

NanaWall SL72

The Miami Dade County Florida Approved/ Vandal Resistant Aluminum Folding System

Performance

The SL72 inswing system is approved with Miami-Dade County, Florida NOA No. 02-0927.09 with expiration date of January 9, 2008. The SL72 outswing system is approved with Miami-Dade County, Florida NOA No. 02-0927.08 with expiration date of January 9, 2008. The approval is valid for all 52 stacking configurations of each 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.

In accordance with Miami Dade County Test Protocols PA 201 (large missile impact), PA 202 (structural pressure, air, water, forced entry), and PA 203 (cyclic pressure), Nana Wall Systems has successfully tested and passed the SL72 in both inswing and outswing applications for 52 stacking configurations.

With 3' x 8' panels and a raised sill, the inswing system achieved a negative design pressure rating of 90 psf and a positive design pressure rating of 55 psf. The outswing system achieved a negative design pressure rating of 55 psf and a positive design pressure rating of 55 psf.

The SL72 passed Miami Dade County large missile impact testing. Both systems had no water penetration at 8.25 psf

(equivalent to a 55 psf design wind pressure) and also passed air infiltration and forced entry requirements.

Other building departments may accept taller units and/or units with a commercial flush sill with a job-specific engineering letter.

Vandal-resistant

The same qualities that make the SL72 hurricane-resistant also make it vandal-resistant.

Monumentally Sized Design Options

The SL72 offers monumentally sized panels: frame heights up to 9'6" and panel widths up to 3'5" are possible. Please note that the Dade County testing is valid only for up to 3' x 8' panels.

Running Post, Floor-Mounted System

This system is ideal for applications where load-bearing capability of the header is a concern. The system's main weight is carried by the floor track. The upper track is merely a guide. The lower-running carriages ride on top of the sill track and lie above the water run-off level.

Hardware Options

Other hardware options are available; however, the Dade County approval is valid only with two/three point locking.



Technical Description

General Description

The SL72 is a monumentally-sized, aluminum folding panel system designed to provide an opening glass wall or store-front up to 36' wide; see *Maximum Size Chart*. It is available in various configurations utilizing one to twelve panels; see *elevation drawings*. The running post design provides extra stability. An option for swing entry/exit panel(s) is available; however, note the further panel size constraints with a swing panel not hinged to a side jamb. Units can be either inward or outward opening (see the section drawings).

Frame and Panels

The nominal extruded aluminum frame and panel thickness is 2 3/4" (70 mm); 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 over two hundred RAL colors; see "Aluminum Finish Options" in the *General Introduction*.

Panels and running posts are pre-assembled. All pins and screws to assemble frame are provided.

Besides the more weathertight raised sill, various standard aluminum flush sills (shown in section drawings) are available as an option in a clear or dark bronze anodized finish. (Please note that the flush sill is not approved for Dade County yet).

Glazing

Units can be supplied glazed with either annealed or heat strengthened 7/16" Solutia .09 PVB impact glass. According to the Dade County approval, heat strengthened glass needs to be used for larger sized inswing panels for higher design windloads; see *product approval details*.

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

For sliding and folding each pair of panels, a patented, floor-supported lower running carriage is attached to the running post profile. An upper running carriage is attached as a guide; see *the section drawings*. The four roller lower running carriage lies above the water run-off level and is constructed to ensure even distribution of pressure on all four rollers. Rollers have sealed bearings and are coated with toughened Polyamide to ensure sound-free running and resistance to extreme temperature.

Five to seven patented hinges per connection are provided to connect panels and running post profiles together and to connect panels to the frame.

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 nylon handle. If there is a swing panel, there is the following additional hardware option on the primary swing panel:

1. **Three Point Locking.** Three point locking hardware consisting of top and bottom Polyamide capped locking bolts 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.
2. **One Point Lockable Latch with Deadbolt** Nylon lever handles on both sides that operates a lockable latch. A lockset locks latch and deadbolt. Turn of key or thumb turn operates.
3. **One Point Lockable Latch with 3 Locking Points.** Same as Option 2, but with 2 additional locking points (this option is not Dade County approved).
4. **Deadbolt Lock.** ADA approved nylon pull handles on both sides with deadbolt(s) operated by a lockset. Turn of key or thumb turn operates lock. Lockset option of having key operation on both sides (this option is not Dade County approved). To keep the panel closed, a door closer should be field installed, but note that a door closer can only be installed on a swing panel that is attached to a side jamb.
5. **No Hardware.** For panic hardware to be installed by others, main entry panel can be supplied with no locking hardware (this option is not Dade County approved).

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 to provide 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, nylon handle colors will be closest match to the aluminum profile color.

Performance of the SL72 NanaWall - Testing Results

RAISED SILL		
Type of Test	Inward Opening Units Approved with Miami Dade County, NOA No. 02-0927.09 with expiration date of 1/9/08	Outward Opening Units Approved with Miami Dade County, NOA No. 02-0927.08 with expiration date of 1/9/08
* Air Infiltration: Protocol TAS 202-94, ft. ³ /min/ft.	@ 1.57 psf (25 mph): 0.12 - 0.14 @ 6.24 psf (50 mph): 0.27 - 0.32	@ 1.57 psf (25 mph): 0.08 - 0.20 @ 6.24 psf (50 mph): 0.20 - 0.37
* Water Penetration: Protocol TAS 202-94	No uncontrolled water entry @ 8.25 psf (56 mph)	No uncontrolled water entry @ 8.25 psf (56 mph)
* Structural Load Deflection Protocol TAS 202-94: pass See design windload charts for other sized panels. Note that the structural test pressures were 50% higher than the design pressures.	<u>Standard Unit</u> Design Pressure Positive @ 55 psf (146 mph) Design Pressure Negative @ 90 psf (188 mph)	<u>Standard Unit</u> Design Pressure Positive @ 55 psf (146 mph) Design Pressure Negative @ 55 psf (146 mph)
Protocol TAS 201-90 Impact Test	Pass	Pass
Protocol TAS 203-94 Cyclic Wind Pressure Loading	+55 / -90 psf Pass	+55 / -55 psf Pass
* Forced Entry Resistance	In accordance with Protocol TAS 202-94.	

* Excerpts of results of three 12' W x 8'3" H four panel units (2L2R, 3L1R and 4L configurations) with Raised Sill tested by Architectural Testing, Inc., Fresno, CA, an independent testing laboratory in May 2002.

LOW PROFILE SADDLE SILL, LOW PROFILE STEPPED SILL, STANDARD 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 @ 3.75 psf (38 mph) subject to the following adaptations in the field: 1. Remove the gaskets covering the inner channel. 2. Drill weep holes through the bottom of this channel (about one 1" x 1/4" 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 1/4" 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 pass Per engineering letter based on raised sill testing. See design windload charts for other sized panels. Note that the structural test pressures were 50% higher than the design pressures.	<u>Standard Unit</u> Design Pressure Positive @ 55 psf (146 mph) Design Pressure Negative @ 90 psf (188 mph)	<u>Standard Unit</u> Design Pressure Positive @ 55 psf (146 mph) Design Pressure Negative @ 55 psf (146 mph)
* Forced Entry Resistance	In accordance with Protocol TAS 202-94.	