

- Installation Notes:**
1. Seal flange/frame to substrate.
 2. Use #10 PH or greater fastener through the nail fin with sufficient length to penetrate a minimum of 1 1/2" into the wood framing. For 2X wood frame substrate (min. S.G. = 0.42).
 3. Host structure (wood buck, masonry, steel) to be designed and anchored to properly transfer all loads to the structure. The host structure is the responsibility of the architect or engineer of record for the project of installation.

This schedule addresses only the fasteners required to anchor the window to achieve the rated design pressure up to the size limitations noted. It is not intended as a guide to the installation process and does not address the sealing consideration that may arise in different wall conditions. For the complete installation procedure, see the instructions packaged with the window or go to www.jeld-wen.com/resources/installation.

DISCLAIMER:
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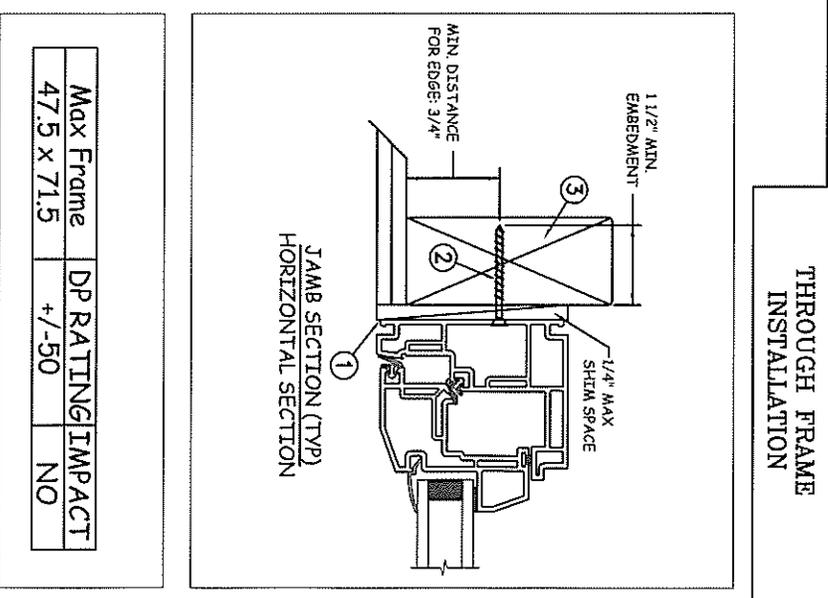
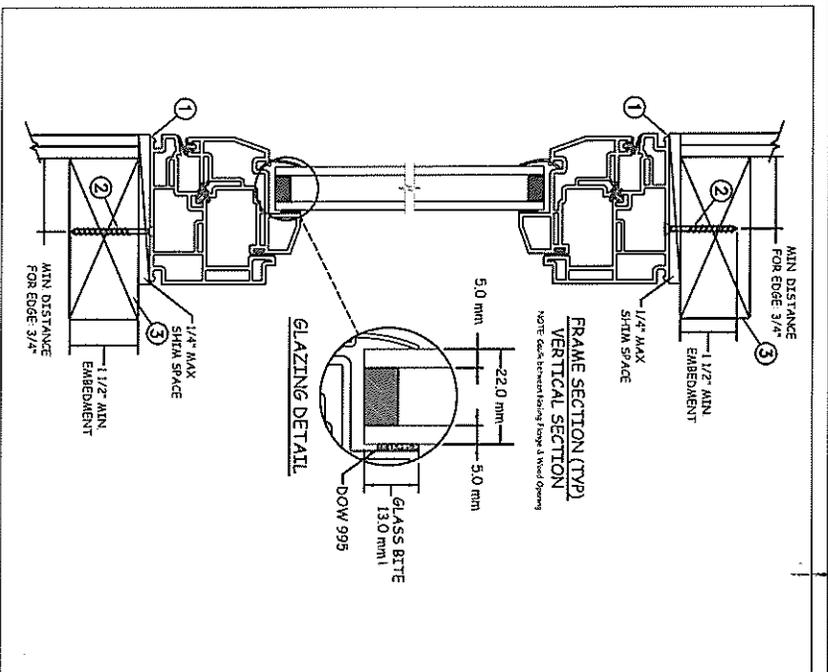
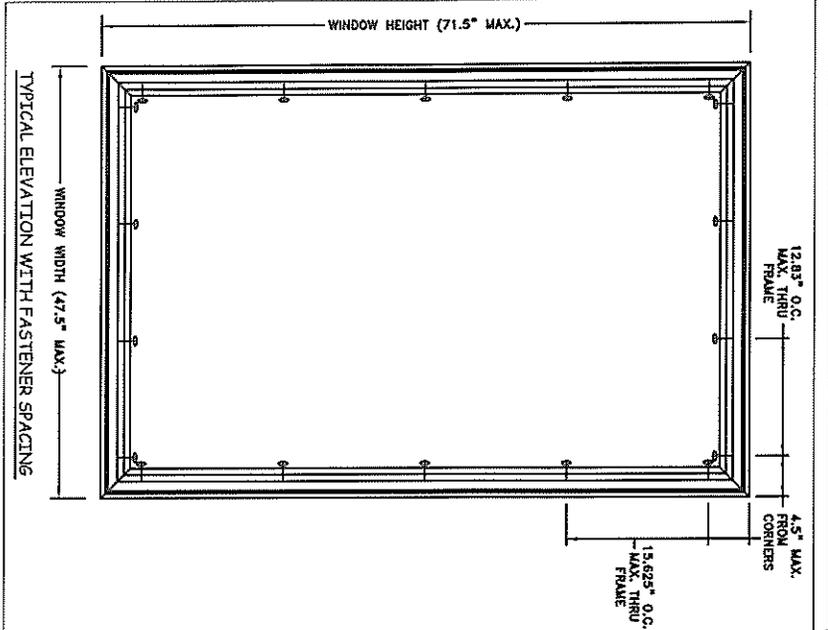
ALEXIS SPYROU, P.E.
Texas P.E. No. 102987
398 East Dallas Beach Blvd., Suite 398
Dallas Beach, FL 33004
D-2275

- General Notes:**
1. The product shown herein is designed, tested and manufactured to comply with the wind load criteria of the adopted International Building Code(IBC), the International Residential Code(IRC), the Texas Revisions and the industry requirement for the stated conditions.
 2. All glazing shall conform to ASTM E1300.
 3. At minimum, glazing shall be 5mm annealed - 13mm airspace - 5mm annealed glass.
 4. Use structural or composite shims where required.
 5. Installation methods can be interchanged within the same opening.
 6. An impact protective system is required where wind borne debris protection is mandated by local building code.
 7. Maximum sizes are buck sizes and do not include fin or flange.

Max Frame	DP RATING	IMPACT
47.5 x 71.5	+/-50	NO

PROJECT ENGINEER:	DATE:	10/09/2013
DRAWN BY:	SCALE:	NTS
CHECKED BY:	TITLE:	Premium Atlantic Vinyl Stationary Casement Window
APPROVED BY:		Nail Fin Installation (47.5" x 71.5")
PART/PROJECT NO.:	PLANT NAME AND LOCATION:	
D0099457		
IDENTIFIER NO.:	CAD DWG. NO.:	REV: 00 SHEET 1 OF 4
NCT1210-3912-1A-TDI		

JELD-WEN
3737 Lakeport Blvd
Klamath Falls, OR 97601
Phone: (541) 882-3451



Max Frame	DP RATING	IMPACT
47.5 x 71.5	+/-50	NO

Installation Notes:

1. Seal flange/frame to substrate.
2. Use #10 PH or greater fastener through the frame with sufficient length to penetrate a minimum of 1 1/2"
3. Host structure (wood buck, masonry, steel) to be designed and anchored to properly transfer all loads to the structure. The host structure is the responsibility of the architect or engineer of record for the project of installation.

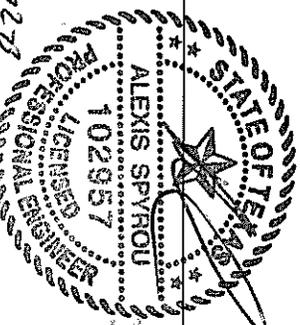
General Notes:

1. The product shown herein is designed, tested and manufactured to comply with the wind load criteria of the adopted International Building Code(IBC), the International Residential Code(IRC), the Texas Revisions and the industry requirement for the stated conditions.
2. All glazing shall conform to ASTM E1300.
3. At minimum, glazing shall be 5mm annealed - 13mm airspace - 5mm annealed glass.
4. Use structural or composite shims where required.
5. Installation methods can be interchanged within the same opening.
6. An impact protective system is required where wind borne debris protection is mandated by local building code.
7. Maximum sizes are buck sizes and do not include fin or flange.

This schedule addresses only the fasteners required to anchor the window to achieve the rated design pressure up to the size limitations noted. It is not intended as a guide to the installation process and does not address the sealing consideration that may arise in different wall conditions. For the complete installation procedure, see the instructions packaged with the window or go to www.jeld-wen.com/resources/installation.

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ALEXSIS SPYROU, P.E.
Texas P.E. No. 102957
398 East Dante Beach Blvd, Suite 398
Dante Beach, FL 33004

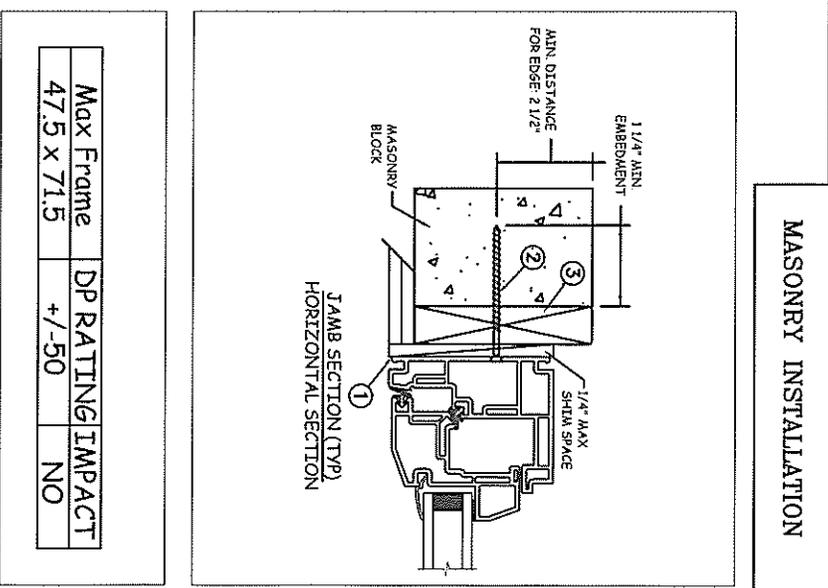
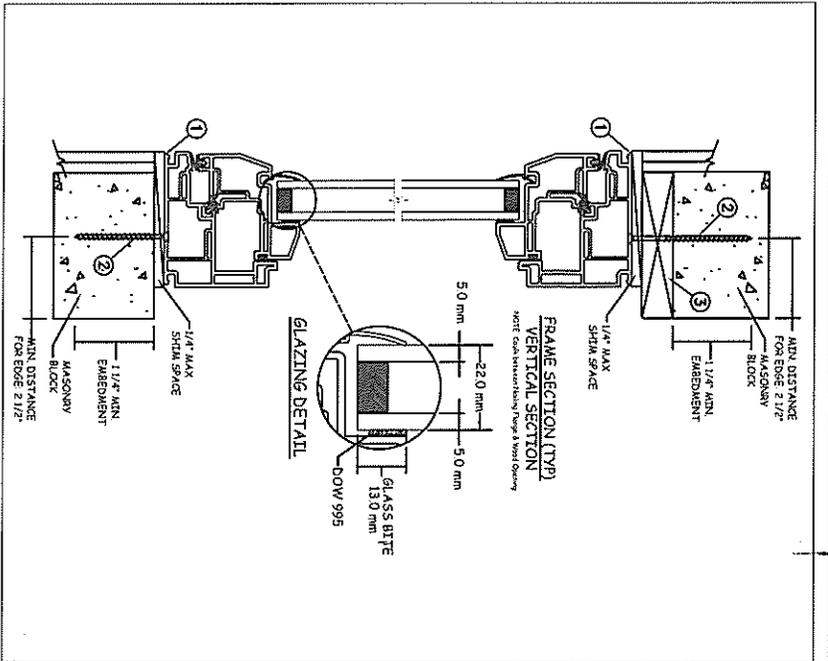
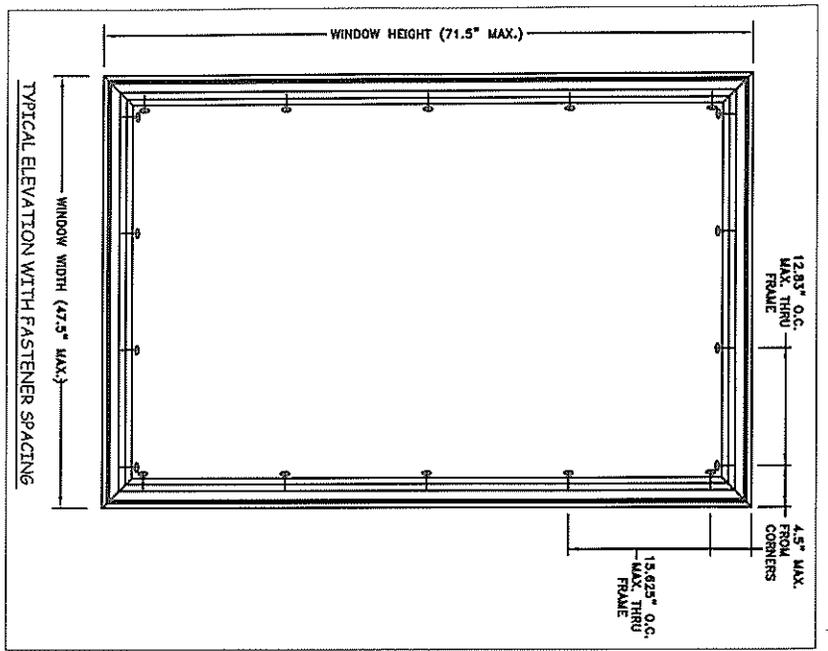
PROJECT ENGINEER:	DATE:
DRAWN BY:	SCALE:
CHECKED BY:	TITLE:
APPROVED BY:	
PART/PROJECT NO.:	
IDENTIFIER NO.:	PLANT NAME AND LOCATION:
NCTL210-3912-1A-1DI	

JELD-WEN

3737 Lakeport Blvd
Klamath Falls, OR, 97601
Phone: (541) 882-3451

Premium Atlantic Vinyl Stationary Casement Window
Through Frame Installation (47.5" x 71.5")

CAD DWG. No.: REV: 00 SHEET 2 OF 4



Max Frame	DP RATING	IMPACT
47.5 x 71.5	+/-50	NO

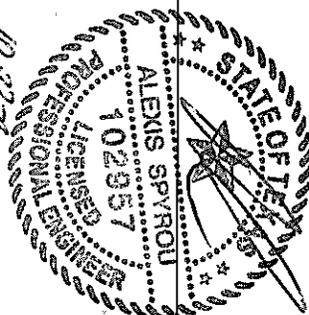
Installation Notes:

1. Seal flange/frame to substrate.
2. Use 3/16" Tapcon or equivalent fasteners through frame with sufficient length to penetrate a minimum of 1 1/4" into concrete or masonry at each location with a 2 1/2" min from edge distance. For concrete (min. f_c = 3000psi) or masonry substrate (CMU shall conform to ASTM C90).
3. Host structure (wood buck, masonry, steel) to be designed and anchored to properly transfer all loads to the structure. The host structure is the responsibility of the architect or engineer of record for the project of installation.

This schedule addresses only the fasteners required to anchor the window to achieve the rated design pressure up to the size limitations noted. It is not intended as a guide to the installation process and does not address the sealing consideration that may arise in different wall conditions. For the complete installation procedure, see the instructions packaged with the window or go to www.jeld-wen.com/resources/installation.

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ALEXIS SPYROU, P.E.
Texas P.E. No. 102957
398 East Dania Beach Blvd., Suite 336
Dania Beach, FL 33004

General Notes:

1. The product shown herein is designed, tested and manufactured to comply with the wind load criteria of the adopted International Building Code(IBC), the International Residential Code(IRC), the Texas Revisions and the industry requirement for the stated conditions.
2. All glazing shall conform to ASTM E1300.
3. At minimum, glazing shall be 5mm annealed - 13mm airspace - 5mm annealed glass.
4. Use structural or composite shims where required.
5. Installation methods can be interchanged within the same opening.
6. An impact protective system is required where wind borne debris protection is mandated by local building code.
7. Maximum sizes are buck sizes and do not include fin or flange.

PROJECT ENGINEER:

DRAWN BY: D. VEZO
CHECKED BY: J. KANTOLA
APPROVED BY:

DATE: 10/09/2013
SCALE: NTS



3737 Lakeport Blvd
Klamath Falls, OR, 97601
Phone: (541) 882-3451

Premium Atlantic Vinyl Stationary Casement Window

Masonry Installation (47.5" x 71.5")

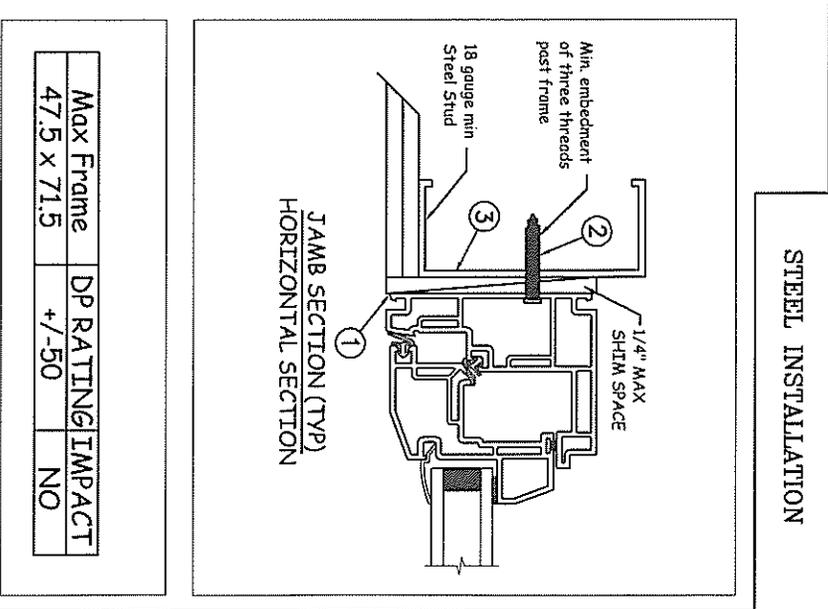
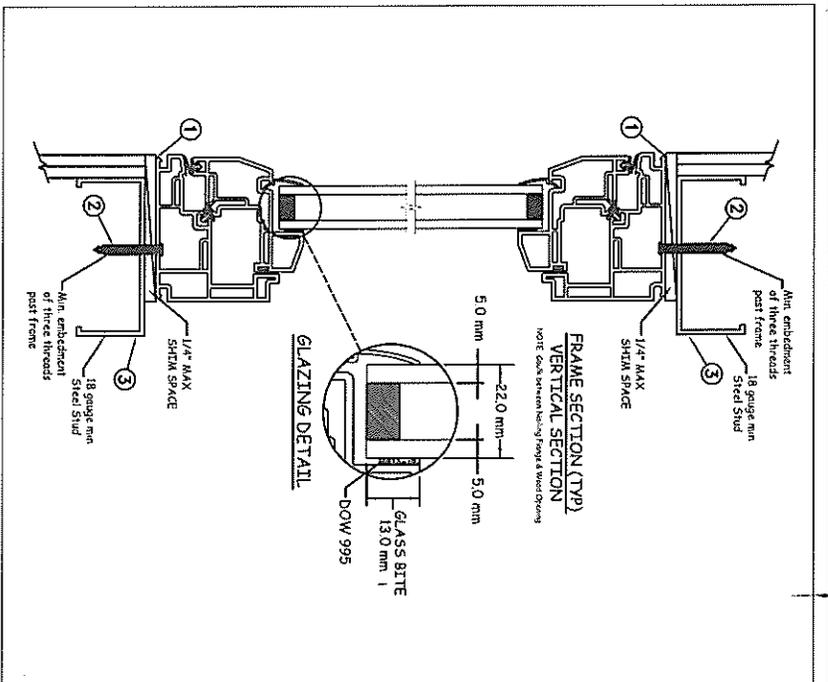
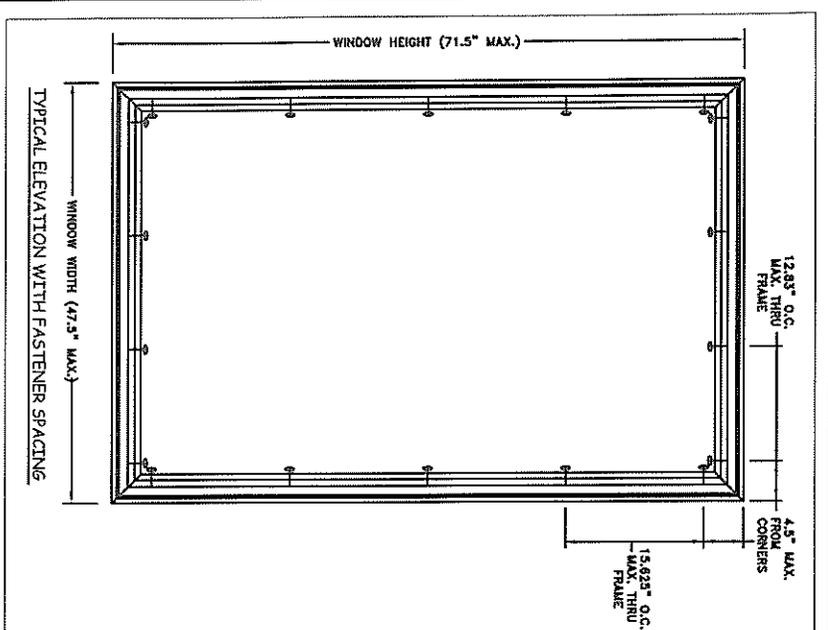
PART/PROJECT NO.: D009457
IDENTIFIER NO. NCTL210-3912-1A-TDI

PLANT NAME AND LOCATION:

CAD DWG. NO.:

REV: 00

SHEET 3 OF 4



- Installation Notes:**
1. Seal flange/frame to substrate.
 2. For anchoring into metal framing use #10 TEK Self Tapping screws with sufficient length to achieve a minimum embedment of three threads past the frame thickness. Steel substrate min. 18ga., fy = 33 ksi.
 3. Host structure (wood buck, masonry, steel) to be designed and anchored to properly transfer all loads to the structure. The host structure is the responsibility of the architect or engineer of record for the project of installation.

This schedule addresses only the fasteners required to anchor the window to achieve the rated design pressure up to the size limitations noted. It is not intended as a guide to the installation process and does not address the sealing consideration that may arise in different wall conditions. For the complete installation procedure, see the instructions packaged with the window or go to www.jeld-wen.com/resources/installation.

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STATE OF TEXAS

 ALEXIS SPYROU
 102957
 LICENSED PROFESSIONAL ENGINEER

10-22-13

ALEXIS SPYROU, P.E.
 Texas P.E. No. 102957
 398 East Dania Beach Blvd., Suite 398
 Dania Beach, FL 33004

- General Notes:**
1. The product shown herein is designed, tested and manufactured to comply with the wind load criteria of the adopted International Building Code(IBC), the International Residential Code(IRC), the Texas Revisions and the industry requirement for the stated conditions.
 2. All glazing shall conform to ASTM E1300.
 3. At minimum, glazing shall be 5mm annealed - 13mm airspace - 5mm annealed glass.
 4. Use structural or composite sills where required.
 5. Installation methods can be interchanged within the same opening.
 6. An impact protective system is required where wind borne debris protection is mandated by local building code.
 7. Maximum sizes are buck sizes and do not include fin or flange.

PROJECT ENGINEER:	DATE:	10/09/2013
DRAWN BY:	SCALE:	NTS
CHECKED BY:	TITLE:	Premium Atlantic Vinyl Stationary Casement Window
APPROVED BY:		Steel Installation (47.5" x 71.5")
PART/PROJECT NO.:	PLANT NAME AND LOCATION:	
IDENTIFIER NO.:	CAD DWG. NO.:	
NCT1210-3912-1A-1DI	REV:	00
	SHEET:	4 OF 4

Max Frame	DP RATING/IMPACT
47.5 x 71.5	+/-50 NO

JELD-WEN
 3737 Lakeport Blvd
 Klamath Falls, OR, 97601
 Phone: (541) 882-3451



BUILDING DROPS

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TBPE Firm #13734

398 East Dania Beach Blvd.
Suite 338
Dania Beach, FL 33004
954.399.8478 PH
954.744.4738 FX
contact@buildingdrops.com

Product Evaluation Report *of*

JELD-WEN, Inc.
Premium Atlantic Vinyl Stationary Casement (Non-Impact)

for

Texas Department of Insurance
Report No. 2584

Product: *Premium Atlantic Vinyl Stationary Casement*
Material: Vinyl (PVC)
Product Dimensions: *47.5" x 71.5" (0)*

Prepared For:
JELD-WEN, inc.
3737 Lakeport Blvd.
Klamath Falls, OR. 97601

Prepared by:
Alexis Spyrou, P.E.
Texas Professional Engineer # 102957
Date: 10/14/2013

Contents:
Evaluation Report Pages 1 – 4
Appendix Pages 5 – 13





BUILDING DROPS

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TBPE Firm #13734

Date: 10/14/2013
Report No: 2584

Manufacturer: JELD-WEN, Inc.

Product Name: Casement Window
(Non-Impact)
47.5" x 71.5" (O)

Scope: This is a Product Evaluation Report issued by Alexis Spyrou, P.E. (TX # 102957) for JELD-WEN, inc. based on the Texas Department of Insurance.

Alexis Spyrou, P.E. does not have nor will acquire financial interest in the company manufacturing or distributing the product or in any other entity involved in the approval process of the product named herein.

This product has been evaluated for use in locations adhering to the International Building Code (IBC), International Residential Code (IRC), and the Texas Revisions.

See Installation Instructions **NCTL-210-3912-1A-TDI**, signed and sealed by Alexis Spyrou, P.E. (TX # 102957) for specific use parameters.

Limits of Use:

1. This product has been evaluated and is in compliance with the IBC, IRC, and Texas Revisions.
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment into substrate material shall be beyond wall dressing or stucco.
3. When used in areas requiring wind borne debris protection this product does require an impact resistant covering.
4. Site conditions that deviate from the details of drawing **NCTL-210-3912-1A-TDI** require further engineering analysis by a licensed engineer or registered architect.
5. See Installation Instructions **NCTL-210-3912-1A-TDI** for size and design pressure limitations.



BUILDING DROPS

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TBPE Firm #13734

Date: 10/14/2013
Report No: 2584

Quality Assurance: The manufacturer has demonstrated compliance for manufacturing under a quality assurance program audited by an approved quality assurance entity through **American Architectural Manufacturers Association**.

Performance Standards: The product described herein has been tested per:

- AAMA/WDMA/CSA 101/I.S.2/A440-11
- AAMA/WDMA/CSA 101/I.S.2/A440-08
- AAMA/WDMA/CSA 101/I.S.2/A440-05

Referenced Data:

1. Product Testing performed by **National Certified Testing Laboratories, Inc.**
Report #: **NCTL-210-3912-1A**, Report Date: 08/13/2013
2. Certification Agency:
American Architectural Manufacturers Association

Products described herein are tested in accordance with standards listed above as required by the International Building Code and does require an impact resistant covering.



BUILDING DROPS

A Perfect Solution in Every Drop
TBPE Firm #13734

Date: 10/14/2013
Report No: 2584

Installation: 1. Approved anchor types and substrates are as follows:

Through Frame Installation:

- A. For wood substrates use **(1) #10 Wood Screw** type installation anchors per location of sufficient length to achieve a minimum embedment of 1.50" into the wood substrate.
- B. For concrete (Min. $f'c = 3000$ psi) or masonry substrate (Conforms to ASTM C90, Min. $f'c = 1500$ psi) where one by (1X), non-structural, wood bucking is employed, use **(1) 3/16" diameter ITW Tapcon** type concrete screw anchors per location of sufficient length to achieve minimum embedment of 1.25" into concrete or masonry.
- C. For concrete (Min. $f'c = 3000$ psi) or masonry substrate (Conforms to ASTM C90, Min. $f'c = 1500$ psi) where wood bucking is NOT employed, use **(1) 3/16" diameter ITW Tapcon** type concrete screw anchors per location of sufficient length to achieve minimum embedment of 1.25" into concrete or masonry.
- D. For steel substrate, use **(1) #10 ITW TEK Screw** type steel frame (min. 18ga.) anchors per location of sufficient length to achieve minimum three threads of penetration beyond steel structure.

Nail Fin Installation (Where applicable):

- A. For wood substrates use **(1) #10 Wood Screw** type installation anchors per location of sufficient length to achieve a minimum embedment of 1.50" into the wood substrate.

Refer to Installation Instructions (**NCTL-210-3912-1A-TDI**) for anchor spacing and more details of the installation requirements.

Design Pressure:

Configuration	Design Pressure
ALL	+50.0 / -50.0 PSF

Installation Methods:

Refer to Installation Instructions (**NCTL-210-3912-1A-TDI**) for installation methods, anchor locations, and more details of the installation requirements.



BUILDING DROPS

A Perfect Solution in Every Drop
TBPE Firm #13734

Date: 10/14/2013
Report No: 2584

APPENDIX

(INCLUDES EIGHT (8) PAGES OF CALCULATIONS)



BUILDING DROPS

A Perfect Solution in Every Drop

TBPE Firm #13734

398 East Dania Beach Blvd., Suite 338

Dania Beach, FL 33004

PH: 954.399.8478 FX: 954.744.4738

#10 Wood Screw into Spruce-Pine-Fir w/ 0 in. of Gap Space.

Wood Screw Type = #10 Wood Screw
 Wood Screw Length = 2.00 in
 Wood Screw Embedment = 1.50 in
 Wood Screw Thread Length = 1.33 in
 D = 0.190 in , Dowel Diameter
 D_m = 0.152 in , Dowel Diameter at max. stress in main member
 D_s = 0.152 in , Dowel Diameter at max. stress in side member
 F_b = 90,000 psi , Dowel bending strength

Wood Screw Withdrawal Calculations

Substrate: Spruce-Pine-Fir
 Tabulated withdrawal design value: W = 95 lbs
 Penetration Factor: C_p = 1.33 in (based on 2/3 screw length)
 Duration Factor: C_D = 1.60

Withdrawal Allowable (W') = 202.0 lbs

Wood Screw Lateral Calculations

Substrate (Main Member): Spruce-Pine-Fir
 Frame (Side Member): PVC
 Cantilever Distance: 0.25 in , Frame hollow space + shim
 g: 0 in , Gap between members (if applicable cantilever/2)

ℓ_m = 1.500 in , Main member dowel bearing length
 ℓ_s = 0.081 in , Side member dowel bearing length
 F_{em} = 3,364 psi , Main member dowel bearing strength
 F_{es} = 9,137 psi , Side member dowel bearing strength
 q_m = 639 lbs/in , Main member dowel bearing resistance = F_{em}D
 q_s = 1,736 lbs/in , Side member dowel bearing resistance = F_{es}D
 M_m = 52.68 in-lbs , Main member dowel moment resistance = F_b(D_m³/6)
 M_s = 52.68 in-lbs , Side member dowel moment resistance = F_b(D_s³/6)

θ = 90 degrees , Maximum angle of load to grain (0° ≤ θ ≤ 90°) for any member in a connection
 K_θ = 1.258
 K_D = 2.200

		Single Shear		Double Shear		
Mode I _m	Z _I =	958.81	lbs	958.81	lbs	, Main Member Bearing
				2.20		, Reduction Term
Mode I _m	Z _I =	435.82	lbs	435.82	lbs	
Mode I _s	Z _I =	140.62	lbs	281.24	lbs	, Side Member Bearing
				2.20		, Reduction Term
Mode I _s	Z _I =	63.92	lbs	127.83	lbs	
Mode II	Z _{II} =	367.18	lbs			, Side and Main Member Bearing
	A =	0.0005				
	B =	0.791				
	C =	-362.40				
				2.20		, Reduction Term
Mode II	Z _{II} =	166.90	lbs			
Mode III _m	Z _{III} =	402.76	lbs			, Main Member Bearing and Dowel
	A =	0.0007				Yielding in the Side Member
	B =	0.750				
	C =	-412.23				
				2.20		, Reduction Term
Mode III _m	Z _{III} =	183.07	lbs			
Mode III _s	Z _{III} =	223.95	lbs	447.90	lbs	, Side Member Bearing and Dowel
	A =	0.0009				Yielding in the Main Member
	B =	0.041				
	C =	-55.52				
				2.20		, Reduction Term
Mode III _s	Z _{III} =	101.80	lbs	203.59	lbs	
Mode IV	Z _{IV} =	313.75	lbs	627.50	lbs	, Dowel Yielding in the Side and Main
	A =	0.0011				Member
	B =	0.000				
	C =	-105.35				
				2.20		, Reduction Term
Mode IV	Z _{IV} =	142.61	lbs	285.23	lbs	

C_d = 1.6 , Load Duration
C_p = 1.000 , Penetration Factor

Single Lateral Allowable (Z'_s) = 102.268 lbs
Double Lateral Allowable (Z'_d) = 204.536 lbs

(Through Frame)



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Dania Beach, FL 33004

PH: 954.399.8478 FX: 954.744.4738

#10 Wood Screw into Spruce-Pine-Fir w/ 0 in. of Gap Space.

Wood Screw Type = #10 Wood Screw
 Wood Screw Length = 2.00 in
 Wood Screw Embedment = 1.50 in
 Wood Screw Thread Length = 1.33 in
 D = 0.190 in , Dowel Diameter
 D_m = 0.152 in , Dowel Diameter at max. stress in main member
 D_s = 0.152 in , Dowel Diameter at max. stress in side member
 F_b = 90,000 psi , Dowel bending strength

Wood Screw Withdrawal Calculations

Substrate: Spruce-Pine-Fir
 Tabulated withdrawal design value: W = 95 lbs
 Penetration Factor: C_p = 1.33 in (based on 2/3 screw length)
 Duration Factor: C_D = 1.60

Withdrawal Allowable (W') = 202.0 lbs (Through Nail Fin)

Wood Screw Lateral Calculations

Substrate (Main Member): Spruce-Pine-Fir
 Frame (Side Member): PVC
 Cantilever Distance: 0.25 in , Frame hollow space + shim
 g: 0 in , Gap between members (if applicable cantilever/2)
 ℓ_m = 1.500 in , Main member dowel bearing length
 ℓ_s = 0.065 in , Side member dowel bearing length
 F_{em} = 3,364 psi , Main member dowel bearing strength
 F_{es} = 9,137 psi , Side member dowel bearing strength
 q_m = 639 lbs/in , Main member dowel bearing resistance = F_{em}D
 q_s = 1,736 lbs/in , Side member dowel bearing resistance = F_{es}D
 M_m = 52.68 in-lbs , Main member dowel moment resistance = F_b(D_m³/6)
 M_s = 52.68 in-lbs , Side member dowel moment resistance = F_b(D_s³/6)
 θ = 90 degrees , Max. angle of load to grain (0° ≤ θ ≤ 90°) for any member in a connection
 K_θ = 1.258
 K_D = 2.200

		Single Shear		Double Shear		
Mode I _m	Z _I =	958.81	lbs	958.81	lbs	, Main Member Bearing
				2.20		, Reduction Term
Mode I _m	Z _I =	435.82	lbs	435.82	lbs	
Mode I _s	Z _I =	112.84	lbs	225.68	lbs	, Side Member Bearing
				2.20		, Reduction Term
Mode I _s	Z _I =	51.29	lbs	102.58	lbs	
Mode II	Z _{II} =	368.81	lbs			, Side and Main Member Bearing
	A =	0.0005				
	B =	0.783				
	C =	-361.39				
				2.20		, Reduction Term
Mode II	Z _{II} =	167.64	lbs			
Mode III _m	Z _{III} =	402.76	lbs			, Main Member Bearing and Dowel
	A =	0.0007				Yielding in the Side Member
	B =	0.750				
	C =	-412.23				
				2.20		, Reduction Term
Mode III _m	Z _{III} =	183.07	lbs			
Mode III _s	Z _{III} =	225.68	lbs	451.37	lbs	, Side Member Bearing and Dowel
	A =	0.0009				Yielding in the Main Member
	B =	0.033				
	C =	-54.51				
				2.20		, Reduction Term
Mode III _s	Z _{III} =	102.58	lbs	205.17	lbs	
Mode IV	Z _{IV} =	313.75	lbs	627.50	lbs	, Dowel Yielding in the Side and Main
	A =	0.0011				Member
	B =	0.000				
	C =	-105.35				
				2.20		, Reduction Term
Mode IV	Z _{IV} =	142.61	lbs	285.23	lbs	
	C _d =	1.6				, Load Duration
	C _p =	1.000				, Penetration Factor
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p>Single Lateral Allowable (Z'_s) = 82.0669 lbs Double Lateral Allowable (Z'_d) = 164.134 lbs</p> </div>						



BUILDING DROPS

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TBPE Firm #13734
398 East Dania Beach Blvd., Suite 338
Dania Beach, FL 33004
PH: 954.399.8478 FX: 954.744.4738

Date: 10/14/2013

Product Evaluation Report

Jeld-Wen Inc.

Premium Atlantic Vinyl Stationary Casement "O", Fixed Window

Masonry/Concrete Anchor Calculations

Fastener type: 3/16" ITW Tapcon

Substrate: CMU

Reference: NOA #03-0114.03

Minimum embedment: 1.25 in

Minimum edge distance: 2.50 in

Allowable Design Value: $Z' = 197$ lbs / anchor

Fastener type: 3/16" ITW Tapcon with minimum embedment of 1.25 in

Shank Diameter: $D = 0.171$ in

Cantilever distance: 0.25 in

Moment arm: 0.00 in

Allowable bending stress: $F_b = 69.00$ ksi

Actual bending stress: $f_b = 0.00$ ksi

Bending Yield strength: $F_y = 92.00$ ksi

Ultimate strength: $F_u = 120.00$ ksi

Allowable shear stress: $F_v = 20.40$ ksi

Actual shear stress: $f_v = 20.40$ ksi

Combined bending plus shear: $(f_b/F_b) + (f_v/F_v) = 1.0 \leq 1.0$

Maximum design value in cantilever: 469 lbs / anchor

Minimum anchor capacity: 197 lbs / anchor



BUILDING DROPS

A Perfect Solution in Every Drop

TBPE Firm #13734

398 East Dania Beach Blvd., Suite 338

Dania Beach, FL 33004

PH: 954.399.8478 FX: 954.744.4738

Date: 10/14/2013

Product Evaluation Report

Jeld-Wen, Inc.

Premium Atlantic Vinyl Stationary Casement "O", Fixed Window

Steel Stud Anchor Calculations

Fastener type: #10 Tek Screw

Substrate: 18 Steel Gauge

Referecne: NOA

Minimum embedment: 3 pitches of thread

Allowable Design Value: $Z' = 316 \text{ lbs} / \text{ anchor}$

Fastener type: #10 Tek Screw with min. engagement of 3 pitches of thread in cantilever

Shank Diameter: $D = 0.152 \text{ in}$

Cantilever distance: 0.25 in

Moment arm: 0.00 in

Allowable bending stress: $F_b = 69 \text{ ksi}$

Actual bending stress: $f_b = 0 \text{ ksi}$

Bending Yield strength: $F_y = 92.00 \text{ ksi}$

Ultimate strength: $F_u = 120.00 \text{ ksi}$

Allowable shear stress: $F_v = 20.40 \text{ ksi}$

Actual shear stress: $f_v = 20.40 \text{ ksi}$

Combined bending plus shear: $(f_b/F_b) + (f_v/F_v) = 1.0 \leq 1.0$

Maximum design value in cantilever: $370 \text{ lbs} / \text{ anchor}$

Minimum anchor capacity: $316 \text{ lbs} / \text{ anchor}$

Minimum anchor capacity per Substrate:

Steel Stud Anchor

$316 \text{ lbs} / \text{ anchor}$



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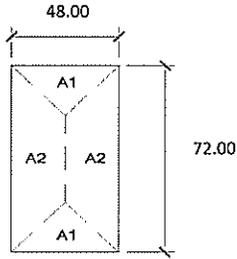
Date: 10/14/2013

Product Evaluation Report

Jeld-Wen, Inc.

Premium Atlantic Vinyl Stationary Casement "O", Fixed Window

Anchor Capacity Calculations (XO): (AS TESTED)



Design pressure: 50.0 psf

Zone	Area (ft ²)	Load (lbs)	From Corner Distance (in)	Max. O.C. (in)	Anchor	
					Cap. (lbs)	Qty
A ₁	4.00	200.0	4.5	12.9	40.0	5
A ₂	8.00	400.0	4.5	15.6	66.7	6

Window Total Area: 24.00 ft²

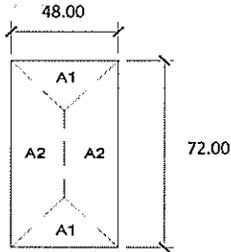
Minimum anchor capacity per Substrate:

LIMITING CAPACITY--> Wood 202 lbs / anchor

Anchor Capacity Calculations (XO):

Substrate of installation: Wood

Design pressure: 50.0 psf



Zone	Area (ft ²)	Load (lbs)	From Corner Distance (in)	Max. O.C. Spacing (in)	Anchor			Result
					Cap. (lbs)	Qty	Load (lbs)	
A ₁	4.00	200.0	4.5	13.0	202	4	50.0	OK
A ₂	8.00	400.0	4.5	15.8	202	5	80.0	OK

Window Total Area: 24.00 ft²

Conclusion:

Anchors on the head & sill located 4.5" from corners and 13" O.C. Anchors on the jambs located 4.5" from corners and 15.8" O.C.



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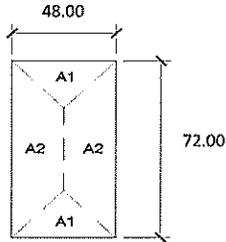
Product Evaluation Report

Jeld-Wen, Inc.

Premium Atlantic Vinyl Stationary Casement "O", Fixed Window

Anchor Capacity Calculations (XO): (AS TESTED)

Design pressure: 50.0 psf



Window Total Area: 24.00 ft²

Zone	Area (ft ²)	Load (lbs)	From Corner Distance (in)	Max. O.C. (in)	Anchor	
					Cap. (lbs)	Qty
A ₁	4.00	200.0	4.5	12.9	40.0	5
A ₂	8.00	400.0	4.5	15.6	66.7	6

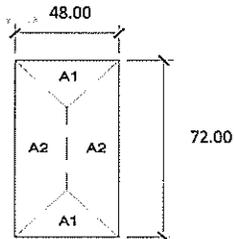
Minimum anchor capacity per Substrate:

LIMITING CAPACITY-->	Wood	102 lbs / anchor
	Masonry	197 lbs / anchor
	Steel Stud	316 lbs / anchor

Anchor Capacity Calculations (XO):

Substrate of installation: Wood

Design pressure: 50.0 psf



Window Total Area: 24.00 ft²

Zone	Area (ft ²)	Load (lbs)	From Corner Distance (in)	Max. O.C. Spacing (in)	Anchor			Result
					Cap. (lbs)	Qty	Load (lbs)	
A ₁	4.00	200.0	4.5	13.0	102	4	50.0	OK
A ₂	8.00	400.0	4.5	15.8	102	5	80.0	OK

Conclusion:

Anchors on the head & sill located 4.5" from corners and 13" O.C. Anchors on the jambs located 4.5" from corners and 15.8" O.C.



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Product Evaluation Report *of*

JELD-WEN, Inc.
Premium Atlantic Vinyl Stationary Casement (Non-Impact)

for

Texas Department of Insurance
Report No. 2584

Product: *Premium Atlantic Vinyl Stationary Casement*
Material: *Vinyl (PVC)*
Product Dimensions: *47.5" x 71.5" (O)*

Prepared For:
JELD-WEN, inc.
3737 Lakeport Blvd.
Klamath Falls, OR. 97601

Prepared by:
Alexis Spyrou, P.E.
Texas Professional Engineer # 102957
Date: 10/14/2013

Contents:

Evaluation Report Pages 1 – 4
Appendix Pages 5 – 13