

Navigating Installation Variables, Part 2

Navigating the variables



By
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Last month, we began this column mini-series on installation by describing the two most common wall types with respect to the configuration of their water resistive barrier—surface barrier and membrane/drainage systems—and introduced the two most common types of windows with regard to their mounting provisions (mounting flange and block frame). In this second installment, we summarize how these are properly mixed and matched.

Taking new construction applications as an example, the installation options could be organized in a matrix, in which the two principal window types are merged with the wall types. However, this is complicated by two factors. One, that either window type may or may not be mated with either an integral or non-integral brick mould (an exterior casing or trim such that the exterior brick, stucco or siding butts up to the window). And two, whether or not a wood buck (a framing assembly used to line the rough opening perimeter to provide an additional attachment surface) is used.

Mounting flange products

Mounting flange windows or doors, commonly called nail fin products, are attached with fasteners that extend through the mounting flange and penetrate the building sheathing into the rough opening framework. They are primarily used in buildings with a membrane/drainage system. Note that flush fin windows—those with a fin which is meant for sealing to the drainage plane and not to be penetrated by fasteners—must never be confused with mounting flange windows. If it doesn't have holes or slots for fasteners, the fin should not be penetrated unless directed by the manufacturer.

When dealing with membrane/drainage systems the first installation step is to apply sill flashing. After that, there are many variations which all are

important to consider and to install in the proper sequence to drive water to the exterior. In the case of mounting flange windows, one must determine:

- Whether the WRB will be installed before or after the window installation,
- Whether the jamb flashing will be installed over or behind the mounting flange, and
- Whether the flashing is self-adhering or mechanically attached.

Mechanically attached flashing is generally applied directly to the studs. Self-adhering flashing requires an underlayment of sheathing, or a backing-support frame of wood or strips of USB attached to the studs around the perimeter of the opening. Each of these decisions will impact the sequencing and the materials that can be used.

Sealant is applied next, to form a seal between the mounting flange and the surface to which it is attached.

Once these preparatory details are complete, the window is set in place using shims as needed and fasteners are attached through the flange into the substrate. Guidelines indicate the proper spacing of the fasteners to prevent frame distortion.

Mineral fiber or foam insulation may have to be applied from the interior into any gaps between the window frame and the rough opening, before trim is installed.

Block frame products

Block frame windows are most often used with surface barrier wall systems, although they can be used in membrane/drainage walls.

For surface barrier walls, a brick mould may or may not be used. This brick mould may be integral (sealed water-tight) or non-integral. Block frame products installed without brick mould and without the aid of a wood buck are generally sealed directly to the surface barrier wall. Block frame products with brick mould may



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be installed with or without a wood buck, with a perimeter sealant applied to the back side of the brick mould prior to setting the unit in place.

There are additional details that apply for correct installation of “specialty” windows such as bay, bow, greenhouse/garden and special shapes. Most of these relate to providing additional support both during installation and after.

Doors follow similar installation sequences, although details differ in some respects.

As one might expect, there are additional variations on these basic installation themes when a window or door is to be installed in an existing building to replace an old, deteriorated unit, either as a whole frame replacement or retrofit utilizing the existing window frame.

Included here is an overly simplified list of instructions for window installation. In all cases, it is important to follow the manufacturer’s written installation instructions. All these methods and variations for new construction as well as for replacement installation, which seem confusing on the surface, are covered more completely in step-by-step detail with ample illustrations within AAMA’s InstallationMasters program manuals. ■

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