U.S. DEPARTMENT OF HOMEL FEDERAL EMERGENCY MANAGE National Flood Insurance I ELEVATION CERTIN IMPORTANT: FOLLOW THE INSTRUCT	EMENT AGEN Program FICATE TIONS ON PAGE	CY 0	MB Control Numb	
Copy all pages of this Elevation Certificate and all attachments for (1) community of	iiciel, (2) Insura	nce agent/company,	and (3) building	owner.
SECTION A - PROPERTY INFORMATION			ANCE COMPAN	
AL BUILDING OWNER'S NETHE HARPISON AND KRISTIE	HARRISON	Policy Number:		
A2. Building Straet Address (Including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Box No. G20 YARD ARM LANC	. Route and	Company NAIC Number:	· · · · · · · · · · · · · · · · · · ·	аналан айтан талан тал
City LONGBOAT Key A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal De	State	2	lp Code 342	28
A4. Buikling Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)		, PART Z. dential		
A5. Letitude/Longitude: Lat. N 27° 20' 55" Long. W 82 36 "Horizont	al Datum:	NAD 1927	NAD 1983	
AS. Attach at least 2 photographs of the building if the Certificate is being used to	o obtain flood li	isurance,		
A7. Building Diagram Number 13 A8. For a building with a crawlepace or enciceure(a): A9.	For a by M ()			
		g with an attached g	1 × m #	
b) Alumine of several sector of the sector o		s of attached garag	1441	sq ft
crawlepace or enclosure(s) within 1.0 foot	number of per in the atlached above adjacen	manent flood openi i ganage within 1.0 f t grade	ioot 6	
c) Total not area of flood openings in A8.b sq in sq in c)	Total net area	of flood openings in	AD.5 1320	ni pe
	Engineered flo		Yes CNo	
SECTION B - FLOOD INSURANCE RATE MA		ORMATION		
B1. NFIP Community Name & Community Number B2. County Ne			B3. St	ate '
LONGBOAT KEV 1251240 SARI	ASOTA		F	6
54. map/Panel Number 85. Suffix 86. FIRM Index Date 87. FIRM Panel Ef	lective/ BB. I		Base Flood Elev	
Revised Date			(Zone AO, use b	Nase flood
1251240010 B 5-18-92 8-15-8	3 1	12	depth	
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood dep	th antened in H	P BO		Ballacture
C FIS Profile @FIRM C Community Determined C Other/Source:				
R-weiner			·····	
B11. Indicate elevation datum used for BFE in Item 89; @NGVD 1929 (* NAVE				
312. Is the building located in a Coastal Barrier Resources System (CBRS) area of	r Otherwise Pr	otected Area (OPA)	? C Yes 6	R No
Designation Date: CBRS COPA				,
The second se				
SECTION C - BUILDING ELEVATION INFORMAT	TION (SURVE	Y REQUIRED)		
C1. Building elevations are based on: C Construction Drawings* C Building A new Elevation Certificate will be required when construction of the building is co	Under Constru mplete,	otion" (# Finis	hed Construction	n
22. Elevations; Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), A	R ARIA ADIA	E, AR/A1-A30, AR/	AH, AR/AO. Cor	mpleta
terns C2.a-h below according to the building diagram specified in them A7. In Puer Benchmark Utilized: <u>A 715</u> Vertical I		iter meters.		
ndicate elevation datum used for the elevations in hems a) through h) below.				
C Other/Source:	10101020 (	1990 1990		
batum used for building elevations must be the same as that used for the BFE.	ar-101-18-19-19-19-19-19-19-19-19-19-19-19-19-19-			
) Top of bottom floor (Including basement, crawlapace, or enclosure floor)	12 .	7	the measurem	
) Top of the next higher floor	19 .	6	effeet Cm	
) Bottom of the lowest horizontal structural member (V Zones only)	NA	ennernen <del>d Till</del> engggerigengen	Creet Cm	
I) Attached garage (top of slab)	8	4	Cfeet Cm	
) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	19 .	6	@fest Cm	
Lowest adjacent (finished) grade next to building (LAG)	7	5	@feet Cm	elera
) Highest adjacent (finished) grads next to building (HAG)	9	}	feet Om	
) Lowest adjacent grade at lowest elevation of dack or stairs, including	-7	<b>171</b>		
structural support.	· · .	1	(Creet Cree	atera
EMA Form 086-0-33 (7/15) Replaces all previous edition	016.		Pa	019 3 of 15

ID CONTAINT, L.		and the second	Explation: 11/30/201
MPORTANT: In these spaces, copy the co			FOR INSURANCE COMPANY USE
Building Street Address (including Apl., Unit,		. Routs and Box No,	Policy Number:
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LONGBOAT KEY	State Z FL - SURVEYOR, ENGINEER, O	Decide	Company NAIC Number:
la cartification is to be signed and sealed by	a land aurvayor engineer, or	ARCHITEGT CERTI	FIGATION
al the Information on this Certificate represent mishable by fine or imprisonment under 18 L	its my bast efforts to interpret t	he data available. I uni	iaw of certify elevation information. I certify isratand that any false statement may be
Check here if attachments.	Were latitude and longitude provided by a licensed land @Yes C No		JBBurchitte
ertifler's Name	Lioense N	umber	L'S-5701
JAMES BURCHE	TT LS	5701	5-10+16
PRESIDENT	Sampey Burcher	7 AND KAISHT	80 C 172 đ
1570 GLOBAL C+,	City Stat	240401	
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py all pages of this Elevation Certificate for (		Time I have	(a) hulldlag gauge
emments (including type of equipment and lo	cation, per C2(a), if epolicable	чноч аденисопралу, и	ing (o) building owner.
C2. C) A/C UNIT			West Side
OF BUILDING			
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mature	9999999999 y - 999999999999999999999999	unger an and a fe and an	Date
SECTION E - BUILDING ELEVATION IN	ORMATION (SURVEY NOT F	EQUIREDI FOR TON	
Zones AO and A (without BFE), complete H	ams E1-E5 If the Cartificate is	intended to success +	
cuons A, D, and C. For name 21-24, use net	ural grade, if available. Check	the measurement used	. In Puerto Rico only, enter meters.
Provide elevation information for the following highest adjacent grade (HAG) and the lower the lower state of the lower state o	ng and check the appropriate it st adjacent grade (LAG),	ioxes to show whether	the elevation is above or below the
<ul> <li>a) Top of bottom floor (Including basement, or enclosure) is</li> </ul>	crawlapace,	C feet Cimete	ra 🔲 above or 🛄 below the HAO.
<li>b) Top of bottom floor (including basement, or enclosure) is</li>	crawlepace,	Criset Create	ns 🔲 above or 📋 below the LAG.
For Building Diagrams 8-9 with permanent her floor (elevation C2.b in the diagrams) of	food openings provided in Sec the building is	tion A Items 8 and/or 9	(see page 8 of Instructions), the next 13 above or below the HAG.
Attached garage (top of alab) is		Creet Creet	
Top of platform of machinery and for equipr	nent	C feet C met	
Zone AO only: If no flood depth number is a	vailable, is the tre of the hetter		
nagement ordinance? CYes CNo C	Unknown. The local official m	ust certify this information	Ion in Section G.
SECTION F - PROPE	RTY OWNER (OR OWNER'S	REPRESENTATIVE)	ERTIFICATION
e property owner or owner's authorized repr mmunity-issued BFE) or Zone AO must sign	sentative who completes Sect	ions A B and E for 70	no & Authout a CENIA Incurad an
operty Owner or Owner's Authorized Repres	televen - water and the second s		and and an and a state of the
idraes	City	State	ZIP Code
gnature	Date	Telephone	
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mments			Check here if attachments.

	responding information i	tom Section A	FOR	Explation: 11/30/201
Building Street Address (including Apt., Unit, S			x No	HEALANDE OUNLANT DOE
			Policy N	
City		Zip Code	Compar Number	
åEC1	ION G - COMMUNITY IN	FORMATION (OP	TIONAL)	alan minang manang kanang k
The local official who is authorized by law or ord Sections A, B, C (or E), and G of this Elevation (	inance to administer the o	ommunity's floodp	ain management	ordinance can complete
terms G8-G10, in Puerio Rico only, enter meters 31. The Information In Section C was taken or architect who is authorized by law to Comments area below.) 32. A community official completed Section or Zone AO.	n from other documentatio o certify elevation Informati	n that has been at ion. (Indicata the a	anad and sealed i purce and date of	ay a Sceneed surveyor, engineer, the elevation data in the
33. The following information (items G4-G	10) la provided for commu	nity floodolsin mer	enement humon	
G4. Permit Number	G5. Date Permit lasued			nplianos/Occupancy issued
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37. This permit has been issued for: C New O	onstruction C Substantia	al improvement		
<ol> <li>Elevation of as-built lowest floor (including t of the building:</li> </ol>	(katemani)	C feet (	matera Datur	п
B. BFE or (in Zone AO) depth of flooding at the	and a second sec			
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10. Community's design flood elevation:	×	freet (	meters Datur	1
ocal Official's Name	Tit			
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# **ICC-ES Evaluation Report**

Most Widely Accepted and Trusted

ESR-2074\* Reissued February 2015 This report is subject to renewal February 2017.

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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<sup>®</sup> 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:

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

<sup>1</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<sup>®</sup> 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.

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The water level stabilizes, equalizing the lateral forces. Each unit is fabricated from stainless steel. Smart Vent<sup>®</sup> Automatic Foundation Flood Vents are available in various models and sizes as described in Table 1. The SmartVENT<sup>®</sup>Stacking Model #1540-511 and FloodVENT<sup>®</sup> 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 2.6.2.2 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 FVs must be installed in accordance with Section 4.0.

# 3.3 Ventilation:

The SmartVENT<sup>®</sup> Model #1540-510 and SmartVENT<sup>®</sup> Overhead Door Model #1540-514 both have screen covers with <sup>1</sup>/4-inch-by-<sup>1</sup>/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<sup>®</sup> 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 FVs recognized in this report do not offer natural ventilation.

# 4.0 DESIGN AND INSTALLATION

SmartVENT<sup>®</sup> and FloodVENT<sup>®</sup> 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 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<sup>®</sup> 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 m<sup>2</sup>) of enclosed area, except that the SmartVENT<sup>®</sup> Stacking Model #1540-511 and FloodVENT<sup>®</sup> Stacking Model #1540-521 must be installed with a minimum of one FV for every 400 square feet (37.2 m<sup>2</sup>) 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

#### \*Revised July 2015

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Page 2 of 3

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<sup>®</sup> 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<sup>®</sup> 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 October 2013 (editorially revised May 2014).

# 7.0 IDENTIFICATION

The Smart VENT<sup>®</sup> 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).

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

### TABLE 1-MODEL SIZES

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

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FIGURE 1-SMART VENT: MODEL 1540-510

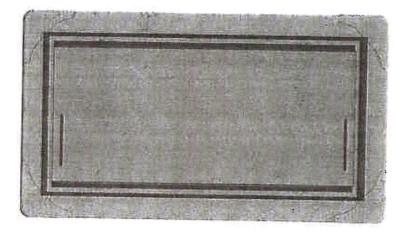


FIGURE 2-SMART VENT MODEL 1540-520

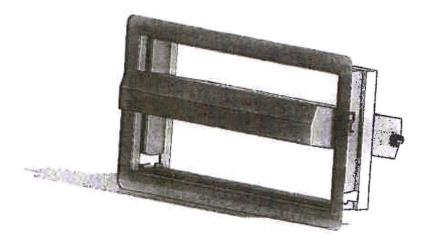


FIGURE 3-SMART VENT: SHOWN WITH FLOOD DOOR PIVOTED OPEN



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# ESR-2074 FBC Supplement\*

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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:** 

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# 1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Smart Vent® Automatic Foundation Flood Vents, recognized in ICC-ES master report ESR-2074, have also been evaluated for compliance with the codes noted below.

#### Applicable code editions:

2014 Florida Building Code—Building (FBC)

2014 Florida Building Code—Residential (FRC)

# 2.0 CONCLUSIONS

The Smart Vent® Automatic Foundation Flood Vents, described in Sections 2.0 through 7.0 of the master evaluation report ESR-2074, comply with the FBC and the FRC, provided the design and installation are in accordance with the International Building Code® provisions noted in the master report.

Use of the Smart Vent® Automatic Foundation Flood Vents has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the FBC and the FRC.

For products falling under Florida Rule 9N-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by

This supplement expires concurrently with the master report, reissued February 2015 and revised July 2015.

\*Revised July 2015

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