



Product Selection Guide

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Document Navigation Tips:

Items listed in the table of contents above are active links that will take you to the corresponding page. The Pella logo on each page is a link back to this table of contents. Bookmarks are also included in this PDF document and are available as an additional navigation option.

Supporting documents for this product:

Test Reports:

https://media.pella.com/professional/adm/CertificationReports/Test_Reports_AS-Clad.pdf

CSI Specs (readable using Microsoft Word or other text editing application):

https://media.pella.com/professional/adm/Wood-CSI_Specs/Masterspec/085200_fl.doc

Detailed Product Description (readable using Microsoft Word or other text editing application):

<https://media.pella.com/professional/adm/Clad-Wood/AST-CM-C.rtf>

Size Tables (requires appropriate CAD software to read and use):

https://media.pella.com/professional/adm/Clad-Wood/ASCCMEV_D.dwg

CAD cross sections (requires appropriate CAD software to read and use):

https://media.pella.com/professional/adm/Clad-Wood/AST-CM-Detail_D.dwg

3D & BIM / REVIT (requires appropriate software to read and use):

https://media.pella.com/professional/adm/RevitFiles/AS-Revit/Window-Casement-Pella-Architect_Series.zip

Sketchup (requires appropriate software to read and use):

https://media.pella.com/professional/adm/Clad-Wood/PellaSKP_ArchitectSeries_Traditional_Casement.zip

Combination Recommendations:

https://media.pella.com/professional/adm/Clad-Wood/D_Combinations.pdf

Installation Details:

https://media.pella.com/professional/adm/Clad-Wood/F_InstallationDetails.pdf

The information published in this document is believed to be accurate at the time of publication. However, because we are constantly working to improve our products, specifications are subject to change without notice. Consult your local Pella representative for up-to-date product information.

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Architect Series® Traditional Casement Window

Size and Performance Data

	Clad	Wood
Sizes		
Standard vent/fixed sizes	●	●
Standard fixed companion sizes	●	●
Egress sizes	●	●
Special sizes available	●	●
Performance₁		
Meets or Exceeds AAMA/WDMA Ratings	CW30 - CW50 Hallmark Certified	LC30 - LC50 Hallmark Certified
Air Infiltration (cfm/ft ² of frame @ 1.57 psf wind pressure)	0.05	0.05
Water Resistance	7.5 psf	4.6 - 7.5 psf
Design Pressure	30 - 50 psf	30 - 50 psf
Products with Impact-Resistant Glass	LC +/-60 - LC +75/-85 Hallmark Certified	-
Other Performance Criteria		
Forced Entry Resistance Level (Minimum Security Grade) ₂	10	10
Operating Force (lb) Initiate Motion / Maintain Motion (of Hallmark tested size and glazing) ₃	15/6	15/6

Sound Transmission Class / Outdoor-Indoor Transmission Class

Product	Frame Size Tested ₃	Glazing System				STC Rating	OITC Rating
		Overall Glazing Thickness	Exterior Glass Thickness	Interior Glass Thickness	Third Pane Thickness		
Standard Clad Window	Vent without Grilles						
	23" x 59"	11/16"	2.5mm	2.5mm	—	28	25
	23" x 59"	11/16"	5mm	3mm	—	32	27
	23" x 59"	11/16"	3mm	6.0mm PVB	—	33	28
	Fixed without Grilles						
	47" x 59"	11/16"	3mm	3mm	—	29	24
	47" x 59"	11/16"	5mm	3mm	—	31	27
	47" x 59"	11/16"	3mm	6.0mm PVB	—	32	28
	Clad Window with Impact-Resistant Glass	Vent without Grilles					
29" x 53"		11/16"	3mm	7.6mm PVB	—	35	30
29" x 53"		1"	5mm	10.1mm SGP	—	35	31
Fixed without Grilles							
47" x 59"		11/16"	3mm	7.6mm PVB	—	33	29
53" x 53"		1"	5mm	10.1mm SGP	—	35	30

(1) Maximum performance for single unit when glazed with the appropriate glass thickness. See Design Data pages in this section for specific product performance class and grade values. Values shown are for standard and special sizes; Custom shapes and sizes may not have the same values. Contact your local sales representative for complete information.

(2) The higher the level, the greater the product's ability to resist forced entry.

(3) Glazing configurations may result in higher operational forces

(4) ASTM E 1425 defines standard sizes for acoustical testing. Ratings achieved at that size are representative of all sizes of the same configuration.

NOTE: Performance with additional options may not be the same as Standard and Special size units. Please contact your local Pella representative for complete information.



Architect Series® Traditional Casement Window

Features and Options

Standard	Options / Upgrades
Glazing	
Glazing Type	
Dual-Pane Insulating Glass	Triple-Pane Insulating Glass
Insulated Glass Options/Low-E Types	
Advanced Low-E	SunDefense™ Low-E
	SunDefense+ Low-E
	AdvancedComfort Low-E
	NaturalSun Low-E
	NaturalSun+ Low-E
	Clear (no Low-E coating)
Additional Glass Options	
Annealed Glass	Tempered Glass
	Obscure Glass ₁
	Low-E Tinted Glass (Bronze, Gray and Green)
	Non-Impact Laminated Dual-Pane Insulating Glass
	Impact-Resistant Laminated Dual-Pane 1 1/16" Insulating Glass
Gas Fill/High Altitude	
Argon	High altitude
	High Altitude with Argon ₂
Wood Types	
Pine	—
Exterior	
Exterior Sash Profile	
Ogee - clad	Putty Glaze - clad or wood
Exterior Finish	
EnduraClad® protective finish	EnduraClad Plus protective finish
	Factory Primed Pine wood exterior
Cladding Colors₁	
Standard colors	Feature Colors, Custom colors
Interior	
Interior Sash Profile	
Ogee	—
Interior Finish	
Unfinished Wood	Factory primed ₃ , Factory prefinished paint ₃ , Factory prefinished stain
Hardware	
Hardware Type	
Wash hinge Hardware	Side Pivot
Hardware Style	
Standard Fold-Away crank	Antiek Fold-Away crank
Hardware Finishes	
Champagne, White, Brown or Matte Black	Satin Nickel, Oil-Rubbed Bronze, Distressed Bronze, Distressed Nickel ₄
Sash Locks	
SureLock® System, Unison Lock System ₅	—
Grilles	
Integral Light Technology® Grilles	
—	Traditional, Prairie, Top Row, Cross, New England, Victorian, Simulated French, Custom
Grilles-Between-the-Glass	
—	Traditional, Prairie, Top Row ₁ , Cross or Custom-Equally Divided
Screens	
—	InView™ screens, Rolscreen® Retractable screens

(1) Contact your local Pella sales representative for current designs and color options.

(4) Distressed Bronze, and Distressed Nickel are only available with Antiek Fold-Away Crank.

(2) Available with Low-E argon-insulated glass only.

(5) Unit height determines availability.

(3) Not available on Mahogany and Douglas Fir interiors.



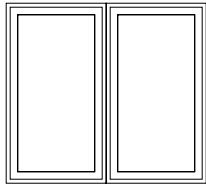
Architect Series® Traditional Casement Window

Combinations

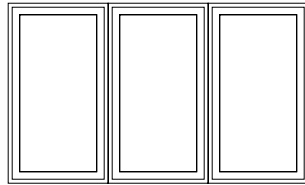
Combinations are a great way to create visual interest in any project. A combination is an assembly formed by two or more separate windows or doors whose frames are mullioned together by a combination or reinforcing mullion.

Pella window combinations are available in an endless variety of arrangements. Below are some examples of factory-assembled combinations. See the Combinations Recommendations document for typical mullions, requirements and limitations.

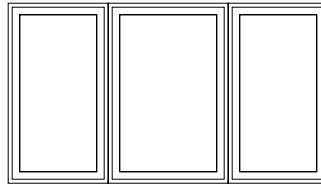
Contact your local Pella sales representative for more information.



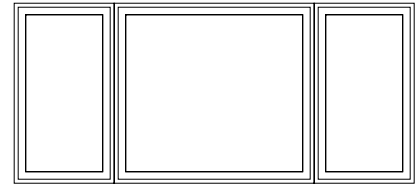
Two-Wide



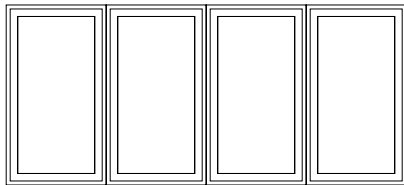
Three-Wide Equal



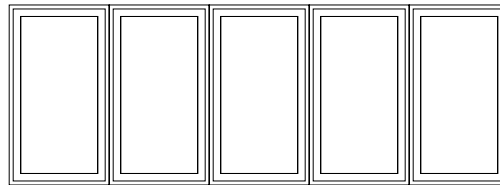
Three-Wide Unequal



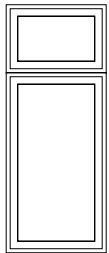
Center Fixed with Flankers



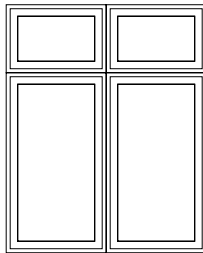
Four-Wide



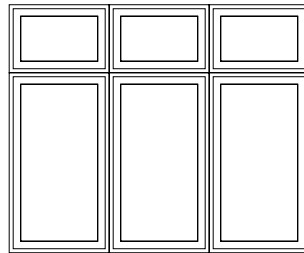
Five-Wide



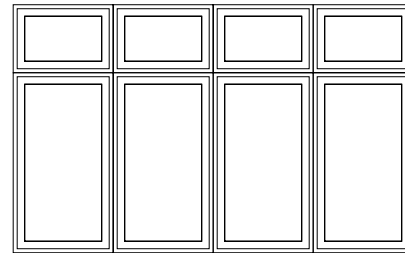
Transom over Single



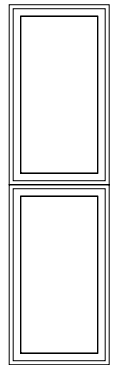
Two-Wide Transom over Two-Wide



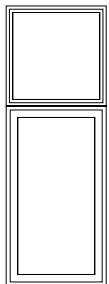
Three-Wide Transom over Three-Wide



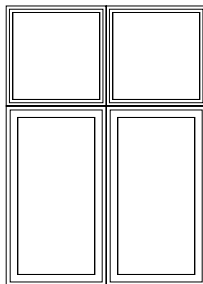
Four-Wide Transom over Four-Wide



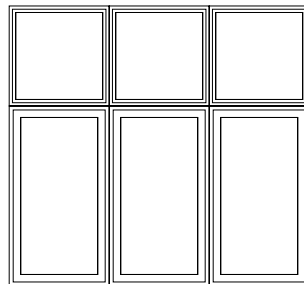
Two-High



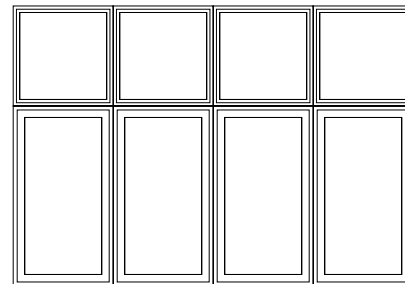
Clad Frame over Single



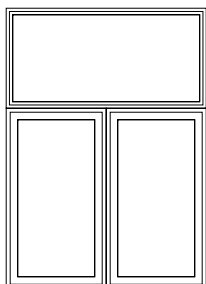
Two-Wide Clad Frame over Two-Wide



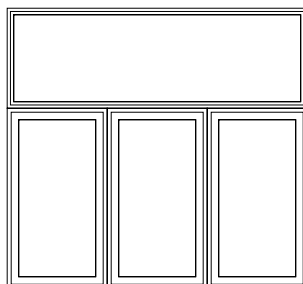
Three-Wide Clad Frame over Three-Wide



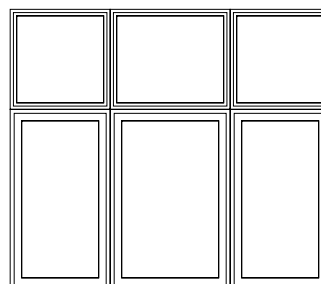
Four-Wide Clad Frame over Four-Wide



Single Clad Frame over Two-Wide



Single Clad Frame over Three-Wide



Three-Wide Clad Frame over Three-Wide Unequal



Architect Series® Traditional Casement Window

Glazing Performance - Total Unit

Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	Performance Values ¹				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ²	
										Zone				ER	Zone
Vent Dual-Pane Glazing - Aluminum-Clad Exterior										N	NC	SC	S		
11/16"	Clear IG	PEL-N-11-24121-00001	3	3	Air	0.45	0.57	0.59	42						
	with grilles-between-the-glass	PEL-N-11-24122-00001				0.45	0.52	0.54	42						
	with integral grilles	PEL-N-11-24123-00001				0.45	0.52	0.54	42						
11/16"	Advanced Low-E IG	PEL-N-11-24313-00001	3	3	Argon	0.29	0.27	0.51	57						
	with grilles-between-the-glass	PEL-N-11-24314-00001				0.29	0.25	0.46	57						
	with integral grilles	PEL-N-11-24315-00001				0.29	0.25	0.46	57						
11/16"	SunDefense™ Low-E IG	PEL-N-11-24317-00001	3	3	Argon	0.28	0.20	0.47	57			SC	S		
	with grilles-between-the-glass	PEL-N-11-24318-00001				0.28	0.19	0.42	57			SC	S		
	with integral grilles	PEL-N-11-24319-00001				0.29	0.19	0.42	57				S		
11/16"	SunDefense+ Low-E IG	PEL-N-11-26013-00001	3	3	Argon	0.25	0.20	0.46	45		NC	SC	S		
	with grilles-between-the-glass	PEL-N-11-26014-00001				0.25	0.18	0.41	45		NC	SC	S		
	with integral grilles	PEL-N-11-26015-00001				0.25	0.18	0.41	45		NC	SC	S		
11/16"	AdvancedComfort Low-E IG	PEL-N-11-24325-00001	3	3	Argon	0.25	0.27	0.49	45		NC				
	with grilles-between-the-glass	PEL-N-11-24326-00001				0.25	0.24	0.45	45		NC				
	with integral grilles	PEL-N-11-24327-00001				0.26	0.24	0.45	45						
11/16"	NaturalSun Low-E IG	PEL-N-11-21563-00002	3	3	Argon	0.30	0.50	0.57	56						
	with grilles-between-the-glass	PEL-N-11-21751-00002				0.30	0.46	0.52	56						
	with integral grilles	PEL-N-11-21754-00002				0.31	0.46	0.52	56						
11/16"	NaturalSun+ Low-E IG	PEL-N-11-25941-00001	3	3	Argon	0.26	0.46	0.56	44	N				34	CA
	with grilles-between-the-glass	PEL-N-11-25942-00001				0.26	0.42	0.51	44	N					
	with integral grilles	PEL-N-11-25943-00001				0.26	0.42	0.51	44	N					
Tinted Glazing															
11/16"	Bronze Advanced Low-E IG	PEL-N-11-24449-00002	5	3	Argon	0.29	0.24	0.33	56						
	with grilles-between-the-glass	PEL-N-11-24450-00002				0.30	0.22	0.30	56				S		
	with integral grilles	PEL-N-11-24451-00002				0.30	0.22	0.30	56				S		
11/16"	Gray Advanced Low-E IG	PEL-N-11-24449-00003	5	3	Argon	0.29	0.22	0.28	56					S	
	with grilles-between-the-glass	PEL-N-11-24450-00003				0.30	0.20	0.26	56					S	
	with integral grilles	PEL-N-11-24451-00003				0.30	0.20	0.26	56					S	
11/16"	Green Advanced Low-E IG	PEL-N-11-24449-00004	5	3	Argon	0.29	0.27	0.44	56						
	with grilles-between-the-glass	PEL-N-11-24450-00004				0.30	0.25	0.40	56						
	with integral grilles	PEL-N-11-24451-00004				0.30	0.25	0.40	56						
High Altitude Glazing															
11/16"	Advanced Low-E IG	PEL-N-11-24145-00001	3	3	Air	0.32	0.27	0.51	54						
	with grilles-between-the-glass	PEL-N-11-24146-00001				0.32	0.25	0.46	54						
	with integral grilles	PEL-N-11-24147-00001				0.33	0.25	0.46	54						
11/16"	SunDefense™ Low-E IG	PEL-N-11-24169-00001	3	3	Air	0.32	0.21	0.47	54					S	
	with grilles-between-the-glass	PEL-N-11-24170-00001				0.32	0.19	0.42	54					S	
	with integral grilles	PEL-N-11-24171-00001				0.33	0.19	0.42	54						
11/16"	SunDefense+ Low-E IG	PEL-N-11-26009-00001	3	3	Air	0.27	0.20	0.46	42			SC	S		
	with grilles-between-the-glass	PEL-N-11-26010-00001				0.27	0.18	0.41	42			SC	S		
	with integral grilles	PEL-N-11-26011-00001				0.28	0.18	0.41	42			SC	S		
11/16"	AdvancedComfort Low-E IG	PEL-N-11-24217-00001	3	3	Air	0.28	0.27	0.49	41						
	with grilles-between-the-glass	PEL-N-11-24218-00001				0.28	0.24	0.45	41						
	with integral grilles	PEL-N-11-24219-00001				0.28	0.24	0.45	41						
11/16"	NaturalSun Low-E IG	PEL-N-11-24193-00001	3	3	Air	0.33	0.50	0.57	53						
	with grilles-between-the-glass	PEL-N-11-24194-00001				0.33	0.45	0.52	53						
	with integral grilles	PEL-N-11-24195-00001				0.34	0.45	0.52	53						
11/16"	NaturalSun+ Low-E IG	PEL-N-11-25937-00001	3	3	Air	0.28	0.45	0.56	41						
	with grilles-between-the-glass	PEL-N-11-25938-00001				0.28	0.41	0.51	41						
	with integral grilles	PEL-N-11-25939-00001				0.29	0.41	0.51	41						

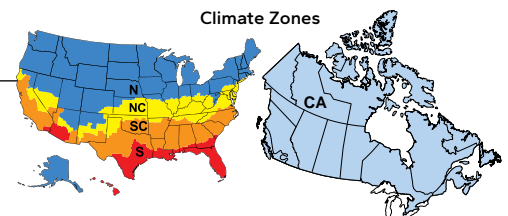
R-Value = 1/U-Factor
 SHGC = Solar Heat Gain Coefficient
 VLT % = Visible Light Transmission
 CR = Condensation Resistance
 ER = Canadian Energy Rating

(1) Glazing performance values are calculated for Pine using NFRC 100, NFRC 200 and NFRC 500. Thermal performance of other wood species may vary. ENERGY STAR® values are updated to 2023 (Version 7) criteria.

(2) The values shown are based on Canada's updated ENERGY STAR® 2020 initiative.

Based on unit size, some products will use 2.5 mm glass that will have equivalent or improved performance from what is shown.

Visit www.energystar.gov for Energy Star guidelines.





Architect Series® Traditional Casement Window

Glazing Performance - Total Unit

Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	Performance Values ¹				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ₂	
										Zone				ER	Zone
Fixed Dual-Pane Glazing - Aluminum-Clad Exterior										N	NC	SC	S		
11/16"	Clear IG	PEL-N-1-59119-00001	3	3	Air	0.46	0.64	0.67	42						
	with grilles-between-the-glass	PEL-N-1-59120-00001				0.46	0.58	0.60	42						
	with integral grilles	PEL-N-1-59121-00001				0.46	0.58	0.60	42						
11/16"	Advanced Low-E IG	PEL-N-1-59311-00001	3	3	Argon	0.27	0.30	0.57	57						
	with grilles-between-the-glass	PEL-N-1-59312-00001				0.27	0.28	0.51	57						
	with integral grilles	PEL-N-1-59313-00001				0.28	0.28	0.51	57						
11/16"	SunDefense™ Low-E IG	PEL-N-1-59315-00001	3	3	Argon	0.27	0.23	0.53	57			SC	S		
	with grilles-between-the-glass	PEL-N-1-59316-00001				0.27	0.21	0.47	57			SC	S		
	with integral grilles	PEL-N-1-59317-00001				0.28	0.21	0.47	57			SC	S		
11/16"	SunDefense+ Low-E IG	PEL-N-1-61941-00001	3	3	Argon	0.23	0.22	0.52	45		NC	SC	S		
	with grilles-between-the-glass	PEL-N-1-61942-00001				0.23	0.20	0.46	45		NC	SC	S		
	with integral grilles	PEL-N-1-61943-00001				0.24	0.20	0.46	45		NC	SC	S		
11/16"	AdvancedComfort Low-E IG	PEL-N-1-59323-00001	3	3	Argon	0.23	0.30	0.56	44		NC				
	with grilles-between-the-glass	PEL-N-1-59324-00001				0.23	0.27	0.50	44		NC				
	with integral grilles	PEL-N-1-59325-00001				0.24	0.27	0.50	44		NC				
11/16"	NaturalSun Low-E IG	PEL-N-1-59319-00001	3	3	Argon	0.28	0.56	0.65	56					37	CA
	with grilles-between-the-glass	PEL-N-1-59320-00001				0.28	0.51	0.58	56					34	CA
	with integral grilles	PEL-N-1-59321-00001				0.29	0.51	0.58	56						
11/16"	NaturalSun+ Low-E IG	PEL-N-1-61869-00001	3	3	Argon	0.24	0.51	0.63	44	N				39	CA
	with grilles-between-the-glass	PEL-N-1-61870-00001				0.24	0.46	0.57	44	N				37	CA
	with integral grilles	PEL-N-1-61871-00001				0.25	0.46	0.57	44	N				35	CA
Tinted Glazing															
11/16"	Bronze Advanced Low-E	PEL-N-1-59447-00002	5	3	Argon	0.28	0.27	0.37	56						
	with grilles-between-the-glass	PEL-N-1-59448-00002				0.29	0.25	0.33	56						
	with integral grilles	PEL-N-1-59449-00002				0.29	0.25	0.33	56						
11/16"	Gray Advanced Low-E IG	PEL-N-1-59447-00003	5	3	Argon	0.28	0.25	0.32	56						
	with grilles-between-the-glass	PEL-N-1-59448-00003				0.29	0.23	0.29	56				S		
	with integral grilles	PEL-N-1-59449-00003				0.29	0.23	0.29	56				S		
11/16"	Green Advanced Low-E IG	PEL-N-1-59447-00004	5	3	Argon	0.28	0.31	0.50	56						
	with grilles-between-the-glass	PEL-N-1-59448-00004				0.29	0.28	0.45	56						
	with integral grilles	PEL-N-1-59449-00004				0.29	0.28	0.45	56						
High Altitude Glazing															
11/16"	Advanced Low-E IG	PEL-N-1-59143-00001	3	3	Air	0.31	0.31	0.57	53						
	with grilles-between-the-glass	PEL-N-1-59144-00001				0.31	0.28	0.51	53						
	with integral grilles	PEL-N-1-59145-00001				0.32	0.28	0.51	53						
11/16"	SunDefense™ Low-E IG	PEL-N-1-59167-00001	3	3	Air	0.31	0.23	0.53	53				S		
	with grilles-between-the-glass	PEL-N-1-59168-00001				0.31	0.21	0.47	53				S		
	with integral grilles	PEL-N-1-59169-00001				0.32	0.21	0.47	53				S		
11/16"	SunDefense+ Low-E IG	PEL-N-1-61937-00001	3	3	Air	0.26	0.22	0.52	41			SC	S		
	with grilles-between-the-glass	PEL-N-1-61938-00001				0.26	0.20	0.46	41			SC	S		
	with integral grilles	PEL-N-1-61939-00001				0.27	0.20	0.46	41			SC	S		
11/16"	AdvancedComfort Low-E IG	PEL-N-1-59215-00001	3	3	Air	0.26	0.30	0.56	41						
	with grilles-between-the-glass	PEL-N-1-59216-00001				0.26	0.27	0.50	41						
	with integral grilles	PEL-N-1-59217-00001				0.27	0.27	0.50	41						
11/16"	NaturalSun Low-E IG	PEL-N-1-59191-00001	3	3	Air	0.32	0.56	0.65	53						
	with grilles-between-the-glass	PEL-N-1-59192-00001				0.32	0.51	0.58	53						
	with integral grilles	PEL-N-1-59193-00001				0.33	0.51	0.58	53						
11/16"	NaturalSun+ Low-E IG	PEL-N-1-61865-00001	3	3	Air	0.27	0.51	0.63	40					36	CA
	with grilles-between-the-glass	PEL-N-1-61866-00001				0.27	0.46	0.57	40						
	with integral grilles	PEL-N-1-61867-00001				0.27	0.46	0.57	40						

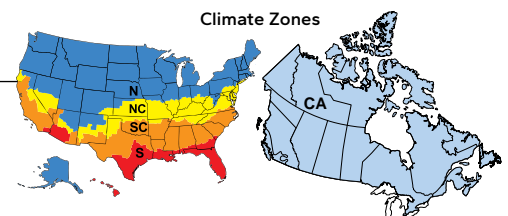
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Architect Series® Traditional Casement Window

Glazing Performance - Total Unit

Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)			Gap Fill	Performance Values ₁				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Mid.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ₂	
											Zone				ER	Zone
Vent Triple-Pane Glazing - Aluminum-Clad Exterior											N	NC	SC	S		
1"	Advanced Low-E IG	PEL-N-11-24333-00001	3	3	3	Argon	0.23	0.25	0.45	65		NC				
	with grilles-between-the-glass	PEL-N-11-24334-00001					0.23	0.23	0.40	65		NC	SC	S		
	with integral grilles	PEL-N-11-24335-00001					0.23	0.23	0.40	65		NC	SC	S		
1"	SunDefense™ Low-E IG	PEL-N-11-24337-00001	3	3	3	Argon	0.23	0.18	0.41	65		NC	SC	S		
	with grilles-between-the-glass	PEL-N-11-24338-00001					0.23	0.17	0.37	65		NC	SC	S		
	with integral grilles	PEL-N-11-24339-00001					0.23	0.17	0.37	65		NC	SC	S		
1"	NaturalSun Low-E IG	PEL-N-11-24329-00001	3	3	3	Argon	0.23	0.41	0.50	65	N				35	CA
	with grilles-between-the-glass	PEL-N-11-24330-00001					0.24	0.37	0.46	65	N	NC				
	with integral grilles	PEL-N-11-24331-00001					0.23	0.37	0.46	65	N	NC				
High Altitude Glazing																
1"	Advanced Low-E IG	PEL-N-11-24269-00001	3	3	3	Air	0.26	0.25	0.45	62						
	with grilles-between-the-glass	PEL-N-11-24270-00001					0.26	0.23	0.40	62			SC	S		
	with integral grilles	PEL-N-11-24271-00001					0.26	0.23	0.40	62			SC	S		
1"	SunDefense Low-E IG	PEL-N-11-24277-00001	3	3	3	Air	0.26	0.19	0.41	62			SC	S		
	with grilles-between-the-glass	PEL-N-11-24278-00001					0.26	0.17	0.37	62			SC	S		
	with integral grilles	PEL-N-11-24279-00001					0.26	0.17	0.37	62			SC	S		
1"	NaturalSun Low-E IG	PEL-N-11-24261-00001	3	3	3	Air	0.26	0.41	0.50	61	N					CA
	with grilles-between-the-glass	PEL-N-11-24262-00001					0.27	0.37	0.46	61						
	with integral grilles	PEL-N-11-24263-00001					0.27	0.37	0.46	61						

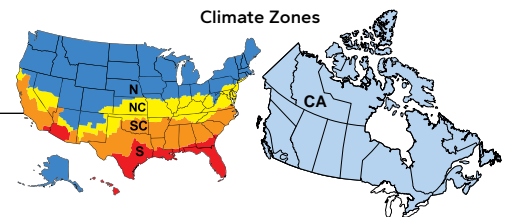
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Architect Series® Traditional Casement Window

Glazing Performance - Total Unit

Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)			Gap Fill	Performance Values ¹				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Mid.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ₂	
											Zone				ER	Zone
Fixed Triple-Pane Glazing - Aluminum-Clad Exterior											N	NC	SC	S	CA	
1"	Advanced Low-E IG	PEL-N-1-59331-00001	3	3	3	Argon	0.20	0.27	0.49	71	N	NC			30	CA
	with grilles-between-the-glass	PEL-N-1-59332-00001					0.20	0.24	0.44	71	N	NC			28	CA
	with integral grilles	PEL-N-1-59333-00001					0.20	0.24	0.44	71	N	NC			28	CA
1"	SunDefense™ Low-E IG	PEL-N-1-59335-00001	3	3	3	Argon	0.20	0.20	0.45	71	N	NC	SC	S	27	CA
	with grilles-between-the-glass	PEL-N-1-59336-00001					0.20	0.18	0.40	71	N	NC	SC	S	25	CA
	with integral grilles	PEL-N-1-59337-00001					0.20	0.18	0.40	71	N	NC	SC	S	25	CA
1"	NaturalSun Low-E IG	PEL-N-1-59327-00001	3	3	3	Argon	0.20	0.45	0.55	71	N				40	CA
	with grilles-between-the-glass	PEL-N-1-59328-00001					0.21	0.40	0.49	71	N				37	CA
	with integral grilles	PEL-N-1-59329-00001					0.21	0.40	0.49	71	N				38	CA
High Altitude Glazing												NC				
1"	Advanced Low-E IG	PEL-N-1-59267-00001	3	3	3	Air	0.24	0.27	0.49	67		NC				
	with grilles-between-the-glass	PEL-N-1-59268-00001					0.24	0.24	0.44	67		NC				
	with integral grilles	PEL-N-1-59269-00001					0.24	0.24	0.44	67		NC				
1"	SunDefense Low-E IG	PEL-N-1-59275-00001	3	3	3	Air	0.24	0.20	0.45	67		NC	SC	S		
	with grilles-between-the-glass	PEL-N-1-59276-00001					0.24	0.18	0.40	67		NC	SC	S		
	with integral grilles	PEL-N-1-59277-00001					0.24	0.18	0.40	67		NC	SC	S		
1"	NaturalSun Low-E IG	PEL-N-1-59259-00001	3	3	3	Air	0.24	0.45	0.55	66	N				35	CA
	with grilles-between-the-glass	PEL-N-1-59260-00001					0.25	0.40	0.49	66	N					
	with integral grilles	PEL-N-1-59261-00001					0.24	0.40	0.49	66	N					

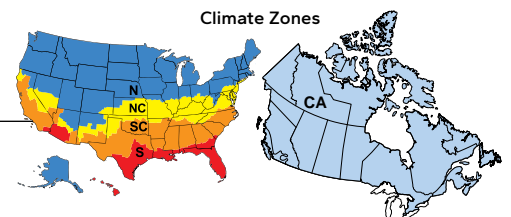
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Glazing Performance - Total Unit

Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	Performance Values ¹				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown						
			Ext.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ₂		
										Zone				ER	Zone	
Vent Dual-Pane Glazing - Wood Exterior											N	NC	SC	S		
11/16"	Clear IG	PEL-N-39-21425-00001	3	3	Air	0.42	0.53	0.56	45							
	with grilles-between-the-glass	PEL-N-39-21426-00001				0.42	0.48	0.50	45							
	with integral grilles	PEL-N-39-21427-00001				0.42	0.48	0.50	45							
11/16"	Advanced Low-E IG	PEL-N-39-21593-00001	3	3	Argon	0.26	0.26	0.48	62							
	with grilles-between-the-glass	PEL-N-39-21594-00001				0.26	0.23	0.43	62			SC	S			
	with integral grilles	PEL-N-39-21595-00001				0.27	0.23	0.43	62			SC	S			
11/16"	SunDefense™ Low-E IG	PEL-N-39-21597-00001	3	3	Argon	0.26	0.19	0.44	62			SC	S			
	with grilles-between-the-glass	PEL-N-39-21598-00001				0.26	0.18	0.40	62			SC	S			
	with integral grilles	PEL-N-39-21599-00001				0.27	0.18	0.40	62			SC	S			
11/16"	SunDefense+ Low-E IG	PEL-N-39-23157-00001	3	3	Argon	0.23	0.19	0.43	49		NC	SC	S			
	with grilles-between-the-glass	PEL-N-39-23158-00001				0.23	0.17	0.39	49		NC	SC	S			
	with integral grilles	PEL-N-39-23159-00001				0.23	0.17	0.39	44		NC	SC	S			
11/16"	AdvancedComfort Low-E IG	PEL-N-39-21605-00001	3	3	Argon	0.23	0.25	0.46	49		NC					
	with grilles-between-the-glass	PEL-N-39-21606-00001				0.23	0.23	0.42	49		NC	SC	S			
	with integral grilles	PEL-N-39-21607-00001				0.24	0.23	0.42	49		NC	SC	S			
11/16"	NaturalSun Low-E IG	PEL-N-39-21601-00001	3	3	Argon	0.27	0.47	0.54	61							
	with grilles-between-the-glass	PEL-N-39-21602-00001				0.27	0.43	0.49	61							
	with integral grilles	PEL-N-39-21603-00001				0.28	0.43	0.49	61							
11/16"	NaturalSun+ Low-E IG	PEL-N-39-23085-00001	3	3	Argon	0.24	0.43	0.53	48	N				35	CA	
	with grilles-between-the-glass	PEL-N-39-23086-00001				0.24	0.39	0.47	48	N	NC					
	with integral grilles	PEL-N-39-23087-00001				0.24	0.39	0.47	48	N	NC					
Tinted Glazing																
11/16"	Bronze Advanced Low-E IG	PEL-N-39-21713-00002	5	3	Argon	0.27	0.23	0.31	61			SC	S			
	with grilles-between-the-glass	PEL-N-39-21714-00002				0.28	0.21	0.28	61			SC	S			
	with integral grilles	PEL-N-39-21715-00002				0.28	0.21	0.28	61			SC	S			
11/16"	Gray Advanced Low-E IG	PEL-N-39-21713-00003	5	3	Argon	0.27	0.21	0.26	61			SC	S			
	with grilles-between-the-glass	PEL-N-39-21714-00003				0.28	0.19	0.24	61			SC	S			
	with integral grilles	PEL-N-39-21715-00003				0.28	0.19	0.24	61			SC	S			
11/16"	Green Advanced Low-E IG	PEL-N-39-21713-00004	5	3	Argon	0.27	0.26	0.42	61							
	with grilles-between-the-glass	PEL-N-39-21714-00004				0.28	0.24	0.38	61							
	with integral grilles	PEL-N-39-21715-00004				0.28	0.24	0.38	61							
High Altitude Glazing																
11/16"	Advanced Low-E IG	PEL-N-39-21449-00001	3	3	Air	0.30	0.26	0.48	58							
	with grilles-between-the-glass	PEL-N-39-21450-00001				0.30	0.24	0.43	58							
	with integral grilles	PEL-N-39-21451-00001				0.30	0.24	0.43	58							
11/16"	SunDefense™ Low-E IG	PEL-N-39-21473-00001	3	3	Air	0.29	0.19	0.44	58				S			
	with grilles-between-the-glass	PEL-N-39-21474-00001				0.29	0.18	0.40	58				S			
	with integral grilles	PEL-N-39-21475-00001				0.30	0.18	0.40	58				S			
11/16"	SunDefense+ Low-E IG	PEL-N-39-23153-00001	3	3	Air	0.25	0.19	0.43	45		NC	SC	S			
	with grilles-between-the-glass	PEL-N-39-23154-00001				0.25	0.17	0.39	45		NC	SC	S			
	with integral grilles	PEL-N-39-23155-00001				0.26	0.17	0.39	45			SC	S			
11/16"	AdvancedComfort Low-E IG	PEL-N-39-21521-00001	3	3	Air	0.26	0.25	0.46	45							
	with grilles-between-the-glass	PEL-N-39-21522-00001				0.26	0.23	0.42	45			SC	S			
	with integral grilles	PEL-N-39-21523-00001				0.26	0.23	0.42	45			SC	S			
11/16"	NaturalSun Low-E IG	PEL-N-39-21497-00001	3	3	Air	0.31	0.47	0.54	57							
	with grilles-between-the-glass	PEL-N-39-21498-00001				0.31	0.43	0.49	57							
	with integral grilles	PEL-N-39-21499-00001				0.31	0.43	0.49	57							
11/16"	NaturalSun+ Low-E IG	PEL-N-39-23081-00001	3	3	Air	0.26	0.43	0.53	44	N						
	with grilles-between-the-glass	PEL-N-39-23082-00001				0.26	0.39	0.47	44							
	with integral grilles	PEL-N-39-23083-00001				0.27	0.39	0.47	44							

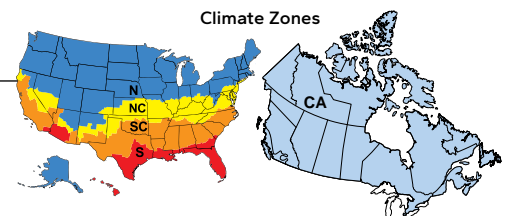
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Glazing Performance - Total Unit

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			Ext.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ²		
										Zone				ER	Zone	
Fixed Dual-Pane Glazing - Wood Exterior										N	NC	SC	S			
11/16"	Clear IG	PEL-N-41-42832-00001	3	3	Air	0.44	0.62	0.65	45							
	with grilles-between-the-glass	PEL-N-41-42833-00001				0.44	0.56	0.58	45							
	with integral grilles	PEL-N-41-42834-00001				0.45	0.56	0.58	45							
11/16"	Advanced Low-E IG	PEL-N-41-43000-00001	3	3	Argon	0.26	0.29	0.55	61							
	with grilles-between-the-glass	PEL-N-41-43001-00001				0.26	0.27	0.49	61							
	with integral grilles	PEL-N-41-43002-00001				0.27	0.27	0.49	61							
11/16"	SunDefense™ Low-E IG	PEL-N-41-43004-00001	3	3	Argon	0.25	0.22	0.51	62		NC	SC	S			
	with grilles-between-the-glass	PEL-N-41-43005-00001				0.25	0.20	0.46	62		NC	SC	S			
	with integral grilles	PEL-N-41-43006-00001				0.26	0.20	0.46	62			SC	S			
11/16"	SunDefense+ Low-E IG	PENDING	3	3	Argon											
	with grilles-between-the-glass	PENDING														
	with integral grilles	PENDING														
11/16"	AdvancedComfort Low-E IG	PEL-N-41-43012-00001	3	3	Argon	0.22	0.29	0.54	48		NC					
	with grilles-between-the-glass	PEL-N-41-43013-00001				0.22	0.26	0.48	48		NC					
	with integral grilles	PEL-N-41-43014-00001				0.23	0.26	0.48	48		NC					
11/16"	NaturalSun Low-E IG	PEL-N-41-43008-00001	3	3	Argon	0.27	0.55	0.63	61						38	CA
	with grilles-between-the-glass	PEL-N-41-43009-00001				0.27	0.49	0.56	61						35	CA
	with integral grilles	PEL-N-41-43010-00001				0.28	0.49	0.56	61							
11/16"	NaturalSun+ Low-E IG	PENDING	3	3	Argon											
	with grilles-between-the-glass	PENDING														
	with integral grilles	PENDING														
Tinted Glazing																
11/16"	Bronze Advanced Low-E	PEL-N-41-43120-00002	5	3	Argon	0.27	0.26	0.36	60							
	with grilles-between-the-glass	PEL-N-41-43121-00002				0.28	0.24	0.32	60							
	with integral grilles	PEL-N-41-43122-00002				0.28	0.24	0.32	60							
11/16"	Gray Advanced Low-E IG	PEL-N-41-43120-00003	5	3	Argon	0.27	0.24	0.31	60							
	with grilles-between-the-glass	PEL-N-41-43121-00003				0.28	0.22	0.28	60			SC	S			
	with integral grilles	PEL-N-41-43122-00003				0.28	0.22	0.28	60			SC	S			
11/16"	Green Advanced Low-E IG	PEL-N-41-43120-00004	5	3	Argon	0.27	0.30	0.49	60							
	with grilles-between-the-glass	PEL-N-41-43121-00004				0.28	0.27	0.43	60							
	with integral grilles	PEL-N-41-43122-00004				0.28	0.27	0.43	60							
High Altitude Glazing																
11/16"	Advanced Low-E IG	PEL-N-41-42856-00001	3	3	Air	0.30	0.30	0.55	57							
	with grilles-between-the-glass	PEL-N-41-42857-00001				0.30	0.27	0.49	57							
	with integral grilles	PEL-N-41-42858-00001				0.31	0.27	0.49	57							
11/16"	SunDefense™ Low-E IG	PEL-N-41-42880-00001	3	3	Air	0.29	0.22	0.51	58						S	
	with grilles-between-the-glass	PEL-N-41-42881-00001				0.29	0.20	0.46	58						S	
	with integral grilles	PEL-N-41-42882-00001				0.30	0.20	0.46	58						S	
11/16"	SunDefense+ Low-E IG	PENDING	3	3	Air											
	with grilles-between-the-glass	PENDING														
	with integral grilles	PENDING														
11/16"	AdvancedComfort Low-E IG	PEL-N-41-42928-00001	3	3	Air	0.25	0.29	0.54	44		NC					
	with grilles-between-the-glass	PEL-N-41-42929-00001				0.25	0.26	0.48	44		NC					
	with integral grilles	PEL-N-41-42930-00001				0.26	0.26	0.48	44							
11/16"	NaturalSun Low-E IG	PEL-N-41-42904-00001	3	3	Air	0.31	0.54	0.63	57							
	with grilles-between-the-glass	PEL-N-41-42905-00001				0.31	0.49	0.56	57							
	with integral grilles	PEL-N-41-42906-00001				0.32	0.49	0.56	57							
11/16"	NaturalSun+ Low-E IG	PENDING	3	3	Air											
	with grilles-between-the-glass	PENDING														
	with integral grilles	PENDING														

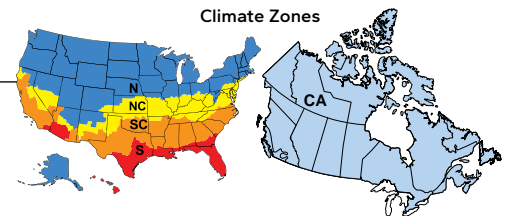
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Architect Series® Traditional Casement Window

Glazing Performance - Total Unit

Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)			Gap Fill	Performance Values ¹				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown						
			Ext.	Mid	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ₂		
											Zone				ER	Zone	
Vent Triple-Pane Glazing - Wood Exterior											N	NC	SC	S	CA		
1"	Advanced Low-E IG	PEL-N-39-21613-00001	3	3	3	Argon	0.21	0.23	0.42	71	N	NC	SC	S	27	CA	
	with grilles-between-the-glass	PEL-N-39-21614-00001					0.21	0.21	0.38	71	N	NC	SC	S	26	CA	
	with integral grilles	PEL-N-39-21615-00001					0.21	0.21	0.38	71	N	NC	SC	S	26	CA	
1"	SunDefense™ Low-E IG	PEL-N-39-21617-00001	3	3	3	Argon	0.20	0.17	0.39	71	N	NC	SC	S	25	CA	
	with grilles-between-the-glass	PEL-N-39-21618-00001					0.21	0.16	0.35	71		NC	SC	S			
	with integral grilles	PEL-N-39-21619-00001					0.21	0.16	0.35	71		NC	SC	S			
1"	NaturalSun Low-E IG	PEL-N-39-21609-00001	3	3	3	Argon	0.21	0.39	0.47	71	N	NC			36	CA	
	with grilles-between-the-glass	PEL-N-39-21610-00001					0.21	0.35	0.43	71	N	NC			34	CA	
	with integral grilles	PEL-N-39-21611-00001					0.21	0.35	0.43	71	N	NC			34	CA	
High Altitude Glazing																	
1"	Advanced Low-E IG	PEL-N-39-21561-00001	3	3	3	Air	0.24	0.23	0.42	67		NC	SC	S			
	with grilles-between-the-glass	PEL-N-39-21562-00001					0.24	0.21	0.38	67		NC	SC	S			
	with integral grilles	PEL-N-39-21563-00001					0.24	0.21	0.38	67		NC	SC	S			
1"	SunDefense Low-E IG	PEL-N-39-21569-00001	3	3	3	Air	0.24	0.18	0.39	67		NC	SC	S			
	with grilles-between-the-glass	PEL-N-39-21570-00001					0.24	0.16	0.35	67		NC	SC	S			
	with integral grilles	PEL-N-39-21571-00001					0.24	0.16	0.35	67		NC	SC	S			
1"	NaturalSun Low-E IG	PEL-N-39-21553-00001	3	3	3	Air	0.24	0.39	0.47	66	N	NC					
	with grilles-between-the-glass	PEL-N-39-21554-00001					0.24	0.35	0.43	66	N	NC					
	with integral grilles	PEL-N-39-21555-00001					0.24	0.35	0.43	66	N	NC					

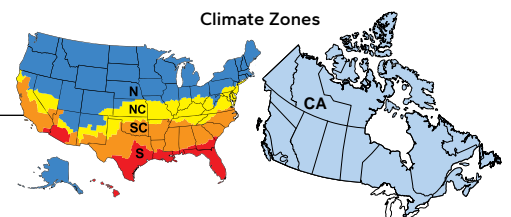
R-Value = 1/U-Factor
 SHGC = Solar Heat Gain Coefficient
 VLT % = Visible Light Transmission
 CR = Condensation Resistance
 ER = Canadian Energy Rating

(1) Glazing performance values are calculated for Pine using NFRC 100, NFRC 200 and NFRC 500. Thermal performance of other wood species may vary. ENERGY STAR® values are updated to 2023 (Version 7) criteria.

(2) The values shown are based on Canada's updated ENERGY STAR® 2020 initiative.

Based on unit size, some products will use 2.5 mm glass that will have equivalent or improved performance from what is shown.

Visit www.energystar.gov for Energy Star guidelines.





Architect Series® Traditional Casement Window

Glazing Performance - Total Unit

Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)			Gap Fill	Performance Values ¹				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Mid	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ²	
											Zone				ER	Zone
Fixed Triple-Pane Glazing - Wood Exterior											N	NC	SC	S	CA	
1"	Advanced Low-E IG	PEL-N-41-43020-00001	3	3	3	Argon	0.19	0.27	0.49	71	N	NC			32	CA
	with grilles-between-the-glass	PEL-N-41-43021-00001					0.20	0.24	0.44	71	N	NC			29	CA
	with integral grilles	PEL-N-41-43022-00001					0.20	0.24	0.44	71	N	NC			29	CA
1"	SunDefense™ Low-E IG	PEL-N-41-43024-00001	3	3	3	Argon	0.19	0.20	0.45	72	N	NC	SC	S	28	CA
	with grilles-between-the-glass	PEL-N-41-43025-00001					0.20	0.18	0.40	72	N	NC	SC	S	25	CA
	with integral grilles	PEL-N-41-43026-00001					0.20	0.18	0.40	72	N	NC	SC	S	25	CA
1"	NaturalSun Low-E IG	PEL-N-41-43016-00001	3	3	3	Argon	0.20	0.45	0.55	71	N				41	CA
	with grilles-between-the-glass	PEL-N-41-43017-00001					0.20	0.40	0.49	71	N	NC			38	CA
	with integral grilles	PEL-N-41-43018-00001					0.20	0.40	0.49	71	N	NC			38	CA
High Altitude Glazing																
1"	Advanced Low-E IG	PEL-N-41-42968-00001	3	3	3	Air	0.23	0.27	0.49	67		NC				
	with grilles-between-the-glass	PEL-N-41-42969-00001					0.24	0.24	0.44	67		NC				
	with integral grilles	PEL-N-41-42970-00001					0.23	0.24	0.44	67		NC				
1"	SunDefense Low-E IG	PEL-N-41-42976-00001	3	3	3	Air	0.23	0.20	0.45	67		NC	SC	S		
	with grilles-between-the-glass	PEL-N-41-42977-00001					0.23	0.18	0.40	67		NC	SC	S		
	with integral grilles	PEL-N-41-42978-00001					0.23	0.18	0.40	67		NC	SC	S		
1"	NaturalSun Low-E IG	PEL-N-41-42960-00001	3	3	3	Air	0.23	0.45	0.55	67	N				37	CA
	with grilles-between-the-glass	PEL-N-41-42961-00001					0.24	0.40	0.49	67	N	NC				
	with integral grilles	PEL-N-41-42962-00001					0.24	0.40	0.49	67	N	NC				

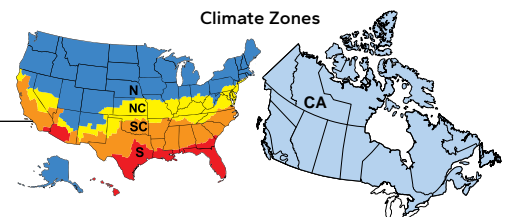
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 CR = Condensation Resistance
 ER = Canadian Energy Rating

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Based on unit size, some products will use 2.5 mm glass that will have equivalent or improved performance from what is shown.

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Architect Series® Traditional Casement Window

Glazing Performance - Total Unit

Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	Performance Values ¹				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.		U-Factor	SHGC	VLT %	CR	U. S.		Canada ²			
										Zone		ER	Zone		
Vent - Laminated Impact-Resistant Glass										N	NC	SC	S	CA	
11/16"	Clear IG	PEL-N-11-24237-00001	3	8	Air	0.48	0.53	0.58	40						
	with grilles-between-the-glass	PEL-N-11-24238-00001				0.49	0.49	0.53	40						
	with integral grilles	PEL-N-11-24239-00001				0.48	0.49	0.53	40						
11/16"	Advanced Low-E IG	PEL-N-11-24365-00001	3	8	Argon	0.34	0.27	0.49	52						
	with grilles-between-the-glass	PEL-N-11-24366-00001				0.36	0.25	0.45	52						
	with integral grilles	PEL-N-11-24367-00001				0.35	0.25	0.45	52						
11/16"	SunDefense™ Low-E IG	PEL-N-11-24361-00001	3	8	Argon	0.33	0.20	0.46	52						
	with grilles-between-the-glass	PEL-N-11-24362-00001				0.35	0.19	0.41	52						
	with integral grilles	PEL-N-11-24363-00001				0.35	0.19	0.41	52						
Tinted Laminated Impact-Resistant Glass															
11/16"	Bronze Advanced Low-E IG	PEL-N-11-24365-00002	3	8	Argon	0.34	0.25	0.29	52						
	with grilles-between-the-glass	PEL-N-11-24366-00002				0.36	0.23	0.27	52						
	with integral grilles	PEL-N-11-24367-00002				0.35	0.23	0.27	52						
11/16"	Gray Advanced Low-E IG	PEL-N-11-24365-00003	3	8	Argon	0.34	0.25	0.23	52						
	with grilles-between-the-glass	PEL-N-11-24366-00003				0.36	0.23	0.21	52						
	with integral grilles	PEL-N-11-24367-00003				0.35	0.23	0.21	52						
11/16"	11/16" Green Advanced Low-E IG	PEL-N-11-24365-00004	3	8	Argon	0.34	0.26	0.40	52						
	with grilles-between-the-glass	PEL-N-11-24366-00004				0.36	0.24	0.36	52						
	with integral grilles	PEL-N-11-24367-00004				0.35	0.24	0.36	52						
Fixed - Laminated Impact-Resistant Glass															
11/16"	Clear IG	PEL-N-1-59235-00001	3	8	Air	0.49	0.60	0.66	40						
	with grilles-between-the-glass	PEL-N-1-59236-00001				0.51	0.54	0.59	40						
	with integral grilles	PEL-N-1-59237-00001				0.50	0.54	0.59	40						
11/16"	Advanced Low-E IG	PEL-N-1-59363-00001	3	8	Argon	0.33	0.30	0.56	52						
	with grilles-between-the-glass	PEL-N-1-59364-00001				0.36	0.27	0.50	52						
	with integral grilles	PEL-N-1-59365-00001				0.35	0.27	0.50	52						
11/16"	SunDefense™ Low-E IG	PEL-N-1-59359-00001	3	8	Argon	0.32	0.23	0.52	52				S		
	with grilles-between-the-glass	PEL-N-1-59360-00001				0.35	0.21	0.46	52						
	with integral grilles	PEL-N-1-59361-00001				0.34	0.21	0.46	52						
Tinted Laminated Impact-Resistant Glass															
11/16"	Bronze Advanced Low-E IG	PEL-N-1-59363-00002	3	8	Argon	0.33	0.29	0.33	52						
	with grilles-between-the-glass	PEL-N-1-59364-00002				0.36	0.26	0.30	52						
	with integral grilles	PEL-N-1-59365-00002				0.35	0.26	0.30	52						
11/16"	Gray Advanced Low-E IG	PEL-N-1-59363-00003	3	8	Argon	0.33	0.28	0.26	52						
	with grilles-between-the-glass	PEL-N-1-59364-00003				0.36	0.26	0.24	52						
	with integral grilles	PEL-N-1-59365-00003				0.35	0.26	0.24	52						
11/16"	Green Advanced Low-E IG	PEL-N-1-59363-00004	3	8	Argon	0.33	0.30	0.45	52						
	with grilles-between-the-glass	PEL-N-1-59364-00004				0.36	0.27	0.41	52						
	with integral grilles	PEL-N-1-59365-00004				0.35	0.27	0.41	52						

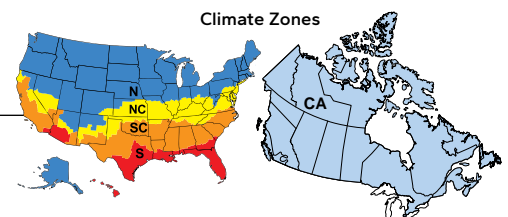
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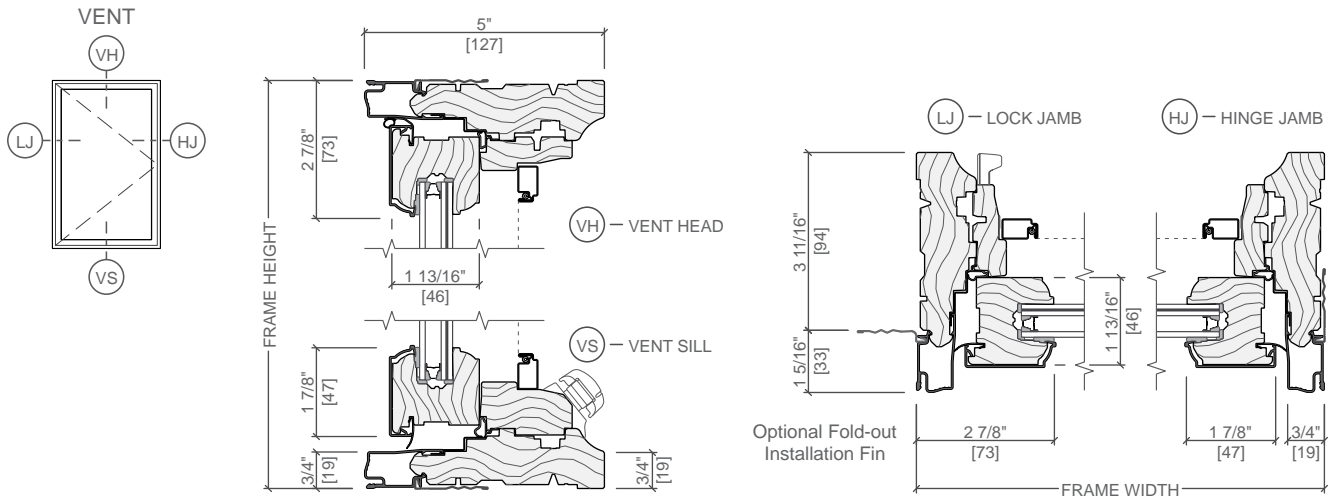




Architect Series® Traditional Casement Window

Products with Impact-Resistant Glass

Product	Design Pressure Large Missile Rating D		Hallmark Certified	Florida Product Approval System
	Minimum	Maximum		
Vent				
11/16" Insulated Glass PVB	60	75	411-H-1339	FL10015
1" Insulated Glass SGP	75	+75 / -85	411-H-1339	FL10015
Large Fixed				
11/16" Insulated Glass PVB	60	75	411-H-1339	FL10022
1" Insulated Glass SGP	75	+75 / -85	411-H-1339	FL10022



(-) = Not Available

All sizes and glass types are tested for air/water/structural and impact-resistance, and are certified for wind zone 4, large missile rating D.

Florida Product Approval System number not needed if Miami-Dade County approved.

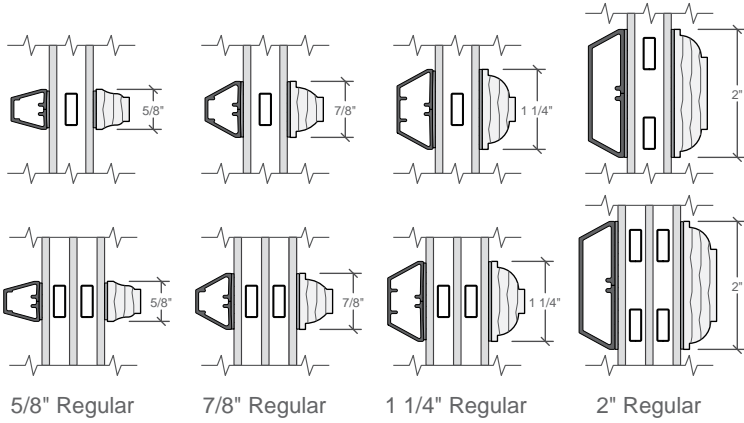
Consult your local building code to ensure products meet all requirements.



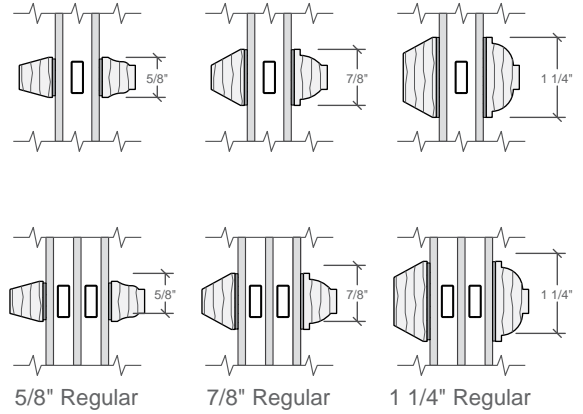
Grille Profiles

Traditional Style Collection - Integral Light Technology®

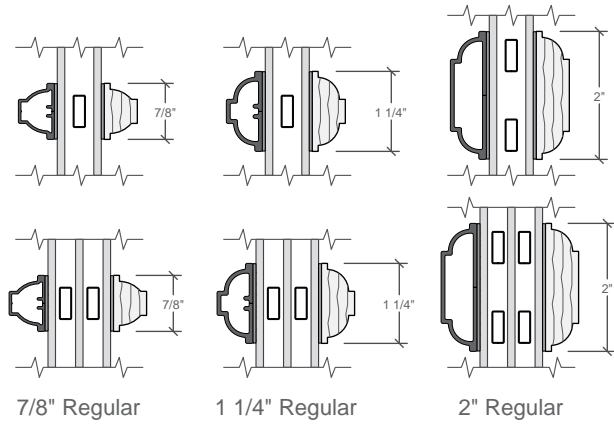
Putty Glaze and Ogee Grilles
Clad Exterior - Wood Interior



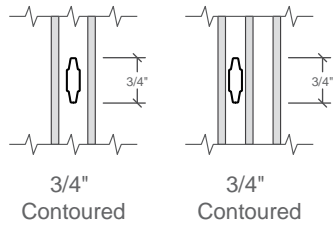
Putty Glaze and Ogee Grilles
Wood Exterior - Wood Interior



Ogee Grilles
Clad Exterior - Wood Interior



Grilles-Between-the-Glass



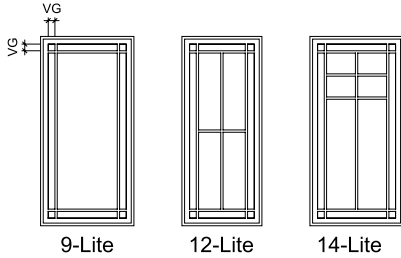
Interior wood ILT grilles available in Pine, Mahogany or Douglas Fir to match complete unit.
Exterior wood ILT grilles available in Pine or Mahogany to match complete unit.



Grille Patterns

Integral Light Technology® Grilles

Prairie Lite Patterns



Size range availability is for 3/4", 7/8" and 1-1/4" grille width.
Standard corner lite dimension for Prairie patterns = 2-1/2" VG.

9-Lite

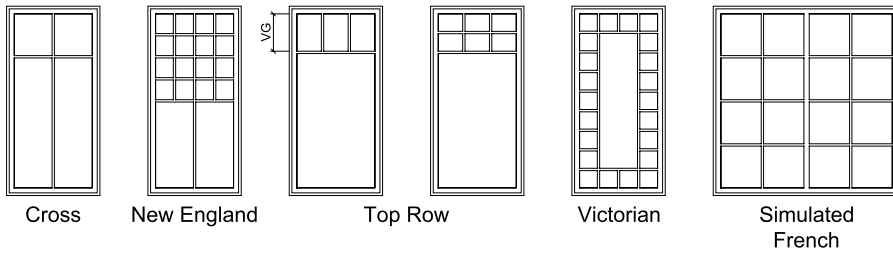
- Available in all standard and special sizes.

12-Lite

- Available in units ≥ 1'9" and ≤ 2'11" in width, and ≥ 1'9" in height.

14-Lite

- Available in units ≥ 1'9" in width and ≥ 2'11" in height.



Cross

- Standard visible glass to separator bar = one-quarter of total visible glass height.

New England

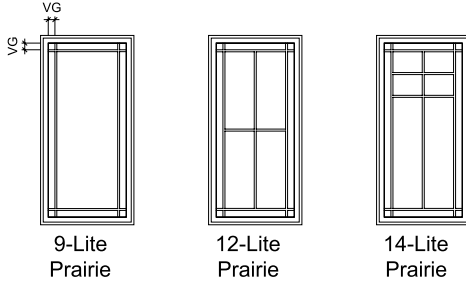
- Standard visible glass to separator bar = half of total visible glass height.

Top Row

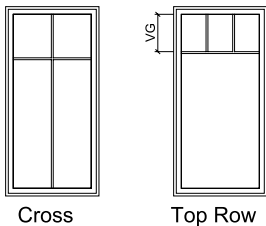
- Standard visible glass to separator bar = 14" or half of total visible glass height, whichever is smaller.

Grilles-Between-the-Glass

Prairie Lite Patterns



Other Available Patterns



Cross

- Available for units with frame heights ≥ 35". Standard visible glass to separator bar = 1/4 of total visible glass height.

Top Row

- Standard visible glass to separator bar = 14" for frame heights >35". Standard visible glass to separator bar = 21" for 35" frame heights and optional for 41" frame height. Separator bar at 12" or 16" optional for frame heights >41".

For traditional patterns, see size tables.

VG = Visible Glass
Lite dimensions noted can vary.
Custom configurations are also available, for details contact your local Pella sales representative.



Architect Series® Traditional Casement Window

Size Tables

	(451) (432)	(552) (533)	(603) (584)	(654) (635)	(756) (737)	(832) (813)	(908) (889)
Opening	1' 5 3/4"	1' 9 3/4"	1' 11 3/4"	2' 1 3/4"	2' 5 3/4"	2' 8 3/4"	2' 11 3/4"
Frame	1' 5"	1' 9"	1' 11"	2' 1"	2' 5"	2' 8"	2' 11"
(375) (356)	1714	2114	2314	2514	2914	3214	3514
(451) (432)	1717	2117	2317	2517	2917	3217	3517
(552) (533)		2121					
(603) (584)			2323				
(654) (635)	1725	2125	2325	2525	2925	3225	3525
(756) (737)				2929			

Opening Dimensions

Clad Exterior Units: Dimensions shown in tables are rough opening dimensions.

Wood Exterior Units: Use frame dimension plus dimensions below. This dimension includes the use of standard 1-1/8" wood subsill.

Frame	Rough		Masonry	
Brickmould	Width	Height	Width	Height
STD	+ 3/4"	+1-7/8"	+ 3-1/8"	+ 3-1/8"
3-1/2"	+ 3/4"	+1-7/8"	+ 6-3/8"	+ 4-3/4"

For clad and wood units with HurricaneShield® impact-resistant glass, see the product installation instructions or refer to local building code requirements.

Not to scale.

Ⓢ = Fixed Unit Only

Traditional grille patterns shown. Refer to Clad/Wood Overview Section for additional patterns and profiles.

Venting transoms are available as casements or awnings.



Architect Series® Traditional Casement Window

Size Tables

Vent and Fixed Units

	(451) (432)	(552) (533)	(603) (584)	(654) (635)	(756) (737)	(832) (813)	(908) (889)
Opening	1' 5 3/4"	1' 9 3/4"	1' 11 3/4"	2' 1 3/4"	2' 5 3/4"	2' 8 3/4"	2' 11 3/4"
Frame	1' 5"	1' 9"	1' 11"	2' 1"	2' 5"	2' 8"	2' 11"
(832) (813)							
(908) (889)							
(1 060) (1 041)							
(1 213) (1 194)							
(1 365) (1 346)							
(1 518) (1 499)							
(1 670) (1 651)							
(1 822) (1 803)							
(1 873) (1 854)							

Egress Notes:

Check all applicable local codes for emergency egress requirements.

- E = Window meets minimum clear opening of 24" height, 20" width, and 5.7 ft².
- E1 = Window meets minimum clear opening of 24" height, 20" width, and 5.0 ft².
- E2 = With optional side pivot hardware, window meets minimum clear opening of 24" height, 20" width, and 5.7 ft².
- E3 = With optional side pivot hardware, window meets minimum clear opening of 24" height, 20" width, and 5.0 ft².

See Design Data pages in this section for clear opening dimensions.

Clear opening (egress) information does not take into consideration the addition of a Rolscreen (or any other accessory) to the product. You should consult your local building code to ensure products with Rolscreens meet egress requirements.

Side pivot hardware reduces Performance class to 'R'.

Opening Dimensions

Clad Exterior Units: Dimensions shown in tables are rough opening dimensions.

Wood Exterior Units: Use frame dimension plus dimensions below. This dimension includes the use of standard 1-1/8" wood subsill.

Frame	Rough		Masonry	
	Width	Height	Width	Height
Brickmould				
STD	+ 3/4"	+1-7/8"	+ 3-1/8"	+ 3-1/8"
3-1/2"	+ 3/4"	+1-7/8"	+ 6-3/8"	+ 4-3/4"

For clad and wood units with HurricaneShield® impact-resistant glass, see the product installation instructions or refer to local building code requirements.

Not to scale.

F = Fixed Unit Only

T = Tempered glass due to aspect ratio.

Traditional grille patterns shown. Refer to Clad/Wood Overview Section for additional patterns and profiles.



Architect Series® Traditional Casement Window

Size Tables

Fixed Units

	(1 060) (1 041)	(1 213) (1 194)	(1 365) (1 346)	(1 518) (1 499)
Opening	3' 5 3/4"	3' 11 3/4"	4' 5 3/4"	4' 11 3/4"
Frame	3' 5"	3' 11"	4' 5"	4' 11"
(1 873) (1 854)	(1 822) (1 803)	(1 670) (1 651)	(1 365) (1 346)	(1 213) (1 194)
6' 1 3/4"	5' 11 3/4"	5' 5 3/4"	4' 5 3/4"	3' 11 3/4"
6' 1"	5' 11"	5' 5"	4' 11"	3' 11"
	4173	4773	5373	5973
	4171	4771	5371	5971
	4165	4765	5365	5965
	4159	4759	5359	5959
	4153	4753	5353	5953
	4147	4747	5347	5947
	4141	4741	5341	5941
	4135	4735	5335	5935
(1 873) (1 854)	(1 822) (1 803)	(1 670) (1 651)	(1 365) (1 346)	(1 213) (1 194)
6' 1 3/4"	5' 11 3/4"	5' 5 3/4"	4' 5 3/4"	3' 11 3/4"
6' 1"	5' 11"	5' 5"	4' 11"	3' 11"
	4173	4773	5373	5973
	4171	4771	5371	5971
	4165	4765	5365	5965
	4159	4759	5359	5959
	4153	4753	5353	5953
	4147	4747	5347	5947
	4141	4741	5341	5941
	4135	4735	5335	5935
(1 060) (1 041)	(1 060) (1 041)	(1 213) (1 194)	(1 365) (1 346)	(1 518) (1 499)
3' 5 3/4"	3' 5 3/4"	3' 11 3/4"	4' 5 3/4"	4' 11 3/4"
3' 5"	3' 5"	3' 11"	4' 5"	4' 11"
	4135	4735	5335	5935
(908) (889)	(908) (889)	(1 060) (1 041)	(1 213) (1 194)	(1 365) (1 346)
2' 11 3/4"	2' 11 3/4"	3' 5 3/4"	4' 5 3/4"	4' 11 3/4"
2' 11"	2' 11"	3' 5"	4' 5"	4' 11"
	4135	4735	5335	5935

Opening Dimensions

Clad Exterior Units: Dimensions shown in tables are rough opening dimensions.

Wood Exterior Units: Use frame dimension plus dimensions below. This dimension includes the use of standard 1-1/8" wood subsill.

Frame	Rough		Masonry	
	Width	Height	Width	Height
STD	+ 3/4"	+1-7/8"	+ 3-1/8"	+ 3-1/8"
3-1/2"	+ 3/4"	+1-7/8"	+ 6-3/8"	+ 4-3/4"

For clad and wood units with HurricaneShield® impact-resistant glass, see the product installation instructions or refer to local building code requirements.

Not to scale.

Traditional grille patterns shown. Refer to Clad/Wood Overview Section for additional patterns and profiles.



Architect Series® Traditional Casement Window

Special Sizes and Dimensions

Special Size Frame Dimensions*

	Minimum	Maximum
Vent	1'1-3/4" W x 1'1-3/4" H (13.75" x 13.75") (349 x 349)	3'5" W x 8'0" H (41" x 96") (1041 x 2 438)
Fixed	10" W x 10" H (254 x 254)	12'0" W x 12'0" H (144" x 144") (3 658 x 3 658)

* Available within size range shown. Standard Performance Option only.

Keep frame dimensions to the nearest 1/8" increment. Frame width cannot exceed frame height on special size vent units.

If Call Height < 32, and Call Width < 32 then Call Width must equal Call Height for standard sizes.

Vent units Max frame area cannot be greater than 19.5 sq ft.

Fixed units Max frame area cannot be greater than 66.25 Sq ft, Max Glass Area cannot be greater than 60 Sq ft.

Contact your Pella representative for the availability of custom sizes smaller or larger than the parameters.

Miscellaneous Formulas

Visible Glass	Width = Frame – 5-3/4" Height = Frame – 5-3/4"
Actual Glass	Width = Frame – 4-3/8" Height = Frame – 4-3/8"

Clear Opening Height

Frame Height - 4-1/8"

Clear Opening Width

Hinge	Frame Width	Formula
Standard	FW ≥ 29" and ≤ 30-1/2"	FW - 9"
Standard	FW > 30-1/2"	FW - 9-3/4"
Side Pivot	FW ≥ 25" and ≤ 35"	FW - 4-3/8"

For units with FW > 35" reference Restricted Opening chart.

Side Pivot Clear Opening Formulas

Hinge	Frame Width	Frame Height	Clear Opening Width Formula	
			CLAD EXTERIOR	WOOD EXTERIOR
STD	17" to ≤ 29"	17" to ≤ 73"	Unit Width - 4.375	Unit Width - 4.375
	> 29" to ≤ 35"	29" to < 47"	Unit Width - 4.375	Unit Width - 4.375
Heavy Duty*	13.75" to < 17"	13.75" to ≤ 96"	(Unit Width x 0.8) - 2.95	(Unit Width x 0.892) - 4.219
	17" to < 19"	13.75" to ≤ 96"	(Unit Width x 0.9) - 4.65	(Unit Width x 0.9) - 4.35
	19" to < 25"	13.75" to ≤ 96"	(Unit Width x 0.883) - 4.433	(Unit Width x 0.883) - 4.133
	25" to 29"	13.75" to ≤ 96"	Unit Width - 5.55	Unit Width - 5.55
	> 29" to ≤ 35"	13.75" to ≤ 96"	(Unit Width x 0.9) - 4.15	(Unit Width x 0.917) - 4.533

Clear opening height = unit height - 4.125"

* All units with Impact glass or standard IG glass weighing 56 lbs. or more require heavy duty hinges.

NOTE: Performance Class and Grade for a Casement with additional options and Specialty windows may not be the same as Standard and Special size units. Please contact your local Pella representative for complete information.

Restricted Opening

Frame Width	Approximate Sash Opening Angle
> 35	28 degrees
36	26 degrees
37	25 degrees
38	24 degrees
39	23 degrees
40	22 degrees
41	21 degrees

Sash opening will be limited to the angle shown.

Units over 35 inches wide do NOT meet Egress.

Rectangle	Minimum		Maximum		Restrictions	
	Fixed					
	W	10"	144"	Maximum Glass weight is 400 Pounds		
	H	10"	144"	Maximum frame size is 66.25 ft ²		
	Vent w/Roto Operator (See standard product for Clear Opening formulas)					
	W	17"	35"			
	H	17"	73"			
	Vent - w/ Roto Operator w/ Side Pivot					
	W	13-3/4"	35"	Maximum frame size is 19.5 ft ²		
	H	13-3/4"	96"			
	Vent - w/ Roto Operator w/Side Pivot Restricted Opening					
	W	35"	41"	Units will NOT meet egress requirements. Applies to all vent units with Width (W) > 35"		
H	35"	96"				

Glass Weight Formula: Actual Glass Width (W) x Actual Glass Height (H) x Actual Glass Thickness ÷ 11

Glazing weight in pounds, all Glass Width (W), Height (H) and Thickness are in inches.

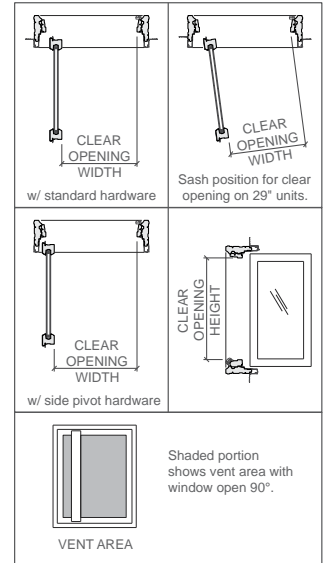


Architect Series® Traditional Casement Window

Design Data

Vent and Fixed, Wood and Aluminum-Clad Exteriors

Unit	Egress		Clear Opening			Visible Glass Ft²	Standard Glass Thickness (mm)			Performance Class & Grade ¹	
	Without Rolscreen	With Rolscreen	Width (Inches)	Height (Inches)	Ft²		Dual-Pane Glazing		Triple-Pane Glazing	Clad	Wood
							Annealed	Tempered			
1732			7-1/4	27-7/8	1.4	2.0	2.1	2.5	3	CW50	LC50
1735			7-1/4	30-7/8	1.6	2.3	2.3	2.5	3	CW50	LC50
1741			7-1/4	36-7/8	1.9	2.8	2.8	2.5	3	CW50	LC50
1747			7-1/4	42-7/8	2.2	3.2	3.2	2.5	3	CW50	LC50
1753			7-1/4	48-7/8	2.5	3.7	3.7	2.5	3	CW50	LC50
1759			7-1/4	54-7/8	2.8	4.2	4.2	2.5	3	CW50	LC50
1765			7-1/4	60-7/8	3.1	4.7	4.6	2.5	3	CW50	LC50
1771T			7-1/4	66-7/8	3.4	5.2	5.1	—	3	CW50	LC50
1773T			7-1/4	68-7/8	3.5	5.3	5.3	—	3	CW50	LC50
2132			11-1/4	27-7/8	2.2	2.7	2.8	2.5	3	CW50	LC50
2135			11-1/4	30-7/8	2.4	3.1	3.1	2.5	3	CW50	LC50
2141			11-1/4	36-7/8	2.9	3.7	3.7	2.5	3	CW50	LC50
2147			11-1/4	42-7/8	3.3	4.4	4.4	2.5	3	CW50	LC50
2153			11-1/4	48-7/8	3.8	5.0	5.0	2.5	3	CW50	LC50
2159			11-1/4	54-7/8	4.3	5.7	5.6	2.5	3	CW50	LC50
2165			11-1/4	60-7/8	4.8	6.3	6.3	2.5	3	CW45/CW50	LC45/LC50
2171			11-1/4	66-7/8	5.2	7.0	6.9	2.5	3	CW45/CW50	LC45/LC50
2173			11-1/4	68-7/8	5.4	7.2	7.1	2.5	3	CW40/CW50	LC40/LC50
2332			13-1/4	27-7/8	2.6	3.1	3.1	2.5	3	CW50	LC50
2335			13-1/4	30-7/8	2.8	3.4	3.5	2.5	3	CW50	LC50
2341			13-1/4	36-7/8	3.4	4.2	4.2	2.5	3	CW50	LC50
2347			13-1/4	42-7/8	3.9	4.9	4.9	2.5	3	CW50	LC50
2353			13-1/4	48-7/8	4.5	5.6	5.7	2.5	3	CW50	LC50
2359			13-1/4	54-7/8	5.0	6.4	6.4	2.5	3	CW45/CW50	LC45/LC50
2365			13-1/4	60-7/8	5.6	7.1	7.1	2.5	3	CW40/CW50	LC40/LC50
2371			13-1/4	66-7/8	6.2	7.9	7.8	2.5	3	CW35/CW50	LC35/LC50
2373			13-1/4	68-7/8	6.3	8.1	8.1	2.5	3	CW35/CW50	LC35/LC50
2532			15-1/4	27-7/8	3.0	3.4	3.5	2.5	3	CW50	LC50
2535			15-1/4	30-7/8	3.3	3.8	3.9	2.5	3	CW50	LC50
2541	E ₃		20-5/8	36-7/8	5.3	4.6	4.7	2.5	3	CW50	LC50
2547	E ₂		20-5/8	42-7/8	6.1	5.5	5.5	2.5	3	CW50	LC50
2553	E ₂		20-5/8	48-7/8	7.0	6.3	6.3	2.5	3	CW50	LC50
2559	E ₂		20-5/8	54-7/8	7.9	7.1	7.1	2.5	3	CW45/CW50	LC45/LC50
2565	E ₂		20-5/8	60-7/8	8.7	7.9	7.9	2.5	3	CW40/CW50	LC40/LC50
2571	E ₂		20-5/8	66-7/8	9.6	8.7	8.7	2.5	3	CW35/CW50	LC35/LC50
2573	E ₂		20-5/8	68-7/8	9.9	9.0	9.0	2.5	3	CW30/CW50	LC30/LC50
2932			24-5/8	27-7/8	4.8	4.1	4.2	2.5	3	CW50	LC50
2935	E ₃		24-5/8	30-7/8	5.3	4.6	4.7	2.5	3	CW50	LC50
2941	E ₂	E ₂	24-5/8	36-7/8	6.3	5.6	5.7	2.5	3	CW50	LC50
2947	E	E ₂	20	42-7/8	6.0	6.6	6.7	2.5	3	CW50	LC50
2953	E	E ₂	20	48-7/8	6.8	7.6	7.6	2.5	3	CW50	LC50
2959	E	E ₂	20	54-7/8	7.6	8.6	8.6	2.5	3	CW45/CW50	LC45/LC50
2965	E	E ₂	20	60-7/8	8.5	9.5	9.6	2.5	3	CW40/CW50	LC40/LC50
2971	E	E ₂	20	66-7/8	9.3	10.5	10.5	3	3	CW45/CW50	LC45/LC50
2973	E	E ₂	20	68-7/8	9.6	10.9	10.9	3	3	CW45/CW50	LC45/LC50
3232	E ₃		27-5/8	27-7/8	5.3	4.6	4.8	2.5	3	CW50	LC50
3235	E ₂		27-5/8	30-7/8	5.9	5.2	5.3	2.5	3	CW50	LC50
3241	E ₂	E ₁	27-5/8	36-7/8	7.1	6.3	6.4	2.5	3	CW50	LC50
3247	E	E	22-1/4	42-7/8	6.6	7.4	7.5	2.5	3	CW50	LC50
3253	E	E	22-1/4	48-7/8	7.6	8.5	8.6	2.5	3	CW50	LC50
3259	E	E	22-1/4	54-7/8	8.5	9.6	9.7	2.5	3	CW45/CW50	LC45/LC50
3265	E	E	22-1/4	60-7/8	9.4	10.7	10.8	3	3	CW50	LC50
3271	E	E	22-1/4	66-7/8	10.3	11.9	11.9	3	3	CW45/CW50	LC45/LC50
3273	E	E	22-1/4	68-7/8	10.6	12.2	12.3	3	3	CW45/CW50	LC45/LC50
3532F			—	—	—	5.3	2.5	3	3	CW50	LC50
3535	E ₁	E ₁	25-1/4	30-7/8	5.4	5.8	5.9	2.5	3	CW50	LC50
3541	E	E	25-1/4	36-7/8	6.5	7.0	7.2	2.5	3	CW50	LC50
3547	E	E	25-1/4	42-7/8	7.5	8.3	8.4	2.5	3	CW50	LC50
3553	E	E	25-1/4	48-7/8	8.6	9.5	9.6	2.5	3	CW45/CW50	LC45/LC50
3559	E	E	25-1/4	54-7/8	9.6	10.7	10.8	3	3	CW50	LC50
3565	E	E	25-1/4	60-7/8	10.7	12.0	12.0	3	3	CW50	LC50
3571	E	E	25-1/4	66-7/8	11.7	13.2	13.3	3	3	CW45/CW50	LC45/LC50
3573	E	E	25-1/4	68-7/8	12.1	13.6	13.7	3	3	CW45/CW50	LC45/LC50



Egress Notes:

Check all applicable local codes for emergency egress requirements.

- E = Window meets minimum clear opening of 24" height, 20" width, and 5.7 ft².
- E1 = Window meets minimum clear opening of 24" height, 20" width, and 5.0 ft².
- E2 = With optional side pivot hardware, window meets minimum clear opening of 24" height, 20" width, and 5.7 ft².
- E3 = With optional side pivot hardware, window meets minimum clear opening of 24" height, 20" width, and 5.0 ft².

Clear opening (egress) information does not take into consideration the addition of a Rolscreen (or any other accessory) to the product. You should consult your local building code to ensure products with Rolscreens meet egress requirements.

Side pivot hardware reduces Performance class to 'R'.

(-) = Not Applicable

F = Fixed only

T = Tempered required due to aspect ratio.

(1) Maximum performance when glazed with the appropriate glass thickness and using standard hinge hardware. Second value, where shown, requires tempered glass.

To convert area to square meters (m²), multiply square feet by 0.0929.



Architect Series® Traditional Casement Window

Design Data

Fixed, Wood and Aluminum-Clad Exteriors								
Unit	Visible Glass Ft ²	Standard Glass Thickness (mm)				Performance Class & Grade ⁽¹⁾		
		Dual-Pane Glazing		Triple-Pane Glazing		Clad	Wood	
		Annealed	Tempered	Annealed	Tempered			
4135	7.2	2.5	3	3	3	CW50	LC50	
4141	8.6	2.5	3	3	3	CW50	LC50	
4147	10.1	3	3	3	3	CW50	LC50	
4153	11.6	3	3	3	3	CW50	LC50	
4159	13.0	3	3	3	3	CW50	LC50	
4165	14.5	3	3	3	3	CW50	LC50	
4171	16.0	3	3	3	3	CW45/CW50	LC45/LC50	
4173	16.5	3	3	3	3	CW45/CW50	LC45/LC50	
4735	8.4	2.5	3	3	3	CW50	LC50	
4741	10.1	3	3	3	3	CW50	LC50	
4747	11.8	3	3	3	3	CW50	LC50	
4753	13.5	3	3	3	3	CW50	LC50	
4759	15.3	3	3	3	3	CW50	LC50	
4765	17.0	3	3	3	3	CW45/CW50	LC45/LC50	
4771	18.7	4	4	4	4	CW50	LC50	
4773	19.3	4	4	4	4	CW50	LC50	
5335	9.6	2.5	3	3	3	CW45/CW50	LC45/LC50	
5341	11.6	3	3	3	3	CW50	LC50	
5347	13.5	3	3	3	3	CW50	LC50	
5353	15.5	3	4	3	4	CW45/CW50	LC45/LC50	
5359	17.5	3	4	3	4	CW40/CW50	LC40/LC50	
5365	19.4	4	4	4	4	CW50	LC50	
5371	21.4	4	4	4	4	CW50	LC50	
5373	22.1	4	4	4	4	CW50	LC50	
5935	10.8	3	3	3	3	CW50	LC50	
5941	13.0	3	3	3	3	CW50	LC50	
5947	15.3	3	3	3	3	CW50	LC50	
5953	17.5	3	4	3	4	CW40/CW50	LC40/LC50	
5959	19.7	4	4	4	4	CW50	LC50	
5965	21.9	4	4	4	4	CW50	LC50	
5971	24.1	4	4	4	4	CW45/CW50	LC45/LC50	
5973	24.9	4	4	4	4	CW45/CW50	LC45/LC50	

Transoms											
Unit	Clear Opening (Inches)				Visible Glass Ft ²	Standard Glass Thickness (mm)			Performance Class & Grade ⁽¹⁾		
	Width	Height	Ft ²	Vent Area Ft ²		Dual-Pane Glazing		Triple- Pane Glazing	Clad	Wood	
						Annealed	Tempered				Annealed or Tempered
1714F	—	—	—	—	0.6	2.5	3	3	CW50	LC50	
1717	7 1/4	12 7/8	0.6	0.8	0.9	2.5	3	3	CW50	LC50	
1725F	—	—	—	—	1.5	2.5	3	3	CW50	LC50	
2114F	—	—	—	—	0.9	2.5	3	3	CW50	LC50	
2117F	—	—	—	—	1.2	2.5	3	3	CW50	LC50	
2121	11 1/4	16 7/8	1.3	1.5	1.6	2.5	3	3	CW50	LC50	
2125F	—	—	—	—	2.0	2.5	3	3	CW50	LC50	
2314F	—	—	—	—	1.0	2.5	3	3	CW50	LC50	
2317F	—	—	—	—	1.3	2.5	3	3	CW50	LC50	
2323	13 1/4	18 7/8	1.7	2.0	2.1	2.5	3	3	CW50	LC50	
2325F	—	—	—	—	2.3	2.5	3	3	CW50	LC50	
2514F	—	—	—	—	1.1	2.5	3	3	CW50	LC50	
2517F	—	—	—	—	1.5	2.5	3	3	CW50	LC50	
2525	15 1/4	20 7/8	2.2	2.5	2.6	2.5	3	3	CW50	LC50	
2914F	—	—	—	—	1.3	2.5	3	3	CW50	LC50	
2917F	—	—	—	—	1.8	2.5	3	3	CW50	LC50	
2925F	—	—	—	—	3.1	2.5	3	3	CW50	LC50	
2929	20	24 7/8	3.5	3.6	3.8	2.5	3	3	CW50	LC50	
3214F	—	—	—	—	1.5	2.5	3	3	CW50	LC50	
3217F	—	—	—	—	2.1	2.5	3	3	CW50	LC50	
3225F	—	—	—	—	3.5	2.5	3	3	CW50	LC50	
3514F	—	—	—	—	1.7	2.5	3	3	CW50	LC50	
3517F	—	—	—	—	2.3	2.5	3	3	CW50	LC50	
3525F	—	—	—	—	3.9	2.5	3	3	CW50	LC50	

(-) = Not Applicable

F = Fixed only

(1) Maximum performance when glazed with the appropriate glass thickness. Second value, where shown, requires tempered glass.

To convert area to square meters (m²), multiply square feet by 0.0929.



Architect Series® Traditional Casement Window

Detailed Product Description - Aluminum-Clad Exterior

Frame

- Select softwood, immersion treated with Pella's EnduraGuard® wood protection formula in accordance with WDMA I.S.-4. The EnduraGuard formula includes three active ingredients for protection against the effects of moisture, decay, stains from mold and mildew. Plus, an additional ingredient adds protection against termite damage.
- Interior exposed surfaces are clear pine.
- Exterior surfaces are clad with aluminum.
- Components are assembled with screws, staples and concealed corner locks
- Overall frame depth is 5" (127mm) for a wall depth of 3-11/16" (94mm).
- Optional factory-applied jamb extensions available between 4-9/16" (116mm) and 7-3/16" (183mm) wall depths.
- Optional factory-installed fold-out installation fins with flexible fin corners.
- Optional factory-applied EnduraClad® exterior trim.

Sash

- Select softwood, immersion treated with Pella's EnduraGuard® wood protection formula in accordance with WDMA I.S.-4. The EnduraGuard formula includes three active ingredients for protection against the effects of moisture, decay, stains from mold and mildew. Plus, an additional ingredient adds protection against termite damage.
- Interior exposed surfaces are clear pine.
- Exterior surfaces are clad with aluminum and sealed.
- Corners mortised and tenoned, glued and secured with metal fasteners.
- Sash thickness is [1-13/16" (46mm) for 11/16" [2-1/8" (54mm) for 1" glazing.
- Sash exterior and interior profile is ogee.

Weatherstripping

- Dual weatherstripping.
 - Flexible santoprene material compressed between frame and sash for positive seal on all four sides.
 - Secondary thermoplastic vulcanizate (TPV) leaf-type weatherstrip between edge of sash and frame on the vertical sides and bottom, and Santoprene® bulb-type weatherstrip on the top.

Glazing System¹

- Quality float glass complying with ASTM C 1036.
- Custom and high altitude [with argon] glazing available for 11/16" glazing only.
 - Silicone-glazed 11/16" dual-seal insulating glass [[annealed] [tempered]] [[clear] [[Advanced] [SunDefense™] [SunDefense+] [NaturalSun] [NaturalSun+] [AdvancedComfort] Low-E [with argon]] [[bronze] [gray] [green] Advanced Low-E with argon]].
 - or –
 - Silicone-glazed 1" triple-pane, dual seal insulating glass [[annealed] [tempered]] [[Advanced] [SunDefense™] [NaturalSun] Low-E [with argon]].
 - or –
- Impact-Resistant
 - Silicone-glazed 1" dual-seal impact-resistant insulating glass¹ SGP. [[tempered] [annealed]] exterior light is [[Advanced Low-E with argon] [clear] [bronze] [gray] [green]]. Laminated clear interior light.
 - or –
 - Silicone-glazed 11/16" dual-seal impact-resistant insulating glass¹ [PVB]. [[tempered] [annealed]] exterior light is [[Advanced Low-E with argon] [clear]]. Laminated [clear] interior light, or [[tempered] [annealed]] exterior light is [[Advanced Low-E with argon] [clear]]. Laminated [[bronze] [gray] [green]] interior light.

Exterior

- Aluminum-clad exteriors shall be finished with EnduraClad® protective finish, in a multi-step, baked-on finish.
 - Color is [standard] [feature] [custom]².
 - or –
- Aluminum-clad exteriors shall be finished with EnduraClad Plus protective finish with 70% fluoropolymer resin in a multi-step, baked-on finish
 - Color is [standard] [feature] [custom]².

Interior

- [Unfinished, ready for site finishing] [factory primed with one coat acrylic latex] [factory prefinished [paint] [stain]²].

Hardware

- Roto operator assembly
 - Steel worm gear sash operator with hardened gears.
 - Operator base is zinc die cast with painted finish.
 - Operator linkage, hinge slide, and hinge arms are stainless steel.
 - Exposed fasteners are stainless steel.
 - Hardware shall exceed 1,000 hours salt spray exposure per ASTM B 117.
- All vent units are available with left- or right-hand hinging.
- SureLock® System—A single handle locking system operates positive-acting arms that reach out and pull the sash into a locked position: one operating lock installed on units with frame height 29" and less, two unison operating locks installed on units with frame height over 29".
- Style of hardware is [Standard integrated fold-away crank and standard lock handle with [baked enamel] [Champagne] [White] [Brown] [Matte Black]] [Satin Nickel] [Oil-Rubbed Bronze] hardware finish].
- or –
- [Antiek fold-away crank and Antiek lock handle with [baked enamel] [Champagne] [White] [Brown] [Matte Black]] [Satin Nickel] [Oil-Rubbed Bronze] [distressed bronze] [distressed nickel] hardware finish].

Optional Products

Grilles

- Integral Light Technology® grilles
 - Interior grilles are [5/8" [7/8" [1-1/4" [2" ogee profile that are solid pine. Interior surfaces are [unfinished, ready for site finishing] [factory primed] [factory prefinished [paint] [stain] ²].
 - Exterior grilles are [5/8" putty glaze profile] [7/8" [putty glaze] [ogee] profile] [1-1/4" [putty glaze] [ogee] profile] [2" ogee profile] that are extruded aluminum.
 - Patterns are [Traditional] [Prairie] [Top Row] [Cross] [New England] [Victorian] [Simulated French].
 - Insulating glass contains non-glare spacer between the panes of glass.
 - Grilles are adhered to both sides of the insulating glass with VHB acrylic adhesive tape and aligned with the non-glare spacer.
 - or –
- Grilles-Between-the-Glass³
 - Insulating glass contains 3/4" contoured aluminum grilles permanently installed between two panes of glass (exterior air-space on triple-pane insulating glass).
 - Patterns are [Traditional] [Prairie] [Cross] [Top Row] [Custom – Equally Divided].
 - Interior color is [White] [Tan⁴] [Brown⁴] [Putty⁴] [Black] [Ivory] [Harvest] [Cordovan] [Brickstone].
 - Exterior color⁵ is [standard]².

Screens

- InView™ Screens
 - Vinyl-coated 18/18 mesh fiberglass screen cloth complying with the performance requirements of SMA 1201, set in aluminum frame fitted to inside of window, supplied complete with all necessary hardware.
 - Insect screen frame finish is [baked enamel] [Champagne] [White] [Brown] [Black].
 - or –
- Rolscreen® Retractable Screen
 - InView™ Screen cloth, self-storing, rolling, black vinyl-coated 18/18 mesh fiberglass screen cloth complying with ASTM D 3656 and the performance requirements of SMA 1201 mounted behind overhead cover.
 - Cover finish is [factory prefinished paint] [pine veneer wrapped over extruded aluminum with factory prefinished [paint] [stain]²].
 - Guides are aluminum extrusion with pine veneer wrapped over extruded aluminum with factory prefinished [paint] [stain]².

Hardware

- Optional factory applied limited opening hardware available for vent units in stainless steel; nominal 3" opening.
- Optional factory applied window opening control device available. Device allows window to open less than 4" with normal operation, with a release mechanism that allows the sash to open completely. Complies with ASTM F2090-17.

Sensors

- Optional factory installed integrated security sensors available in vent units.

(1) Low-E coated insulating glass is argon-filled (except high altitude). All other insulating glass (including high altitude Low-E) is air-filled.

(2) Contact your local Pella sales representative for current designs and color options.

(3) Available in clear or Low-E insulating glass with argon, and obscure insulated glass.

(4) Tan, Brown and Putty Interior GBG colors are available in single-tone (Brown/Brown, Tan/Tan or Putty/Putty). Other interior colors are also available with tan or brown exterior.

(5) Appearance of exterior grille color will vary depending on Low-E coating on glass.



Architect Series® Traditional Casement Window

Detailed Product Description - Wood Exterior

Frame

- Select softwood, immersion treated with Pella's EnduraGuard® wood protection formula in accordance with WDMA I.S.-4. The EnduraGuard formula includes three active ingredients for protection against the effects of moisture, decay, stains from mold and mildew. Plus, an additional ingredient adds protection against termite damage.
- Interior exposed surfaces are clear pine.
- Exterior surfaces are [pine: Factory Primed].
- Overall frame depth is 4-3/8" (111mm) for a wall depth of 4-3/16" (106mm).
- Optional factory-applied jamb extensions available between 4-9/16" (116mm) and 7-3/16" (183mm) wall depths, with Pella's standard wood exterior trim.

Sash

- Select softwood, immersion treated with Pella's EnduraGuard® wood protection formula in accordance with WDMA I.S.-4. The EnduraGuard formula includes three active ingredients for protection against the effects of moisture, decay, stains from mold and mildew. Plus, an additional ingredient adds protection against termite damage.
- Interior exposed surfaces are clear pine.
- Exterior surfaces are [Factory Primed] [ready-to-stain].
- Corners mortised and tenoned, glued and secured with metal fasteners.
- Sash thickness is [1-13/16" (46mm) for 11/16" [2-1/8" (54mm) for 1" glazing.
- Sash exterior profile is putty glaze, interior profile is ogee.

Weatherstripping

- Dual weatherstripping.
 - Flexible santoprene material compressed between frame and sash for positive seal on all four sides.
 - Secondary thermoplastic vulcanizate (TPV) leaf-type weatherstrip between edge of sash and frame.

Glazing System¹

- Quality float glass complying with ASTM C 1036.
- Custom and high altitude [with argon] glazing available.
- Silicone-glazed 11/16" dual-seal insulating glass [[annealed] [tempered]] [[clear] [[Advanced] [SunDefense™] [SunDefense+] [NaturalSun] [NaturalSun+] [AdvancedComfort] Low-E [with argon]] [[bronze] [gray] [green] Advanced Low-E with argon]].
– or –
- Silicone-glazed 1" triple-pane, dual-seal insulating glass [[annealed] [tempered]] [[Advanced] [SunDefense™] [NaturalSun] Low-E [with argon]].

Interior

- [Unfinished, ready for site finishing] [factory primed with one coat acrylic latex] [factory prefinished [paint] [stain]₃].

Hardware

- Roto operator assembly
 - Steel worm gear sash operator with hardened gears.
 - Operator base is zinc die cast with painted finish.
 - Operator linkage, hinge slide, and hinge arms are stainless steel.
 - Exposed fasteners are stainless steel.
 - Hardware will exceed 1,000 hours salt spray exposure per ASTM B 117.
- All vent units are available with left- or right-hand hinging.
- SureLock® System—A single handle locking system operates positive-acting arms that reach out and pull the sash into a locked position: one operating lock installed on units with frame height 29" or less, two unison operating locks installed on units with frame height over 29".
- Style of hardware is [Standard integrated fold-away crank and standard lock handle with [baked enamel [Champagne] [White] [Brown] [Matte Black] [Satin Nickel] [Oil-Rubbed Bronze] hardware finish].
– or –
- [Antiek fold-away crank and Antiek lock handle with [baked enamel [Champagne] [White] [Brown] [Matte Black]] [Satin Brass] [Satin Nickel] [Oil-Rubbed Bronze] [distressed bronze] [distressed nickel] hardware finish].

Optional Products

Grilles

- Integral Light Technology® grilles
 - Interior grilles are [5/8" [7/8" [1-1/4" ogee profile that are solid pine. Interior surfaces are [unfinished, ready for site finishing] [factory primed] [factory prefinished [paint] [stain]₃].
 - Exterior grilles are solid [5/8" [7/8" [1-1/4" putty glaze profile that are pine. Exterior surfaces are water repellent, preservative-treated in accordance with WDMA I.S.-4, and are [unfinished, ready for site finishing] [factory primed].
 - Patterns are [Traditional] [Prairie] [Top Row] [Cross] [New England] [Victorian] [Simulated French].
 - Insulating glass contains non-glare spacer between the panes of glass.
 - Grilles are adhered to both sides of the insulating glass with VHB acrylic adhesive tape and aligned with the non-glare spacer.
– or –
- Grilles-Between-the-Glass²
 - Insulating glass contains 3/4" contoured aluminum grilles permanently installed between two panes of glass (exterior air-space on triple-pane insulating glass).
 - Patterns are [Traditional] [Prairie] [Cross] [Top Row] [Custom – Equally Divided].
 - Interior color is [White] [Tan₄] [Brown₄] [Putty₄] [Black] [Ivory] [Harvest] [Cordovan] [Brickstone].
 - Exterior color₅ is [standard]₃.

Screens

- InView™ Screens
 - Vinyl-coated 18/18 mesh fiberglass screen cloth complying with the performance requirements of SMA 1201, set in aluminum frame fitted to inside of window, supplied complete with all necessary hardware.
 - Insect screen frame finish is [baked enamel [Champagne] [White] [Brown] [Black]].
– or –
- Roloscreen® Retractable Screen
 - InView™ Screen cloth, self-storing, rolling, black vinyl-coated 18/18 mesh fiberglass screen cloth complying with ASTM D 3656 and the performance requirements of SMA 1201 mounted behind overhead cover.
 - Cover finish is [factory prefinished paint] [pine veneer wrapped over extruded aluminum with factory prefinished [stain] [paint] ₃].
 - Guides are aluminum extrusion with [pine veneer wrapped over extruded aluminum with factory prefinished [paint] [stain] ₃].

Hardware

- Optional factory applied limited opening hardware available for vent units in stainless steel; nominal 3" opening.
- Optional factory applied window opening control device available. Device allows window to open less than 4" with normal operation, with a release mechanism that allows the sash to open completely. Complies with ASTM F2090-17.

Sensors

- Optional factory installed integrated security sensors available in vent units.

(1) Low-E coated insulating glass is argon-filled (except high altitude). All other insulating glass (including high altitude Low-E) is air-filled.

(2) Available in clear or Low-E insulating glass with argon, and obscure insulated glass

(3) Contact your local Pella sales representative for current designs and color options.

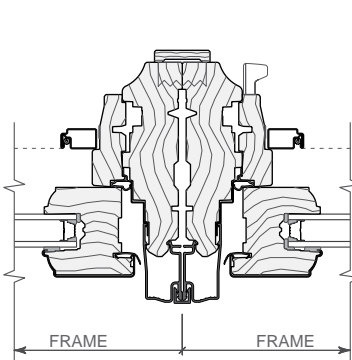
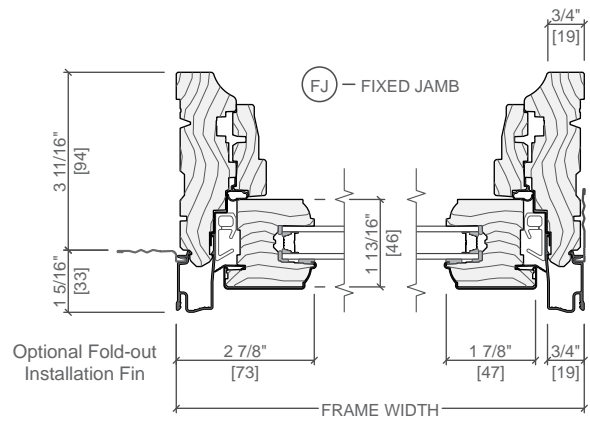
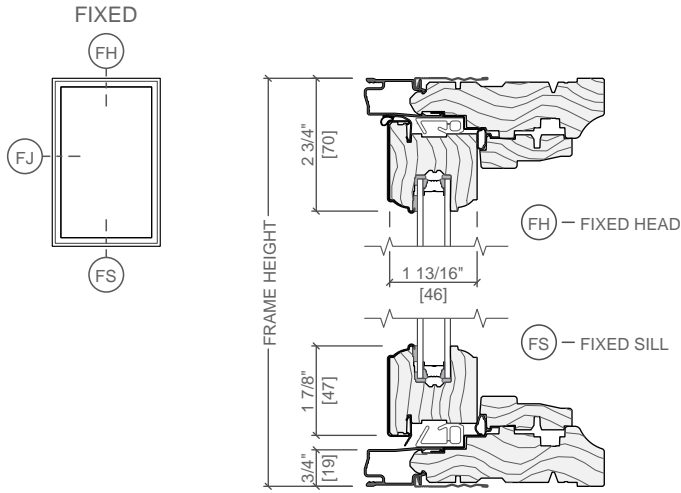
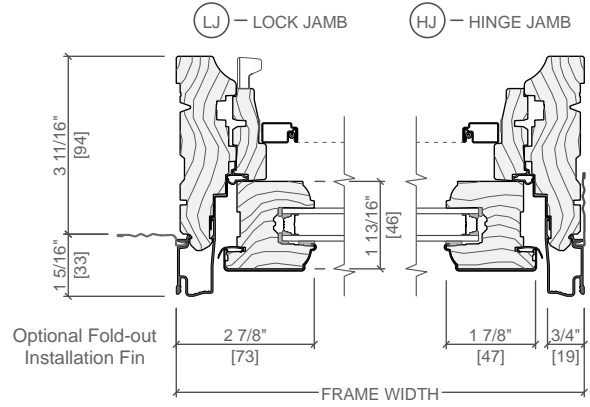
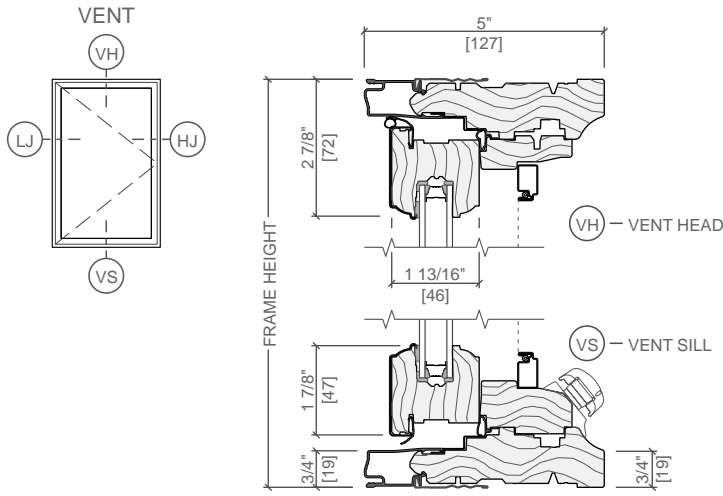
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(5) Appearance of exterior grille color will vary depending on Low-E coating on glass.

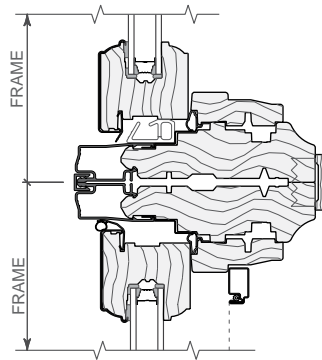


Architect Series® Traditional Casement Window

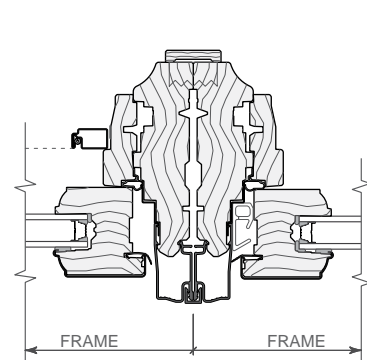
Unit Sections – Aluminum-Clad Exterior, Ogee Exterior Profile



VERTICAL JOINING MULLION
VENT / VENT



HORIZONTAL JOINING MULLION
TRANSOM / VENT



VERTICAL JOINING MULLION
VENT / FIXED

Scale 3" = 1' 0"

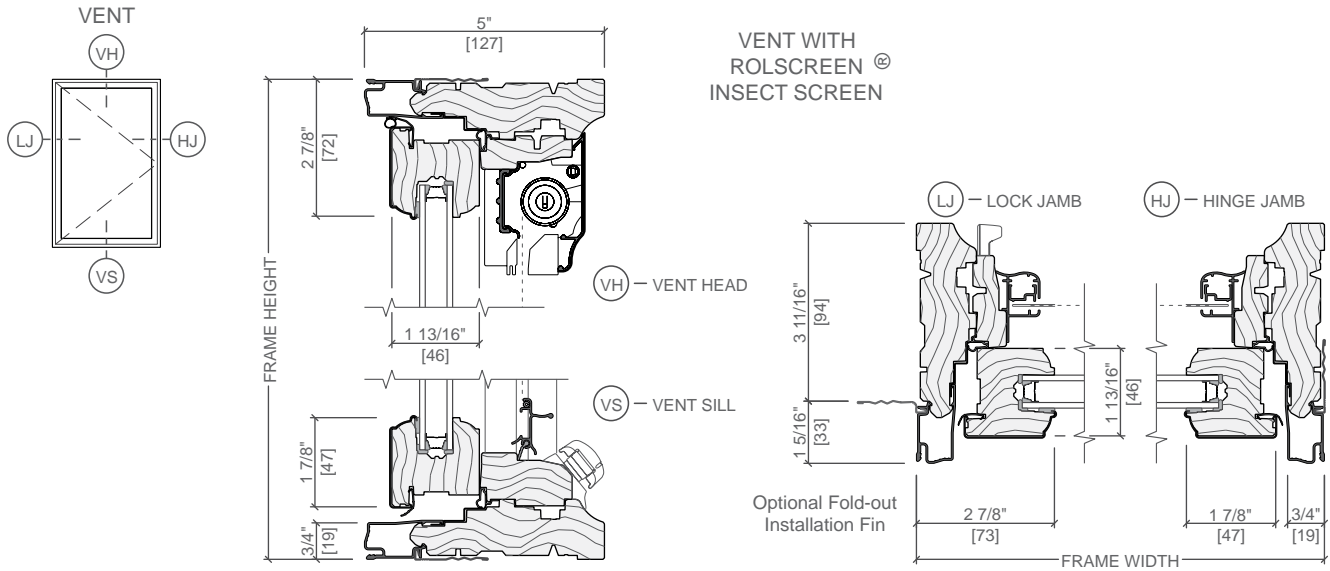
All dimensions are approximate.

See Combinations Section for mullion limitations and reinforcing requirements.



Architect Series® Traditional Casement Window

Unit Sections – Aluminum-Clad Exterior, Ogee Exterior Profile



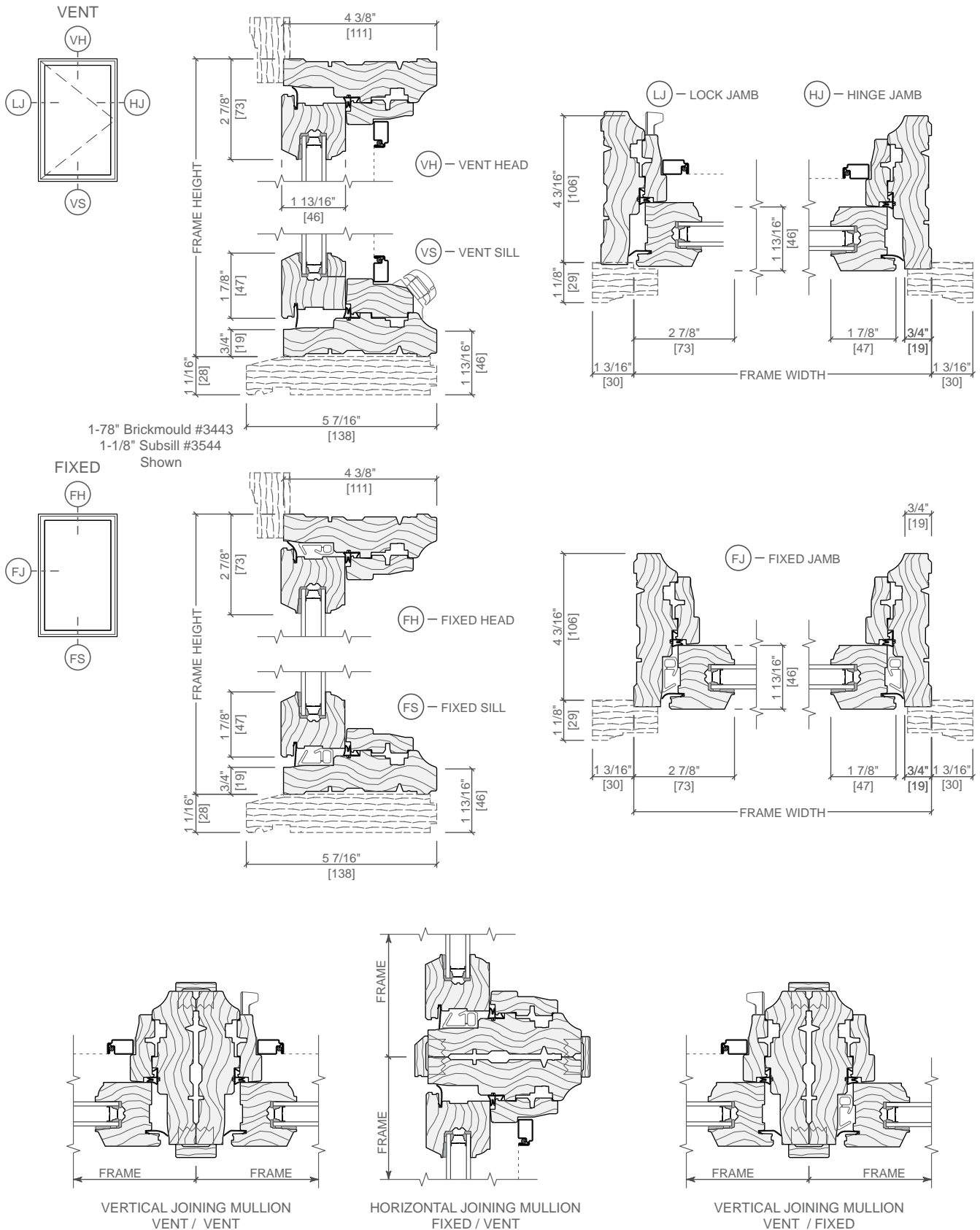
Scale 3" = 1' 0"

All dimensions are approximate.



Architect Series® Traditional Casement Window

Unit Sections – Wood Exterior, Putty Glaze Exterior Profile



Scale 3" = 1' 0"

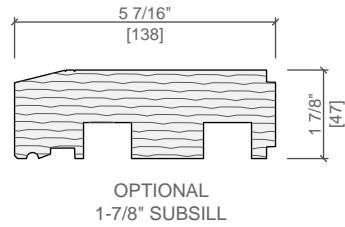
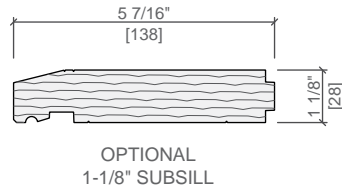
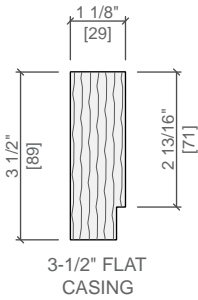
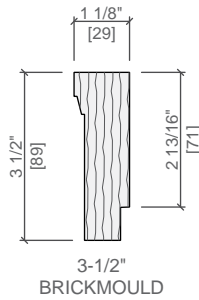
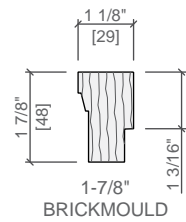
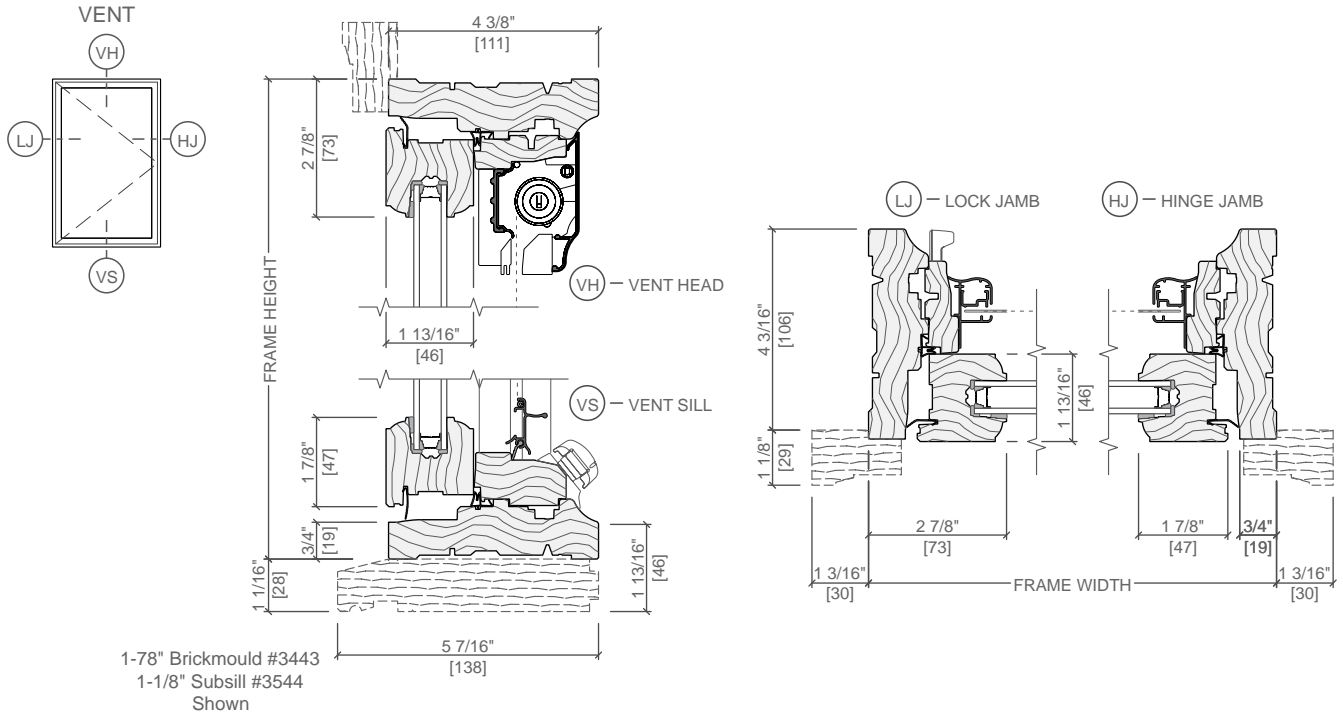
All dimensions are approximate.

See Combinations Section for mullion limitations and reinforcing requirements.



Architect Series® Traditional Casement Window

Unit Sections – Wood Exterior, Putty Glaze Exterior Profile



Scale 3" = 1' 0"

All dimensions are approximate.