



11 Installation

ATTENTION! THE FOLLOWING INSTALLATION INSTRUCTIONS ARE SUPPLEMENTAL TO AND NOT A REPLACEMENT FOR BEST INDUSTRY PRACTICES. WASCO RECOMMENDS THAT THE GUIDELINES FOUND IN THE INSTALLATIONMASTERS™ TRAINING MANUAL²¹. FOR CONSTRUCTION TYPES NOT COVERED IN THIS DOCUMENT, WASCO RECOMMENDS CONSULTATION WITH A BUILDING SCIENCE PROFESSIONAL. WASCO IS NOT LIABLE FOR DAMAGES DUE TO IMPROPER INSTALLATION.

11.1 General

Whether the Geneo series windows are being installed for renovation or new construction, certain principles apply. The window must be installed plumb, level and square. The window must be properly shimmed and anchored to the rough opening. Steps must be taken to prevent and control water infiltration, and the window should be sealed against air infiltration.

ATTENTION! IN NO CASE SHOULD A NAILING FIN SUBSTITUTE FOR PROPER SHIMMING AND ANCHORING. THE WEIGHT OF THE WINDOWS IS TOO GREAT FOR THIS PRACTICE AND LONG TERM PROBLEMS WILL DEVELOP WITHOUT PROPER FASTENING TO THE ROUGH OPENING.

HINT: REMOVE ALL OPERATING SASHES BEFORE INSTALLATION IS ATTEMPTED. THE WEIGHT OF THE SASH IS TOO GREAT TO SQUARE THE WINDOW WITH THE SASH OPEN. IN MOST CASES, THE SASH CAN BE TAKEN OUT BY REMOVING A SINGLE PIN. THIS SMALL STEP WILL GREATLY REDUCE THE OVERALL TIME AN INSTALLATION TAKES.

11.1.1 Plumb, level and square

The window must be installed plumb to prevent the sash from swinging with gravity when open. The window must be installed level for proper water performance. Finally, the window must be installed square. If the window is out of square, the multiple lock points will not work properly.

11.1.2 Properly shimmed and supported

The window must be shimmed at the sill to ensure that it is level. Additionally, shims are necessary at certain locations to ensure the transfer of loads from the window frame to the structure.

Shims may be either fenestration-specific “horseshoe” shims (Figure 24), or cedar wedges. If wedges are used, two must be used together to prevent the frame from twisting.

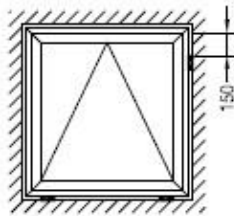
Figure 25 shows the location of shims for various window and door types available in the Geneo series. They are generally placed approximately 6” from any corner where load transfer takes place, and under any jamb or mullion. On operating windows, there will normally be an installation hole in this area. When this is the case, it is usually easier to first start the installation screw, and then slip the required shims in above the screw, in between the window frame and the rough opening.

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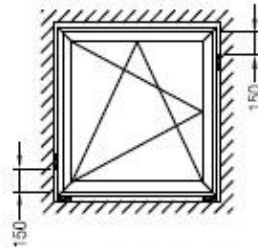


Figure 24: "Horseshoe" installation shims, also known as frame packers²²

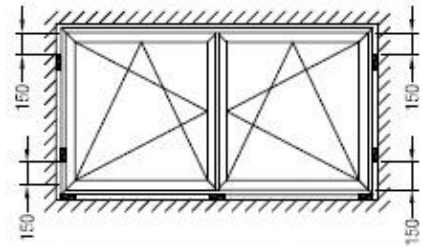
²² Picture courtesy of Glazpart Inc., 145 North Yeager Court, Pelham, Alabama 35124 USA, Tel: (205) 621 7845, glazpart@aol.com. Quality shims are available directly from this company.



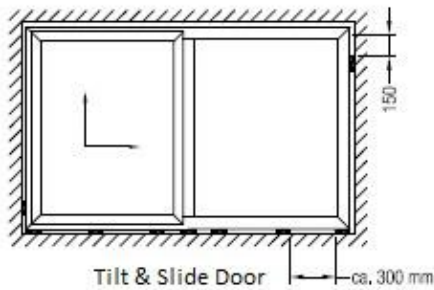
Hopper
(Supporting shims underneath the hinges)



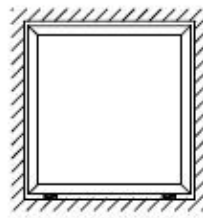
Tilt & Turn Window



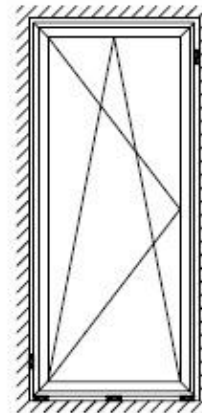
French Window or Door (Mullionless)
(Do not allow the shim in the area of the meeting rail to bow the frame.)



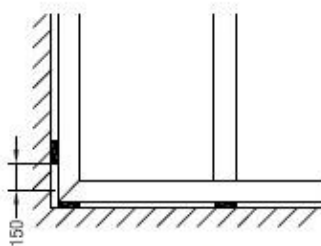
Tilt & Slide Door ca. 300 mm



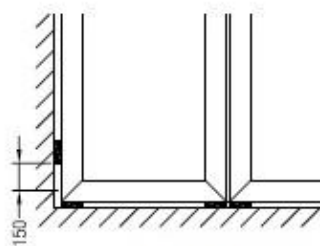
Picture Window
(Supporting shims approximately under the glazing shims)



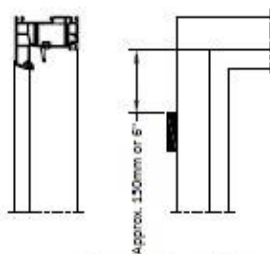
Single Entry, Terrace or Balcony Door



Mullion



Multiple Frame Coupled Together



■ — Supporting shim

Figure 25: Location of shims for various window types

11.1.3 Anchoring

Operating windows will have pre-drilled installation holes on the jambs and header. In each of these holes, a screw is used to anchor the window frame to the building's structure. Before being installed, place the screw through the screw cover. WASCO recommends #12 construction screws from SPAX or GRK fasteners.



Figure 26: Installation hole (left), and with screw and cover (right)

The sill should also be secured against movement. One method of doing this is to use installation straps (Figure 27 with window frame, Figure 23 with sill extension) spaced out so the maximum distance between the straps is 28". Alternatively, if the distance from the sill to the rough opening is not too great, one of the innermost-screws may be removed from all of the lock strikes along the sill, and replaced with a #8 x 3" screw. (Figure 28)



Figure 27: Geneo installation strap



Figure 28: Replacing tilt & turn keeper screw to anchor sill

Non-operating windows require the use of installation straps. These should be placed about 6" from the corners of the visible glass and along all four sides so that the maximum distance between straps is 28 inches.

11.1.4 Water control

Windows need to be installed with precautions to (a) prevent water from infiltrating around the window perimeter and (b) allow any water that does infiltrate to escape.

11.1.5 Air sealing

Air sealing may be accomplished through either the use of low-expansion foam specifically designed for windows and doors, or by caulking the inside of the window to the rough opening. Backer rod may be necessary if caulking. Backer rod and caulk are preferred.

When caulk will be used at the sealant, fiberglass bat should be used to insulate around the perimeter of the window before caulking.

CAUTION! IMPROPER SELECTION OF FOAM MAY DAMAGE THE WINDOWS.

HINT: FIBERGLASS BAT BY ITSELF WILL NOT PREVENT AIR INFILTRATION.



11.2 New construction

In almost all cases, the window or door should be installed with a sill pan to ensure any water which infiltrates the flashing can escape.

For conventional wood-frame construction, WASCO recommends a nailing flange. The window should be flashed in accordance with the InstallationMasters™ manual. It is also possible to flash directly to the face of the window.



11.3 Renovation

When the Geneo series is used for renovation, the window should be installed as a new construction window; i.e., the entire old window, including extension jambs, should be removed.

Before installing the Geneo series window or door, a sill pan should be installed. When installing the new window, it is important that the integrity of the building's water control layer be maintained.