Tools & Materials You Will Need:

- Measuring Tape
- Hammer
- Level
- Square
- Putty Knife
- 1 doz. ¼" Wood Shims
- Power Drill & Drill Bits
- Pencil
- High Quality Silicone Caulking in accordance with ASTM C 920 Class 25
- Box of Non-Corrosive #8 x ¼" Phillips Panhead Screws for Sill Angle Application
- Batt Insulation or AAMA approved Non-Expanding Window Insulation Foam in accordance with ASTM C 1620.

Installation Screwpack Contents:

- (4) ⅜" Flush Hole Plugs (to cover heads of installation jamb screws)
- (4) #8 x 2" Phillips Panhead Screws (to install window into jamb)
- (2) #6 x ¼" Phillips Panhead Screws (to install head expander)

REMEMBER: ALWAYS USE THE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.

Your Window Order Will Be Packaged With The Following:

- Vinyl Replacement Window (3¾" Frame Depth)
- Head Extender
- Sill Extender
- Mullion Kit (If applicable)

Tips To Follow Before You Begin Installation:

- Windows achieve maximum performance from installation methods that dictate square frames, precise leveling and straight tight lines between sash and master frame.
- A window gains strength from the surrounding wall structure. This is obtained from proper sizing, support and installation methods.
- When installing over an existing slope sill, a continuous wood sub sill is recommended to support weight of sashes.
- Use a high quality grade of silicone caulking that is a neutral base. Silicone that releases an acetic acid during cure does not adhere well to vinyl.
1 INSPECT & MEASURE NEW WINDOW

Step 1- Unwrap window and thoroughly inspect new window for any shipping or material damages.

If any component of the main frame is damaged, please contact your dealer for replacements **BEFORE** you begin demolition of existing window.

Moving parts, locks, balances, glass, rails, etc. can be repaired easily **AFTER** the window is installed.

Step 2- Check the bar coded label on shipping box and cross reference the size with your window size. If you have any discrepancies, please contact your dealer before proceeding to removing existing window.

Step 3- Measure width and height of new window. Compare new window size to existing window size.

The tip-to-tip make size should be big enough to fit rough opening to allow a clearance for insulation. See sizing chart on below:

### Rough Opening Vs. Make Size

<table>
<thead>
<tr>
<th>Vinyl Models:</th>
<th>RO Width</th>
<th>RO Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double Hung, Casement, Awning, Slider, Picture</td>
<td>RO (−) ¼&quot; width = Unit make size</td>
<td>RO (−) ¼&quot; Height = Unit Make Size without Head Expander</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RO (−) ¾&quot; height = Unit Make Size with Head Expander</td>
</tr>
</tbody>
</table>

**Exact Sizing**

Exact sizes are the actual window tip-to-tip finished sizes. Allowable factory tolerance is plus or minus ¼". Exact sizes do not include head expanders.

**Head Expander:**

A head expander will add a minimum of ¼" when fully collapsed to 1" when full extended.

Exact Sizes are manufactured on the following increments:

<table>
<thead>
<tr>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>¼&quot;, ½&quot;, ¾&quot;, 1&quot;, 1 ¼&quot;, 1 ½&quot;, 1 ¾&quot;, 2&quot;</td>
<td>¼&quot;, ½&quot;, ¾&quot;, 1&quot;, 1 ¼&quot;, 1 ½&quot;, 1 ¾&quot;, 2&quot;</td>
</tr>
</tbody>
</table>

Step 4- After inspecting and measuring the new window, shut and lock it until the old window is removed. This will allow the seals, locks, interlocks and weatherstripping to engage.

Step 5- Remove screen and lay aside. You will be re-inserting the screen in Procedure 11.
2  **REMOVING EXISTING WINDOW IN TYPICAL WOOD FRAME OPENING**

The following instructions are for a typical wood frame replacement. Some replacement applications may require additional information and techniques and must always be installed in accordance with your local building codes and ordinances.

**Step 1** - Score the paint/sealant along the seam of the existing window interior and exterior stops.

**Step 2** - Using a chisel or sharp putty knife, carefully remove the interior or exterior stops (you may reuse them after installation of the new window is complete).

**Step 3** - Remove old sashes by disconnecting from balances.

**Step 4** - Remove any parting strips.

3  **PREPARE ROUGH OPENING**

**Step 1** - If necessary, remove balances that may be encased inside the rough opening.

**Step 2** - If you have a vinyl window frame, remove the existing window frame from the opening (this will expose existing stops).

**Step 3** - Clear the rough opening of any remaining dirt or debris from existing window.

**Step 4** - Fill any open cavities left from removing the old window frame and balances with batt insulation or an AAMA approved non-expanding window insulation foam that complies with ASTM C 1620.

**Step 5** - Check for plumb, level and square.
If the window sill is to be covered with coil stock, the coil stock must be applied prior to installing the window. If you are not using coil stock, proceed to Procedure 6 on Page 5.

Listed below are guidelines on applying coil stock, sill angle and sill extender.

**Sill Angle Installation**

- Install a continuous wood sub sill for support
- Insulate to Maximize Energy Efficiency
- Install vinyl sill angle using #8 x 1/2" Phillips Panhead Screws

**Sill Extender Installation**

- Install a continuous wood sub sill for support
- Field Trimnable Sill Extender
- Insulate to Maximize Energy Efficiency

- Extend coil stock approximately 1" under window unit and on exterior sill nailing in a way that nails will be covered by window frame once it is in place.

- Always have window overlap sill angle and coil stock to reduce risk of water leakage. A sill extender is provided to accommodate for the sloped sill while maintaining a level window. Vinyl sill angle is an added option.

- Sliders Only: **DO NOT COVER** the weeped drainage system on the exterior of bottom of window frame with coil stock or caulking

- Install vinyl sill extender by sliding the extender up into the frame channel. Sill extender is field trimmable for any necessary adjustments.

- Casements and Awnings are not compatible with a sill angle or head extender. A sill extender is shipped with your order to allow height adjustments and is field trimmable.
5 DRY FIT NEW WINDOW

If the windows need to be field mulled, please go to Page 10 for instructions on field mulling the window before placing into the opening.

Step 1- Insulate the window frame in between the master frame and the head and sill extenders using a thin layer of batt insulation. (This will prevent cold transfer and assist in keeping the extenders in place.)

On a double hung, slider or picture window, a head expander (or header extender) is provided to assure a tight fit in the height, yet allow downsizing of the window unit for leveling purposes during installation.

Step 2- Place window into opening making sure the new window will fit into the rough opening allowing enough clearance to prevent binding or deformation.

Step 3- After proper height has been determined and you are using a head extender, drive the extender onto the header frame and trim to proper height.

If sill extender is used, Install extender by sliding the extender up into the frame channel. Sill extender is field trimmable for any necessary adjustments (see Page 4 for illustration).

Step 4- Remove window from opening.

6 INSTALLING NEW WINDOW

Step 1- Check rough opening for level, plumb and square.

Step 2- Apply an ample size of a continous bead of sealant to the remaining stops and sill of the perimeter frame of the rough opening.

After the sealant is applied, immediately install the product before a skin can form on the sealant's surface.

Step 3- Place window unit into the opening and onto sealant.
**INSTALLING DOUBLE HUNGS OR SLIDERS:**

Proper support and leveling of the frame is very important. For an oversized slider or when installing over an existing sloped sill, a continuous wood sub sill is recommended to support the weight of the sashes.

**Step 1** - Install 2 #6 x ½" Phillips Panhead Screws to secure head extender to interior of window header frame.

**Step 2** - If sill angle is used, fasten using (2) #8 x ½" Phillips Panhead Screws (not provided) to opening directly below the screen track which is behind the exterior leg of the unit’s master frame (see Page 4 for illustration).

**Step 3** - Pre-drill a ⅜" diameter hole approximately ¼" deep into factory prepped holes located behind sash stops (to countersink head of installation screw).

It may be necessary to shim window frame to ensure sash and frame are level and square.

**Step 4** - Install #8 x 2" Phillips Panhead screws into the pre-drilled holes. There should be 2 install screws on each jamb side and 2 at the header. **DO NOT OVERTIGHTEN.**

Do not install the hole plugs until after Procedure 9 - Applying Hole Plugs, Sealant & Stops

**Step 5** - Lift bottom sash up and checks sill for level. Check margins from window sash to frame.

Run level vertically on each side and check for a proper straight line on master frame and sashes. This ensures window is square and sashes will operate properly.
**INSTALLING DOUBLE HUNGS OR SLIDERS:**

**Step 6-** If necessary, adjust jamb adjusters that are located approximately midpoint of a double hung and are used to make final adjustments to ensure the weatherstrips on the sash are compressed against the main frames (see illustrations).

When using jamb adjusters, adjust both sides evenly. **DO NOT ADJUST ONLY ONE SIDE.** If only one side is adjusted, it will create poor sash and frame alignment.

**INSTALLING AWNINGS OR CASEMENTS:**

Proper support and leveling of the frame is very important. For an oversized slider or when installing over an existing sloped sill, a continuous wood sub sill is recommended to support the weight of the sashes.

**Step 1-** Open the sash. Locate the exterior frame area opposite side of the sash lock (see illustration). Pre-drill a ⅜" diameter hole into the first wall of the cavity.

It may be necessary to shim the window frame to ensure sash and frame are level and square.

**Step 2-** Using a ¼" drill bit, drill through the remaining 4 walls. Drill approximately 4 installation holes (2 at each jamb and 2 at header).

**Step 3-** Install #8 x 2" Phillips Panhead screws into the pre-drilled holes. **DO NOT OVERTIGHTEN.**

Do not install the hole plugs until after Procedure 9 - Applying Hole Plugs, Sealant & Stops.
**INTALLING AWNINGS OR CASEMENTS:**

**HINGE & SASH ADJUSTMENT**

**Step 1** - Using the “truth” slim-line wrench (part #31502 - may be purchased from your dealer), turn the cam-stud located on the hinge track.

This allows for a full $\frac{1}{16}$" adjustment towards the outside of the sash, and $\frac{1}{32}$" towards the jamb.

A standard $\frac{3}{8}$" open end wrench can also be used for this procedure, however this will require detaching the support arm from the track (at the cam-stud) by inserting a flathead screwdriver under support arm & detaching the arm.

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**INTALLING PICTURE WINDOWS:**

**Step 1** - Install 2 #6 x $\frac{1}{2}$” Phillips Panhead screws to secure head extender to interior of window header frame.

**Step 2** - If sill angle is used, fasten using (2) #8 x $\frac{1}{2}$” Phillips Panhead Screws (not provided) to opening directly below the screen track which is behind the exterior leg of the unit’s master frame (see Page 4 for illustration).

It may be necessary to shim the window frame to ensure sash and frame are level and square.

**Step 3** - Remove the short piece of glazing bead (installed for shipping purposes).

**Step 4** - Pre-drill a $\frac{3}{4}$” diameter hole through two walls of main frame.

**Step 5** - Install #8 x 2” Phillips Panhead screws into pre-drilled holes. There should be 2 install screws on each jamb side and 2 at header. DO NOT OVERTIGHTEN.

**Step 6** - Install glazing bead (pre-cut to size) on vertical sides (was shipped to you packaged inside window unit).

Do not install hole plugs until after Procedure 9 - Applying Holes Plugs, Sealant & Stops
7 APPLY INSULATION

Step 1- To maximize energy efficiency, insulate any gaps between window frame and opening. Using batt insulation and a flat putty knife, insert into the cavities between the window frame and the rough opening.

OR

Using an AAMA approved ASTM C 1620 non-expanding foam, fill the cavities between the window frame and the rough opening.

DO NOT OVERSTUFF the batt insulation. Doing so will cause the window to become out of square and sashes will not operate properly.

Step 2- Check margins between sash and window frame.

8 FINAL ADJUSTMENTS TO WINDOW

Step 1- Check the window operation by unlocking and operating both sash and tilt mechanisms.

SQUARING THE WINDOW:
Adjust the window in the opening so that the edge of the glazing bead is parallel to the inside edge of the frame. If the margins between frame and glazing bead are not parallel, the sashes will not operate properly.

Adjust the jamb installation screws by loosening or tightening in order to achieve proper margins between sash and window frame.

If necessary, shim the window in order to achieve a level and square window.

SILL IS CROWNED (Sashes Not Operating Properly):

Step 1- Open and close the sash. The sash should lock securely and not bind when opened or closed.

Additional 2” screws may be needed for the sill as necessary to relieve any crown condition.

Step 2- On Casement/Awnings: Place 2” screws approx. 2” from the keeper side down through the sill. If need be, the hinge plate screw can be removed and another 2” screw used to draw the sill down.

Sealant must be used on any screws secured through the sill.

The keeper located on the sash can be adjusted up or down, where applicable, to align with the locking mechanism.
9 APPLY HOLE PLUGS, SEALANT & STOPS

Apply sealant on exterior perimeter (all 4 sides) of window

Apply sealant on interior perimeter (all 4 sides) of window

The windows must remain shut and locked during the curing of the caulking to ensure windows will operate properly.

Step 1- Cover jamb installation holes with hole plugs.

Step 2- Close and lock the window.

Step 3- Using a high quality window sealant, place a bead of sealant around the entire perimeter of the exterior and interior of the window creating a barrier seal.

Sliders Only: DO NOT COVER the weeped drainage system on the exterior of bottom of window frame with caulking.

Step 4- Re-install the interior and exterior stops.

Step 5- Re-install screen.

FIELD MULLING VINYL WINDOWS

If your window unit has been shipped loose and you need to mull the windows together in the installation field, please follow each step listed that is the appropriate scenario to your application.

Tools You May Need:

- Power drill & assorted drill bits
- Pre-cut treated plywood (size depending on model of window)
- $\frac{1}{16}$" x $\frac{3}{8}$" Glazing Tape

MULLING VINYL DOUBLE HUNG WINDOWS:

Adds $\frac{3}{16}$" in overall width

$\frac{1}{4}$" x $\frac{3}{8}$" Glazing Tape - in 6 places

$\frac{1}{4}$" Hole Plug

$\frac{1}{4}$" x $\frac{1}{2}$" Snap Mullion

Step 1- Install $\frac{1}{4}$" x $\frac{3}{8}$" double sided glazing tape to inside of frame of each window and to each side of plywood (see illustration).

Step 2- Install (pre-cut to the window make size) treated plywood, making sure each piece adheres to the glazing tape.

Step 3- Install the snap mullion (or H mullion) to both the interior and exterior sides of both windows.

Step 4- From inside the home, install the #8 x 2" Phillips panhead installation screw in 3-4 locations staggered depending on height of window. If you use the factory prepped location on one window, make sure you stagger the other installation screw on the opposite window to prevent the screws from hitting.

Step 5- Install hole plugs in mulled side only. Proceed to

Proceed to Procedure 5 - “Dry Fit New Window”
**FIELD MULLING VINYL WINDOWS**

**MULLING VINYL SLIDERS:**

Step 1 - Install 1/8” x 3/8” double sided glazing tape to inside of frame of each window and to each side of plywood (see illustration).

Step 2 - Install (pre-cut to the window make size) treated plywood, making sure each piece adheres to the glazing tape.

Step 3 - Install the snap mullion (or H mullion) to both the interior and exterior sides of both windows.

Step 4 - From inside the home, install the #8 x 2” Phillips panhead installation screw in 3-4 locations staggered depending on height of window. If you use the factory prepped location on one window, make sure you stagger the other installation screw on the opposite window to prevent the screws from hitting.

Step 5 - Install hole plugs for the mulled side only.

Proceed to Procedure 5 - “Dry Fit New Window”

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**MULLING CASEMENTS/AWNINGS:**

Step 1 - Install 1/8” x 3/8” double sided glazing tape to one side of window frame (see illustration) and attach opposite window, making sure the glazing tape adheres to both window frames.

Step 2 - Install the snap mullion to both the interior and exterior sides of both windows.

Step 3 - From inside the home, install the #8 x 2” Phillips Panhead installation screw in 3-4 locations staggered depending on height of window. If you use the factory prepped location on one window, make sure you stagger the other installation screw on the opposite window to prevent the screws from hitting.

Step 4 - Install hole plugs for the mulled side only.

Proceed to Procedure 5 - “Dry Fit New Window”
**FIELD MULLING VINYL WINDOWS**

**MULLING DOUBLE HUNG TO PICTURE WINDOW:**

**Step 1** - Install ¼" x ⅛" double sided glazing tape to 2 sides on the double hung frame, 2 sides on the picture window frame and exterior sides of both pieces of plywood.

**Step 2** - Install (pre-cut to the window make size) treated plywood, making sure each piece adheres to the glazing tape. The double hung frame will use ⅜" x 3" Treated Plywood and the picture window frame will use ⅜" x 1⅜" Treated Plywood.

**Step 3** - Install the H mullion to both the interior and exterior sides of both windows.

**Step 4** - From inside the home, install the #8 x 2" Phillips panhead installation screws in the double hung frame and the #8 x 2½" Phillips Panhead installation screws in the picture window frame in 3-4 locations staggered depending on height of window. If you use the factory prepped location on one window, make sure you stagger the other installation screw on the opposite window to prevent the screws from hitting.

**Step 5** - Install hole plugs for the mulled side only.

**After the window units have been field mullled, proceed to Procedure 5 - Install Window**