



RADIUS SHAPE

SECTION DIRECTORY

**General Information**

Product Summary.....	350-RS-2
Size and Performance Data	350-RS-3
Features and Options.....	350-RS-3
Sound Transmission Class and Outdoor-Indoor Transmission Class.....	350-RS-4

Pella® 350 Series Radius Shapes

Glazing Performance	
11/16" insulating Glass with 3mm Glass	350-RS-5
1" insulating Glass with 5mm Glass	350-RS-5
Triple-Pane Insulating Glass.....	350-RS-6
11/16" insulating Glass with 3mm/5mm Glass.....	350-RS-6
11/16" insulating Glass - Tinted Glazing	350-RS-7
Non-Impact Laminate.....	350-RS-8
3-1/4" Block Pocket Replacement	
1" Insulating Glass - Fixed	350-RS-9
11/16" Insulating Glass - Fixed	350-RS-9
11/16" Insulating Glass with 3mm/5mm Glass - Fixed.....	350-RS-10
Triple-Pane Glazing.....	350-RS-10
1" Insulated Glazing - Tinted Glass	350-RS-11
11/16" insulating Glass - Tinted Glazing	350-RS-11
HurricaneShield Impact-Resistant Glazing.....	350-RS-12
Grille Types	350-RS-14
Size Tables.....	350-RS-15
Special Sizes	350-RS-15
Product Performance	350-RS-16
Design Data	350-RS-18
Detailed Product Descriptions	350-RS-19
Unit Sections.....	350-RS-20

BRAND SUMMARY



RADIUS SHAPE

Pella® 350 Series Radius Shape

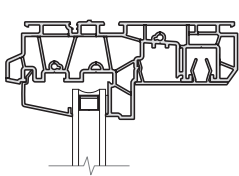
Windows feature an extruded, rigid PVC (polyvinyl chloride) frame with heat-fused mitered corners for a fully welded corner assembly. The SmoothSeam™ welded corners on the interior of the frame are virtually invisible. Radius Shape Windows meet industry standards for water infiltration and wind resistance and meet ENERGY STAR® guidelines with dual-pane or triple-pane insulated glass.



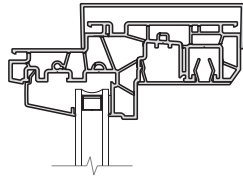
BLOCK FRAME DESIGN

4-1/2" Block or 3-1/4" Block Pocket Install

- 3-1/4" Block Pocket Install Frame allows a perfect fit into a 3-1/4" pocket when installed into an existing Double-Hung or Single-Hung wood frame from the interior.
- 4-1/2" block frame can be used in new construction block or concrete walls. They may also be used in replacement of old aluminum or steel frame windows or pocket replacement into wood frames from the exterior.
- The block frames include interior and exterior accessory grooves.
- Custom sizes are available in 1/8" increments - for a perfect fit.



4-1/2" Block Frame

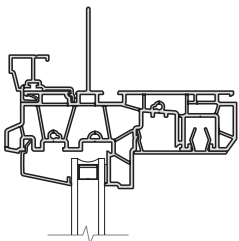


3-1/4" Block Pocket Install

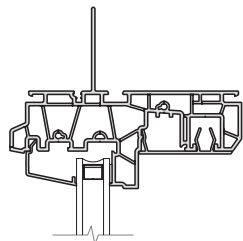
NAIL FIN FRAME DESIGN

With or Without Integrated J-Channel

- Continuous fin with welded corners adds a protective weather barrier and allows for hassle-free installation.
- The standard 4-1/2" frame depth includes interior and exterior accessory grooves.
- Nailing fin has a 1-7/16" setback from exterior face of window frame.
- Custom sizes are available in 1/8" increments - for a perfect fit.
- 4-9/16" and 6-9/16" factory applied primed or clear jamb extensions are available.



With J-Channel

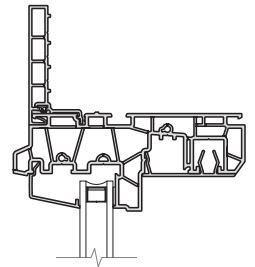


Without J-Channel

DOUBLE-WALL FLUSH FLANGE

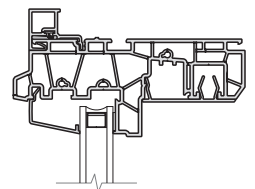
Replacement Frame Design

- The flush flange frame allows for easy replacement of old aluminum or steel frame windows without removing the existing frame head or jambs - typically used with stucco exteriors in southwest arid climates.
- The frame depth is 4-1/2" (overall wall depth of 4-1/16") includes interior accessory grooves
- Custom sizes are available in 1/8" increments - for a perfect fit.



INTEGRAL 5/8" FLANGE FRAME

- The integral 5/8" flange frame can be used in new construction block or concrete walls. Commonly used in Florida and often referred to as "Florida Flange" frame.
- The frame depth is 4-1/2" (overall wall depth of 3-7/8") includes interior accessory groove.
- Custom sizes are available in 1/8" increments - for a perfect fit.





RADIUS SHAPE

PRODUCT SELECTION GUIDE

Size and Performance Data
Features and Options



Size and Performance Data

SIZES	
Standard Sizes	S
Special Sizes Available Built on 1/8" Increments	O
FRAMES	
Nail Fin Only	O
Nail Fin with J-Channel	O
4-1/2" Block	S
3-1/4" Block Pocket Install / Replacement	S
Double-Wall Flush Flange	O
Integral 5/8" Flange	O
PERFORMANCE ₁	
Standard Performance	
Meets or Exceeds AAMA/WDMA Ratings	R-PG30 to C-PG60
Air Infiltration (cfm/ft ² of frame @ 1.57 psf wind pressure)	.05
Design Pressure	30-60 psf
Water Penetration Resistance	4.5 to 9.0 psf
Performance Upgrade	
Meets or Exceeds AAMA/WDMA Ratings	R-PG30 to C-PG60
Air Infiltration (cfm/ft ² of frame @ 1.57 psf wind pressure)	.05
Design Pressure	30-60 psf
Water Penetration Resistance	4.5 to 9.0 psf
Other Performance Criteria	
Forced Entry Resistance (Minimum Security Grade) ₂	40

Features and Options

GLAZING (INSULATING GLASS)	
Glazing Type	
Dual-pane insulating glass	S
Triple-pane insulating glass	O
Insulated Glass Options / Low-E Types	
Advanced Low-E	S
NaturalSun Low-E	O
SunDefense™ Low-E ₃	O
Gray Low-E ₃	O
Bronze-tinted Advanced Low-E ₃	O
Additional Glazing Options	
Annealed glass	S
Tempered glass	O
Obscure glass ₄	O
Noise reduction glass (STC 3mm/5mm combination) ₃	O
Noise reduction laminated glass (non-impact) ₃	O
Gas Fill / High Altitude	
Argon	S
High altitude	O
High altitude with argon ₃	O
INTERIOR / EXTERIOR COLOR	
White	S
Almond	O
Brown exterior/White interior	O
GRILLES	
Grilles-Between-the-Glass	
Traditional, Sunburst, Starburst, Prairie and Perimeter	O
Simulated-Divided-Light Grilles ₃ (without spacer)	
Traditional and Starburst	O

S = Standard; O = Optional

(1) Published performance data is for single unit only.
Combinations require reinforcing mullion between units.

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

(3) Not available with triple-pane glazing.

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



RADIUS SHAPE

PRODUCT SELECTION GUIDE

Sound Transmission Class



Sound Transmission Class and Outdoor-Indoor Transmission Class

Frame Size Tested ¹	Glazing System				STC Rating	OITC Rating
	Overall Glazing Thickness	Exterior Glass Thickness	Interior Glass Thickness	Third Pane Thickness		
FIXED WINDOW – DUAL PANE INSULATING GLASS						
48" x 60"	1 1/16"	3mm	3mm	–	30	24
60" x 24"	1 1/16"	3mm	5mm	–	30	25
FIXED WINDOW – NON-IMPACT LAMINATED INSULATING GLASS						
60" x 24"	1"	5mm	10mm PVB	–	36	31
FIXED WINDOW – HURRICANESHIELD IMPACT-RESISTANT LAMINATED INSULATING GLASS						
60" x 24"	1"	5mm	11.7 mm SGP	–	35	31
60" x 24"	1"	5mm	10mm PVB	–	36	31
FIXED WINDOW – TRIPLE-PANE INSULATING GLASS						
60" x 24"	1-1/4"	3mm	3mm	3mm	33	26

NOT E: The presence of Low-E or argon have negligible effect on sound attenuation characteristics.

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



GLAZING PERFORMANCE - TOTAL UNIT

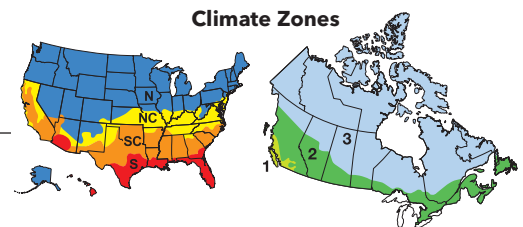
11/16" Insulating Glass with 3mm Glass
1" Insulating Glass with 5mm Glass



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.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ₂					
										Zone				ER	Zone				
										N	NC	SC	S				1	2	3
FIXED – 11/16" IG																			
11/16"	Advanced Low-E IG	PEL-N-185-00006-00001	3	3	air	0.29	0.32	60	58										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00078-00001				0.31	0.29	54	58										
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00146-00001				0.29	0.29	54	58										
11/16"	Advanced Low-E IG	PEL-N-185-00044-00001	3	3	argon	0.26	0.32	60	61							26			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00112-00001				0.27	0.29	54	61							23			
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00178-00001				0.26	0.29	54	61							24			
11/16"	NaturalSun Low-E IG	PEL-N-185-00007-00001	3	3	air	0.30	0.58	67	57							36			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00079-00001				0.32	0.52	60	57							30			
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00147-00001				0.30	0.52	60	57							32			
11/16"	NaturalSun Low-E IG	PEL-N-185-00045-00001	3	3	argon	0.27	0.58	67	61							39			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00113-00001				0.28	0.53	60	61							35			
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00179-00001				0.27	0.53	60	61							37			
11/16"	SunDefense™ Low-E IG	PEL-N-185-00008-00001	3	3	air	0.29	0.24	55	58										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00080-00001				0.31	0.22	49	58										
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00148-00001				0.29	0.22	49	58										
11/16"	SunDefense Low-E IG	PEL-N-185-00046-00001	3	3	argon	0.25	0.23	55	62							22			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00114-00001				0.27	0.21	49	62							18			
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00180-00001				0.25	0.21	49	62							21			
FIXED – 1" IG																			
1"	Advanced Low-E IG	PEL-N-185-00016-00001	5	5	air	0.30	0.31	59	57										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00088-00001				0.30	0.28	52	57										
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00156-00001				0.30	0.28	52	57										
1"	Advanced Low-E IG	PEL-N-185-00054-00001	5	5	argon	0.26	0.31	59	60							25			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00122-00001				0.26	0.28	52	60							23			
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00188-00001				0.26	0.28	52	60							23			
1"	NaturalSun Low-E IG	PEL-N-185-00017-00001	5	5	air	0.31	0.56	66	56							33			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00089-00001				0.31	0.51	59	56							30			
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00157-00001				0.31	0.51	59	56							30			
1"	NaturalSun Low-E IG	PEL-N-185-00055-00001	5	5	argon	0.27	0.56	66	60							38			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00123-00001				0.27	0.51	59	60							35			
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00189-00001				0.27	0.51	59	60							35			
1"	SunDefense™ Low-E IG	PEL-N-185-00018-00001	5	5	air	0.29	0.24	54	57										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00090-00001				0.29	0.21	49	57										
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00158-00001				0.29	0.21	49	57										
1"	SunDefense Low-E IG	PEL-N-185-00056-00001	5	5	argon	0.26	0.23	54	61							20			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00124-00001				0.26	0.21	49	61							19			
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00190-00001				0.26	0.21	49	61							19			

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 2015 (Version 6) criteria.
(2) The values shown are based on Canada's updated ENERGY STAR® 2015 initiative. Based on unit size, some products will use 2.5mm glass that may have improved glazing performance from what is shown. See the Product Performance section for more detailed information or visit www.energystar.gov for Energy Star guidelines.





GLAZING PERFORMANCE - TOTAL UNIT

Triple-Pane Insulating Glass

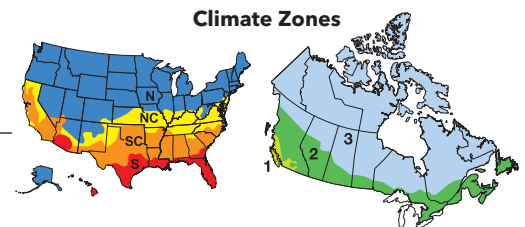
11/16" Insulating Glass with 3mm/5mm Glass



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.	Mid.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ₂		
											Zone				ER	Zone	
TRIPLE-PANE											N	NC	SC	S	1	2	3
1-1/4"	Advanced Low-E Triple-pane IG	PEL-N-185-00023-00001	3	3	3	air	0.18	0.27	46	70					33		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00095-00001					0.19	0.24	42	70					30		
1-1/4"	Advanced Low-E Triple-pane IG	PEL-N-185-00061-00001	3	3	3	argon	0.15	0.27	46	74					36		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00129-00001					0.16	0.24	42	74					33		
1-1/4"	NaturalSun Low-E Triple-pane IG	PEL-N-185-00024-00001	3	3	3	air	0.24	0.51	62	65					39		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00096-00001					0.25	0.46	55	65					35		
1-1/4"	NaturalSun Low-E Triple-pane IG	PEL-N-185-00062-00001	3	3	3	argon	0.21	0.51	62	68					43		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00130-00001					0.22	0.46	55	68					39		
1-7/16"	Advanced Low-E Triple-pane IG	PEL-N-185-00025-00001	5	5	5	air	0.18	0.26	45	69					32		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00097-00001					0.19	0.24	40	69					30		
1-7/16"	Advanced Low-E Triple-pane IG	PEL-N-185-00063-00001	5	5	5	argon	0.15	0.26	45	72					36		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00131-00001					0.16	0.24	40	72					33		
1-7/16"	NaturalSun Low-E Triple-pane IG	PEL-N-185-00026-00001	5	5	5	air	0.24	0.48	60	64					37		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00098-00001					0.25	0.44	54	64					34		
1-7/16"	NaturalSun Low-E Triple-pane IG	PEL-N-185-00064-00001	5	5	5	argon	0.21	0.48	60	66					41		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00132-00001					0.22	0.44	54	66					38		
FIXED 11/16" IG WITH 3MM/5MM GLASS																	
11/16"	Advanced Low-E IG	PEL-N-185-00011-00001	3		5	air	0.31	0.32	59	55							
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00083-00001					0.35	0.29	53	55							
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00151-00001					0.31	0.29	53	55							
11/16"	Advanced Low-E IG	PEL-N-185-00049-00001	3		5	argon	0.26	0.31	59	59					25		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00117-00001					0.30	0.28	53	59							
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00183-00001					0.26	0.28	53	59					23		
11/16"	NaturalSun Low-E IG	PEL-N-185-00012-00001	3		5	air	0.32	0.56	67	54					32		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00084-00001					0.36	0.51	60	54							
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00152-00001					0.32	0.51	60	54					29		
11/16"	NaturalSun Low-E IG	PEL-N-185-00050-00001	3		5	argon	0.27	0.56	67	58					38		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00118-00001					0.31	0.51	60	58					30		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00184-00001					0.27	0.51	60	58					35		
11/16"	SunDefense™ Low-E IG	PEL-N-185-00013-00001	3		5	air	0.31	0.24	55	55							
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00085-00001					0.35	0.22	49	55							
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00153-00001					0.31	0.22	49	55							
11/16"	SunDefense Low-E IG	PEL-N-185-00051-00001	3		5	argon	0.26	0.24	55	59					21		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00119-00001					0.30	0.22	49	59							
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00185-00001					0.26	0.22	49	59					20		

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 2015 (Version 6) criteria.
 (2) The values shown are based on Canada's updated ENERGY STAR® 2015 initiative. Based on unit size, some products will use 2.5mm glass that may have improved glazing performance from what is shown. See the Product Performance section for more detailed information or visit www.energystar.gov for Energy Star guidelines.





RADIUS SHAPE

GLAZING PERFORMANCE - TOTAL UNIT

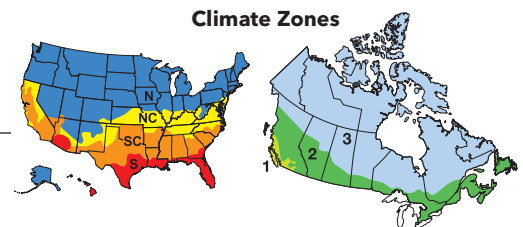
Tinted Glazing



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.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ₂					
										Zone				ER	Zone				
										N	NC	SC	S				1	2	3
TINTED GLAZING – 11/16" IG																			
11/16"	Bronze Advanced Low-E IG	PEL-N-185-00010-00001	3	3	air	0.29	0.31	44	58										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00082-00001				0.31	0.28	40	58										
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00150-00001				0.29	0.28	40	58										
11/16"	Bronze Advanced Low-E IG	PEL-N-185-00048-00001	3	3	argon	0.26	0.31	44	61						25				
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00116-00001				0.27	0.28	40	61						22				
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00182-00001				0.26	0.28	40	61						23				
11/16"	Gray Low-E IG	PEL-N-185-00009-00001	3	3	air	0.30	0.22	34	57										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00081-00001				0.32	0.20	31	57										
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00149-00001				0.30	0.20	31	57										
11/16"	Gray Low-E IG	PEL-N-185-00047-00001	3	3	argon	0.26	0.22	34	61						20				
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00115-00001				0.28	0.20	31	61						16				
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00181-00001				0.26	0.20	31	61						19				
TINTED GLAZING – 1" IG																			
1"	Bronze Advanced Low-E IG	PEL-N-185-00020-00001	5	5	air	0.30	0.28	38	57										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00092-00001				0.30	0.25	34	57										
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00160-00001				0.30	0.25	34	57										
1"	Bronze Advanced Low-E IG	PEL-N-185-00058-00001	5	5	argon	0.26	0.28	38	60						23				
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00126-00001				0.26	0.25	34	60						22				
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00192-00001				0.26	0.25	34	60						22				
1"	Gray Low-E IG	PEL-N-185-00019-00001	5	5	air	0.30	0.21	33	56										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00091-00001				0.30	0.20	30	56										
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00159-00001				0.30	0.20	30	56										
1"	Gray Low-E IG	PEL-N-185-00057-00001	5	5	argon	0.27	0.21	33	60						18				
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00125-00001				0.27	0.19	30	60						17				
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00191-00001				0.27	0.19	30	60						17				

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 2015 (Version 6) criteria.
 (2) The values shown are based on Canada's updated ENERGY STAR® 2015 initiative. Based on unit size, some products will use 2.5mm glass that may have improved glazing performance from what is shown. See the Product Performance section for more detailed information or visit www.energystar.gov for Energy Star guidelines.





RADIUS SHAPE

GLAZING PERFORMANCE - TOTAL UNIT

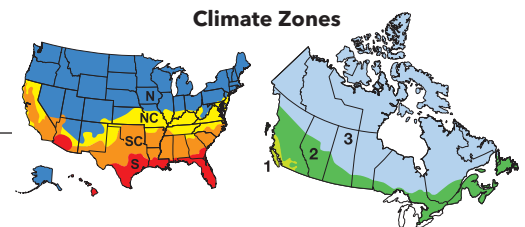
Non-Impact Laminate



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.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ₂		
										Zone				ER	Zone	
FIXED – NON-IMPACT LAMINATE										N	NC	SC	S	1	2	3
1"	Advanced Low-E PVB IG	PEL-N-185-00273-00001	5	10	air	0.28	0.31	0.57	58					20		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00287-00001				0.28	0.28	0.51	58					18		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00315-00001				0.28	0.28	0.51	58					18		
1"	Advanced Low-E PVB IG	PEL-N-185-00266-00001	5	10	argon	0.25	0.30	0.57	62					23		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00280-00001				0.25	0.27	0.51	62					22		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00308-00001				0.25	0.27	0.51	62					22		
1"	NaturalSun Low-E PVB IG	PEL-N-185-00276-00001	5	10	air	0.29	0.51	0.65	57					30		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00290-00001				0.29	0.46	0.58	57					28		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00318-00001				0.29	0.46	0.58	57					28		
1"	NaturalSun Low-E PVB IG	PEL-N-185-00269-00001	5	10	argon	0.26	0.52	0.65	61					35		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00283-00001				0.26	0.47	0.58	61					32		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00311-00001				0.26	0.47	0.58	61					32		
1"	SunDefense™ Low-E PVB IG	PEL-N-185-00275-00001	5	10	air	0.28	0.24	0.53	58					16		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00289-00001				0.28	0.21	0.47	58							
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00317-00001				0.28	0.21	0.47	58							
1"	SunDefense Low-E PVB IG	PEL-N-185-00268-00001	5	10	argon	0.24	0.23	0.53	62					20		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00282-00001				0.24	0.21	0.47	62					19		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00310-00001				0.24	0.21	0.47	62					19		
FIXED – NON-IMPACT LAMINATE TINTED GLASS										N	NC	SC	S	1	2	3
1"	Bronze Advanced Low-E PVB IG	PEL-N-185-00278-00001	5	10	air	0.28	0.29	0.35	58					19		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00292-00001				0.28	0.26	0.31	58					17		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00320-00001				0.28	0.26	0.31	58					17		
1"	Bronze Advanced Low-E PVB IG	PEL-N-185-00271-00001	5	10	argon	0.25	0.29	0.35	62					23		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00285-00001				0.25	0.27	0.31	62					22		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00313-00001				0.25	0.27	0.31	62					22		
1"	Gray Advanced Low-E PVB IG	PEL-N-185-00272-00001	5	10	air	0.29	0.21	0.32	58							
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00286-00001				0.29	0.19	0.29	58							
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00314-00001				0.29	0.19	0.29	58							
1"	Gray Advanced Low-E PVB IG	PEL-N-185-00265-00001	5	10	argon	0.25	0.21	0.32	61					18		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00279-00001				0.25	0.19	0.29	61					17		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00307-00001				0.25	0.19	0.29	61					17		

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 2015 (Version 6) criteria.
 (2) The values shown are based on Canada's updated ENERGY STAR® 2015 initiative. Based on unit size, some products will use 2.5mm glass that may have improved glazing performance from what is shown. See the Product Performance section for more detailed information or visit www.energystar.gov for Energy Star guidelines.





RADIUS SHAPE

GLAZING PERFORMANCE - TOTAL UNIT

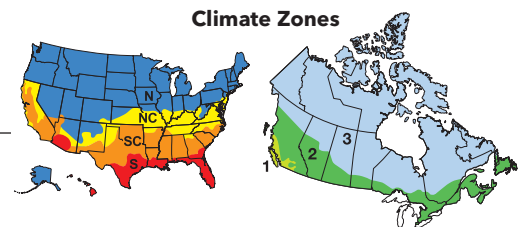
3-1/4" Block Pocket Replacement



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.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ₂					
										Zone				ER	Zone				
										N	NC	SC	S				1	2	3
FIXED – 11/16" IG																			
11/16"	Advanced Low-E IG	PEL-N-193-00006-00001	3	3	air	0.29	0.32	60	58										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00058-00001				0.31	0.29	54	58										
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00110-00001				0.29	0.29	54	58										
11/16"	Advanced Low-E IG	PEL-N-193-00032-00001	3	3	argon	0.25	0.32	60	62							27			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00084-00001				0.27	0.29	54	62							23			
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00130-00001				0.25	0.29	54	62							25			
11/16"	NaturalSun Low-E IG	PEL-N-193-00007-00001	3	3	air	0.30	0.58	67	57							36			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00059-00001				0.32	0.52	60	57							30			
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00111-00001				0.30	0.52	60	57							32			
11/16"	NaturalSun Low-E IG	PEL-N-193-00033-00001	3	3	argon	0.26	0.58	67	61							41			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00085-00001				0.28	0.53	60	61							35			
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00131-00001				0.26	0.53	60	61							38			
11/16"	SunDefense™ Low-E IG	PEL-N-193-00008-00001	3	3	air	0.29	0.24	55	58										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00060-00001				0.31	0.22	49	58										
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00112-00001				0.29	0.22	49	58										
11/16"	SunDefense Low-E IG	PEL-N-193-00034-00001	3	3	argon	0.25	0.23	55	62							22			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00086-00001				0.27	0.21	49	62							18			
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00132-00001				0.25	0.21	49	62							21			
FIXED – 1" IG																			
1"	Advanced Low-E IG	PEL-N-193-00016-00001	5	5	air	0.29	0.31	59	57										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00068-00001				0.29	0.28	52	57										
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00120-00001				0.29	0.28	52	57										
1"	Advanced Low-E IG	PEL-N-193-00042-00001	5	5	argon	0.26	0.31	59	60							25			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00094-00001				0.26	0.28	52	60							23			
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00140-00001				0.26	0.28	52	60							23			
1"	NaturalSun Low-E IG	PEL-N-193-00017-00001	5	5	air	0.30	0.56	66	56							35			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00069-00001				0.30	0.51	59	56							32			
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00121-00001				0.30	0.51	59	56							32			
1"	NaturalSun Low-E IG	PEL-N-193-00043-00001	5	5	argon	0.27	0.56	66	60							38			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00095-00001				0.27	0.51	59	60							35			
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00141-00001				0.27	0.51	59	60							35			
1"	SunDefense™ Low-E IG	PEL-N-193-00018-00001	5	5	air	0.29	0.24	54	57										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00070-00001				0.29	0.21	49	57										
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00122-00001				0.29	0.21	49	57										
1"	SunDefense Low-E IG	PEL-N-193-00044-00001	5	5	argon	0.25	0.23	54	61							22			
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00096-00001				0.25	0.21	49	61							21			
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00142-00001				0.25	0.21	49	61							21			

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 2015 (Version 6) criteria.
 (2) The values shown are based on Canada's updated ENERGY STAR® 2015 initiative.
 Based on unit size, some products will use 2.5mm glass that may have improved glazing performance from what is shown.
 See the Product Performance section for more detailed information or visit www.energystar.gov for Energy Star guidelines.





RADIUS SHAPE

GLAZING PERFORMANCE - TOTAL UNIT

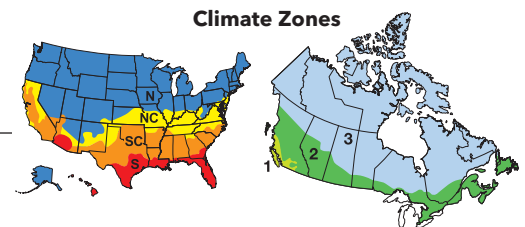
3-1/4" Block Pocket Replacement



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.	Mid.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ₂		
											Zone				ER	Zone	
TRIPLE-PANE											N	NC	SC	S	1	2	3
1-1/4"	Advanced Low-E Triple-pane IG	PEL-N-193-00023-00001	3	3	3	air	0.18	0.27	46	66					33		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00075-00001					0.19	0.24	42	66					30		
1-1/4"	Advanced Low-E Triple-pane IG	PEL-N-193-00049-00001	3	3	3	argon	0.15	0.27	46	74					36		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00101-00001					0.15	0.24	42	74					35		
1-1/4"	NaturalSun Low-E Triple-pane IG	PEL-N-193-00024-00001	3	3	3	air	0.23	0.51	62	65					40		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00076-00001					0.25	0.46	55	65					35		
1-1/4"	NaturalSun Low-E Triple-pane IG	PEL-N-193-00050-00001	3	3	3	argon	0.20	0.51	62	67					44		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00102-00001					0.21	0.46	55	67					40		
1-7/16"	Advanced Low-E Triple-pane IG	PEL-N-193-00025-00001	5	5	5	air	0.18	0.26	45	69					32		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00077-00001					0.19	0.24	40	69					30		
1-7/16"	Advanced Low-E Triple-pane IG	PEL-N-193-00051-00001	5	5	5	argon	0.15	0.26	45	72					36		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00103-00001					0.15	0.24	40	72					35		
1-7/16"	NaturalSun Low-E Triple-pane IG	PEL-N-193-00026-00001	5	5	5	air	0.23	0.48	60	64					39		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00078-00001					0.24	0.44	54	64					35		
1-7/16"	NaturalSun Low-E Triple-pane IG	PEL-N-193-00052-00001	5	5	5	argon	0.20	0.48	60	67					42		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00104-00001					0.21	0.44	54	67					39		
FIXED 11/16" IG WITH 3MM/5MM GLASS																	
11/16"	Advanced Low-E IG	PEL-N-193-00011-00001	3		5	air	0.31	0.32	59	54							
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00063-00001					0.35	0.29	53	54							
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00115-00001					0.31	0.29	53	54							
11/16"	Advanced Low-E IG	PEL-N-193-00037-00001	3		5	argon	0.26	0.31	59	58					25		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00089-00001					0.30	0.28	53	58							
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00135-00001					0.26	0.28	53	58					23		
11/16"	NaturalSun Low-E IG	PEL-N-193-00012-00001	3		5	air	0.32	0.56	67	54					32		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00064-00001					0.36	0.51	60	54							
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00116-00001					0.32	0.51	60	54					29		
11/16"	NaturalSun Low-E IG	PEL-N-193-00038-00001	3		5	argon	0.27	0.56	67	58					38		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00090-00001					0.31	0.51	60	58					30		
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00136-00001					0.27	0.51	60	58					35		
11/16"	SunDefense™ Low-E IG	PEL-N-193-00013-00001	3		5	air	0.31	0.24	55	55							
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00065-00001					0.35	0.22	49	55							
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00117-00001					0.31	0.22	49	55							
11/16"	SunDefense Low-E IG	PEL-N-193-00039-00001	3		5	argon	0.26	0.24	55	59					21		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00091-00001					0.29	0.22	49	59							
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00137-00001					0.26	0.22	49	59					20		

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 2015 (Version 6) criteria.
 (2) The values shown are based on Canada's updated ENERGY STAR® 2015 initiative. Based on unit size, some products will use 2.5mm glass that may have improved glazing performance from what is shown. See the Product Performance section for more detailed information or visit www.energystar.gov for Energy Star guidelines.





RADIUS SHAPE

GLAZING PERFORMANCE - TOTAL UNIT

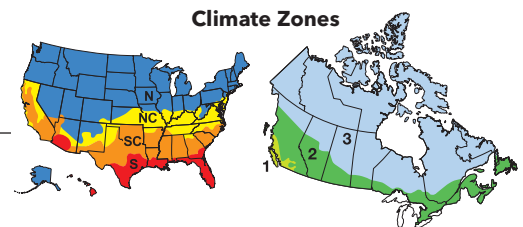
3-1/4" Block Pocket Replacement



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.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ₂					
										Zone				ER	Zone				
										N	NC	SC	S				1	2	3
TINTED GLAZING – 11/16" IG																			
11/16"	Bronze Advanced Low-E IG	PEL-N-193-00010-00001	3	3	air	0.29	0.31	44	58										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00062-00001				0.31	0.28	40	58										
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00114-00001				0.29	0.28	40	58										
11/16"	Bronze Advanced Low-E IG	PEL-N-193-00036-00001	3	3	argon	0.25	0.31	44	62						26				
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00088-00001				0.27	0.28	40	62						22				
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00134-00001				0.25	0.28	40	62						25				
11/16"	Gray Low-E IG	PEL-N-193-00009-00001	3	3	air	0.30	0.22	34	57										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00061-00001				0.32	0.20	31	57										
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00113-00001				0.30	0.20	31	57										
11/16"	Gray Low-E IG	PEL-N-193-00035-00001	3	3	argon	0.26	0.22	34	61						20				
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00087-00001				0.28	0.20	31	61						16				
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00133-00001				0.26	0.20	31	61						19				
TINTED GLAZING – 1" IG																			
1"	Bronze Advanced Low-E IG	PEL-N-193-00020-00001	5	5	air	0.29	0.28	38	57										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00072-00001				0.29	0.25	34	57										
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00124-00001				0.29	0.25	34	57										
1"	Bronze Advanced Low-E IG	PEL-N-193-00046-00001	5	5	argon	0.26	0.28	38	60						23				
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00098-00001				0.26	0.25	34	60						22				
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00144-00001				0.26	0.25	34	60						22				
1"	Gray Low-E IG	PEL-N-193-00019-00001	5	5	air	0.30	0.21	33	56										
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00071-00001				0.30	0.20	30	56										
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00123-00001				0.30	0.20	30	56										
1"	Gray Low-E IG	PEL-N-193-00045-00001	5	5	argon	0.26	0.21	33	60						19				
	with 3/4" or 1" grilles-between-the-glass	PEL-N-193-00097-00001				0.26	0.19	30	60						18				
	with 7/8" Simulated Divided Light grilles	PEL-N-193-00143-00001				0.26	0.19	30	60						18				

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 2015 (Version 6) criteria.
 (2) The values shown are based on Canada's updated ENERGY STAR® 2015 initiative. Based on unit size, some products will use 2.5mm glass that may have improved glazing performance from what is shown. See the Product Performance section for more detailed information or visit www.energystar.gov for Energy Star guidelines.





RADIUS SHAPE

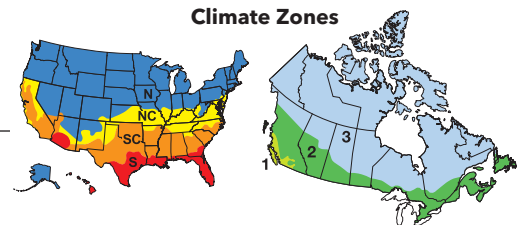
HURRICANESHIELD® IMPACT-RESISTANT GLAZING
GLAZING PERFORMANCE - TOTAL UNIT



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.	Int.		U-Factor	SHGC	VLT %	CR	U. S.				Canada ₂		
										Zone				ER	Zone	
						N	NC	SC	S			1	2	3		
1"	Advanced Low-E IG PVB	PEL-N-185-00224-00001	5	12	air	0.30	0.31	56	56					20		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00248-00001				0.33	0.28	51	57					15		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00260-00001				0.30	0.28	51	56					18		
1"	Advanced Low-E IG PVB	PEL-N-185-00218-00001	5	12	argon	0.26	0.30	56	60					25		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00242-00001				0.29	0.28	51	60					20		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00254-00001				0.26	0.28	51	60					23		
1"	SunDefense™ Low-E IG PVB	PEL-N-185-00226-00001	5	12	air	0.29	0.24	52	57					17		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00250-00001				0.33	0.22	47	57					11		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00262-00001				0.29	0.22	47	57					16		
1"	SunDefense Low-E IG PVB	PEL-N-185-00220-00001	5	12	argon	0.25	0.23	52	61					22		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00244-00001				0.28	0.21	47	61					17		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00256-00001				0.25	0.21	47	61					21		
FIXED – WITH OBSCURE GLAZING																
1"	Advanced Low-E IG PVB	PEL-N-185-00203-00001	5	12	air	0.30	0.30	40	56					20		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00211-00001				0.33	0.27	36	56					14		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00215-00001				0.30	0.27	36	56					18		
1"	Advanced Low-E IG PVB	PEL-N-185-00201-00001	5	12	argon	0.26	0.30	40	60					25		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00209-00001				0.29	0.27	36	60					19		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00213-00001				0.26	0.27	36	60					23		
1"	SunDefense™ Low-E IG PVB	PEL-N-185-00204-00001	5	12	air	0.29	0.23	37	57					17		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00212-00001				0.33	0.21	33	57					11		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00216-00001				0.29	0.21	33	57					16		
1"	SunDefense Low-E IG PVB	PEL-N-185-00202-00001	5	12	argon	0.25	0.23	37	60					22		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00210-00001				0.28	0.21	33	60					17		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00214-00001				0.25	0.21	33	60					21		
FIXED – WITH TINTED GLAZING																
1"	Bronze Advanced Low-E IG PVB	PEL-N-185-00225-00001	5	12	air	0.30	0.29	34	56					19		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00249-00001				0.33	0.26	30	57					13		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00261-00001				0.30	0.26	30	56					17		
1"	Bronze Advanced Low-E IG PVB	PEL-N-185-00219-00001	5	12	argon	0.26	0.29	34	60					24		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00243-00001				0.29	0.26	30	60					18		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00255-00001				0.26	0.26	30	60					22		
1"	Gray Advanced Low-E IG PVB	PEL-N-185-00223-00001	5	12	air	0.30	0.22	32	56					15		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00247-00001				0.33	0.20	29	56					10		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00259-00001				0.30	0.20	29	56					14		
1"	Gray Advanced Low-E IG PVB	PEL-N-185-00217-00001	5	12	argon	0.26	0.21	32	60					19		
	with 3/4" or 1" grilles-between-the-glass	PEL-N-185-00241-00001				0.29	0.19	29	60					14		
	with 7/8" Simulated Divided Light grilles	PEL-N-185-00253-00001				0.26	0.19	29	60					18		

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 2015 (Version 6) criteria.
(2) The values shown are based on Canada's updated ENERGY STAR® 2015 initiative. Based on unit size, some products will use 2.5mm glass that may have improved glazing performance from what is shown. See the Product Performance section for more detailed information or visit www.energystar.gov for Energy Star guidelines.





RADIUS SHAPE

HURRICANESHIELD® IMPACT-RESISTANT

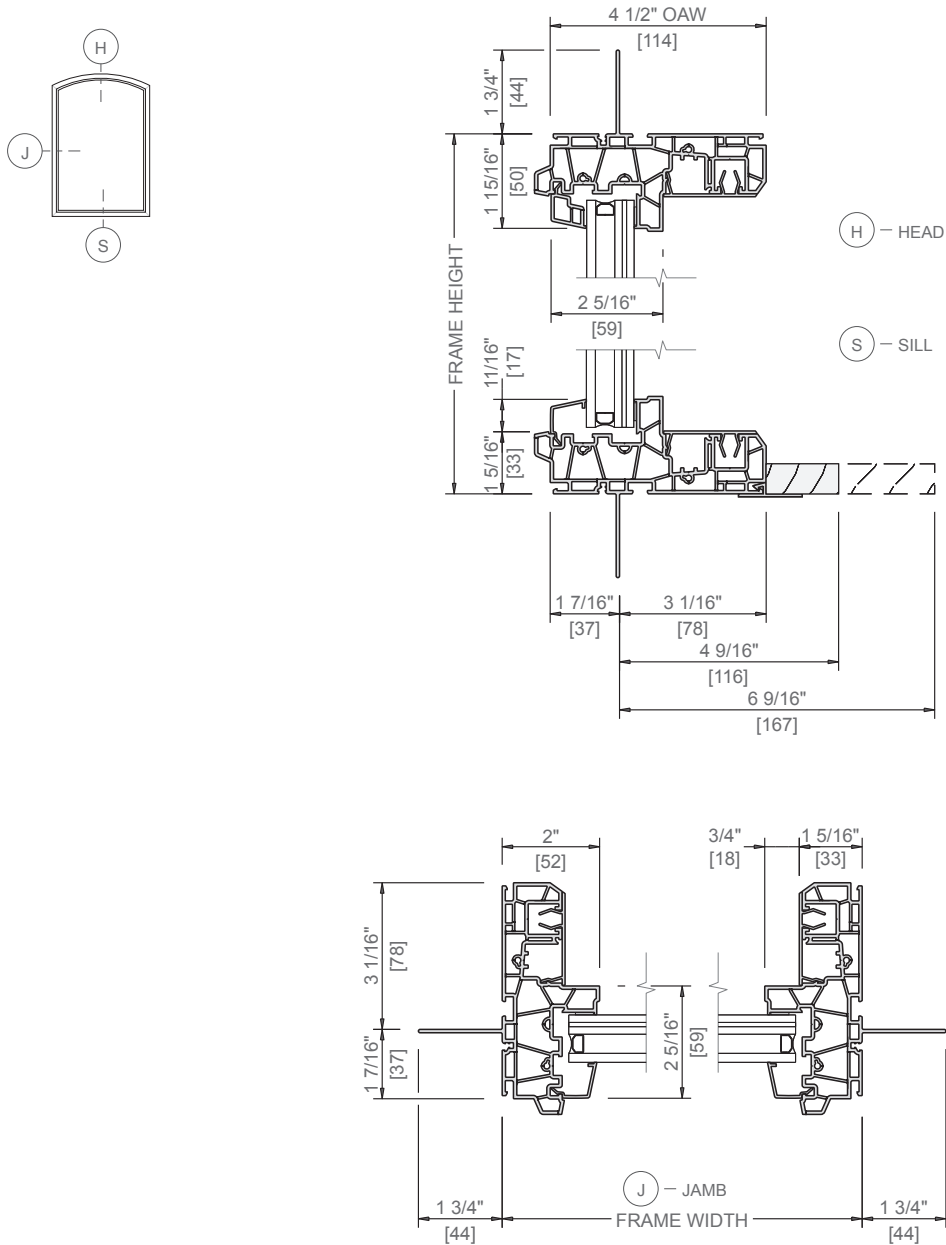
Fixed Window



For a complete list of the HurricaneShield Impact-Resistant Glazing ratings, refer to the Coastal and High Winds section.

Product	Design Pressure Large Missile Rating D		Hallmark Certified	Miami-Dade County Approved (NOA)	Florida Product Approval System (FPAS)	Texas Department of Insurance (TDI)
	Minimum	Maximum				
FIXED UNITS						
1" Insulated Glass SGP	60	60	411-H-1428	12-1219.04	FL16040	WIN-1738

UNIT SECTIONS



All sizes and glass types are tested for air/water/structural and impact-resistance, and are certified for wind zone 4, large missile rating D. Florida Product Approval System number not needed if Miami-Dade County approved.

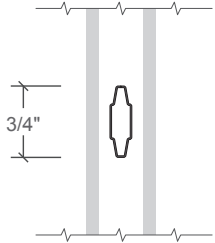
GRILLE TYPES



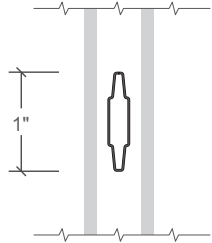
RADIUS SHAPE

Grille Profiles

GRILLES-BETWEEN-THE-GLASS

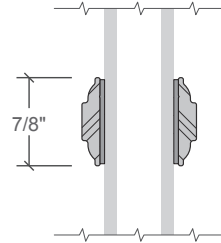


3/4" Contour

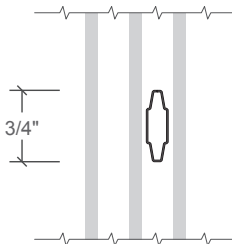


1" Contour

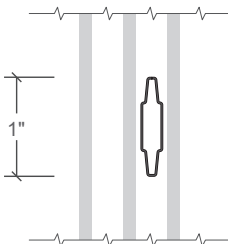
SIMULATED-DIVIDED-LIGHT GRILLES WITHOUT SPACER



7/8" Contour



3/4" Contour



1" Contour

Grille Patterns

	TRADITIONAL	PERIMETER	PRAIRIE	SUNBURST	STARBURST
HALF CIRCLE					
QUARTER CIRCLE		Not Available			
SPRINGLINE					Not Available
ARCH-HEAD					
PARTIAL ARCH-HEAD		Not Available			Not Available



RADIUS SHAPE

SPECIAL SIZE FRAME DIMENSIONS

Parameters and Product Rules

	SHAPES	Frame Width (Inches)		Frame Height (Inches)	
		MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
Half Circle		29-1/2"	95-1/2"	14-1/2 "	47-1/2"
		<ul style="list-style-type: none"> Half circles are built for a true half circle rough opening (.250 offset from actual frame) FH = (FW/2) - 1/4" 			
Quarter Circle		23-1/2 "	73-1/2"	23-1/2"	73-1/2"
		N/A			
Springline		29-1/2"	95-1/2"	20-1/2 "	108"
		<ul style="list-style-type: none"> Minimum SH is 8" 			
Arch Head		17-1/2 "	95-1/2"	17-1/2"	108"
		<ul style="list-style-type: none"> Width and height ratio cannot exceed 8:1 if LS is \leq 95-1/2" If LS is $>$ 95-1/2", width and height ratio must be $<$ 5:1 Minimum leg length is 8" Minimum corner angle is 40° Minimum cut angle 20° Maximum frame angle is 160° SH must be $>$ (FH - (Width / 2) + 1.375 Minimum Radius: 14-3/4", Maximum Radius is 239-3/4" Frame Radius = FH - SH 			
Partial Arch Head		17-1/2 "	95-1/2"	17-1/2"	108"
		<ul style="list-style-type: none"> Width and height ratio cannot exceed 8:1 if LS is \leq 95-1/2" If LS is $>$ 95-1/2", width and height ratio must be $<$ 5:1 Frame Radius must be $>$ (FH - SH) + 3 Minimum leg length is 8" Minimum corner angle is 40° Minimum cut angle 20° Maximum frame angle is 160° Minimum Radius is 14-3/4", Maximum Radius is 239-3/4" 			

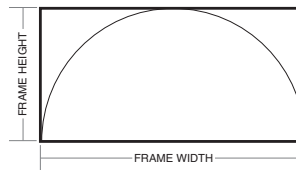
General Notes:

- Both width and height cannot be $>$ than 73-1/2"
- Maximum Square Foot (of Rectangle framing shape): 40 Ft.²
- Bronze glass: limited to 22 Ft.²

Miscellaneous Formulas

VISIBLE GLASS	Width = Frame - 3-15/16" Height = Frame - 3-15/16"
ACTUAL GLASS	Width = Frame - 2-13/16" Height = Frame - 2-13/16"

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



For all shapes, calculate the area as if it were a rectangle.

KEY:

- FH = Frame Height
- FR = Frame Rise
- FW = Frame Width
- LS = Long Side
- SH = Short Side Height
- SSH = Straight Side Height

Units are available in 1/8" increments.
All dimensions are referenced to the outside of the frame excluding nail fin or any installation accessories.



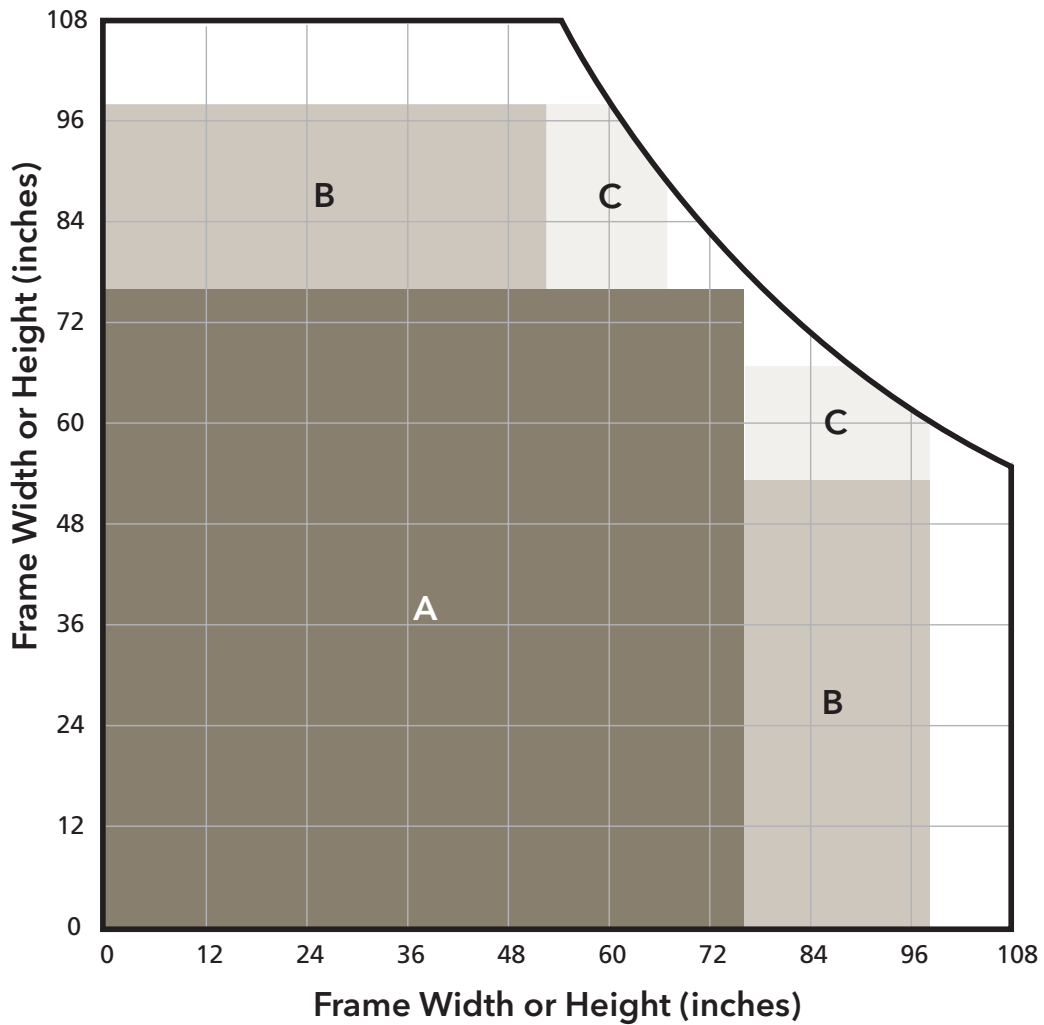
PRODUCT PERFORMANCE

Standard Performance

Performance Upgrade Fin Install



- The use of circlehead windows is limited by product performance rating, design pressure load chart, mullion strength and glass thickness or type. See mullion limitation and glass charts in the Installation and Performance section at PellaADM.com.
- All curved shapes are available up to a maximum of 40 ft² (4.46 m²) when measured as a rectangle.
- Glass must meet requirements of the glass charts and comply with the load chart. The chart below shows the maximum performance class and grade when glazed with the appropriate glass thickness.





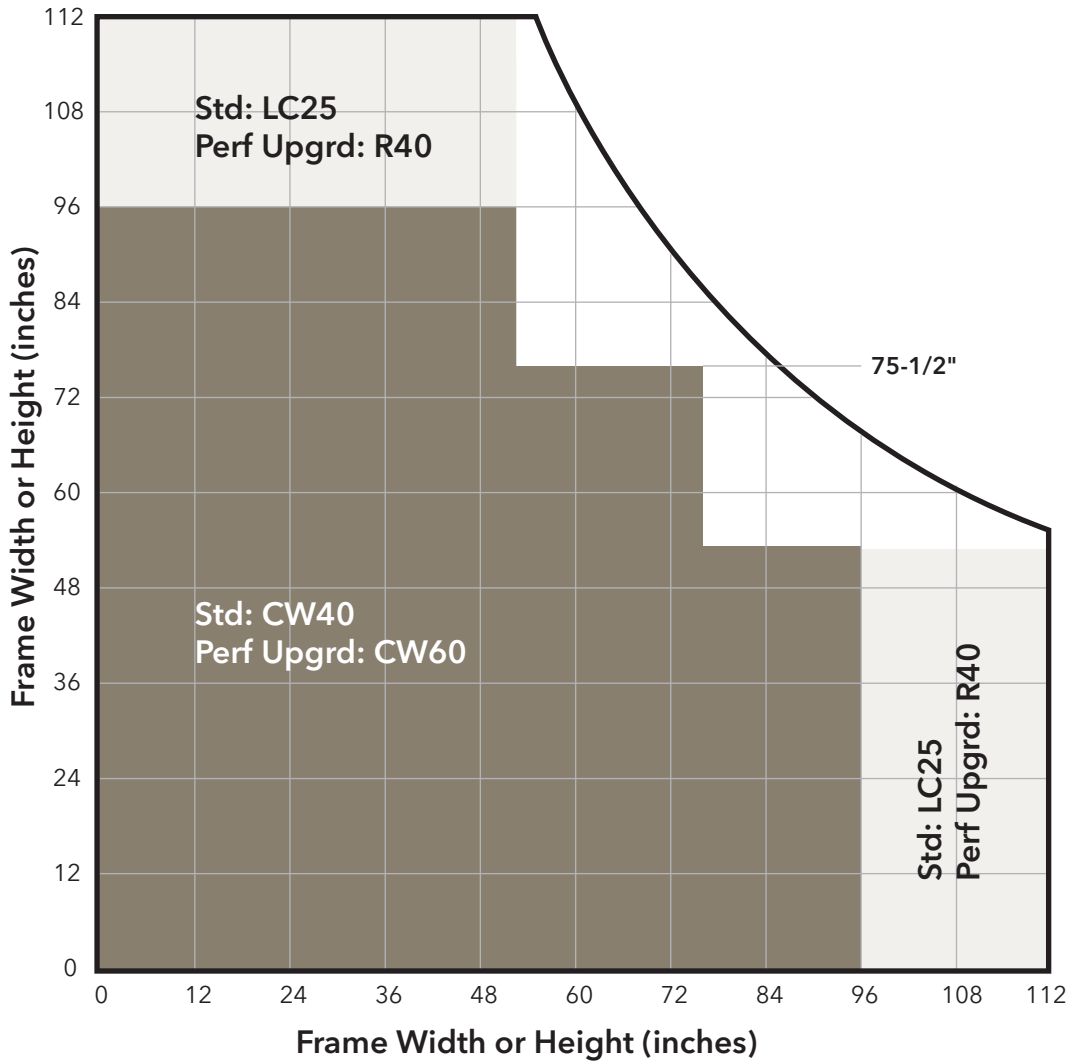
RADIUS SHAPE

PRODUCT PERFORMANCE

Standard and Performance Upgrade
Block Frame and Flange Frame Install



- The use of circlehead windows is limited by product performance rating, design pressure load chart, mullion strength and glass thickness or type. See mullion limitation and glass charts in the Installation and Performance section at PellaADM.com.
- All curved shapes are available up to a maximum of 40 ft² (4.46 m²) when measured as a rectangle.
- Glass must meet requirements of the glass charts and comply with the load chart. The chart below shows the maximum performance class and grade when glazed with the appropriate glass thickness.



Standard and Performance upgrade - Block Frame, Flange Frame



RADIUS SHAPE

DESIGN DATA

5/8" Integral Flange

**HALF CIRCLE FIXED UNITS**

Call Out	Frame		Visible Glass Ft ²	Frame Area Ft ²	Performance Class & Grade	
	Width (inches)	Height (inches)			Standard	High Performance
Option 1	36	25	3.1	4.4		
Option 2	52-1/8	26-1/16	7.4	9.4		
Option 3	73	36-1/4	15.5	18.4		

QUARTER CIRCLE FIXED UNITS

Call Out	Frame		Visible Glass Ft ²	Frame Area Ft ²	Performance Class & Grade	
	Width (inches)	Height (inches)			Standard	High Performance
Option 1	18-1/4	18-1/4	1.4	2.3		
Option 2	36	36	7.1	9.0		
Option 3	52-1/8	52-1/8	16.1	18.9		
Option 4	73	73	33.1	37.0		



RADIUS SHAPE

DETAILED PRODUCT DESCRIPTIONS



FRAME

- Overall frame depth: 4-1/2" on all frame types except the 3-1/4" pocket replacement frame. The 3-1/4" pocket replacement frame has an overall frame depth of 4-7/8".
- Frame members are mitered and heat fused to provide a fully welded corner assembly. Sill is fitted with weeps.
- Frame: [1-3/8" setback nail fin for 3-1/8" wall depth] [Block frame for 4-1/2" wall depth] [Block frame for 3-1/4" pocket replacement install] [Flush flange for 4" wall depth] [Integral flange for 3-7/8" wall depth].
- Interior and exterior frame surfaces are extruded rigid PVC.

GLAZING SYSTEM

- Quality float glass complying with ASTM C 1036.
- Exterior face-glazed sealed insulating glass.
- 1" Dual Pane annealed [Advanced Low-E coated [with Argon]] [NaturalSun Low-E coated [with Argon]] [SunDefense™ Low-E coated [with Argon]] [Bronze, Advanced Low-E coated [with Argon]] [Gray Low-E coated [with Argon]] [Obscure₁] [High Altitude₂] [Tempered].
- or-
- 1-3/8" Triple Pane annealed [Advanced Low-E coated with Argon] [NaturalSun Low-E coated with Argon] [Obscure₁] [High Altitude₂] [Tempered].

INTERIOR / EXTERIOR

- Window frame members [[White] [Almond] have an integral color extruded throughout the profiles] [Brown exterior has a solar reflective coating per AAMA 614, and integral color on the interior].
- All exposed PVC surfaces are smooth, glossy and uniform in appearance.
- Frame color is [White] [Almond] [Brown exterior / White interior].

OPTIONAL PRODUCTS

Grilles

- Grilles-Between-the-Glass
 - Insulating glass contains [3/4"] [1"] contoured aluminum grilles permanently installed between two panes of glass.
 - Patterns are [Traditional] [Sunburst] [Starburst] [Prairie] [Perimeter].
 - Grilles match color of interior and exterior frame.
- Simulated-Divided-Light grilles
 - Grilles permanently bonded to the interior and exterior of glass.
 - Patterns are [Traditional] [Starburst].
 - Interior grilles match the interior frame color.
 - Exterior grilles match the exterior frame color.
 - Available only on units glazed with Dual Pane insulating glass.

(1) Obscure glass not available with Bronze Advanced Low-E.

(2) Dual Pane IG High Altitude glazings are available with or without Argon. Triple Pane IG High Altitude glazings are only available without Argon.



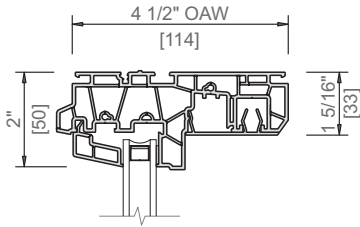
RADIUS SHAPE

UNIT SECTIONS

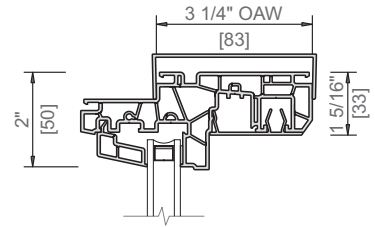
Installation Types



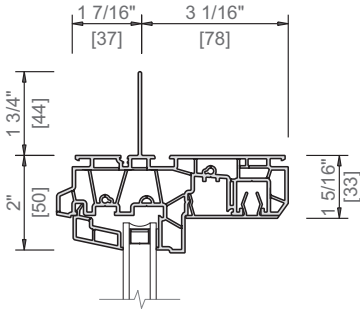
STANDARD
BLOCK FRAME



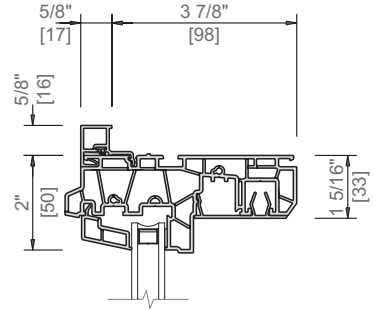
POCKET REPLACEMENT



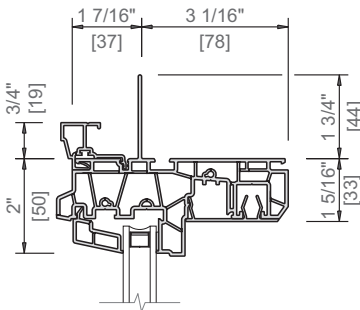
STANDARD
NAIL FIN



BLOCK FRAME with
5/8" INTEGRAL FLANGE

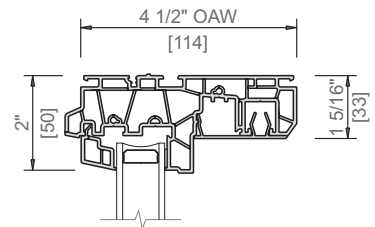


NAIL FIN
with J-CHANNEL

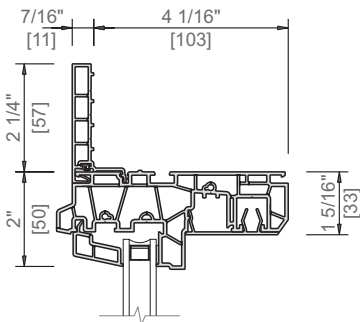


Additional Glazing Options

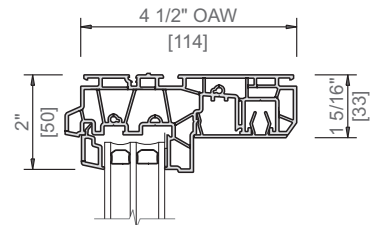
1" IG



DOUBLE WALL
FLUSH FLANGE



1 1/4" TRIPLE
PANE IG



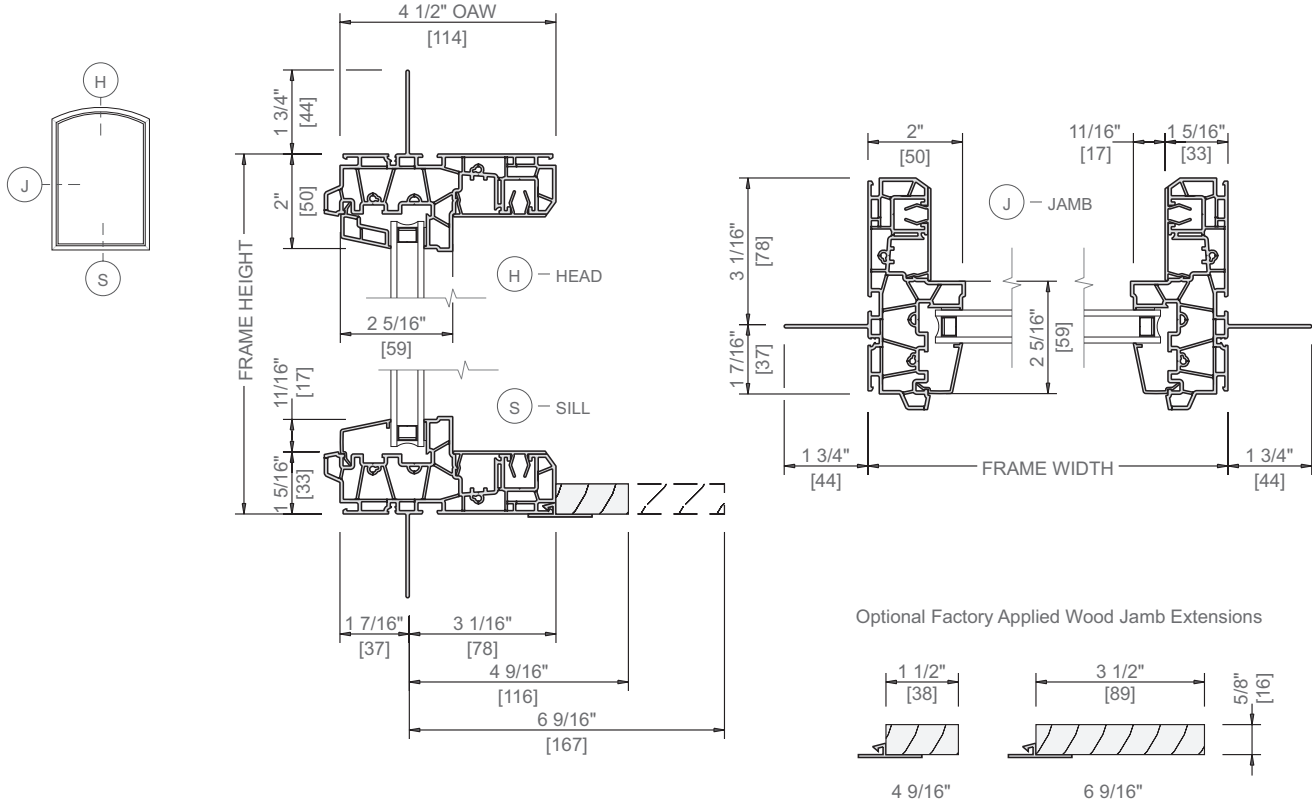
Scale 3" = 1' 0"
All dimensions are approximate.



RADIUS SHAPE

UNIT SECTIONS

Standard Nail Fin



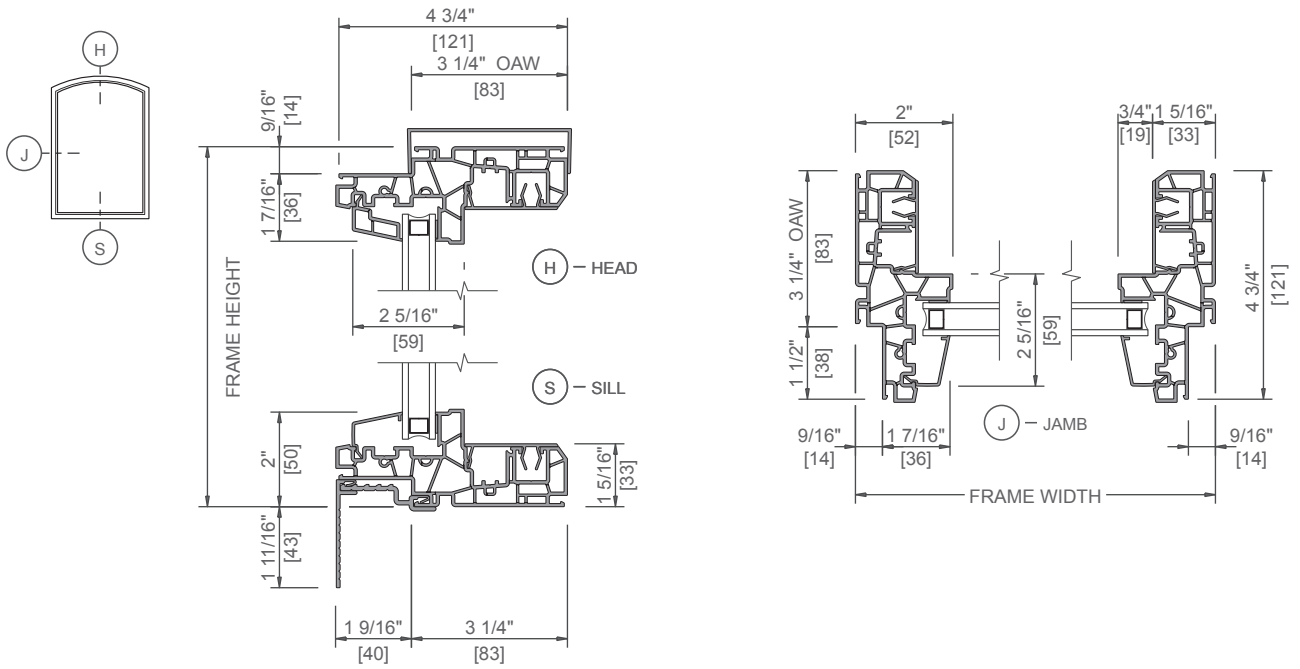
Scale 3" = 1' 0"
All dimensions are approximate.

UNIT SECTIONS

Block Pocket Replacement Frame



RADIUS SHAPE



Scale 3" = 1' 0"
All dimensions are approximate.