Supporting documents for this product:

Test Reports:
https://media.pella.com/professional/adm/CertificationReports/Test_Reports_IMP.pdf?utm_source=pdfdoc

CSI Specs (readable using Microsft Word or other text editing application):
https://media.pella.com/professional/adm/Fiberglass-CSI_Specs/08572_SW.rtf?utm_source=pdfdoc

AIA Masterspec (readable using Microsft Word or other text editing application):
https://media.pella.com/professional/adm/Fiberglass-CSI_Specs/085413_fl.doc?utm_source=pdfdoc

Detailed Product Description (readable using Microsft Word or other text editing application):
https://media.pella.com/professional/adm/Fiberglass/F2-SW.rtf?utm_source=pdfdoc

Size Tables (requires appropriate CAD software to read and use):
http://media.pella.com/professional/adm/Fiberglass/IMP-SW-Elev_D.dwg?utm_source=pdfdoc

CAD cross sections (requires appropriate CAD software to read and use):
https://media.pella.com/professional/adm/Fiberglass/IMP-SW-Detail_D.dwg?utm_source=pdfdoc

3D & BIM (requires appropriate software to read and use):
https://media.pella.com/professional/adm/RevitFiles/Imp-Revit/Window-Sliding-Pella-Impervia.zip?utm_source=pdfdoc

Sketchup (requires appropriate software to read and use):
https://media.pella.com/professional/adm/Fiberglass/PellaSKP_Impervia_Sliding_Window.zip?utm_source=pdfdoc

Combination Recommendations:
https://media.pella.com/professional/adm/Fiberglass/F2_Combinations.pdf?utm_source=pdfdoc

Installation Details:
https://media.pella.com/professional/adm/Fiberglass/Pella-Impervia_InstallationDetails.pdf?utm_source=pdfdoc

Size and Performance Data

	Block Frame	Integral Nailing Fin	Flange Frame
Sizes			
Standard Vent	●	●	●
Standard Fixed Companion	●	●	●
Special Sizes Available	●	●	●
Performance[1]			
Meets or Exceeds AAMA/WDMA Ratings	SW-LC30 – SW-LC50 Hallmark Certified	SW-LC30 – SW-LC50 Hallmark Certified	SW-LC30 – SW-LC50 Hallmark Certified
Air Infiltration (cfm/ft² of frame @ 1.57 psf wind pressure)	0.10	0.10	0.10
Water Resistance	4.5 - 7.5 psf	4.5 - 7.5 psf	4.5 - 7.5 psf
Design Pressure	30 - 50 psf	30 - 50 psf	30 - 50 psf
Other Performance Criteria			
Forced Entry Resistance Level (Minimum Security Grade)[2]	40	40	40
Operating Force (lb) Initiate Motion / Maintain Motion (of Hallmark tested size and glazing)[3]	12/17 for units with sash ≤ 12 ft²		
Maximum Locking Force (lb) Lock/Unlock	6/6	6/6	6/6

Sound Transmission Class and Outdoor-Indoor Transmission Class

Product	Frame Size Tested[4]	Glazing System			STC Rating	OITC Rating
		Overall Glazing Thickness	Exterior Glass Thickness	Interior Glass Thickness		
2-Panel OX,XO	59-1/2" x 47-1/2"	11/16"	2.5mm	2.5mm	26	23
	59-1/2" x 47-1/2"	11/16"	3mm	5mm	31	27
	59-1/2" x 47-1/2"	11/16"	3mm	6mm Laminated	33	29
	59-1/2" x 47-1/2"	11/16"	4mm	7mm Laminated	33	30
3-Panel XOX	59-1/2" x 47-1/2"	11/16"	2.5mm	2.5mm	26	22
	59-1/2" x 47-1/2"	11/16"	3mm	5mm	31	28
	59-1/2" x 47-1/2"	11/16"	3mm	6mm Laminated	32	28
	59-1/2" x 47-1/2"	11/16"	4mm	7mm Laminated	32	30

(1) See Design Data pages in this section for specific product performance class and grade values.

(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.

Features and Options

	Block Frame	Integral Nailing Fin	Flange Frame
Glazing			
Glazing Type			
Dual-pane Insulating Glass	S	S	S
Insulated Glass Options / Low-E Types			
Clear Insulating Glass (no Low-E coating)	S	S	S
Advanced Low-E Insulating Glass	O	O	O
SunDefense™ Low-E Insulating Glass	O	O	O
SunDefense+ Low-E Insulating Glass	O	O	O
AdvancedComfort Low-E Insulating Glass	O	O	O
NaturalSun Low-E Insulating Glass	O	O	O
NaturalSun+ Low-E Insulating Glass	O	O	O
Additional Glass Options			
Annealed Glass	S	S	S
Tempered Glass	O	O	O
Noise reduction glass (3/5mm, 4/6mm combinations)	O	O	O
Noise reduction laminated glass (non-impact)	O	O	O
Tinted glass (Bronze, Gray, Green) Advanced Low-E	O	O	O
Obscure Glass[1]	O	O	O
Gas Fill / High Altitude			
Argon	S	S	S
High Altitude	O	O	O
High Altitude with argon	O	O	O
Exterior / Interior Factory Pre-finish Colors			
Powder-Coat White	S	S	S
Powder-Coat Brown, Black, Tan or Morning Sky Gray	O	O	O
Powder-Coat Dual-color (Brown, Black, Tan or Morning Sky Gray exterior with White interior)	O	—	O
Hardware			
Match interior finish	S	S	S
Satin Nickel, Bright Brass or Oil-Rubbed Bronze	O	O	O
Sash Locks			
Self-aligning sash lock	S	S	S
Screens			
InView™ screens	O	O	O
Grilles			
Grilles-Between-the-Glass			
3/4" Contoured	O	O	O
Patterns			
Traditional	O	O	O
Prairie	O	O	O
Top Row	O	O	O
Special	O	O	O

S = Standard; O = Optional; (—) = Not available

(1) Contact your local Pella sales representative for current offering.

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. Zone				Canada[2] ER	Canada[2] Zone
Vent										N	NC	SC	S		CA
11/16"	Clear IG	PEL-N-103-01154-00004	2.5	2.5	air	0.47	0.60	0.63	44						
	with grilles-between-the-glass	PEL-N-103-01155-00004				0.47	0.54	0.56	44						
11/16"	Clear IG	PEL-N-103-01154-00002	3	3	air	0.47	0.59	0.62	44						
	with grilles-between-the-glass	PEL-N-103-01155-00002				0.47	0.53	0.55	44						
11/16"	Clear IG	PEL-N-103-01164-00002	5	5	air	0.49	0.56	0.61	41						
	with grilles-between-the-glass	PEL-N-103-01165-00002				0.49	0.50	0.54	41						
11/16"	Advanced Low-E IG	PEL-N-103-01246-00004	2.5	2.5	argon	0.30	0.28	0.53	58						
	with grilles-between-the-glass	PEL-N-103-01247-00004				0.30	0.26	0.47	58						
11/16"	Advanced Low-E IG	PEL-N-103-01246-00002	3	3	argon	0.30	0.28	0.53	58						
	with grilles-between-the-glass	PEL-N-103-01247-00002				0.30	0.25	0.47	58						
11/16"	Advanced Low-E IG	PEL-N-103-01256-00002	5	5	argon	0.33	0.28	0.51	54						
	with grilles-between-the-glass	PEL-N-103-01257-00002				0.32	0.25	0.46	54						
11/16"	SunDefense™ IG	PEL-N-103-01286-00004	2.5	2.5	argon	0.29	0.21	0.49	58				S		
	with grilles-between-the-glass	PEL-N-103-01287-00004				0.29	0.19	0.44	58				S		
11/16"	SunDefense™ IG	PEL-N-103-01286-00002	3	3	argon	0.29	0.21	0.49	58				S		
	with grilles-between-the-glass	PEL-N-103-01287-00002				0.29	0.19	0.43	58				S		
11/16"	SunDefense™ IG	PEL-N-103-01296-00002	5	5	argon	0.32	0.22	0.48	54				S		
	with grilles-between-the-glass	PEL-N-103-01297-00002				0.33	0.19	0.43	54						
11/16"	SunDefense+ IG	PEL-N-103-01416-00001	2.5	2.5	argon	0.26	0.21	0.48	47			SC	S		
	with grilles-between-the-glass	PEL-N-103-01417-00001				0.31	0.19	0.43	43				S		
11/16"	SunDefense+ IG	PEL-N-103-01420-00001	3	3	argon	0.26	0.21	0.48	46			SC	S		
	with grilles-between-the-glass	PEL-N-103-01421-00001				0.26	0.19	0.42	46			SC	S		
11/16"	SunDefense+ IG	PEL-N-103-01426-00001	5	5	argon	0.29	0.21	0.47	42				S		
	with grilles-between-the-glass	PEL-N-103-01427-00001				0.30	0.19	0.42	42				S		
11/16"	AdvancedComfort Low-E IG	PEL-N-103-01322-00004	2.5	2.5	argon	0.26	0.28	0.52	46						
	with grilles-between-the-glass	PEL-N-103-01323-00004				0.26	0.25	0.46	46						
11/16"	AdvancedComfort Low-E IG	PEL-N-103-01322-00002	3	3	argon	0.26	0.28	0.51	46						
	with grilles-between-the-glass	PEL-N-103-01323-00002				0.26	0.25	0.46	46						
11/16"	AdvancedComfort Low-E IG	PEL-N-103-01328-00002	5	5	argon	0.28	0.27	0.50	42						
	with grilles-between-the-glass	PEL-N-103-01329-00002				0.28	0.25	0.45	42						
11/16"	NaturalSun Low-E IG	PEL-N-103-01210-00004	2.5	2.5	argon	0.31	0.53	0.60	57						
	with grilles-between-the-glass	PEL-N-103-01211-00004				0.31	0.47	0.54	57						
11/16"	NaturalSun Low-E IG	PEL-N-103-01210-00002	3	3	argon	0.31	0.52	0.60	57						
	with grilles-between-the-glass	PEL-N-103-01211-00002				0.31	0.47	0.53	57						
11/16"	NaturalSun Low-E IG	PEL-N-103-01216-00002	5	5	argon	0.33	0.50	0.59	54						
	with grilles-between-the-glass	PEL-N-103-01217-00002				0.33	0.45	0.52	54						
11/16"	NaturalSun+ Low-E IG	PEL-N-103-01444-00001	2.5	2.5	argon	0.27	0.48	0.59	46						
	with grilles-between-the-glass	PEL-N-103-01445-00001				0.28	0.43	0.52	46						
11/16"	NaturalSun+ Low-E IG	PEL-N-103-01448-00001	3	3	argon	0.27	0.47	0.58	45						
	with grilles-between-the-glass	PEL-N-103-01449-00001				0.27	0.43	0.52	45						
11/16"	NaturalSun+ Low-E IG	PEL-N-103-01454-00001	5	5	argon	0.30	0.45	0.57	41						
	with grilles-between-the-glass	PEL-N-103-01455-00001				0.31	0.41	0.51	41						

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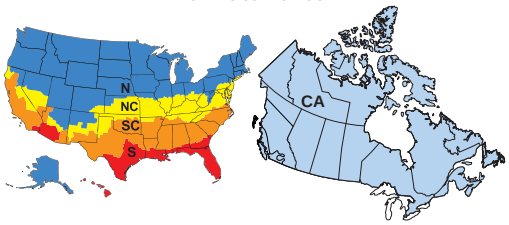

Glazing Performance – Total Unit

Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm) Ext.	Glass (mm) Int.	Gap Fill	Performance Values[1] U-Factor	SHGC	VLT	CR	Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown U. S. Zone N	NC	SC	S	Canada[2] ER	Canada[2] Zone
Vent — with Foam Insulation										N	NC	SC	S		CA
11/16"	Advanced Low-E IG	PEL-N-103-01014-00004	2.5	2.5	argon	0.27	0.28	0.53	58						
	with grilles-between-the-glass	PEL-N-103-01015-00004				0.27	0.26	0.47	58						
11/16"	Advanced Low-E IG	PEL-N-103-01014-00002	3	3	argon	0.27	0.28	0.53	58						
	with grilles-between-the-glass	PEL-N-103-01015-00002				0.27	0.25	0.47	58						
11/16"	Advanced Low-E IG	PEL-N-103-01024-00002	5	5	argon	0.30	0.28	0.51	55						
	with grilles-between-the-glass	PEL-N-103-01025-00002				0.31	0.25	0.46	55						
11/16"	SunDefense IG	PEL-N-103-01054-00004	2.5	2.5	argon	0.26	0.21	0.49	59			SC	S		
	with grilles-between-the-glass	PEL-N-103-01055-00004				0.26	0.19	0.44	59			SC	S		
11/16"	SunDefense IG	PEL-N-103-01054-00002	3	3	argon	0.26	0.21	0.49	59			SC	S		
	with grilles-between-the-glass	PEL-N-103-01055-00002				0.26	0.19	0.43	59			SC	S		
11/16"	SunDefense IG	PEL-N-103-01064-00002	5	5	argon	0.29	0.22	0.48	55				S		
	with grilles-between-the-glass	PEL-N-103-01065-00002				0.3	0.19	0.43	55				S		
11/16"	SunDefense+ IG	PEL-N-103-01528-00001	2.5	2.5	argon	0.24	0.21	0.48	46		NC	SC	S		
	with grilles-between-the-glass	PEL-N-103-01529-00001				0.28	0.19	0.43	43			SC	S		
11/16"	SunDefense+ IG	PEL-N-103-01532-00001	3	3	argon	0.24	0.21	0.48	47		NC	SC	S		
	with grilles-between-the-glass	PEL-N-103-01533-00001				0.24	0.19	0.42	47		NC	SC	S		
11/16"	SunDefense+ IG	PEL-N-103-01538-00001	5	5	argon	0.26	0.21	0.47	42			SC	S		
	with grilles-between-the-glass	PEL-N-103-01539-00001				0.27	0.19	0.42	42			SC	S		
11/16"	AdvancedComfort Low-E IG	PEL-N-103-01090-00004	2.5	2.5	argon	0.23	0.28	0.52	46		NC				
	with grilles-between-the-glass	PEL-N-103-01091-00004				0.23	0.25	0.46	46		NC				
11/16"	AdvancedComfort Low-E IG	PEL-N-103-01090-00002	3	3	argon	0.23	0.28	0.51	46		NC				
	with grilles-between-the-glass	PEL-N-103-01091-00002				0.23	0.25	0.46	46		NC				
11/16"	AdvancedComfort Low-E IG	PEL-N-103-01096-00002	5	5	argon	0.25	0.27	0.50	42		NC				
	with grilles-between-the-glass	PEL-N-103-01097-00002				0.25	0.25	0.45	42		NC				
11/16"	NaturalSun Low-E IG	PEL-N-103-00978-00004	2.5	2.5	argon	0.28	0.53	0.60	58					34	CA
	with grilles-between-the-glass	PEL-N-103-00979-00004				0.28	0.47	0.54	58						
11/16"	NaturalSun Low-E IG	PEL-N-103-00978-00002	3	3	argon	0.28	0.52	0.60	58						
	with grilles-between-the-glass	PEL-N-103-00979-00002				0.28	0.47	0.53	58						
11/16"	NaturalSun Low-E IG	PEL-N-103-00984-00002	5	5	argon	0.31	0.50	0.59	54						
	with grilles-between-the-glass	PEL-N-103-00985-00002				0.31	0.45	0.52	54						
11/16"	NaturalSun+ Low-E IG	PEL-N-103-01556-00001	2.5	2.5	argon	0.25	0.48	0.59	45	N				35	CA
	with grilles-between-the-glass	PEL-N-103-01557-00001				0.25	0.43	0.52	45	N					
11/16"	NaturalSun+ Low-E IG	PEL-N-103-01560-00001	3	3	argon	0.25	0.47	0.58	45	N				34	CA
	with grilles-between-the-glass	PEL-N-103-01561-00001				0.25	0.43	0.52	45	N					
11/16"	NaturalSun+ Low-E IG	PEL-N-103-01566-00001	5	5	argon	0.27	0.45	0.57	41						
	with grilles-between-the-glass	PEL-N-103-01567-00001				0.28	0.41	0.51	41						

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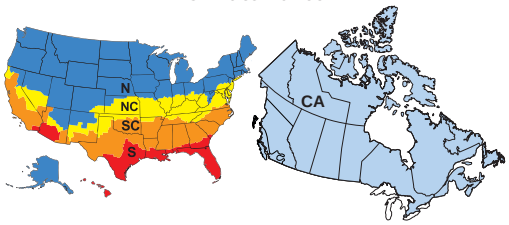

Glazing Performance – Total Unit

Glazing Thickness	Type of Glazing	PENDING 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. Zone				Canada[2] ER	Canada[2] Zone
Vent — High Altitude Glazing										N	NC	SC	S		CA
11/16"	(HA) Advanced Low-E IG	PEL-N-103-01226-00004	2.5	2.5	air	0.33	0.29	0.53	55						
	with grilles-between-the-glass	PEL-N-103-01227-00004				0.33	0.26	0.47	55						
11/16"	(HA) Advanced Low-E IG	PEL-N-103-01226-00002	3	3	air	0.33	0.29	0.53	55						
	with grilles-between-the-glass	PEL-N-103-01227-00002				0.33	0.26	0.47	55						
11/16"	(HA) Advanced Low-E IG	PEL-N-103-01236-00002	5	5	air	0.37	0.28	0.51	50						
	with grilles-between-the-glass	PEL-N-103-01237-00002				0.38	0.26	0.46	50						
11/16"	(HA) SunDefense IG	PEL-N-103-01266-00004	2.5	2.5	air	0.33	0.21	0.49	55						
	with grilles-between-the-glass	PEL-N-103-01267-00004				0.33	0.19	0.44	55						
11/16"	(HA) SunDefense IG	PEL-N-103-01266-00002	3	3	air	0.33	0.21	0.49	55						
	with grilles-between-the-glass	PEL-N-103-01267-00002				0.33	0.19	0.43	55						
11/16"	(HA) SunDefense IG	PEL-N-103-01276-00002	5	5	air	0.37	0.22	0.48	50						
	with grilles-between-the-glass	PEL-N-103-01277-00002				0.38	0.20	0.43	50						
11/16"	(HA) SunDefense+ IG	PEL-N-103-01414-00001	2.5	2.5	air	0.29	0.21	0.48	44				S		
	with grilles-between-the-glass	PEL-N-103-01415-00001				0.30	0.19	0.43	44				S		
11/16"	(HA) SunDefense+ IG	PEL-N-103-01418-00001	3	3	air	0.29	0.21	0.48	43				S		
	with grilles-between-the-glass	PEL-N-103-01419-00001				0.29	0.19	0.42	43				S		
11/16"	(HA) SunDefense+ IG	PEL-N-103-01428-00001	5	5	air	0.32	0.21	0.47	38				S		
	with grilles-between-the-glass	PEL-N-103-01429-00001				0.33	0.19	0.42	38						
11/16"	(HA) AdvancedComfort Low-E IG	PEL-N-103-01306-00004	2.5	2.5	air	0.29	0.28	0.52	42						
	with grilles-between-the-glass	PEL-N-103-01307-00004				0.29	0.25	0.46	42						
11/16"	(HA) AdvancedComfort Low-E IG	PEL-N-103-01306-00002	3	3	air	0.29	0.28	0.51	42						
	with grilles-between-the-glass	PEL-N-103-01307-00002				0.29	0.25	0.46	42						
11/16"	(HA) AdvancedComfort Low-E IG	PEL-N-103-01312-00002	5	5	air	0.30	0.27	0.50	38						
	with grilles-between-the-glass	PEL-N-103-01313-00002				0.30	0.25	0.45	38						
11/16"	(HA) NaturalSun Low-E IG	PEL-N-103-01194-00004	2.5	2.5	air	0.34	0.53	0.60	54						
	with grilles-between-the-glass	PEL-N-103-01195-00004				0.34	0.47	0.54	54						
11/16"	(HA) NaturalSun Low-E IG	PEL-N-103-01194-00002	3	3	air	0.34	0.52	0.60	54						
	with grilles-between-the-glass	PEL-N-103-01195-00002				0.34	0.47	0.53	54						
11/16"	(HA) NaturalSun Low-E IG	PEL-N-103-01200-00002	5	5	air	0.38	0.50	0.59	50						
	with grilles-between-the-glass	PEL-N-103-01201-00002				0.38	0.45	0.52	50						
11/16"	(HA) NaturalSun+ Low-E IG	PEL-N-103-01442-00001	2.5	2.5	air	0.30	0.48	0.59	43						
	with grilles-between-the-glass	PEL-N-103-01443-00001				0.31	0.43	0.52	43						
11/16"	(HA) NaturalSun+ Low-E IG	PEL-N-103-01446-00001	3	3	air	0.30	0.47	0.58	42						
	with grilles-between-the-glass	PEL-N-103-01447-00001				0.30	0.42	0.52	42						
11/16"	(HA) NaturalSun+ Low-E IG	PEL-N-103-01456-00001	5	5	air	0.33	0.45	0.57	38						
	with grilles-between-the-glass	PEL-N-103-01457-00001				0.34	0.40	0.51	38						

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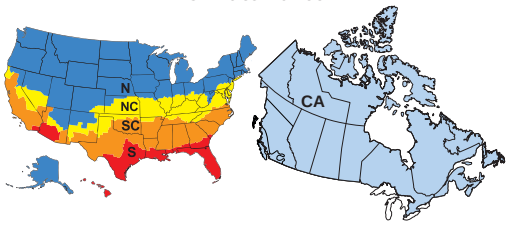
Climate Zones



Glazing Performance – Total Unit

Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm) Ext.	Glass (mm) Int.	Gap Fill	Performance Values[1] U-Factor	SHGC	VLT	CR	Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown U. S. Zone N	NC	SC	S	Canada[2] ER	Zone
Vent — High Altitude Glazing with Foam Insulation															CA
11/16"	(HA) Advanced Low-E IG	PEL-N-103-00994-00004	2.5	2.5	air	0.31	0.29	0.53	55						
	with grilles-between-the-glass	PEL-N-103-00995-00004				0.31	0.26	0.47	55						
11/16"	(HA) Advanced Low-E IG	PEL-N-103-00994-00002	3	3	air	0.31	0.29	0.53	55						
	with grilles-between-the-glass	PEL-N-103-00995-00002				0.31	0.26	0.47	55						
11/16"	(HA) Advanced Low-E IG	PEL-N-103-01004-00002	5	5	air	0.34	0.28	0.51	51						
	with grilles-between-the-glass	PEL-N-103-01005-00002				0.35	0.26	0.46	51						
11/16"	(HA) SunDefense IG	PEL-N-103-01034-00004	2.5	2.5	air	0.30	0.21	0.49	55				S		
	with grilles-between-the-glass	PEL-N-103-01035-00004				0.30	0.19	0.44	55				S		
11/16"	(HA) SunDefense IG	PEL-N-103-01034-00002	3	3	air	0.30	0.21	0.49	55				S		
	with grilles-between-the-glass	PEL-N-103-01035-00002				0.30	0.19	0.43	55				S		
11/16"	(HA) SunDefense IG	PEL-N-103-01044-00002	5	5	air	0.34	0.22	0.48	51						
	with grilles-between-the-glass	PEL-N-103-01045-00002				0.35	0.20	0.43	51						
11/16"	(HA) SunDefense+ IG	PEL-N-103-01526-00001	2.5	2.5	air	0.26	0.21	0.48	42			SC	S		
	with grilles-between-the-glass	PEL-N-103-01527-00001				0.27	0.19	0.43	42			SC	S		
11/16"	(HA) SunDefense+ IG	PEL-N-103-01530-00001	3	3	air	0.26	0.21	0.48	43			SC	S		
	with grilles-between-the-glass	PEL-N-103-01531-00001				0.26	0.19	0.42	43			SC	S		
11/16"	(HA) SunDefense+ IG	PEL-N-103-01540-00001	5	5	air	0.30	0.21	0.47	39				S		
	with grilles-between-the-glass	PEL-N-103-01541-00001				0.31	0.19	0.42	39				S		
11/16"	(HA) AdvancedComfort Low-E IG	PEL-N-103-01074-00004	2.5	2.5	air	0.26	0.28	0.52	42						
	with grilles-between-the-glass	PEL-N-103-01075-00004				0.26	0.25	0.46	42						
11/16"	(HA) AdvancedComfort Low-E IG	PEL-N-103-01074-00002	3	3	air	0.26	0.28	0.51	42						
	with grilles-between-the-glass	PEL-N-103-01075-00002				0.26	0.25	0.46	42						
11/16"	(HA) AdvancedComfort Low-E IG	PEL-N-103-01080-00002	5	5	air	0.27	0.27	0.50	38						
	with grilles-between-the-glass	PEL-N-103-01081-00002				0.27	0.25	0.45	38						
11/16"	(HA) NaturalSun Low-E IG	PEL-N-103-00962-00004	2.5	2.5	air	0.32	0.53	0.60	54						
	with grilles-between-the-glass	PEL-N-103-00963-00004				0.32	0.47	0.54	54						
11/16"	(HA) NaturalSun Low-E IG	PEL-N-103-00962-00002	3	3	air	0.32	0.52	0.60	54						
	with grilles-between-the-glass	PEL-N-103-00963-00002				0.32	0.47	0.53	54						
11/16"	(HA) NaturalSun Low-E IG	PEL-N-103-00968-00002	5	5	air	0.35	0.50	0.59	50						
	with grilles-between-the-glass	PEL-N-103-00969-00002				0.35	0.45	0.52	50						
11/16"	(HA) NaturalSun+ Low-E IG	PEL-N-103-01554-00001	2.5	2.5	air	0.27	0.48	0.59	41						
	with grilles-between-the-glass	PEL-N-103-01555-00001				0.28	0.43	0.52	41						
11/16"	(HA) NaturalSun+ Low-E IG	PEL-N-103-01558-00001	3	3	air	0.27	0.47	0.58	42						
	with grilles-between-the-glass	PEL-N-103-01559-00001				0.27	0.42	0.52	42						
11/16"	(HA) NaturalSun+ Low-E IG	PEL-N-103-01568-00001	5	5	air	0.30	0.45	0.57	38						
	with grilles-between-the-glass	PEL-N-103-01569-00001				0.31	0.40	0.51	38						

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

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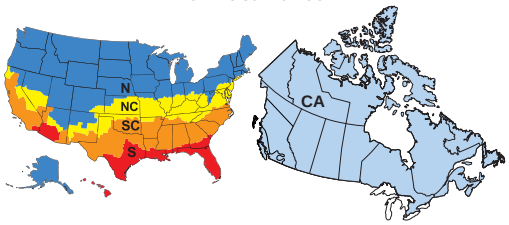
Climate Zones



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. Zone				Canada[2] ER	Canada[2] Zone
										N	NC	SC	S		CA
Vent — 5mm/3mm Glass															
1"	Clear IG	PEL-N-277-00009-00001	5	3	air	0.48	0.58	0.61	42						
	with grilles-between-the-glass	PEL-N-277-00010-00001				0.48	0.52	0.55	42						
1"	Advanced Low-E IG	PEL-N-277-00051-00001	5	3	argon	0.30	0.28	0.52	56						
	with grilles-between-the-glass	PEL-N-277-00052-00001				0.30	0.26	0.46	56						
1"	SunDefense™ IG	PEL-N-277-00067-00001	5	3	argon	0.30	0.21	0.48	56				S		
	with grilles-between-the-glass	PEL-N-277-00068-00001				0.30	0.19	0.43	56				S		
1"	SunDefense+ IG	PENDING	5	3	argon										
	with grilles-between-the-glass	PENDING													
1"	AdvancedComfort Low-E IG	PEL-N-277-00099-00001	5	3	argon	0.27	0.28	0.51	44						
	with grilles-between-the-glass	PEL-N-277-00100-00001				0.27	0.25	0.45	44						
1"	NaturalSun Low-E IG	PEL-N-277-00083-00001	5	3	argon	0.31	0.52	0.59	55						
	with grilles-between-the-glass	PEL-N-277-00084-00001				0.31	0.46	0.53	55						
1"	NaturalSun+ Low-E IG	PENDING	5	3	argon										
	with grilles-between-the-glass	PENDING													
Vent — 5mm/3mm Glass with Foam Insulation															
1"	Advanced Low-E IG	PEL-N-277-00383-00001	5	3	argon	0.28	0.28	0.52	56						
	with grilles-between-the-glass	PEL-N-277-00384-00001				0.28	0.26	0.46	56						
1"	SunDefense IG	PEL-N-277-00399-00001	5	3	argon	0.27	0.21	0.48	57			SC	S		
	with grilles-between-the-glass	PEL-N-277-00400-00001				0.27	0.19	0.43	57			SC	S		
1"	SunDefense+ IG	PENDING	5	3	argon										
	with grilles-between-the-glass	PENDING													
1"	AdvancedComfort Low-E IG	PEL-N-277-00431-00001	5	3	argon	0.24	0.28	0.51	44		NC				
	with grilles-between-the-glass	PEL-N-277-00432-00001				0.24	0.25	0.45	44		NC				
1"	NaturalSun Low-E IG	PEL-N-277-00415-00001	5	3	argon	0.29	0.52	0.59	56						
	with grilles-between-the-glass	PEL-N-277-00416-00001				0.29	0.46	0.53	56						
1"	NaturalSun+ Low-E IG	PENDING	5	3	argon										
	with grilles-between-the-glass	PENDING													
Vent — 5mm/3mm Glass High Altitude Glazing															
1"	(HA) Advanced Low-E IG	PEL-N-277-00049-00001	5	3	air	0.35	0.29	0.52	52						
	with grilles-between-the-glass	PEL-N-277-00050-00001				0.35	0.26	0.46	52						
1"	(HA) SunDefense IG	PEL-N-277-00065-00001	5	3	air	0.34	0.22	0.48	53						
	with grilles-between-the-glass	PEL-N-277-00066-00001				0.34	0.20	0.43	53						
1"	(HA) SunDefense+ IG	PENDING	5	3	air										
	with grilles-between-the-glass	PENDING													
1"	(HA) AdvancedComfort Low-E IG	PEL-N-277-00097-00001	5	3	air	0.30	0.28	0.51	40						
	with grilles-between-the-glass	PEL-N-277-00098-00001				0.30	0.25	0.45	40						
1"	(HA) NaturalSun Low-E IG	PEL-N-277-00081-00001	5	3	air	0.36	0.51	0.59	52						
	with grilles-between-the-glass	PEL-N-277-00082-00001				0.36	0.46	0.53	52						
1"	(HA) NaturalSun+ Low-E IG	PENDING	5	3	air										
	with grilles-between-the-glass	PENDING													
Vent — 5mm/3mm Glass High Altitude Glazing — with Foam Insulation															
1"	(HA) Advanced Low-E IG	PEL-N-277-00381-00001	5	3	air	0.32	0.29	0.52	53						
	with grilles-between-the-glass	PEL-N-277-00382-00001				0.32	0.26	0.46	53						
1"	(HA) SunDefense IG	PEL-N-277-00397-00001	5	3	air	0.32	0.22	0.48	53				S		
	with grilles-between-the-glass	PEL-N-277-00398-00001				0.32	0.20	0.43	53				S		
1"	(HA) SunDefense+ IG	PENDING	5	3	air										
	with grilles-between-the-glass	PENDING													
1"	(HA) AdvancedComfort Low-E IG	PEL-N-277-00429-00001	5	3	air	0.27	0.28	0.51	40						
	with grilles-between-the-glass	PEL-N-277-00430-00001				0.27	0.25	0.45	40						
1"	(HA) NaturalSun Low-E IG	PEL-N-277-00413-00001	5	3	air	0.33	0.51	0.59	52						
	with grilles-between-the-glass	PEL-N-277-00414-00001				0.33	0.46	0.53	52						
1"	(HA) NaturalSun+ Low-E IG	PENDING	5	3	air										
	with grilles-between-the-glass	PENDING													

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Glazing Performance – Total Unit

Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm) Ext.	Glass (mm) Int.	Gap Fill	Performance Values[1] U-Factor	SHGC	VLT	CR	Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown U. S. Zone N	NC	SC	S	Canada[2] ER	Canada[2] Zone CA
Vent — Tinted Glazing															
11/16"	Bronze Advanced Low-E IG	PEL-N-103-01362-00002	5	3	argon	0.30	0.25	0.34	57						
	with grilles-between-the-glass	PEL-N-103-01363-00002				0.30	0.23	0.30	57				S		
11/16"	Gray Advanced Low-E IG	PEL-N-103-01366-00002	5	3	argon	0.30	0.23	0.29	57				S		
	with grilles-between-the-glass	PEL-N-103-01367-00002				0.32	0.21	0.26	57				S		
11/16"	Green Advanced Low-E IG	PEL-N-103-01370-00002	5	3	argon	0.30	0.28	0.46	57						
	with grilles-between-the-glass	PEL-N-103-01371-00002				0.30	0.26	0.41	57						
Vent—Tinted Glazing with Foam Insulation															
11/16"	Bronze Advanced Low-E IG	PEL-N-103-01130-00002	5	3	argon	0.28	0.25	0.34	57						
	with grilles-between-the-glass	PEL-N-103-01131-00002				0.28	0.23	0.30	57			SC	S		
11/16"	Gray Advanced Low-E IG	PEL-N-103-01134-00002	5	3	argon	0.28	0.23	0.29	57			SC	S		
	with grilles-between-the-glass	PEL-N-103-01135-00002				0.28	0.21	0.26	57			SC	S		
11/16"	Green Advanced Low-E IG	PEL-N-103-01138-00002	5	3	argon	0.28	0.28	0.46	57						
	with grilles-between-the-glass	PEL-N-103-01139-00002				0.28	0.26	0.41	57						
Vent — Tinted High Altitude Glazing															
11/16"	Bronze Advanced Low-E IG	PEL-N-103-01338-00002	5	3	air	0.34	0.26	0.34	53						
	with grilles-between-the-glass	PEL-N-103-01339-00002				0.34	0.23	0.30	53						
11/16"	Gray Advanced Low-E IG	PEL-N-103-01342-00002	5	3	air	0.34	0.24	0.29	53						
	with grilles-between-the-glass	PEL-N-103-01343-00002				0.37	0.22	0.26	53						
11/16"	Green Advanced Low-E IG	PEL-N-103-01346-00002	5	3	air	0.34	0.29	0.46	53						
	with grilles-between-the-glass	PEL-N-103-01347-00002				0.34	0.26	0.41	53						
Vent — Tinted High Altitude Glazing with Foam Insulation															
11/16"	Bronze Advanced Low-E IG	PEL-N-103-01106-00002	5	3	air	0.32	0.26	0.34	54						
	with grilles-between-the-glass	PEL-N-103-01107-00002				0.32	0.23	0.30	54				S		
11/16"	Gray Advanced Low-E IG	PEL-N-103-01110-00002	5	3	air	0.32	0.24	0.29	54						
	with grilles-between-the-glass	PEL-N-103-01111-00002				0.32	0.22	0.26	54				S		
11/16"	Green Advanced Low-E IG	PEL-N-103-01114-00002	5	3	air	0.32	0.29	0.46	54						
	with grilles-between-the-glass	PEL-N-103-01115-00002				0.32	0.26	0.41	54						

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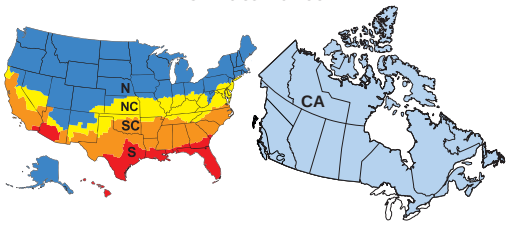
Climate Zones



Glazing Performance – Total Unit

Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm) Ext.	Glass (mm) Int.	Gap Fill	Performance Values[1] U-Factor	SHGC	VLT	CR	Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown U. S. Zone N	NC	SC	S	Canada[2] ER	Canada[2] Zone CA
Vent with Laminated Glazing															
11/16"	Advanced Low-E IG	PEL-N-103-01250-00002	3	6	argon	0.32	0.28	0.52	55						
	with grilles-between-the-glass	PEL-N-103-01251-00002				0.32	0.25	0.46	55						
11/16"	SunDefense™ IG	PEL-N-103-01290-00002	3	6	argon	0.31	0.21	0.48	55				S		
	with grilles-between-the-glass	PEL-N-103-01291-00002				0.32	0.19	0.42	55				S		
Vent Laminated Glazing with Foam Insulation															
11/16"	Advanced Low-E IG	PEL-N-103-01018-00002	3	6	argon	0.29	0.28	0.52	55						
	with grilles-between-the-glass	PEL-N-103-01019-00002				0.30	0.25	0.46	55						
11/16"	SunDefense™ IG	PEL-N-103-01058-00002	3	6	argon	0.29	0.21	0.48	56				S		
	with grilles-between-the-glass	PEL-N-103-01059-00002				0.30	0.19	0.42	56				S		
Vent Laminated High Altitude Glazing															
11/16"	Advanced Low-E IG	PEL-N-103-01230-00002	3	6	air	0.36	0.28	0.52	51						
	with grilles-between-the-glass	PEL-N-103-01231-00002				0.37	0.26	0.46	51						
11/16"	SunDefense IG	PEL-N-103-01270-00002	3	6	air	0.36	0.22	0.48	51						
	with grilles-between-the-glass	PEL-N-103-01271-00002				0.37	0.19	0.42	51						
Vent Laminated High Altitude Glazing with Foam Insulation															
11/16"	Advanced Low-E IG	PEL-N-103-00998-00002	3	6	air	0.34	0.28	0.52	51						
	with grilles-between-the-glass	PEL-N-103-00999-00002				0.35	0.26	0.46	51						
11/16"	SunDefense IG	PEL-N-103-01038-00002	3	6	air	0.34	0.22	0.48	51						
	with grilles-between-the-glass	PEL-N-103-01039-00002				0.35	0.19	0.42	51						

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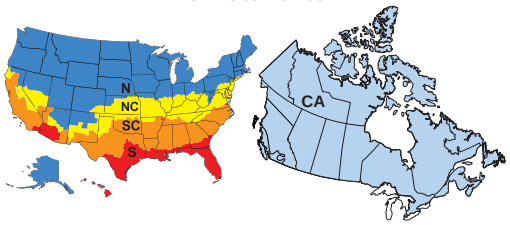
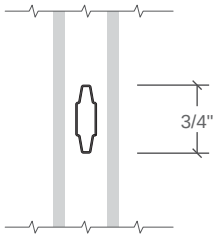
Climate Zones



Grille Profiles

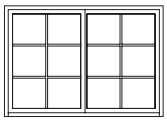
Grilles-Between-the-Glass



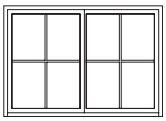
3/4" Contour

Grille Patterns

Other Patterns

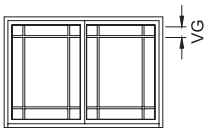


Traditional

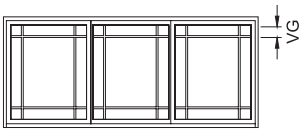


Special

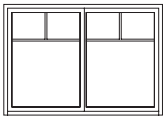
Prairie Patterns



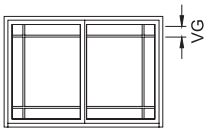
9-Lite Prairie



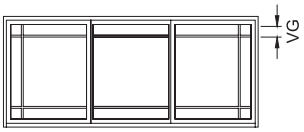
9-Lite Prairie



Top Row (1)



6-Lite Prairie



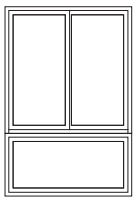
6-Lite Prairie

- Standard corner lite dimension for Prairie patterns = 4" visible glass (VG).
- Pattern availability may vary depending on size of unit.

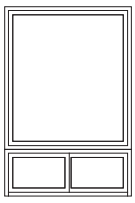
Combination Assemblies

A combination is defined as an assembly formed by two or more separate windows or doors whose frames are mulled together utilizing a combination mullion or reinforcing mullion.

Below are available factory-assembled combinations. See the Combination section for requirements and limitations related to mulling various combinations plus configuration size range information.



Fixed Below

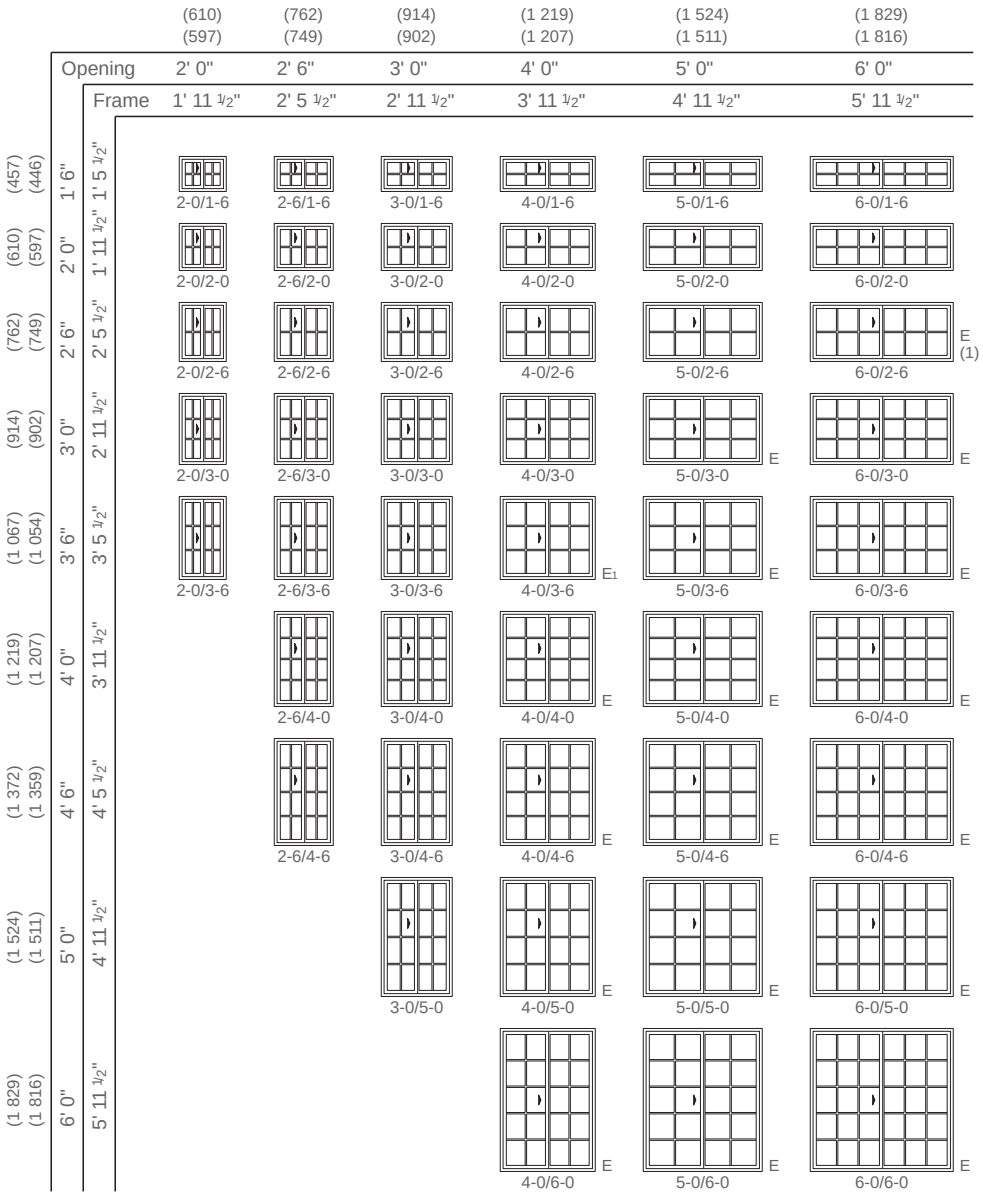


Fixed Above

(1) Standard visible glass to center line of separator bar = 14" or half of total visible glass height, whichever is smaller. Multiple rows are available up to 50% glass size.

Size Tables

Vent-Fixed Units (XO)



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.

(1) Unit meets E1 if high performance sill adapter kit is installed.

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

Not to scale.

Special size units are available in 1/8" increments.

Vent-Fixed (XO) units are shown as viewed from the exterior. Fixed-Vent (OX) units are also available.

Size Tables

Fixed Units

Opening (mm)	Opening	Frame (mm)	Frame	(610) (597)	(762) (749)	(914) (902)	(1 219) (1 207)	(1 524) (1 511)	(1 829) (1 816)
				2' 0"	2' 6"	3' 0"	4' 0"	5' 0"	6' 0"
(356) (343)	1' 2"	(356) (343)	1' 1 1/2"	2-0/1-2	2-6/1-2	3-0/1-2	4-0/1-2	5-0/1-2	6-0/1-2
(457) (446)	1' 6"	(457) (446)	1' 5 1/2"	2-0/1-6	2-6/1-6	3-0/1-6	4-0/1-6	5-0/1-6	6-0/1-6
(610) (597)	2' 0"	(610) (597)	1' 11 1/2"	2-0/2-0	2-6/2-0	3-0/2-0	4-0/2-0	5-0/2-0	6-0/2-0
(762) (749)	2' 6"	(762) (749)	2' 5 1/2"				4-0/2-6	5-0/2-6	6-0/2-6
(914) (902)	3' 0"	(914) (902)	2' 11 1/2"				4-0/3-0	5-0/3-0	6-0/3-0
(1 067) (1 054)	3' 6"	(1 067) (1 054)	3' 5 1/2"				4-0/3-6	5-0/3-6	6-0/3-6
(1 219) (1 207)	4' 0"	(1 219) (1 207)	3' 11 1/2"				4-0/4-0	5-0/4-0	6-0/4-0
(1 372) (1 359)	4' 6"	(1 372) (1 359)	4' 5 1/2"				4-0/4-6	5-0/4-6	6-0/4-6
(1 524) (1 511)	5' 0"	(1 524) (1 511)	4' 11 1/2"				4-0/5-0	5-0/5-0	6-0/5-0

Not to scale.

Special size units are available in 1/8" increments.

Size Tables - 12" Vent

Vent-Fixed Units (XO)

Opening (914) (902)	3' 0"	Opening (1 219) (1 207)	4' 0"	Opening (1 524) (1 511)	5' 0"	Opening (1 829) (1 816)	6' 0"
Frame	2' 11 ½"	Frame	3' 11 ½"	Frame	4' 11 ½"	Frame	5' 11 ½"
(457) (446) 1' 6"	1' 5 ½"						
	3-0/1-6		4-0/1-6		5-0/1-6		6-0/1-6
(610) (597) 2' 0"	1' 11 ½"						
	3-0/2-0		4-0/2-0		5-0/2-0		6-0/2-0
(762) (749) 2' 6"	2' 5 ½"						
	3-0/2-6		4-0/2-6		5-0/2-6		6-0/2-6
(914) (902) 3' 0"	2' 11 ½"						
	3-0/3-0		4-0/3-0		5-0/3-0		6-0/3-0
(1 067) (1 054) 3' 6"	3' 5 ½"						
	3-0/3-6		4-0/3-6		5-0/3-6		6-0/3-6
(1 219) (1 207) 4' 0"	3' 11 ½"						
	3-0/4-0		4-0/4-0		5-0/4-0		6-0/4-0
(1 372) (1 359) 4' 6"	4' 5 ½"						
	3-0/4-6		4-0/4-6		5-0/4-6		6-0/4-6
(1 524) (1 511) 5' 0"	4' 11 ½"						
	3-0/5-0		4-0/5-0		5-0/5-0		6-0/5-0
(1 829) (1 816) 6' 0"	5' 11 ½"						
			4-0/6-0		5-0/6-0		6-0/6-0

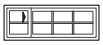
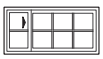
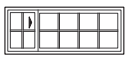
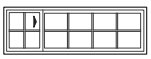
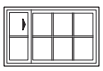
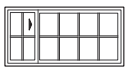
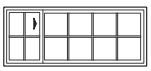
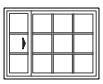
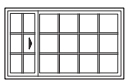
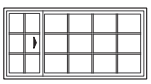
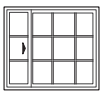
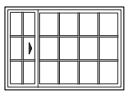
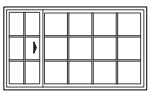
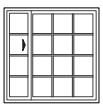
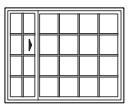
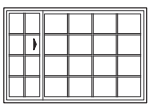
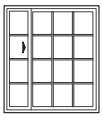
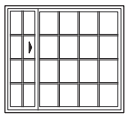
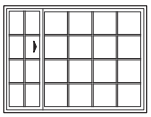
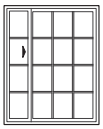
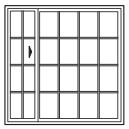
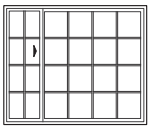
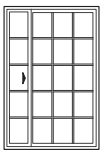
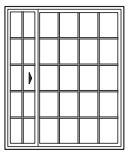
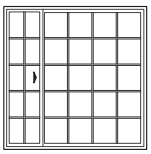
Not to scale.

Special size units are available in 1/8" increments up to 6' heights and widths ≥ 35-1/2".

XO units shown also available as OX.

Size Tables - Quarter Vent

Quarter Vent-Fixed Units (XO)

Opening			(1 219) (1 207) 4' 0"	(1 524) (1 511) 5' 0"	(1 829) (1 816) 6' 0"
		Frame	3' 11 ½"	4' 11 ½"	5' 11 ½"
(457) (446)	1' 6"	1' 5 ½"	 4-0/1-6	 5-0/1-6	 6-0/1-6
(610) (597)	2' 0"	1' 11 ½"	 4-0/2-0	 5-0/2-0	 6-0/2-0
(762) (749)	2' 6"	2' 5 ½"	 4-0/2-6	 5-0/2-6	 6-0/2-6
(914) (902)	3' 0"	2' 11 ½"	 4-0/3-0	 5-0/3-0	 6-0/3-0
(1 067) (1 054)	3' 6"	3' 5 ½"	 4-0/3-6	 5-0/3-6	 6-0/3-6
(1 219) (1 207)	4' 0"	3' 11 ½"	 4-0/4-0	 5-0/4-0	 6-0/4-0
(1 372) (1 359)	4' 6"	4' 5 ½"	 4-0/4-6	 5-0/4-6	 6-0/4-6
(1 524) (1 511)	5' 0"	4' 11 ½"	 4-0/5-0	 5-0/5-0	 6-0/5-0
(1 829) (1 816)	6' 0"	5' 11 ½"	 4-0/6-0	 5-0/6-0	 6-0/6-0

Not to scale.

Special size units are available in 1/8" increments.

XO units shown also available as OX.

Size Tables - One Third Vent

Vent-Fixed Units (XO)

Opening (914) (902)	3' 0"	Opening (1 219) (1 207)	4' 0"	Opening (1 524) (1 511)	5' 0"	Opening (1 829) (1 816)	6' 0"
Frame	2' 11 ½"	Frame	3' 11 ½"	Frame	4' 11 ½"	Frame	5' 11 ½"
(457) (446)	1' 6"						
(610) (597)	2' 0"						
(762) (749)	2' 6"						
(914) (902)	3' 0"						
(1 067) (1 054)	3' 6"						
(1 219) (1 207)	4' 0"						
(1 372) (1 359)	4' 6"						
(1 524) (1 511)	5' 0"						
(1 829) (1 816)	6' 0"						

Frame	2' 11 ½"	3' 11 ½"	4' 11 ½"	5' 11 ½"
1' 5 ½"	3-0/1-6	4-0/1-6	5-0/1-6	6-0/1-6
1' 11 ½"	3-0/2-0	4-0/2-0	5-0/2-0	6-0/2-0
2' 5 ½"	3-0/2-6	4-0/2-6	5-0/2-6	6-0/2-6
2' 11 ½"	3-0/3-0	4-0/3-0	5-0/3-0	6-0/3-0
3' 5 ½"	3-0/3-6	4-0/3-6	5-0/3-6	6-0/3-6 E1
3' 11 ½"	3-0/4-0	4-0/4-0	5-0/4-0	6-0/4-0 E
4' 5 ½"	3-0/4-6	4-0/4-6	5-0/4-6	6-0/4-6 E
4' 11 ½"	3-0/5-0	4-0/5-0	5-0/5-0	6-0/5-0 E
5' 11 ½"		4-0/6-0	5-0/6-0	6-0/6-0 E

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.

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

Not to scale.
Special size units are available in 1/8" increments up to 6' heights and widths ≥ 35-1/2".
XO units shown also available as OX.

Size Tables - Vent-Fixed-Vent (XOX) — Quarter Vent

		(1 829) (1 816)	(2 134) (2 121)	(2 438) (2 426)	(2 743) (2 731)
	Opening	6' 0"	7' 0"	8' 0"	9' 0"
	Frame	5' 11 ½"	6 11 ½"	7' 11 ½"	8' 11 ½"
(457) (446)	1' 6"	1' 5 ½"	6-0/1-6 3W	7-0/1-6 3W	8-0/1-6 3W	9-0/1-6 3W
(610) (597)	2' 0"	1' 11 ½"	6-0/2-0 3W	7-0/2-0 3W	8-0/2-0 3W	9-0/2-0 3W
(762) (749)	2' 6"	2' 5 ½"	6-0/2-6 3W	7-0/2-6 3W	8-0/2-6 3W	9-0/2-6 3W
(914) (902)	3' 0"	2' 11 ½"	6-0/3-0 3W	7-0/3-0 3W	8-0/3-0 3W	9-0/3-0 3W E1
(1 067) (1 054)	3' 6"	3' 5 ½"	6-0/3-6 3W	7-0/3-6 3W	8-0/3-6 3W E	9-0/3-6 3W E
(1 219) (1 207)	4' 0"	3' 11 ½"	6-0/4-0 3W	7-0/4-0 3W	8-0/4-0 3W E	9-0/4-0 3W E
(1 372) (1 359)	4' 6"	4' 5 ½"	6-0/4-6 3W	7-0/4-6 3W	8-0/4-6 3W E	9-0/4-6 3W E
(1 524) (1 511)	5' 0"	4' 11 ½"	6-0/5-0 3W	7-0/5-0 3W	8-0/5-0 3W E	9-0/5-0 3W E

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.

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

Not to scale.
Special size units are available in 1/8" increments up to 6' heights and widths ≥ 47-1/2".

Size Tables Vent-Fixed-Vent (XOX) — One Third Vent

Opening		(1 829) (1 816) 6' 0"	(2 134) (2 121) 7' 0"	(2 438) (2 426) 8' 0"	(2 743) (2 731) 9' 0"
Frame		5' 11 ½"	6 11 ½"	7' 11 ½"	8' 11 ½"
(457) (446)	1' 6"	1' 5 ½"	6-0/1-6 3W	7-0/1-6 3W	8-0/1-6 3W	9-0/1-6 3W
(610) (597)	2' 0"	1' 11 ½"	6-0/2-0 3W	7-0/2-0 3W	8-0/2-0 3W	9-0/2-0 3W
(762) (749)	2' 6"	2' 5 ½"	6-0/2-6 3W	7-0/2-6 3W	8-0/2-6 3W	9-0/2-6 3W E (1)
(914) (902)	3' 0"	2' 11 ½"	6-0/3-0 3W	7-0/3-0 3W E1	8-0/3-0 3W E	9-0/3-0 3W E
(1 067) (1 054)	3' 6"	3' 5 ½"	6-0/3-6 3W	7-0/3-6 3W E	8-0/3-6 3W E	9-0/3-6 3W E
(1 219) (1 207)	4' 0"	3' 11 ½"	6-0/4-0 3W	7-0/4-0 3W E	8-0/4-0 3W E	9-0/4-0 3W E
(1 372) (1 359)	4' 6"	4' 5 ½"	6-0/4-6 3W	7-0/4-6 3W E	8-0/4-6 3W E	9-0/4-6 3W E
(1 524) (1 511)	5' 0"	4' 11 ½"	6-0/5-0 3W	7-0/5-0 3W E	8-0/5-0 3W E	9-0/5-0 3W E

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.

(1) Unit meets E1 if high performance sill adapter kit is installed.

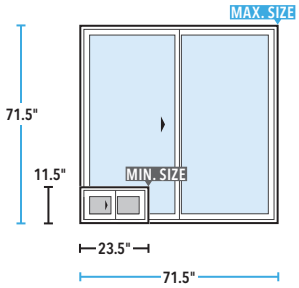
See Design Data pages in this section for clear opening dimensions.

Not to scale.
Special size units are available in 1/8" increments.

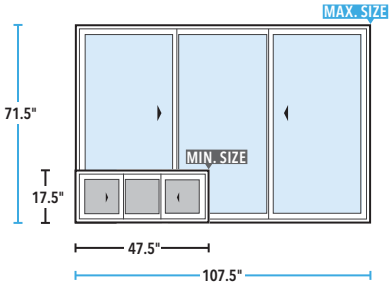
Special Sizes[2]

Window Type	Minimum	Maximum
Two Panel Vent OX and XO	23-1/2" W x 11-1/2" H	71-1/2" W x 71-1/2" H
Three Panel Vent XOX	47-1/2" W x 17-1/2" H	107-1/2" W x 71-1/2" H

Vent (OX or XO)



Vent (XOX)



Clear Opening Formulas[1]

(OX and XO)	(XOX)
Width = (AVGW – 7/16") Height = Frame Height – 3-9/16"	Width = 2 x (AVGW – 7/16") Height = Frame Height – 3-9/16"

Miscellaneous Formulas

	Total Glass Width (TGW)	Actual Vent Glass Width (AVGW)	Actual Fixed Glass Width (AFGW)	Actual Vent Glass Height	Visible Fixed Glass Width	Visible Vent Glass Height
12" Vent OX and XO	FW - 6-1/4"	8-5/8"	TGW - AVGW	FH – 5-1/8"	AFGW – 15/16"	FH – 6-1/16"
Quarter Vent OX and XO	FW - 6-1/4"	(FW – 7-3/8") x 1/4	TGW - AVGW	FH – 5-1/8"	AFGW – 15/16"	FH – 6-1/16"
One Third Vent OX and XO	FW - 6-1/4"	(FW – 7-3/8") x 1/3	TGW - AVGW	FH – 5-1/8"	AFGW – 15/16"	FH – 6-1/16"
One Half Vent OX and XO	FW - 6-1/4"	(FW ÷ 2) – 3-1/8"	TGW - AVGW	FH – 5-1/8"	AFGW – 15/16"	FH – 6-1/16"
Quarter Vent XOX	FW – 7-3/8"	TGW x 1/4	TGW x 1/2	FH – 5-1/8"	AFGW – 15/16"	FH – 6-1/16"
One Third Vent XOX	FW – 7-3/8"	TGW / 3	TGW / 3	FH – 5-1/8"	AFGW – 15/16"	FH – 6-1/16"

(1) Subtract 1/2" from opening height to calculate vent area for High Performance unit.

(2) Special sized XOX units >59-1/2" in height are not performance rated.

Equal Sash Two-Panel Vent-Fixed (XO or OX)

Unit	Egress	Clear Opening [2]		Vent Area Ft²	Visible Glass Ft²	Standard Glass Thickness (mm)		Performance Class & Grade [3]
		Width (Inches)	Height (Inches)			Annealed	Tempered	
2-0/1-6		8-3/16	13-15/16	0.7	1.2	3	3	LC40/LC50
2-0/2-0		8-3/16	19-15/16	1.1	1.8	3	3	LC40/LC50
2-0/2-6		8-3/16	25-15/16	1.4	2.5	3	3	LC40/LC50
2-0/3-0		8-3/16	31-15/16	1.8	3.1	3	3	LC40/LC50
2-0/3-6		8-3/16	37-15/16	2.1	3.7	3	3	LC30/LC50
2-6/1-6		11-3/16	13-15/16	1.0	1.6	3	3	LC40/LC50
2-6/2-0		11-3/16	19-15/16	1.5	2.5	3	3	LC40/LC50
2-6/2-6		11-3/16	25-15/16	2.0	3.4	3	3	LC40/LC50
2-6/3-0		11-3/16	31-15/16	2.4	4.3	3	3	LC40/LC50
2-6/3-6		11-3/16	37-15/16	2.9	5.2	3	3	LC40/LC50
2-6/4-0		11-3/16	43-15/16	3.4	6.1	3	3	LC40/LC50
2-6/4-6		11-3/16	49-15/16	3.8	7.0	3	3	LC30/LC40
3-0/1-6		14-3/16	13-15/16	1.3	2.1	2.5	3	LC40/LC50
3-0/2-0		14-3/16	19-15/16	1.9	3.3	2.5	3	LC40/LC50
3-0/2-6		14-3/16	25-15/16	2.5	4.4	2.5	3	LC40/LC50
3-0/3-0		14-3/16	31-15/16	3.1	5.5	2.5	3	LC40/LC50
3-0/3-6		14-3/16	37-15/16	3.7	6.7	2.5	3	LC30/LC50
3-0/4-0		14-3/16	43-15/16	4.3	7.8	2.5	3	LC30/LC50
3-0/4-6		14-3/16	49-15/16	4.9	9.0	2.5	3	LC30/LC40
3-0/5-0		14-3/16	55-15/16	5.5	10.1	2.5	3	LC30/LC40
4-0/1-6		20-3/16	13-15/16	1.9	3.1	2.5	3	LC40/LC50
4-0/2-0		20-3/16	19-15/16	2.7	4.7	2.5	3	LC40/LC50
4-0/2-6		20-3/16	25-15/16	3.6	6.4	2.5	3	LC40/LC50
4-0/3-0		20-3/16	31-15/16	4.4	8.0	2.5	3	LC40/LC50
4-0/3-6	E1	20-3/16	37-15/16	5.3	9.6	2.5	3	LC40/LC50
4-0/4-0	E	20-3/16	43-15/16	6.1	11.3	2.5	3	LC40/LC50
4-0/4-6	E	20-3/16	49-15/16	7.0	12.9	2.5	3	LC30/LC40
4-0/5-0	E	20-3/16	55-15/16	7.8	14.6	2.5	3	LC30/LC40
4-0/6-0	E	20-3/16	67-15/16	9.5	17.8	2.5	3	LC30
5-0/1-6		26-3/16	13-15/16	2.5	4.0	2.5	3	LC40/LC50
5-0/2-0		26-3/16	19-15/16	3.6	6.2	2.5	3	LC40/LC50
5-0/2-6		26-3/16	25-15/16	4.7	8.3	2.5	3	LC40/LC50
5-0/3-0	E	26-3/16	31-15/16	5.8	10.5	2.5	3	LC40/LC50
5-0/3-6	E	26-3/16	37-15/16	6.8	12.6	2.5	3	LC30/LC40
5-0/4-0	E	26-3/16	43-15/16	7.9	14.7	2.5	3	LC30/LC40
5-0/4-6	E	26-3/16	49-15/16	9.0	16.9	2.5	3	LC30/LC40
5-0/5-0	E	26-3/16	55-15/16	10.1	19.0	2.5	3	LC30/LC40
5-0/6-0	E	26-3/16	67-15/16	12.3	23.3	3	3	LC30
6-0/1-6		32-3/16	13-15/16	3.1	5.0	2.5	3	LC40/LC50
6-0/2-0		32-3/16	19-15/16	4.4	7.6	2.5	3	LC40/LC50
6-0/2-6	E(1)	32-3/16	25-15/16	5.7	10.3	2.5	3	LC40/LC50
6-0/3-0	E	32-3/16	31-15/16	7.1	12.9	2.5	3	LC40/LC50
6-0/3-6	E	32-3/16	37-15/16	8.4	15.5	2.5	3	LC30/LC40
6-0/4-0	E	32-3/16	43-15/16	9.8	18.2	2.5	3	LC30/LC40
6-0/4-6	E	32-3/16	49-15/16	11.1	20.8	3	3	LC30/LC40
6-0/5-0	E	32-3/16	55-15/16	12.5	23.5	3	3	LC30/LC40
6-0/6-0	E	32-3/16	67-15/16	15.1	28.7	3	3	LC30

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.
- (1) = Unit meets E1 if high performance sill adapter kit is installed.

To convert areas to square meters (m²), multiply square feet (ft²) by 0.0929.

(2) Subtract 1/2" from opening height to calculate vent area for Performance Upgrade unit.

(3) Maximum performance when glazed with the appropriate glass thickness. The second value, where shown, is maximum performance with Performance Upgrade Kit applied.

One Third Vent Three Panel (XOX)

Unit	Egress	Clear Opening [2]			Vent Area Ft²	Visible Glass Ft²	Standard Glass Thickness (mm)		Performance Class & Grade [3]
		Width (Inches)	Height (Inches)	Ft²			Annealed	Tempered	
6-0/1-6		19-3/4	13-15/16	2.0	2.0	4.8	2.5	3	LC35/LC50
6-0/2-0		19-3/4	19-15/16	2.8	2.8	7.4	2.5	3	LC35/LC50
6-0/2-6		19-3/4	25-15/16	3.7	3.7	9.9	2.5	3	LC35/LC50
6-0/3-0		19-3/4	31-15/16	4.6	4.6	12.4	2.5	3	LC35/LC50
6-0/3-6		19-3/4	37-15/16	5.5	5.5	15.0	2.5	3	LC30
6-0/4-0		19-3/4	43-15/16	6.3	6.3	17.5	2.5	3	LC30
6-0/4-6		19-3/4	49-15/16	7.2	7.2	20.0	2.5	3	LC30
6-0/5-0		19-3/4	55-15/16	8.1	8.1	22.6	2.5	3	LC30
7-0/1-6		23-3/4	13-15/16	2.4	2.4	5.8	2.5	3	LC35/LC50
7-0/2-0		23-3/4	19-15/16	3.4	3.4	8.8	2.5	3	LC35/LC50
7-0/2-6		23-3/4	25-15/16	4.4	4.4	11.9	2.5	3	LC35/LC50
7-0/3-0	E1	23-3/4	31-15/16	5.5	5.5	14.9	2.5	3	LC35/LC50
7-0/3-6	E	23-3/4	37-15/16	6.5	6.5	17.9	2.5	3	LC30
7-0/4-0	E	23-3/4	43-15/16	7.6	7.6	21.0	2.5	3	LC30
7-0/4-6	E	23-3/4	49-15/16	8.6	8.6	24.0	2.5	3	LC30
7-0/5-0	E	23-3/4	55-15/16	9.6	9.6	27.0	2.5	3	LC30
8-0/1-6		27-3/4	13-15/16	2.8	2.8	6.7	2.5	3	LC35
8-0/2-0		27-3/4	19-15/16	4.0	4.0	10.3	2.5	3	LC35
8-0/2-6		27-3/4	25-15/16	5.2	5.2	13.8	2.5	3	LC35
8-0/3-0	E	27-3/4	31-15/16	6.4	6.4	17.3	2.5	3	LC35
8-0/3-6	E	27-3/4	37-15/16	7.6	7.6	20.9	2.5	3	LC30
8-0/4-0	E	27-3/4	43-15/16	8.8	8.8	24.4	2.5	3	LC30
8-0/4-6	E	27-3/4	49-15/16	10.0	10.0	27.9	2.5	3	LC30
8-0/5-0	E	27-3/4	55-15/16	11.2	11.2	31.5	3	3	LC30
9-0/1-6		31-3/4	13-15/16	3.1	3.1	7.7	2.5	3	LC30
9-0/2-0		31-3/4	19-15/16	4.5	4.5	11.7	2.5	3	LC30
9-0/2-6	E(1)	31-3/4	25-15/16	5.9	5.9	15.8	2.5	3	LC30
9-0/3-0	E	31-3/4	31-15/16	7.3	7.3	19.8	2.5	3	LC30
9-0/3-6	E	31-3/4	37-15/16	8.6	8.6	23.8	2.5	3	LC30
9-0/4-0	E	31-3/4	43-15/16	10.0	10.0	27.9	2.5	3	LC30
9-0/4-6	E	31-3/4	49-15/16	11.4	11.4	31.9	3	3	LC30
9-0/5-0	E	31-3/4	55-15/16	12.7	12.7	35.9	5	5	LC30

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.

(1) = Unit meets E1 if high performance sill adapter kit is installed.

To convert areas to square meters (m²), multiply square feet (ft²) by 0.0929.

(2) Subtract 1/2" from opening height to calculate vent area for High Performance unit.

(3) Maximum performance when glazed with the appropriate glass thickness.

The second value, where shown, is maximum performance with Performance Upgrade Kit applied.

12" Vent Two-Panel Vent-Fixed (XO or OX)

Unit	Clear Opening [2]		Vent Area Ft²	Visible Glass Ft²	Standard Glass Thickness (mm)		Performance Class & Grade [3]
	Width (Inches)	Height (Inches)			Annealed	Tempered	
3-0/1-6	8-3/16	13-15/16	0.7	2.1	3	3	LC40/LC50
3-0/2-0	8-3/16	19-15/16	1.1	3.3	3	3	LC40/LC50
3-0/2-6	8-3/16	25-15/16	1.4	4.4	3	3	LC40/LC50
3-0/3-0	8-3/16	31-15/16	1.8	5.5	3	3	LC40/LC50
3-0/3-6	8-3/16	37-15/16	2.1	6.7	3	3	LC40/LC50
3-0/4-0	8-3/16	43-15/16	2.4	7.8	3	3	LC30/LC40
3-0/4-6	8-3/16	49-15/16	2.8	9.0	3	3	LC30/LC40
3-0/5-0	8-3/16	55-15/16	3.1	10.1	3	3	LC30/LC40
4-0/1-6	8-3/16	13-15/16	0.7	3.1	3	3	LC40/LC50
4-0/2-0	8-3/16	19-15/16	1.1	4.7	3	3	LC40/LC50
4-0/2-6	8-3/16	25-15/16	1.4	6.4	3	3	LC40/LC50
4-0/3-0	8-3/16	31-15/16	1.8	8.0	3	3	LC40/LC50
4-0/3-6	8-3/16	37-15/16	2.1	9.6	3	3	LC30/LC40
4-0/4-0	8-3/16	43-15/16	2.4	11.3	3	3	LC30/LC40
4-0/4-6	8-3/16	49-15/16	2.8	12.9	3	3	LC40/LC50
4-0/5-0	8-3/16	55-15/16	3.5	14.6	3	3	LC30/LC40
4-0/6-0	8-3/16	67-15/16	4.3	17.8	3	3	LC30/LC40
5-0/1-6	8-3/16	13-15/16	0.7	4.0	3	3	LC40/LC50
5-0/2-0	8-3/16	19-15/16	1.1	6.2	3	3	LC40/LC50
5-0/2-6	8-3/16	25-15/16	1.4	8.3	3	3	LC40/LC50
5-0/3-0	8-3/16	25-15/16	1.4	10.5	3	3	LC40/LC50
5-0/3-6	8-3/16	37-15/16	2.1	12.6	3	3	LC30/LC40
5-0/4-0	8-3/16	43-15/16	2.4	14.7	3	3	LC30/LC40
5-0/4-6	8-3/16	49-15/16	2.8	16.9	3	3	LC40/LC50
5-0/5-0	8-3/16	55-15/16	3.5	19.0	3	3	LC30/LC40
5-0/6-0	8-3/16	67-15/16	4.3	23.3	3	3	LC30/LC40
6-0/1-6	8-3/16	13-15/16	0.7	5.0	3	3	LC40/LC50
6-0/2-0	8-3/16	19-15/16	1.1	7.6	3	3	LC40/LC50
6-0/2-6	8-3/16	25-15/16	1.4	10.3	3	3	LC40/LC50
6-0/3-0	8-3/16	31-15/16	1.8	12.9	3	3	LC40/LC50
6-0/3-6	8-3/16	37-15/16	2.1	15.5	3	3	LC30/LC40
6-0/4-0	8-3/16	43-15/16	2.4	18.2	3	3	LC30/LC40
6-0/4-6	8-3/16	49-15/16	2.8	20.8	3	5	LC30/LC40
6-0/5-0	8-3/16	55-15/16	3.5	23.5	3	5	LC30/LC40
6-0/6-0	8-3/16	67-15/16	4.3	28.7	5	5	LC30

(1) Maximum performance when glazed with the appropriate glass thickness.
The second value, where shown, is maximum performance with Performance Upgrade Kit applied.

Quarter Vent Two-Panel Vent-Fixed (XO or OX)

Unit	Clear Opening		Vent Area Ft²	Visible Glass Ft²	Standard Glass Thickness (mm)		Performance Class & Grade [1]
	Width (Inches)	Height (Inches)			Annealed	Tempered	
4-0/1-6	9-5/8	13-15/16	0.9	3.1	3	3	LC40/LC50
4-0/2-0	9-5/8	19-15/16	1.3	4.7	3	3	LC40/LC50
4-0/2-6	9-5/8	25-15/16	1.7	6.4	3	3	LC40/LC50
4-0/3-0	9-5/8	31-15/16	2.1	8.0	3	3	LC40/LC50
4-0/3-6	9-5/8	37-15/16	2.5	9.6	3	3	LC30/LC40
4-0/4-0	9-5/8	43-15/16	2.9	11.3	3	3	LC30/LC40
4-0/4-6	9-5/8	49-15/16	3.3	12.9	—	3	LC30/LC40
4-0/5-0	9-5/8	55-15/16	3.7	14.6	—	3	LC30
4-0/6-0	9-5/8	67-15/16	4.5	17.8	—	3	LC30
5-0/1-6	12-5/8	13-15/16	1.2	4.0	3	3	LC40/LC50
5-0/2-0	12-5/8	19-15/16	1.7	6.2	3	3	LC40/LC50
5-0/2-6	12-5/8	25-15/16	2.2	8.3	3	3	LC40/LC50
5-0/3-0	12-5/8	37-15/16	2.7	10.5	3	3	LC40/LC50
5-0/3-6	12-5/8	43-15/16	3.3	12.6	3	5	LC30/LC40
5-0/4-0	12-5/8	49-15/16	3.8	14.7	3	5	LC30/LC40
5-0/4-6	12-5/8	55-15/16	4.3	16.9	3	5	LC30/LC40
5-0/5-0	12-5/8	67-15/16	4.8	19.0	3	5	LC30/LC40
5-0/6-0	15-5/8	13-15/16	5.9	23.3	—	5	LC30/LC40
6-0/1-6	15-5/8	19-15/16	1.5	5.0	2.5	3	LC40/LC50
6-0/2-0	15-5/8	25-15/16	2.1	7.6	2.5	3	LC40/LC50
6-0/2-6	15-5/8	31-15/16	2.8	10.3	2.5	3	LC40/LC50
6-0/3-0	15-5/8	32-15/16	3.4	12.9	2.5	3	LC40/LC50
6-0/3-6	15-5/8	37-15/16	4.1	15.5	3	5	LC30/LC40
6-0/4-0	15-5/8	43-15/16	4.7	18.2	3	5	LC30/LC40
6-0/4-6	15-5/8	49-15/16	5.4	20.8	3	5	LC30/LC40
6-0/5-0	15-5/8	55-15/16	6.0	23.5	5	3	LC30/LC40
6-0/6-0	15-5/8	67-15/16	7.3	28.7	5	5	LC30/LC40

(1) Maximum performance when glazed with the appropriate glass thickness.
The second value, where shown, is maximum performance with Performance Upgrade Kit applied.

One-Third Vent Two Panel Vent-Fixed (XO or OX)

Unit	Egress	Clear Opening		Vent Area Ft²	Visible Glass Ft²	Standard Glass Thickness (mm)		Performance Class & Grade[1]
		Width (Inches)	Height (Inches)			Annealed	Tempered	
3-0/1-6		8-15/16	13-15/16	0.8	2.1	3	3	LC40/LC50
3-0/2-0		8-15/16	19-15/16	1.2	3.3	3	3	LC40/LC50
3-0/2-6		8-15/16	25-15/16	1.6	4.4	3	3	LC40/LC50
3-0/3-0		8-15/16	31-15/16	1.9	5.5	3	3	LC40/LC50
3-0/3-6		8-15/16	37-15/16	2.3	6.7	3	3	LC30/LC40
3-0/4-0		8-15/16	43-15/16	2.7	7.8	3	3	LC30/LC40
3-0/4-6		8-15/16	49-15/16	3.0	9.0	3	3	LC30/LC40
3-0/5-0		8-15/16	55-15/16	3.4	10.1	—	3	LC30/LC40
4-0/1-6		12-15/16	13-15/16	1.2	3.1	2.5	3	LC40/LC50
4-0/2-0		12-15/16	19-15/16	1.7	4.7	2.5	3	LC40/LC50
4-0/2-6		12-15/16	25-15/16	2.3	6.4	2.5	3	LC40/LC50
4-0/3-0		12-15/16	31-15/16	2.8	8.0	2.5	3	LC40/LC50
4-0/3-6		12-15/16	37-15/16	3.4	9.6	2.5	3	LC30/LC40
4-0/4-0		12-15/16	43-15/16	3.9	11.3	2.5	3	LC30/LC40
4-0/4-6		12-15/16	49-15/16	4.4	12.9	2.5	3	LC30/LC40
4-0/5-0		12-15/16	55-15/16	5.0	14.6	2.5	3	LC30/LC40
4-0/6-0		12-15/16	67-15/16	6.1	17.8	3	3	LC30
5-0/1-6		16-15/16	13-15/16	1.6	4.0	2.5	3	LC40/LC50
5-0/2-0		16-15/16	19-15/16	2.3	6.2	2.5	3	LC40/LC50
5-0/2-6		16-15/16	25-15/16	3.0	8.3	2.5	3	LC40/LC50
5-0/3-0		16-15/16	25-15/16	3.7	10.5	2.5	3	LC40/LC50
5-0/3-6		16-15/16	37-15/16	4.4	12.6	2.5	3	LC30/LC40
5-0/4-0		16-15/16	43-15/16	5.1	14.7	2.5	3	LC30/LC40
5-0/4-6		16-15/16	49-15/16	5.8	16.9	2.5	3	LC30/LC40
5-0/5-0		16-15/16	55-15/16	6.5	19.0	3	3	LC30/LC40
5-0/6-0		16-15/16	67-15/16	7.9	23.3	3	3	LC30
6-0/1-6		20-15/16	13-15/16	2.0	5.0	2.5	3	LC40/LC50
6-0/2-0		20-15/16	19-15/16	2.8	7.6	2.5	3	LC40/LC50
6-0/2-6		20-15/16	25-15/16	3.7	10.3	2.5	3	LC40/LC50
6-0/3-0		20-15/16	31-15/16	4.6	12.9	2.5	3	LC40/LC50
6-0/3-6	E1	20-15/16	37-15/16	5.5	15.5	3	5	LC30/LC40
6-0/4-0	E	20-15/16	43-15/16	6.3	18.2	3	5	LC30/LC40
6-0/4-6	E	20-15/16	49-15/16	7.2	20.8	3	5	LC30/LC40
6-0/5-0	E	20-15/16	55-15/16	8.1	23.5	3	5	LC30/LC40
6-0/6-0	E	20-15/16	67-15/16	9.8	28.7	5	5	LC30

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.

To convert areas to square meters (m²), multiply square feet (ft²) by 0.0929.

(1) Maximum performance when glazed with the appropriate glass thickness.

The second value, where shown, is maximum performance with Performance Upgrade Kit applied.

Fixed

Unit	Visible Glass Ft²	Standard Glass Thickness (mm)		Performance Class & Grade[3]
		Annealed	Tempered	
2-0/1-2	0.9	3	3	CW50
2-0/1-6	1.3	2.5	3	CW50
2-0/2-0	2.1	2.5	3	CW50
2-6/1-2	1.2	3	3	CW50
2-6/1-6	1.8	2.5	3	CW50
2-6/2-0	2.8	2.5	3	CW50
3-0/1-2	1.5	3	3	CW50
3-0/1-6	2.3	2.5	3	CW50
3-0/2-0	3.5	2.5	3	CW50
4-0/1-2	2.1	—	3	CW50
4-0/1-6	3.2	2.5	3	CW50
4-0/2-0	5.0	2.5	3	CW50
4-0/2-6	6.7	2.5	3	CW50
4-0/3-0	8.4	3	3	CW50
4-0/3-6	10.1	3	5	CW45
4-0/4-0	11.9	3	5	CW40
4-0/4-6	13.0	3	5	CW40
4-0/5-0	15.3	3	5	CW40
5-0/1-2	2.7	—	3	CW50
5-0/1-6	4.2	2.5	3	CW50
5-0/2-0	6.4	2.5	3	CW50
5-0/2-6	8.6	2.5	3	CW50
5-0/3-0	10.9	3	3	CW45
5-0/3-6	13.1	3	3	CW40
5-0/4-0	15.3	3	5	CW40
5-0/4-6	16.8	5	5	CW35
5-0/5-0	19.8	5	5	CW35
6-0/1-2	3.3	—	3	CW50
6-0/1-6	5.1	—	3	CW50
6-0/2-0	7.9	2.5	3	CW50
6-0/2-6	10.6	3	3	CW50
6-0/3-0	13.3	3	3	CW45
6-0/3-6	16.1	3	5	CW40
6-0/4-0	18.8	5	5	CW35
6-0/4-6	20.6	5	5	CW35
6-0/5-0	24.2	5	5	CW30

Quarter Vent Three Panel (XOX)

Unit	Egress	Clear Opening[2]			Vent Area Ft²	Visible Glass Ft²	Standard Glass Thickness (mm)		Performance Class & Grade[3]
		Width (Inches)	Height (Inches)	Ft²			Annealed	Tempered	
6-0/1-6		15-9/16	13-15/16	1.5	3.0	4.8	2.5	3	LC35/LC50
6-0/2-0		15-9/16	19-15/16	2.1	4.3	7.4	2.5	3	LC35/LC50
6-0/2-6		15-9/16	25-15/16	2.8	5.6	9.9	2.5	3	LC35/LC50
6-0/3-0		15-9/16	31-15/16	3.4	6.9	12.5	2.5	3	LC35/LC50
6-0/3-6		15-9/16	37-15/16	4.1	8.2	15.0	2.5	3	LC30
6-0/4-0		15-9/16	43-15/16	4.7	9.5	17.6	2.5	3	LC30
6-0/4-6		15-9/16	49-15/16	5.4	10.8	20.1	3	3	LC30
6-0/5-0		15-9/16	55-15/16	6.0	12.1	22.7	3	3	LC30
7-0/1-6		18-9/16	13-15/16	1.7	3.5	5.8	2.5	3	LC35/LC50
7-0/2-0		18-9/16	19-15/16	2.5	5.1	8.8	2.5	3	LC35/LC50
7-0/2-6		18-9/16	25-15/16	3.3	6.6	11.9	2.5	3	LC35/LC50
7-0/3-0		18-9/16	31-15/16	4.1	8.2	14.9	2.5	3	LC35/LC50
7-0/3-6		18-9/16	37-15/16	4.8	9.7	18.0	2.5	5	LC30
7-0/4-0		18-9/16	43-15/16	5.6	11.3	21.0	3	5	LC30
7-0/4-6		18-9/16	49-15/16	6.4	12.8	24.1	3	5	LC30
7-0/5-0		18-9/16	55-15/16	7.2	14.4	27.2	3	5	LC30
8-0/1-6		21-9/16	13-15/16	2.0	4.1	6.7	2.5	3	LC35
8-0/2-0		21-9/16	19-15/16	2.9	5.9	10.3	2.5	3	LC35
8-0/2-6		21-9/16	25-15/16	3.8	7.7	13.8	2.5	3	LC35
8-0/3-0		21-9/16	31-15/16	4.7	9.5	17.4	2.5	3	LC35
8-0/3-6	E	21-9/16	37-15/16	5.6	11.3	20.9	3	5	LC30
8-0/4-0	E	21-9/16	43-15/16	6.5	13.1	24.5	3	5	LC30
8-0/4-6	E	21-9/16	49-15/16	7.4	14.9	28.1	3	5	LC30
8-0/5-0	E	21-9/16	55-15/16	8.3	16.7	31.6	3	5	LC30
9-0/1-6		24-9/16	13-15/16	2.3	4.7	7.7	2.5	3	LC30
9-0/2-0		24-9/16	19-15/16	3.4	6.8	11.7	2.5	3	LC30
9-0/2-6		24-9/16	25-15/16	4.4	8.8	15.8	2.5	3	LC30
9-0/3-0	E1	24-9/16	31-15/16	5.4	10.9	19.8	2.5	3	LC30
9-0/3-6	E	24-9/16	37-15/16	6.4	12.9	23.9	3	5	LC30
9-0/4-0	E	24-9/16	43-15/16	7.5	15.0	28.0	3	5	LC30
9-0/4-6	E	24-9/16	49-15/16	8.5	17.0	32.0	3	5	LC30
9-0/5-0	E	24-9/16	55-15/16	9.5	19.1	36.1	5	5	LC30

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.

To convert areas to square meters (m²), multiply square feet (ft²) by 0.0929.

(2) Subtract 1/2" from opening height to calculate vent area for Performance Upgrade unit.

(3) Maximum performance when glazed with the appropriate glass thickness. The second value, where shown, is maximum performance with Performance Upgrade Kit applied.

Detailed Product Description

Frame

- Frame is Duracast® fiberglass composite — five-layer pultruded fiberglass material [with optional foam insulation[1]] reinforced with a Pella patented interlocking mat.
- Overall frame depth is 3".
- Nominal wall thickness of Duracast fiberglass composite members is .050" to .070" thick.
- Frame corners are mitered, joined and bonded with corner lock and mechanically fastened with injected polyurethane adhesive.
- Sill is fitted with weep valve assemblies.
- Jambs contain factory-drilled (counter-bored) installation screw holes on block frame and flush flange only.
- Optional factory-applied jamb extensions available in 4-9/16" and 6-9/16".

Sash

- Sash is Duracast fiberglass composite — five-layer pultruded fiberglass material [with optional foam insulation[1]] reinforced with a Pella patented interlocking mat.
- All sash members have mitered corners bonded with corner lock and sealed with injected polyurethane adhesive.
- Vent sash can be removed for cleaning.

Exterior / Interior

- Duracast fiberglass composite surfaces with powder-coat paint finish.
  - Color is [White] [Brown] [Black] [Tan] [Morning Sky Gray].

    - or -
  - Dual-color option [Brown] [Black] [Tan] [Morning Sky Gray] exterior with White interior[2].

Glazing System

- Quality float glass complying with ASTM C 1036.
- 11/16" insulating glass [[annealed] [tempered]] [obscure[3]] [[clear] [Advanced] [SunDefense™] [SunDefense+] [AdvancedComfort] [NaturalSun] [NaturalSun+] Low-E coated, with argon]] sealed and bonded to sash.
- High altitude glazing available.

Weatherstripping

- Sash is weatherstripped with a dual fin-type pile weatherstrip around perimeter of sash.

Hardware

- Vents are equipped with two nylon roller housings containing two acetal rollers each. Vent-panel sash is fully operable for ventilation.
- Rollers may be removed for cleaning and/or maintenance.
- All fasteners are corrosion-resistant material.
- Two locks are installed on units 37" high or greater.
- Locks are zinc die-cast, self-aligning cam action factory-installed on the interlocker [powder-coat painted [White] [Brown] [Matte Black] [Tan] [Morning Sky Gray] to match finish] [Satin Nickel] [Bright Brass] [Oil-Rubbed Bronze].

Optional Products

Screens

- InView™ Screens
  - Half-size with black vinyl coated 18/18 mesh fiberglass screen cloth complying with SMA 1201.
  - Set in aluminum frame and fitted to outside of window.
  - Supplied complete with all necessary hardware.
  - Screen frame finish is baked enamel, color to match exterior.

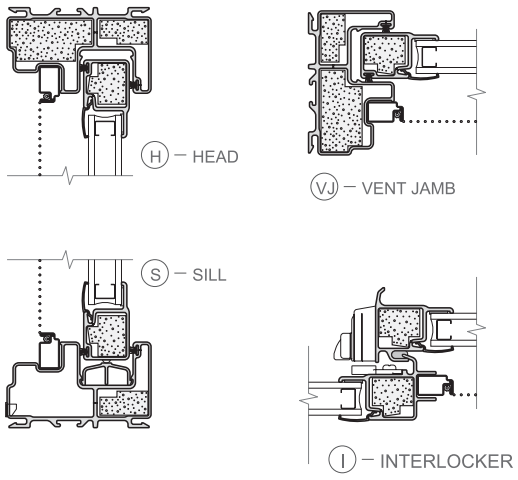
Grilles

- Grilles-Between-the-Glass
  - Insulating glass contains 3/4" contoured aluminum grilles permanently installed between two panes of glass.
  - Grilles are factory prefinished [White] [Brown] [Black] [Tan] [Morning Sky Gray] to match interior and exterior finish.

Hardware

- Optional limited opening device available for all venting units; nominal 3" opening. Off-white rubber bumper to be installed at the head of the venting unit.
- Optional window opening control device available for field installation. 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 F2090-10.

Foam Insulation Inserts[1]



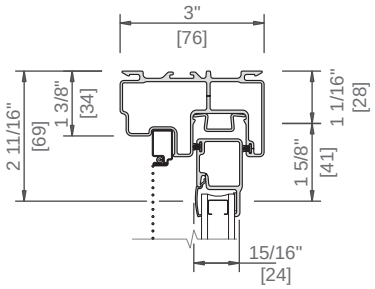
(1) Foam insulation inserts are not available with clear glazing.

(2) Dual-color finish is not available on products with integral nailing fin.

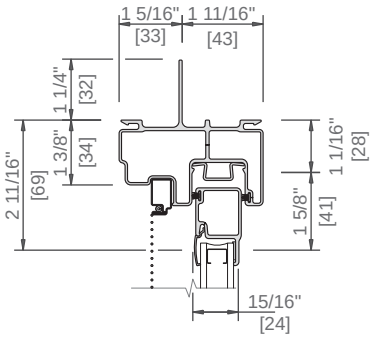
(3) Obscure glazing is not available when AdvancedComfort Low-E coated IG is specified.

Frame Types

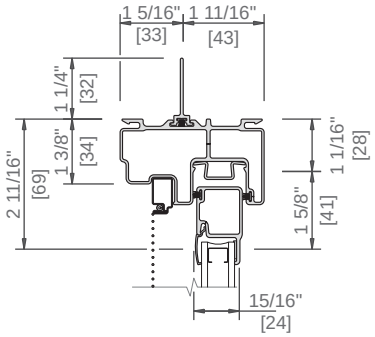
STANDARD
BLOCK FRAME



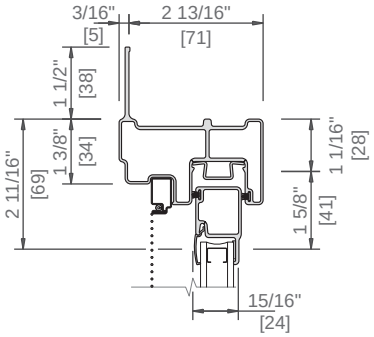
INTEGRAL
NAILING FIN



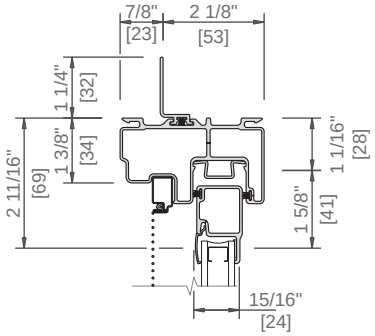
BLOCK FRAME
STANDARD FIN



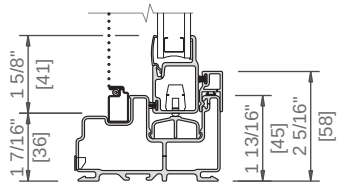
FLUSH FLANGE



BLOCK FRAME
OFFSET FIN



BLOCK FRAME
DP50 SILL DAM

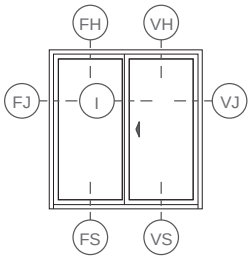


Scale 3" = 1' 0"

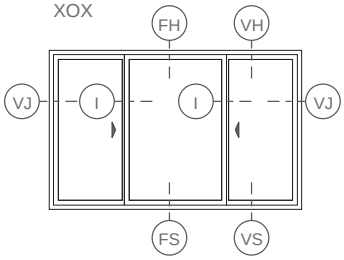
All dimensions are approximate.

Unit Sections

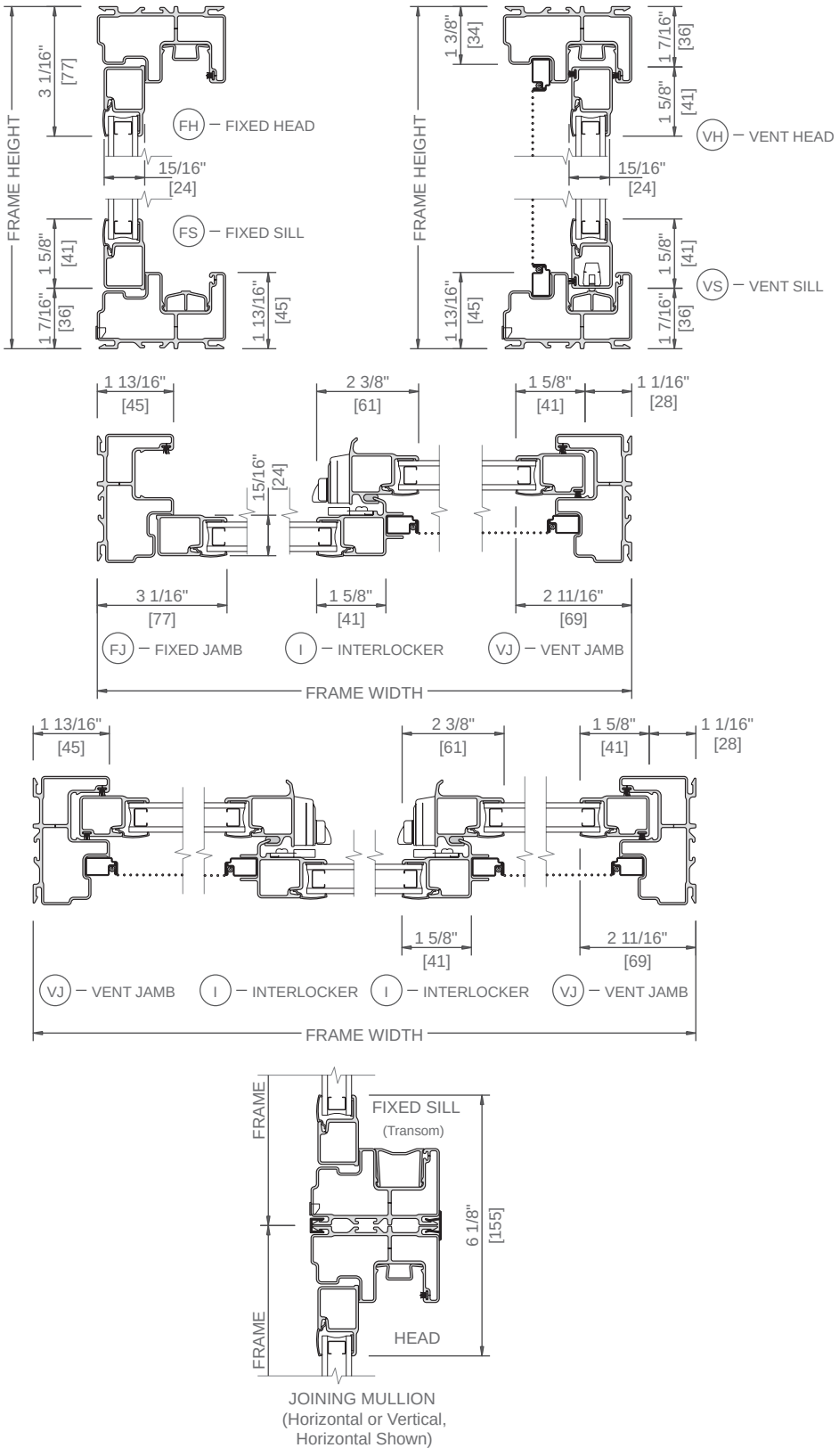
OX



XOX



BLOCK FRAME



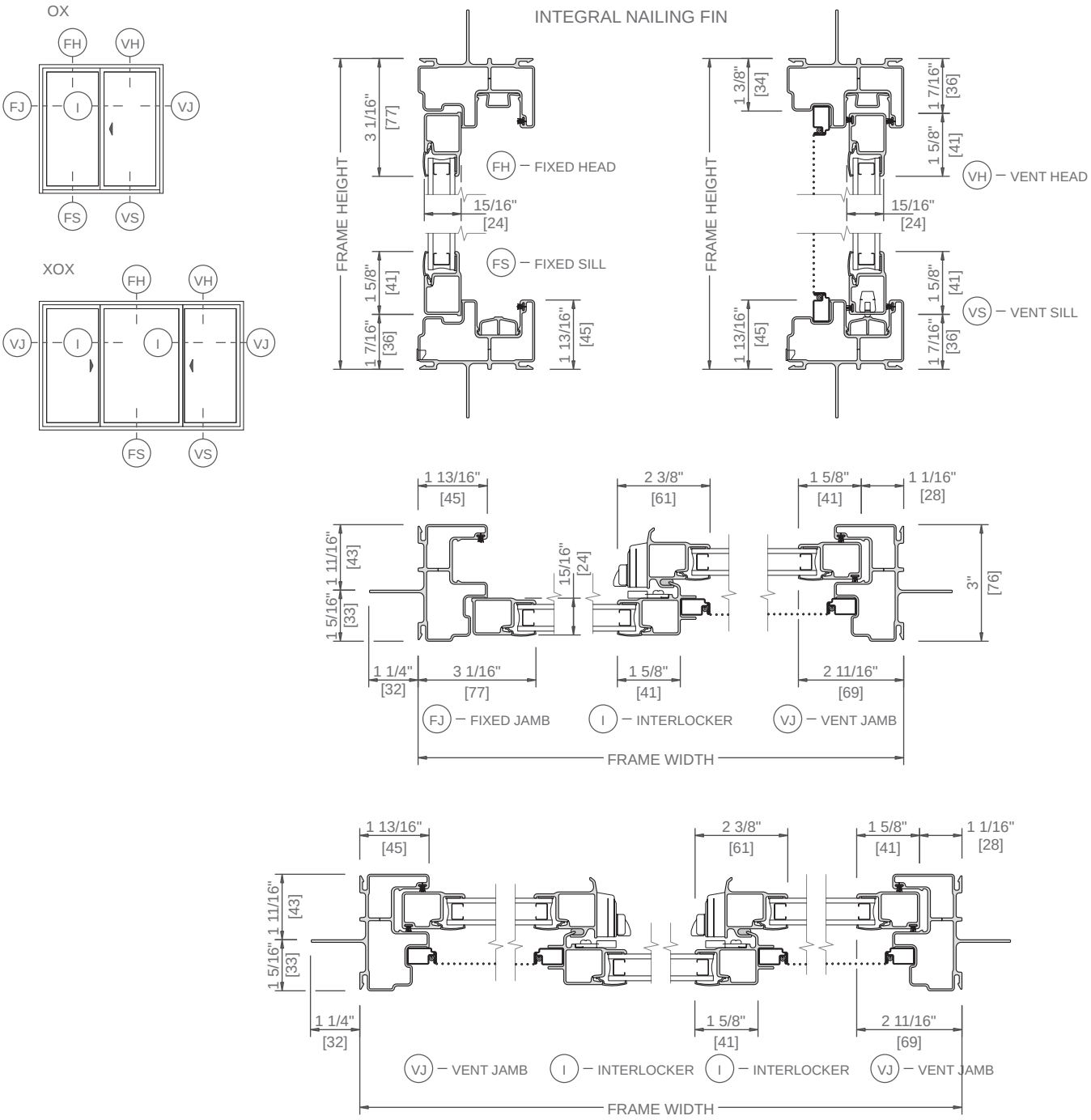
JOINING MULLION
(Horizontal or Vertical,
Horizontal Shown)

Scale 3" = 1' 0"

All dimensions are approximate.

See Combination section for mullion applications and structural limitations.

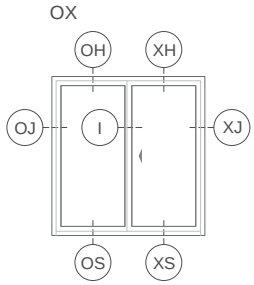
Unit Sections

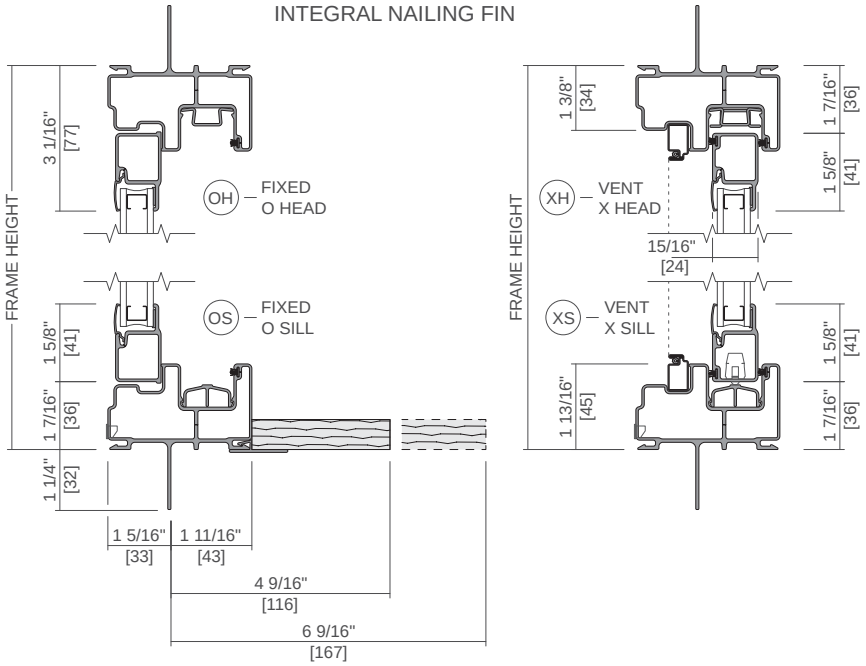


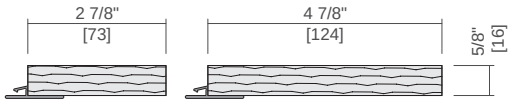
Scale 3" = 1' 0"

All dimensions are approximate.

Unit Sections

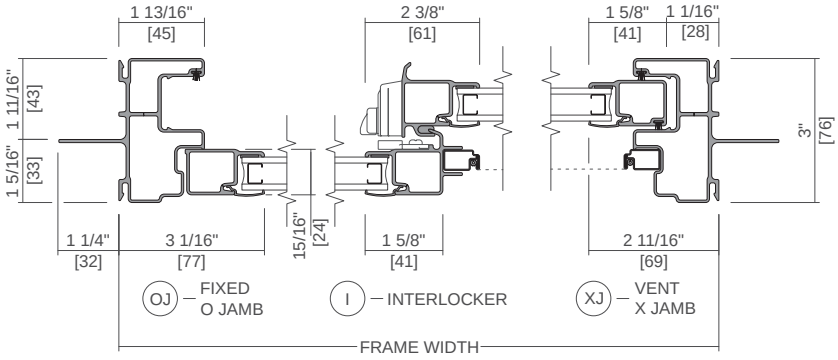






4 9/16" Wall 6 9/16" Wall

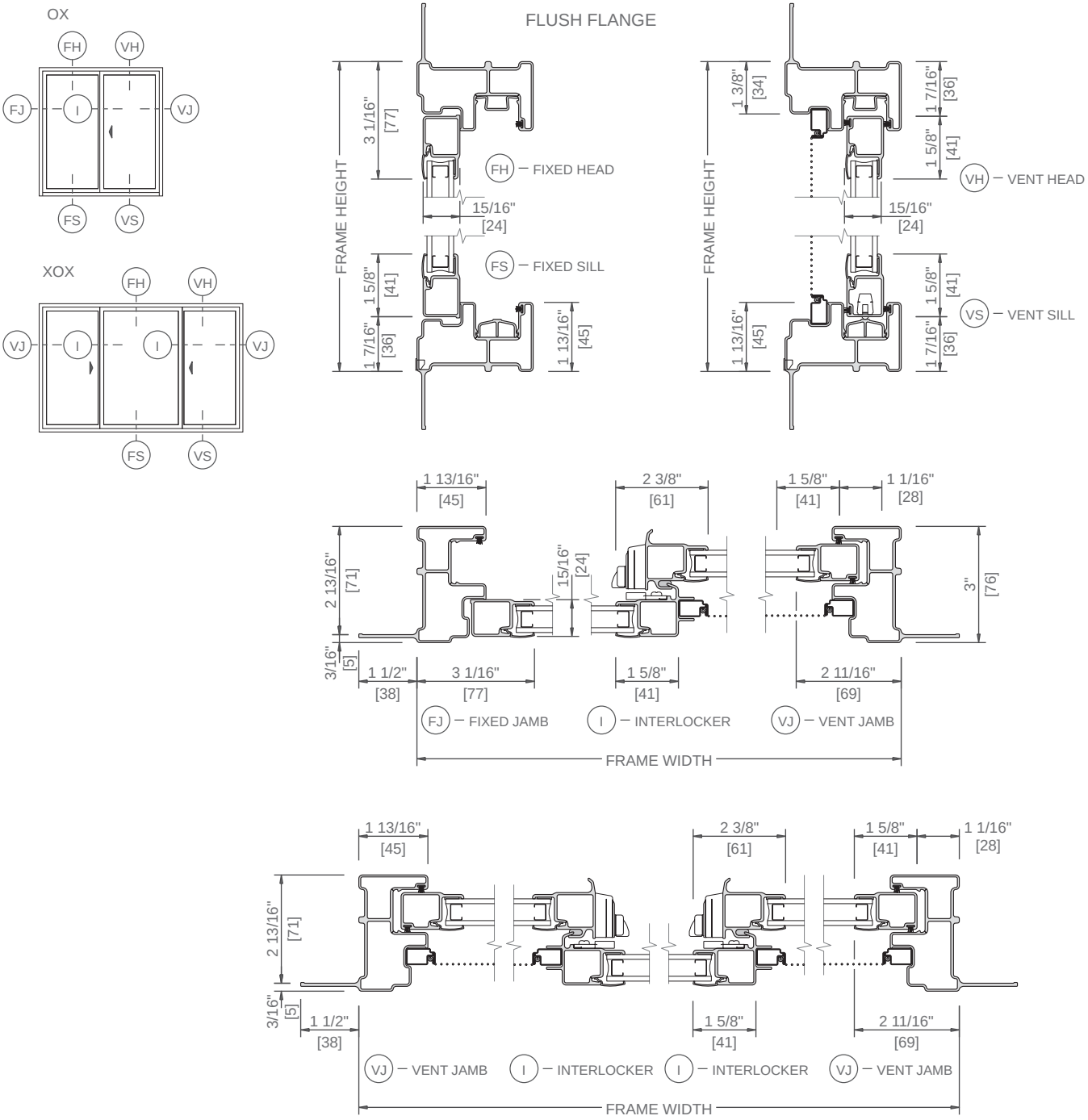
Optional Factory Applied Wood Jamb Extensions



Scale 3" = 1' 0"

All dimensions are approximate.

Unit Sections



Scale 3" = 1' 0"

All dimensions are approximate.