

## NanaWall SL35

### The Standard Folding Aluminum Framed System

The SL35 is an aluminum folding panel system designed to provide a moving glass wall for openings as wide as 36'. It is a top-hung system.

*For benefits of all NanaWall systems, see the "General Introduction" section. For features common to aluminum folding systems, see the "Aluminum Folding Systems" Introduction.*

#### **Additional Stacking Configurations**

Angled units of 90° are possible. *To see these operable wall concepts in action, please visit [www.nanawall.com](http://www.nanawall.com) and click on the "Animations" link.*

#### **Weathertight**

The system is engineered to be weathertight and provide high structural performance. The inward-opening unit with raised sill is tested to AAMA HGD-R20 (see the Testing section).

#### **Especially for High Rises: Easy Cleaning Feature**

For balcony applications, there is an easy hinge removal option, facilitating glass cleaning from the inside.



## Technical Description

### General Description

The SL35 is an aluminum folding panel system designed to provide an opening glass wall or storefront for openings as wide as 36' (see Maximum Size Chart). The system is available in various configurations utilizing one to twelve panels (see elevation drawings). The option exists for a swing entry/exit panel; note, however, the panel size constraints with a swing panel not hinged to a side jamb. Units can be either inward or outward opening (see details in section drawings).

### Frame and Panels

The nominal frame and panel thickness is 1 3/8" (35 mm) extruded aluminum (See section drawings). Standard finishes available are clear anodized, dark bronze anodized, dark brown powder-coated or white powder-coated. Custom finishes can be chosen from a range of over two hundred RAL colors. See "Aluminum Finish Options" in the General Introduction.

Panel stiles and rails, as well as frame corners, are connected by special cast-alloy corner fittings that incorporate hinge components. Finishes on frames, panels, and fittings are matched.

Panels are pre-assembled, and all pins and screws necessary to assemble the frame are provided.

Besides the more weather tight raised sill, various flush sills and Low Profile Stepped Sills (shown in section drawings) are available as an option.

### Glazing

Units can be supplied either glazed (with 3/16" single tempered or laminated; or 11/16" clear insulating tempered or insulating Low-E tempered glass) or open. If supplied open, standard glass stops and "dry" glazing gaskets are supplied for a glass thickness of 3/16" (5 mm) for single glass; 18 mm (11/16") for insulated glass; or 6-8 mm (single glazing). See "Glazing" in the General Introduction.

### Weatherstripping

All weather stripping, consisting of APTK, EPDM or brush seals, is provided for sealing between panels and between panels and frames (see section drawings).

### Sliding/Folding Hardware

Attached to the upper corner of a panel (see section drawings) is a patented, load-bearing, upper-running carriage for sliding and folding each pair of panels; attached to the lower corner is a lower-running carriage as a guide. The double pair, twin tandem, upper-running carriage is constructed to ensure even pressure distribution on all four rollers. Rollers have sealed bearings and are coated with toughened Polyamide to ensure sound-free running and optimal resistance to extreme temperature.

Corner connector with hinges at the corners of each panel connect panels to each other and connect panels to the side jamb.

### Locking Hardware and Handle Options

For each pair of folding panels and on the swing panel(s), if any, provided is two point locking hardware consisting of top and bottom Polyamide capped locking bolts operated by a 180° turn of a flat handle. Standard handle finishes are dark brown, white, white aluminum, dark gray, or match panel profile color.

If there is a swing panel, there is the following additional hardware option on the main entry panel: Three point locking hardware consisting of top and bottom Polyamide capped locking rods and a horizontal bolt operated by a 180° turn of L-shaped handles located on both the inside and outside. Lockable with a lockset. Turn of key or thumb turn operates lock.

If a unit is inward opening and there is no swing panel, an option to enable a unit to be opened from the outside is on the folding pair to be opened first: Two point locking hardware consisting of top and bottom Polyamide capped locking rods operated by a 180° turn of an L-shaped handle on the inside and a flat handle on the outside. Lockable with a lockset. Turn of key or thumb turn operates lock.

From thirteen available colors, the nylon handle color will be the closest match to the flat handles or aluminum profile color.

# Performance of the SL35 NanaWall - Testing Results

RAISED SILL		
Type of Test	Inward Opening Units	Outward Opening Units
* Air Infiltration: ASTM E-283, ft. <sup>3</sup> /min/ft.	@ 1.57 psf (25 mph): 0.15 @ 6.24 psf (50 mph): 0.32	@ 1.57 psf (25 mph): 0.11 @ 6.24 psf (50 mph): 0.24
* Water Penetration: ASTM E-547-86	No uncontrolled water entry @ 3 psf (24 mph)	No uncontrolled water entry @ 5.25 psf (45 mph)
* Structural Load Deflection ASTM E-330-90: pass <b>See design windload charts for other sized panels.</b> Note that the structural test pressures were 50% higher than the design pressures.	<u>Standard Unit</u> Design Pressure Positive @ 35 psf (116 mph) Design Pressure Negative @ 35 psf (116 mph) <u>Unit with top and bottom locking points reinforced</u> Design Pressure Positive @ 40 psf (125 mph) Design Pressure Negative @ 40 psf (125 mph)	<u>Standard Unit</u> Design Pressure Positive @ 35 psf (116 mph) Design Pressure Negative @ 35 psf (116 mph) <u>Unit with top and bottom locking points reinforced</u> Design Pressure Positive @ 40 psf (125 mph) Design Pressure Negative @ 40 psf (125 mph)
Thermal Performance: Summary of NFRC U-Factor Computer Simulation Report prepared by Architectural Testing  <b>Clear</b> <b>Low E (air filled)</b> <b>Low E (argon filled)</b> <b>Single Glazing</b>	With 18 mm (.70") Thick Insulated Glass: Glass thickness of .157" (4 mm) and gap thickness of .406" (10mm)  <u>U-Factor</u> .69 .58 .55 1.16	With 18 mm (.70") Thick Insulated Glass: Glass thickness of .157" (4 mm) and gap thickness of .406" (10mm)  <u>U-Factor</u> .69 .58 .55 1.16
* Forced Entry Resistance	In accordance with AAMA-1303.5 and CAWM 300-96 requirements.	

\* Excerpts of results of a 8'5" W x 7'4" H three panel units with a raised sill tested by Architectural Testing, Inc., Fresno, CA, an independent testing laboratory in March 1997 and February 2000. These units tested to meet AAMA HGD-H20.

LOW PROFILE SADDLE SILL, LOW PROFILE STEPPED SILL, FLUSH SILL		
Type of Test	Inward Opening Units	Outward Opening Units
Water Penetration: ASTM E-547-86  Internally Tested  Not applicable for standard flush sill	No uncontrolled water entry @ 6.0 psf (48 mph) subject to the following adaptations in the field by others: 1. Remove the gaskets covering the inner channel. 2. Drill weep holes through the bottom of this channel (about one 1" x ¼" weep hole per panel.) 3. Drill weep holes through the bottom of the sill or lower front face of the sill to drain water collected to a lower point (about one 1" x ¼" weep hole per panel.)  Please note that due to varying site requirements and conditions, these sills will not be prepared for drainage by Nana Wall Systems, Inc. If this drainage system is desired, we recommend that a qualified professional construct this system on the project site strictly in accordance with instructions provided by Nana Wall Systems, Inc. and in accordance with good waterproofing techniques. Note that in some applications drain connections may not be possible.	
Structural Load Deflection ASTM E-330-90: pass Per engineering letter based on raised sill testing. <b>See design windload charts for other sized panels.</b> Note that the structural test pressures were 50% higher than the design pressures.	<u>Standard Unit</u> Design Pressure Positive @ 35 psf (116 mph) Design Pressure Negative @ 35 psf (116 mph) <u>Unit with top and bottom locking points reinforced</u> Design Pressure Positive @ 40 psf (125 mph) Design Pressure Negative @ 40 psf (125 mph)	<u>Standard Unit</u> Design Pressure Positive @ 35 psf (116 mph) Design Pressure Negative @ 35 psf (116 mph) <u>Unit with top and bottom locking points reinforced</u> Design Pressure Positive @ 40 psf (125 mph) Design Pressure Negative @ 40 psf (125 mph)
Thermal Performance: Summary of NFRC U-Factor Computer Simulation Report prepared by Architectural Testing  <b>Clear</b> <b>Low E (air filled)</b> <b>Low E (argon filled)</b> <b>Single Glazing</b>	With .70" (18 mm) Thick Insulated Glass: Glass thickness of .157" (4 mm) and gap thickness of .406" (10mm)  <u>U-Factor</u> .69 .58 .55 1.16	With .70" (18 mm) Thick Insulated Glass: Glass thickness of .157" (4 mm) and gap thickness of .406" (10mm)  <u>U-Factor</u> .69 .58 .55 1.16
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