Energy Sense: Storm Windows and Doors

Cooperative Extension South Dakota State University

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ENERGY SENSE:

storm windows and doors

Cooperative Extension Service
South Dakota State University
U.S. Department of Agriculture
Windows and doors cover 20 percent of the sidewalls in an average home. Heat losses through and around windows and doors may be responsible for as much as 50 percent of your fuel bill.

Storm windows and storm doors cut heat loss by creating dead air space between exterior and interior windows and doors. This air space—it should be at least 3/4"—is the actual energy saver. In the north, where severe winters are common, you can realize 10 to 30 percent savings in heating costs by installing tight-fitting storm windows and doors. Cover all windows and entries to heated areas of the home.

There are three basic types of storm windows and doors: plastic, single pane, and combination screen and storm (triple track combination). To be worthwhile, all must be installed with weather stripping or gaskets along the crack between the storm unit and the window or door frame.

**Plastic sheeting** of at least 6-mil thickness can be cut slightly larger than the area to be covered and attached to the window or door with masking tape, or preferably, 1/4" wood slats. Damage from ice and wind can be avoided if the plastic is mounted on the inside of the window. Usually, the installation of plastic storm sash is a do-it-yourself job. It is economical and efficient for renters and homeowners. If used on the outside of the window, new plastic should be installed each year. If used on the inside, several years' use from the plastic may be possible.

**Single pane** storm windows and doors are usually stored during the summer and put on each winter. Check seasonally and replace cracked putty. Paint regularly to preserve the wood frame.

An experienced contractor is the usual source for single pane storm windows and doors. However, if you are skilled in carpentry, you can make them. Windows and doors are not projects for the beginning do-it-yourselfer. A thorough window insulation job with plastic and weather stripping is more effective than ill-fitting, single pane storm sash.

**Combination** screen and storm windows and doors remain permanently in place. Self-storing screens are incorporated into the units. Therefore screens and storms can be interchanged easily. Combination units are available in steel and in plain and baked aluminum finishes.
The baked aluminum finish requires the least maintenance and is the most durable. Properly fitted combination units have vents in the frame where the storm sash meets the sill. These vents keep condensation from collecting and causing rot and should always be kept clear. If your present combination units do not have such vents, you should drill them into the frames.

The construction and, usually, installation of combination storm windows and doors are jobs for an experienced, reputable contractor. The marketplace abounds with combination units of varying quality and cost; check out several before you buy. Be watchful for the quality of hardware, corner joints, and weather stripping. For safety's sake, insist on safety glass or rigid plastic for storm doors.

Once your choice is made, a contract between you and the contractor should be signed before work is begun. The contract should specify materials, cost, work content, and warranty.

Financing and Long-Term Savings

Storm windows and doors conserve energy as well as add to the value of a home. You may wish to finance the installation of storm windows and doors with a home improvement loan. Obtain estimates before visiting a bank.

It is estimated that storm windows and storm doors will pay for themselves in seven to ten years or less depending on energy costs (based on 12% interest charges). After that, they will return a dividend of 13 to 18 percent. A smart way to save energy and dollars!

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### Types of Storm Windows and Doors

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<th></th>
<th>Plastic</th>
<th>Single pane</th>
<th>Combination</th>
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<tbody>
<tr>
<td>Initial cost</td>
<td>low</td>
<td>medium</td>
<td>high</td>
</tr>
<tr>
<td>Durability</td>
<td>low</td>
<td>medium-high</td>
<td>high</td>
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<tr>
<td>Maintenance - time</td>
<td>high</td>
<td>high</td>
<td>low</td>
</tr>
<tr>
<td>Maintenance - cost</td>
<td>medium</td>
<td>medium</td>
<td>low</td>
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<tr>
<td>Visibility</td>
<td>low-medium</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>Ease in opening</td>
<td>low</td>
<td>low</td>
<td>high</td>
</tr>
<tr>
<td>Ease of installation</td>
<td>low</td>
<td>medium</td>
<td>medium</td>
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