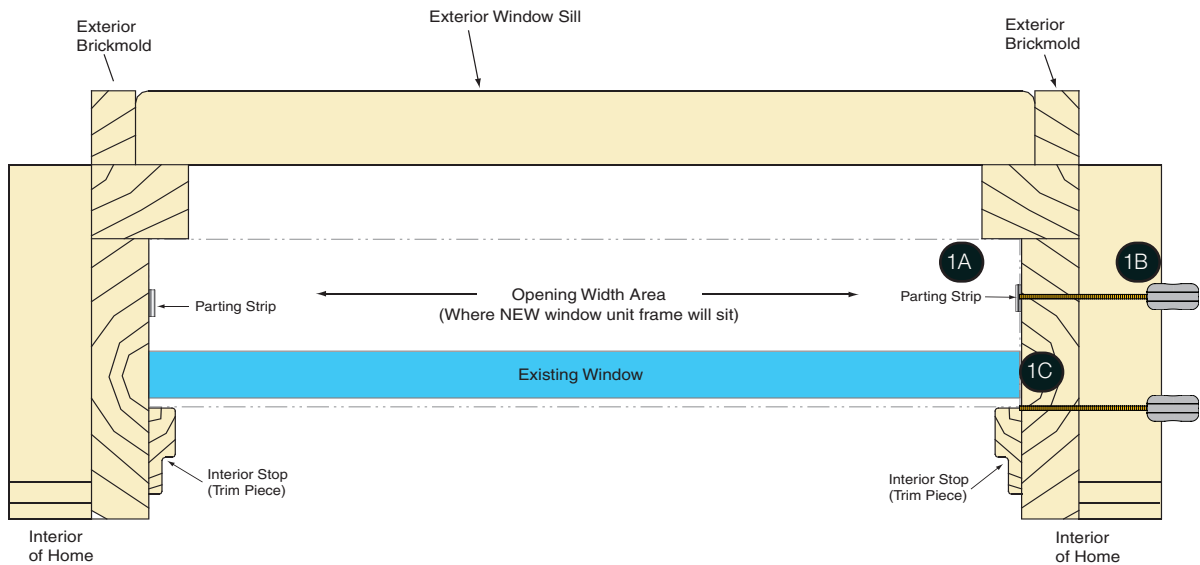


VINYL REPLACEMENT WINDOW MEASURING INSTRUCTIONS

Steps to Measuring an Opening

When you specify a vinyl replacement window, it is made to fit the particular opening measurements. It is very important to correctly measure the existing opening. There are 3 critical measurements: WIDTH, HEIGHT, and SQUARE. Please follow Steps 1 - 3 for measuring recommendations. Please follow Step 4 for level recommendations.



1 MEASURE WIDTH

The existing window will be inside the opening where you need to measure for the new vinyl replacement window. In order to get to the correct areas of measurement detailed on the above illustration, you will need to do the following:

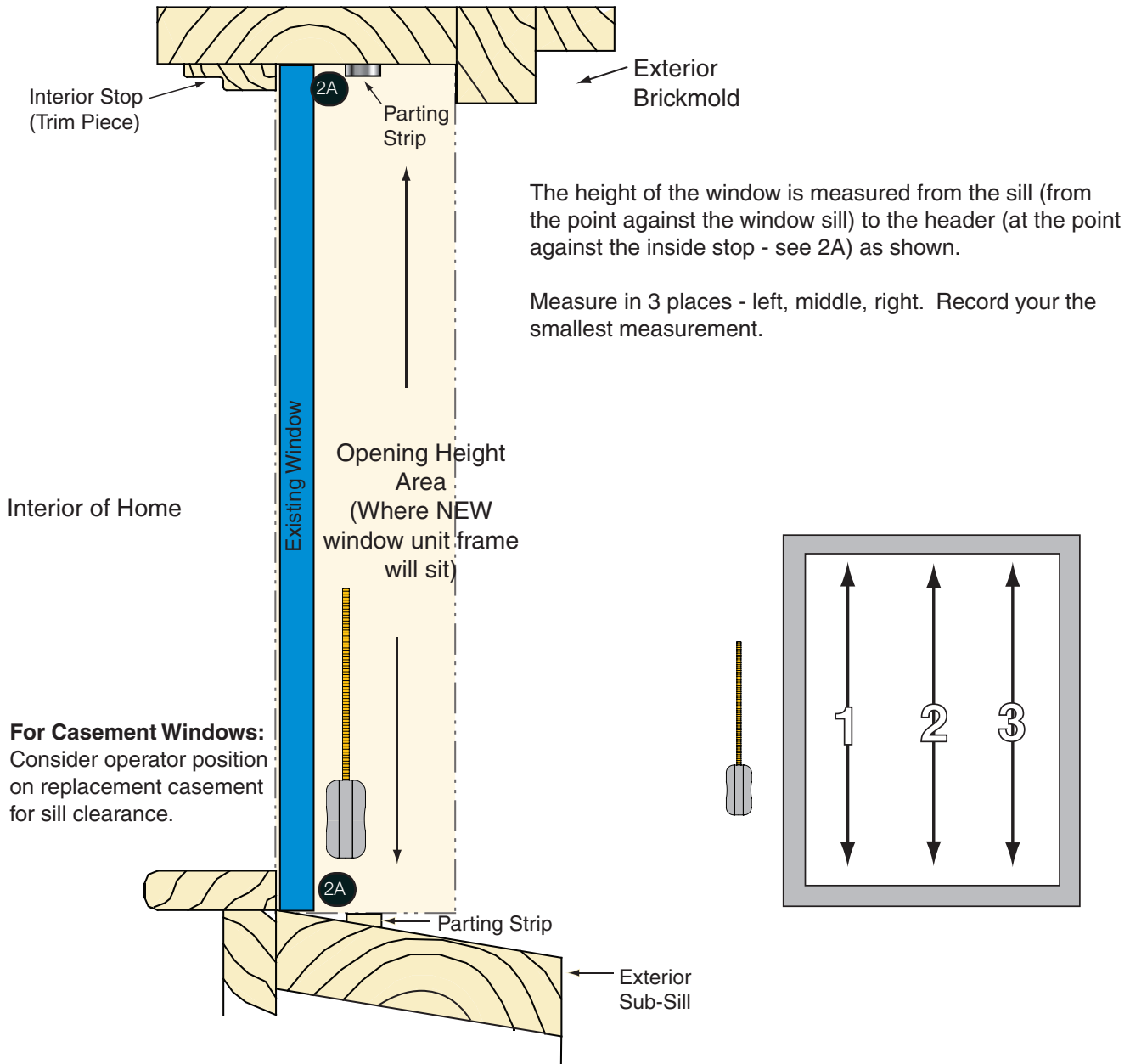
- Double Hung - Move the bottom sash up to get a clear opening
- Slider - Move the operating sash over to get a clear opening
- Fixed Window - Measure from inside the home behind the interior trim (where it starts and ends) (see 1C)

The existing window opening will probably contain a parting strip on each side of the jamb (see 1A). This parting strip will need to be removed from the opening when installing the new vinyl replacement window.

However, in order to achieve an accurate measurement for your new window, place your tape measure behind the parting strip (see 1B) (closest to the interior the house).

Measure in 3 places - top, middle and bottom. Record your measurements using the smallest measurement.

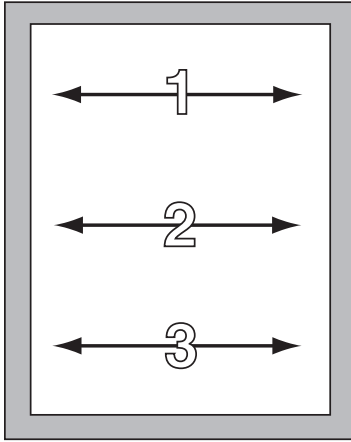
2 MEASURE HEIGHT



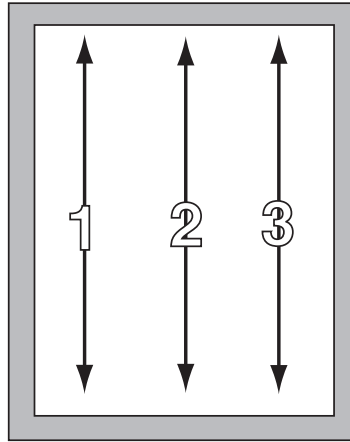
When a vinyl replacement window is ordered as opening size, it is reduced to an exact window size. See chart below to determine exact manufactured window size.

Window Types	Opening Width	(-) Mfg. Deduct	Exact Wdw Size Width	Opening Height	(-) Mfg. Deduct	Exact Wdw Size Height
Double Hung Slider Picture Casement Awning	36.00"	(-) 1/2" (.500")	35 1/2" (35.500")	60.00"	(-) 1/2" (.500") If Head Expander is ordered (n/a on casements/awnings): (-) 3/8" (.375")	59 1/2" (59.500") If Head Expander is ordered (n/a on casements/awnings): 59 5/8" (59.625")
Garden Bay & Bow Architectural Shapes	36.00"	(-) 1/2" (.500")	35 1/2" (35.500")	60.00"	(-) 1/2" (.500")	59 1/2" (59.500")

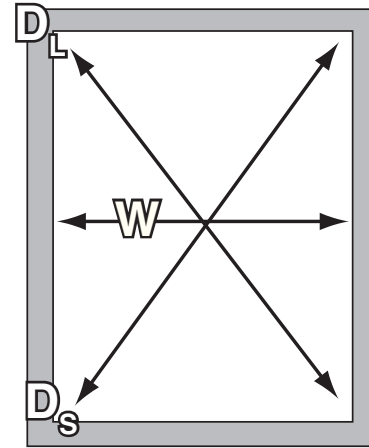
3 MEASURE FOR SQUARE



WIDTH



HEIGHT



SQUARE

Because some openings have become out-of-square over the years, it is important that the “squareness” of the opening is measured accurately. Measure the diagonals - upper left to lower right and upper right to lower left - from inside the stool to a point against the inside stop at the header. Record the two dimensions.

If the two dimensions are the same, then you can assume the opening is square. If the two dimensions are not the same, then it is possible the opening is not square.

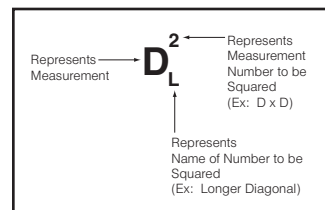
If the diagonal measurements are not square, you can follow the simple equation listed below:

Formula: $D_L^2 - D_S^2 = W$

D_L = Longer Diagonal

D_S = Shorter Diagonal

W = Width of Opening



The difference between the sum of the squares of the measured diagonals cannot be greater than the opening width.

Example: Opening is 36" wide by 48" high. The Long Diagonal is 60 3/8" (60.375") and the Short Diagonal is 60 1/8" (60.125").

Squaring the Long Diagonal: take the 60.375 x 60.375 = 3645.14
 Squaring the Short Diagonal: take the 60.125 x 60.125 = 3615.02
 Subtract the Difference: 30.12

The difference is LESS than the width of 36", so the opening is square enough to accept a vinyl window designed to fit a 36" x 48" opening.

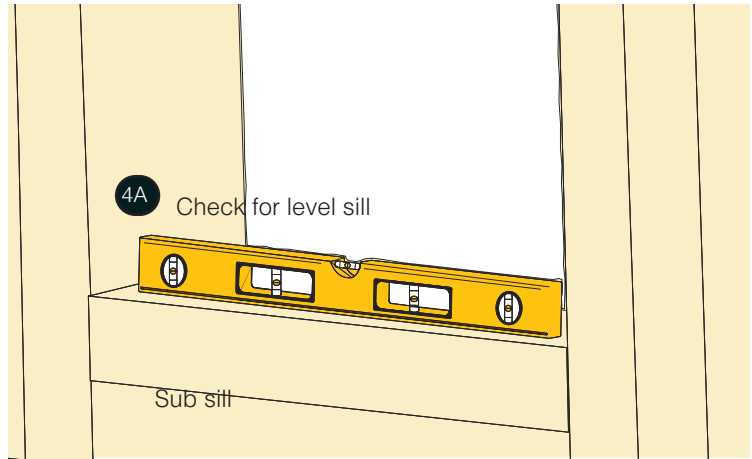
If the difference is OVER than the width of 36", then you will need to adjust your Opening size down 1/8" - 1/4" narrower; however keep in mind that our factory deduct is (-) 1/2" (.500) on WIDTH and (-) 1/2" (.500") on HEIGHT from your Opening size dimensions, so you may not be necessary for you to adjust this dimension any narrower.

4 CHECK FOR LEVEL

When installing a vinyl replacement window, it is important that the sill on which the window will be installed onto is level.

Sills that are not level can cause distortion to the frame of the window and problems in operation of the sashes.

Unlevel sills will cause sash of the window to not seal with the window frame. The sash will not lock tight losing the weatherstripping seal and causing air and moisture to travel into the home. If a sash is forced into a frame that is out of square, it will cause negative pressure on the corners, hardware and the glass itself.

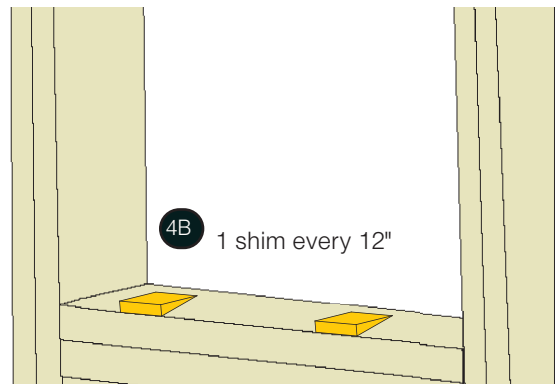


Solution: Shimming

The solution is to shim the bottom of the window unit until it is level.

The sill of the window opening must be supported in a straight and level position at a minimum of 2 shims at each end. Windows wider than 30 inches should be supported at a maximum of 1 shim every 12 inches.

Set window unit onto the shims and check sill with a level again and adjust thickness of shim as required to level the sill. Re-adjust side clearance if necessary. Shim both sides of window and adjust thickness of shims to make diagonal measurements equal with the window plumb and square (see page 3).



Please Note: Shimming should not raise the sill to the point where water can leak under the sill to rot the subsill or cause leakage into the house. A shimmed unlevel sill can cause part of the window to bottom out and become unsupported, thus bending under the weight. In this case, where there is a crowned sill, shimming becomes complicated due to the size and weight of the master frame of the window unit. You may want to consider installing some kind of shimming, hardening filler or a rigid aluminum "sub sill".

The only structural and long lasting solution is to establish a level opening across the entire sill *prior* to the window installation. If the opening is very old and looks to be rotted or having water damage, you may want to consider re-framing the opening using 2x6 studs to square the opening prior to installing the window. This means it will change the size of your opening size, but you will have a level and structurally stable sill.

