

# Security and Vandal Screens



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## Installation Guidelines for Security and Vandal Screens

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# Security and Vandal Screens

## Installation Guideline Disclaimer

This document contains general installation guidelines for Graham Architectural products and does not address each particular condition or installation. Shop drawing installation details may vary from these Guidelines as these Guidelines do not address each particular condition so any variances should be addressed by the design professional. These Guidelines do not address the structural adequacy on any installation and such should be addressed by a design professional. Anchorage to existing or proposed wall/ window conditions are not addressed in this document. Sealant compatibilities and application details should be reviewed by the sealant manufacturers.

# Security and Vandal Screens

Graham Architectural Products offers two types of screens other than insect screens. Both products are generally installed in the factory, attached to Graham Architectural Products windows. However, both products can be installed in the field to Graham Architectural Products windows, or onto other manufacturer's windows. These instructions include the installation instructions if the screens are installed in the field. Read these instructions before starting any installation.

Vandal Screens - Constructed of heavy-duty woven wire screen mesh available in two configurations. A Half Vandal Screen frame that can be installed within the screen track of a window system, or a Full Vandal Screen frame that is hinged at the head and sized to fit between the window screen tracks on the jambs. Vandal Screens are a 2-point locking screen that use spring bolts at the bottom corners of the screen to lock each side independently, or a Single Point Release (SPR) that allows the 2-point locking to be disengaged with a single lever.

Security Screens - Constructed of either heavy duty woven wire screen mesh or perforated steel plate in an independent subframe that is attached to the screen track of a window or to the building condition with installation accessories if necessary. Security screens are only available as a side-hinged full screen with a multi-point locking system.

**Note:** Copies of these instructions can be downloaded from [www.grahamwindows.com/architectural-resources/technical-information/](http://www.grahamwindows.com/architectural-resources/technical-information/)

## Receiving, Handling, and Storage

The proper receiving, handling and storage of the screens is critical to the performance of the products throughout their service life. Abuse of the products during these processes will affect their operation and appearance. Even if the effects are not immediately noticed, they could surface later in the life of the product. The following are precautions that need to be followed.

Receiving: Prior to receiving the shipment of the screens, ensure that there is an adequate location to receive the products and enough manpower and equipment to off load the products.

- Most trucking companies allow a 3 hour off-loading time, and will charge a detention fee if the truck is not off-loaded within that time period. That should be considered when determining the location where the truck will be off-loaded and how much manpower will be needed to complete the process.
- Ensure that the storage location is close to the off-loading area. The product storage area must meet the requirements listed in the "Storage" section below.

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Handling: HANDLE CAREFULLY – DO NOT DROP.

- Be careful handling screens with pre-loaded vents. Make sure pre-loaded vents are fully locked prior to moving windows. Never have fingers or hands inside the operating area of a vent.
- Do not use any of the hardware or muntins for lifting or manipulating the screen.

Storage:

- The storage location for any finished products must be cordoned off to prevent damage from other trades, such as moving equipment.
- Stack vertically and on their sills with adequate separation so screen parts (including hardware) will not rub together, including any protruding hardware such as handles. All products should be stored on top of wood blocking to protect the finish. Blocking will also be needed between the frame and any object that can damage the screen. Ensure that the products cannot be blown over by the wind, and limited to stacking of five (5) units before alternate support is given.
- Protect screens completely from moisture and dirt prior to installation. It is important that all screens that are not installed, are protected from direct contact with rain, snow, or ice so as to protect the finish of the product.
- Storing the screens in the building is preferred, as long as they are not in a high traffic area. If stored in a trailer, or under clear plastic, there must be adequate ventilation to prevent excessive temperature or humidity build-up.
- Construction debris and dirt within the frame will affect the operation of the screen. Protect all products from paint, weld spatter, construction debris, cement, plaster, terrazzo, and other construction materials, which include, but are not limited to, alkali based materials or caustic cleaners. This must be removed immediately to prevent damage to the finish of the aluminum.
- If the screens have been wrapped in a transparent plastic protective wrap, this wrap cannot be on the product for more than 90 days from the date of manufacturing, otherwise, it will be very difficult to remove protective wrap from the screen finish.
- Prior to applying sealants, the surfaces must be cleaned and prepared as directed by the sealant manufacturer.

*CAUTION –Screens are not to be used as ladders, scaffolds, or supports. Installed openings are not to be used as construction entrances, unless adequate protection to the window and/or screen sill and jambs is provided. Damage to any products from any construction activity will void the product warranty for the products in question.*

# Security and Vandal Screens

## General Installation Instructions

A. Upon delivery carefully check that all screens have been received undamaged. If any of the screens have been damaged, immediately notify your Graham Representative.

<b>Table #1</b>	<b>Installation Tolerances (+/- Target)</b>		
	<b>Inches/foot</b>	<b>Inches Maximum</b>	<b>Method of Measurement</b>
True (In Plane Measurement)	1/32"	1/8"	Attach strings across corners. Measure where they cross
Extrusion Straightness	1/64"	1/16"	Measure with straight edge.
Square (Diagonal Measurement)	N/A	1/16" <sup>**</sup> 1/8" <sup>***</sup>	Measure diagonal corners (Difference/2)
* Openings up to 20 sq. ft.    **Openings 20 sq. ft. and over			

B. The screen must be installed within the tolerances listed in Table #1.

C. All work should start from established bench marks and column center lines established by the architectural drawings and the general contractor.

D. The sequence of installation should be coordinated with the job superintendent so delays are prevented.

E. Caution must be exercised when fastening through the frame of a window. Fasteners through a window frame can cause water leaks past the perimeter seal. It is recommended that all fasteners through the frame of a window are sealed to prevent water leakage.

F. Be aware of allowable edge distance requirements for the fasteners into wood window frames. Refer to the fastener manufacturer's instruction for proper usage.

## **Half Vandal Screen Installation**

*Note: The screen track on the window frame must have an inside measurement of between 3/8" to 1/2" in order for the screen to operate correctly.*

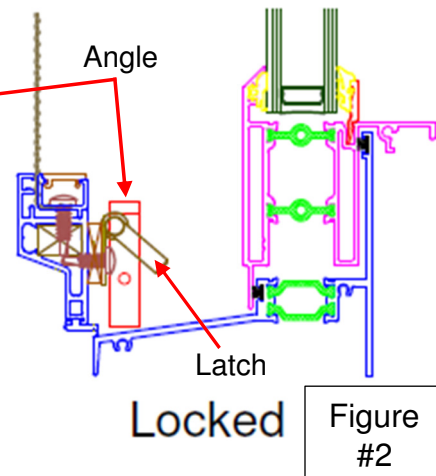
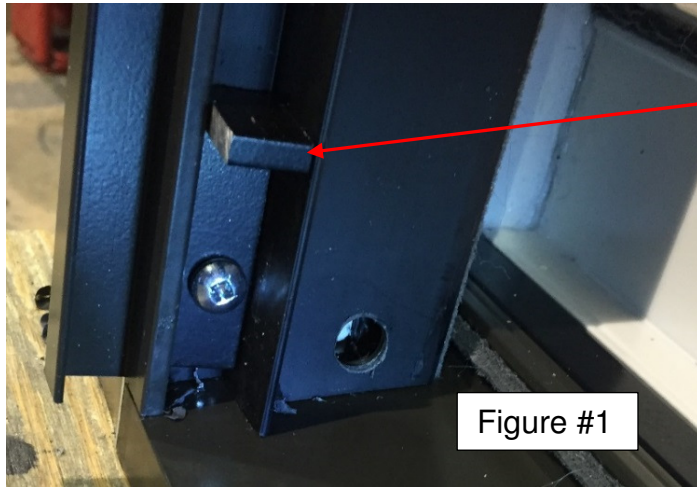
A. Ensure that the attachment screws on the stiles are backed out, so the springs are fully retracted.

B. Insert one of the screen stiles into the screen track on the jamb of the window, and then rotate the screen flat against the window. Center the screen in the window.

C. Tighten the attachment screws until the springs are barely touching the screen track. The screen should slide up and down the track without catching on the window frame.

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D. Install the angles for the screen latches into the jambs of the window frame, right above the screen latches See Figures #1 and #2). Seal the screw holes.



E. Check the operation of the screen.

## **Hinged Full Vandal Screen Installation**

*Note: The full Vandal Screen is attached to a hinge at the head and latches to the exterior leg of the window frame at the bottom of the jambs. If there is a jamb screen track, the screen has to fit in between the legs of the screen tracks (See Figure #3).*

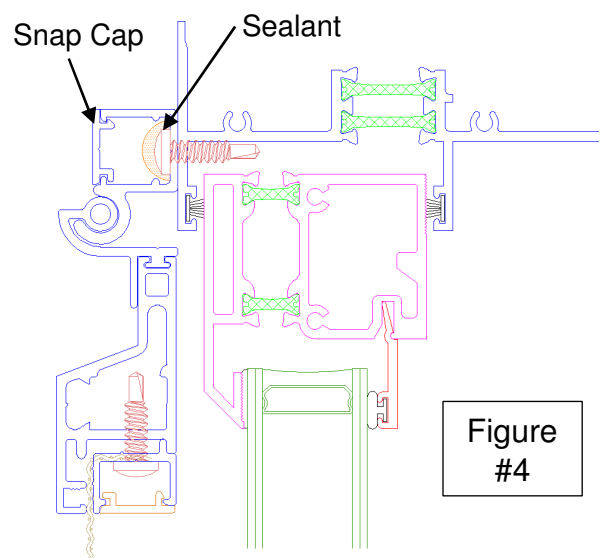
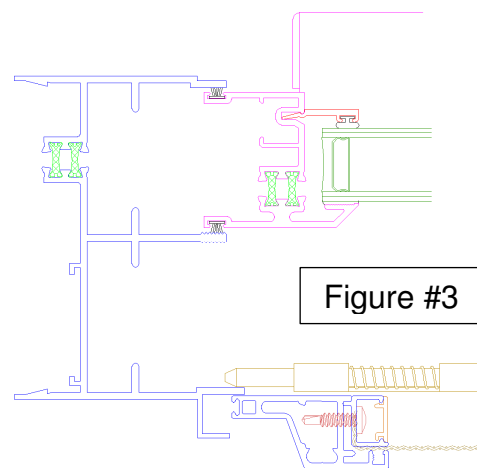
A. Remove the snap cap on the hinge, if it's not already removed (See Figure #4).

B. Install a screw at one end of the hinge, using sealant to seal the screw head (See Figure #4).

C. Make sure the screen is level and attach another screw at the other end of the hinge. Use sealant to seal the screw.

D. Continue attaching the screen hinge with the appropriate screws, while checking the screen for true in accordance with Table #1. Use sealant to seal each screw head.

E. Check the screen, and window if applicable, for operation before attaching the snap cap (See Figure #4).



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## Security Screen Installation

*Note: Security Screens are hinged within their own frame, and the frame is attached to the window frame. Select appropriate screws to attach the screen to the window frame.*

A. Remove the snap cap on the frame, if it's not already removed (See Figure #5).

B. Install one of the top jamb screws (See Figure #5).

*Note: When installing screws, pre-drill the attachment hole through the screen frame, clean out the drill shavings/debris, clean around the hole area, apply sealant in the hole, install the fastener, and then seal over the fastener head.*

C. Make sure the screen frame is square and attach another screw on the opposite jamb. Use sealant to seal the screw.

D. Continue attaching the screen frame with the appropriate screws, while checking the screen for true and extrusion straightness in accordance with Table #1. If a fastening schedule has not been specified, Graham Architectural recommends applying fasteners a maximum of 9 inches from each corner, and then a maximum of 18 inches apart. Use sealant to seal each screw head.

E. Check the screen, and window if applicable, for operation before attaching the snap cap (See Figure #5).

