

Weather Stripping and Caulking Homes

Money-Saving Do-It-Yourself Projects

Both old and new homes often have many cracks and openings around windows and doors. These cracks are prime sources of heat loss and cause annoying drafts. Most doors fit loosely so they will open and close smoothly. A 1/8-inch crack around a standard front door is equivalent to a 4-by 7-inch opening, something that would not be tolerated in a home. In a properly-insulated home, air leakage can account for up to one-third of the heating costs—a good reason for weather stripping and caulking.

Caulking Cracks and Openings

Caulking is one of the easiest and most economical do-it-yourself projects to tighten a home against air leakage and energy wastage. Use caulking wherever two different materials or parts of a house meet at a stationary joint, (windows; doors; foundation sills; chimneys; vents; pipes; water faucets; electric, gas, and telephone utility entrances).

Caulking compounds are available in both 11-ounce cartridges that fit conventional caulking guns and in pressurized aerosol cans. There are several basic types of caulk compounds.

Elastomeric caulks include silicones, polysulfides, copolymers, and polyurethanes. These are relatively easy to apply, give a neat bead, stick to most building surfaces, are

long lasting, do not harden (will slightly expand and contract), and are more expensive. Some caulks require primers on porous surfaces. Some accept paint, while others do not.

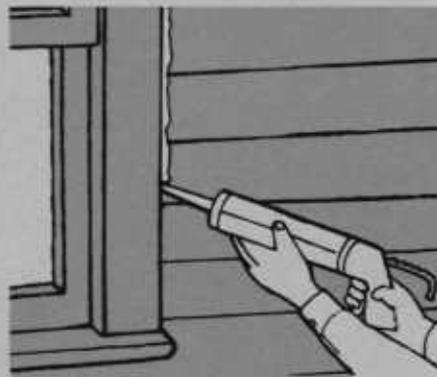
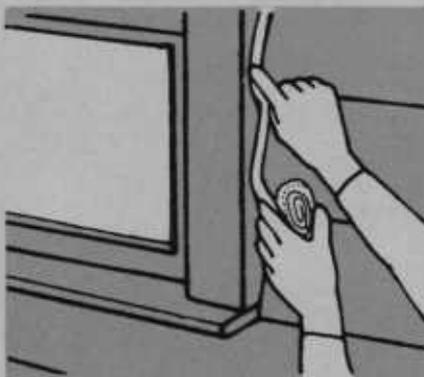
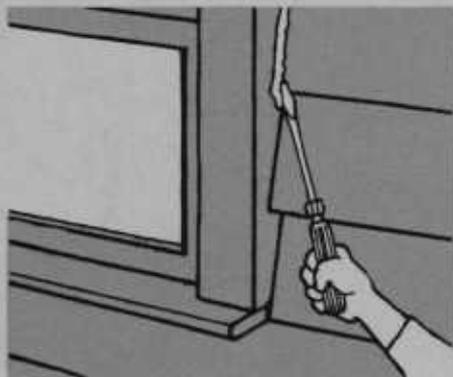
Latex, butyl, or polyvinyl base caulks are easy to apply, bond to most surfaces, accept paint, are moderately durable, and are in medium-price range. Acrylic latex in premium grade is recommended for most applications.

Oil and resin base caulks are readily available; bond to wood, masonry and metal; have a short life (2 to 3 years); are very low in elasticity; and are lowest in cost.

Filler (oakum rope, caulking cotton, sponge rubber, self-sticking cord, or insulation scraps) should be used to fill extra wide cracks (1/2-inch or wider) before sealing with regular caulking.

Foam caulking with polyurethane base is easily dispensed from pressurized cans, expands as it cures to fill cracks tightly, and accepts paint or stain.

Installation—Remove chipping or flaking paint, dirt, and deteriorated caulk before applying new caulk. Stuff filler in extra wide cracks as needed. Lay a firm bead that overlaps both sides of crack for a tight seal and firm adherence to substrate. Rough beads can be smoothed out or squeegeed off with moistened finger tip.



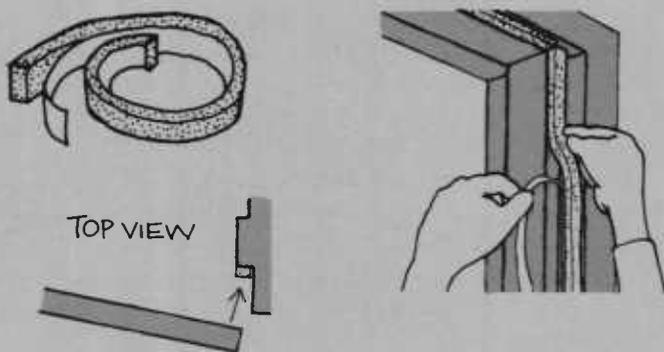
Weather Stripping Doors

Each type of weather stripping has its own level of effectiveness, durability, and degree of installation difficulty. Select one you feel is best for you. Installations are the same for both sides and top of door. A different, more durable material is needed for the threshold.

Nearly everyone can install most types of commonly-available weather stripping for doors. Generally, you'll need hammer, measuring tape, screw driver, knife/shears, nails/screws, tin snips, hand saw, hacksaw, and plane to do a satisfactory job.

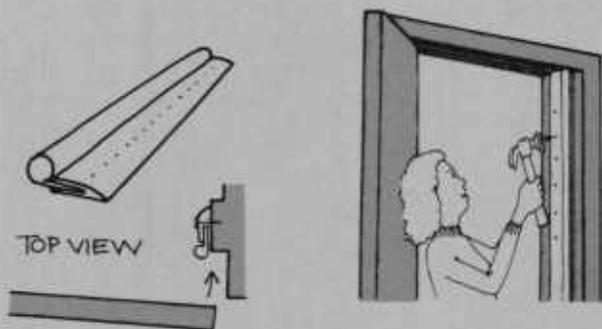
Adhesive-Backed Foam—Extremely easy to install. Invisible when door is closed. Not very durable; becomes unsightly when worn. More effective on doors than windows.

Installation—Stick foam to inside face of jamb.



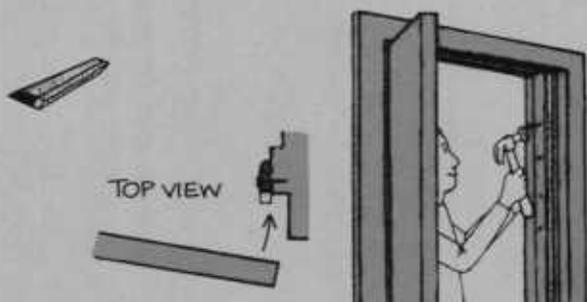
Rolled Vinyl with Aluminum Channel Backing—Easy to install. Visible when installed. Durable.

Installation—Nail strip snugly against door on casing.



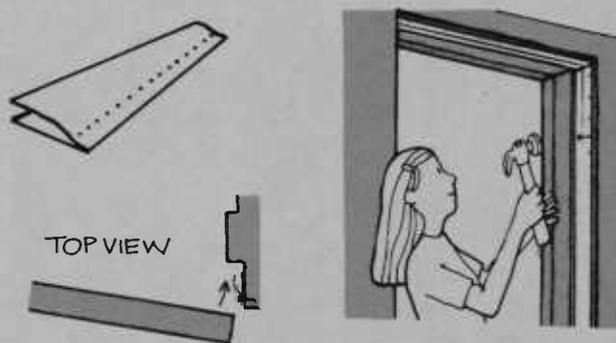
Foam Rubber with Wood Backing—Easy to install. Visible when installed. Not very durable.

Installation—Nail strip on door casing so it fits snugly against closed door. Space nails 8 to 12 inches apart.



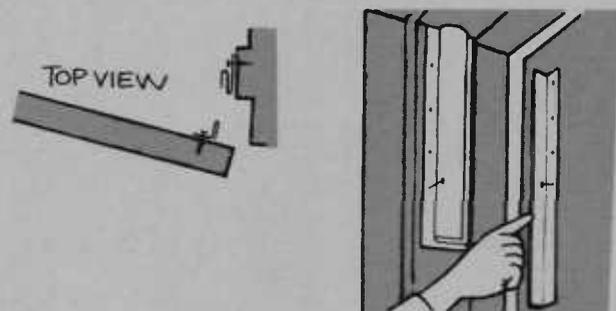
Spring Metal—Easy to install. Invisible with door closed when installed. Extremely durable.

Installation—Cut to length and tack in place. Lift outer edge of strip with screwdriver after tacking for better seal.



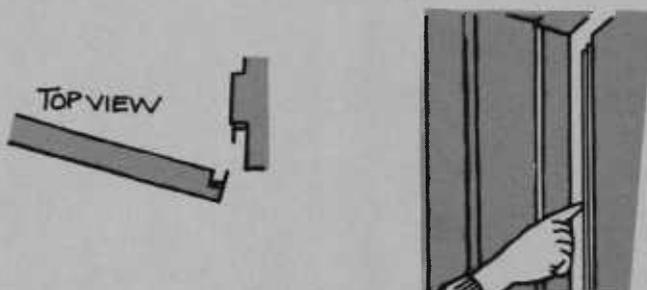
Interlocking Metal Channels—Difficult to install (alignment is critical). Visible when installed. Durable but subject to damage. Excellent seal.

Installation—Cut and fit strips to head of door first: male strip on door, female on head. Then hinge side of door: male strip on jamb, female on door. Finally, lock side of door, female on jamb.



Fitted Interlocking Metal Channels (J-Strips)—Very difficult to install. Exceptionally good weather seal. Invisible when installed. Not exposed to possible damage.

Installation—Should be installed by a carpenter. Note: Need router, special stapler and careful craftsmanship for proper fit.



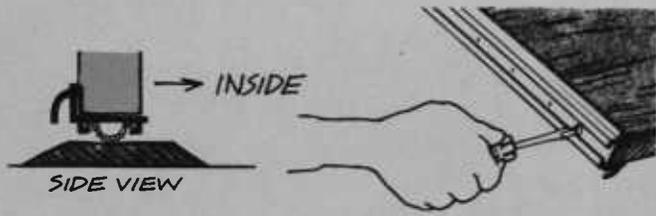
Sweeps—Aluminum or stainless steel with sponge, felt or vinyl. Useful for flat thresholds. May drag on carpet or rug.

Installation—Cut sweep to fit 1/16-inch in from edges of door. Some sweeps are installed on inside and some outside— check instructions for your particular type.



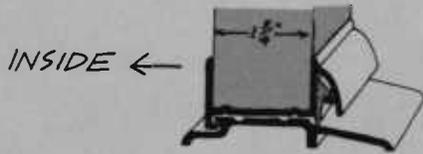
Door Shoe—Useful with wooden threshold that is not worn. Very durable. Difficult to install (must remove door). Includes drip cap to shed rain.

Installation—Remove door and plane or saw required amount off bottom. Cut to door width. Install by sliding vinyl out and fasten with screws.



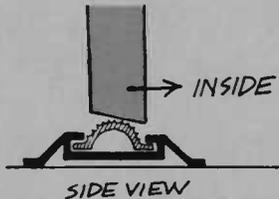
Interlocking Threshold—Very difficult to install. Exceptionally good weather stripping seal.

Installation—Should be installed by a skilled carpenter.



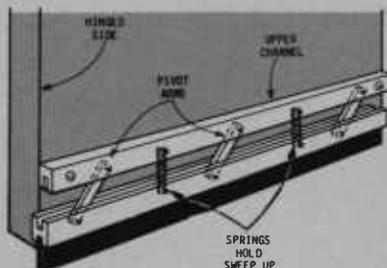
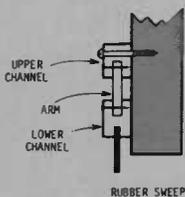
Vinyl Bulb Threshold—Useful where there is no threshold or wooden one is worn out. Available in different heights. Difficult to install. Vinyl will wear but replacements are available.

Installation—Remove door and plane or saw required amount off bottom. Bevel bottom about 1/4-inch to seal against vinyl. Be sure bevel is cut in right direction for opening.



Automatic Sweep—Flips up when door is opened. Aluminum with vinyl, neoprene, or felt drop. Useful where threshold is flat or there is no threshold. Durable. Precise adjustment important.

Installation—Screw onto outside of in-swinging door. Adjust so when door closes, striker plate causes sweep to lower.



Weather Stripping Windows

You'll need a measuring tape, tin snips or heavy-duty scissors, screwdriver, hammer, and appropriate nails/screws to complete a window weather stripping project.

Reaching upper story windows may be a problem. You should be able to do all work from inside, but avoid awkward leaning out of windows when tacking weather stripping into place. If you use a ladder, observe these precautions:

- Level and block ladder
- Place ladder so space between bottom of ladder and wall is at least one-fourth of vertical length
- Have a helper steady ladder
- Carry tools and other materials in tool pocket or attached to belt to free both hands for climbing
- Raise and lower heavy materials with a rope
- Always face ladder when going up or down
- Move ladder to where work can be done without reaching far to either side of ladder.

Before starting a window weather stripping project, make sure moving parts of your windows (sash) and channels in which sash slides are sound so they will hold small nails used for securing weather stripping. If badly rotted, consider replacing entire window unit. Consult a lumberyard or window dealer for an evaluation or cost estimate.

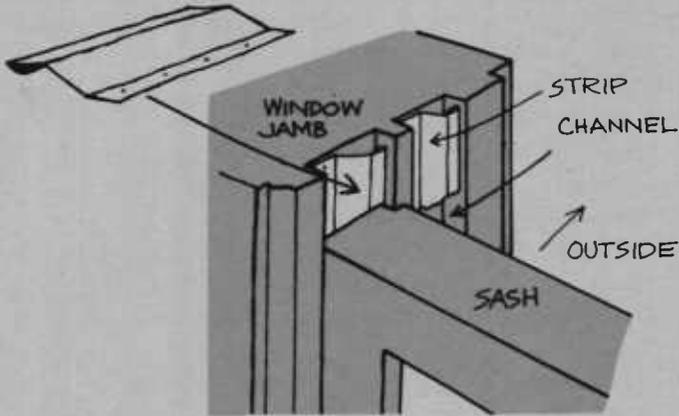
Weather stripping for windows is available either by the running foot or in kit form for each window. In either case, list windows and measure each to find total length of weather stripping needed. Measure total distance around edges of moving parts of each window and complete list below:

Type	Size	Quantity	x	Length req'd	=	Total
Double-hung 	1	()	x	()	=	()
	2	()	x	()	=	()
	3	()	x	()	=	()
Casement 	1	()	x	()	=	()
	2	()	x	()	=	()
	3	()	x	()	=	()
Tilting 	1	()	x	()	=	()
	2	()	x	()	=	()
	3	()	x	()	=	()
Sliding pane 	1	()	x	()	=	()
	2	()	x	()	=	()
	3	()	x	()	=	()

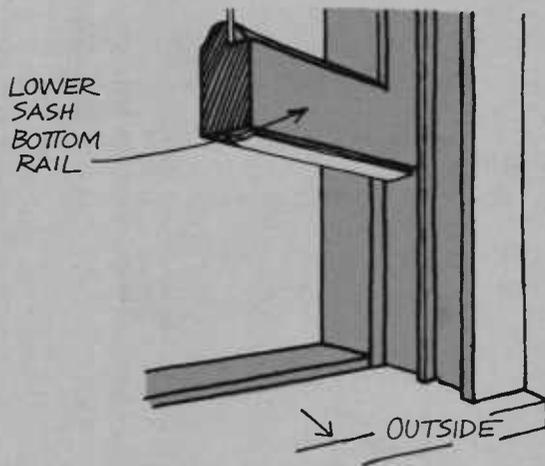
Total length of weather stripping required _____

Thin Spring Metal Strips—Made of aluminum, brass, or stainless steel. Very durable. Installed in channel of window. Virtually invisible. Somewhat difficult to install, especially on tight-fitting windows. Select pre-drilled stock if possible.

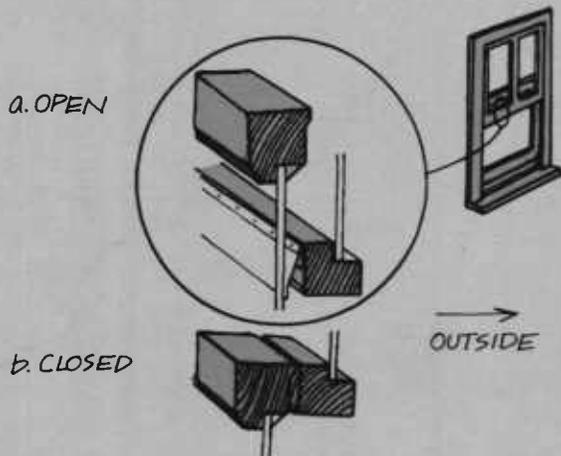
Installation (channel)—Install by moving sash to open position and sliding strip in between sash and channel. Tack in place on casing. Do not cover pulleys in upper channels.



Installation (lower sash)—Install strips full width of sash on bottom of lower sash bottom rail and top of upper sash top rail.

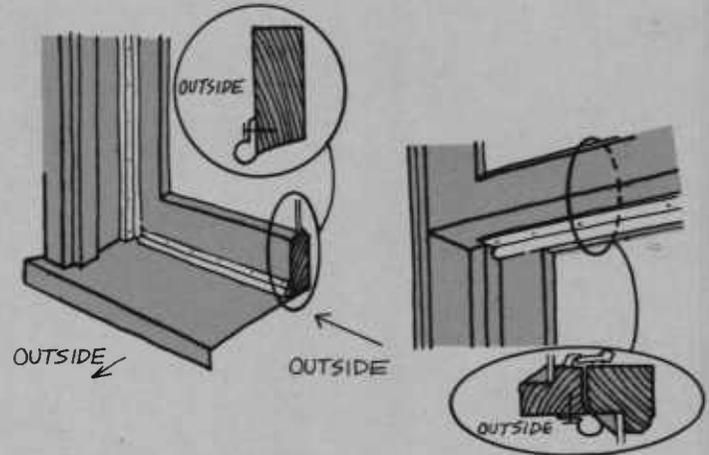


Installation (upper sash)—Attach a strip full width of window to upper sash bottom rail. Countersink nails slightly so they do not catch on lower sash top rail.



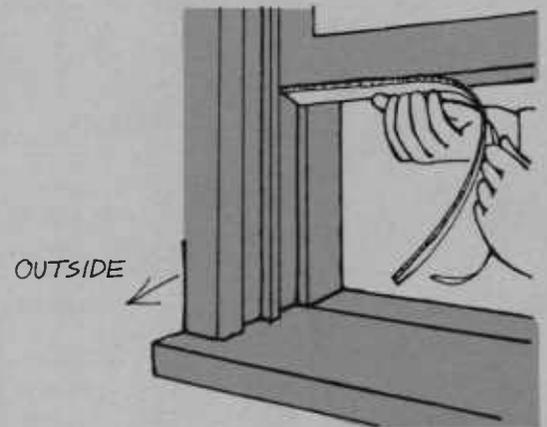
Rolled Vinyl or Rigid Strip Gasket (with or without metal backing)—Visible when installed. Easy to install. Durable.

Installation—Nail vinyl strips on double-hung windows as shown. A sliding window is much the same and can be treated as a double-hung window turned on its side. Casement and tilting windows should be weather stripped with vinyl nailed to window casing so roll is compressed as window closes.



Pliable Gaskets—Foam rubber attached with adhesive backing or flexible vinyl, rubber, or felt attached with brads or staples. Easy to install. Out of sight. Breaks down and wears rather quickly. Not as effective a sealer as metal strips or rolled vinyl. Never use where friction occurs.

Adhesive-Backed Foam Vinyl Strip—Install adhesive-backed foam, on all types of windows, only where there is no friction. On double-hung windows, this is only on bottom (as shown) and top rails. Other types of windows can use foam strips in many more places.



Note: Be sure to allow for waste. If in kit form, select kit intended for your window type and size. Jalousie-type windows require a special weather stripping material—a clear vinyl channel that slips over edge of each slat of glass. Finding correct size and shape may be difficult, but installation is quick and simple.

Adapted from a Department of Housing and Urban Development publication, "In the Bank—Or Up the Chimney," by Hugh J. Hansen, Extension agricultural engineer, Oregon State University.

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