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COLORADO STATE UNIVERSITY EXTENSION SERVICE

Installing storm windows and doors

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no. 4.656

Quick Facts

- Windows and doors can be sources of significant heat loss from a dwelling.
- Installation of storm windows and doors can reduce air leakage and greatly improve the insulating properties of windows.
- Plastic storm windows and doors are low-cost energy conservation methods that can pay for themselves quickly in energy savings.
- More permanent combination storm windows and doors have a higher initial cost and may take from six to ten years to pay for themselves in energy savings.
- Plastic storm windows and doors can be installed with a minimum of tools and skills; combination storm windows and doors should be installed by someone with experience.
- Quality of construction affects the strength and performance of storm windows and doors; corner joints are a good place to check construction quality.
- Quality of hardware should be evaluated, since it can have a direct effect on durability, and is a good indicator of overall construction quality.

Windows and doors can be sources of significant heat loss from a dwelling. Loose-fitting windows and doors will cause air leakage. Glass has very low insulating properties.

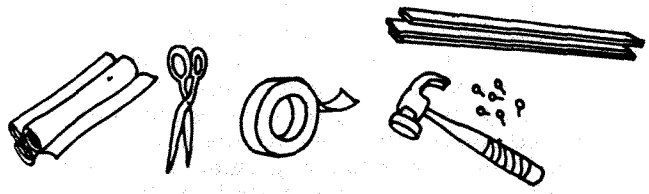
Installation of storm windows and doors can reduce air leakage and greatly improve the insulating properties of windows. Plastic storm windows and doors are low-cost energy conservation methods that can pay for themselves quickly in energy savings.

More permanent combination storm windows and doors have a higher initial cost and may take from six to ten years to pay for themselves in energy savings.

Plastic storm windows and doors can be installed with a minimum of tools and skills. Combination storm windows and doors should be installed by an experienced handy person or contractor.

Installing Plastic Storm Windows and Doors

Plastic sheeting can be tacked over the outside of windows or screen doors or taped over the inside instead of installing permanent type storm windows or doors.



Tools and materials needed—Six-mil thick polyethylene plastic in rolls or kits; shears to cut and trim plastic; two-inch-wide (5-centimeter) masking tape OR hammer and nails and ¼" x 1¼" (6 X 32 millimeter) wood slats.

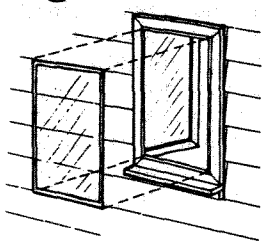
Installation—The width of the larger windows or doors in the house should be measured to determine the width of the plastic rolls to buy. The length of all windows and doors also should be measured to see how many linear feet and, therefore, how many rolls or the kit sizes are needed for purchase.

Plastic should be attached to the inside or outside of the frame so that it will block air leaks around the movable parts of a window or screen on a door. If the plastic is to be attached to the outside, slats and tacks should be used. If the plastic is to be attached to the inside, masking tape will work.

Installing plastic to the inside of the window or door is easier and will provide greater protection to the plastic. Outside installation is more difficult, especially on a two-story house, and the plastic is more likely to be damaged by the elements.

Plastic should be installed tightly and securely and all excess removed. Besides looking better, this will make the plastic less susceptible to deterioration during the course of the winter.

Installing Single-Pane Storm Windows



Storm window suppliers will build single-pane storm windows to specific measurements that can then be installed by the homeowner. Another alternative is

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[1/] *Lloyd Walker, CSU research associate, agricultural engineering; fact sheet adapted from "In the bank...or up the Chimney," U.S. Department of Housing and Urban Development (revised 8/1/80)*

to construct the storm windows with aliminum do-it-yourself materials available at most hardware stores.

Installation—The homeowner should determine how the windows will sit in the frame. Measurements need to be taken of the outside dimensions of the storm windows. These should be as accurate as possible, with ⅛" (3.2 mm) along each edge allowed for clearance. This should be done carefully, because the window will not fit if there are any errors in measurement.

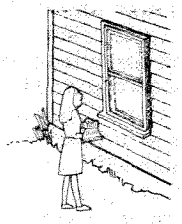
When the windows are delivered, the actual measurements should be checked carefully against the original order. The windows then can be installed and fixed into place with movable clips so that they may be removed during the summer.

Advantages and disadvantages—Single-pane storm windows aren't as expensive as the double-track or triple-track combination windows. The major disadvantage of single-pane windows is that they can't be opened easily after they are installed.

Selection and quality judgment—A mill finish (plain aluminum) on the frame will oxidize quickly and degrade the appearance. Windows with an anodized or baked enamel finish look better.

The side of the aluminum frame which touches the window frame should have a permanently installed weatherstrip or gasket to seal the crack between the window and the single-pane storm window frames.

Installing Combination Storm Windows



Triple-track combination (windows and screen) storm windows are designed for installation over double-hung windows. They are permanently installed and can be opened any time with a screen slid into place for ventilation.

Double-track combination units also are available and at less cost. Both types of combination storm windows are sold almost everywhere and can be purchased with or without the cost of installation.

Installation—Homeowners can save a few dollars (10 to 15 percent of the purchase price) by installing the windows themselves. A few tools are needed—caulking gun, drill and screwdriver. In most cases, it will be easier to have the supplier install the windows, although it will cost more.

The supplier first will measure all the windows where the storm windows are to be installed. It will take anywhere from several days to a few weeks to make up the order and for the supplier to return to make the installation.

The actual installation should take less than one day, depending on how many windows are involved. Two very important items should be checked to make sure the installation is properly done. Make sure that both the window sashes and screen sash move smoothly and seal tightly when closed after installation. Poor installation can cause misalignment.

There should be a *tightly* caulked seal around the edge of the storm windows. Leaks can hinder the performance of storm windows a great deal.

NOTE: Most combination units will come with two or three ¼-inch (6-mm) diameter holes (or other types of vents) drilled through the frame where it meets the window sill. This is to keep winter condensation from collecting on the sill and causing rot. Keep these holes clear and drill them yourself if the combination units don't already have them.

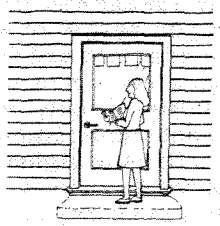
Selection and quality judgment—A mill finish (plain aluminum) on the frame will oxidize, reducing ease of operation and degrading the appearance. An anodized or baked enamel finish is better.

Quality of construction affects the strength and performance of storm windows. Corner joints are a good place to check construction. These should be strong and air-tight. Normally, overlapped corner joints are better than mitered. If you can see through the joints, they will leak air.

Storm windows are supposed to reduce air leakage around windows. The depth of the metal grooves (sash tracks) at the side of the window and the weather-stripping quality make a big difference in how well storm windows will do this. Compare several types before deciding on which storm windows to select.

The quality of locks and catches and other hardware has a direct effect on durability and is a good indicator of overall construction quality.

Installing Combination Storm Doors



Combination (windows and screen) storm doors are designed for installation over exterior doors. They are sold almost everywhere, with or without the cost of installation.

Installation—Homeowners can save a few dollars (10 to 15 percent of the purchase price) by installing doors themselves. A few tools are needed—hammer, drill and screwdriver, plus weatherstripping. In most cases, it will be easier to have the supplier install the doors, although it will cost more.

The supplier first will measure all the doors where the storm doors are to be installed. It will take anywhere from several days to a few weeks to make up the order and for the supplier to return to make the installation. The actual installation should take less than half a day.

Before the installer leaves, be sure the doors operate smoothly and close tightly. Check for cracks around the jamb and make sure the seal is as air-tight as possible. Also, remove and replace the exchangeable panels (window and screen) to make certain that they fit properly and with a weather-tight seal.

Selection and quality judgment—A mill finish (plain aluminum) on the door will oxidize, reducing ease of operation and degrading the appearance. An anodized or baked enamel finish is more satisfactory.

Quality of construction affects the strength and effectiveness of storm doors. Corners are a good place to check construction. They should be strong and air-tight. If you can see through the joints, they will leak air.

Storm doors are supposed to reduce air leakage around doors. Weatherstripping quality makes a big difference in how well storm doors will do this. Compare several types before deciding on which storm doors to select.

The quality of hardware—locks, hinges and catches—should be evaluated, since it can have a direct effect on durability, and is a good indicator of overall construction quality.

Storm doors of wood or steel can be purchased within the same price range as the aluminum variety. They have the same quality differences and should be similarly evaluated. The choice between doors of similar quality, but of different material, is primarily up to individual personal taste.