



# Window Installation Instructions

The following are Berdick's recommended installation instructions for windows; **these instructions do not replace any national, provincial, or local building codes.**

Although these installation instructions are recommended for use with Berdick products; In Canada, strict compliance with CSA A440-4-07 (2012) supersedes these instructions and is recommended as an alternate method of window installation; by doing so will not have any negative impact on the application of the Berdick product warranty.

## **Important Information**

**This instruction is based on CSA A440-4-07 (reaffirmed 2012), for any specific details that maybe different please contact your supplier for recommendations.**

1. If installing in an area of high winds, see the structural engineering report of the product for specific fastening requirements.
2. Any local building code requirements supersede the recommended installation instructions. Failure to install square, level and plumb could result in denial of warranty claims for operational or performance problems.

### **Important Note!**

If the Installation of the window is such that the window sill is higher than 35 feet above ground level or any window installation into a wall condition not specifically addressed in this document must be designed by an architect or structural engineer.



# Window Installation Instructions

## **Removing Packaging and Inspecting your window**

### **1.0. Remove Packaging**

1.1. Remove shipping materials such as corner covers, shipping blocks or pads. If there is a protective film on the glass, do not remove it until installation and construction are complete.

### **2.0. Window Inspection**

2.1. Cosmetic damage

2.2. Correct product (size, color, grid pattern, handing, glazing, energy-efficiency requirements, etc.)

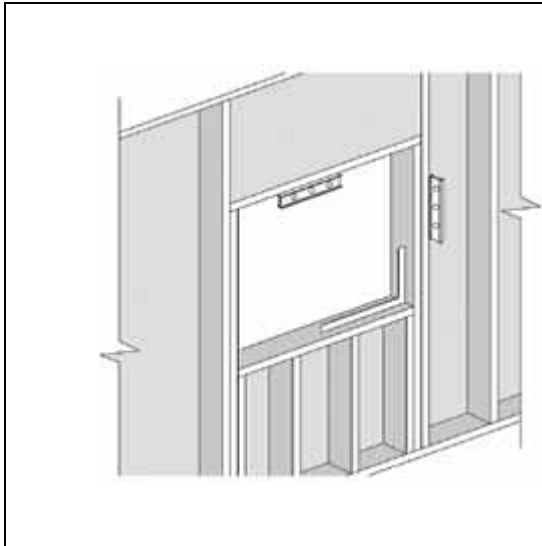
2.3. Cracked frame



# Window Installation Instructions

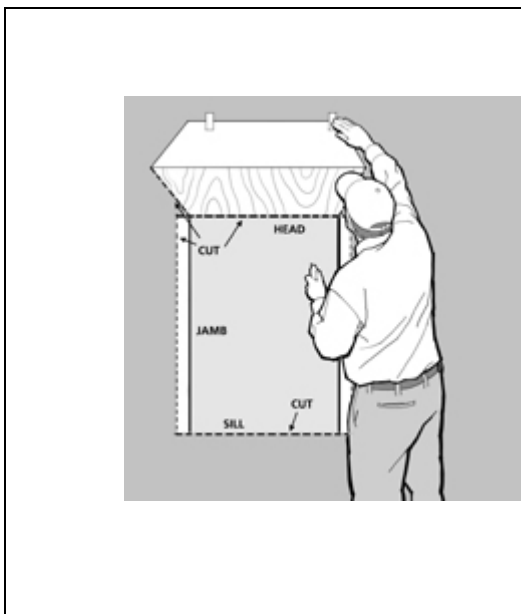
## Preparation/Inspection of Rough Opening

### 1.0. Verification of 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.
  - Ensure proper header is in place before installation.
  - Make necessary corrections.

### 2.0. Building Wrap Preparation



- 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 approximately 1 1/2" exposing the sheathing at the sides only. This will create a direct contact seal between the window flange and sheathing.



# Window Installation Instructions

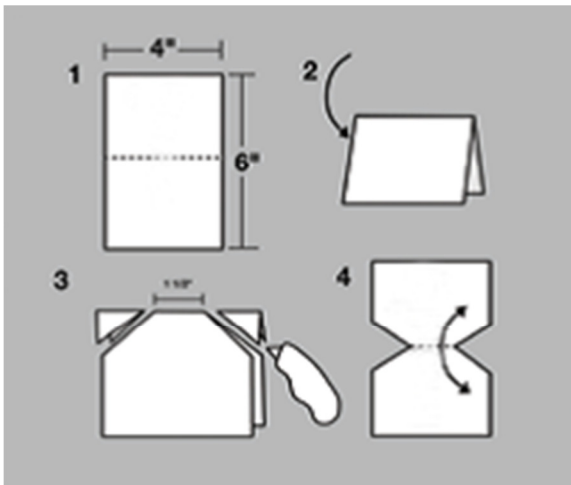
## **IMPORTANT:** CSA-A440.4-07 Sub-Sill Flashing Requirements

- Be made from water-impermeable membrane or flashing
- Be applied to the Sill and lower corners of the rough opening
- Adequately lapped, sloped, and sealed so that incidental water penetration is drained to the exterior or to the “second plane of protection”.

The following chart illustrates the cut dimensions when installing flashing onto the rough opening. These formulas will be referred to continuously in various sections.

Flashing Cut Lengths and Formulas		
Head Flashing	=	RO (width) + ( 2 x Flashing Width) + 2”
Jamb(s)	=	RO (Height) + ( 2 x Flashing Width) - 1”
Sill Flashing	=	RO (width) + 12”

### 3.0.Sill Pan Flashing Installation – Corner Flashing Preparation



1. Cut a 4"x 6" rectangular piece of flashing.
2. Fold it in half.
3. Cut both corners, leaving approx. 1 1/2" in the center.
4. After cutting, the corner flashing should look like step 4.



# Window Installation Instructions

## 4.0. Installing the Sill Flashing



- Install the pre-cut corners tightly into the corners of the rough opening to flash and seal the corner joints.

**\*Ensure that the corners are tightly sealed without air bubbles.**



- Cut a length of 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 appropriate roller.

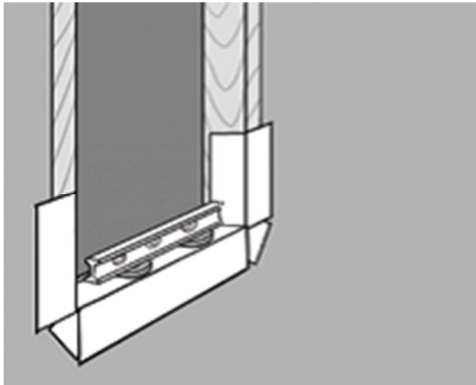


# Window Installation Instructions

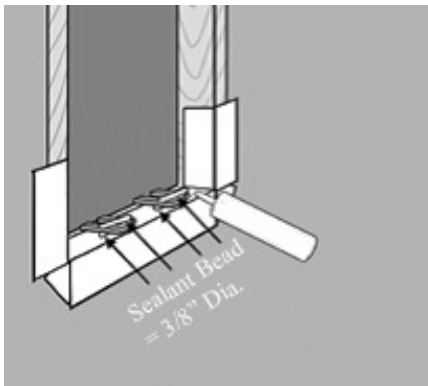
## **IMPORTANT:** CSA-A440.4-07 Shimming Requirements

- Corner Shims are to be placed 4" – 8" away from corners
- Shims are placed on the Sill no more than 16" apart.
- **Foam Does Not Replace Shims. Foam will not resist wind pressure on a window.**
- Do not install Shims at the head of the rough opening; for wide windows, it may be necessary to use a screw at the head to prevent bowing.

## 5.0. Shim Installation and Sill Levelling



- Level the sill platform by first performing a "dry run" with a level and high impact shims.

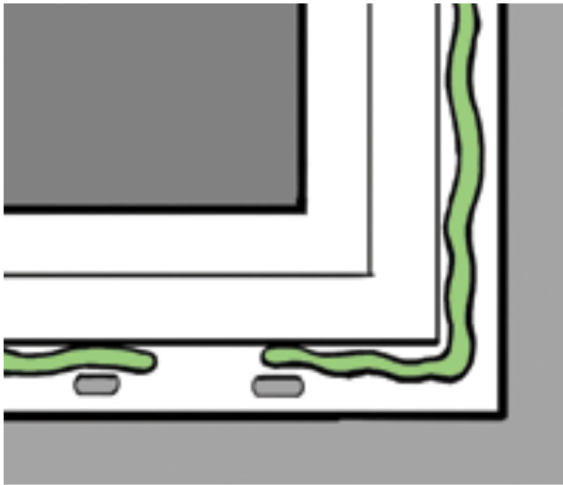


- If shims are left in place then make sure they don't protrude past the interior window frame.
- Make sure shim is placed in proper depth and not under the jamb extension.
- After shims are determined to be level on the sill, proceed to set shims with silicone/sealant under the shim and over the shim as shown in drawing



# Window Installation Instructions

## 6.0. Preparing the Window for Installation

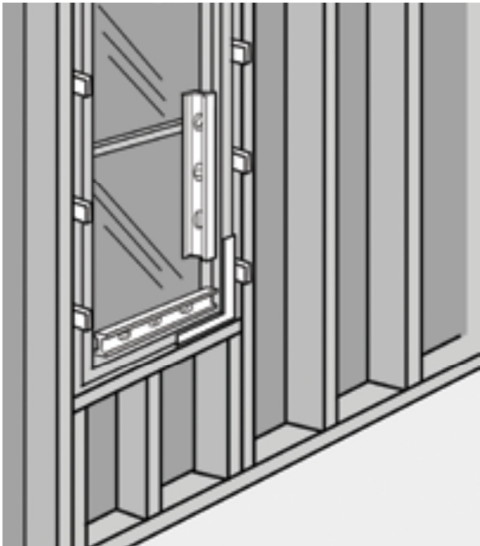


- Apply a heavy 3/8" bead of silicone sealant over the flange holes.
- On the bottom flange, leave a 2" void approx. 2" from either end and under every mull joint. This will allow a drainage path for incidental moisture.
- Window must be installed before sealant dries.



# Window Installation Instructions

## 7.0. Setting and Securing the Window



**Two or more people may be required to accomplish this step.**

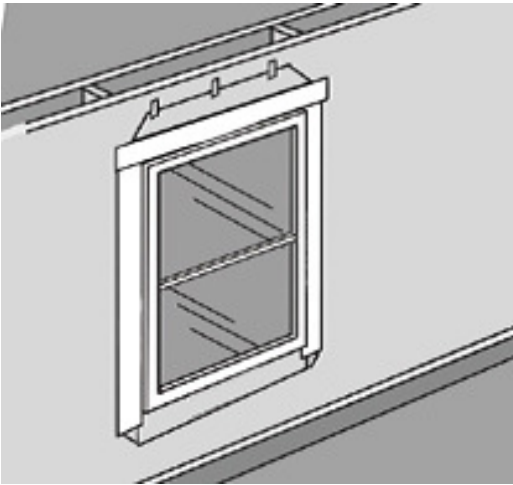
- From the building exterior, set the window into the rough opening
- Center the window in the rough opening and apply a 1 1/2" screw through the top corner of the flange.
- Apply shims 4" (100mm) from bottom and top, and one at the center; Shim the unit plumb square and level.
- Apply a screw through every other flange hole (do not angle or over tighten the screws).
- Operate the unit once it is completely fastened.





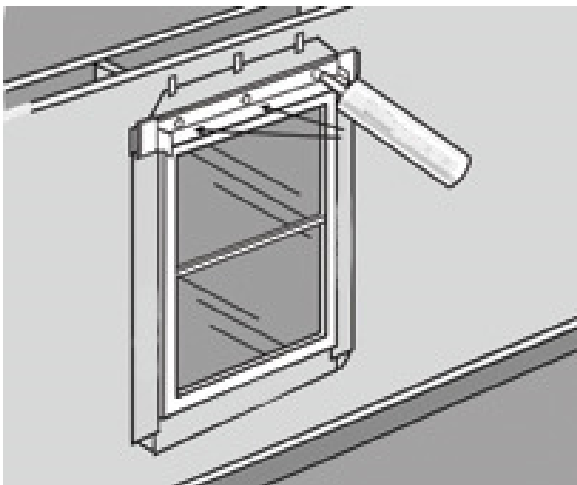
# Window Installation Instructions

## 8.0. Exterior Flashing Application



- After the window has been fastened, flashing should be applied to the jambs and head.
- Use the previously mentioned calculation to determine proper flashing lengths.
- Use a appropriate 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.

## 9.0. Installation of Flexible & Rigid Head Flashing

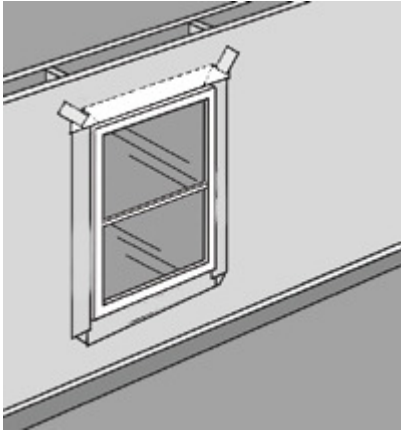


- Appropriate head flashing must be applied to top of the unit.
- Apply a healthy bead of Silicone Seal to both sides of the rigid head flash and fasten with 1 1/2" screws.



# Window Installation Instructions

## 10.0. Completing the Weather Resistant Barrier



- 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 flashing over the diagonal cuts made in the WRB.
- Ensure that the entire cut is covered.

## 11.0. Sealing and Insulating the Interior cavity



- The rough opening should have enough tolerance to accept 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.

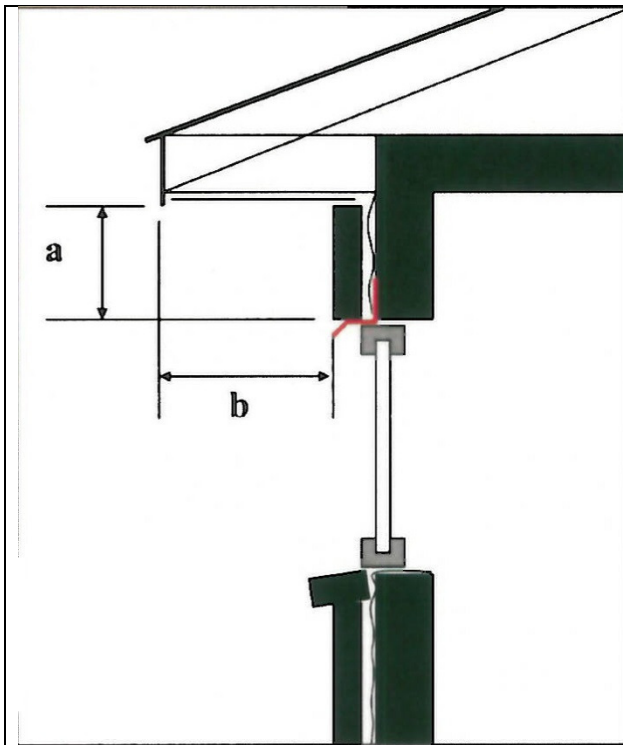
**NOTE :**

After the foam has set you may fill the entire rough opening cavity with Foam or fiber glass insulation.

The following is to be used as reference to the CSA A440.4-07 and NBCC standards for drip cap design and/or installation requirements. This information is to be referenced when the factory does not supply drip cap for the installation.

These requirements are meant to collect and direct to the exterior, rain water that might penetrate through the cladding. The projecting drip edge keeps drainage water and runoff water from the outside face of the cladding, away from the joint between the window or door head and the wall. Extending the drip cap beyond the window and door trip, and providing end dams, prevent water on the flashing from draining over the end onto the trim and the frame/wall joint below. Those joints are often sealed with caulking but a small defect, or deteriorated sealant, can allow water to enter the rough opening.

## A.1. Drip Cap Requirements



The NBCC and CSA A440.4-07 require a drip cap to be installed above wall openings, including window and door openings, if there is not adequate protection provided by the roof.

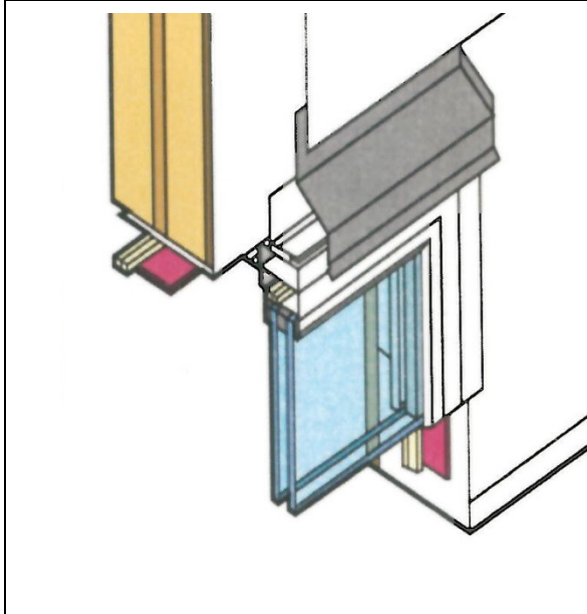
The rules to determine adequate protection are:

If the distance between the roof soffit and the top of the opening is greater than  $\frac{1}{4}$  of the depth of the soffit, head flashing must be installed.

Refer to the drawing:

If distance  $a$  is greater than  $\frac{1}{4}$  of distance  $b$

## A.2. Drip Cap Features



- 50mm upturn at back, behind the sheathing membrane.
- 6% (1/16) slope to drain.
- 25mm end-dams
- 10mm over-lap onto the cladding below.
- 5mm projecting drip edge.
- Drip Cap material must be a single piece across the width of the opening.
- Drip Cap must extend past the window or door trim (i.e. brickmould) and the trim/cladding joint.