ARCHITECTURAL SOLUTIONS

DESIGN. TECHNOLOGY. VALUE.





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ABOUT US:

VPI Quality Windows has been a leading vinyl window manufacturer in the United States for over 25 years. With our roots firmly set in custom window & door fabrication, and a distinct resume of mid-rise, multi-family, institutional, hospitality & commercial projects, VPI is uniquely qualified to handle everything from boutique development to multi-phase, commercial construction.

We have achieved success by demanding three things of ourselves in everything we do: safety, quality and consistency. This foundation guides our mission, vision and values, and how we interact with all of our stakeholders.

CORE VALUES

Integrity | Respect | Excellence | Personal Growth | Family

MISSION

VPI Quality Windows is dedicated to serving its family of employees, customers and vendors. We build and deliver high performing products through our standard of excellence, integrity and guaranteed satisfaction.

VISION

From design to delivery, we engineer product and process. We earn respect in the eyes of our customers through continuous improvement of design, performance and craftsmanship. By expanding our products, we evolve with our existing and emerging markets.

Quality People. Quality Products. Quality Business.

SUPERIOR PRODUCT PERFORMANCE

At VPI, we recognize that performance is measured in many ways, including product longevity. We combine our superior fabrication processes with the best materials from vendors that share our commitment to quality and consistency. We proudly partner with the best, US based material partners in our industry.

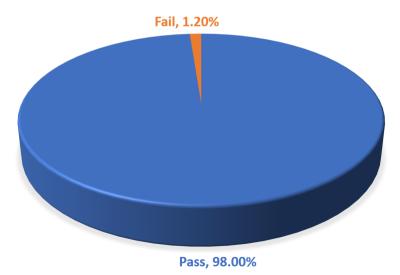
- Tightly crafted joinery at the intersections to protect from water intrusion
- Consistent results from independent 3rd-party testing
- Customer trust in the VPI brand demonstrated via recurring business

WATER TESTING

Consistency and reliability are critical when assessing window performance. VPI attended, and documented, 626 third-party field water tests in 2019, with 619 tests passing the first time.

Assembly errors/omissions, material defects, and hardware malfunctions are exposed during the water testing process. VPI conducts in-house water testing as a daily part of our comprehensive Quality Management System.

2019 DOCUMENTED THIRD-PARTY FIELD WATER TESTS



With VPI, your project won't be delayed with water test failures and slow remediation.

UNIQUE PRODUCT DESIGN

When you are working with VPI's Sales and Engineering groups, you will be working with a seasoned team of professionals who are determined to take care of your needs. Delivering the right product on your schedule. All you have to do is ask.

- Manufacture one complete window rather than piece together separate units
- Experienced engineering team validates unique designs prior to production
- Partnership with architects / envelope consultants in design approach



KEY CONTACTS

At VPI, we take pride in how we are able to serve our customers in ways that other manufacturers cannot. Our ability to assist starts with our Sales Department. We ensure that each territory manager has product technical ability and local building code experience. We can help architects during the design phase and suggest, for their consideration, optimal window configurations that balance aesthetics, performance and value.

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Product Brochures

- Endurance Window
- Endurance Door
- Envision Window
- Envision Door
- Dual Cap
- PTAC
- Endurance AC Port





Endurance Window

Commercial Mid-Rise Windows

Strength & Performance

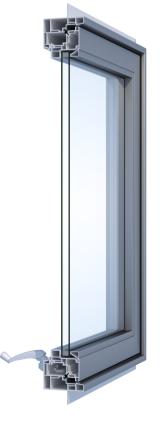
- Superior product performance developed and tested in the lab, proven in the field
- Commercial grade metal reinforcements interconnected throughout window assembly
- Vinyl frames deliver consistent thermal performance and minimize condensation
- Windows are assembled with continuous frames to avoid risky mulls

Water Resistance

- Panel level design minimizes water intrusion and air infiltration/ex-filtration
- Fusion welded corners provide environmental comfort and protect against leaks
- Integral nailfin options for ease of installation and water barrier

Design & Security

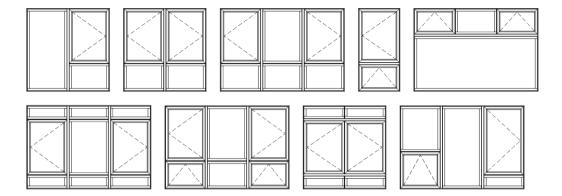
- Durable, co-extruded acrylic exterior finishes allow for color diversity
- Available multiple locking points ensure security and compress the triple weather seal for superior air and water resistance
- Easy to operate hardware for egress and fair housing requirements
- Heavily reinforced intersecting "T-Bar" system allows for design freedom with superior structural, air, water, and thermal performance



Commercial-Rated Performance:

Engineered for Mid-Rise Construction

Common Configurations:



Options:

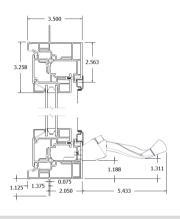
- Casement
- Awning
- Fixed
- Single Hung
- Horizontal Slider

Sill Details:

Casement/Awning

3 1/2" Frame Depth

- Up to CW PG-70
- U values as low as .18
- Sound Rating as high as STC 44/OITC 33



Fixed Window

3 1/2" Frame Depth

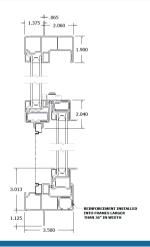
- Up to CW PG-40
- U values as low as .16
- Sound Rating as high as STC 44/OITC 33



Single Hung

3 1/2" Frame Depth

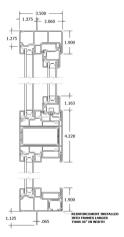
- Up to LC-PG55
- U values as low as .22
- Sound Rating as high as STC 36/OITC 29



Horizontal Slider

3 1/2" Frame Depth

- Up to LC-PG50
- U values as low as .22
- Sound Rating as high as STC 36/OITC 29



Colors:

Base







SuperCapSR*







Silver Architectural
(clear anodized Bronze
appearance)



*Printing limitations prevent exact color duplication. Contact your VPI representative for color samples.







www.vpiwindows.com (800) 634-1478 | info@vpiwindows.com 3420 E. Ferry, Spokane, WA 99202



Endurance Sliding Door Series by VPI Quality Windows

Steel reinforced frame suitable for commercial application

• Fusion welded mitered corners provide strength and durability

Peace of mind

- Crafted with Cardinal IG featuring Endur low conductivity spacer, high-performance LoE, and safety glazing standard
- Industry leading warranty

Custom fit your application

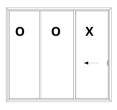
- Build to order manufacturing with standard lead times
- Wide variety of flat and contoured grid styles available to enhance your door
- 2 and 3 panel configurations available
- Meets or exceeds AAMA and NFRC standards
- Cardinal 366 LoE standard for optimal comfort in any climate
- Optional threshold adapter for ADA compliance

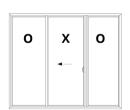


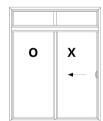
Configurations:

(X = Operable, O = Fixed)

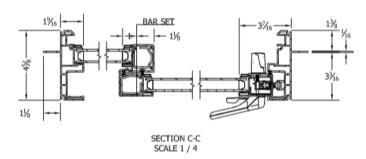






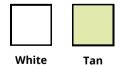


Cross Section:



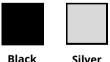
Colors:

Base





SuperCapSR*







Architectural (clear anodized **Bronze** appearance)

SuperCapSR

*Printing limitations prevent exact color duplication. Contact your VPI representative for color samples.

Hardware Options:



















Envision Window

Commercial Inward Projecting Windows for Retrofit and New Construction

The Envision Window system offers exceptional design, flexibility, and performance to meet the vigorous demands of today's mid to high-rise building market. Available in a variety of colors and configurations, Envision Windows combine the energy efficiency of rigid vinyl with the robust strength needed for high-wind load applications.

Strength & Beauty

Leak-proof fusion welded corners and warm condensation resistant vinyl frames are available in fixed, hopper and inswing casement configurations (or combinations of each), offering a superior option to the commercial window market.

Improved Strength & Performance

- Heavier walls on frame and integral T-bar provides greater rigidity
- Improved sound performance

Streamlined Installation

- Integral nailing flange for ease of installation and water barrier
- 1" Nailfin setback

Greater Flexibility

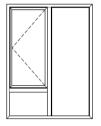
- New hinge more design configurations
- Easily adjustable

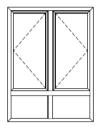


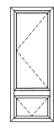
Commercial-Rated Performance:

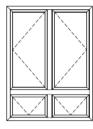
Mid to High Rise Construction

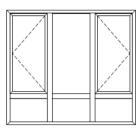
Common Configurations:

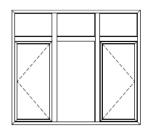












Options:

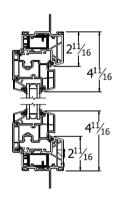
- Inswing
- Hopper
- Casement
- Integral nailfin with 1" setback
- Interior/Exterior color options

Sill Details:

Inswing Casement

3 1/4" Frame Depth

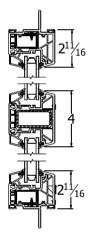
- Up to CW PG-40
- U values as low as .16
- Sound Rating as high as STC 44



Fixed Window

3 1/4" Frame Depth

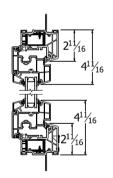
- Up to CW PG-65
- U values as low as .16
- Sound Rating as high as STC 44



Inswing Hopper

3 1/4" Frame Depth

- Up to CW PG-40
- U values as low as .16
- Sound Rating as high as STC 44



Colors:

Base:

White

Tan











*Printing limitations prevent exact color duplication. Contact your VPI representative for color samples.









appearance)



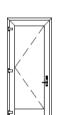
Commercial Swinging Patio Doors for Retrofit and New Construction

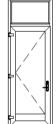
Envision, achieving new heights

VPI Quality Windows, a leader in high-performance vinyl commercial window systems, introduces the next generation of doors for mid and high-rise building applications, Envision Door.

Energy codes continue to evolve, requiring new approaches to building cladding and fenestration design. A ground-breaking door system, the Envision Series combines the proven energy efficiency of PVC with the robust structural strength needed in high-wind load applications. Providing greater design freedom with multiple fused colors, Envision Door is available in a wide variety of high performance configurations.

Standard Configurations:













Options:

- Inswing
- Outswing
- Low Profile (LP) Sill
- High Performance (HP) Sill
- Kick Plate
- Integral Nailfin w/ 1" Setback
- Interior/Exterior color options

Standard Features on all Configurations:

- COMPRESSION SEAL DESIGN Enhances protection against water intrusion, air infiltration and allows ease of glass replacement
- VINYL FRAMES Increase thermal performance, add color options and reduce condensation
- FRAME AND SASH Have hollow compartments that allow for optimal reinforcement required in heavy commercial applications
- FUSION WELDED CORNERS Provide environmental comfort and protect against leaks
- HARDWARE Multiple finishes available in both standard and ADA compliant options as well as with opening restrictors
- **INTEGRAL BAR** Allows for freedom of design while maintaining structural and thermal performance
- MULTIPLE LOCKING POINTS Added security



Commercial-Rated Performance:

Mid to High Rise Construction

Colors:

Base





SuperCapSR*

(Available for exterior only or interior/exterior options)





Bronze



Silver (clear anodized appearance)







*Printing limitations prevent exact color duplication. Contact your VPI representative for color samples.

Sill Details:

Outswing Door with Transom Above

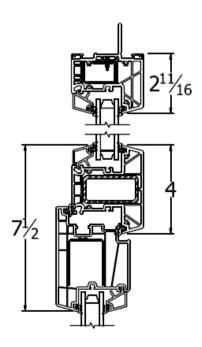
- Up to CW PG-40
- U values as low as .18
- Sound Rating as high as STC 42

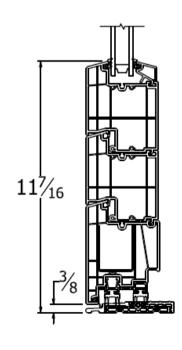
Outswing Door Low Profile with Kickplate

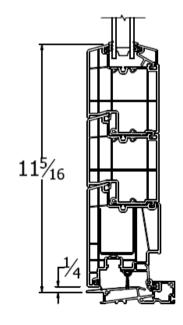
- Up to CW PG-40
- U values as low as .18
- Sound Rating as high as STC 42

Outswing Door High Performance with Kickplate

- Up to CW PG-40
- U values as low as .18
- Sound Rating as high as STC 42











HEW

VPI Expands SuperCapSR™ Color Technology to Interior Finishes

VPI Quality Windows announced that it will now extend SuperCapSR™ color technology to include interior finishes for the following product lines:

- Endurance Outswing Casement
- Endurance Awning
- Endurance Fixed

- Envision Inswing Casement
- Envision Hopper
- Envision Swing Door

The SuperCapSR™ process creates a tough, thermally-fused acrylic color layer that becomes integral to the profile for superior color retention performance. With this enhancement, interior hardware and screens will match interior window color for a clean, finished look.

Available Color Combinations:

- Black Exterior/Adobe Substrate/Black interior
- Bronze Exterior/Adobe Substrate/Bronze interior
- Silver Exterior/White Substrate/Silver interior



Adobe Substrate/Bronze Interior

KFY FFATURES

- SuperCapSR™ colors provide added flexibility when designing window packages for upscale properties
- Highly scratch-resistant color layer handles jobsite abuse better than paint, saving time and cost
- Long-lasting colors, typically 450%+ thicker than typical paint layers, will not crack, chip, flake or chalk
- Tests to 12x harder than competitive paint-applied coatings
- Most durable color solution on the market

HEW

VPI PTAC Louver System

VPI Quality Windows Endurance and Envision product lines now offer seamless integration with the industry's leading Packaged Terminal Air Conditioner (PTAC) louver manufacturer.

Ideal for multifamily and hotel design, these integrated solutions help improve water resistance, reduce installation and material costs, as well as improve overall design aesthetics.

KEY FEATURES

Louver and insulated blank-off panel directly glazed into the frame pocket

Allows for improved condensation management forming inside the pocket. The glazing pocket allows for insulated blank-off panels up to 1 3/8" in (35mm) thick.



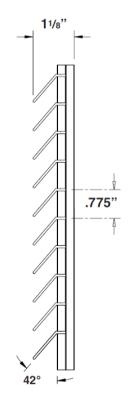
A variety of configurations are available to provide ultimate design flexibility

Aesthetics

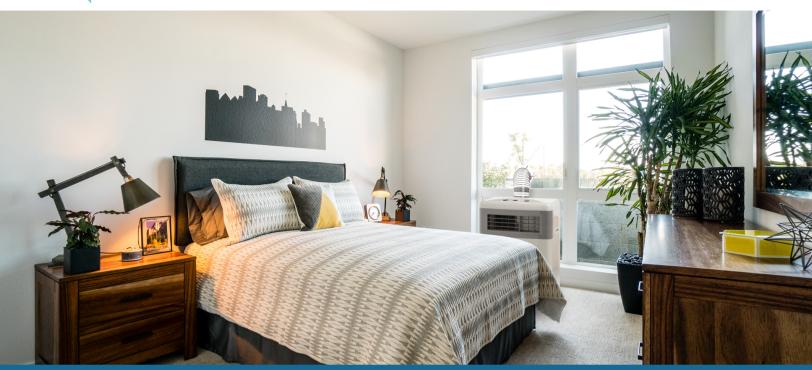
The architectural Kynar ® finish matches the exterior window color for a clean, finished look.

The architectural extruded aluminum louver meets the required free area, bar arrangements, 42 degree blade angle and unit attachments for the PTAC units. At the same time it provides a thin slim line decorative appeal that enhances the outside appearance of any building.









Endurance AC Port

Designed for Endurance Casement/Awning Products to Vent Portable Air Conditioning Units

User Friendly Application

- Port fits into screen pocket
- No special tools or skills required for installation
- No cutting holes into walls

Energy Efficient

- Removable in non-summer months
- Keeps cool air in and hot air out
- Fits standard 5" AC hoses

Competitively Priced

- Nominal chart up to 6 Sq.Ft.
- Additional charge for sizes > 6 Sq.Ft.
- Dual port options available





NCTL Fact Sheet



Class/Design Pressure in PSF (inches of water)	Class/Design Pressure Equivalent Wind Velocity in MPH	Structural Test Pressure in PSF (inches of water)	Structural Test Pressure Equivalent Wind Velocity in MPH	Water Test Pressure in PSF (inches of water)	Water Test Pressure Equivalent Wind Velocity in MPH
15 (2.88)	77.52	22.50 (4.32)	94.94	2.86 (0.55)	24.67
20 (3.84)	89.51	30.00 (5.76)	109.63	3.00 (0.58)	33.85
25 (4.80)	100.08	37.50 (7.20)	122.57	3.75 (0.72)	38.76
30 (5.76)	109.63	45.00 (8.64)	134.27	4.50 (0.86)	42.46
35 (6.72)	118.42	52.50 (10.08)	145.03	5.25 (1.01)	45.86
40 (7.68)	126.59	60.00 (11.52)	155.04	6.00 (1.15)	49.03
45 (8.64)	134.27	67.50 (12.96)	164.45	6.75 (1.30)	52
50 (9.60)	141.53	75.00 (14.40)	173.34	7.50 (1.44)	54.82
55 (10.56)	148.44	82.50 (15.84)	181.8	8.25 (1.58)	57.49
60 (11.52)	155.04	90.00 (17.28)	189.89	9.00 (1.73)	60.05
65 (12.48)	161.37	97.50 (18.72)	197.64	9.75 (1.87)	62.5
70 (13.44)	167.47	105.00 (20.16)	205.1	10.50 (2.02)	64.86
75 (14.40)	173.34	112.50 (21.60)	212.3	11.25 (2.16)	67.14
80 (15.36)	179.03	120.00 (23.04)	219.26	12.00 (2.30)	69.34
85 (16.32)	184.54	127.50 (24.48)	226.01	12.00 (2.30)	69.34
90 (17.28)	189.89	135.00 (25.92)	232.56	12.00 (2.30)	69.34
95 (18.24)	195.09	142.50 (27.36)	238.94	12.00 (2.30)	69.34
100 (19.20)	200.16	150.00 (28.80)	245.14	12.00 (2.30)	69.34

Air Inflitration Pressure in PSF (inches of water)	Equivalent Wind Velocity in MPH
1.57 (0.30)	25.08
6.24 (1.20)	50.00

These values are calculated from the Ensewiler Formulat, $P = 0.00256 \text{ V}^2$, where V = Wind Velocity in MPH and <math>P = the Differential Pressure across the window in Pounds per Square Foot (PSF). The equation assumes the direction of wind is perpendicular to the window and there are no effects from surrounding terrain or the shape of the building in which it is installed. Positive (+) pressures act inward and Negative (-) pressures act outward on the window.

An easier way to perform this calculation would be as follows:

Square Root of PSF x 20.016 (e.g. 15 Sq.Rt. = 3.87 x 20.016 = 77.52)

ACOUSTICAL PERFORMANCE DATA



Test Methods: ASTM E90, ASTM E 413-04, ASTM E 1332-90, ASTM E 2235-04

Testing performed by: Western Electro Acoustic Laboratory and Intertech (Architectural Testing)

Product	STC	OITC	Glazing	Report Number
511 Casement/ Awning/ Fixed Combination Windows	29 37 39 39 44 38 40	23 29 30 31 33 29 31	3mm/3mm 3/4" OA 3mm/5mm 1" OA 6mm/6mm 1 1/4" OA 6mm/6mm Lami 1 1/4" OA 6mm Lami/6mm Lami 1 1/4" OA TG 3mm/3mm/5mm TG 3mm/3mm/6mm Lami	K2039.01-303-11-RO TL 19-224 TL 19-291 TL 19-296 TL 19-288 TL 19-450 TL 19-297
511 Endurance Horizontal Slider	28 31 36	23 26 29	3mm/3mm 3/4" OA 3mm/5mm 3/4" OA 5mm/6mm Lami 1"	77807.01 A 77807.01 B 77807.07 C
511 Endurance Vertical Slider (Single Hung)	31 33 33	26 27 27	3mm/5mm 3/4" OA 3mm/6mm 1" OA 5mm/6mm 1" OA	84892.01 B 84982.01 C 84982.01 A
723 Endurance Sliding Glass Door	23 32 33 35	21 25 26 28	3mm/3mm 1" OA 3mm/5mm 1" OA 4mm/5mm 1" OA 6mm/6mm Lami 1" OA	TL 20-161 TL 20-164 TL 20-162 TL 20-163
1200 Envision Swing Door	31 36 38 39 40 42	24 29 30 31 32 35	3mm/3mm 1" OA 3mm/5mm 1" OA 4mm/5mm 1" OA 5mm/6mm 1 1/4" OA 5mm/6mm Lami 1 1/4" OA 6mm/9mm Lami (0.90 PVB) 1 1/4" OA	TL 19-333 TL 19-334 TL 19-335 TL 19-339 TL 19-337 TL 19-340

STRUCTURAL PERFORMANCE DATA



Test Specifications: AAMA/WDMA/CSA 101/1.S.2./A440-11, NAFS **Testing Performed by:** Intertech (Architectural Testing)

Perf Class	PG/DP	ASTM E 330 Uniform Struc. Load	Size/Configuration/ Description	ASTM E 283 Air Inf./Exf.	ASTM E 547 H ² 0 Penetration Resistance	ASTM E 502-20 Field Water Test Presure				
Product: 511 Casement/Awning/Fixed Combination Windows										
CW CW LC CW CW CW	70 40 60 40 40 55 45	105 psf 50 psf 90 psf 60 psf 60 psf 82.5 psf 67.5 psf	96" x 66" C-F-C 96" x 86" C-F-C/A-A-A 96" x 86" C-F-C/A-A-A 108" x 96" C-F-C/F-F-F 72" x 96" Fixed 36" x 123" F/C 108" x 96" F-F-F/C-F-C/F-F-F	0.06 cfm/ft ² 0.02 cfm/ft ² 0.02 cfm/ft ² 0.01 cfm/ft ² 0.01 cfm/ft ² 0.05 cfm/ft ²	10.5 psf 6 psf 9 psf 6 psf 6 psf 8.25 psf 6.75 psf	7 psf 4 psf 6 psf 4 psf 4 psf 5.5 psf 4.5 psf				
LC LC LC LC LC	50 50 50 50 40	75 psf 75 psf 75 psf 75 psf 75 psf 60 psf	108" x 96" XOX/FFF 71" x 56" XO 120" x 60" XOX 120" x 120" FFF/XOX/FFF	0.05 cfm/ft ² 0.05 cfm/ft ² 0.06 cfm/ft ² 0.07 cfm/ft ²	7.5 psf 7.5 psf 7.5 psf 6 psf	5 psf 5 psf 5 psf 4 psf				
Product: 59	1 Enduranc	e Vertical Slider (Single H	ung)							
CW LC LC LC	30 35 55 40	45 psf 52.5 psf 82.5 psf 60 psf	108" x 96" XOX/FFF 71" x 56" XO 120" x 60" XOX 120" x 120" FFF/XOX/FFF	0.05 cfm/ft ² 0.05 cfm/ft ² 0.06 cfm/ft ² 0.07 cfm/ft ²	7.5 psf 7.5 psf 7.5 psf 6 psf	5 psf 5 psf 5 psf 4 psf				

STRUCTURAL PERFORMANCE DATA



Test Specifications: AAMA/WDMA/CSA 101/1.S.2./A440-11, NAFS **Testing Performed by:** Intertech (Architectural Testing)

Perf Class	PG/DP	ASTM E 330 Uniform Struc. Load	Size/Configuration/ Description	ASTM E 283 Air Inf./Exf.	ASTM E 547 H ² 0 Penetration Resistance	ASTM E 502-20 Field Water Test Presure
Product: 72	3 Enduranc	e Sliding Glass Door				
LC LC LC LC	30 30 25 40 40	45 psf 45 psf 37.5 psf 60 psf 60 psf	96" x 96" XO 96" x 120" F/XO 120" x 96" O/XO 96" x 84" XO 144" x 84"	0.18 cfm/ft ² 0.08 cfm/ft ² 0.01 cfm/ft ² 0.10 cfm/ft ² 0.05 cfm/ft ²	4.5 psf 4.5 psf 3.75 psf 6 psf 6 psf	3 psf 3 psf 3 psf 3 psf 3 psf
Product: 12	00 Envision					
CW CW CW	40 40 40 40	60 psf 60 psf 60 psf 60 psf	42" x 96" Out-Swing Hinged Door 42" x 96" In-Swing Hinged Door 42" x 96" Casement 72" x 56" Hopper	0.01 cfm/ft ² 0.01 cfm/ft ² 0.01 cfm/ft ² 0.01 cfm/ft ²	6 psf 6 psf 6 psf 6 psf	4 psf 4 psf 4 psf 4 psf

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THERMAL (NFRC) PERFORMANCE DATA



CPD Numbers are published at: http://search.nfrc.org/search/searchDefault.aspx

WINDOW TYPE	GLASS THICKNESS	LOW -e	LOW -e	Argon	Air	IGU OA	U-Factor	SHGC	VT	
Product: Endurance										
Horizontal Sliding	3mm/3mm	366		√		3/4"	0.28	0.22	0.51	
Horizontal Sliding	3mm/3mm	366			\checkmark	3/4"	0.32	0.22	0.51	
Horizontal Sliding	3mm/3mm	270		√		3/4"	0.29	0.29	0.55	
Horizontal Sliding	3mm/3mm	270			✓	3/4"	0.32	0.30	0.55	
Single Hung	3mm/3mm	366		\checkmark		3/4"	0.28	0.22	0.51	
Single Hung	3mm/3mm	366			✓	3/4"	0.32	0.22	0.51	
Single Hung	3mm/3mm	270		\checkmark		3/4"	0.28	0.29	0.55	
Single Hung	3mm/3mm	270			✓	3/4"	0.32	0.30	0.55	
Fixed	3mm/3mm	366		\checkmark		3/4"	0.26	0.22	0.53	
Fixed	3mm/3mm	366			\checkmark	3/4"	0.30	0.23	0.53	
Fixed	3mm/3mm	270		\checkmark		3/4"	0.26	0.30	0.57	
Fixed	3mm/3mm	270			\checkmark	3/4"	0.30	0.30	0.57	
Fixed	3mm/3mm/3mm	270	180	\checkmark		1 1/4"	0.16	0.27	0.50	
Casement	3mm/3mm	366		✓		3/4"	0.26	0.18	0.42	
Casement	3mm/3mm	366			\checkmark	3/4"	0.30	0.18	0.42	
Casement	3mm/3mm	270		\checkmark		3/4"	0.26	0.24	0.45	
Casement	3mm/3mm	270			✓	3/4"	0.31	0.30	0.45	
Casement	3mm/3mm/3mm	270	180	\checkmark		1 1/4"	0.18	0.21	0.40	
Awning	3mm/3mm	366		\checkmark		3/4"	0.26	0.18	0.42	
Awning	3mm/3mm	366			\checkmark	3/4"	0.30	0.18	0.42	
Awning	3mm/3mm	270		\checkmark		3/4"	0.27	0.24	0.45	
Awning	3mm/3mm	270			\checkmark	3/4"	0.31	0.30	0.45	
Awning	3mm/3mm/3mm	270	180	\checkmark		1 1/4"	0.18	0.21	0.40	
Sliding Door	3mm/3mm	366		\checkmark		1"	0.28	0.23	0.55	
Sliding Door	3mm/3mm	270		✓		1"	0.29	0.31	0.60	

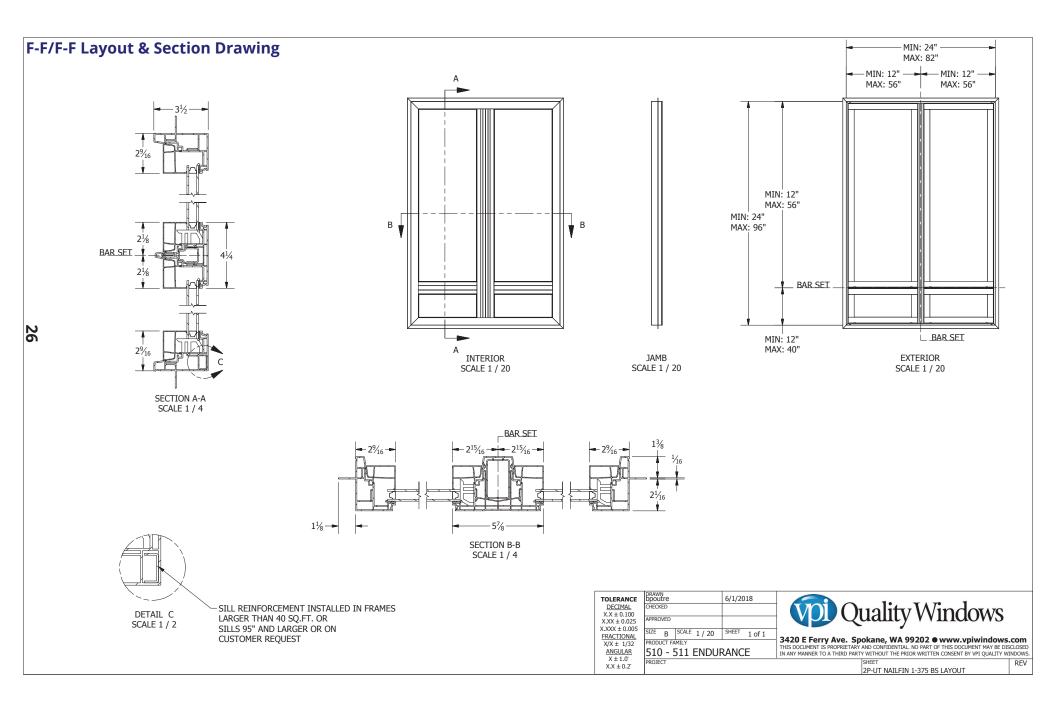
THERMAL (NFRC) PERFORMANCE DATA

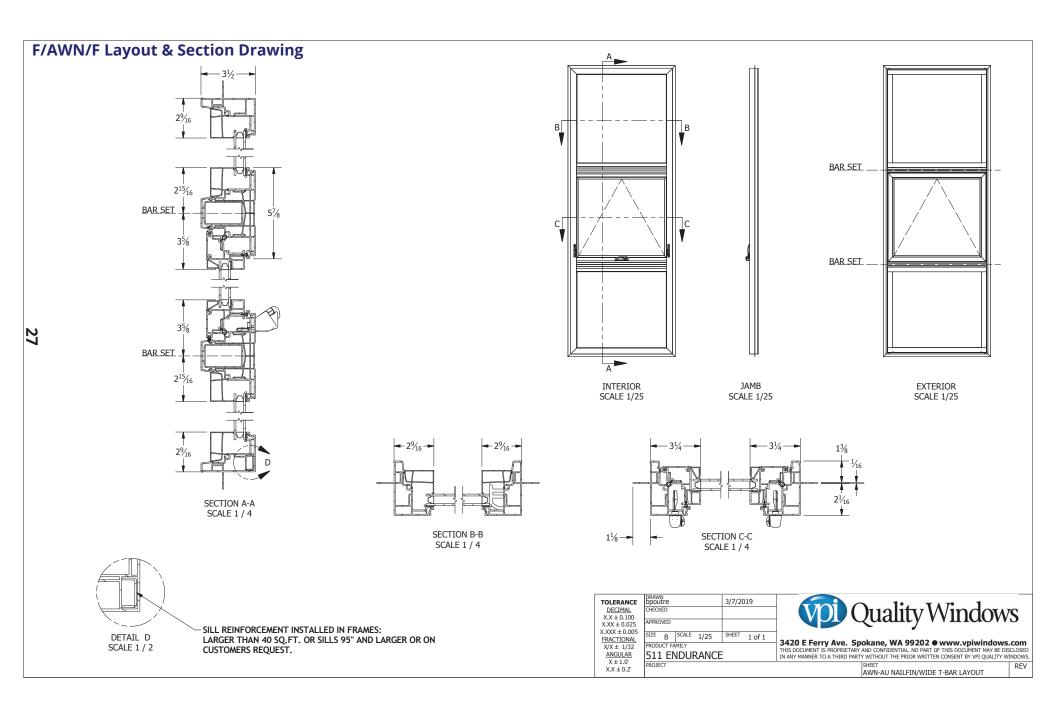


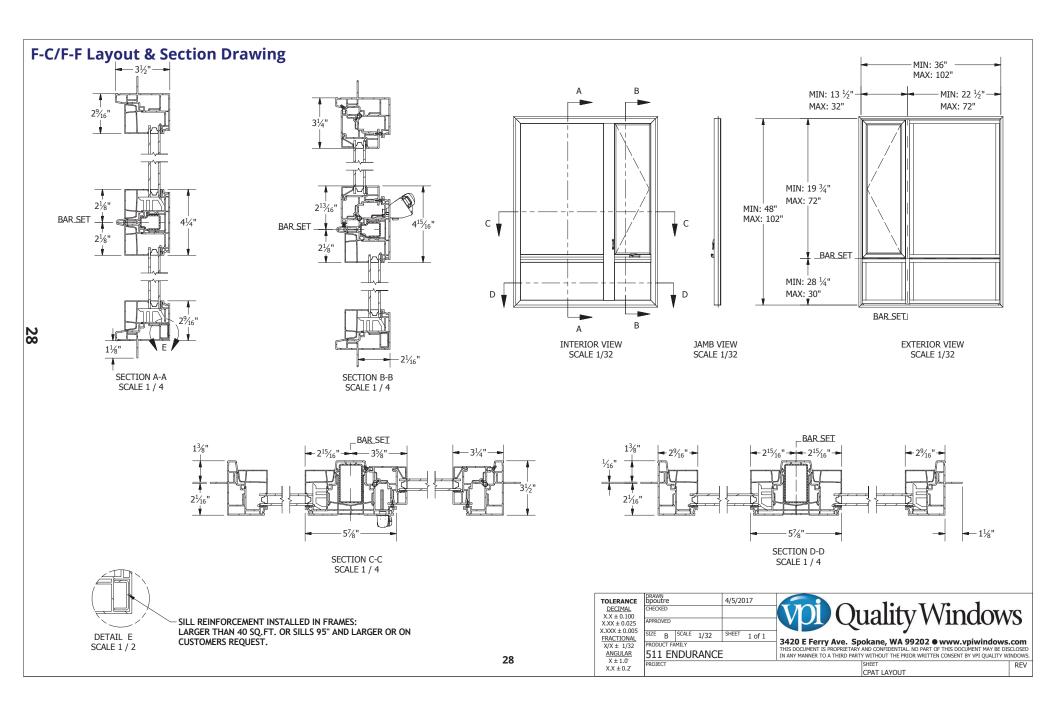
CPD Numbers are published at: http://search.nfrc.org/search/searchDefault.aspx

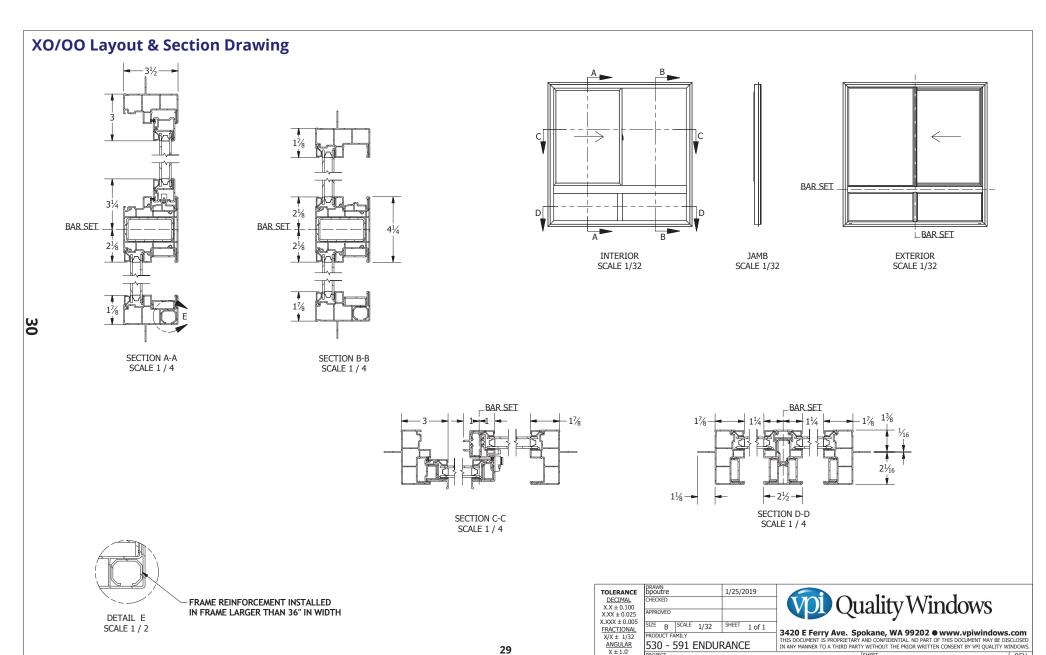
WINDOW TYPE	GLASS THICKNESS	LOW -e	LOW -e	Argon	Air	IGU OA	U-Factor	SHGC	VT
Product: Envision	Window								
Casement	3mm/3mm	366		√		1"	0.27	0.14	0.32
Casement	3mm/3mm	270		✓		1"	0.27	0.19	0.34
Hopper	3mm/3mm	366		✓		1"	0.27	0.14	0.32
Hopper	3mm/3mm	270		\checkmark		1"	0.27	0.19	0.34
Product: Envision Door									
Balcony Door	3mm/3mm	366		√		1"	0.25	0.16	0.35
Balcony Door	3mm/3mm	270		\checkmark		1"	0.26	0.21	0.38

Technical Drawings



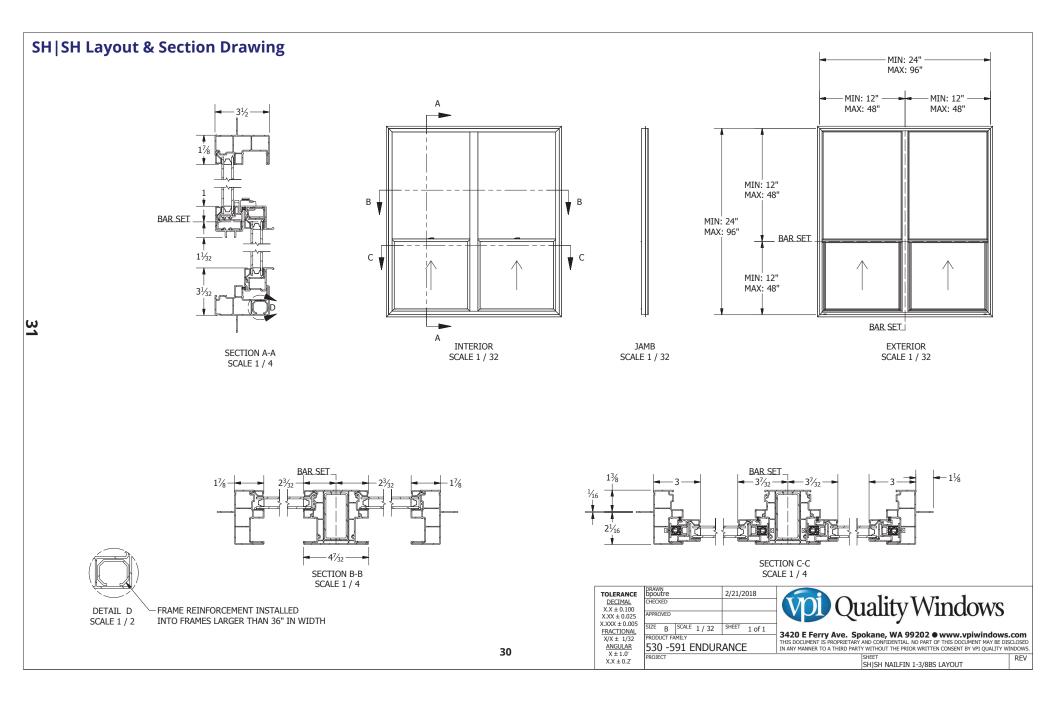


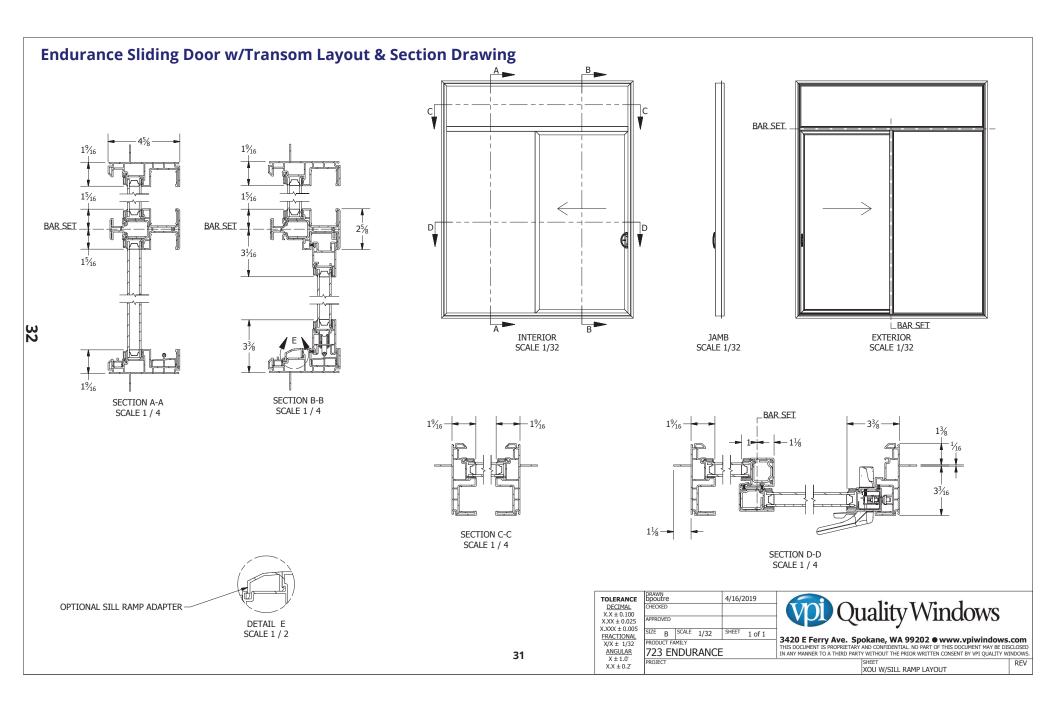




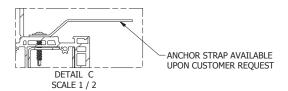
 $X.X \pm 0.2^{\circ}$

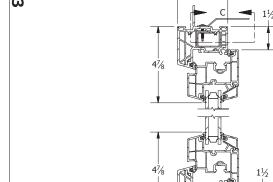
OXAT NAILFIN 1-375BS LAYOUT



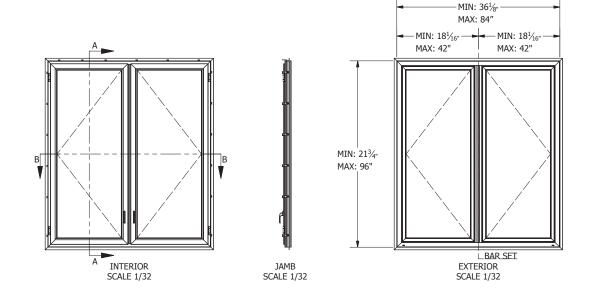


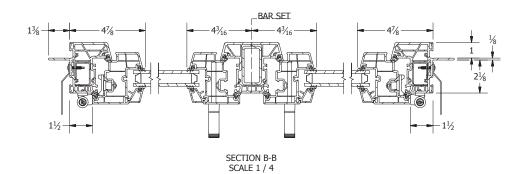












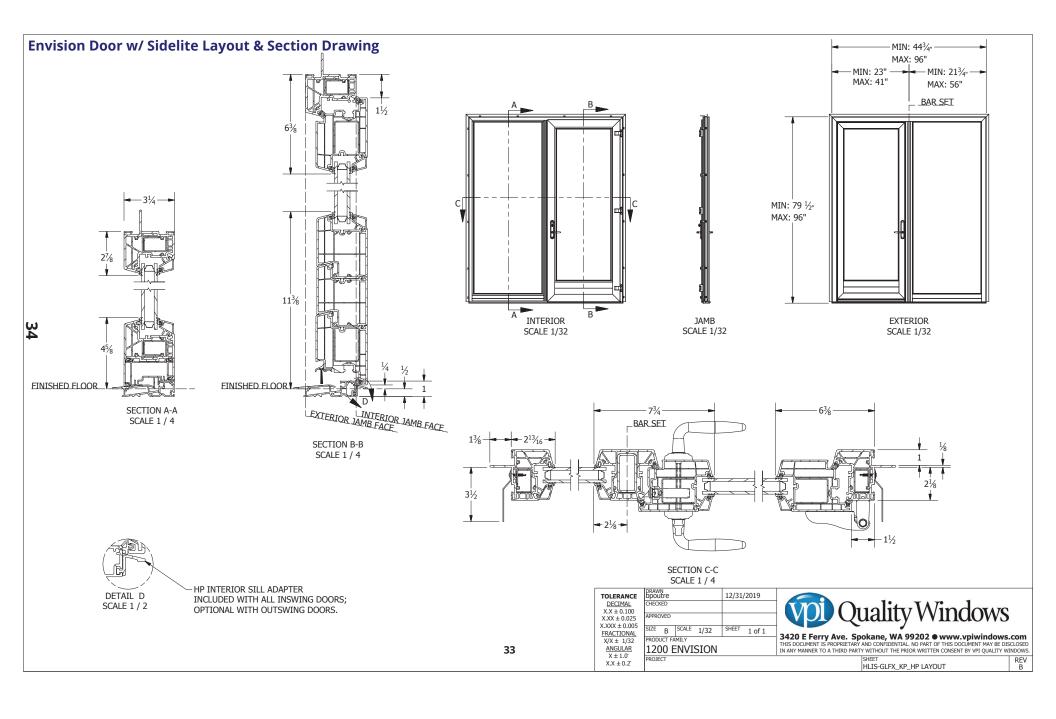
prawn bpoutre		1/4/2020		
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SIZE B	SCALE	1/32	SHEET	1 of 1
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	CHECKED APPROVED SIZE B PRODUCT FA	DPOUT FAMILY 1200 ENVIS	Dipositre CHECKED APPROVED SIZE B SCALE 1/32 PRODUCT FAMILY 1200 ENVISION	bpoutre 1/4/20 CHECKED 1/4/20 SIZE B SCALE 1/32 SHEET PRODUCT FAMILY 1200 ENVISION

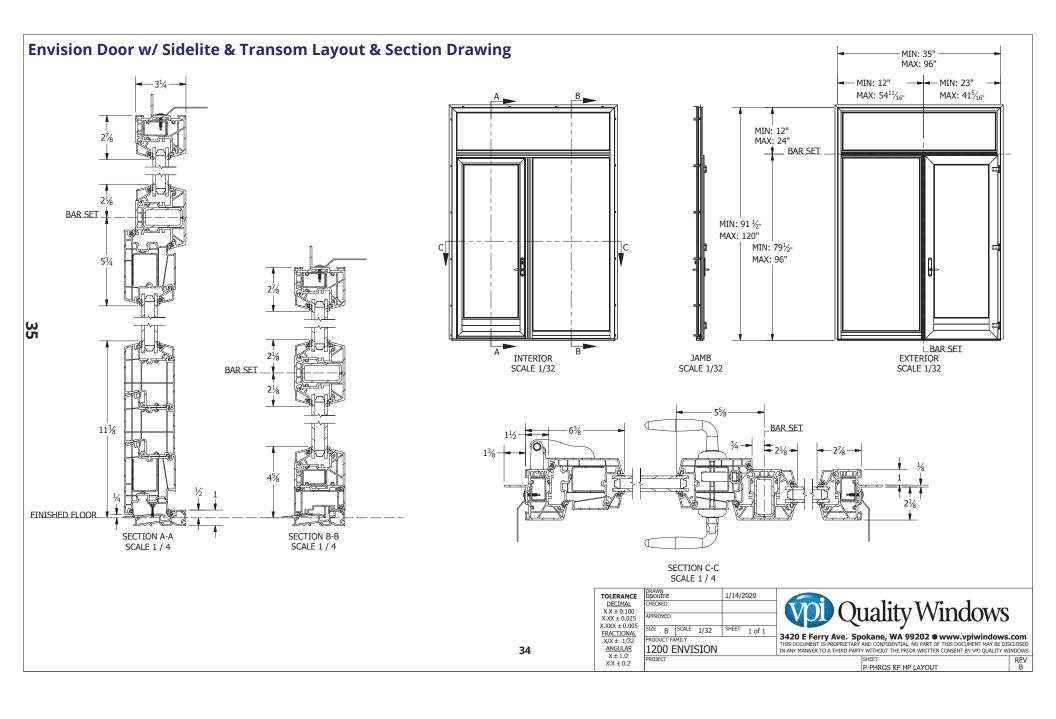


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CLICR LAYOUT

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TECHNOLOGY

VPI is committed to working with the most technologically advanced supply chain partners in the industry.

Our partners are constantly striving to increase both performance and value in their offering, and VPI works closely with them to ensure products will outlast the test of time.

From the patented SuperCap (thermally fused) color technology, to our long-lasting hardware options, to our industry-leading glass unit supplier, VPI is always at the forefront to supply our customers with the best quality products the industry has to offer.





Heat-Reflective Color Technology

CO-EXTRUDED EXTERIOR COLOR TECHNOLOGY 12X HARDER THAN COMPETITIVE PAINT COATINGS

WHEN THE HEAT IS ON, SuperCapSR™ PERFORMS

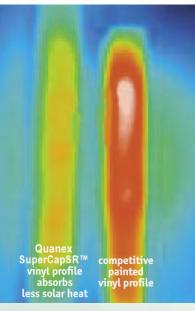
Historically, darker colored vinyl windows have experienced distortion due to heat build-up; not only in hot climates but in most direct sun exposures, especially at higher altitude. Drawing upon **military infrared heat-reflective technology**, SuperCapSR™ co-extruded exterior color technology absorbs less heat to prevent profile distortion. The SuperCapSR™process creates a tough **thermally-fused acrylic color layer** that becomes integral to the profile for superior color retention performance.

CUTTING-EDGE COLOR TECHNOLOGY

- Superior exterior color technology for vinyl and composite window and door systems.
- Proprietary solar heat-reflective performance
 reflects 76% of infrared light to reduce vinyl profile heat gain; excellent fade resistance.
- Maintain profile dimension integrity by reducing solar heat build-up.
- Co-extruded process provides a permanent, molecular-bonded acrylic color layer – integral to the profile – that is highly scratch resistant.
- Durable colors will not crack, chip, flake or chalk, which is why SuperCapSR™ is backed by our industry-leading warranty.



SuperCapSR™ Architectural Bronze on vinyl frame and muntins



Actual lab thermal image photo

A NEW WAY TO DIFFERENTIATE YOUR BRAND

Through adopting the SuperCapSR™ color technology you will further differentiate your brand, seize the opportunity to appeal among color-conscious customers, and gain a profitable up-sell opportunity.

DESIGNED TO MEET AND EXCEED INDUSTRY QUALIFICATIONS

- Exceeds AAMA 614 weathering standards more than 5 years outdoor weathering exposure testing in Florida, Arizona and Kentucky, with the test specimens still maintaining color fastness.
- Exceeds AAMA 615 durability standards, testing to 12x harder than competitive paint coatings.
- Tested per ASTM D3363, D4214, D2247, D4585, D714, D523, D4726, D3359, D4803 and D968.
- Exceeds AAMA 613 color retention standards
- Profile dimensional performance and color retention are backed by our industry-leading warranty.
- Most durable color solution on the market
- Tests to 12x harder than competitive paint-applied coatings
- High scratch resistance handles jobsite abuse better than paint, saving time and cost

	2B		9H	
	Competitive Coatings		SuperCapSR	ГΜ
Scale 3b-2b-b-hb-f-h-2h-3h-4h-5h-6h-7h-8h-9h				

SUPERIOR FIELD BENEFITS

- SuperCapSR™ colors match popular clad-wood colors to provide added flexibility when developing window packages for upscale homes.
- Highly scratch-resistant color layer handles jobsite abuse better than paint, saving time and cost.
- Long-lasting colors, typically 450%+ thicker than typical paint layers, will not crack, chip, flake or chalk.

COLOR RANGE

SuperCapSR™ is available in the following popular exterior colors:







Due to printing limitations, actual color may vary from printed color. View actual color samples before making color decisions.

Architectural Bronze

Adobe

Black

Silver (clear anodized appearance)



Quanex Building Products North American Fenestration 1034 6th Avenue North Kent, WA 98032 (800) 456-8020

www.Quanex.com
Rev 03/2019





Essentials of Manufacturing Long-Lasting IG Units

What makes a long-lasting IG unit?

1. Material Selection

The sealant(s) used to bond glass to the spacer system is the most important material used in IG unit construction. The sealant(s) must resist temperature extremes, UV radiation, moisture ingress into the airspace and retain any inert gas in the airspace; i.e., argon. Cardinal has chosen a dual seal system with polyisobutylene (PIB) as the primary seal and silicone as the secondary seal.

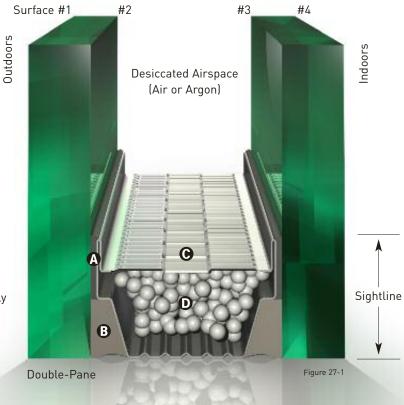
In addition to sealant choice, spacer design and processing are also important. Cardinal uses four bent corners in our construction which requires only one joint in the spacer. Many other IG manufacturers use corner keys to attach the four spacer pieces together. Four joints instead of one significantly increases the potential for moisture ingress into the IG unit.

2. Workmanship

Critical to IG unit longevity is fabrication consistency. There must be no voids allowed in the seal system. Cardinal's unique Intelligent Quality Assurance Program virtually eliminates anomalies in the fabrication process. All inspections rely on carefully calibrated scientific instrumentation, so results are objective. In addition, Cardinal manufactures its own production equipment to ensure that units are fabricated with consistent high quality.

3. How the Units Are Glazed

If an IG unit sits in water or the seal system is overstressed, there is no unit construction that will deliver long-term performance. Cardinal believes that our dual seal construction is the most versatile IG seal system because of its excellent weatherability. In fact, in both real-world and simulated weathering conditions, Cardinal's dual seal system outperforms other IG unit constructions.



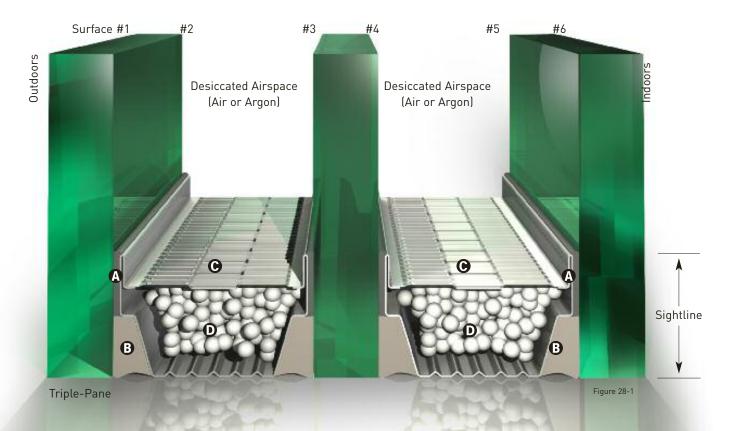
Cardinal IG® Unit Construction

Cardinal IG units consist of two or three lites of glass separated by an inorganic metal spacer (Figures 27-1 and 28-1). Spacer corners are bent to be air/gas tight. The spacer contains desiccant which adsorb the moisture vapor within the airspace.

The dual seal construction has a primary seal of polyisobutylene (PIB) and a secondary seal of silicone. Cardinal certifies all units through the IGCC (Insulating Glass Certification Council) Program, and has met the requirements of the IGMA (Insulating Glass Manufacturers Alliance) Certification Program.

A Primary Seal: Polyisobutylene (PIB) minimizes moisture permeation and provides one of the lowest argon permeation rates of all known sealants.





- **3** Secondary Seal: Specially formulated silicone for IG units provides long-term adhesion. Silicones, due to their nonorganic nature, are the most resistant sealants in the window industry to the negative effects of UV and moisture. Silicone is recognized as the best sealant for resisting weathering and adhering to glass substrates. Because of its structural properties, silicone provides structural integrity of the IG units.
- **©** Spacer: Stainless steel spacer features a roll formed design providing maximum area for primary and secondary sealant coverage. It provides increased resistance to condensation and less stress on IG seal system. Bent corners completely seal the spacer periphery to eliminate moisture vapor transmission into the airspace through corners.
- **Desiccant:** Molecular sieve creates a frost point below -85° F. Cardinal's 3 angstrom desiccant assures optimum moisture adsorption while minimizing the effects of geometry and temperature-related pressure changes.

Insulating Glass Guide Specifications

The following guide specification is recommended for specifying insulating glass units:

A. Glass

 Float glass. Specify clear, heat absorbing, or LoE®, LoE2® or LoE3®.

B. Dual Seal

- PIB Primary Seal
- Silicone Secondary Seal
- Bent Corners

C. Argon Fill

- D. Certified in accordance with ASTM Specification E-2190 through:
 - Insulating Glass Certification Council (IGCC)
 - Insulating Glass Manufacturers Alliance (IGMA)

Residential: SafeGard™ 2R

AT 01-2919

SafeGard™ 2R

As a market leader in fenestration hardware. AT engineered, patented, and manufactured releasable limit device forl windows which meets the ASTM F2090 safety requirements for self-resetting, egress capable, fall prevention devices. The ASTM F2090 addresses window fall prevention that helps protect against potential falls by children through open windows. This is done by allowing the window opening to be set at a predetermined position of less than four inches (4") and automatically re-latch when fully closed. AmesburyTruth's SafeGard™ 2R provides a means that the window, when opened in an initial operation, will limit the venting to less than 4". By code, two actions are required to open the window fully for egress purposes. This additional operation can be performed without the use of keys, tools, or special knowledge. SafeGard™ Window Opening Control Device is designed to allow for factory installation as well as field application by trained personnel.



Features & Benefits within ASTM F2090-17

- Prohibits the free passage of a 4 in. diameter Pully concealed unit after installation and rigid sphere
- Dual action release mechanism that consists 🕢 Easy and accurate factory installation of two separate, distinct, and consecutive actions to release the mechanism
- WOCD and egress release will not reduce the open area of the window unit beyond applicable code requirements
- Avoids interference with operation or performance of a window

Features & Benefits beyond ASTM F2090-17

- window in closed position
- Built-in forgiveness with field adjustment feature and allowing for up to 1/8" sash sag
- All adjustments can be done inside the home after window is installed
- Pan head screw (SS) use for ease of handling
- Concealed arm after released from track

This Warranty covers window and door products manufactured by VPI Quality Windows Inc. ("VPI") and sold for installation in a multi-family or mixed-use building ("Product"). VPI will provide for repair or supply a replacement part for any Product it confirms to contain a defect in materials or workmanship that causes a significant impairment in operation or performance, as detailed below. This Warranty covers the original purchaser of the Product from VPI through the original owner of the building into which the Product is installed. The Warranty will transfer one subsequent building owner for 5 years from Product installation.

Frame/Non-Glass Components. For 10 years from installation, VPI will at its option repair or supply a replacement part for a Product with a defect in the frame or non-glass component. VPI will provide skilled labor for 2 years after installation. Skilled labor is defined as repair or replacement requiring special training or tools to complete. From 3 to 10 years, VPI will provide replacement parts only with shipment to the building where Product is installed.

Glass. For 10 years from installation, VPI will supply a replacement insulated glass unit (IGU) and labor for an IGU with seal failure, or interpane dusting or misting, which causes obstruction of vision. Laminated and Monolithic glass are covered for only 5 years. Condensation on any outer surfaces of the IGU is not a defect and is not covered.

Finishes. For 10 years from installation, VPI will at its option repair the finish or supply replacement components for Product with factory-applied finish that peels, blisters, or flakes under normal use and conditions. From 11 to 20 years, VPI will repair, replace or refund 33% of the VPI sale price for the affected Product in full satisfaction.

VPI is not responsible for repair or replacement of materials or components other than the VPI Product. Replacement parts may not be an aesthetic match to the original. If VPI determines that repair or replacement is not practical or cannot be timely made, it may refund the VPI sale price of the affected Product in full satisfaction. This Warranty is not extended by any service, cannot be assigned, and can only be modified by a writing signed by an officer of VPI.

This Warranty does not cover, and VPI shall have no liability for, conditions related to or caused in whole or part by:

- Product aging, normal wear and tear, misuse or abuse; lack of care or maintenance; discoloration or weathering which causes surfaces to gradually fade, chalk or darken; or Product that has been removed and reinstalled.
- Storage, handling, or breakage; damage to Product from any external source.
- Installation of Product, building movement or settling; an application exceeding design capacity or violating code or project specifications; Product installed in a non-vertical plane or removed and reinstalled; Product built outside standard size limitations; alteration or modification of the Product; Product not paid for in full.
- Individual Product variation in any tested performance results.
- Minor imperfections or wavy distortion in the glass that do not impair structural integrity. Wavy distortions or color differences caused by interlayer of laminated glass or heat strengthening are not defects.
- Hardware function in corrosive environments, including within two miles of salt water; heat build-up (e.g. films, storm windows, storage in uncontrolled containers, solar heat reflection); or use of solvents or exterior finishes.

Claims. To make a claim, provide all information requested online at https://vpiwindows.com/contact-technical-services.php. VPI will investigate a completed claim and respond in a timely manner. VPI shall have no legal obligation unless it first receives proper notice of a claim within the coverage period and an opportunity to perform.

Disclaimers/Exclusions. This Warranty is the sole and exclusive remedy with respect to VPI Product regardless of legal theory, and in no event shall VPI's liability exceed the VPI sale price of the affected Product. VPI makes no warranties or representations other than contained in this Warranty. ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY WITH RESPECT TO MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE DISCLAIMED. VPI SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT OR SPECIAL DAMAGES OF ANY KIND. Some states do not allow the disclaimer of implied warranties or exclusion of incidental and consequential damages, so these disclaimers or exclusions may not apply to you. This Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Effective 5/10/18

Project Name:	Comments:
	Vinyl Windows & Doors
Project Address:	VPI Quality Windows 3420 E. Ferry Ave. Spokane, WA 99202
City: State: Zip:	Service Department Info: (888) 634-1478
Submittal Creation Date:	infoévpiwindows.com

CUSTOMER SERVICE

At VPI, we take pride in our ability to serve our customers in ways that other manufacturers cannot.

Our project managers and staff are there to assist with the challenges associated with large scale construction, including traffic coordination, contract management and scheduling services. VPI is also proud to have some of the best & brightest engineers and craftsmen in the industry.

Together, our teams work seamlessly with a solution-focused commitment to serving the unique needs of each customer and project.

Contact us:

Phone: (800) 634-1478

Email: sales@vpiwindows.com or service@vpiwindows.com

Visit us online at: www.vpiwindows.com



CUSTOMERS

VPI first started its multi-family work back in 1997 by providing windows to a variety of military housing projects. Since then, VPI has become the leading manufacturer in the mid-rise, multifamily market throughout the United States.

Today, VPI serves a wide variety of commercial industries including:

- Mid-Rise to High-Rise Mixed Use
- Market Rate Apartments
- Affordable Housing
- Nursing/Assisted Living
- Student Housing
- Hospitality
- Luxury Apartments & Condominiums
- K-12 Schools







Customer Showcase







University of California, San Diego, Nuevo West
Photo credit: ©heliphoto.net

































VPI DIFFERENTIATED SERVICES

Service	Pre-Construction	Construction
Design Consultation	 Work with architects to select right system Create window schedule to meet design intent 	 "As-Built" shop drawings available Envelope engineering coordination
Regulatory Review	 Architectural code review for ADA, egress, etc. Architectural & envelope coordination 	 Real-time support for Q&A Periodic job site visits
Estimating	 Estimates include code & regulatory advisement Specification review & coordination 	RFI & ASI pricing & processing
Project Management	Contract review & mark-upDelivery sequencing	Contract managementChange order facilitation

Quality People. Quality Products. Quality Business.





CAD files and specifications for most products are available for download in PDF and DWG format at vpiwindows.com/CAD.

Dedicated partner portal for all product materials including installation instructions, test reports, parts information, configurations and more

Quality People. Quality Products. Quality Business.

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VPIWINDOWS.COM