

# Homeowner's Guide to Draft-proofing

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## Why Should You Draft-proof Your Home?

### Save Money

It can be expensive to heat a home in Nova Scotia's climate. Draft proofing a house to reduce air leakage is often the least expensive way of achieving significant savings on your heating bill.

### Increase Comfort

A thorough job of caulking and weather-stripping will reduce cold drafts and make your home more comfortable.

### Save Energy

Approximately 60% of Nova Scotia's annual residential energy use goes towards heating our homes. Much of that energy can be saved. Retrofitting your home will help save our valuable energy resources, and will cost less than producing new energy.

## Major Sources of Air Leakage in Homes

- Foundation wall and floor assembly
- Exterior walls and floors
- Rough openings around windows and doors
- Electrical boxes for outlets and switches
- The attic hatch and frame
- Where the plumbing vent pipe enters the attic
- Ventilation intakes and exhausts (dryer vents, central vacuum exhausts, etc.)
- Where an interior chimney enters the attic
- Behind a bathtub or shower enclosure
- Where plumbing pipes or drains leave the building
- Overhangs for bay windows and cantilevered floors
- Plugs and switches on exterior walls

## How to Locate Air Leaks

The first step in draft-proofing is to determine where the air is leaking in to and out of your home. The best way to do so is with a Home Energy Assessment from Efficiency Nova Scotia. As part of this assessment, a blower door

test is conducted on the home. This involves a large fan that depressurizes the house and identifies the locations of drafts.

Another way to detect these air leaks is to use a draft detector. This is a simple device you can make at home by simply attaching a piece of tissue or light plastic to a coat hanger with clothespins. When held steady in the path of a draft, the plastic or tissue will flutter. As an alternative, you could use the smoke from an incense stick as your indicator.

Air leakage is best detected when the air pressure difference between the inside of the house and the outdoors is greatest. Choose a cool, windy day in the fall, or a cold winter day. Turn down the thermostat to prevent the furnace fan from affecting the test. Turn on all exhaust fans (including the clothes dryer) that are vented to the outdoors to increase air leakage. Move your draft indicator around window and door edges, electrical outlets, and other potential sources of air leaks. Make note of where your indicator flutters the most.

## Can You Over Seal Your Home?

In most houses, there is ample room for improvement in air sealing, so all efforts should be made to draft-proof as much as possible.

Potential problems include:

- Humidity levels in the house may become excessive
- The concentration of pollutants may rise to unhealthy levels
- Fuel burning appliances (e.g. fireplaces, woodstoves, oil and propane furnaces or hot water tanks, etc.) may not receive an adequate supply of air to function properly and could back draft combustion products into the home.

### Humidity Levels

Low humidity levels in your home during the heating season may cause static electricity, dust and dryness of the skin and throat. Draft-proofing will increase humidity levels and reduce these problems.

On the other hand, your home's humidity levels during winter may already be high. This encourages the growth of moulds and spores, and can create health problems for some people. Excessive humidity levels may also cause

significant damage to the structure of the house. If your home has excessive humidity levels, it is recommended that this problem be solved before undertaking any additional draft-proofing.

**For more information, see “A Homeowner’s Guide to Moisture and Humidity” at [efficiencyns.ca](http://efficiencyns.ca)**

### Pollutants

The air in a house may contain numerous pollutants. If concentrations of these pollutants increase, the occupants’ health or comfort may start to be affected. The safe concentration limit varies considerably from one type of pollutant to another and from one person to another.

Fortunately, it is extremely difficult to seal a home to the point where airborne pollutants become a problem, especially if the home has an effective ventilation system. If you plan an extensive job of draft-proofing, ensure that your home is equipped with an adequate ventilation system.

### Fuel-burning Appliances

Air is required by fuel burning appliances for efficient burning and to remove the resulting combustion by-products up the chimney or flue.

In some homes, fuel burning appliances are provided with their own air supply ducted directly from the outdoors. In these cases draft-proofing should not affect the performance of the appliance.

In most homes, the fuel burning appliances are not provided with their own supply of air from the outdoors. If you plan an extensive job of draft-proofing in this situation, have a heating contractor ensure that any fuel burning appliances in the home are provided with an adequate supply of combustion air.

## Material Selection - Weather-stripping

Weather-stripping is used to control air leakage at joints where two surfaces meet and move relative to each other such as doors, windows, and attic hatches. A proper weather-stripping job requires that you select the correct material, adequately prepare the surfaces to which the weather-stripping will be applied, and properly install the material.

### Selection of Weather-stripping

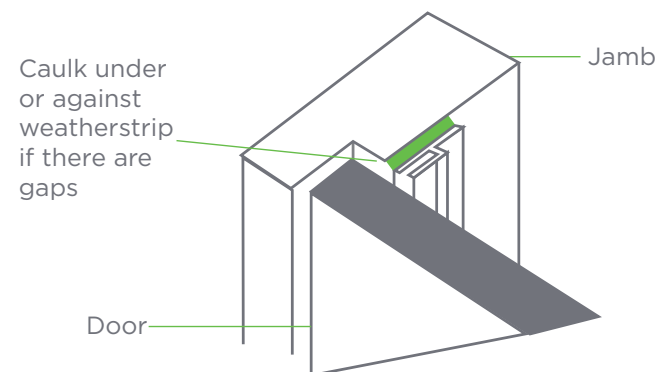
Different types of weather-stripping materials are commonly available. The weather-stripping you choose for a particular application should:

- Provide an effective seal
- Be durable
- Be relatively easy to install
- Have an acceptable appearance

### Surface Preparation

A properly prepared surface is essential if the weather-stripping is to provide an effective, long-lasting seal. Surface preparation involves several steps, but in most cases it is relatively quick and easy. Materials to be weather-stripped should be thoroughly cleaned to remove dirt, oil, grease, flaking paint, or wood splinters.

Uneven surfaces should be levelled with a hand plane or sander. Major gaps or cracks should be filled with latex wood filler. Before weather-stripping windows and doors, any major structural flaws (such as warped frames or missing stops) should be repaired or trued. When using



adhesive-backed weather-strips, the surfaces should be completely clean and dry before application.

### Application of Weather-stripping

Most weather-stripping can be easily installed with the use of standard tools such as a hammer, screwdriver, and staple gun. Some materials also require cutting tools. Metal thresholds, door bottoms, and attachment strips are cut with a hacksaw, for instance.

Weather-stripping can be installed throughout the year, but temperature will affect the installation of certain materials. In some cases, weather-stripping installed during warmer months may have to be adjusted to maintain a good seal when sub-zero temperatures are encountered. As a general rule, adhesive materials used in weather-stripping products are not affected by extremes in temperature. However, while most adhesive-backed materials are meant to be installed without additional fastening, it is advisable to reinforce the seal with staples every 150 mm (6 inches).

Weather-stripping should be installed in continuous pieces with a minimum of splices. Materials should butt tightly at corners. If there are gaps in the weather-stripping, seal them with caulking to reduce any air leakage. If there is a possibility of air leakage through the gap between the weather-stripping and the surface it is applied to, apply a small bead of caulking under or against the weather-stripping.

## Caulking

Caulking is used to reduce air leakage where two surfaces meet, but do not move. Although the application of caulking may require a little more effort and skill than weather-stripping, it is just as important in cutting heat loss from your home.

A proper job of caulking requires that you:

- Select the correct type of caulking for each job;
- Properly prepare the surface to which the caulk will be applied;
- Properly apply the caulking

If any one of these aspects is ignored, the effectiveness of the caulking job will be jeopardized

### Selection of Caulking

Many homeowners have unfortunate experiences when they first try caulking because they purchase an inexpensive or inappropriate caulking compound. These caulking materials might be effective at first, but more often than not, they fail very quickly and will be a waste of time and money. Be sure to select a good quality caulking material that is well suited to the task.

### Surface Preparation

A properly prepared surface is essential if the caulking is to provide an effective, long-lasting seal. Use a wire brush or scraper and a clean cloth to remove all dirt, loose material, old paint or old caulking from the joint to be sealed.

With some types of caulking materials, further preparation of the surfaces (i.e. priming) may be required. Always follow the manufacturer's recommendations on surface preparation.

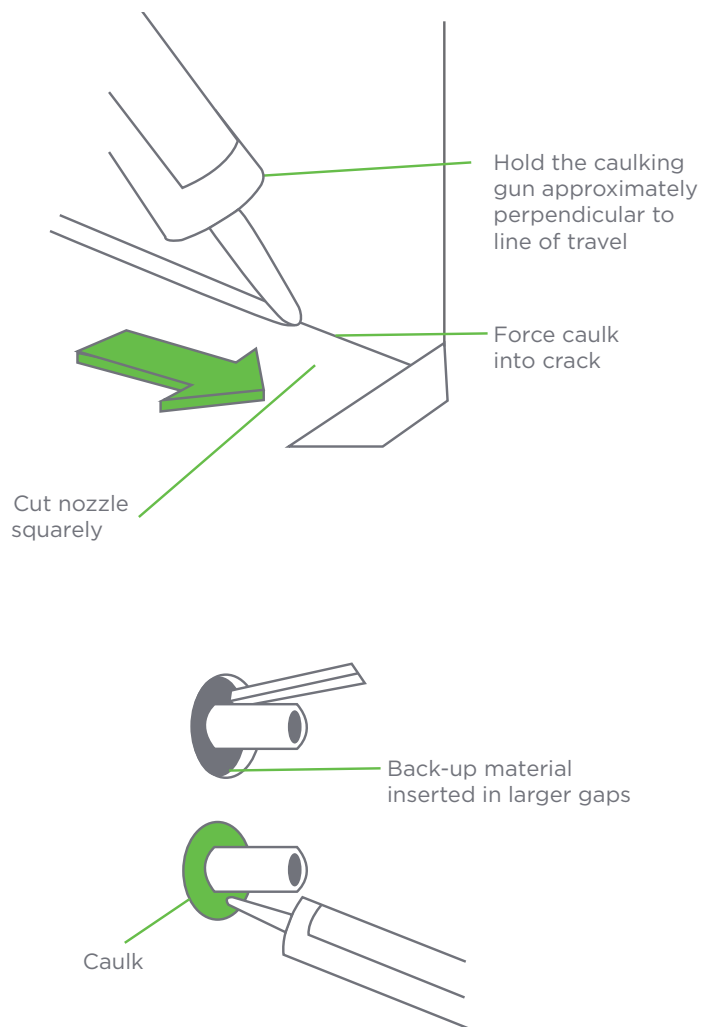
### Application of Caulking

Cut the nozzle of the tube of caulk squarely, and at a size that will allow the bead of caulk to overlap both sides of the crack. Hold the gun approximately perpendicular to the line of travel to force caulk into the crack. Practice, preferably in an out-of-view location, will probably be required before you can create a neat, uniform bead. Remember to release the pressure lever on the gun after use to prevent dripping as you move from place to place.

When sealing gaps larger than 6 mm (1/4-inch), it is good practice to install a back-up material first. This reduces the amount of sealant required and ensures that the sealant comes into good contact with the sides of the gap. Larger gaps can also be sealed with urethane spray foam.

### Tooling the Bead

If the bead of caulk will not be covered by trim work, you may want to tool (shape and smooth) the bead to improve its appearance. Running a wetted finger lightly along the surface of the bead is often the most effective technique. However, with some caulking materials skin contact should be avoided. In these cases, it may be possible to tool the bead with a plastic spoon (refer to the manufacturer's instructions).



### Clean-Up

Have a rag handy to wipe off any excess caulking. Acrylic latex and silicone caulk can be cleaned off with water before they set. For other caulking materials, try a standard solvent (e.g. mineral spirits, turpentine, rubbing alcohol). Cover adjoining areas with masking tape to minimize the chance of marring the finish.

To store the caulk, release pressure on the tube by pulling back the plunger of the gun. Wipe the tip of the tube clean, cap it tightly and store in a cool, dry place.

## Common DIY Draft-proofing Projects

### Attic Hatch

Think of your attic hatch as a door to the outside. It separates heated space from a cold attic, so it needs to be weather-stripped to stop air leakage and insulated to reduce heat loss.

### For this project you will need:

- Foam adhesive or large nails/screws with washers
- Rigid foam insulation (ex. extruded polystyrene)
- V-strip or foam weather-stripping with adhesive backing
- Safety glasses, gloves, and a clean rag
- Plywood
- Handle
- Utility knife
- Acrylic caulking (paintable)
- Latch or eye hooks

### To weather-strip your attic hatch:

- 1 Many attic hatches are made from very thin or warped material. If yours is like this, start by cutting a replacement hatch from plywood that is flat.
- 2 To insulate your new hatch, cut several layers of rigid insulation the same size as the hatch. Add a minimum of 4 inches of rigid insulation.
- 3 Use foam adhesive to adhere the insulation to the plywood or fasten it mechanically to the plywood hatch with nails or screws with oversize washers.
- 4 Weather-strip the edge that the hatch sits on with V-strip or other compression (foam) weather-stripping. Use the adhesive and a few staples to hold the weather stripping in place.
- 5 Caulk any gaps between the ceiling and the hatch trim.
- 6 Latches or eye hooks will help keep the attic hatch tight against the weather stripping. A handle can make it easier to open and close the hatch.

### Ceiling Lights, Walls and Ceiling Joints

Indoor air leaking into the attic through holes at the ceiling level increases heating costs and can damage your attic. It's important to draft proof areas between the ceiling and your attic before you add extra insulation. Ceiling lights and the joints between walls and the attic ceiling can be a source of energy loss and should be sealed.

### For this project you will need:

- Polyethylene (heavy plastic)  
or
- Rigid foam insulation (ex. extruded polystyrene)
- Staple gun / staples
- Acoustical sealant
- Mask, gloves, and a clean rag
- Utility knife

### To draft-proof at the ceiling level (light fixtures that protrude into the attic):

Before starting, remove any insulation covering the area you would like to seal. Clean up any dust or loose materials.

**If the junction box is in an unobstructed area, use a strip of polyethylene (heavy plastic) to seal around the box.**

- 1 Cut a piece of polyethylene to cover the junction box with several extra inches on all sides.
- 2 Place a bead of acoustical caulking in a square pattern outside of the box.
- 3 Put the polyethylene in place over the caulking. Staple around the edges.

**If the junction box is in an obstructed area, use rigid insulation to create a sealed and insulated box over the outlet.**

- 1 Use your utility knife to cut strips of the rigid insulation to fit the space around the box. Always cut away from your other hand.
- 2 Remove any dust or debris to ensure a good seal.
- 3 Put the rigid insulation in place and attach with caulking or glue to create an enclosed box made of rigid insulation.
- 4 Run a bead of acoustical caulking along any gaps.

**To draft-proof around wall or ceiling joints:**

- 1 In your attic, use caulking to seal along gaps where interior walls meet the ceiling.
- 2 Caulk any holes around wires going through the top of interior walls.
- 3 Wall cavities that are open to the attic should be sealed with wood blocking or rigid insulation and caulked.

**TIP:** When opening a tube of caulking, cut the opening according to the size of the gaps you are filling. Pierce the aluminum foil barrier that's inside the tube's nozzle.

**TIP:** Draw a diagram or make a list of rooms and the locations of the light fixtures before heading into the attic. It will help you identify where the lights are and how many you have to seal.

**TIP:** If you have fiberglass insulation in your attic, air leakage can often be identified by looking for dirt on the underside of the insulation. The dirt on the insulation shows where air is leaking into the attic and is being filtered by the fiberglass. Be sure to wear a mask and gloves when handling insulation.

## Chimney

Chimneys are another common path for air leakage that can extend from the basement to the attic. Any gaps around the chimney should be sealed.

**For this project you will need:**

- Sheet metal or flashing
- High temperature caulking or muffler cement
- Hammer and roofing nails
- Tin snips
- Safety glasses, gloves, and a clean rag

**To draft-proof a chimney:**

- 1 Remove any insulation around the chimney. Wear a mask and gloves.
- 2 The NS Building Code requires a space of at least 2 inches between the chimney and all combustible materials. For this reason, sheet metal or flashing is often selected to seal chimney gaps.
- 3 Measure the length of area around the chimney. Cut the flashing with metal cutters to the appropriate length.
- 4 Put high temperature silicone caulking along the top of the framing around the chimney.
- 5 Nail the metal flashing in place to the attic wood trusses. Use a high temperature silicone caulking to seal any remaining gaps between the metal and the chimney.
- 6 Replace insulation, keeping it at least 2 inches away from the chimney.

**TIP:** It is important that you use high temperature caulking. Read the product label or talk with the staff at your local home improvement store to ensure you are purchasing the right product.

**TIP:** Apply a good bead of high temperature caulking along the edges of the metal so that it adheres to the chimney. This will greatly reduce air leakage.

## Doors

Weather-stripping doors can save you money in energy costs and increase the comfort of your home.

### For this project you will need:

- Hammer, screwdriver, staple gun
- Flexible weather strip on plastic attachment strip
- Saw
- Nails or screws
- Tape measure
- Utility knife
- Acrylic caulking (paintable)
- Safety glasses, gloves, and a clean rag

### To weather-strip your door:

- 1 Remove any old weather-stripping. Make sure you clean the area where the weather stripping will be installed. A properly prepared surface provides an effective and long-lasting seal.
- 2 If you have an uneven surface, it should be sanded, filled or planed to make it level.
- 3 Measure, cut, and set weather-stripping in place with door closed.
- 4 Trace the weather-stripping position with pencil on the door frame.
- 5 Remove the weather-stripping.
- 6 Place a bit of caulking on the back of the plastic attachment strip or along the door frame.
- 7 Replace the weather-stripping and tack or screw it in place. Check to make sure the door opens and latches properly before setting nails. Caulk the corner joints.
- 8 Gaps between the trim and doorframe can easily be sealed with a bead of paintable caulk. Also, seal where the doorframe meets the trim.

**TIP:** The gap between the door and jamb can vary due to warping caused by changes in the weather. Select a weather-stripping that can accommodate movement and doesn't make it hard to close the door.

**TIP:** Poor sills are another problem area. The gap between the bottom of the door and the sill can be weather-stripped with a threshold seal, door bottom or a sweep. There are a variety of products available.

**TIP:** Most sliding doors use pile weather-stripping, which can be replaced. Some patio doors need special weather-stripping materials and tools. For these projects, we recommend bringing in a specialist.

## Firewalls

Firewalls separate duplexes, row houses, or semi-detached homes. The gap between the walls of two units extends the full length of the house and should be sealed.

### For this project you will need:

- Hammer
- Rigid foam insulation (ex. extruded polystyrene or Styrofoam)
- Acoustical caulking
- Tape measure
- Utility knife
- Low expansion foam
- Safety glasses, gloves, and a clean rag

### To draft-proof your firewall, access this area from the attic:

- 1 Remove any batt insulation that covers the gap between the firewall and the wall partition. Wear a mask and gloves.
- 2 Measure the width of the gap you are trying to fill.
- 3 Use your utility knife to cut strips of the rigid insulation to fit the gap.
- 4 Push the rigid insulation in place. Make sure it is a tight fit. Gently tap into place using a hammer and a block of wood.
- 5 For areas that you will be caulking, clean any surfaces of debris or dust.
- 6 Ensure you create a good seal between the rigid insulation and the firewall by running a bead of acoustical caulking along any gaps.
- 7 Use acoustical caulking between the interior wall and the rigid insulation.
- 8 Look for any other openings where you think air could be escaping into the attic and seal with acoustical caulking.

**TIP:** If you have gaps that are too big for acoustical caulking, or too small for rigid insulation, use low expansion foam to fill the gaps. Remember that foam has to be shaken well. Follow the instructions for use on the can.

## Stacks

A stack is a vertical section of drainpipe that runs from the bottom of the house to the roof, and then outside. Stacks often have substantial gaps around them. Sealing gaps around stacks will reduce air loss from your home.

These seals must accommodate movement since the plastic or metal stack expands and contracts at a different rate than the wood framing around it.

### For this project you will need:

- Polyethylene (heavy plastic)
- Hose clamp (big enough to fit around your plumbing stack)
- Low expansion foam
- Acoustical caulking
- Staple gun and staples
- Mask
- Safety glasses, gloves, and a clean rag

### To draft-proof plumbing stacks, access this area from the attic:

- 1 Remove any insulation around the plumbing stack. Wear a mask.
- 2 First, seal major gaps with low expansion foam. For larger holes around the stack, cut a piece of foam board or plywood to reduce the size of the hole.
- 3 Secure the polyethylene to the attic floor or ceiling with staples and clamp it around the plumbing stack with a hose clamp. Make sure there is enough slack to allow for movement.
- 4 Put a bead of acoustical caulking on the floor of the attic and around the stack.
- 5 To complete the seal, loosely wrap the polyethylene around the stack so that the base is larger and fits to the framing or floor of the attic. Fold and staple the joint after placing a bead of acoustical caulk along the seam.
- 6 Replace insulation.

**TIP:** Another possible solution is to cut a hole in a sheet of rubber that is slightly smaller than the stack diameter. To use this approach you have to be able to slide the rubber over the end of the pipe. Then seal the rubber to the ceiling and caulk any gaps.

**TIP:** If you have blown-in insulation, it's important that when replacing insulation be sure to fluff it up to maximize R-value (insulation value).

## Sills

There may be many areas in your basement where cold air can enter your home. In older homes, drafts can be responsible for up to 40% of your heating bill. Gaps where the sill meets the foundation are one of the key areas to look for. Make sure you fill gaps and cracks as thoroughly as possible.

### For this project you will need:

- Hammer and nails
- Rigid foam insulation (ex. extruded polystyrene or styrofoam)
- Acoustical caulking
- Drywall
- Utility knife
- Low expansion foam
- Tape measure or ruler
- Straight edge or framing square
- Safety glasses, gloves, and a clean rag

### To reduce air loss in your basement, seal any sills or joists:

- 1 If you have insulation between your joists, remove it and clean the area. Wear a mask and gloves.
- 2 Caulk the gap where the concrete foundation meets the wooden sill. Use low expansion foam if the gaps are large.
- 3 Replace any insulation you previously removed.
- 4 Cut pieces of rigid foam insulation to fit between the floor joists.
- 5 Tap into place. You may need a block to prevent damage to the insulation.
- 6 Caulk around all the edges.
- 7 Fill larger gaps with low expansion foam.
- 8 If the area will remain exposed, cut a piece of drywall to fit between the joists.
- 9 Tap drywall into place with a hammer and block of wood. Secure with nails or screws

**TIP:** If you have wires or other obstructions, cut your rigid insulation and drywall so it will fit. You may have to cut the insulation block into two pieces.

**TIP:** For really large gaps, use a piece of solid material such as wood to fill the gap and caulk around the edges.

**TIP:** If you see cracks in your foundation walls, seal them

with caulking. Caulk around any wires, pipes and ducts that penetrate the foundation. If the gaps are large you may need to fill them with backer rod or sponge rubber. Expanding foam may also work.

## Window Frames

To reduce heat loss around window frames, draft-proof all the way around the window.

### For this project you will need:

- Utility knife
- Foam backer rods, low expansion foam, or wooden strips
- Acrylic caulking
- Saw
- Tape measure
- Hammer and nails
- Safety glasses, gloves, and a clean rag

### To weather-strip unfinished basement windows we've provided three methods:

#### Option 1 - Foam Backer Rods

If you have small gaps that can be filled with foam backer rods, this may be the easiest option for you.

- 1 Remove any insulation from the first inch or so around the window frame and clean the surface area you are working with.
- 2 Fill gaps around the outside of the window space by pushing the foam backer rod in between the frame and the window.
- 3 Seal any remaining gaps around the window frame with acrylic caulking.

**TIP:** Foam backer rods come in many different sizes. You can find (round) foam crack filler or backer rod at your local hardware store.

#### Option 2 - Low Expansion Foam

- 1 Remove any insulation from the first inch or so around the window frame and clean the surface area you are working with.
- 2 Hold the can of low expansion foam upside down. Shake before using.
- 3 If using for the first time, test on paper so you can see how much it expands.
- 4 Place the spray nozzle in the gap you are filling. Gently

squeeze the trigger. Squeeze out just enough to place a line of foam in the bottom of the gap you are filling. The foam will expand and do the rest of the work for you.

- 5 Read the can for instructions to determine how long it will take for the product to dry.
- 6 Seal any remaining gaps around the window frame with acrylic caulking.

**TIP:** Make sure you are using low-expansion foam. Use just enough to seal the crack and then let the foam expand. If you apply too much, the pressure of the expansion may distort the window so that it doesn't operate properly.

#### Option 3 - Wooden Strips

For larger gaps, strips of wood provide an air barrier to keep the warm air in and the cold air out.

- 1 Remove any insulation around the outside of the window and clean the surface area you are working with.
- 2 Precut wood strips to fit the gaps between the window frame and outside frame.
- 3 Apply acrylic caulking to the window frame and the outside frame.
- 4 Nail the wood strips in place to seal the window frame to the outside frame.
- 5 Seal any remaining gaps around the window frame with acrylic caulking.

**TIP:** Apply an even bead of caulking to ensure a good seal.

## Windows

On average, 10-15% of air loss comes from windows. You can realize savings and efficiencies by weather-stripping your windows.

### For this project you will need:

Many older homes, have single-hung wood windows. These windows have one fixed and one moveable sash (or window pane) that opens vertically. Concentrate your efforts on the moveable sash.

- Hammer and nails
- Screwdriver and screws
- Low expansion spray foam
- Staple gun and staples
- Foam strip weather-stripping
- Nail punch
- V-strip weather-stripping



- Utility knife
- Polyethelene (heavy plastic)
- Small pry bar
- Acrylic caulking (paintable)
- Pliers
- Thin wood block
- Safety glasses, gloves, and a clean rag

**To draft-proof windows:**

- 1 First, remove the stops (trim around the window) on both sides to remove the operable window unit. Start by scoring (cutting) the paint joint between the stop and window with a utility knife to prevent paint from pulling off when the stop is removed.
- 2 To remove the stops, gently pry the wood off with a small pry bar. Use a thin wood block to avoid denting the window frame.
- 3 Use pliers to remove the nails from the back of the stop so the side you see is not damaged. Another method is to drive the nails right through the stop with a nail punch.
- 4 Lightly scrape any loose paint or lumps off the back of the stop.
- 5 Carefully remove the window by sliding it out from one side.
- 6 Before installing V-strip weather-stripping on both sides of the window at the sash (where the window we removed meets the window frame) these surfaces need to be sanded and wiped off to create a smooth surface that the V-strip will adhere to.
- 7 V-strip has adhesive on one side. Crease the weather stripping to form a V and carefully peel back part of the backing on the adhesive. The V must face the outside to keep cold air from entering the house where the window sash meets the frame. Put the V-strip carefully in place, keeping the edge straight and making sure it is flush to the frame. Fold over the V and use a tool like a screw driver to apply pressure to the adhesive and make sure the V is maintained when the window is replaced.
- 8 Staple the top and bottom of the V-strip to make sure it does not slide. You can set the staples with a nail punch. Repeat this process on the other side.
- 9 The next step is to install the V-strip on the sash between the two window frames. It is important that the V faces the outside so that it can stop any incoming drafts between the two windows. Line up the edge of the strip with the bottom of the window. Set the adhesive side of the V-strip using pressure.
- 10 Measure a length of foam weather stripping to fit the bottom of the window sash. Staple the foam in a few places to make sure it stays in place.
- 11 Replace the window. Make sure that the V-strip is folded into the proper position and makes a good seal.
- 12 Replace the stops starting at the bottom.

**TIP:** Open the window before you nail the top of the stop to ensure there is enough space for the window to slide smoothly. Don't set any nails until you are sure the window opens properly.

**TIP:** To improve the efficiency of your windows, seal around the interior window trim. Run a bead of clear or acrylic (paintable) caulking along the gap between the trim and the wall. Fill gaps between the trim and window frame, and where the frame meets in the corners. You may also seal behind the trim. You can either seal the gap between the trim and the wall, or you can carefully remove the trim and seal the gap. Put the trim back in place.

**TIP:** Fill large gaps with low-expansion foam. Select a low-expansion foam with a delivery system (usually some type of gun). This allows for accurate and neat application.

**TIP:** Most sliding windows use pile weather stripping. This can easily be replaced. Remove the old pile by pushing a screwdriver blade under the weather stripping at a corner. Use pliers to pull out the full strip. Cut the replacement pile weather stripping to fit the window. Remove protective backing and put in place.

**TIP:** Fixed windows are usually much more efficient because they don't open so the potential for air leakage is greatly reduced.

**TIP:** If you replace your windows, an energy efficient product is a sound investment. Look for the ENERGY STAR® label to identify energy efficient products.

**Check out our other Homeowner's Guides at [efficiencyns.ca](http://efficiencyns.ca)**