Loewen

Window Installation Guide

New Construction

Important Notices & Information

The building envelope must be correctly prepared with weather resistant barriers – that meet local and state codes. All frame and sill surfaces must be correctly prepared for air, water, and structural integrity by the builder or contractor before attempting installation. In order to meet warranty requirements, all systems are required to be installed by a certified installer.

- Read these instructions in their entirety prior to installing windows. Contact Loewen at 1.800.563.9367 for clarification.
- Loewen is not responsible for site measurements nor the structural and architectural requirements for the installation of the windows.
- Building design, construction methods, building materials and site conditions unique to your project may require methods different from these instructions.
- Choosing the appropriate method is the responsibility of you, your architect, or your construction professional.
- Confirm with sealant/foam/barrier manufacturers that all materials used are compatible with one another.
- Remove shipping blocks and related staples prior to installation.
- All drawings are shown not to scale.
- To ensure accuracy, make sure you have the latest approved shop drawings and assembly and installation guides.
- ***Any local, regional or national building code requirements supersede these instructions.***
- ***Safety is top priority for Loewen. Use proper work procedures and protective equipment.***

Site Preparation Advisory

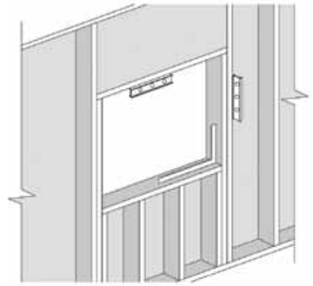
This manual is intended for construction professionals with proven competency installing doors and windows for large openings. Window installations are complex and should not be attempted with simple written documentation.

Note on Building Envelopes

Improper design and/or non-conforming application of building envelope materials has been demonstrated to cause premature building envelope failure. Even with premium materials, shortcuts and errors in the final installation can impact budgets, time frames, building life span, and increase legal liabilities.

As one of the elements that bisect the interior/exterior plane, window and door integrations are a critical element of the building envelope as a whole. Poor installations can carry significant liability, due to building envelope failure.

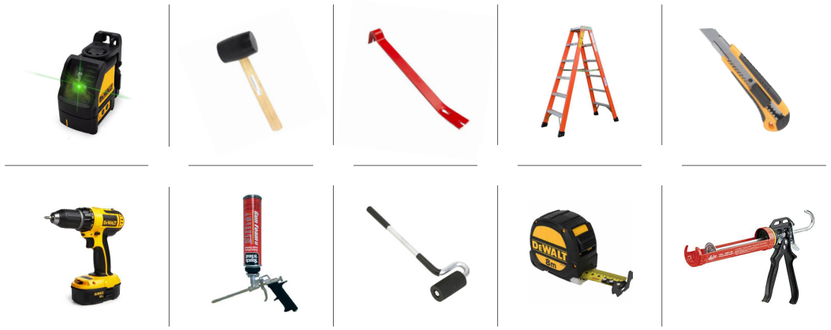
Verify The Rough Opening



- Measure the rough opening and the window to determine that the size is correct. Recommended rough opening is between 3/4” (19mm) - 1” (25mm) larger than the window width and height.
- Ensure that the rough opening is plumb, level and square, and the walls in the opening are not twisted.
  - **a)** 1 1/2” (38 mm) solid blocking is required at the sill and sides of the opening.
  - **b)** Ensure proper header is in place before installation.
  - **c)** Make necessary corrections.

Tools Required

- Laser Level
- Hammer
- Pry Bars
- Ladders
- Utility Knife
- Screw Gun
- Applicator Foam Gun
- ‘J’ Roller
- Tape Measure
- Caulk Gun



Materials Required

- Composite (not wood) shims/spacers
- 1 1/2” #8 screws (recommended stainless steel)
- Expansion Foam - Closed-cell (low-expansion only)
- Window & Door flashing tape
- Window & Door sealant
- Interior trim

Barrier Material Selection

Though this guide only includes one type of barrier material, various options are available to meet individual site requirements:

- Vapor permeable building wraps
- Fluid applied materials
- Self-adhered membranes
- Medium density spray-polyurethane foam
- Rigid board stock insulation
- Factory-bonded membranes to sheathing

① Box Cut and WRB Flap

- Cut out Weather Resistant Barrier with a complete box cut of the opening.
- Weather Resistant Barrier should NOT be brought into the rough opening.
- Create a temporary flap at the head of the opening by cutting the Weather Resistant Barrier on a 45 degree angle. Temporarily tape the flap up out of the way to allow for window installation and head flashings.
- Cut back the Weather Resistant Barrier to a minimum of 1 1/2” exposing the sheathing at the sides only. This will create a direct contact seal between the window flange and sheathing.

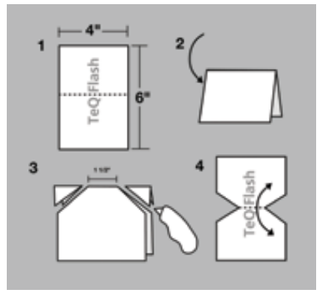
Flashing Lengths & Cut Formulas

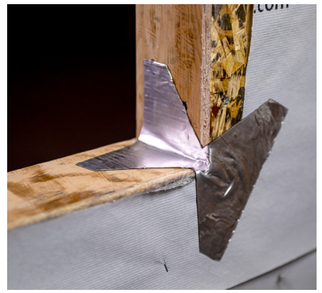
Still Flashing = RO^W + 12”
Jamb Flashing = RO^H + (2 x flashing width) - 1”
Head Flashing = RO^W + (2 x flashing width) + 2”

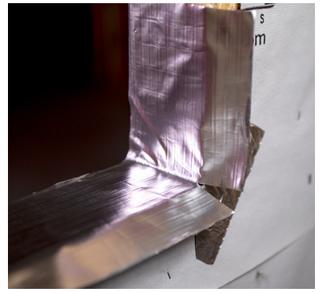
Legend

RO = Rough Opening
RO^H = Rough Opening Vertical (Height)
RO^W = Rough Opening Horizontal (Width)

② Flexible Sill Pan



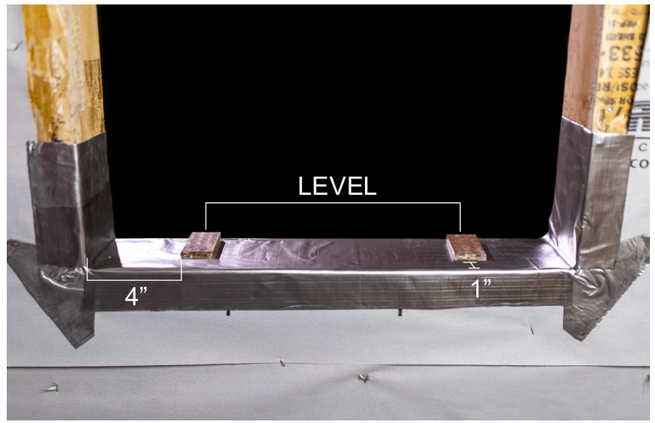




- Cut a 4”x 6” rectangular TeQ Flash flashing.
- Fold the piece in half.
- Cut both corners leaving appox 1 1/2” in the center (see #3).
- Install these tightly in the corners to flash and seal the corner joints.
- This must be done allowing for tight adhesion into the corners with no air bubbles.
- Cut a length of TeQ Flash flashing, using the formulas, at least 12” wider than the rough opening.
- Center the flashing left to right. Then set into the rough sill the same depth of the window or greater. With a utility knife, cut the flashing from the corner down the flashing that will expose the previously installed corner guard (see drawing).
- Roll out and smooth with J roller.

Note: Rigid flashing and liquid flashing are also effective if the proper application methods are used.

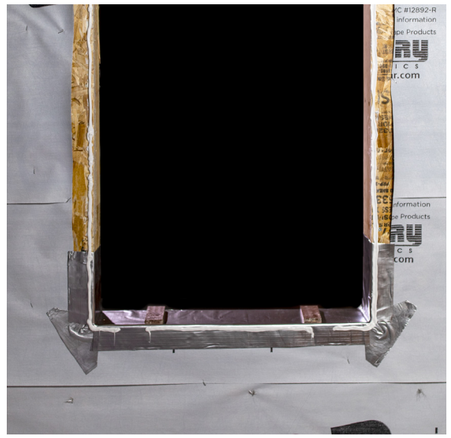
③ Sill Condition Leveling



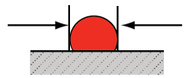
- Level the sill condition using high impact, composite shims.
- Shims should be placed on the sill 4” (100mm) from each end and at every mull. Make sure shims are 1” back from the front edge of the sill and not under the jamb extension.
- If shims will be left in place permanently, be sure they don’t protrude past the interior window frame.

Note: In a future step, the foam being applied under the window needs to be a continuous seal at the sill.

④ Rough Opening Sealant



- Apply a heavy 3/8” bead of window/door sealant around the rough opening. The sealant must line up with the flange holes.
- At the bottom of the rough opening, leave a 2” void approximately 2” from either end and under every mull joint. This will allow a drainage path for incidental moisture.
- Install window before the sealant dries.



Two or more people will be required to accomplish this step.

- Set the window from the exterior into the rough opening
- Center the window in the rough opening. Apply a 1 1/2” screw through the top corner of the flange to secure the window.

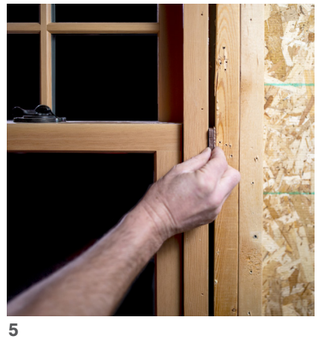
⑤ Securing the Unit

1

2

3

4



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6

- Shim the unit plumb, square and level (1,2,3). It is also a good idea to verify that the unit is not bowed (4).
- Apply additional shims 4” (100mm) from bottom and top, and one at the center (5).
- Apply a screw (not nails) through every other flange hole (do not angle or over tighten the screws). In coastal/hurricane environments apply a screw through every flange hole (6).
- Operate the unit once it is completely fastened.

⑥ Jamb and Head Flashing

- After the window has been fastened, window/door flashing should be applied to the jambs and head.
- Follow the formulas on page 3 for proper flashing lengths.
- Use a J roller to push out all air pockets to ensure good adhesion.
- If at any time the flashing does not stick due to cold wet substrates, it is permissible to secure the flashing with a tack hammer and staples.

Note: If a rigid head flashing/drip edge hasn’t been factory installed, ensure an appropriate one is installed correctly.

⑦ WRB Top Flap

- Remove the previously applied tape holding the flap of the WRB at the head.
- Allow the flap to lay flat over the head flashing. Apply slices of window/door flashing over the diagonal cuts made in the WRB. Ensure that the entire cut is covered.

⑧ Interior Cavity Sealant

- The rough opening should have enough tolerance to accept closed-cell foam for insulating purposes.
- From the interior, insert the nozzle of the applicator into the rough opening, hold the tip of the nozzle 1” (25mm) from the exterior window flange and apply a minimum 2” (50mm) bead of foam around the entire unit.

Note: After the foam has set you may fill the entire rough opening cavity with closed-cell foam or fiber glass insulation.

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