



cero<sup>®</sup> by NanaWall



# ce·ro

[ 'sirō ]

**noun**

The minimal framed large panel sliding glass wall by NanaWall Systems. Simple in form yet engineered to perfection. Producing clean, uniform, and ultra-thin lines for maximum light filled spaces that connect the interior to the exterior.





## CREATIVE DESIGN FREEDOM

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**cero**—absolute architectural minimalism at its best—questions conventional boundaries. With cero, architectural design can be stripped down to its most essential elements allowing for light, form, material, space, and nature to speak for itself. Outside and inside become one.



## A FLOOR TO CEILING LENS TO THE OUTSIDE

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The award-winning zero offers full floor to ceiling sliding glass panels with recessed top and bottom tracks. Produced through time-tested premium German engineering, zero allows for maximum transparency with the largest panes of glass and the most minimal frames offered by NanaWall.



### **NARROW STILES AND RAILS—SYMMETRICAL PICTURE FRAME EFFECT**

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With zero, the panel's rail and stiles are uniform with a consistent 1 5/16" (34 mm) top to bottom, achieving a symmetrical and minimal design.



## MINIMALIST BEAUTY—MAXIMAL BENEFIT

NanaWall's intelligent approach and innovative use of materials reflects a creative integration of design and technology. Within each system component is the NanaWall DNA—components designed by NanaWall and crafted with exceptional quality that perform effortlessly while standing the test of time.

- **Quality Craftsmanship:** German engineered. Backed by rigorous testing and high-grade materials. An investment that boosts a property's appeal and value.
- **Open and Close with Ease:** Easy opening and closing—a NanaWall hallmark. Single handle, one-handed operation. The panels smoothly guide to their open or closed position.

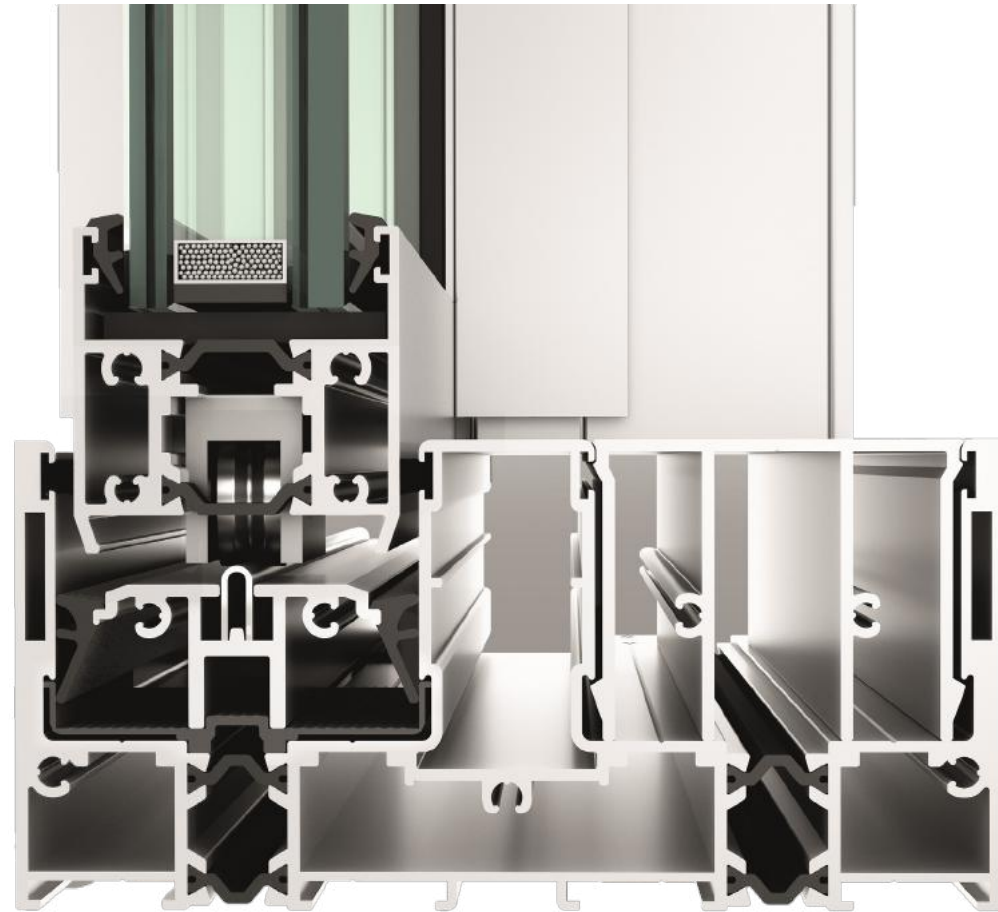
### ***Performance When Closed:***

The true measure of quality is how an opening glass wall performs when closed.

- **Thermally Broken Energy Efficiency:** When closed, the energy efficient design keeps the cold on the outside while maintaining warmth inside. cero's frame and Higher Weather Performance Sill are thermally broken and the thermal breaks are in alignment.
- **Combats Wind and Rain:** Specialized seals and panel design provide superior wind and rain resistance while the engineering of our sills resist wind-driven water from entering the home.
- **Extreme Weather Resistance:** When closed, our glass walls form a refuge against extreme weather keeping you comfortable and secure.







**cero II, thermally broken Higher Weather Performance Sill**

Glass weight load transfer of the panel is in a straight line through the shims and wheel to the floor for ease of movement. Additionally, cero's panel and floor track thermal breaks are in alignment for optimal energy efficiency.

**UNCOMPROMISED ROLLER SYSTEM EQUALS EFFORTLESS SLIDING**

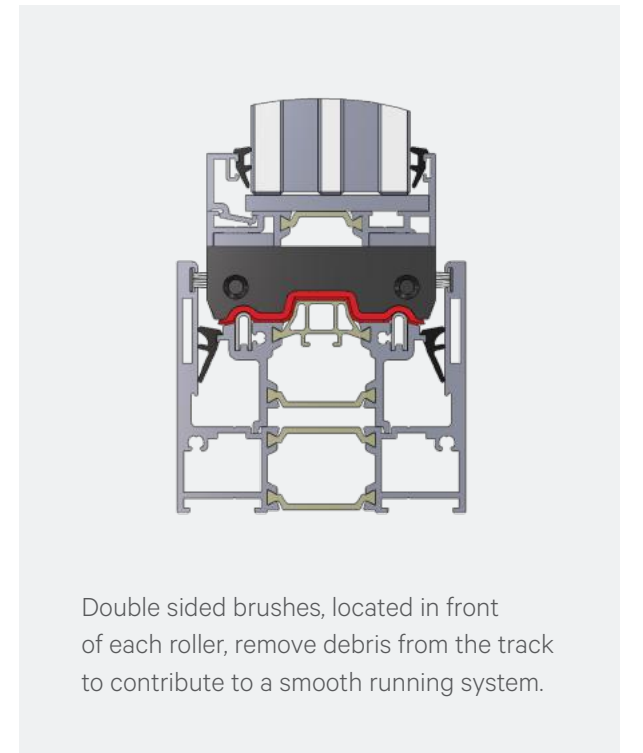
**Engineered Features of the Roller System**

- cero II panels with double insulated glass have 2 rollers per panel and cero III panels with triple insulated glass have 4 rollers per panel.
- The floor supported cero sliding panels are operated by rollers containing a pair of wheels with encapsulated and self-lubricating ball bearings.
- cero's stainless steel wheels slide effortlessly on a stainless steel track.
- Unique to cero is a Gothic arch wheel bearing design. With a 2 point contact of each wheel to the bottom track, the system glides with less friction.
- To maintain the sleek minimal look, each roller is concealed within the bottom panel profile.

cero has been tested to 40,000 opening and closing cycles.

**Elevated above Water Table**

NanaWall Floor Supported Technology assures that the rollers run above the water table and the design allows for continued long term smooth operation.



Double sided brushes, located in front of each roller, remove debris from the track to contribute to a smooth running system.

## DRY GLAZED FOR SEAL DURABILITY

### Glazing

- cero is available in either double glazed (cero II) or triple glazed (cero III) options depending on thermal performance needs.
- Panels are dry glazed providing 360° ventilation of the glass. Dry glazing provides air circulation to keep the pocket cavity dry and allows any potential water to weep out of the panels.
- Dry glazing with gaskets delivers a more aesthetic presentation between glass and frame.



cero II

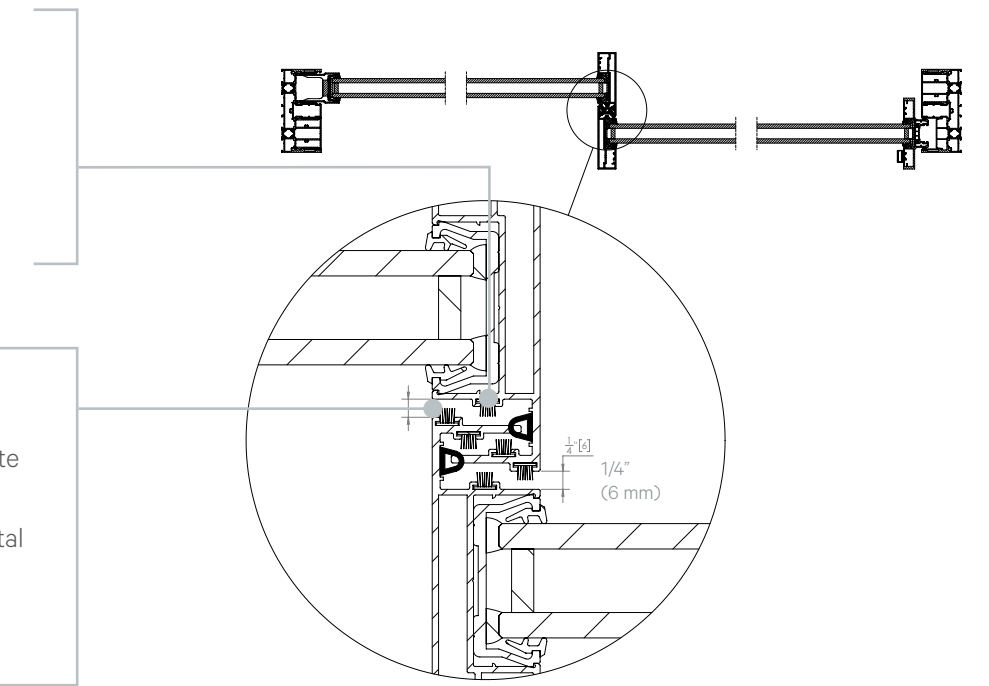
## SOFT OPENING AND CLOSING

### No Metal to Metal Contact

The weather resistant interlock design consists of numerous layers of double fin weatherseals and soft bubble gaskets. Transparent bumpers on the top and bottom of the vertical stiles avoid metal to metal contact and allow for a soft opening and closing process.

### Sophisticated Design Allows for Panel Deflection

cero's panel and interlock design is engineered to accommodate panel and glass deflection with a built-in tolerance of up to 1/4" (6 mm). This design also eliminates the concern of the metal vertical stiles touching the adjacent glass sliding panel during the opening and closing process.



cero II

## HIGHER WEATHER PERFORMANCE SILL

- **Floor Track Adjustability:** To compensate for potential future building movement, cero's thermally broken Higher Weather Performance Sill offers height adjustability of up to 1/8" (3 mm).
- cero's Higher Weather Performance Sill is fully recessed into the floor creating a clean uninterrupted transition from interior to exterior.
- Optional track insert in a coordinating finish is available to meet ADA requirements.
- Track drainage provided by an engineered, cascading water management system. For installations requiring even greater drainage due to exposure, a matching French drain system by others is available.



## FLUSH SILL, LOW PROFILE SADDLE SILL, AND FLUSH SADDLE HYBRID SILL

- **Aesthetically Disappearing Floor Track:** cero's non-thermally broken Flush Sill option is available for sheltered or interior environments creating aesthetically seamless transitions between spaces.
- The minimal Flush Sill is fully recessed at a shallow 7/8" (23 mm) into the floor.
- The Low Profile Saddle Sill is recessed at an even shallower 7/16" (11 mm) for surface mounted installations, while the Flush Saddle Hybrid Sill is designed to work with varying interior and exterior finish floor heights.
- The Low Profile Saddle Sill and the Flush Saddle Hybrid Sill reduces sheeting rain from entering the interior.
- Finished flooring inserts can be easily installed in between the tracks making these sills virtually disappear. Sill designs also make for easy cleaning and maintenance.
- For commercial environments, such as retail, hotels, and auto dealerships, the Flush, Low Profile Saddle and Flush Saddle Hybrid sills all meet ADA requirements.



cero II, non-thermally broken Flush Saddle Hybrid Sill

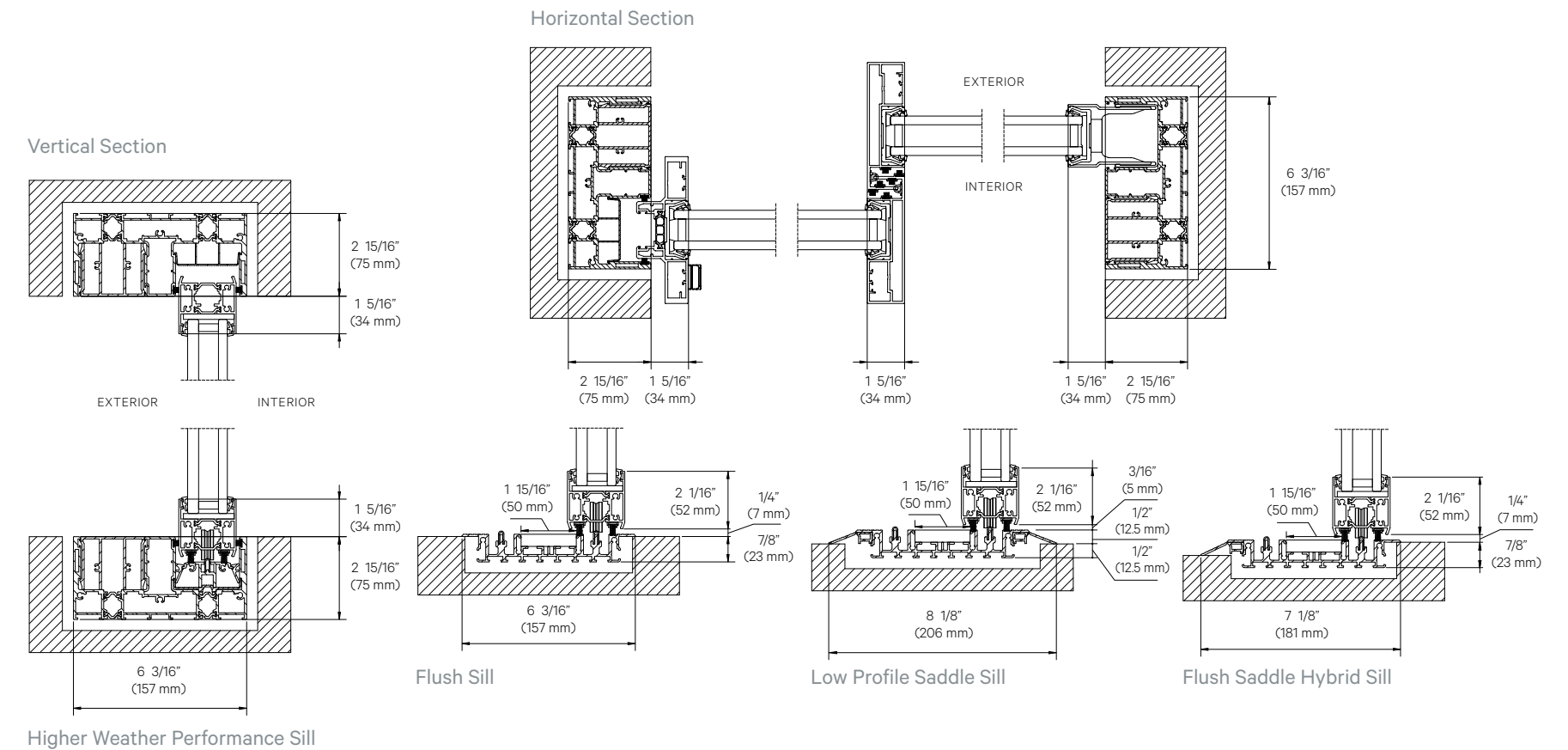
## HIGHLY SECURE LOCKING

### Multipoint Tamper-Resistant System

- With zero, security is provided with multipoint locking and a flat handle that is integrated into the 1 5/16" (34 mm) vertical profile stile to maintain the clean, minimal appearance.
- A full 1" (25 mm) throw securely locks the panel into a top and bottom adjustable +/- 1/4" (5 mm) locking receiver.
- For those with higher security concerns, the system is able to meet the optional European security standards of either RC2 or RC3.



## TYPICAL HORIZONTAL AND VERTICAL DETAILS: CERO II



## CONFIGURATION EXAMPLES

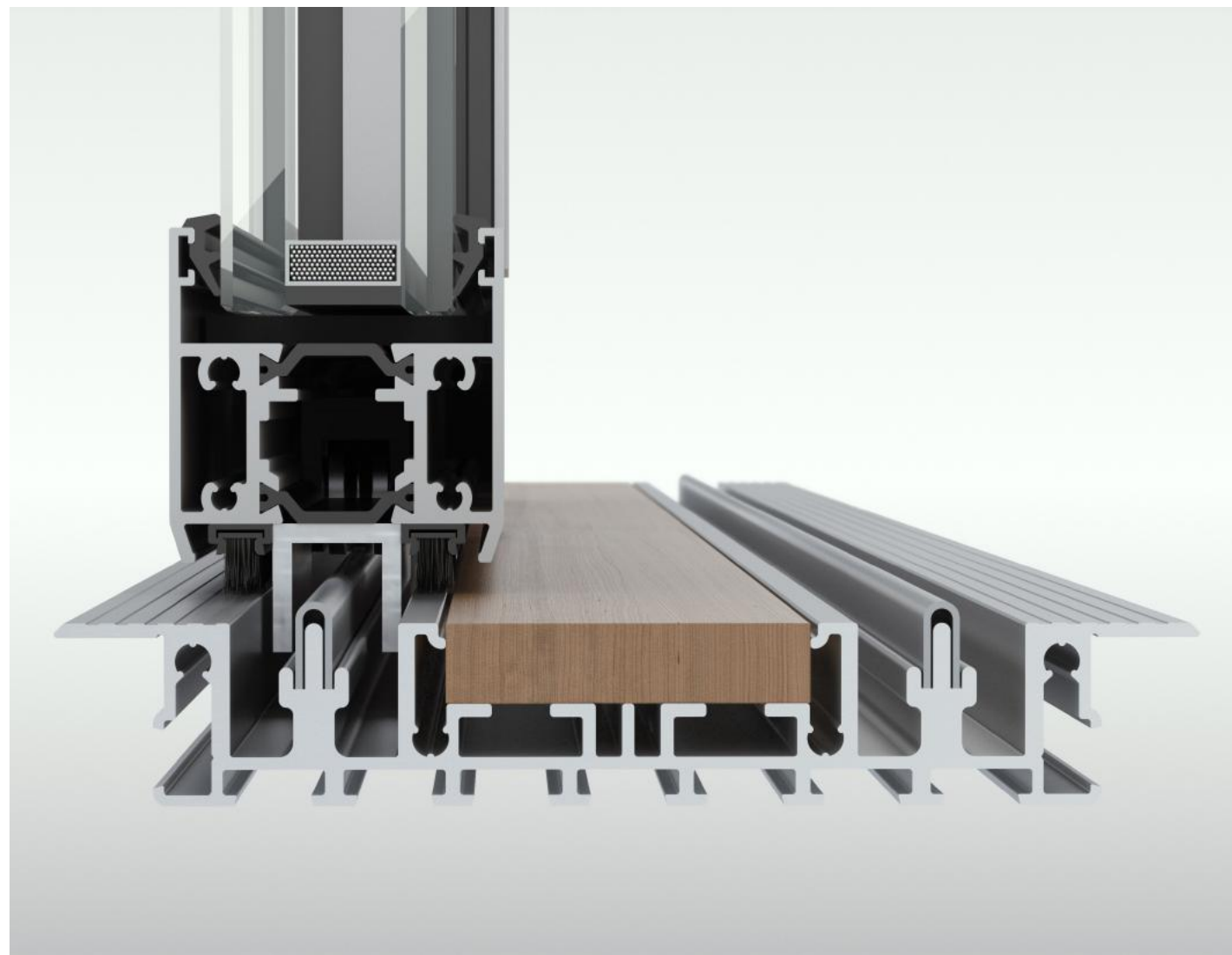


## SYSTEM OVERVIEW

	Cero [CE certified, ISO 14001, ISO 9001]
Maximum Panel Size (Sliding or Fixed)	7' 4 1/2" (W) x 13' 1" (H) (2250 mm x 4000 mm) for cero II   9' 10" (W) x 13' 1" (H) (3000 mm x 4000 mm) for cero III
Maximum Panel Weight	1,300 lbs. (600 kg) for cero II or 2,200 lbs. (1,000 kg) for cero III
Insulated Glass Thickness	1 3/16"- 1 7/16" (30 - 36 mm) for Double Glazed cero II   1 7/8"- 2 1/8" (48 - 54 mm) for Triple Glazed cero III
Daylight / Proportion of Glass	98%
Running Mechanism	Floor Supported Technology
Thermally Broken Higher Weather Performance Sill	ADA Wheelchair Compliant with Optional Insert
Flush Sill / Saddle Sill / Flush Saddle Hybrid Sill	ADA Wheelchair Compliant
Visible Profile Width	1 5/16" (34 mm) All the Way Around with Recessed Frame

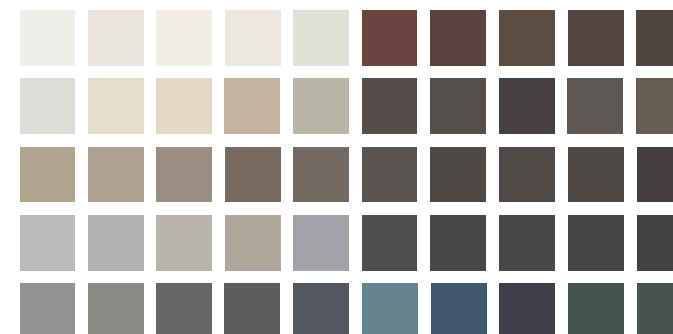
System Testing	Double Glazed—cero II with Higher Weather Performance Sill	Double Glazed—cero II with Flush / Saddle / Hybrid Sill	Triple Glazed—cero III with Higher Weather Performance Sill
U-Value (Rated and Certified NFRC 100)	.40 - .45	.41 - .45	.28 - .31
SHGC (Rated and Certified NFRC 200)	.23 - .53	.23 - .53	.18 - .44
Static Water Penetration (ASTM E-547 and E-331) <sup>①③④</sup>	12 psf (600 Pa)   8 psf (400 Pa) <sup>②</sup>	6 psf (300 Pa)   4 psf (200 Pa) <sup>②</sup> <i>(Tested with U-channel on the inside)</i>	12 psf (600 Pa)   8 psf (400 Pa) <sup>②</sup>
Dynamic Water Penetration (AAMA 501) <sup>①③</sup>	12 psf (600 Pa)		12 psf (600 Pa)
Air Infiltration   Exfiltration @ 1.57 psf (ASTM E-283) <sup>①②④</sup>	0.09 cfm/ft <sup>2</sup>   0.08 cfm/ft <sup>2</sup>   A3	0.16 cfm/ft <sup>2</sup>   0.13 cfm/ft <sup>2</sup>   A2	0.05 cfm/ft <sup>2</sup>   0.04 cfm/ft <sup>2</sup>   A3
AAMA/WDMA/CSA 101/IS.2/A440-08 and -11	Standard Unit: Class CW-PG35-SD 23' 3" x 10' 3" (7100 mm x 3130 mm)		Standard Unit: Class CW-PG40-SD 23' 1" x 10' 2" (7047 mm x 3122 mm)
	Reinforced Unit: Class CW-PG60-SD 23' 3" x 10' 3" (7100 mm x 3130 mm)		Reinforced Unit: Class CW-PG75-SD 23' 1" x 10' 2" (7047 mm x 3122 mm)
<b>DESIGN PRESSURE</b>			
Structural Load Deflection (ASTM E-330) <sup>①②③④</sup> See design windload charts for other sizes Note that the structural test pressures were 50% higher than the design pressures	Standard Unit: +/- 35 psf (1680 Pa) Pass L/175 Requirement	Standard Unit: +/- 35 psf (1680 Pa) Pass L/175 Requirement	Standard Unit: +/- 40 psf (1920 Pa) Pass L/175 Requirement
	Reinforced Unit: + 65 psf (3120 Pa) - 60 psf (2880 Pa) Pass L/175 Requirement		Reinforced Unit: + 80 psf (3840 Pa) - 73 psf (3550 Pa) Pass L/175 Requirement
Florida Product Approval (non-impact)	FL38028		FL35024
Forced Entry (ASTM F-842) <sup>①③④</sup>	Pass with optional RC2	Pass	Pass with optional RC2 or RC3
Cycle Testing (per DIN 1191/12400)	40,000	40,000	40,000
Acoustical Performance (ASTM E-90 and E-1332) <sup>③④</sup>	Tested with: STC 47 glass achieved STC (Rw) 43 and OITC 34	Tested with: STC 50 glass achieved unit STC (Rw) 43 and OITC 34 STC 38 glass achieved unit STC (Rw) 33 and OITC 29	Tested with: STC 50 glass achieved STC (Rw) 44 and OITC 35

<sup>①</sup> Excerpts of results of four panel unit size 22' 4" W x 9' 10" H (6800 mm x 3000 mm) with varying cross sections by Architectural Testing Inc., Fresno, CA an AAMA accredited and certified independent testing laboratory in March 2017. <sup>②</sup> For Canada tested to NAFS-2011 and CSA A440-T1. <sup>③</sup> Excerpts of results of four panel unit size 22' 4" W x 9' 10" H (6800 mm x 3000 mm) with varying cross sections by Architectural Testing Inc., Fresno, CA an AAMA accredited and certified independent testing laboratory in May 2018. <sup>④</sup> Excerpts of results of two panel unit size 14' W x 10' H (4267 mm x 3048 mm) with varying cross sections by Architectural Testing Inc., Fresno, CA an AAMA accredited and certified independent testing laboratory in May 2018. <sup>⑤</sup> Excerpts of results of two panel unit size 11' 6" W x 8' 2" H (3500 mm x 2500 mm) with varying cross sections by SG Bauakustik, Muelheim an der Ruhr, an EN DIN ISO accredited and certified independent testing laboratory in August 2016. <sup>⑥</sup> Excerpts of results of two panel unit size 14' W x 10' H (4267 mm x 3048 mm) with varying cross sections by Architectural Testing Inc., Lake Forest, CA an AAMA accredited and certified independent testing laboratory in May 2018.



zero II, non-thermally broken Flush Sill

## FINISHES, GLAZING & HARDWARE OPTIONS



### Standard 50 Finishes

zero is available in 50 standard colors with over 200 colors available in powder coat and anodized finishes. Custom matched colors and simulated wood effects are also available.

**For accurate color swatch examples, please request our Powder Coating Finish Options brochure.**

### Glazing Area Options

Standard to zero is reduced iron tempered glass with a VLT of 90%. Other glazing choices include low iron and laminated glass. All glazing has an option of argon/krypton filled double or triple insulated low-E. Contact NanaWall for additional specialty glass alternatives.



### Stainless Steel Flat Handles

NanaWall stainless steel flat handles complement the clean minimal lines of zero.

### Accessory Options

Contact NanaWall for information on screens, system automation and electromagnetic locking options for exterior access. Automation and electromagnetic locking are compatible with home security systems and a phone/tablet App for ease of use.

### NanaWall Support Resources

- Visit [NanaWall.com](http://NanaWall.com) for: CAD, product specifications, animations, installation/operational videos, architectural binder, owner's manuals, and a complete line of brochures.
- NanaWall opening glass walls are sold factory direct through local architectural design representatives across North America. Our Certified Installation Network option ensures correct installation with precision.
- From design to installation—we're here to help. Our Dedicated Design Team can answer your questions and assist with planning, ordering, and optimizing your zero options.







Explore our opening glass wall product families:



Folding Glass Walls



Single Track Glass Walls



Frameless Glass Walls

## THE ONE AND ONLY NANAWALL

NanaWall redefined the category of opening glass wall systems. During our 30-plus years in business, we have earned the trust of architects, builders, design professionals, and homeowners as a solutions provider for re-imagining how buildings, people, and the elements interact. By combining precision engineering and outstanding design options across more than 20 unique systems, we advance design possibilities beyond the conventional for almost any space.

**NanaWall**  
Boundaries **Unbound**<sup>®</sup>

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