

SERIES 1000



**VELOCITY**  
IMPACT PRODUCTS

INSTALLATION  
INSTRUCTIONS

THE BEST PRODUCTS IN  
THE WORLD ARE ONLY AS  
GOOD AS THE QUALITY OF  
THE INSTALLATION



**YOU MAKE THE DIFFERENCE**

# ATTENTION

PROPER INSTALLATION PROCEDURES ARE CRITICAL TO ENSURE THE PERFORMANCE OF THIS PRODUCT. FAILURE TO FOLLOW RECOMMENDED INSTALLATION PROCEDURES CAN RESULT IN VOIDING THE WARRANTY. REFER TO INSTALLATION INSTRUCTIONS INCLUDED WITH THIS PRODUCT.

## **DO NOT USE METAL BLADES TO CLEAN GLASS**

### **Required Tools -**

6' level	Rubber mallet
Torpedo level	Nylon block (or block of wood)
String line/laser level (recommended)	Plastic, nylon or composite shims (no wood)
High performance silicone or polyurethane for perimeter seal, screws and joints	Hex nut drivers Allen wrenches
Tape measure	Various pry bars
Hammer drill with masonry bits	Drill
Impact driver	Framing square
#3 phillips screw driver	Isopropyl alcohol
#2 phillips screw driver	Clean rags
Glass suction cups (recommended)	
Appropriate fasteners for installation type (see Florida Product Approval #31650)	

### **You should have the following:**

Frame Pack(s), Trim Pack(s), Hardware Box(es), Panels, Screen(s) (if applicable)

**IMPORTANT: If doors are to be set in a bed of non-shrink grout the bottom of the sill should be coated by the installer with a bituminous paint to separate dissimilar metals.**

**Installer must clean all metal connections requiring sealant with isopropyl alcohol prior to applying sealants to ensure proper adhesion.**

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Before beginning installation review these instructions and identify all of the parts used as well as ensure that all required parts are accounted for and nothing is missing or damaged to prevent an installation from not being able to be completed.

Check all opening sizes to ensure product order size will fit prior to removing an existing product and that the door is the correct color and configuration.

Product frame should be protected. Only use light oil, grease or soap coating. Sill substrate should be smooth and free of any high spots or valleys ensuring proper function of door and hardware.

Please follow these instructions step-by-step to ensure proper installation

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## **FRAME ASSEMBLY - BYPASS DOORS**

- 1) Assemble head, jambs and sill using the supplied #12 x 1-1/2" phillips pan head screws at each assembly hole (See Figure 1 and 2).
- 2) Apply sealant to the frame connections and exterior side of the jamb/sill and jamb/head connections and tool in place.
- 3) Apply sealant to the interior of the end dam and press end dam over frame jamb and sill so as to create a fully sealed water-tight exterior corner connection.
- 4) Install two #10 screws into each end dam to hold it in place through the pre-drilled holes into the jamb screw boss.
- 5) Apply the sill riser to the frame sill. Run a continuous bead of sealant down the entire length of the riser in the top groove prior to installation of the riser (See Figure 3).

Note: Be sure to run sealant up the inside face of the jamb so that there is a good seal between the riser and jamb once the riser is installed.

6) Make sure the opening which the door is to be installed in to is clean, dry and clear of debris. Dry fit the frame into the opening. If the frame does not fit easily do not force it. Remove the frame and clear the obstruction. Pre-locate shims at each anchor point so the track is level prior to applying sealant.

Note: Risers can be applied at the end of the installation as well should the panels need to be set from the inside or to protect them from job site damage. When using the box riser allow for the additional depth the riser will add to the sill towards the inside. If this additional depth is not accounted for there may not be enough room to install the riser. It is recommended that the sill riser be attached (without sealant) until the main frame is secured to ensure a proper fit.

7) Once the frame fits into the opening freely, seal under the entire length of sill and all frame seams. Make sure to include where the frame sill and head meet the main frame jambs (See Figure 5).

Note: Anchor-less sill options seal differently and require specific structural sealants. Refer to Attachment 1 for further details.

8) Set assembled frame in a full bed of sealant and shim as necessary to ensure a plumb, level and square fit. Shim behind all frame jamb, head and sill installation screw locations to prevent frame deflection when fasteners are tightened.

Important: Frame head and sill must be level and square and frame jambs must be plumb. Measure at head, sill and midpoint horizontally to be certain that the frame is not bowed. Also measure from the top to bottom across the entire frame from left to right to make sure that there are no rises in the sill or dips in the head. An out of square frame, high spots in the sill or dips in the head could prevent the panels from being installed. Do not over-tighten frame installation screws as this could warp the frame (See Figure 6).

Tip: Using a torpedo level across the sill (without setting it on the riser) and head to verify the sill and head are level from inside to outside will ensure the panels roll correctly. If the sill or head are not level from inside to outside it could cause poor panel operation. Since the head and the sill are not the same depth it is critical that a plumb bob is utilized to ensure the head and sill are in alignment.

9) Attach frame to substrate in accordance with the Florida Product Approval.

Note: Once the frame is securely fastened and plumb, level and square seal all installation screws. All installation screw holes are to be pumped with sealant prior to screw installation. Once screws are installed cap bead heads prior to installation of door panel guide rails.

10) After installation screws are sealed, install the door guide rails (See Figure 7)

11) Install the frame head anchor covers and screen snap covers (if applicable).

12) Install the frame jamb anchor covers, jamb covers, and screen covers (if applicable).

Note: Do not install jamb anchor covers in jamb locations where lock keepers and fixed panel clips are to be installed yet.

## **FRAME ASSEMBLY - POCKET DOORS**

### **(see attachment 1)**

1) Collect frame components - head, jambs and sill.  
Lay out all components and trace frame head and sill ends with sealant.

Note: Seal and tool the outside of all four corners after assembly.

2) Apply sealant to the exterior side of the jamb/sill and jamb/head connections and tool in place.

3) Apply sealant to the interior of the end dam and press end dam over frame jamb and sill so as to create a fully sealed water-tight exterior corner connection. Install two #10 screws into each end dam to hold it in place through the pre-drilled holes into the jamb screw boss.

4) Set the sill on an even, flat and fully supported surface before installing the sill riser. Use a block of wood or nylon to prevent damage to the riser if a mallet must be used (See Figure 4).

5) Apply the sill riser to the frame sill. Run a continuous bead of sealant down the entire length of the riser in the top groove prior to installation of the riser (See Figure 3).

Important: Sill riser must be installed prior to the pocket hook base, catch and cover being installed.

Note: Be sure to run sealant up the inside face of the jamb so that there is a good seal between the riser and jamb once the riser is installed.

Note: Riser can be applied near the end of the installation but must be installed prior to the installation of the pocket hook should the panels need to be set from the inside or to protect them from job site damage.

When using the box riser allow for the additional depth the riser will add to the sill towards the inside.

If this additional depth is not accounted for there may not be enough room to install the riser. It is recommended that the sill riser be attached (without sealant) until the main frame is secured to ensure a proper fit.

6) Make sure the opening which the door is to be installed in to is clean, dry and clear of debris. Dry fit the frame into the opening. If the frame does not fit easily do not force it. Remove the frame and clear the obstruction.

7) Once the frame fits into the opening freely, seal under the entire length of sill and all frame seams. Make sure to include where the frame sill and head meet the main frame jambs (See Figure 12).

Note: Anchorless sill options seal differently and require specific structural sealants. Refer to Attachment 1 for further details.

8) Set assembled frame in the opening and shim as necessary to ensure a plumb, level and square fit. Shim behind all frame jamb, head and sill installation screw locations to prevent frame distortion when fasteners are tightened.

Important: Frame head and sill must be level and square and frame jambs must be plumb. Measure at head, sill and midpoint horizontally to be certain that the frame is not bowed. Also measure from the top to bottom across the entire frame from left to right to make sure that there are no rises in the sill or dips in the head. An out of square frame, high spots in the sill or dips in the head could prevent the panels from being installed. Do not over-tighten frame installation screws as this could warp the frame (See Figure 13).

Tip: Using a torpedo level across the sill (without setting it on the riser) and head to verify the sill and head are level from inside to outside will ensure the panels roll correctly. If the sill or head are not level from inside to outside it could cause poor panel operation. Since the head and the sill are not the same depth it is critical that a plumb bob is utilized to ensure the head and sill are in alignment, especially in pocket conditions.

9) Attach frame to substrate in accordance with the Florida Product Approval.

Note: Once the frame is securely fastened and plumb, level and square seal all installation screws.

10) Place the pocket hook base into the intended installation location but do not fasten. The pocket hook base is sized to sit on top of the sill riser and end just under the frame head (See Figure 14).

11) If the panel with the pocket hook interlock is not available to set the location of the pocket hook base and catch then align the pocket hook base with the riser and header as shown (See Figure 15).

Note: If panel(s) is/are available, slide the pocket hook catch into the interlock of the panel that will capture the hook with all panels closed fully to ensure proper sizing. Once location is correct proceed to step 12.

12) Attach pocket hook base to substrate per Velocity Impact Products specifications and in accordance with the Florida Product Approval, local code requirements and/or site specific engineering or test reports.

13) Secure the pocket hook catch to the pocket hook base using the supplied #10 x 3/4" pan head phillips head sheet metal screws so that the catch is fully engaged into the interlock of the panel and the panel can operate freely when it is opened. All installation screw holes are to be pumped with sealant prior to screw installation. Once screws are installed cap bead heads prior to installation of door panel guide rails.

14) After installation screws are sealed, install the door guide rails (See Figure 16)

15) Install the frame head anchor covers and pocket hook cover (See Figure 17 and 18).

16) Install the main frame jamb anchor covers, jamb covers.

Note: Do not install jamb anchor covers in jamb locations where lock keepers are to be installed yet as these must be trimmed to size once the keepers have been adjusted.

## **PANEL INSTALLATION**

1) Velocity numbers each panel from the outside looking in from left to right starting with panel 1. They are to be installed in order. X panels are operable and O panels are fixed. Compare panels to installation instruction drawing to ensure panels are placed onto proper track. Panels on interior track must be installed first in most cases (opposite if installing panels from the inside).

2) Position panel so that the top rail of the panel slips over the track frame head. Swing bottom of panel in until bottom of panel is aligned over sill and set panel on door guide rails (See Figure 19).

3) Repeat procedure with next outer panel until all panels have been installed.

4) Panels are to be installed with roller adjustment holes to the exterior.

Note: To adjust rollers installed in panels use a #3 phillips head screwdriver. Adjusting the roller screw clockwise raises the panel and counter clockwise lowers the panel (See Figure 20).

### **DO NOT USE IMPACT TOOLS TO ADJUST ROLLERS**

Note: When raising and lowering rollers if you feel pressure do not continue to attempt to turn the adjustment screw as this could cause it to strip. Adjust each panel until all panels operate freely and all vertical stiles and frame jambs are parallel when in the closed position.

5) Once all panels are set into place and have been adjusted properly, check the reveals and operations to verify that everything is in proper working order. You are now ready to install the hardware.

### **INSTALL THE LOCKING HARDWARE BEFORE ATTACHING THE FIXED PANEL CLIPS**

#### **LOCKING HARDWARE -**

1) Align the thumb turn tail piece into the square drive of the mortise assembly. In the unlocked position the thumb turn should be at 90 or 270 degrees (left or right) based on orientation and in the locked position the thumb turn should be at 180 degrees (straight down).

2) Attach the thumb turn through the installation holes using two #10 self drilling screws provided.

Note: Lock will not operate unless the safety pin (located between the two mortise cams) is depressed.

## **ADJUSTABLE STRIKE INSTALLATION -**

Note: Marking the location for the center of the lock mechanism is critical in ensuring the door lock function properly. Slide the locking door panel until it is almost completely in the closed position and mark the center of the lock safety pin so that it can be seen from the interior. Slide the panel in the closed position and mark the jamb (or opposite center-meet panel) and place the adjustable strike so that the center of the keeper will align with the center of the mortise lock (See Figure 21).

1) Attach the adjustable keeper to the frame jamb using four #10-24 f-type screws provided. Use a 5/32" drill bit to drill pilot holes for the fasteners.

2) The adjustable strike has one screw at the top and one at the bottom which allow for the strike to be adjusted out (away from the jamb) or in (towards the jamb) for the best possible operation. These screws can be adjusted independently (See Figure 22).

Note: It is recommended that the keeper is not adjusted tight until the fixed panel clip or pocket hook catch is installed. Once the fixed panel clip or pocket hook catch is installed, re-adjust keeper to allow for minimal movement of the panel for best operation. Ensure the set screw (middle screw) is loose prior to adjusting the keeper. Re-adjust set screw once strike adjustment is complete.

### **DO NOT OVER-TIGHTEN ADJUSTMENT SET SCREW**

3) Install jamb anchor covers. This part is sent full length but must be trimmed to size based on where the adjustable strike is mounted as well as if more than one keeper is installed on the door. Reveal should be kept as minimal as possible.

## **LOCKING HARDWARE -**

### Crest/Crest II Handle Set -

1) Attach handle set using the two M5 hex head screws provided in the handle set box hardware pack.

Note: The screw is used in multiple thickness doors. For this application the last section of the screw must be removed and discarded.

2) Attach the exterior handle first using the two M5 handle screws and two handle bushings provided in the handle set box hardware pack (See Figure 23 and

24). Do not over-tighten.

3) Attach the interior handle with the screws provided in the handle set box hardware pack. Do not over-tighten.

### Crest/Crest II Handle (Interior Only) -

1) Attach handle set using the two snap-off M5 hex head screws provided in the handle set box hardware pack.

Note: The screw is used with rivet nuts. For this application the last two sections of the screw must be snapped off and discarded.

2) Attach the two M5 handle screws into the rivet nuts using two handle spacers provided in the handle set box hardware pack (See Figure 25). Bushing and visible hex head must be on the interior side of the door. Do not over-tighten.

3) Attach the interior handle (cross drilled) over screw heads and fix using the two grub screws included in the handle set box hardware pack. Do not over-tighten.

## **FIXED PANEL CLIP INSTALLATION -**

- 1) Each fixed panel which engages into a jamb requires one fixed panel clip be installed six inches from the top of the panel into the jamb and one six inches from the bottom of the panel into the jamb.
- 2) Place clip inside of the vertical stile and press it tightly against the weatherstripping so that it will clear the jamb when the door panel is closed.
- 3) Using a 5/32" drill bit drill three pilot holes through the 3 locations on the clip and install three #10 screws (See Figure 26).
- 4) Close all door fully and engage the lock to ensure door will still function correctly after installation of the fixed panel clips.
- 5) Close the fixed panel fully against the jamb.
- 6) Verify that all interlocks are fully engaged.
- 7) If the fixed panel clip is still tight against the jamb, use a 5/32" drill bit drill three pilot holes through the 3 locations on the clip and install three #10 screws (See Figure 27). If there is space behind the fixed panel clip use a shim to support the clip.
- 8) Verify the lock mechanism operates properly and re-adjust if required. Once door lock is adjusted properly install jamb covers which will conceal the fixed panel clips.

## **SCREEN INSTALLATION -**

1) Position screen so that top rail of screen slips over frame head screen rail. Swing bottom of screen in until bottom of screen is aligned over sill screen rail and set screen down onto sill (See Figure 28).

2) Repeat this step for additional screens.

3) Adjust screen rollers from ends of screen panel.

### **DO NOT USE IMPACT TOOLS TO ADJUST ROLLERS**

Note: When raising and lowering rollers if you feel pressure do not continue to attempt to turn the adjustment screw as this could cause it to strip. Adjust each screen panel until all panels operate freely and all vertical stiles and frame jambs are parallel when in the closed position.

4) Once screens are properly adjusted, latch keepers may be installed and raised or lowered to make proper contact with the latch cam.

Note: For OXO configuration doors with screen applications the offset screen adapter must be installed on the fixed sliding glass door panel which the screen will lock into. This must be installed using the included #10 screws provided. Once the adapter is installed the fastener cover can be installed to conceal the mounting screws (See Figure 29). Install the supplied screen keeper into the fabricated recess on the astragal using the supplied screws.

Note: For center-meet applications, one screen will have an applied screen astragal that will require a screen keeper be installed similarly to what is used on the offset screen adapter. Install the supplied screen keeper into the fabricated recess on the astragal using the supplied philips screws.

## **ACCESSORIES -**

### **Ultraplugs** (Moustache Pads/Fuzzies)

Ultraplugs are used to fill any voids where interlocking panels are set in the closed position and require a weather seal. Position one ultraplug (gray) in the frame sill channel and one ultraplug (color) in the frame head channel above and below the interlocking section when the door is in the closed position (See Figure 30).

To do this, mark the area where the doors interlock together in the closed position. Then, open the panels and place the ultraplugs on the extrusion making sure that the adhesive backing makes good contact to the extrusion.

Note: OXO configuration doors will require that ultraplugs also be placed under and above the offset buttstile.

Note: Pocket doors will also require a dust plug added to the head and sill facing the interlocking panel (See Figure 31).

### **Panel Bumper** (Come-A-Long)

If the unit is a multi-panel, multi-track or pocket door unit it may be necessary to install panel bumpers. This allows for the door to open without having to move each panel individually and also keeps the panels from hitting the interlocks or making contact with the handle hardware. They are to be oriented vertically and installed at the top rail of the panel at the front of the vertical stile (See Figure 32). Install the panel bumper using the two #10 screws provided.

**WARNING: USE CAUTION TO AVOID GLASS WHEN  
INSTALLING INSTALLATION SCREWS - DO NOT  
LOCATE BUMPER IN ANY OTHER AREA OTHER  
THAN WHAT IS SHOWN**

The bumper should leave a gap between the handle and the interlock of the panel.

**Adjustment Hole Covers**

Once the doors are installed and working properly, install the roller adjustment hole covers. There are two per operable panel and should be located on the outside face of the bottom rail (See Figure 33).

**Final Screw Covers**

Once the installation has been completed, install any remaining screw covers. This includes screw covers that need to be cut to size that fit above and below the adjustable strikes and the jamb covers.

**Reversing Door Stack**

**ADVANCED USERS ONLY!**

Series 1000 sliding glass doors have the same notches both top and bottom which allow for the door stack to be changed in the field. Not all units are capable of stack reversal. For reversal of pocket conditions, changing from an exterior pocket to an interior pocket will require a new pocket hook base, catch and cover (two of each if double pocket configuration). Reversing an interior pocket to an exterior will only require you cut down these parts and notch the applied interlock.

Contact Velocity Impact Products for specific instructions on reversing door stacks in the field.

## **ATTACHMENT 1 -**

Pocket doors require additional spacing from the finish wall to the sill to ensure proper spacing for pocket hook installation (See Figure 34).

Outside pocket - position the back edge of the jambs 1" from the pocket wall.

Inside pocket - position the outside of the jambs a minimum of 1" away from the pocket wall.

## **INSTALLATION OF POCKET HOOK CATCH, BASE AND COVER -**

- 1) Installation of pocket hook catch (See Figure 35).
- 2) Installation of pocket hook base (See Figure 36 and Figure 37).
- 3) Installation of pocket hook cover (See Figure 38).

## **ATTACHMENT 2 -**

### **Corner Door Installation**

- 1) Use the supplied composite corner keys to mate the left and right leg of the head and sill.
  
- 2) With a framing square, verify that the head and sill corners come together at the proper 90 degree angle.
  
- 3) Using a plumb bob or laser level, verify that the top of the head that captures the panel top rail is plumb to the sill snap door guide rails both in the corner as well as down both sides of the 90 degree door system to ensure that the alignment is correct.

Note: Spacing is also critical so ensuring spacing is parallel and consistent along the entire length of the sill is paramount in how the door will come together at the corner and operate smoothly.



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