



Product Selection Guide

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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 Microsoft Word or other text editing application):

https://media.pella.com/professional/adm/Fiberglass-CSI_Specs/08263_Door.rtf?utm_source=pdfdoc

AIA Masterspec (readable using Microsoft 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 Microsoft Word or other text editing application):

https://media.pella.com/professional/adm/Fiberglass/F2-SD.rtf?utm_source=pdfdoc

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

https://media.pella.com/professional/adm/Fiberglass/IMP-SPD-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-SPD-Detail_D.dwg?utm_source=pdfdoc

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

https://media.pella.com/professional/adm/RevitFiles/Imp-Revit/Door-Sliding_Patio-Pella-Impervia-XO.zip?utm_source=pdfdoc

Sketchup (requires appropriate software to read and use):

https://media.pella.com/professional/adm/Fiberglass/PellaSKP_Impervia_Sliding_Door.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

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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.



Impervia® Sliding Patio Doors

Size and Performance Data

Sizes	
Standard Sizes	●
Special Sizes	●
6' 8" Door Heights	●
6' 10" Door Heights	●
8' Door Heights	●
9' Door Heights	●
10' Door Heights	●
Available in Fixed-Vent (OX), Vent-Fixed (XO), Fixed (O) Fixed-Vent-Fixed (OX/O, O/XO)	

	8-0/6-10 (96" x 82")	8-0/6-10 with Performance Upgrade (Requires screw through frame install)	8-0/6-10 Impact-Resistant (Requires screw through frame or clip install)	8-0/8-0 (96" x 96")	8-0/8-0 with Performance Upgrade (Requires screw through frame install)	8-0/8-0 Impact-Resistant (Requires screw through frame or clip install)
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Performance (vent single units only OX / XO)						
Meets or Exceeds AAMA / WDMA Ratings	SD-LC50 Hallmark Certified	SD-LC50 Hallmark Certified	SD-LC+50/-50 Wind Zone 2 - Missile C Hallmark Certified	SD-LC35 Hallmark Certified	SD-LC50 Hallmark Certified	SD-LC+50/-50 Wind Zone 2 - Missile C Hallmark Certified
Air Infiltration (cfm/ft ² of frame @ 1.57 psf wind pressure) ₁	0.15	0.15	0.15	0.15	0.15	0.15
Design Pressure	50 psf	50 psf	50 psf	35 psf	50 psf	50 psf
Water Resistance	7.5 psf	7.5 psf	7.5 psf	7.5 psf	7.5 psf	7.5 psf

Other Performance Criteria						
Forced Entry Resistance Level (Minimum Security Grade) ₂	40/10	40/10	40/10	40/10	40/10	40/10
Maximum Operating Force (lb) Initiate Motion/Maintain Motion	18/7	18/7	18/7	18/7	18/7	18/7
Maximum Locking Force (lb) Lock/Unlock	1/1	1/1	1/1	1/1	1/1	1/1

Sound Transmission Class and 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 Glass Thickness		
Vent-Fixed	71-1/4" x 81-1/2"	1"	3mm	3mm	—	29	24
	71-1/4" x 81-1/2"	1"	4mm	4mm	—	27	23
	71-1/4" x 81-1/2"	1"	5mm	5mm	—	31	27
	71-1/4" x 81-1/2"	1"	6mm	6mm	—	31	27
	71-1/4" x 81-1/2"	1"	5mm	3mm	—	31	27
	71-1/4" x 81-1/2"	1"	3mm	7mm Laminated	—	33	27
	71-1/4" x 95-1/2"	1"	6mm	11.7mm Laminated	—	33	30
	71-1/4" x 81-1/2"	1"	3mm	3mm	3mm	29	24
	71-1/4" x 95-1/2"	1"	4mm	4mm	4mm	30	26
Fixed	71-1/4" x 81-1/2"	1"	3mm	3mm	—	30	24

(1) Published performance data for air infiltration is determined by testing a minimum of four (4) products of NFRC model size. Testing is conducted in accordance with ASTM E283. Air infiltration ratings for products will differ by size. The performance data does not apply to combination assemblies unless noted. Actual product performance may vary for a number of reasons including installation and product care.

(2) The higher the level, the greater the product's ability to resist forced entry. Grade 40 is achieved with a block frame screw install and grade 10 is achieved with a fin install.

(3) ASTM E 1425 defines standard sizes for acoustical testing. Actual tested sizes shown vary from ASTM E 1425 sizes to represent Pella's product offering.

All sizes and glass types are tested for air/water/structural and impact-resistance.



Impervia® Sliding Patio Doors

Features and Options

	Block Frame
Glazing	
Glazing Type	
Dual-pane Insulating Glass	S
Triple-pane Insulating Glass	O
Insulated Glass Options / Low-E Types	
Clear Insulating Glass (no Low-E coating)	S
Advanced Low-E Insulating Glass	O
SunDefense™ Low-E Insulating Glass	O
SunDefense+ Low-E Insulating Glass	O
AdvancedComfort Low-E Insulating Glass	O
NaturalSun Low-E Insulating Glass	O
NaturalSun+ Low-E Insulating Glass	O
Additional Glass Options	
Tempered Glass	S
Noise reduction laminated glass (non-impact)	O
Impact-resistant laminated glass	O
Tinted glass (Bronze, Gray, Green) Advanced Low-E	O
Obscure Glass ¹	O
Blinds-Between-the-Glass ²	O
Gas Fill / High Altitude	
Argon	S
High Altitude	O
High Altitude with argon	O
Exterior / Interior	
Powder-Coat Brown, Black, Tan or Morning Sky Gray	S
Powder-Coat Dual-color (Brown, Black, Tan or Morning Sky Gray with White interior)	O

	Block Frame
Interior Hardware Finish	
Match interior finish	S
Satin Nickel	O
Exterior Hardware Finish	
Match exterior finish	S
Locking System	
Multi-Point Locking System	S
Keylock	O
Secure-Vent Lock	S
Grilles	
Grilles-Between-the-Glass	
3/4" contoured (match interior and exterior finish)	O
Patterns	
Traditional	O
Prairie	O
Top Row	O
Special	O
Screens	
InView™ fiberglass sliding screen door	S

S = Standard; O = Optional

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

(2) Select sizes and glass configurations only



Impervia® Sliding Patio Doors

Glazing Performance - Total Unit

Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	U-Factor	SHGC	VLT	CR	Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.						U. S.			Canada		
										Zone	ER	Zone	ER	Zone	ER
Standard Performance										N	NC	SC	S	CA	
1"	Clear IG	PEL-N-279-00001-00001	3	3	air	0.48	0.59	0.54	45						
1"	with grilles-between-the-glass	PEL-N-279-00001-00002	3	3	air	0.48	0.52	0.54	45						
1"	NaturalSun Low-E IG	PEL-N-279-00003-00001	3	3	argon	0.32	0.52	0.52	59						
1"	with grilles-between-the-glass	PEL-N-279-00003-00002	3	3	argon	0.32	0.46	0.52	59						
1"	NaturalSun+ Low-E IG	PEL-N-279-01695-00001	3	3	argon	0.27	0.48	0.58	48						
1"	with grilles-between-the-glass	PEL-N-279-01696-00001	3	3	argon	0.27	0.42	0.51	48						
1"	Advanced Low-E IG	PEL-N-279-00005-00001	3	3	argon	0.31	0.28	0.46	59						
1"	with grilles-between-the-glass	PEL-N-279-00005-00002	3	3	argon	0.31	0.25	0.46	59						
1"	SunDefense™ IG	PEL-N-279-00007-00001	3	3	argon	0.31	0.21	0.43	60						
1"	with grilles-between-the-glass	PEL-N-279-00007-00002	3	3	argon	0.31	0.19	0.43	60						
1"	SunDefense+ IG	PEL-N-279-01719-00001	3	3	argon	0.26	0.21	0.48	49	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-01720-00001	3	3	argon	0.26	0.18	0.42	49	N	NC	SC	S		
1"	AdvancedComfort Low-E IG	PEL-N-279-00009-00001	3	3	argon	0.27	0.28	0.45	48						
1"	with grilles-between-the-glass	PEL-N-279-00009-00002	3	3	argon	0.27	0.24	0.45	48						
1"	Clear IG	PEL-N-279-00010-00001	4	4	air	0.47	0.57	0.54	45						
1"	with grilles-between-the-glass	PEL-N-279-00010-00002	4	4	air	0.47	0.50	0.54	45						
1"	NaturalSun Low-E IG	PEL-N-279-00012-00001	4	4	argon	0.32	0.51	0.52	58						
1"	with grilles-between-the-glass	PEL-N-279-00012-00002	4	4	argon	0.32	0.45	0.52	58						
1"	NaturalSun+ Low-E IG	PEL-N-279-01699-00001	4	4	argon	0.27	0.46	0.58	47						
1"	with grilles-between-the-glass	PEL-N-279-01700-00001	4	4	argon	0.27	0.41	0.51	47						
1"	Advanced Low-E IG	PEL-N-279-00014-00001	4	4	argon	0.31	0.28	0.45	59						
1"	with grilles-between-the-glass	PEL-N-279-00014-00002	4	4	argon	0.31	0.25	0.45	59						
1"	SunDefense™ IG	PEL-N-279-00016-00001	4	4	argon	0.30	0.21	0.42	59						
1"	with grilles-between-the-glass	PEL-N-279-00016-00002	4	4	argon	0.30	0.19	0.42	59						
1"	SunDefense+ IG	PEL-N-279-01723-00001	4	4	argon	0.26	0.21	0.47	48	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-01724-00001	4	4	argon	0.26	0.18	0.41	48	N	NC	SC	S		
1"	AdvancedComfort Low-E IG	PEL-N-279-00018-00001	4	4	argon	0.27	0.27	0.44	48						
1"	with grilles-between-the-glass	PEL-N-279-00018-00002	4	4	argon	0.27	0.24	0.44	48						
1"	Clear IG	PEL-N-279-00019-00001	5	5	air	0.47	0.57	0.53	45						
1"	with grilles-between-the-glass	PEL-N-279-00019-00002	5	5	air	0.47	0.50	0.53	45						
1"	NaturalSun Low-E IG	PEL-N-279-00021-00001	5	5	argon	0.32	0.50	0.51	58						
1"	with grilles-between-the-glass	PEL-N-279-00021-00002	5	5	argon	0.32	0.44	0.51	58						
1"	NaturalSun+ Low-E IG	PEL-N-279-01711-00001	5	5	argon	0.27	0.46	0.57	46						
1"	with grilles-between-the-glass	PEL-N-279-01712-00001	5	5	argon	0.27	0.40	0.50	46						
1"	Advanced Low-E IG	PEL-N-279-00023-00001	5	5	argon	0.31	0.28	0.45	58						
1"	with grilles-between-the-glass	PEL-N-279-00023-00002	5	5	argon	0.31	0.24	0.45	58						
1"	SunDefense™ IG	PEL-N-279-00025-00001	5	5	argon	0.30	0.21	0.42	59						
1"	with grilles-between-the-glass	PEL-N-279-00025-00002	5	5	argon	0.30	0.19	0.42	59						
1"	SunDefense+ IG	PEL-N-279-01735-00001	5	5	argon	0.26	0.20	0.47	48	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-01736-00001	5	5	argon	0.26	0.18	0.41	48	N	NC	SC	S		
1"	AdvancedComfort Low-E IG	PEL-N-279-00027-00001	5	5	argon	0.27	0.27	0.44	47						
1"	with grilles-between-the-glass	PEL-N-279-00027-00002	5	5	argon	0.27	0.24	0.44	47						
1"	Clear IG	PEL-N-279-00034-00001	5	3	air	0.47	0.55	0.53	44						
1"	with grilles-between-the-glass	PEL-N-279-00034-00002	5	3	air	0.47	0.48	0.53	44						

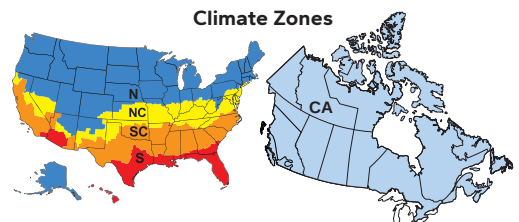
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R-Value = 1/U-Factor
SHGC = Solar Heat Gain Coefficient
VLT % = Visible Light Transmission
CR = Condensation Resistance
ER = Canadian Energy Rating

(1) Glazing performance values are calculated based on NFRC 100, NFRC 200 and NFRC 500. ENERGY STAR® values are updated to 2023 (Version 7) criteria.

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

Visit www.energystar.gov for Energy Star guidelines.





Impervia® Sliding Patio Doors

Glazing Performance - Total Unit

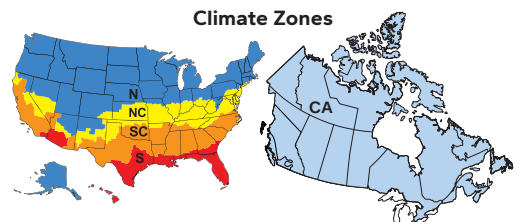
Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	U-Factor	SHGC	VLT	CR	Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.						U. S.			Canada		
										Zone	ER	Zone	ER	Zone	ER
Standard Performance										N	NC	SC	S	CA	
1"	NaturalSun Low-E IG	PEL-N-279-00036-00001	6	6	argon	0.31	0.49	0.51	57						
1"	with grilles-between-the-glass	PEL-N-279-00036-00002	6	6	argon	0.31	0.43	0.51	57						
1"	NaturalSun+ Low-E IG	PEL-N-279-01715-00001	6	6	argon	0.27	0.44	0.57	46						
1"	with grilles-between-the-glass	PEL-N-279-01716-00001	6	6	argon	0.27	0.39	0.49	46						
1"	Advanced Low-E IG	PEL-N-279-00038-00001	6	6	argon	0.30	0.27	0.44	58						
1"	with grilles-between-the-glass	PEL-N-279-00038-00002	6	6	argon	0.30	0.24	0.44	58						
1"	SunDefense™ IG	PEL-N-279-00040-00001	6	6	argon	0.30	0.21	0.41	58						
1"	with grilles-between-the-glass	PEL-N-279-00040-00002	6	6	argon	0.30	0.19	0.41	58						
1"	SunDefense+ IG	PEL-N-279-01739-00001	6	6	argon	0.26	0.20	0.46	47	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-01740-00001	6	6	argon	0.26	0.18	0.40	47	N	NC	SC	S		
1"	AdvancedComfort Low-E IG	PEL-N-279-00042-00001	6	6	argon	0.27	0.27	0.43	47						
1"	with grilles-between-the-glass	PEL-N-279-00042-00002	6	6	argon	0.27	0.24	0.43	47						
1"	Clear IG	PEL-N-279-00049-00001	5	3	air	0.47	0.57	0.54	45						
1"	with grilles-between-the-glass	PEL-N-279-00049-00002	5	3	air	0.47	0.50	0.54	45						
1"	NaturalSun Low-E IG	PEL-N-279-00051-00001	5	3	argon	0.32	0.50	0.52	59						
1"	with grilles-between-the-glass	PEL-N-279-00051-00002	5	3	argon	0.32	0.44	0.52	59						
1"	NaturalSun+ Low-E IG	PEL-N-279-01707-00001	5	3	argon	0.27	0.46	0.58	47						
1"	with grilles-between-the-glass	PEL-N-279-01708-00001	5	3	argon	0.27	0.41	0.50	47						
1"	Advanced Low-E IG	PEL-N-279-00053-00001	5	3	argon	0.31	0.28	0.45	59						
1"	with grilles-between-the-glass	PEL-N-279-00053-00002	5	3	argon	0.31	0.25	0.45	59						
1"	SunDefense™ IG	PEL-N-279-00055-00001	5	3	argon	0.30	0.21	0.42	59						
1"	with grilles-between-the-glass	PEL-N-279-00055-00002	5	3	argon	0.30	0.19	0.42	59						
1"	SunDefense+ IG	PEL-N-279-00057-00001	5	3	argon	0.27	0.20	0.41	49			SC	S		
1"	with grilles-between-the-glass	PEL-N-279-00057-00002	5	3	argon	0.27	0.18	0.41	49			SC	S		
1"	AdvancedComfort Low-E IG	PEL-N-279-00509-00001	5	3	argon	0.26	0.27	0.44	48	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00509-00002	5	3	argon	0.26	0.24	0.44	48	N	NC				
Standard Performance — with Blinds-Between-the-Glass															
1"	Advanced Low-E IG	PEL-N-279-00493-00001	3	3	Air	0.36	0.28	0.46	56						
1"	SunDefense Low-E IG	PEL-N-279-00495-00001	3	3	Air	0.36	0.21	0.43	56						

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Impervia® Sliding Patio Doors

Glazing Performance - Total Unit

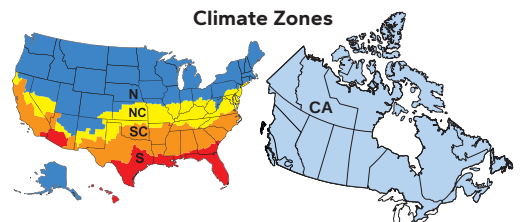
Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	Performance Values ₁				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.		U-Factor	SHGC	VLT	CR	U. S.				Canada ₂	
										Zone				ER	Zone
										Standard Performance — Foam Insulation					
1"	Clear IG	PEL-N-279-00088-00001	3	3	air	0.45	0.59	0.54	46						
1"	with grilles-between-the-glass	PEL-N-279-00088-00002	3	3	air	0.45	0.52	0.54	46						
1"	NaturalSun Low-E IG	PEL-N-279-00090-00001	3	3	argon	0.29	0.52	0.52	60						
1"	with grilles-between-the-glass	PEL-N-279-00090-00002	3	3	argon	0.29	0.46	0.52	60						
1"	NaturalSun+ Low-E IG	PEL-N-279-01839-00001	3	3	argon	0.24	0.48	0.58	48	N	NC			34	CA
1"	with grilles-between-the-glass	PEL-N-279-01840-00001	3	3	argon	0.24	0.42	0.51	48	N	NC				
1"	Advanced Low-E IG	PEL-N-279-00092-00001	3	3	argon	0.28	0.28	0.46	60						
1"	with grilles-between-the-glass	PEL-N-279-00092-00002	3	3	argon	0.28	0.25	0.46	60						
1"	SunDefense™ IG	PEL-N-279-00094-00001	3	3	argon	0.28	0.21	0.43	61				SC	S	
1"	with grilles-between-the-glass	PEL-N-279-00094-00002	3	3	argon	0.28	0.19	0.43	61				SC	S	
1"	SunDefense+ IG	PEL-N-279-01863-00001	3	3	argon	0.23	0.21	0.48	50	N	NC		SC	S	
1"	with grilles-between-the-glass	PEL-N-279-01864-00001	3	3	argon	0.23	0.18	0.42	50	N	NC		SC	S	
1"	AdvancedComfort Low-E IG	PEL-N-279-00096-00001	3	3	argon	0.24	0.28	0.45	49	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00096-00002	3	3	argon	0.24	0.24	0.45	49	N	NC				
1"	Clear IG	PEL-N-279-00097-00001	4	4	air	0.44	0.57	0.54	45						
1"	with grilles-between-the-glass	PEL-N-279-00097-00002	4	4	air	0.44	0.50	0.54	45						
1"	NaturalSun Low-E IG	PEL-N-279-00099-00001	4	4	argon	0.29	0.51	0.52	59						
1"	with grilles-between-the-glass	PEL-N-279-00099-00002	4	4	argon	0.29	0.45	0.52	59						
1"	NaturalSun+ Low-E IG	PEL-N-279-01843-00001	4	4	argon	0.24	0.46	0.58	48	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-01844-00001	4	4	argon	0.24	0.41	0.51	48	N	NC				
1"	Advanced Low-E IG	PEL-N-279-00101-00001	4	4	argon	0.28	0.28	0.45	60						
1"	with grilles-between-the-glass	PEL-N-279-00101-00002	4	4	argon	0.28	0.25	0.45	60						
1"	SunDefense™ IG	PEL-N-279-00103-00001	4	4	argon	0.27	0.21	0.42	60				SC	S	
1"	with grilles-between-the-glass	PEL-N-279-00103-00002	4	4	argon	0.27	0.19	0.42	60				SC	S	
1"	SunDefense+ IG	PEL-N-279-01867-00001	4	4	argon	0.23	0.21	0.47	49	N	NC		SC	S	
1"	with grilles-between-the-glass	PEL-N-279-01868-00001	4	4	argon	0.23	0.18	0.41	49	N	NC		SC	S	
1"	AdvancedComfort Low-E IG	PEL-N-279-00105-00001	4	4	argon	0.24	0.27	0.44	49	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00105-00002	4	4	argon	0.24	0.24	0.44	49	N	NC				
1"	Clear IG	PEL-N-279-00136-00001	5	3	air	0.44	0.57	0.54	45						
1"	with grilles-between-the-glass	PEL-N-279-00136-00002	5	3	air	0.44	0.50	0.54	45						
1"	NaturalSun Low-E IG	PEL-N-279-00138-00001	5	3	argon	0.29	0.50	0.52	60						
1"	with grilles-between-the-glass	PEL-N-279-00138-00002	5	3	argon	0.29	0.44	0.52	60						
1"	NaturalSun+ Low-E IG	PEL-N-279-01851-00001	5	3	argon	0.24	0.46	0.58	48	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-01852-00001	5	3	argon	0.24	0.41	0.50	48	N	NC				
1"	Advanced Low-E IG	PEL-N-279-00140-00001	5	3	argon	0.28	0.28	0.45	60						
1"	with grilles-between-the-glass	PEL-N-279-00140-00002	5	3	argon	0.28	0.25	0.45	60						
1"	SunDefense™ IG	PEL-N-279-00142-00001	5	3	argon	0.27	0.21	0.42	60				SC	S	
1"	with grilles-between-the-glass	PEL-N-279-00142-00002	5	3	argon	0.27	0.19	0.42	60				SC	S	
1"	SunDefense+ IG	PEL-N-279-00144-00001	5	3	argon	0.24	0.20	0.41	49	N	NC		SC	S	
1"	with grilles-between-the-glass	PEL-N-279-00144-00002	5	3	argon	0.24	0.18	0.41	49	N	NC		SC	S	
1"	AdvancedComfort Low-E IG	PEL-N-279-00511-00001	5	3	argon	0.25	0.27	0.44	49	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00511-00002	5	3	argon	0.25	0.24	0.44	49	N	NC				
Standard Performance — Foam Insulation with Blinds-Between-the-Glass															
1"	Advanced Low-E IG	PEL-N-279-00497-00001	3	3	Air	0.33	0.28	0.46	60						
1"	SunDefense Low-E IG	PEL-N-279-00499-00001	3	3	Air	0.33	0.21	0.43	60						

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Impervia® Sliding Patio Doors

Glazing Performance - Total Unit

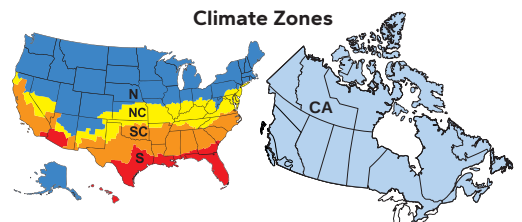
Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	Performance Values ₁				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.		U-Factor	SHGC	VLT	CR	U. S.		Canada ₂			
										Zone	ER	Zone			
Standard Performance — High Altitude Glazing										N	NC	SC	S	CA	
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00002-00001	3	3	air	0.36	0.52	0.52	56						
1"	with grilles-between-the-glass	PEL-N-279-00002-00002	3	3	air	0.36	0.46	0.52	56						
1"	NaturalSun+ Low-E IG	PEL-N-279-01693-00001	3	3	air	0.29	0.48	0.58	45						
1"	with grilles-between-the-glass	PEL-N-279-01694-00001	3	3	air	0.29	0.42	0.51	45						
1"	(HA) Advanced Low-E IG	PEL-N-279-00004-00001	3	3	air	0.35	0.28	0.46	56						
1"	with grilles-between-the-glass	PEL-N-279-00004-00002	3	3	air	0.35	0.25	0.46	56						
1"	(HA) SunDefense™ IG	PEL-N-279-00006-00001	3	3	air	0.34	0.21	0.43	57						
1"	with grilles-between-the-glass	PEL-N-279-00006-00002	3	3	air	0.34	0.19	0.43	57						
1"	SunDefense+ IG	PEL-N-279-01717-00001	3	3	air	0.29	0.21	0.48	46						
1"	with grilles-between-the-glass	PEL-N-279-01718-00001	3	3	air	0.29	0.18	0.42	46						
1"	(HA) AdvancedComfort Low-E IG	PEL-N-279-00008-00001	3	3	air	0.30	0.28	0.45	45						
1"	with grilles-between-the-glass	PEL-N-279-00008-00002	3	3	air	0.30	0.25	0.45	45						
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00011-00001	4	4	air	0.35	0.51	0.52	55						
1"	with grilles-between-the-glass	PEL-N-279-00011-00002	4	4	air	0.35	0.45	0.52	55						
1"	NaturalSun+ Low-E IG	PEL-N-279-01697-00001	4	4	air	0.29	0.46	0.58	44						
1"	with grilles-between-the-glass	PEL-N-279-01698-00001	4	4	air	0.29	0.41	0.51	44						
1"	(HA) Advanced Low-E IG	PEL-N-279-00013-00001	4	4	air	0.34	0.28	0.45	56						
1"	with grilles-between-the-glass	PEL-N-279-00013-00002	4	4	air	0.34	0.25	0.45	56						
1"	(HA) SunDefense™ IG	PEL-N-279-00015-00001	4	4	air	0.34	0.21	0.42	56						
1"	with grilles-between-the-glass	PEL-N-279-00015-00002	4	4	air	0.34	0.19	0.42	56						
1"	SunDefense+ IG	PEL-N-279-01721-00001	4	4	air	0.28	0.21	0.47	45			SC	S		
1"	with grilles-between-the-glass	PEL-N-279-01722-00001	4	4	air	0.28	0.18	0.41	45			SC	S		
1"	(HA) AdvancedComfort Low-E IG	PEL-N-279-00017-00001	4	4	air	0.29	0.27	0.44	45						
1"	with grilles-between-the-glass	PEL-N-279-00017-00002	4	4	air	0.29	0.24	0.44	45						
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00050-00001	5	3	air	0.35	0.50	0.52	56						
1"	with grilles-between-the-glass	PEL-N-279-00050-00002	5	3	air	0.35	0.44	0.52	56						
1"	NaturalSun+ Low-E IG	PEL-N-279-01705-00001	5	3	air	0.29	0.46	0.58	44						
1"	with grilles-between-the-glass	PEL-N-279-01706-00001	5	3	air	0.29	0.40	0.50	44						
1"	(HA) Advanced Low-E IG	PEL-N-279-00052-00001	5	3	air	0.34	0.28	0.45	56						
1"	with grilles-between-the-glass	PEL-N-279-00052-00002	5	3	air	0.34	0.25	0.45	56						
1"	(HA) SunDefense™ IG	PEL-N-279-00054-00001	5	3	air	0.34	0.21	0.42	56						
1"	with grilles-between-the-glass	PEL-N-279-00054-00002	5	3	air	0.34	0.19	0.42	56						
1"	SunDefense+ IG	PEL-N-279-00056-00001	5	3	air	0.29	0.21	0.41	45						
1"	with grilles-between-the-glass	PEL-N-279-00056-00002	5	3	air	0.29	0.18	0.41	45						
1"	(HA) AdvancedComfort Low-E IG	PEL-N-279-00510-00001	5	3	air	0.29	0.27	0.44	45						
1"	with grilles-between-the-glass	PEL-N-279-00510-00002	5	3	air	0.29	0.24	0.44	45						

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Impervia® Sliding Patio Doors

Glazing Performance - Total Unit

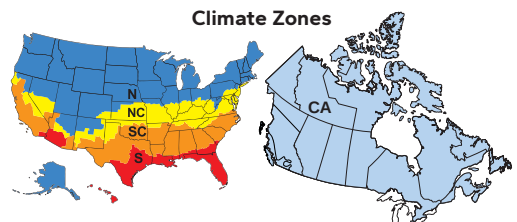
Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	Performance Values ₁				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.		U-Factor	SHGC	VLT	CR	U. S.		Canada ₂			
										Zone	ER	Zone			
High Altitude Glazing with Foam Insulation										N	NC	SC	S	CA	
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00089-00001	3	3	air	0.32	0.52	0.52	57						
1"	with grilles-between-the-glass	PEL-N-279-00089-00002	3	3	air	0.32	0.46	0.52	57						
1"	NaturalSun+ Low-E IG	PEL-N-279-01837-00001	3	3	air	0.26	0.48	0.58	45	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-01838-00001	3	3	air	0.26	0.42	0.51	45	N	NC				
1"	(HA) Advanced Low-E IG	PEL-N-279-00091-00001	3	3	air	0.32	0.28	0.46	57						
1"	with grilles-between-the-glass	PEL-N-279-00091-00002	3	3	air	0.32	0.25	0.46	57						
1"	(HA) SunDefense™ IG	PEL-N-279-00093-00001	3	3	air	0.31	0.21	0.43	57						
1"	with grilles-between-the-glass	PEL-N-279-00093-00002	3	3	air	0.31	0.19	0.43	57						
1"	SunDefense+ IG	PEL-N-279-01861-00001	3	3	air	0.26	0.21	0.48	46	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-01862-00001	3	3	air	0.26	0.18	0.42	46	N	NC	SC	S		
1"	(HA) AdvancedComfort Low-E IG	PEL-N-279-00095-00001	3	3	air	0.26	0.28	0.45	46						
1"	with grilles-between-the-glass	PEL-N-279-00095-00002	3	3	air	0.26	0.25	0.45	46						
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00098-00001	4	4	air	0.32	0.51	0.52	56						
1"	with grilles-between-the-glass	PEL-N-279-00098-00002	4	4	air	0.32	0.45	0.52	56						
1"	NaturalSun+ Low-E IG	PEL-N-279-01841-00001	4	4	air	0.26	0.46	0.58	45	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-01842-00001	4	4	air	0.26	0.41	0.51	45	N	NC				
1"	(HA) Advanced Low-E IG	PEL-N-279-00100-00001	4	4	air	0.31	0.28	0.45	57						
1"	with grilles-between-the-glass	PEL-N-279-00100-00002	4	4	air	0.31	0.25	0.45	57						
1"	(HA) SunDefense™ IG	PEL-N-279-00102-00001	4	4	air	0.31	0.21	0.42	57						
1"	with grilles-between-the-glass	PEL-N-279-00102-00002	4	4	air	0.31	0.19	0.42	57						
1"	SunDefense+ IG	PEL-N-279-01865-00001	4	4	air	0.25	0.21	0.47	46	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-01866-00001	4	4	air	0.25	0.18	0.41	46	N	NC	SC	S		
1"	(HA) AdvancedComfort Low-E IG	PEL-N-279-00104-00001	4	4	air	0.26	0.27	0.44	46						
1"	with grilles-between-the-glass	PEL-N-279-00104-00002	4	4	air	0.26	0.24	0.44	46						
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00137-00001	5	3	air	0.32	0.50	0.52	56						
1"	with grilles-between-the-glass	PEL-N-279-00137-00002	5	3	air	0.32	0.44	0.52	56						
1"	NaturalSun+ Low-E IG	PEL-N-279-01849-00001	5	3	air	0.26	0.46	0.58	45	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-01850-00001	5	3	air	0.26	0.40	0.50	45	N	NC				
1"	(HA) Advanced Low-E IG	PEL-N-279-00139-00001	5	3	air	0.31	0.28	0.45	57						
1"	with grilles-between-the-glass	PEL-N-279-00139-00002	5	3	air	0.31	0.25	0.45	57						
1"	(HA) SunDefense™ IG	PEL-N-279-00141-00001	5	3	air	0.31	0.21	0.42	57						
1"	with grilles-between-the-glass	PEL-N-279-00141-00002	5	3	air	0.31	0.19	0.42	57						
1"	SunDefense+ IG	PEL-N-279-00143-00001	5	3	air	0.26	0.21	0.41	46	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-00143-00002	5	3	air	0.26	0.18	0.41	46	N	NC	SC	S		
1"	(HA) AdvancedComfort Low-E IG	PEL-N-279-00512-00001	5	3	air	0.27	0.27	0.44	45						
1"	with grilles-between-the-glass	PEL-N-279-00512-00002	5	3	air	0.27	0.24	0.44	45						

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Glazing Performance - Total Unit

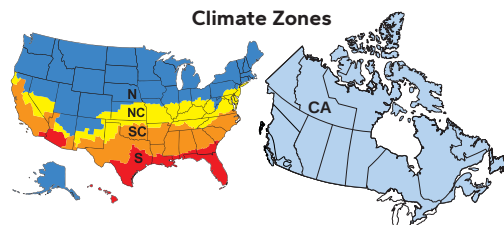
Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	Performance Values ₁				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.		U-Factor	SHGC	VLT	CR	U. S.				Canada ₂	
										Zone				ER	Zone
										Performance Upgrade Units					
1"	Clear IG	PEL-N-279-00175-00001	3	3	air	0.48	0.59	0.54	44						
1"	with grilles-between-the-glass	PEL-N-279-00175-00002	3	3	air	0.48	0.52	0.54	44						
1"	NaturalSun Low-E IG	PEL-N-279-00177-00001	3	3	argon	0.32	0.52	0.52	58						
1"	with grilles-between-the-glass	PEL-N-279-00177-00002	3	3	argon	0.32	0.46	0.52	58						
1"	NaturalSun+ Low-E IG	PEL-N-279-01623-00001	3	3	argon	0.28	0.48	0.58	47						
1"	with grilles-between-the-glass	PEL-N-279-01624-00001	3	3	argon	0.28	0.42	0.51	47						
1"	Advanced Low-E IG	PEL-N-279-00179-00001	3	3	argon	0.31	0.28	0.46	59						
1"	with grilles-between-the-glass	PEL-N-279-00179-00002	3	3	argon	0.31	0.25	0.46	59						
1"	SunDefense™ IG	PEL-N-279-00181-00001	3	3	argon	0.31	0.21	0.43	59						
1"	with grilles-between-the-glass	PEL-N-279-00181-00002	3	3	argon	0.31	0.19	0.43	59						
1"	SunDefense+ IG	PEL-N-279-01647-00001	3	3	argon	0.27	0.21	0.48	48			SC	S		
1"	with grilles-between-the-glass	PEL-N-279-01648-00001	3	3	argon	0.27	0.18	0.42	48			SC	S		
1"	AdvancedComfort Low-E IG	PEL-N-279-00183-00001	3	3	argon	0.27	0.28	0.45	48						
1"	with grilles-between-the-glass	PEL-N-279-00183-00002	3	3	argon	0.27	0.24	0.45	48						
1"	Clear IG	PEL-N-279-00184-00001	4	4	air	0.48	0.57	0.54	44						
1"	with grilles-between-the-glass	PEL-N-279-00184-00002	4	4	air	0.48	0.50	0.54	44						
1"	NaturalSun Low-E IG	PEL-N-279-00186-00001	4	4	argon	0.32	0.51	0.52	57						
1"	with grilles-between-the-glass	PEL-N-279-00186-00002	4	4	argon	0.32	0.45	0.52	57						
1"	NaturalSun+ Low-E IG	PEL-N-279-01627-00001	4	4	argon	0.27	0.46	0.58	46						
1"	with grilles-between-the-glass	PEL-N-279-01628-00001	4	4	argon	0.27	0.41	0.51	46						
1"	Advanced Low-E IG	PEL-N-279-00188-00001	4	4	argon	0.31	0.28	0.45	58						
1"	with grilles-between-the-glass	PEL-N-279-00188-00002	4	4	argon	0.31	0.25	0.45	58						
1"	SunDefense™ IG	PEL-N-279-00190-00001	4	4	argon	0.31	0.21	0.42	58						
1"	with grilles-between-the-glass	PEL-N-279-00190-00002	4	4	argon	0.31	0.19	0.42	58						
1"	SunDefense+ IG	PEL-N-279-01651-00001	4	4	argon	0.26	0.21	0.47	48	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-01652-00001	4	4	argon	0.26	0.18	0.41	48	N	NC	SC	S		
1"	AdvancedComfort Low-E IG	PEL-N-279-00192-00001	4	4	argon	0.27	0.27	0.44	47						
1"	with grilles-between-the-glass	PEL-N-279-00192-00002	4	4	argon	0.27	0.24	0.44	47						
1"	Clear IG	PEL-N-279-00223-00001	5	3	air	0.48	0.57	0.54	44						
1"	with grilles-between-the-glass	PEL-N-279-00223-00002	5	3	air	0.48	0.50	0.54	44						
1"	NaturalSun Low-E IG	PEL-N-279-00225-00001	5	3	argon	0.32	0.50	0.52	58						
1"	with grilles-between-the-glass	PEL-N-279-00225-00002	5	3	argon	0.32	0.44	0.52	58						
1"	NaturalSun+ Low-E IG	PEL-N-279-01635-00001	5	3	argon	0.27	0.46	0.58	46						
1"	with grilles-between-the-glass	PEL-N-279-01636-00001	5	3	argon	0.27	0.41	0.50	46						
1"	Advanced Low-E IG	PEL-N-279-00227-00001	5	3	argon	0.31	0.28	0.45	58						
1"	with grilles-between-the-glass	PEL-N-279-00227-00002	5	3	argon	0.31	0.25	0.45	58						
1"	SunDefense™ IG	PEL-N-279-00229-00001	5	3	argon	0.31	0.21	0.42	58						
1"	with grilles-between-the-glass	PEL-N-279-00229-00002	5	3	argon	0.31	0.19	0.42	58						
1"	SunDefense+ IG	PEL-N-279-00231-00001	5	3	argon	0.27	0.20	0.41	48			SC	S		
1"	with grilles-between-the-glass	PEL-N-279-00231-00002	5	3	argon	0.27	0.18	0.41	48			SC	S		
1"	AdvancedComfort Low-E IG	PEL-N-279-00513-00001	5	3	argon	0.27	0.27	0.44	47						
1"	with grilles-between-the-glass	PEL-N-279-00513-00002	5	3	argon	0.27	0.24	0.44	47						
Performance Upgrade — with Blinds-Between-the-Glass															
1"	Advanced Low-E IG	PEL-N-279-00501-00001	3	3	Air	0.36	0.28	0.46	55						
1"	SunDefense Low-E IG	PEL-N-279-00503-00001	3	3	Air	0.36	0.21	0.43	55						

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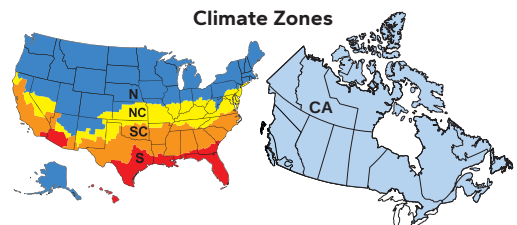
Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	Performance Values ₁				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.		U-Factor	SHGC	VLT	CR	U. S.				Canada ₂	
										Zone				ER	Zone
										Performance Upgrade Units with Foam Insulation					
1"	Clear IG	PEL-N-279-00262-00001	3	3	air	0.45	0.59	0.54	45						
1"	with grilles-between-the-glass	PEL-N-279-00262-00002	3	3	air	0.45	0.52	0.54	45						
1"	NaturalSun Low-E IG	PEL-N-279-00264-00001	3	3	argon	0.30	0.52	0.52	58						
1"	with grilles-between-the-glass	PEL-N-279-00264-00002	3	3	argon	0.30	0.46	0.52	58						
1"	NaturalSun+ Low-E IG	PEL-N-279-01767-00001	3	3	argon	0.25	0.48	0.58	47	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-01768-00001	3	3	argon	0.25	0.42	0.51	47	N	NC				
1"	Advanced Low-E IG	PEL-N-279-00266-00001	3	3	argon	0.29	0.28	0.46	59						
1"	with grilles-between-the-glass	PEL-N-279-00266-00002	3	3	argon	0.29	0.25	0.46	59						
1"	SunDefense™ IG	PEL-N-279-00268-00001	3	3	argon	0.28	0.21	0.43	59						
1"	with grilles-between-the-glass	PEL-N-279-00268-00002	3	3	argon	0.28	0.19	0.43	59						
1"	SunDefense+ IG	PEL-N-279-01791-00001	3	3	argon	0.24	0.21	0.48	48	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-01792-00001	3	3	argon	0.24	0.18	0.42	48	N	NC	SC	S		
1"	AdvancedComfort Low-E IG	PEL-N-279-00270-00001	3	3	argon	0.25	0.28	0.45	48	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00270-00002	3	3	argon	0.25	0.24	0.45	48	N	NC				
1"	Clear IG	PEL-N-279-00271-00001	4	4	air	0.45	0.57	0.54	44						
1"	with grilles-between-the-glass	PEL-N-279-00271-00002	4	4	air	0.45	0.50	0.54	44						
1"	NaturalSun Low-E IG	PEL-N-279-00273-00001	4	4	argon	0.30	0.51	0.52	58						
1"	with grilles-between-the-glass	PEL-N-279-00273-00002	4	4	argon	0.30	0.45	0.52	58						
1"	NaturalSun+ Low-E IG	PEL-N-279-01771-00001	4	4	argon	0.25	0.46	0.58	47	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-01772-00001	4	4	argon	0.25	0.41	0.51	47	N	NC				
1"	Advanced Low-E IG	PEL-N-279-00275-00001	4	4	argon	0.29	0.28	0.45	58						
1"	with grilles-between-the-glass	PEL-N-279-00275-00002	4	4	argon	0.29	0.25	0.45	58						
1"	SunDefense™ IG	PEL-N-279-00277-00001	4	4	argon	0.28	0.21	0.42	59						
1"	with grilles-between-the-glass	PEL-N-279-00277-00002	4	4	argon	0.28	0.19	0.42	59						
1"	SunDefense+ IG	PEL-N-279-01795-00001	4	4	argon	0.24	0.21	0.47	48	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-01796-00001	4	4	argon	0.24	0.18	0.41	48	N	NC	SC	S		
1"	AdvancedComfort Low-E IG	PEL-N-279-00279-00001	4	4	argon	0.25	0.27	0.44	48	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00279-00002	4	4	argon	0.25	0.24	0.44	48	N	NC				
1"	Clear IG	PEL-N-279-00310-00001	5	3	air	0.47	0.57	0.54	45						
1"	with grilles-between-the-glass	PEL-N-279-00310-00002	5	3	air	0.47	0.50	0.54	45						
1"	NaturalSun Low-E IG	PEL-N-279-00312-00001	5	3	argon	0.31	0.50	0.52	59						
1"	with grilles-between-the-glass	PEL-N-279-00312-00002	5	3	argon	0.31	0.44	0.52	59						
1"	NaturalSun+ Low-E IG	PEL-N-279-01779-00001	5	3	argon	0.25	0.46	0.58	47	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-01780-00001	5	3	argon	0.25	0.41	0.50	47	N	NC				
1"	Advanced Low-E IG	PEL-N-279-00314-00001	5	3	argon	0.30	0.28	0.45	59						
1"	with grilles-between-the-glass	PEL-N-279-00314-00002	5	3	argon	0.30	0.25	0.45	59						
1"	SunDefense™ IG	PEL-N-279-00316-00001	5	3	argon	0.30	0.21	0.42	59						
1"	with grilles-between-the-glass	PEL-N-279-00316-00002	5	3	argon	0.30	0.19	0.42	59						
1"	SunDefense+ IG	PEL-N-279-00318-00001	5	3	argon	0.26	0.20	0.41	50	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-00318-00002	5	3	argon	0.26	0.18	0.41	50	N	NC	SC	S		
1"	AdvancedComfort Low-E IG	PEL-N-279-00515-00001	5	3	argon	0.26	0.27	0.44	47	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00515-00002	5	3	argon	0.26	0.24	0.44	47	N	NC				
Performance Upgrade — Foam Insulation with Blinds-Between-the-Glass															
1"	Advanced Low-E IG	PEL-N-279-00505-00001	3	3	Air	0.34	0.28	0.46	60						
1"	SunDefense Low-E IG	PEL-N-279-00507-00001	3	3	Air	0.33	0.21	0.43	60						

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Impervia® Sliding Patio Doors

Glazing Performance - Total Unit

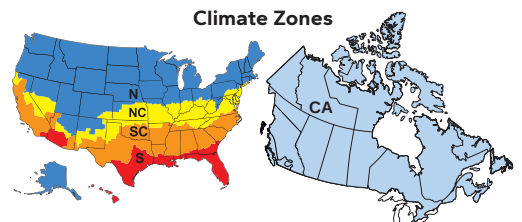
Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	Performance Values ₁				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.		U-Factor	SHGC	VLT	CR	U. S.		Canada ₂			
										Zone	ER	Zone			
Performance Upgrade High Altitude Glazing										N	NC	SC	S	CA	
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00176-00001	3	3	air	0.36	0.52	0.52	55						
1"	with grilles-between-the-glass	PEL-N-279-00176-00002	3	3	air	0.36	0.46	0.52	55						
1"	(HA) NaturalSun+ Low-E IG	PEL-N-279-01621-00001	3	3	air	0.30	0.48	0.58	44						
1"	with grilles-between-the-glass	PEL-N-279-01622-00001	3	3	air	0.30	0.42	0.51	44						
1"	(HA) Advanced Low-E IG	PEL-N-279-00178-00001	3	3	air	0.35	0.28	0.46	55						
1"	with grilles-between-the-glass	PEL-N-279-00178-00002	3	3	air	0.35	0.25	0.46	55						
1"	(HA) SunDefense™ IG	PEL-N-279-00180-00001	3	3	air	0.35	0.21	0.43	56						
1"	with grilles-between-the-glass	PEL-N-279-00180-00002	3	3	air	0.35	0.19	0.43	56						
1"	(HA) SunDefense+ IG	PEL-N-279-01645-00001	3	3	air	0.29	0.21	0.48	45						
1"	with grilles-between-the-glass	PEL-N-279-01646-00001	3	3	air	0.29	0.18	0.42	45						
1"	(HA) AdvancedComfort Low-E IG	PEL-N-279-00182-00001	3	3	air	0.30	0.28	0.45	45						
1"	with grilles-between-the-glass	PEL-N-279-00182-00002	3	3	air	0.30	0.25	0.45	45						
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00185-00001	4	4	air	0.36	0.51	0.52	54						
1"	with grilles-between-the-glass	PEL-N-279-00185-00002	4	4	air	0.36	0.45	0.52	54						
1"	(HA) NaturalSun+ Low-E IG	PEL-N-279-01625-00001	4	4	air	0.29	0.46	0.58	44						
1"	with grilles-between-the-glass	PEL-N-279-01626-00001	4	4	air	0.29	0.41	0.51	44						
1"	(HA) Advanced Low-E IG	PEL-N-279-00187-00001	4	4	air	0.35	0.28	0.45	55						
1"	with grilles-between-the-glass	PEL-N-279-00187-00002	4	4	air	0.35	0.25	0.45	55						
1"	(HA) SunDefense™ IG	PEL-N-279-00189-00001	4	4	air	0.34	0.21	0.42	55						
1"	with grilles-between-the-glass	PEL-N-279-00189-00002	4	4	air	0.34	0.19	0.42	55						
1"	(HA) SunDefense+ IG	PEL-N-279-01649-00001	4	4	air	0.29	0.21	0.47	45						
1"	with grilles-between-the-glass	PEL-N-279-01650-00001	4	4	air	0.29	0.18	0.41	45						
1"	(HA) AdvancedComfort Low-E IG	PEL-N-279-00191-00001	4	4	air	0.30	0.27	0.44	44						
1"	with grilles-between-the-glass	PEL-N-279-00191-00002	4	4	air	0.30	0.24	0.44	44						
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00224-00001	5	3	air	0.36	0.50	0.52	55						
1"	with grilles-between-the-glass	PEL-N-279-00224-00002	5	3	air	0.36	0.44	0.52	55						
1"	(HA) NaturalSun+ Low-E IG	PEL-N-279-01633-00001	5	3	air	0.30	0.46	0.58	43						
1"	with grilles-between-the-glass	PEL-N-279-01634-00001	5	3	air	0.30	0.40	0.50	43						
1"	(HA) Advanced Low-E IG	PEL-N-279-00226-00001	5	3	air	0.35	0.28	0.45	55						
1"	with grilles-between-the-glass	PEL-N-279-00226-00002	5	3	air	0.35	0.25	0.45	55						
1"	(HA) SunDefense™ IG	PEL-N-279-00228-00001	5	3	air	0.34	0.21	0.42	56						
1"	with grilles-between-the-glass	PEL-N-279-00228-00002	5	3	air	0.34	0.19	0.42	56						
1"	(HA) SunDefense+ IG	PEL-N-279-00230-00001	5	3	air	0.29	0.21	0.41	45						
1"	with grilles-between-the-glass	PEL-N-279-00230-00002	5	3	air	0.29	0.18	0.41	45						
1"	(HA) AdvancedComfort Low-E IG	PEL-N-279-00514-00001	5	3	air	0.29	0.27	0.44	44						
1"	with grilles-between-the-glass	PEL-N-279-00514-00002	5	3	air	0.29	0.24	0.44	44						

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Impervia® Sliding Patio Doors

Glazing Performance - Total Unit

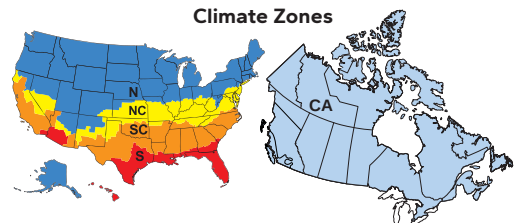
Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	Performance Values ₁				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.		U-Factor	SHGC	VLT	CR	U. S.		Canada ₂			
										Zone	ER	Zone			
Performance Upgrade High Altitude Glazing with Foam Insulation										N	NC	SC	S	CA	
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00263-00001	3	3	air	0.33	0.52	0.52	55						
1"	with grilles-between-the-glass	PEL-N-279-00263-00002	3	3	air	0.33	0.46	0.52	55						
1"	(HA) NaturalSun+ Low-E IG	PEL-N-279-01765-00001	3	3	air	0.27	0.48	0.58	44						
1"	with grilles-between-the-glass	PEL-N-279-01766-00001	3	3	air	0.27	0.42	0.51	44						
1"	(HA) Advanced Low-E IG	PEL-N-279-00265-00001	3	3	air	0.32	0.28	0.46	56						
1"	with grilles-between-the-glass	PEL-N-279-00265-00002	3	3	air	0.32	0.25	0.46	56						
1"	(HA) SunDefense™ IG	PEL-N-279-00267-00001	3	3	air	0.32	0.21	0.43	56						
1"	with grilles-between-the-glass	PEL-N-279-00267-00002	3	3	air	0.32	0.19	0.43	56						
1"	(HA) SunDefense+ IG	PEL-N-279-01789-00001	3	3	air	0.26	0.21	0.48	45	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-01790-00001	3	3	air	0.26	0.18	0.42	45	N	NC	SC	S		
1"	(HA) AdvancedComfort Low-E IG	PEL-N-279-00269-00001	3	3	air	0.27	0.28	0.45	45						
1"	with grilles-between-the-glass	PEL-N-279-00269-00002	3	3	air	0.27	0.25	0.45	45						
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00272-00001	4	4	air	0.33	0.51	0.52	55						
1"	with grilles-between-the-glass	PEL-N-279-00272-00002	4	4	air	0.33	0.45	0.52	55						
1"	(HA) NaturalSun+ Low-E IG	PEL-N-279-01769-00001	4	4	air	0.27	0.46	0.58	44						
1"	with grilles-between-the-glass	PEL-N-279-01770-00001	4	4	air	0.27	0.41	0.51	44						
1"	(HA) Advanced Low-E IG	PEL-N-279-00274-00001	4	4	air	0.32	0.28	0.45	55						
1"	with grilles-between-the-glass	PEL-N-279-00274-00002	4	4	air	0.32	0.25	0.45	55						
1"	(HA) SunDefense™ IG	PEL-N-279-00276-00001	4	4	air	0.32	0.21	0.42	55						
1"	with grilles-between-the-glass	PEL-N-279-00276-00002	4	4	air	0.32	0.19	0.42	55						
1"	(HA) SunDefense+ IG	PEL-N-279-01793-00001	4	4	air	0.26	0.21	0.47	45	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-01794-00001	4	4	air	0.26	0.18	0.41	45	N	NC	SC	S		
1"	(HA) AdvancedComfort Low-E IG	PEL-N-279-00278-00001	4	4	air	0.27	0.27	0.44	45						
1"	with grilles-between-the-glass	PEL-N-279-00278-00002	4	4	air	0.27	0.24	0.44	45						
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00311-00001	5	3	air	0.34	0.50	0.52	56						
1"	with grilles-between-the-glass	PEL-N-279-00311-00002	5	3	air	0.34	0.44	0.52	56						
1"	(HA) NaturalSun+ Low-E IG	PEL-N-279-01777-00001	5	3	air	0.27	0.46	0.58	44						
1"	with grilles-between-the-glass	PEL-N-279-01778-00001	5	3	air	0.27	0.40	0.50	44						
1"	(HA) Advanced Low-E IG	PEL-N-279-00313-00001	5	3	air	0.34	0.28	0.45	56						
1"	with grilles-between-the-glass	PEL-N-279-00313-00002	5	3	air	0.34	0.25	0.45	56						
1"	(HA) SunDefense™ IG	PEL-N-279-00315-00001	5	3	air	0.33	0.21	0.42	57						
1"	with grilles-between-the-glass	PEL-N-279-00315-00002	5	3	air	0.33	0.19	0.42	57						
1"	(HA) SunDefense+ IG	PEL-N-279-00317-00001	5	3	air	0.28	0.21	0.41	47			SC	S		
1"	with grilles-between-the-glass	PEL-N-279-00317-00002	5	3	air	0.28	0.18	0.41	47			SC	S		
1"	(HA) AdvancedComfort Low-E IG	PEL-N-279-00516-00001	5	3	air	0.28	0.27	0.44	44						
1"	with grilles-between-the-glass	PEL-N-279-00516-00002	5	3	air	0.28	0.24	0.44	44						

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Glazing Performance - Total Unit

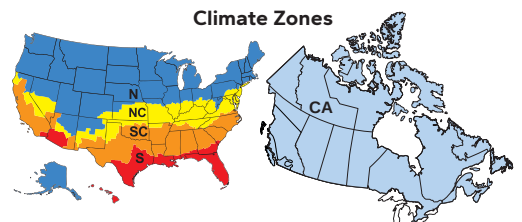
Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	Performance Values ¹				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.		U-Factor	SHGC	VLT	CR	U. S.				Canada ²	
										Zone				ER	Zone
Laminated for Sound Glazing										N	NC	SC	S	CA	
1"	Advanced Low-E IG	PEL-N-279-00075-00001	4	7	argon	0.30	0.27	0.45	58						
	with grilles-between-the-glass	PEL-N-279-00075-00002				0.30	0.24	0.45	58						
1"	Advanced Low-E IG	PEL-N-279-00082-00001	6	11	argon	0.32	0.27	0.43	55						
	with grilles-between-the-glass	PEL-N-279-00083-00001				0.34	0.24	0.43	55						
1"	SunDefense™ IG	PEL-N-279-00077-00001	4	7	argon	0.30	0.21	0.42	59						
	with grilles-between-the-glass	PEL-N-279-00077-00002				0.30	0.18	0.42	59						
1"	SunDefense™ IG	PEL-N-279-00086-00001	6	11	argon	0.32	0.21	0.40	55						
	with grilles-between-the-glass	PEL-N-279-00087-00001				0.33	0.19	0.40	55						
Laminated for Sound Glazing with Foam Insulation															
1"	Advanced Low-E IG	PEL-N-279-00162-00001	4	7	argon	0.27	0.27	0.45	60						
	with grilles-between-the-glass	PEL-N-279-00162-00002				0.27	0.24	0.45	60						
1"	Advanced Low-E IG	PEL-N-279-00169-00001	6	11	argon	0.29	0.27	0.43	56						
	with grilles-between-the-glass	PEL-N-279-00170-00001				0.31	0.24	0.43	56						
1"	SunDefense™ IG	PEL-N-279-00164-00001	4	7	argon	0.27	0.21	0.42	60			SC	S		
	with grilles-between-the-glass	PEL-N-279-00164-00002				0.27	0.18	0.42	60			SC	S		
1"	SunDefense™ IG	PEL-N-279-00173-00001	6	11	argon	0.29	0.21	0.40	57						
	with grilles-between-the-glass	PEL-N-279-00174-00001				0.30	0.19	0.40	57						
Laminated for Sound High Altitude Glazing															
1"	Advanced Low-E IG	PEL-N-279-00074-00001	4	7	air	0.34	0.28	0.45	55						
	with grilles-between-the-glass	PEL-N-279-00074-00002				0.34	0.25	0.45	55						
1"	Advanced Low-E IG	PEL-N-279-00080-00001	6	11	air	0.37	0.28	0.43	51						
	with grilles-between-the-glass	PEL-N-279-00081-00001				0.38	0.24	0.43	51						
1"	SunDefense™ IG	PEL-N-279-00076-00001	4	7	air	0.33	0.21	0.42	56						
	with grilles-between-the-glass	PEL-N-279-00076-00002				0.33	0.19	0.42	56						
1"	SunDefense™ IG	PEL-N-279-00084-00001	6	11	air	0.36	0.22	0.40	52						
	with grilles-between-the-glass	PEL-N-279-00085-00001				0.38	0.19	0.40	52						
Laminated for Sound High Altitude Glazing with Foam Insulation															
1"	Advanced Low-E IG	PEL-N-279-00161-00001	4	7	air	0.31	0.28	0.45	56						
	with grilles-between-the-glass	PEL-N-279-00161-00002				0.31	0.25	0.45	56						
1"	Advanced Low-E IG	PEL-N-279-00167-00001	6	11	air	0.34	0.28	0.43	52						
	with grilles-between-the-glass	PEL-N-279-00168-00001				0.35	0.24	0.43	52						
1"	SunDefense™ IG	PEL-N-279-00163-00001	4	7	air	0.30	0.21	0.42	57						
	with grilles-between-the-glass	PEL-N-279-00163-00002				0.30	0.19	0.42	57						
1"	SunDefense™ IG	PEL-N-279-00171-00001	6	11	air	0.33	0.22	0.40	53						
	with grilles-between-the-glass	PEL-N-279-00172-00001				0.35	0.19	0.40	53						

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Impervia® Sliding Patio Doors

Glazing Performance - Total Unit

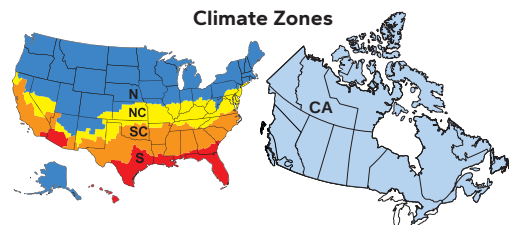
Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	Performance Values ¹				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.		U-Factor	SHGC	VLT	CR	U. S.				Canada ²	
										Zone				ER	Zone
Performance Upgrade with Laminated for Sound Glazing										N	NC	SC	S	CA	
1"	Advanced Low-E IG	PEL-N-279-00249-00001	4	7	argon	0.31	0.27	0.45	58						
	with grilles-between-the-glass	PEL-N-279-00249-00002				0.31	0.24	0.45	58						
1"	Advanced Low-E IG	PEL-N-279-00256-00001	6	11	argon	0.33	0.27	0.43	54						
	with grilles-between-the-glass	PEL-N-279-00257-00001				0.34	0.24	0.43	54						
1"	SunDefense™ IG	PEL-N-279-00251-00001	4	7	argon	0.30	0.21	0.42	58						
	with grilles-between-the-glass	PEL-N-279-00251-00002				0.30	0.18	0.42	58						
1"	SunDefense™ IG	PEL-N-279-00260-00001	6	11	argon	0.32	0.21	0.40	55						
	with grilles-between-the-glass	PEL-N-279-00261-00001				0.34	0.19	0.40	55						
Performance Upgrade Laminated for Sound Glazing with Foam Insulation															
1"	Advanced Low-E IG	PEL-N-279-00336-00001	4	7	argon	0.29	0.27	0.45	59						
	with grilles-between-the-glass	PEL-N-279-00336-00002				0.29	0.24	0.45	59						
1"	Advanced Low-E IG	PEL-N-279-00343-00001	6	11	argon	0.31	0.27	0.43	55						
	with grilles-between-the-glass	PEL-N-279-00344-00001				0.33	0.24	0.43	55						
1"	SunDefense™ IG	PEL-N-279-00338-00001	4	7	argon	0.29	0.21	0.42	59						
	with grilles-between-the-glass	PEL-N-279-00338-00002				0.29	0.18	0.42	59						
1"	SunDefense™ IG	PEL-N-279-00347-00001	6	11	argon	0.31	0.21	0.40	55						
	with grilles-between-the-glass	PEL-N-279-00348-00001				0.33	0.19	0.40	55						
Performance Upgrade Laminated for Sound High Altitude Glazing															
1"	Advanced Low-E IG	PEL-N-279-00248-00001	4	7	air	0.34	0.28	0.45	55						
	with grilles-between-the-glass	PEL-N-279-00248-00002				0.34	0.25	0.45	55						
1"	Advanced Low-E IG	PEL-N-279-00254-00001	6	11	air	0.37	0.28	0.43	51						
	with grilles-between-the-glass	PEL-N-279-00255-00001				0.39	0.24	0.43	51						
1"	SunDefense™ IG	PEL-N-279-00250-00001	4	7	air	0.34	0.21	0.42	55						
	with grilles-between-the-glass	PEL-N-279-00250-00002				0.34	0.19	0.42	55						
1"	SunDefense™ IG	PEL-N-279-00258-00001	6	11	air	0.37	0.22	0.40	51						
	with grilles-between-the-glass	PEL-N-279-00259-00001				0.38	0.19	0.40	51						
Performance Upgrade Laminated for Sound High Altitude Glazing with Foam Insulation															
1"	Advanced Low-E IG	PEL-N-279-00335-00001	4	7	air	0.33	0.28	0.45	56						
	with grilles-between-the-glass	PEL-N-279-00335-00002				0.33	0.25	0.45	56						
1"	Advanced Low-E IG	PEL-N-279-00337-00001	6	11	air	0.32	0.21	0.42	56						
	with grilles-between-the-glass	PEL-N-279-00337-00002				0.32	0.19	0.42	56						
1"	SunDefense™ IG	PEL-N-279-00341-00001	4	7	air	0.36	0.28	0.43	51						
	with grilles-between-the-glass	PEL-N-279-00342-00001				0.38	0.24	0.43	51						
1"	SunDefense™ IG	PEL-N-279-00345-00001	6	11	air	0.36	0.22	0.40	52						
	with grilles-between-the-glass	PEL-N-279-00346-00001				0.37	0.19	0.40	52						

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Impervia® Sliding Patio Doors

Glazing Performance - Total Unit

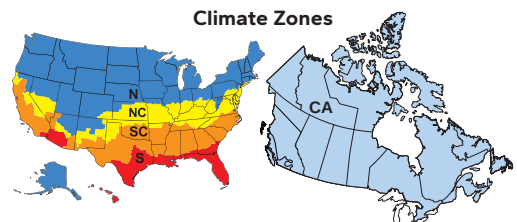
Glazing Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)		Gap Fill	Performance Values ¹				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Int.		U-Factor	SHGC	VLT	CR	U. S.				Canada ²	
										Zone				ER	Zone
										Impact-Resistant Laminated Glazing					
1"	Clear IG (PVB)	PEL-N-279-01909-00001	3	8.6	air	0.46	0.56	0.60	44						
	with grilles-between-the-glass	PEL-N-279-01910-00001				0.46	0.49	0.53	44						
1"	Clear IG (PVB)	PEL-N-279-00669-00001	5	8.6	air	0.46	0.55	0.61	44						
	with grilles-between-the-glass	PEL-N-279-00669-00002				0.46	0.48	0.53	44						
1"	Advanced Low-E IG (PVB)	PEL-N-279-01919-00001	3	8.6	argon	0.30	0.28	0.51	57						
	with grilles-between-the-glass	PEL-N-279-01920-00001				0.30	0.25	0.45	57						
1"	Advanced Low-E IG (PVB)	PEL-N-279-00694-00001	5	8.6	argon	0.30	0.28	0.51	57						
	with grilles-between-the-glass	PEL-N-279-00694-00002				0.30	0.24	0.45	57						
1"	SunDefense™ IG (PVB)	PEL-N-279-01915-00001	3	8.6	argon	0.30	0.21	0.47	57						
	with grilles-between-the-glass	PEL-N-279-01916-00001				0.30	0.18	0.41	57						
1"	SunDefense™ IG (PVB)	PEL-N-279-00682-00001	5	8.6	argon	0.29	0.21	0.48	58						
	with grilles-between-the-glass	PEL-N-279-00682-00002				0.29	0.19	0.42	58						
1"	Bronze Advanced Low-E IG (PVB)	PEL-N-279-01923-00001	3	8.6	argon	0.30	0.27	0.37	58						
	with grilles-between-the-glass	PEL-N-279-01924-00001				0.30	0.24	0.33	58						
1"	Bronze Advanced Low-E IG (PVB)	PEL-N-279-00700-00001	5	8.6	argon	0.30	0.25	0.03	57						
	with grilles-between-the-glass	PEL-N-279-00700-00002				0.30	0.22	0.03	57						
Impact-Resistant Laminated Glazing with Foam Insulation															
1"	Advanced Low-E IG (PVB)	PEL-N-279-01935-00001	3	8.6	argon	0.28	0.28	0.51	57						
	with grilles-between-the-glass	PEL-N-279-01936-00001				0.28	0.25	0.45	57						
1"	Advanced Low-E IG (PVB)	PEL-N-279-01170-00001	5	8.6	argon	0.27	0.28	0.51	57						
	with grilles-between-the-glass	PEL-N-279-01170-00002				0.27	0.24	0.45	57						
1"	SunDefense™ IG (PVB)	PEL-N-279-01931-00001	3	8.6	argon	0.27	0.21	0.47	58			SC	S		
	with grilles-between-the-glass	PEL-N-279-01932-00001				0.27	0.18	0.41	58			SC	S		
1"	SunDefense™ IG (PVB)	PEL-N-279-01158-00001	5	8.6	argon	0.27	0.21	0.48	58			SC	S		
	with grilles-between-the-glass	PEL-N-279-01158-00002				0.27	0.19	0.42	58			SC	S		
1"	Bronze Advanced Low-E IG (PVB)	PEL-N-279-01939-00001	3	8.6	argon	0.28	0.27	0.37	58						
	with grilles-between-the-glass	PEL-N-279-01940-00001				0.28	0.24	0.33	58						
1"	Bronze Advanced Low-E IG (PVB)	PEL-N-279-01176-00001	5	8.6	argon	0.27	0.25	0.03	57						
	with grilles-between-the-glass	PEL-N-279-01176-00002				0.27	0.22	0.03	57			SC	S		

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Glazing Performance - Total Unit

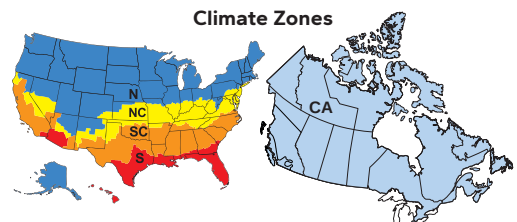
Glass Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)			Gap Fill	Performance Values ₁				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown							
			Ext.	Middle	Int.		U-Factor	SHGC	VLT	CR	U. S.				Canada ₂			
											Zone				ER	Zone		
Triple-Pane Glazing											N	NC	SC	S	CA			
1"	NaturalSun Low-E IG	PEL-N-279-00351-00001	3	3	3	argon	0.25	0.43	0.46	59	N	NC						
1"	with grilles-between-the-glass	PEL-N-279-00352-00001	3	3	3	argon	0.25	0.38	0.46	59	N	NC						
1"	AdvancedComfort Low-E IG	PEL-N-279-00357-00001	3	3	3	argon	0.24	0.26	0.41	59	N	NC						
1"	with grilles-between-the-glass	PEL-N-279-00358-00001	3	3	3	argon	0.25	0.23	0.41	59	N	NC	SC	S				
1"	SunDefense™ IG	PEL-N-279-00363-00001	3	3	3	argon	0.24	0.19	0.37	59	N	NC	SC	S				
1"	with grilles-between-the-glass	PEL-N-279-00364-00001	3	3	3	argon	0.25	0.17	0.37	59	N	NC	SC	S				
1"	NaturalSun Low-E IG	PEL-N-279-00369-00001	4	4	4	argon	0.27	0.41	0.45	59								
1"	with grilles-between-the-glass	PEL-N-279-00370-00001	4	4	4	argon	0.27	0.36	0.45	59								
1"	AdvancedComfort Low-E IG	PEL-N-279-00375-00001	4	4	4	argon	0.26	0.25	0.40	59								
1"	with grilles-between-the-glass	PEL-N-279-00376-00001	4	4	4	argon	0.27	0.22	0.40	59			SC	S				
1"	SunDefense™ IG	PEL-N-279-00381-00001	4	4	4	argon	0.26	0.19	0.37	59			SC	S				
1"	with grilles-between-the-glass	PEL-N-279-00382-00001	4	4	4	argon	0.27	0.17	0.37	59			SC	S				
Triple-Pane Glazing with Foam Insulation																		
1"	NaturalSun Low-E IG	PEL-N-279-00387-00001	3	3	3	argon	0.21	0.43	0.46	67	N	NC			35	CA		
1"	with grilles-between-the-glass	PEL-N-279-00388-00001	3	3	3	argon	0.21	0.38	0.46	67	N	NC			32	CA		
1"	AdvancedComfort Low-E IG	PEL-N-279-00393-00001	3	3	3	argon	0.21	0.26	0.41	67	N	NC			25	CA		
1"	with grilles-between-the-glass	PEL-N-279-00394-00001	3	3	3	argon	0.21	0.23	0.41	67	N	NC	SC	S	24	CA		
1"	SunDefense™ IG	PEL-N-279-00399-00001	3	3	3	argon	0.21	0.19	0.37	67	N	NC	SC	S				
1"	with grilles-between-the-glass	PEL-N-279-00400-00001	3	3	3	argon	0.21	0.17	0.37	67	N	NC	SC	S				
1"	NaturalSun Low-E IG	PEL-N-279-00405-00001	4	4	4	argon	0.23	0.41	0.45	64	N	NC						
1"	with grilles-between-the-glass	PEL-N-279-00406-00001	4	4	4	argon	0.24	0.36	0.45	64	N	NC						
1"	AdvancedComfort Low-E IG	PEL-N-279-00411-00001	4	4	4	argon	0.23	0.25	0.40	64	N	NC						
1"	with grilles-between-the-glass	PEL-N-279-00412-00001	4	4	4	argon	0.23	0.22	0.40	64	N	NC	SC	S				
1"	SunDefense™ IG	PEL-N-279-00417-00001	4	4	4	argon	0.23	0.19	0.37	64	N	NC	SC	S				
1"	with grilles-between-the-glass	PEL-N-279-00418-00001	4	4	4	argon	0.23	0.17	0.37	64	N	NC	SC	S				

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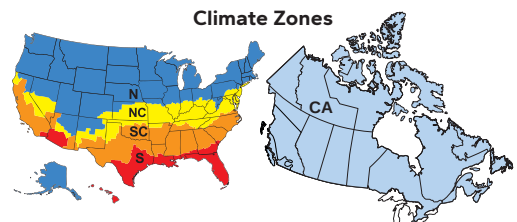
Glass Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)			Gap Fill	Performance Values ₁				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			ENct.	Middle	Int.		U-Factor	SHGC	VLT	CR	U. S.				Canada ₂	
											Zone				ER	Zone
											Triple-Pane High-Altitude Glazing					
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00349-00001	3	3	3	air	0.28	0.43	0.46	59						
1"	with grilles-between-the-glass	PEL-N-279-00350-00001	3	3	3	air	0.28	0.38	0.46	59						
1"	(HA) Advanced Low-E IG	PEL-N-279-00355-00001	3	3	3	air	0.28	0.26	0.41	59						
1"	with grilles-between-the-glass	PEL-N-279-00356-00001	3	3	3	air	0.28	0.23	0.41	59						
1"	(HA) SunDefense™ IG	PEL-N-279-00361-00001	3	3	3	air	0.28	0.19	0.37	59			SC	S		
1"	with grilles-between-the-glass	PEL-N-279-00362-00001	3	3	3	air	0.28	0.17	0.37	59						
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00367-00001	4	4	4	air	0.31	0.41	0.45	58						
1"	with grilles-between-the-glass	PEL-N-279-00368-00001	4	4	4	air	0.31	0.36	0.45	58						
1"	(HA) Advanced Low-E IG	PEL-N-279-00373-00001	4	4	4	air	0.30	0.26	0.40	58						
1"	with grilles-between-the-glass	PEL-N-279-00374-00001	4	4	4	air	0.31	0.23	0.40	58						
1"	(HA) SunDefense™ IG	PEL-N-279-00379-00001	4	4	4	air	0.30	0.20	0.37	58						
1"	with grilles-between-the-glass	PEL-N-279-00380-00001	4	4	4	air	0.31	0.18	0.37	58						
Triple-Pane High-Altitude Glazing with Foam Insulation																
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00385-00001	3	3	3	air	0.25	0.43	0.46	63	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00386-00001	3	3	3	air	0.25	0.38	0.46	63	N	NC				
1"	(HA) Advanced Low-E IG	PEL-N-279-00391-00001	3	3	3	air	0.24	0.26	0.41	64	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00392-00001	3	3	3	air	0.25	0.23	0.41	64	N	NC	SC	S		
1"	(HA) SunDefense™ IG	PEL-N-279-00397-00001	3	3	3	air	0.24	0.19	0.37	64	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-00398-00001	3	3	3	air	0.25	0.17	0.37	64	N	NC	SC	S		
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00403-00001	4	4	4	air	0.27	0.41	0.45	60						
1"	with grilles-between-the-glass	PEL-N-279-00404-00001	4	4	4	air	0.28	0.36	0.45	60						
1"	(HA) Advanced Low-E IG	PEL-N-279-00409-00001	4	4	4	air	0.27	0.26	0.40	61						
1"	with grilles-between-the-glass	PEL-N-279-00410-00001	4	4	4	air	0.27	0.23	0.40	61			SC	S		
1"	(HA) SunDefense™ IG	PEL-N-279-00415-00001	4	4	4	air	0.27	0.20	0.37	61			SC	S		
1"	with grilles-between-the-glass	PEL-N-279-00416-00001	4	4	4	air	0.27	0.18	0.37	61			SC	S		

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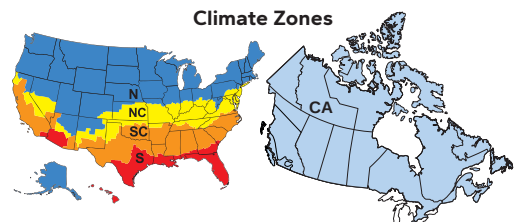
Glass Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)			Gap Fill	Performance Values ₁				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Middle	Int.		U-Factor	SHGC	VLT	CR	U. S.				Canada ₂	
											Zone				ER	Zone
Performance Upgrade Triple-Pane Glazing											N	NC	SC	S	CA	
1"	NaturalSun Low-E IG	PEL-N-279-00423-00001	3	3	3	argon	0.25	0.43	0.46	58	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00424-00001	3	3	3	argon	0.25	0.38	0.46	58	N	NC				
1"	AdvancedComfort Low-E IG	PEL-N-279-00429-00001	3	3	3	argon	0.25	0.26	0.41	58	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00430-00001	3	3	3	argon	0.25	0.23	0.41	58	N	NC	SC	S		
1"	SunDefense™ IG	PEL-N-279-00435-00001	3	3	3	argon	0.24	0.19	0.37	59	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-00436-00001	3	3	3	argon	0.25	0.17	0.37	59	N	NC	SC	S		
1"	NaturalSun Low-E IG	PEL-N-279-00441-00001	4	4	4	argon	0.27	0.41	0.45	58						
1"	with grilles-between-the-glass	PEL-N-279-00442-00001	4	4	4	argon	0.27	0.36	0.45	58						
1"	AdvancedComfort Low-E IG	PEL-N-279-00447-00001	4	4	4	argon	0.27	0.25	0.40	58						
1"	with grilles-between-the-glass	PEL-N-279-00448-00001	4	4	4	argon	0.27	0.22	0.40	58			SC	S		
1"	SunDefense™ IG	PEL-N-279-00453-00001	4	4	4	argon	0.27	0.19	0.37	58			SC	S		
1"	with grilles-between-the-glass	PEL-N-279-00454-00001	4	4	4	argon	0.27	0.17	0.37	58			SC	S		
Performance Upgrade Triple-Pane Glazing with Foam Insulation																
1"	NaturalSun Low-E IG	PEL-N-279-00459-00001	3	3	3	argon	0.22	0.43	0.46	65	N	NC			34	CA
1"	with grilles-between-the-glass	PEL-N-279-00460-00001	3	3	3	argon	0.22	0.38	0.46	65	N	NC				
1"	AdvancedComfort Low-E IG	PEL-N-279-00465-00001	3	3	3	argon	0.22	0.26	0.41	65	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00466-00001	3	3	3	argon	0.22	0.23	0.41	65	N	NC	SC	S		
1"	SunDefense™ IG	PEL-N-279-00471-00001	3	3	3	argon	0.22	0.19	0.37	65	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-00472-00001	3	3	3	argon	0.22	0.17	0.37	65	N	NC	SC	S		
1"	NaturalSun Low-E IG	PEL-N-279-00477-00001	4	4	4	argon	0.24	0.41	0.45	62	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00478-00001	4	4	4	argon	0.24	0.36	0.45	62	N	NC				
1"	AdvancedComfort Low-E IG	PEL-N-279-00483-00001	4	4	4	argon	0.24	0.25	0.40	62	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00484-00001	4	4	4	argon	0.24	0.22	0.40	62	N	NC	SC	S		
1"	SunDefense™ IG	PEL-N-279-00489-00001	4	4	4	argon	0.24	0.19	0.37	62	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-00490-00001	4	4	4	argon	0.24	0.17	0.37	62	N	NC	SC	S		

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 based on NFRC 100, NFRC 200 and NFRC 500. ENERGY STAR® values are updated to 2023 (Version 7) criteria.

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

Visit www.energystar.gov for Energy Star guidelines.





Impervia® Sliding Patio Doors

Glazing Performance - Total Unit

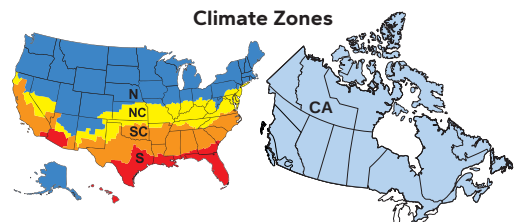
Glass Thickness	Type of Glazing	NFRC Certified Product #	Glass (mm)			Gap Fill	Performance Values ₁				Shaded Areas Meet ENERGY STAR® Performance Criteria in Zones Shown					
			Ext.	Middle	Int.		U-Factor	SHGC	VLT	CR	U. S.				Canada ₂	
											Zone				ER	Zone
Performance Upgrade — Triple-Pane High-Altitude Glazing											N	NC	SC	S	CA	
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00421-00001	3	3	3	air	0.28	0.43	0.46	58						
1"	with grilles-between-the-glass	PEL-N-279-00422-00001	3	3	3	air	0.29	0.38	0.46	58						
1"	(HA) Advanced Low-E IG	PEL-N-279-00427-00001	3	3	3	air	0.28	0.26	0.41	58						
1"	with grilles-between-the-glass	PEL-N-279-00428-00001	3	3	3	air	0.28	0.23	0.41	58						
1"	(HA) SunDefense™ IG	PEL-N-279-00433-00001	3	3	3	air	0.28	0.19	0.37	58			SC	S		
1"	with grilles-between-the-glass	PEL-N-279-00434-00001	3	3	3	air	0.28	0.17	0.37	58						
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00439-00001	4	4	4	air	0.31	0.41	0.45	58						
1"	with grilles-between-the-glass	PEL-N-279-00440-00001	4	4	4	air	0.31	0.36	0.45	58						
1"	(HA) Advanced Low-E IG	PEL-N-279-00445-00001	4	4	4	air	0.31	0.26	0.40	58						
1"	with grilles-between-the-glass	PEL-N-279-00446-00001	4	4	4	air	0.31	0.23	0.40	58						
1"	(HA) SunDefense™ IG	PEL-N-279-00451-00001	4	4	4	air	0.30	0.20	0.37	58						
1"	with grilles-between-the-glass	PEL-N-279-00452-00001	4	4	4	air	0.31	0.18	0.37	58						
Performance Upgrade —Triple-Pane High-Altitude Glazing with Foam Insulation																
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00457-00001	3	3	3	air	0.25	0.43	0.46	62	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00458-00001	3	3	3	air	0.26	0.38	0.46	62	N	NC				
1"	(HA) Advanced Low-E IG	PEL-N-279-00463-00001	3	3	3	air	0.25	0.26	0.41	62	N	NC				
1"	with grilles-between-the-glass	PEL-N-279-00464-00001	3	3	3	air	0.26	0.23	0.41	62	N	NC	SC	S		
1"	(HA) SunDefense™ IG	PEL-N-279-00469-00001	3	3	3	air	0.25	0.19	0.37	62	N	NC	SC	S		
1"	with grilles-between-the-glass	PEL-N-279-00470-00001	3	3	3	air	0.25	0.17	0.37	62	N	NC	SC	S		
1"	(HA) NaturalSun Low-E IG	PEL-N-279-00475-00001	4	4	4	air	0.28	0.41	0.45	59						
1"	with grilles-between-the-glass	PEL-N-279-00476-00001	4	4	4	air	0.28	0.36	0.45	59						
1"	(HA) Advanced Low-E IG	PEL-N-279-00481-00001	4	4	4	air	0.28	0.26	0.40	59						
1"	with grilles-between-the-glass	PEL-N-279-00482-00001	4	4	4	air	0.28	0.23	0.40	59						
1"	(HA) SunDefense™ IG	PEL-N-279-00487-00001	4	4	4	air	0.28	0.20	0.37	59			SC	S		
1"	with grilles-between-the-glass	PEL-N-279-00488-00001	4	4	4	air	0.28	0.18	0.37	59						

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 based on NFRC 100, NFRC 200 and NFRC 500. ENERGY STAR® values are updated to 2023 (Version 7) criteria.

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

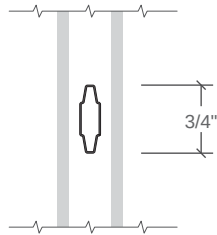
Visit www.energystar.gov for Energy Star guidelines.





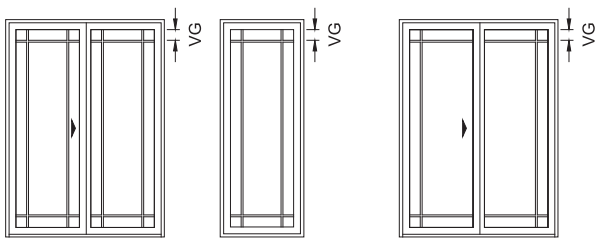
Grille Profiles

Grilles-Between-the-Glass



Grille Patterns

Prairie Patterns



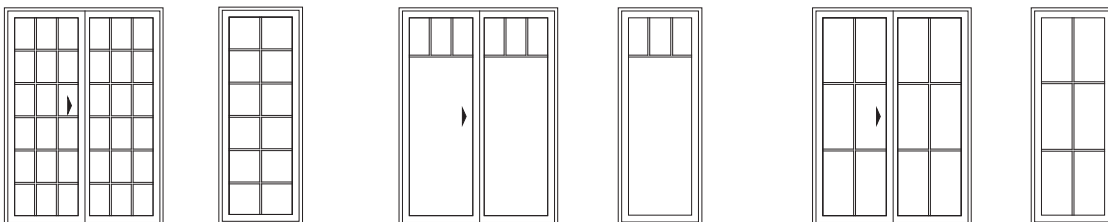
9-Lite Prairie

6-Lite Prairie

Standard corner lite dimension for Prairie patterns = 4" visible glass (VG).

Pattern availability may vary depending on size of unit.

Additional Patterns



Traditional

Top Row⁽¹⁾

Special

(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.

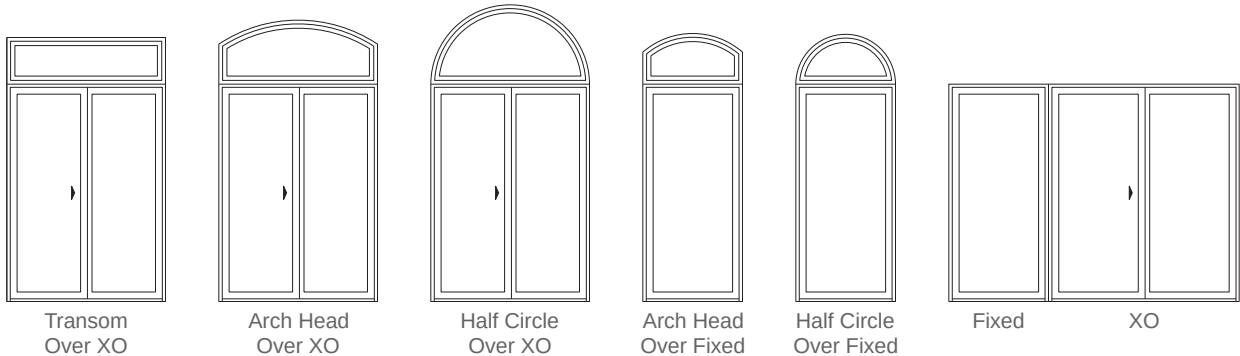


Combinations

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 mulled together by a combination or reinforcing mullion.

Pella door combinations are available in an endless variety of arrangements. Below are some field-assembled combinations. Some units can be fixed or vent depending on availability. See the combinations section for requirements and limitations.

Contact your local Pella sales representative for more information.





Impervia® Sliding Patio Doors

Size Tables

Fixed

2-Panel (XO 1)

	(854) (829)	(1 006) (981)	(1 159) (1 133)	(1 311) (1 286)	(1 518) (1 505)	(1 822) (1 810)	(2 042) (2 029)	(2 127) (2 115)	(2 432) (2 419)
Opening	2' 9 5/8"	3' 3 5/8"	3' 9 5/8"	4' 3 5/8"	4' 11 3/4"	5' 11 3/4"	6' 8 3/8"	6' 11 3/4"	7' 11 3/4"
Frame	32 5/8"	38 5/8"	44 5/8"	50 5/8"	59 1/4"	71 1/4"	79 7/8"	83 1/4"	95 1/4"
6' 8" (2 032)									
6' 10" (2 083)									
8' 0" (2 438)									
9' 0" (2 743)									
10' 0" (3 048)									

Not to scale.

Special sizes available to the nearest 1/4".

All dimensions are approximate to the nearest 1/16"

(1) Two panel doors—Vent-Fixed (XO), left panel opens, right panel is fixed.

Units open in the direction of the arrows as viewed from the exterior. Fixed-Vent (OX) doors are also available.

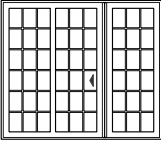
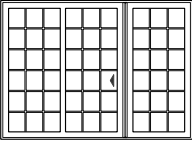
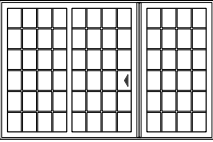
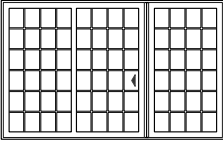
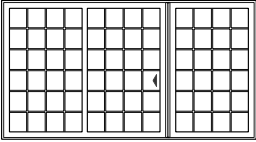
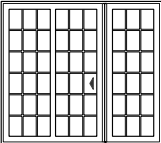
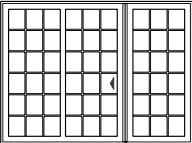
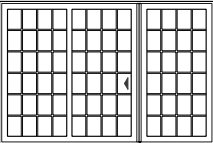
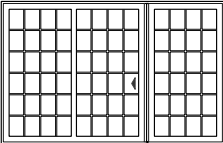
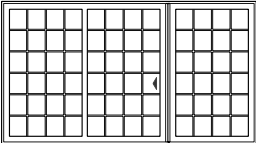
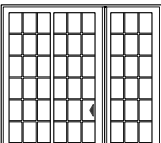
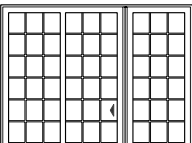
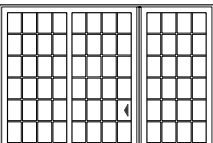
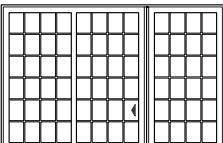
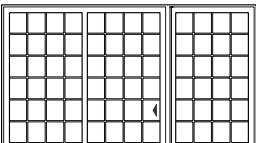
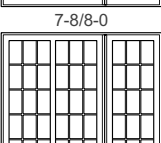
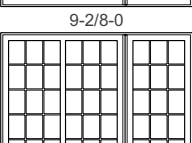
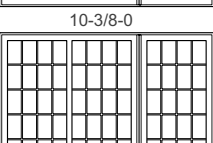
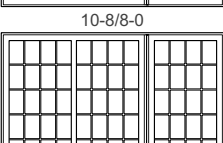
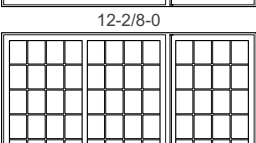
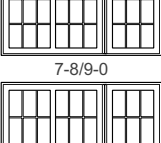
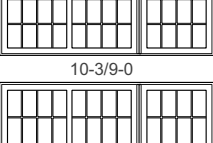
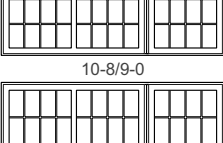
Fixed-Vent-Fixed (OXO) combination doors also available as OOX and XO combinations.



Impervia® Sliding Patio Doors

Size Tables

3-Panel (OXO)

	(2 346) (2 334)	(2 804) (2 791)	(3 132) (3 119)	(3 261) (3 248)	(3 718) (3 705)
Opening	7' 8 ³ / ₈ "	9' 2 ³ / ₈ "	10' 3 ⁵ / ₁₆ "	10' 8 ³ / ₈ "	12' 2 ³ / ₈ "
Frame	91 ⁷ / ₈ "	109 ⁷ / ₈ "	122 ¹³ / ₁₆ "	127 ⁷ / ₈ "	145 ⁷ / ₈ "
6' 8" (2 032) 79 ¹ / ₂ " (2 019)	 7-8/6-8	 9-2/6-8	 10-3/6-8	 10-8/6-8	 12-2/6-8
6' 10" (2 083) 81 ¹ / ₂ " (2 070)	 7-8/6-10	 9-2/6-10	 10-3/6-10	 10-8/6-10	 12-2/6-10
8' 0" (2 438) 95 ¹ / ₂ " (2 426)	 7-8/8-0	 9-2/8-0	 10-3/8-0	 10-8/8-0	 12-2/8-0
9' 0" (2 743) 107 ¹ / ₂ " (2 731)	 7-8/9-0	 9-2/9-0	 10-3/9-0	 10-8/9-0	 12-2/9-0
10' 0" (3 048) 119 ¹ / ₂ " (3 035)	 7-8/10-0	 9-2/10-0	 10-3/10-0	 10-8/10-0	 12-2/10-0

Not to scale.

Special sizes available to the nearest 1/4".

All dimensions are approximate to the nearest 1/16"

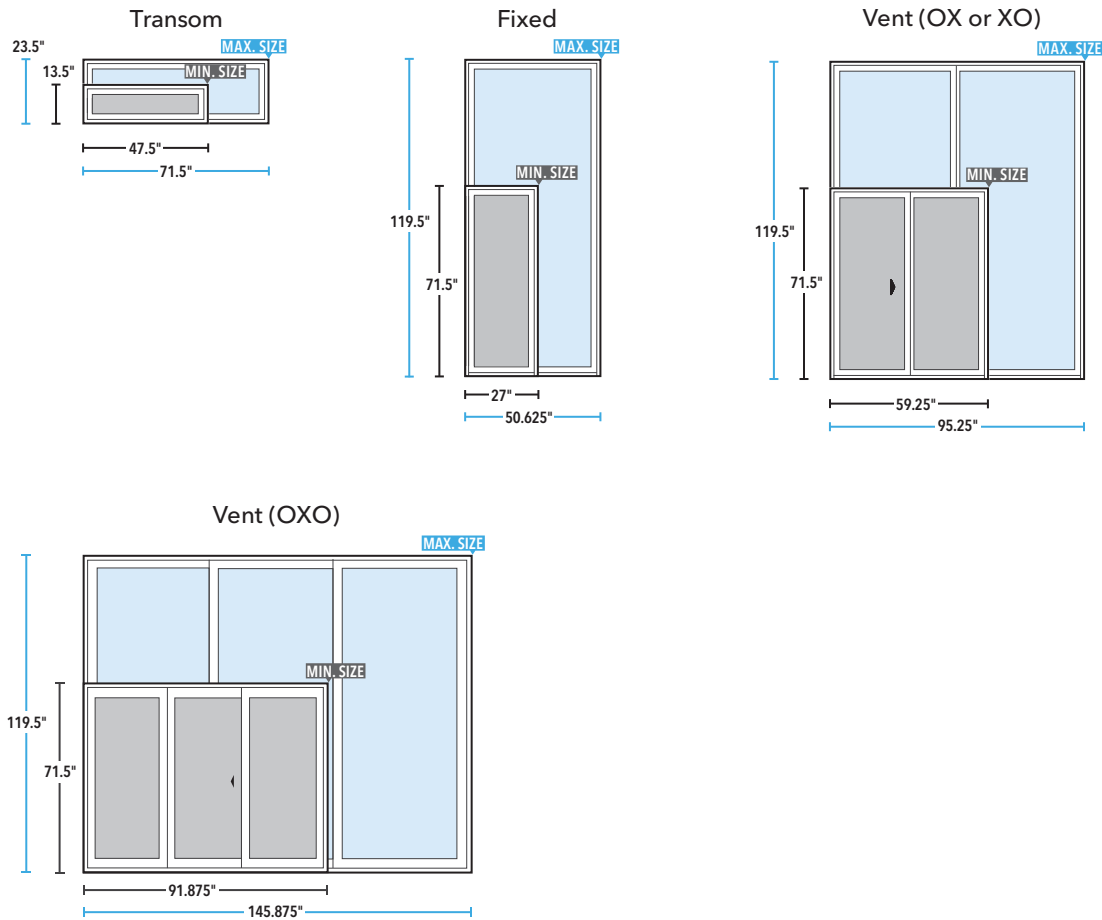
(1) Two panel doors—Vent-Fixed (XO), left panel opens, right panel is fixed.

Units open in the direction of the arrows as viewed from the exterior. Fixed-Vent (OX) doors are also available.

Fixed-Vent-Fixed (OXO) combination doors also available as OOX and XO combinations.



Special Size Frame Dimensions (Standard)



Standard Offering

	Frame Width		Frame Height	
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
Vent Door (OX, XO)	59-1/4" (1 505)	95-1/4" (2 419)	71-1/2" (1 816)	119-1/2" (3 035)
Vent Door (OXO)	91-7/8" (2 334)	145-7/8" (3 705)	71-1/2" (1 816)	119-1/2" (3 035)
Fixed Panel (O)	27" (686)	50-5/8" (1 286)	71-1/2" (1 816)	119-1/2" (3 035)
Transom	47-1/2" (1 207)	71-1/2" (1 816)	13-1/2" (343)	23-1/2" (597)

Impact-Resistant Offering

	Frame Width		Frame Height	
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
Vent Door (OX, XO)	59-1/4" (1 505)	95-1/4" (2 419)	71-1/2" (1 816)	95-1/2" (2 426)
Fixed Panel (O)	27" (686)	50-5/8" (1 286)	71-1/2" (1 816)	95-1/2" (2 426)
Transom	47-1/2" (1 207)	71-1/2" (1 816)	13-1/2" (343)	23-1/2" (597)

Frame dimensions are on the nearest 1/4" increment.
Doors that are less than or equal to 54-3/4" in width do not meet 20" egress requirements.
See Fixed Frame Direct Set product section for transom sizes and performance.



Miscellaneous Glass Formulas

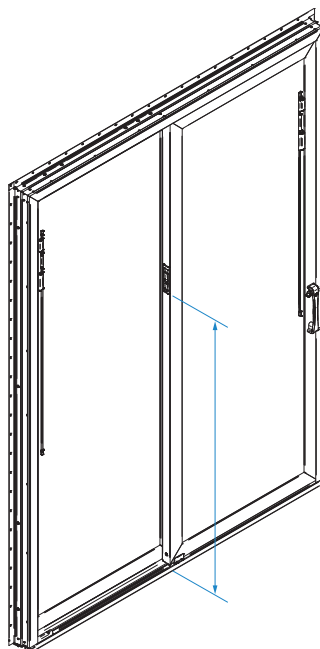
	Doors	Transoms (Fixed Frame Direct Set)
Frame	Frame Width = Rough opening width – 3/4" Frame Height = Rough opening height – 1/2"	Frame Width = Rough opening width – 3/4" Frame Height = Rough opening height – 1/2"
Panel	Width of XO/OX = (Frame width ÷ 2) – 1/8" Width of XOX = (Frame width ÷ 3) – 1-1/8" Width of O = Frame Width – 3-1/8" Panel Height = Frame height – 2-7/8"	Not Applicable
Actual Glass	Width of XO/OX = (Frame width ÷ 2) – 4-15/16" Width of XOX = (Frame width ÷ 3) – 5-15/16" Width of O = Frame Width – 7-15/16" Glass Height = Frame height – 6-5/16"	Glass Width = Frame width – 2-1/4" Glass Height = Frame height – 2-1/4"
Visible Glass	Width of XO/OX = (Frame width ÷ 2) – 6" Width of XOX = (Frame width ÷ 3) – 7" Width of O = Frame Width – 9" VG Height = Frame height – 8-3/4"	VG Width = Frame width – 3-1/2" VG Height = Frame height – 3-1/2"
Visible Glass with Blinds-Between-the-Glass	Width of XO/OX = (Frame width ÷ 2) – 9" Width of XOX = (Frame width ÷ 3) – 10" Width of O = Frame Width – 12" VG Height = Frame height – 5-1/16"	Not Applicable
Clear Opening	Width of XO/OX = (Frame width ÷ 2) – 7-7/8" Width of XOX = (Frame width ÷ 3) – 8-7/8" Clear Opening Height without screen = Frame height – 3-1/8" Clear Opening Height with screen = Frame height – 3-1/4"	Not Applicable

Secondary Lock Accessibility

All standard offering heights are available at 60" or 42".

Use chart only when FH is non-standard size.

FRAME HEIGHT	Greater Than 54"	Less Than 48"
114.5" - 119.5"	60"	42"
108.5" - 114.375"	56.5"	38.5"
102.5" - 108.375"	60"	42"
96.5" - 102.375"	60.5"	40.5"
90.5" - 96.375"	60"	42"
82.5" - 90.375"	56"	36"
76.5" - 82.375"	60"	42"
71.5" - 76.375"	55"	36"





Impervia® Sliding Patio Doors

Design Data

Unit	Venting	Clear Opening (inches)		Vent Area Ft²	Visible Glass Ft²	Standard Glass Thickness (mm)	Performance Class & Grade ¹
		Width	Height			Tempered	
6'8" doors							
2-9/6-8	O	—	—	—	11.6	3	LC50
3-3/6-8	O	—	—	—	14.6	4	LC50
3-9/6-8	O	—	—	—	17.5	4	LC50
4-3/6-8	O	—	—	—	20.5	4	LC50
5-0/6-8	XO, OX	21-11/16	76-1/4	11.5	23.2	3	LC50
6-0/6-8	XO, OX	27-11/16	76-1/4	14.7	29.1	3	LC50
6-8/6-8	XO, OX	32	76-1/4	17.0	33.3	3	LC50
7-0/6-8	XO, OX	33-11/16	76-1/4	17.9	35.0	4	LC50
8-0/6-8	XO, OX	39-11/16	76-1/4	21.0	40.9	5	LC50
7-8/6-8	OXO	21-11/16	76-1/4	11.5	34.8	3	LC50
9-2/6-8	OXO	27-11/16	76-1/4	14.7	43.7	3	LC50
10-3/6-8	OXO	32	76-1/4	17.0	50.0	3	LC50
10-8/6-8	OXO	33-11/16	76-1/4	17.9	52.5	4	LC50
12-2/6-8	OXO	39-11/16	76-1/4	21.0	61.4	5	LC50
6'10" doors							
2-9/6-10	O	—	—	—	11.9	3	LC50
3-3/6-10	O	—	—	—	15.0	4	LC50
3-9/6-10	O	—	—	—	18.0	4	LC50
4-3/6-10	O	—	—	—	21.0	4	LC50
5-0/6-10	XO, OX	21-11/16	78-1/4	11.8	23.9	3	LC50
6-0/6-10	XO, OX	27-11/16	78-1/4	15.1	29.9	3	LC50
6-8/6-10	XO, OX	32	78-1/4	17.4	34.3	3	LC50
7-0/6-10	XO, OX	33-11/16	78-1/4	18.3	36.0	4	LC50
8-0/6-10	XO, OX	39-11/16	78-1/4	21.6	42.1	5	LC50
7-8/6-10	OXO	21-11/16	78-1/4	11.5	35.8	3	LC50
9-2/6-10	OXO	27-11/16	78-1/4	14.7	44.9	3	LC50
10-3/6-10	OXO	32	78-1/4	17.0	51.4	3	LC50
10-8/6-10	OXO	33-11/16	78-1/4	17.9	54.0	4	LC50
12-2/6-10	OXO	39-11/16	78-1/4	21.0	63.1	5	LC50

(—) = Not Applicable

(1) Maximum performance when glazed with the appropriate glass thickness. Second number indicates performance rating with Performance Upgrade.



Impervia® Sliding Patio Doors

Design Data

Unit	Venting	Clear Opening (inches)		Vent Area Ft²	Visible Glass Ft²	Standard Glass Thickness (mm)	Performance Class & Grade ¹
		Width	Height			Tempered	
8' doors							
2-9/8-0	O	—	—	—	14.2	4	LC35/LC50
3-3/8-0	O	—	—	—	17.8	4	LC35/LC50
3-9/8-0	O	—	—	—	21.5	4	LC35/LC50
4-3/8-0	O	—	—	—	25.1	4	LC35/LC50
5-0/8-0	XO, OX	21-11/16	92-1/4	13.9	28.5	4	LC35/LC50
6-0/8-0	XO, OX	27-11/16	92-1/4	17.8	35.7	4	LC35/LC50
6-8/8-0	XO, OX	32	92-1/4	20.5	40.9	4	LC35/LC50
7-0/8-0	XO, OX	33-11/16	92-1/4	21.6	42.9	4	LC35/LC50
8-0/8-0	XO, OX	39-11/16	92-1/4	25.4	50.2	5	LC35/LC50
7-8/8-0	OXO	21-11/16	92-1/4	11.5	42.7	4	LC35/LC50
9-2/8-0	OXO	27-11/16	92-1/4	14.7	53.5	4	LC35/LC50
10-3/8-0	OXO	32	92-1/4	17.0	61.3	4	LC35/LC50
10-8/8-0	OXO	33-11/16	92-1/4	17.9	64.4	4	LC35/LC50
12-2/8-0	OXO	39-11/16	92-1/4	21.0	75.2	5	LC35/LC50
9' doors							
2-9/9-0	O	—	—	—	16.2	5	LC35
3-3/9-0	O	—	—	—	20.3	5	LC35
3-9/9-0	O	—	—	—	24.4	5	LC35
4-3/9-0	O	—	—	—	28.5	5	LC35
5-0/9-0	XO, OX	21-11/16	104-1/4	15.7	32.4	5	LC35
6-0/9-0	XO, OX	27-11/16	104-1/4	20.1	40.6	5	LC35
6-8/9-0	XO, OX	32	104-1/4	23.2	46.5	5	LC35
7-0/9-0	XO, OX	33-11/16	104-1/4	24.4	48.9	5	LC35
8-0/9-0	XO, OX	39-11/16	104-1/4	28.8	57.1	5	LC35
7-8/9-0	OXO	21-11/16	104-1/4	11.5	48.6	5	LC35
9-2/9-0	OXO	27-11/16	104-1/4	14.7	60.9	5	LC35
10-3/9-0	OXO	32	104-1/4	17.0	69.8	5	LC35
10-8/9-0	OXO	33-11/16	104-1/4	17.9	73.3	5	LC35
12-2/9-0	OXO	39-11/16	104-1/4	21.0	85.6	5	LC35

(—) = Not Applicable

(1) Maximum performance when glazed with the appropriate glass thickness. Second number indicates performance rating with Performance Upgrade.



Impervia® Sliding Patio Doors

Design Data

Unit	Venting	Clear Opening (inches)		Vent Area Ft²	Visible Glass Ft²	Standard Glass Thickness (mm)	Performance Class & Grade ₁
		Width	Height			Tempered	
10' doors							
2-9/10-0	O	—	—	—	18.2	4	LC35
3-3/10-0	O	—	—	—	22.8	4	LC35
3-9/10-0	O	—	—	—	27.4	5	LC35
4-3/10-0	O	—	—	—	32.0	5	LC35
5-0/10-0	XO, OX	21-11/16	116-1/4	17.5	36.3	5	LC35
6-0/10-0	XO, OX	27-11/16	116-1/4	22.4	45.6	5	LC35
6-8/10-0	XO, OX	32	116-1/4	25.9	52.2	5	LC35
7-0/10-0	XO, OX	33-11/16	116-1/4	27.2	54.8	5	LC35
8-0/10-0	XO, OX	39-11/16	116-1/4	32.1	64.0	5	LC35
7-8/10-0	OXO	21-11/16	116-1/4	11.5	54.5	5	LC35
9-2/10-0	OXO	27-11/16	116-1/4	14.7	68.4	5	LC35
10-3/10-0	OXO	32	116-1/4	17.0	78.3	5	LC35
10-8/10-0	OXO	33-11/16	116-1/4	17.9	82.2	5	LC35
12-2/10-0	OXO	39-11/16	116-1/4	21.0	96.0	5	LC35

(—) = Not Applicable

(1) Maximum performance when glazed with the appropriate glass thickness. Second number indicates performance rating with Performance Upgrade.



Impact-resistant qualification requires Block Frame with a Prep for Screw Through Frame or Installation Clips attachment methods. See FPAS documents or Pella Installation Instructions for required anchor layout and details.

Impact-Resistant Laminated Glazing (Maximum Design Pressure)					
Unit	Venting	1" Insulated Glass PVB ₁			Performance Class and Grade
		Design Pressure	FPAS / TDI	Hallmark Certified	
6'8" doors					
2-9/6-8	O	+50 / -50	FL 39352	411-H-1514	CW50
3-3/6-8	O	+50 / -50	FL 39352	411-H-1514	CW50
3-9/6-8	O	+50 / -50	FL 39352	411-H-1514	CW50
4-3/6-8	O	+50 / -50	FL 39352	411-H-1514	CW50
5-0/6-8	OX, XO	+50 / -50	FL 39352	411-H-1514	LC50
6-0/6-8	OX, XO	+50 / -50	FL 39352	411-H-1514	LC50
6-8/6-8	OX, XO	+50 / -50	FL 39352	411-H-1514	LC50
7-0/6-8	OX, XO	+50 / -50	FL 39352	411-H-1514	LC50
8-0/6-8	OX, XO	+50 / -50	FL 39352	411-H-1514	LC50
6' 10" Doors					
2-9/6-10	O	+50 / -50	FL 39352	411-H-1514	CW50
3-3/6-10	O	+50 / -50	FL 39352	411-H-1514	CW50
3-9/6-10	O	+50 / -50	FL 39352	411-H-1514	CW50
4-3/6-10	O	+50 / -50	FL 39352	411-H-1514	CW50
5-0/6-10	XO, OX	+50 / -50	FL 39352	411-H-1514	LC50
6-0/6-10	XO, OX	+50 / -50	FL 39352	411-H-1514	LC50
6-8/6-10	XO, OX	+50 / -50	FL 39352	411-H-1514	LC50
7-0/6-10	XO, OX	+50 / -50	FL 39352	411-H-1514	LC50
8-0/6-10	XO, OX	+50 / -50	FL 39352	411-H-1514	LC50
8' Doors					
2-9/8-0	O	+50 / -50	FL 39352	411-H-1514	CW50
3-3/8-0	O	+50 / -50	FL 39352	411-H-1514	CW50
3-9/8-0	O	+50 / -50	FL 39352	411-H-1514	CW50
4-3/8-0	O	+50 / -50	FL 39352	411-H-1514	CW50
5-0/8-0	XO, OX	+50 / -50	FL 39352	411-H-1514	LC50
6-0/8-0	XO, OX	+50 / -50	FL 39352	411-H-1514	LC50
6-8/8-0	XO, OX	+50 / -50	FL 39352	411-H-1514	LC50
7-0/8-0	XO, OX	+50 / -50	FL 39352	411-H-1514	LC50
8-0/8-0	XO, OX	+50 / -50	FL 39352	411-H-1514	LC50

(1) Units are tested for air/water/structural and impact-resistance, and certified for wind zone 2, large missile rating C (Non-HVHZ).



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 5".
- Nominal wall thickness of Duracast members are .070" to .120" thick.
- Duracast sill powder-coat painted black.
- Frame corners are mitered, joined and bonded with glass filled polypropylene corner lock and mechanically fastened. Jamb to head corners sealed with injected polyurethane or hot melt silicone adhesive.
- Jambs and head contain factory-drilled (counter-bored) installation screw holes when ordered with prep for install screws.

Door Panel

- Panel is Duracast® fiberglass composite — five-layer pultruded fiberglass material [with optional foam insulation⁽¹⁾] reinforced with a Pella patented interlocking mat.
- All panel members have mitered corners joined and bonded with corner locks, injected with polyurethane or hot melt silicone adhesive.
- Vent panels have two adjustable permanently-sealed electroplated steel with organic coating ball-bearing rollers, set on stainless steel track.

Exterior / Interior

- Duracast surfaces are factory applied 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.

Glazing System

- Quality float glass complying with ASTM C 1036.
- 1" insulating glass tempered [obscure⁽²⁾] [[clear] [Advanced] [SunDefense™] [SunDefense+] [AdvancedComfort] [NaturalSun] [NaturalSun+] Low-E coated, with argon]] sealed and bonded to panel.
- High altitude glazing is available.
 - or –
- 1" Triple-pane insulating glass [annealed] [tempered] [obscure⁽²⁾] [clear] [[Advanced] [SunDefense™] [AdvancedComfort] [NaturalSun] Low-E coated, [with argon]] sealed and bonded to panel.
- High altitude glazing available.
 - or –

Impact-Resistant

- Silicone-glazed 1" dual-seal impact-resistant insulating glass [PVB] [[tempered] [annealed]] exterior light is [[Advanced Low-E] [SunDefense] [clear]]. Laminated [clear] interior light, or [[tempered] [annealed]] exterior light is [multi-layer Low-E]. Laminated [bronze] interior light.

Weatherstripping

- Flexible polymeric bulb section with welded corners and a slip-coating at head, jamb, sill and interlocker.
- Bristle strip rain-screen at vent panel interlocker.

Hardware

- Interior handle, thumb lock for inside locking is [powder-coat [White] [Brown] [Matte Black] [Tan] [Morning Sky Gray] to match finish] [Satin Nickel].
- Exterior handle is powder-coat painted to match exterior.
- Multiple point lock hardware is electroplated steel with stainless steel strikes.
- Non Self-locking secure vent lock. Color matched to interior. Vent lock holds the door open approximately 4" for ventilation, available in two height locations.

Optional Products

Screens

- InView™ screen
 - Vinyl-coated 18/18 mesh fiberglass screen cloth complying with SMA 1201, set in aluminum frame and fitted to exterior of door.
 - Supplied complete with all necessary hardware.
 - Screen finish is baked enamel, color to match sliding door 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

- Keylock with [K-keyway cylinder] [dummy cylinder]. Finish is [Matte Black] [Chrome].

Accessibility

- Optional field installed sill riser

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

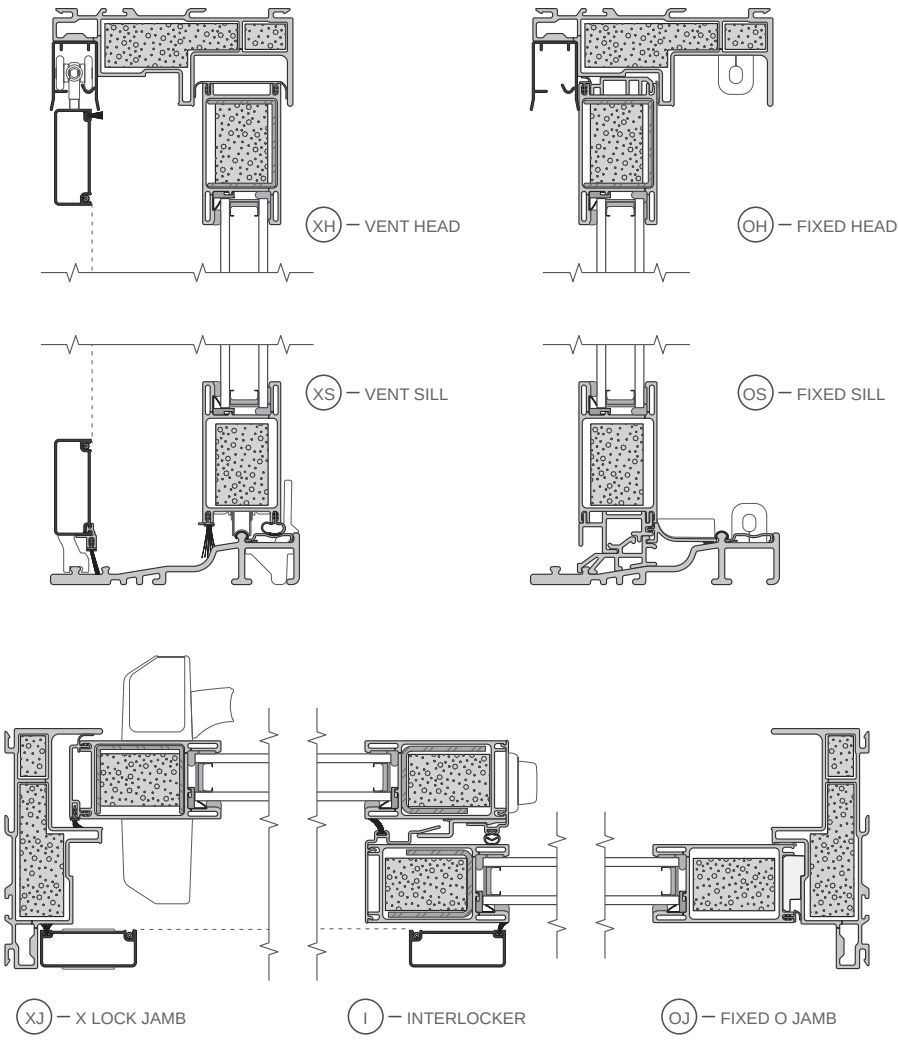
(2) Obscure glazing is not available when AdvancedComfort Low-E coated IG is specified.



Impervia® Sliding Patio Doors

Unit Sections - Optional Foam Insulation

Sliding Patio Door



Foam insulation inserts are not available with clear glazing.

Scale 3" = 1' 0"

All dimensions are approximate.



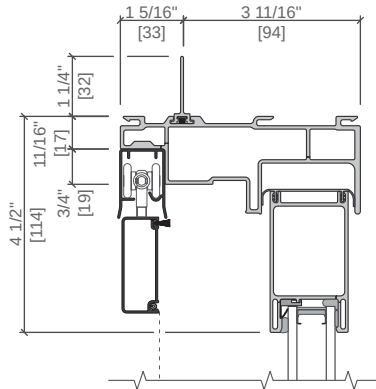
Impervia® Sliding Patio Doors

Unit Sections - Frame Types / Glazing Types Overview

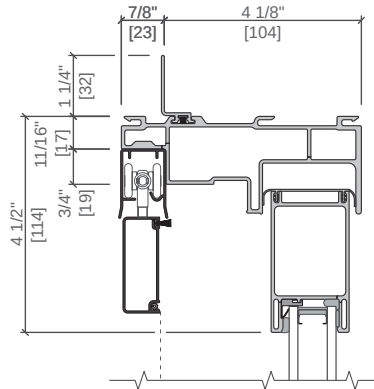
NEW CONSTRUCTION FRAME

REPLACEMENT FRAME

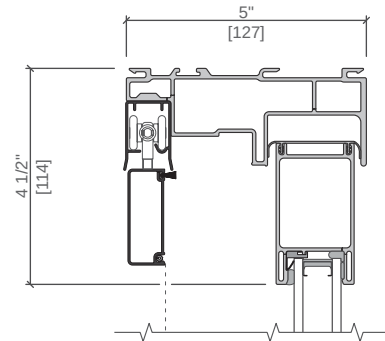
Block Frame with Standard Nail Fin



Block Frame with Off Set Fin

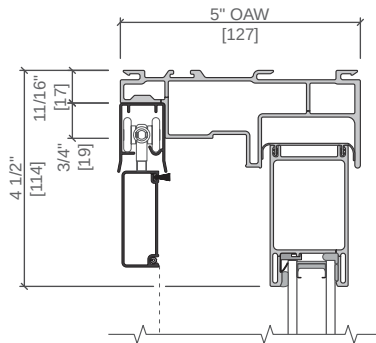


Double Wall Flush Flange

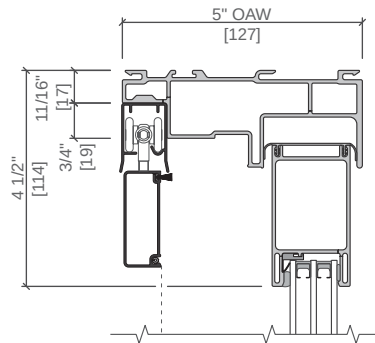


REPLACEMENT FRAME

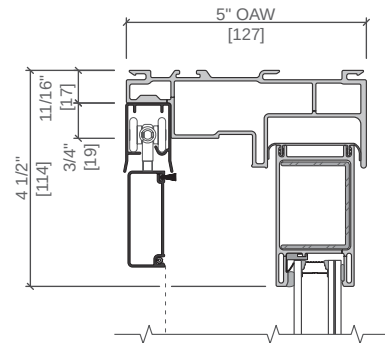
1" Standard IG



1" Triple IG

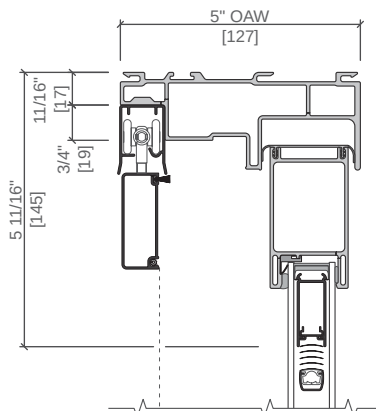


Laminated IG



ACCESSORY OPTIONS

1" IG with Blinds-Between-The-Glass



Scale 3" = 1' 0"

All dimensions are approximate.

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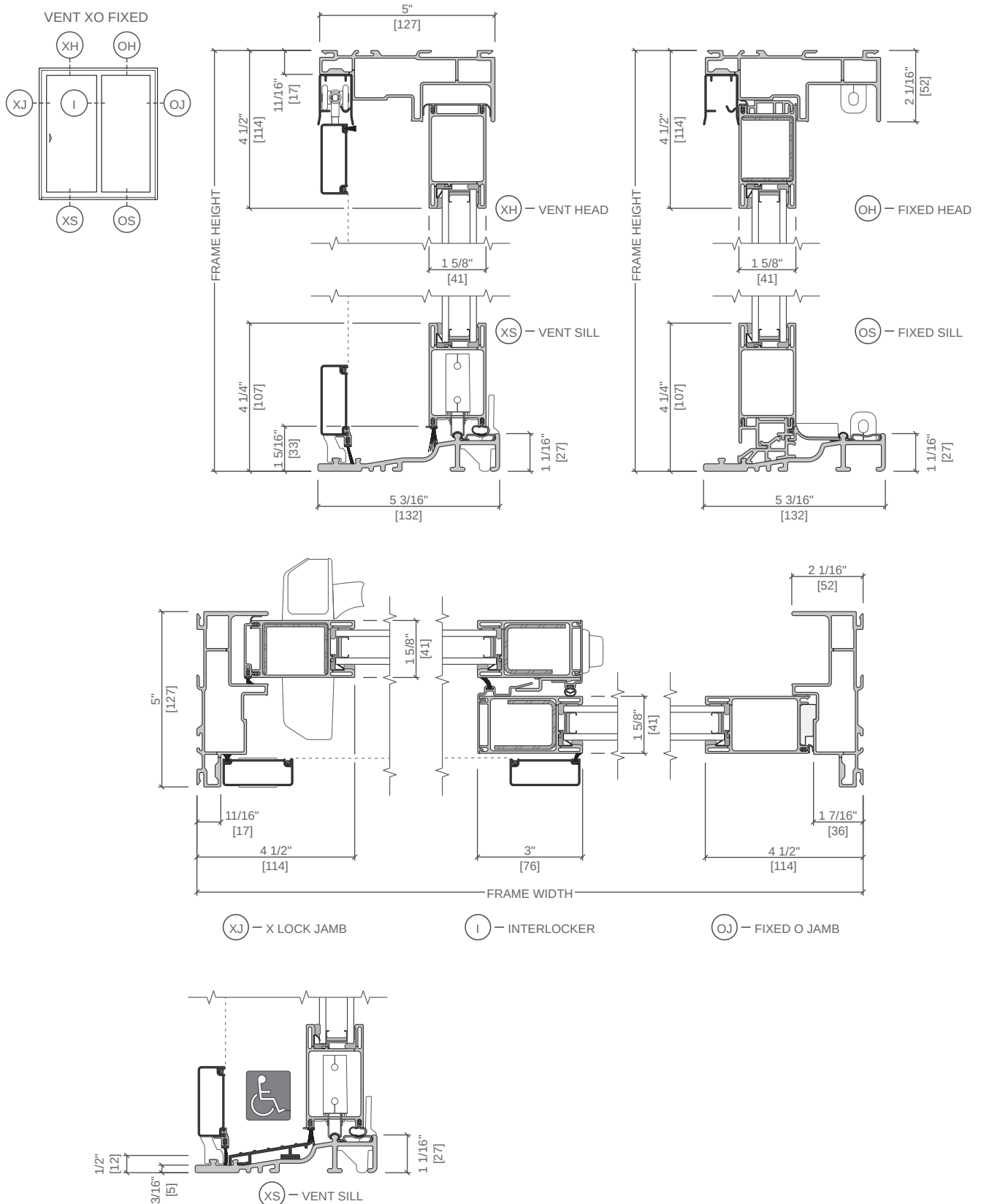
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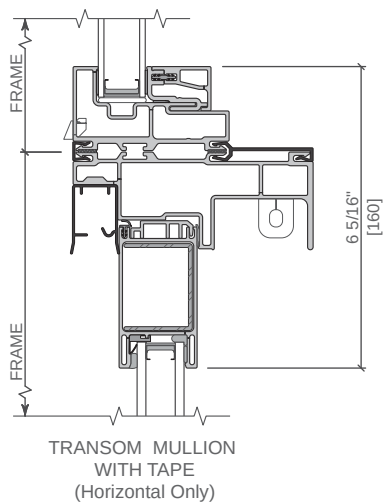
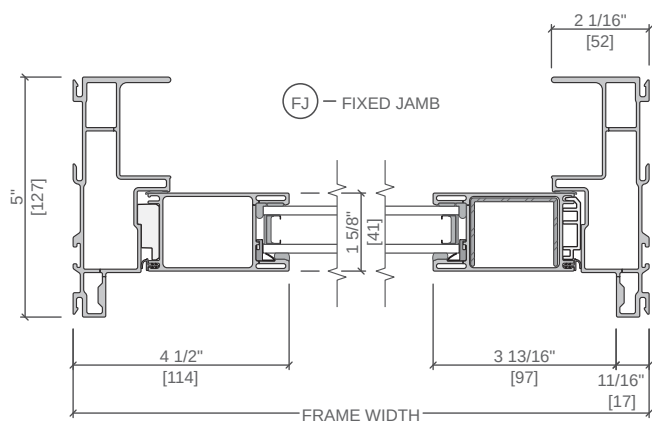
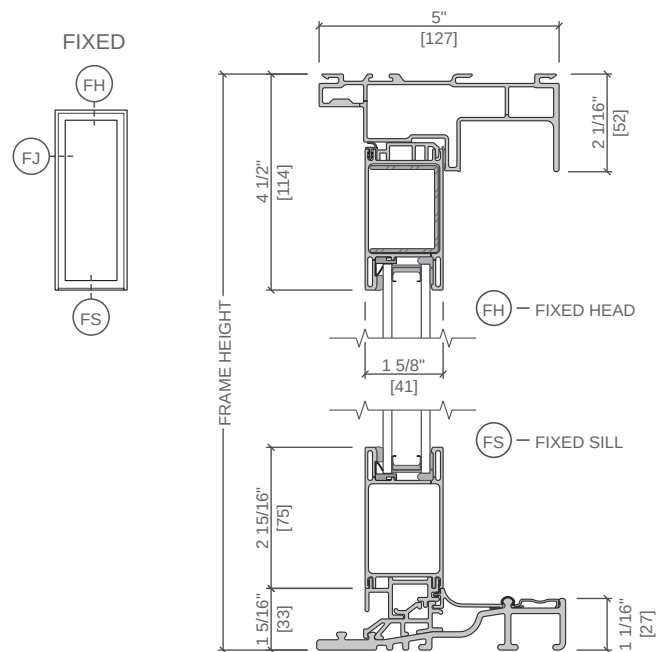
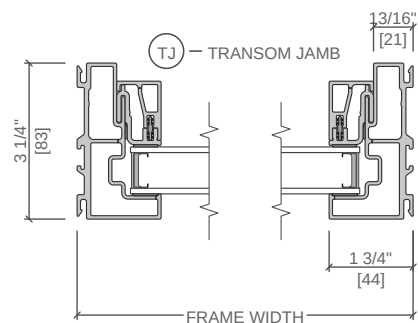
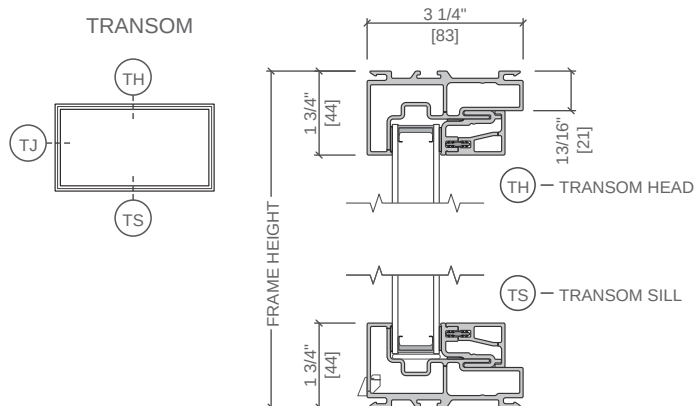
Unit Sections - Dual-Pane Glazing



Scale 3" = 1' 0"

All dimensions are approximate.

Unit Sections - Dual-Pane Glazing



Scale 3" = 1' 0"

All dimensions are approximate.

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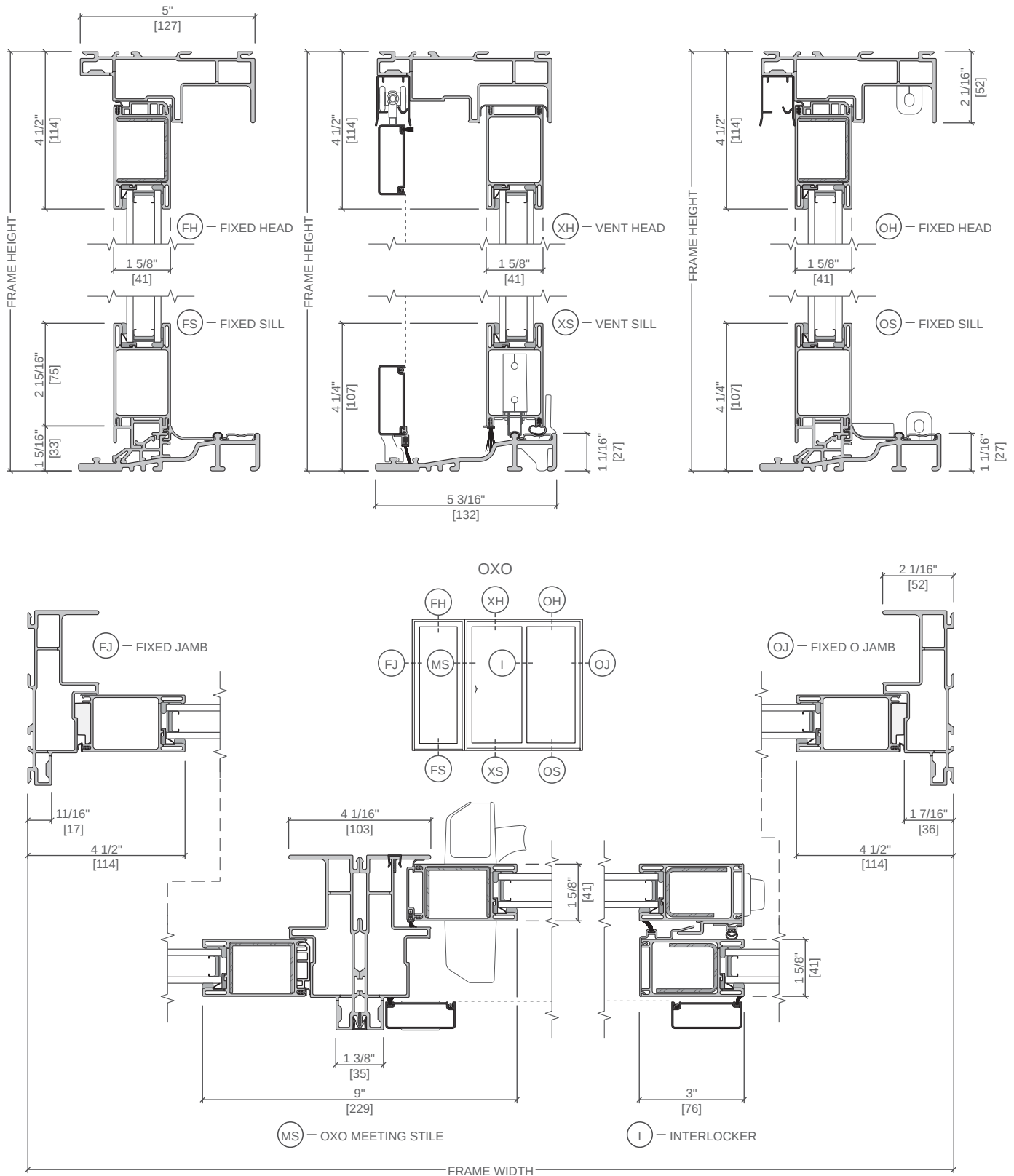
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Impervia® Sliding Patio Doors

Unit Sections - Dual-Pane Glazing



Scale 3" = 1' 0"

All dimensions are approximate.

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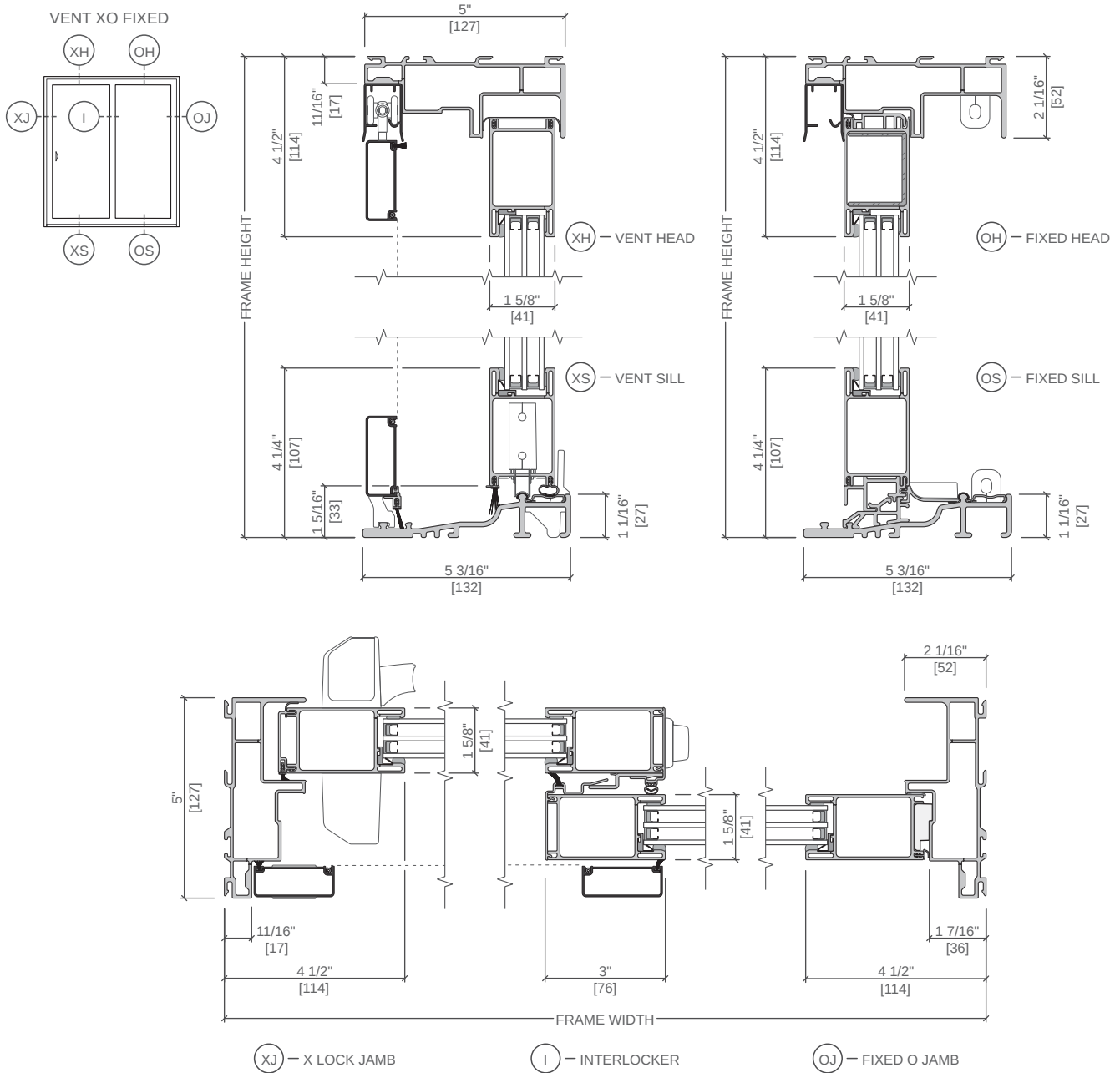
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Impervia® Sliding Patio Doors

Unit Sections - Triple-Pane Glazing



Scale 3" = 1' 0"

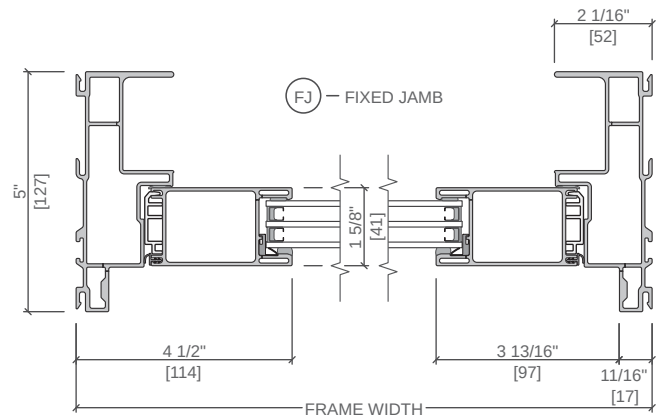
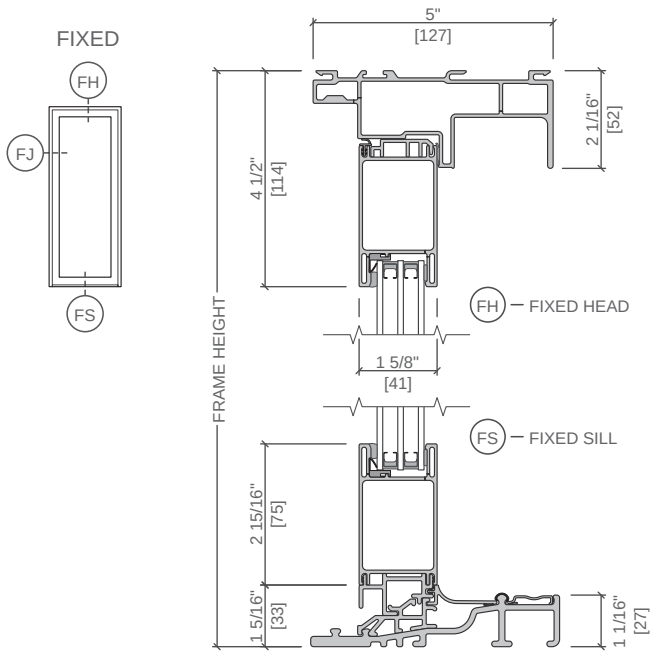
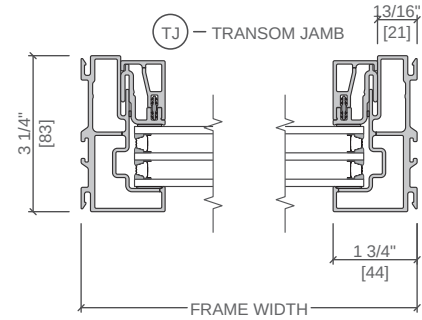
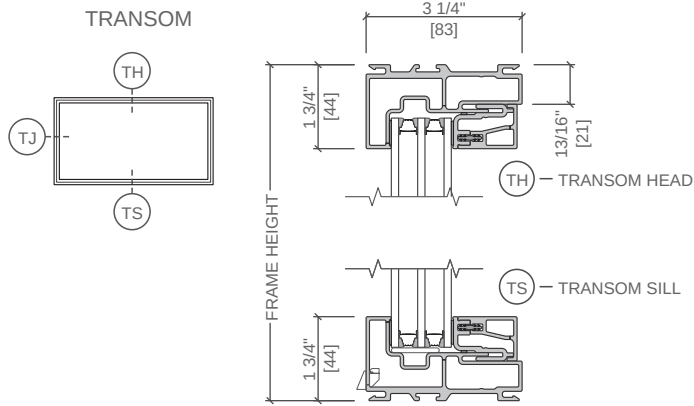
All dimensions are approximate.

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Impervia® Sliding Patio Doors

Unit Sections - Triple-Pane Glazing



Scale 3" = 1' 0"

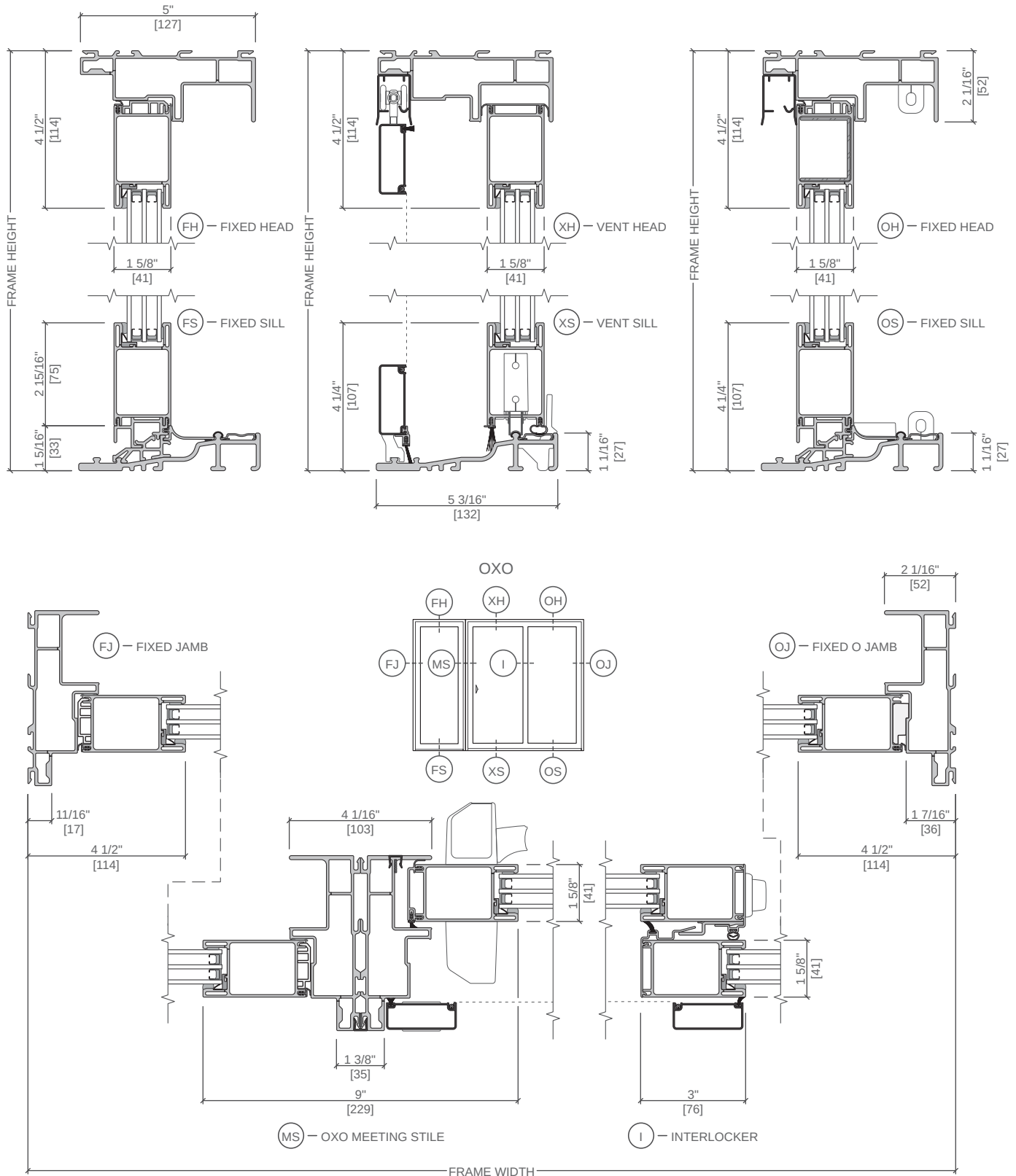
All dimensions are approximate.

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Impervia® Sliding Patio Doors

Unit Sections - Triple-Pane Glazing



Scale 3" = 1' 0"

All dimensions are approximate.

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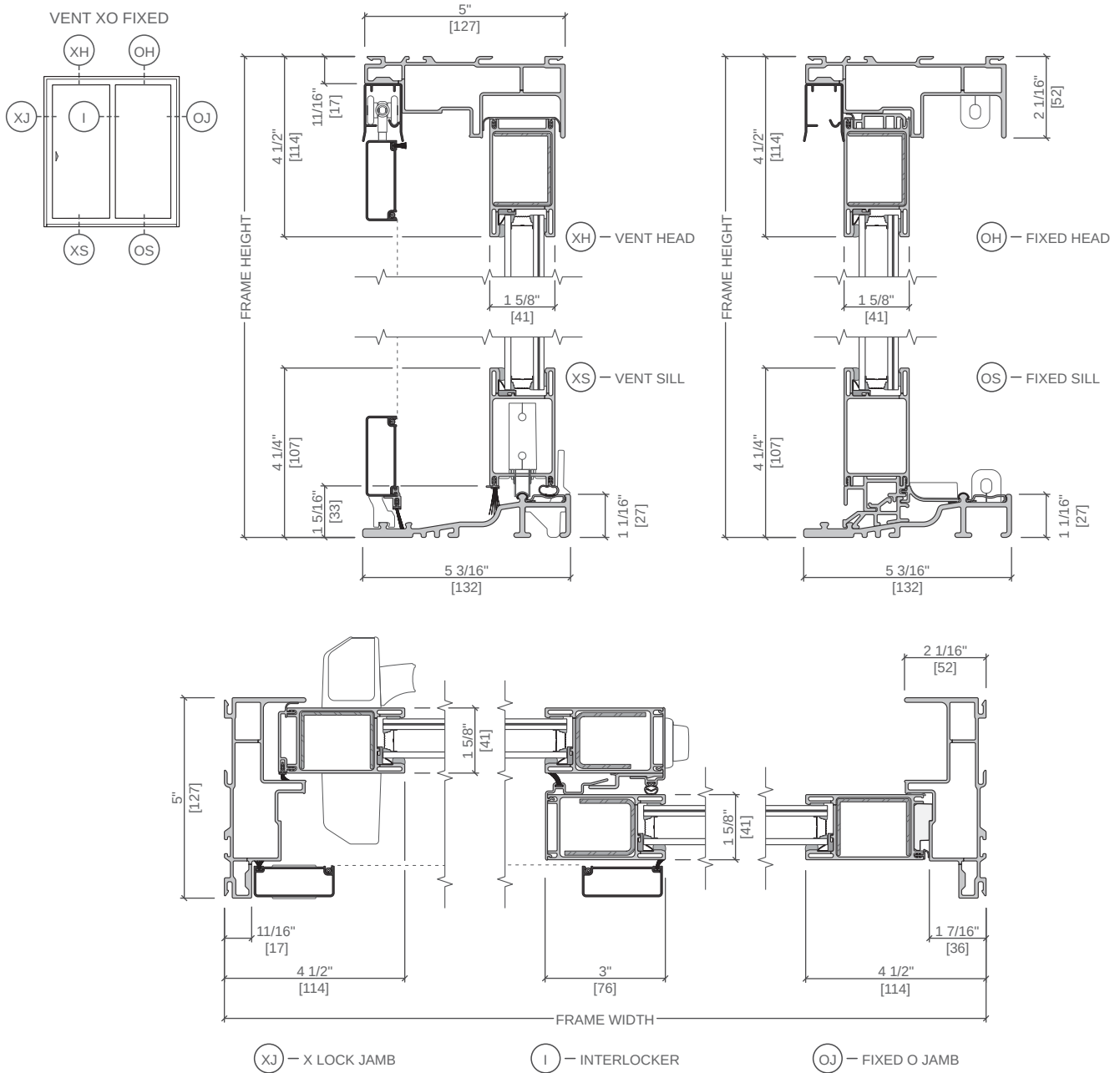
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Impervia® Sliding Patio Doors

Unit Sections - Impact-Resistant Laminated Glazing



Scale 3" = 1' 0"

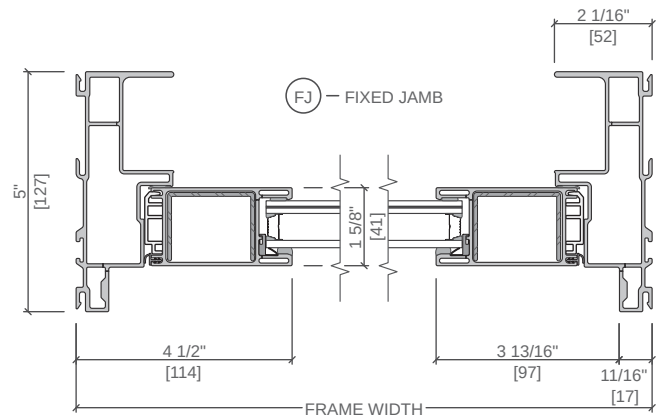
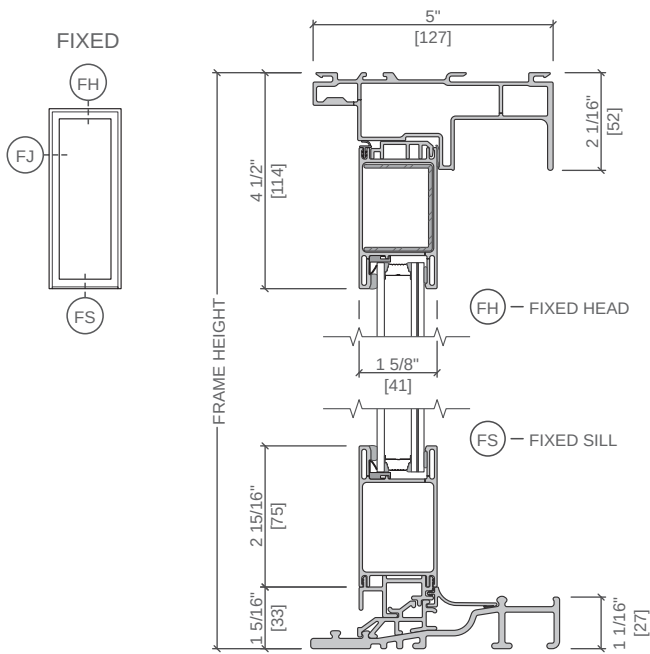
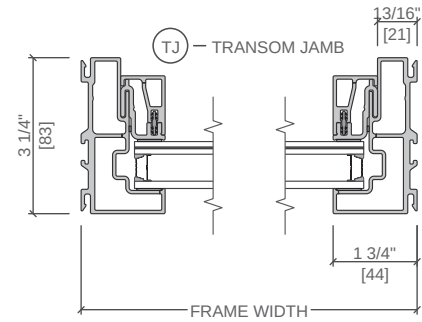
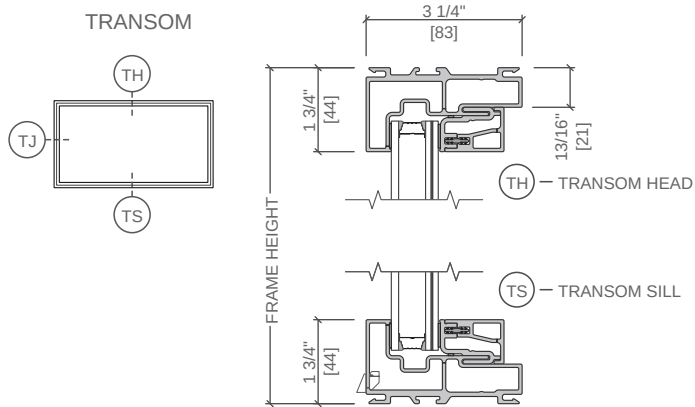
All dimensions are approximate.

Rev. 08/16/23



Impervia® Sliding Patio Doors

Unit Sections - Impact-Resistant Laminated Glazing



Scale 3" = 1' 0"

All dimensions are approximate.

Rev. 08/16/23