered opening design principle noted in Section 2.7.2.2 and 2.7.3 of ASCE/SEI 24-14 [Section 2.6.2.2 of ASCE/SEI 24-05 (2012, 2009, 2006 IBC and IRC)], the Smart Vent® FVs must be installed as follows:

- With a minimum of two openings on different sides of each enclosed area.
- With a minimum of one FV for every 200 square feet (18.6 m²) 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 FV for every  $400 \text{ square feet } (37.2 \text{ m}^2) \text{ of enclosed area.}$ 

- Below the base flood elevation.
- With the bottom of the FV located a maximum of 12 inches (305.4 mm) above the higher of the final grade or floor and finished exterior grade immediately under each opening.

## 5.0 CONDITIONS OF USE

The Smart Vent<sup>®</sup> FVs 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® FVs 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® FVs 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 Mechanically Operated Flood Vents (AC364), dated August 2015.

# 7.0 IDENTIFICATION

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

TABLE 1-MODEL SIZES

MODEL NAME	MODEL NUMBER	MODEL SIZE (in.)	COVERAGE (sq. ft.)
FloodVENT <sup>®</sup>	1540-520	15 <sup>3</sup> / <sub>4</sub> " X 7 <sup>3</sup> / <sub>4</sub> "	200
SmartVENT <sup>®</sup>	1540-510	15 <sup>3</sup> / <sub>4</sub> " X 7 <sup>3</sup> / <sub>4</sub> "	200
FloodVENT <sup>®</sup> Overhead Door	1540-524	15 <sup>3</sup> / <sub>4</sub> " X 7 <sup>3</sup> / <sub>4</sub> "	200
SmartVENT <sup>®</sup> Overhead Door	1540-514	15 <sup>3</sup> / <sub>4</sub> " X 7 <sup>3</sup> / <sub>4</sub> "	200
Wood Wall FloodVENT®	1540-570	14" X 8 <sup>3</sup> / <sub>4</sub> "	200
Wood Wall FloodVENT® Overhead Door	1540-574	14" X 8 <sup>3</sup> / <sub>4</sub> "	200
SmartVENT <sup>®</sup> Stacker	1540-511	16" X 16"	400
FloodVent <sup>®</sup> Stacker	1540-521	16" X 16"	400

For SI: 1 inch = 25.4 mm; 1 square foot = m<sup>2</sup>

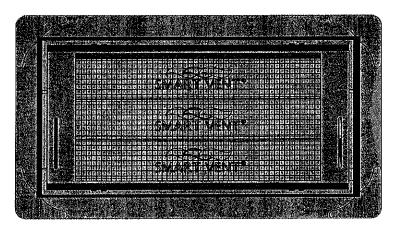


FIGURE 1—SMART VENT: MODEL 1540-510

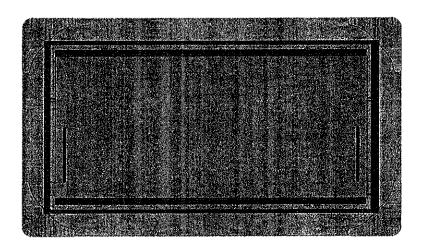


FIGURE 2-SMART VENT MODEL 1540-520

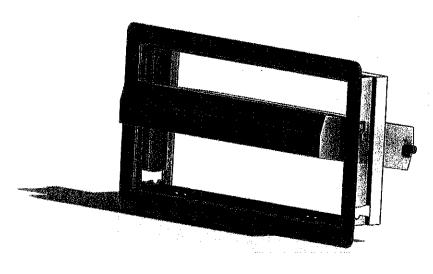


FIGURE 3—SMART VENT: SHOWN WITH FLOOD DOOR PIVOTED OPEN