U.S. DEPARTM INT OF HOMELAND SECURITY TEDERAL FIR RGENCY MANAGEMENT AGENCY National Floo Insurance Program

ELEVATION CERTIFICATE

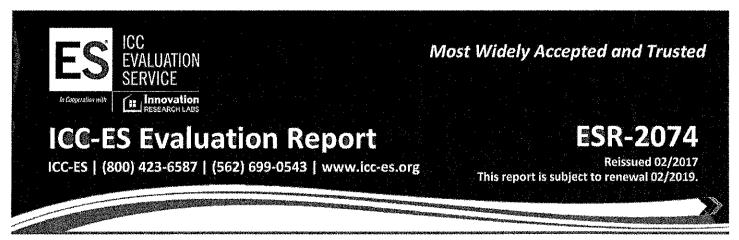
Important: Read the instructions on pages 1-9.

OMB No. 1660-0008

Expiration Date: July 31, 2015

		important. i	tcau tri	c man actions c	n page	.5 1-5.		
			TION A	- PROPERTY INI	FORMA	TION	-Assumation density	NSURANCE COMPANY USE
Building Owner's Nar	ne ERWIN ABR	AMS					Policy	Number:
A2. Building Street Addre 16 NORTH DECATUR AV		., Unit, Suite, and/or	r Bidg. No	o.) or P.O. Route and	Box No.		Compa	any NAIC Number:
City MARGATE CITY	1			State NJ ZIP (Code 084	102		
A3. Property Description BLOCK 226 LOT 27	(Lot and Block N	umbers, Tax Parcel	Number,	Legal Description, e	tc.)			
A4. Building Use (e.g., Re A5. Latitude/Longitude: La A6. Attach at least 2 photo A7. Building Diagram Num A8. For a building with a c a) Square footage of b) Number of permar or enclosure(s) wit c) Total net area of fi	at. 39° 19' 23.9" ographs of the bunber 9 crawlspace or enert flood openin thin 1.0 foot above ood openings in	Long. 74°30'49.1" ilding if the Certifica closure(s): nclosure(s) 3 gs in the crawlspace adjacent grade A8.b	te is being	g used to obtain flood A9. sq ft sq in	For a bui a) Squa b) Numl withir c) Total	ding with an atta re footage of atta per of permanent of 1.0 foot above net area of flood	ached gar ached gar t flood op adjacent	rage <u>833</u> sq ft enings in the attached garage grade <u>6</u> s in A9.b <u>1200</u> sq in
d) Engineered flood of		Yes No	INCLID			neered flood ope		⊠ Yes □ No
	SEC	TION B - FLOOD	INSURA	ANCE RATE MAP	(FIRIVI)	INFORMATIC	N	
B1. NFIP Community Name MARGATE 345	e & Community N 304	Number	B2. Cou	unty Name TIC			B3. Stat	
B4. Map/Panel Number 34001C0434	B5. Suffix	B6. FIRM Index I		B7. FIRM Panel Effective/Revised D 1/29/2015		B8. Flood Zone(s) AE	B9. I	Base Flood Elevation(s) (Zone AO, use base flood depth) 9.00'
Indicate the source of FIS Profile Indicate elevation datus the building located Designation Date:		☐ Community Det	termined VD 1929	flood depth entered i Other/Son NAVD 19 S) area or Otherwise	urce: 88] Other/Source:	Prelimina	ary Firm Map □ Yes ⊠ No
		N C – BUILDING	ELEVA	TION INFORMATI	ON (SU	RVEY REQUIR	RED)	
Building elevations are to	pased on:	☐ Construction Dr	awings*	☐ Building	Under C			nished Construction
*A new Elevation Certific 2. Elevations – Zones A1–, below according to the b	A30, AE, AH, A (with BFE), VE, V1-	V30, V (w	vith BFE), AR, AR/A,	AR/AE,	AR/A1–A30, AR/	AH, AR/A	AO. Complete Items C2.a-h
Benchmark Utilized: Indicate elevation datum	_		Vertica	al Datum:		IAVD 1988 □ C	ther/Sou	rce:
Datum used for building	elevations must	be the same as that	t used for	the BFE.		Check	the mea	surement used.
a) Top of bottom floor (in	•	nt, crawlspace, or e	nclosure f	floor)	<u>*5.38</u>			meters
b) Top of the next higherc) Bottom of the lowest I		ral member (V Zone	es only)		14.25 N/A			meters meters
d) Attached garage (top		(,,		5.38		∫ feet	meters \
 e) Lowest elevation of m (Describe type of equi 			building		N/A			meters // b///
f) Lowest adjacent (finish		• , ,			4.96		⊠ feet	meters /
g) Highest adjacent (finish)h) Lowest adjacent grade	, .	• , ,	s, includin	g structural support	<u>5.30</u>		⊠ feet ⊠ feet *	☐ meters
	SECTIO	N D – SURVEYO	R, ENGI	NEER, OR ARCH	ITECT (CERTIFICATIO	N ()	81611
This certification is to be sign information. I certify that the understand that any false s Check here if comments Check here if attachments is same DANIEL.	information on the tatement may be safe provided or	nis Certificate repres punishable by fine h back of form.	sents my l or impriso Were lati	best efforts to interpronment under 18 U.S itude and longitude i	ret the da S. Code, n Section Yes	ta available. Section 1001. A provided by a		ALACE. PERE
Title LAND SURVEYOR	/ /	Company Name A	RTHUR	W. PONZIO COMPA	ANY			
dress 400 NORTH DOV	R AVENUE (City ATLANTIC CI		State NJ	ZIP Cod	e 08401		
Signature		Date 8/5/14		Telephone 6	609-344-	3194		

5 111 6/ 1111	py the corresponding information from Section A.	FOR INSURANCE COMPANY USI
Building St. 2 t Address (including Apt., I 16 NORTH DECATUR AVENUE	Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.	Policy Number:
City MARGATE CITY	State NJ ZIP Code 0840	Company NAIC Number:
SECTION D	O – SURVEYOR, ENGINEER, OR ARCHITECT CERTIF	ICATION (CONTINUED)
Copy both sides of this Elevation Certific	cate for (1) community official, (2) insurance agent/company, ar	nd (3) building owner.
Comments PROJECT # 31830	ELEVATION OF A/C PLATFORM = 13.79' *STORAGE /	AREA
ignature	Date 8/5/14	
SECTION E – BUILDING ELEVA	ATION INFORMATION (SURVEY NOT REQUIRED) FO	OR ZONE AO AND ZONE A (WITHOUT BFE
or Zones AO and A (without BFE), com	nplete Items E1–E5. If the Certificate is intended to support a Luade, if available. Check the measurement used. In Puerto Rico	DMA or LOMR-F request, complete Sections A, B,
grade (HAG) and the lowest adjace a) Top of bottom floor (including bat b) Top of bottom floor (including bat 2. For Building Diagrams 6–9 with per (elevation C2.b in the diagrams) of 3. Attached garage (top of slab) is 4. Top of platform of machinery and/or 5. Zone AO only: If no flood depth nur	asement, crawlspace, or enclosure) is fee green feet green f	t
	Unknown. The local official must certify this information in Sect	
	 PROPERTY OWNER (OR OWNER'S REPRESENTAL d representative who completes Sections A, B, and E for Zone. 	ACCORDING TO SECURE STATE OF A CONTRACT OF A
Zone AO must sign here. The statementy Owner's or Owner's Authorized F	nts in Sections A, B, and E are correct to the best of my knowle Representative's Name City	dge. State ZIP Code
gnature	Date	
gnature	Date	Telephone
mments		
mments	SECTION G – COMMUNITY INFORMATION (OPT)	
local official who is authorized by law or o	SECTION G – COMMUNITY INFORMATION (OPTI	t ordinance can complete Sections A, B, C (or E), an
local official who is authorized by law or on a selevation Certificate. Complete the approximation in Section C was is authorized by law to certify eleventhal A community official completed Section 1.		ONAL) t ordinance can complete Sections A, B, C (or E), and Items G8–G10. In Puerto Rico only, enter meters. led by a licensed surveyor, engineer, or architect von data in the Comments area below.) ed or community-issued BFE) or Zone AO.
local official who is authorized by law or or is Elevation Certificate. Complete the approximation in Section C was is authorized by law to certify elever A community official completed Second The following information (Items Completed Second Seco	ordinance to administer the community's floodplain managemen plicable item(s) and sign below. Check the measurement used in taken from other documentation that has been signed and seavation information. (Indicate the source and date of the elevation of the source and date of the section E for a building located in Zone A (without a FEMA-issue G4–G10) is provided for community floodplain management pu	ONAL) t ordinance can complete Sections A, B, C (or E), an Items G8–G10. In Puerto Rico only, enter meters. eled by a licensed surveyor, engineer, or architect won data in the Comments area below.) ed or community-issued BFE) or Zone AO.
local official who is authorized by law or of is Elevation Certificate. Complete the approximation in Section C was is authorized by law to certify elever A community official completed Setting The following information (Items Compared Number Compared Nu	ordinance to administer the community's floodplain managemen plicable item(s) and sign below. Check the measurement used ir taken from other documentation that has been signed and sea vation information. (Indicate the source and date of the elevation ection E for a building located in Zone A (without a FEMA-issue G4—G10) is provided for community floodplain management puts. Date Permit Issued G6. Date Cert New Construction Substantial Improvement ding basement) of the building: feet at the building site: feet	ONAL) t ordinance can complete Sections A, B, C (or E), and Items G8–G10. In Puerto Rico only, enter meters. eled by a licensed surveyor, engineer, or architect won data in the Comments area below.) ed or community-issued BFE) or Zone AO. rposes.
local official who is authorized by law or of a Elevation Certificate. Complete the application of the information in Section C was is authorized by law to certify elevation. A community official completed Search The following information (Items Community Number Government Number Number Number Government Number N	ordinance to administer the community's floodplain managemen plicable item(s) and sign below. Check the measurement used in taken from other documentation that has been signed and sea vation information. (Indicate the source and date of the elevation ection E for a building located in Zone A (without a FEMA-issue G4–G10) is provided for community floodplain management put is. Date Permit Issued G6. Date Central New Construction Substantial Improvement ding basement) of the building:	ONAL) tordinance can complete Sections A, B, C (or E), and Items G8–G10. In Puerto Rico only, enter meters. Items G8–G10. In Puerto Rico only, enter meters. Iteld by a licensed surveyor, engineer, or architect word data in the Comments area below.) Ited or community-issued BFE) or Zone AO. Imposes. Ifficate Of Compliance/Occupancy Issued Imeters Datum Imeters Datum Imeters Datum Imeters Datum
Iocal official who is authorized by law or or selevation Certificate. Complete the approximation in Section C was is authorized by law to certify elever A community official completed Selevation (Items Grand Permit Number Grand Permit Number Grand Permit has been issued for: Elevation of as-built lowest floor (included BFE or (in Zone AO) depth of flooding Community's design flood elevation: al Official's Name	ordinance to administer the community's floodplain managemen plicable item(s) and sign below. Check the measurement used in taken from other documentation that has been signed and sea vation information. (Indicate the source and date of the elevation ection E for a building located in Zone A (without a FEMA-issue G4-G10) is provided for community floodplain management puts. Date Permit Issued G6. Date Cert New Construction Substantial Improvement ding basement) of the building: feet at the building site: feet	ONAL) tordinance can complete Sections A, B, C (or E), an Items G8–G10. In Puerto Rico only, enter meters. eled by a licensed surveyor, engineer, or architect word data in the Comments area below.) ed or community-issued BFE) or Zone AO. reposes. elificate Of Compliance/Occupancy Issued meters Datum meters Datum meters Datum meters Datum
local official who is authorized by law or of is Elevation Certificate. Complete the application of the information in Section C was is authorized by law to certify eleved A community official completed Selection of the following information (Items Community Number Gommunity Number Number Gommunity Number N	ordinance to administer the community's floodplain managemen plicable item(s) and sign below. Check the measurement used in taken from other documentation that has been signed and sea vation information. (Indicate the source and date of the elevation ection E for a building located in Zone A (without a FEMA-issue G4-G10) is provided for community floodplain management puts. Date Permit Issued G6. Date Cert New Construction Substantial Improvement ding basement) of the building: feet at the building site: feet	ONAL) tordinance can complete Sections A, B, C (or E), and Items G8–G10. In Puerto Rico only, enter meters. Items G8–G10. In Puerto Rico only, enter meters. Iteld by a licensed surveyor, engineer, or architect word data in the Comments area below.) Ited or community-issued BFE) or Zone AO. Imposes. Ifficate Of Compliance/Occupancy Issued Imeters Datum Imeters Datum Imeters Datum Imeters Datum



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

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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® 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)[†]

[†]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[®] 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[®] 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 [®]	1540-520	15 ³ / ₄ " X 7 ³ / ₄ "	200	
SmartVENT [®]	1540-510	15 ³ / ₄ " X 7 ³ / ₄ "	200	
FloodVENT [®] Overhead Door	1540-524	15 ³ / ₄ " X 7 ³ / ₄ "	200	
SmartVENT [®] Overhead Door	1540-514	15 ³ / ₄ " X 7 ³ / ₄ "	200	
Wood Wall FloodVENT®	1540-570	14" X 8 ³ / ₄ "	200	
Wood Wall FloodVENT® Overhead Door	1540-574	14" X 8 ³ / ₄ "	200	
SmartVENT [®] Stacker	1540-511	16" X 16"	400	
FloodVent [®] Stacker	1540-521	16" X 16"	400	

For SI: 1 inch = 25.4 mm; 1 square foot = m²

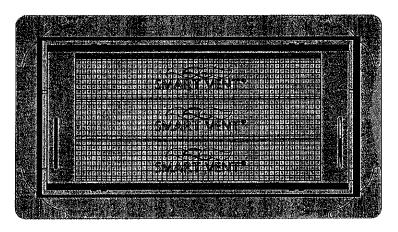


FIGURE 1—SMART VENT: MODEL 1540-510

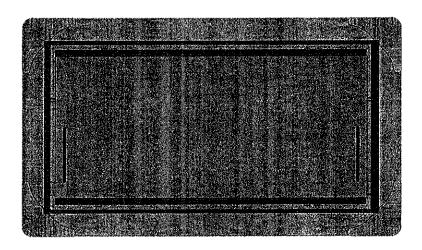


FIGURE 2-SMART VENT MODEL 1540-520

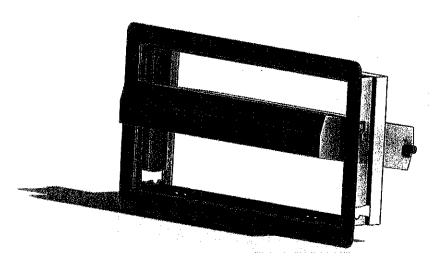


FIGURE 3—SMART VENT: SHOWN WITH FLOOD DOOR PIVOTED OPEN