



## **Window Installation, without exterior casing.**

Before you begin please read and understand these installation instructions. The following installation instructions are recommended by Norwood and failure to follow them may void the warranty.

**The following installation instructions are the minimum required by Norwood. If local building codes exceed these installation instructions then the local building codes must be followed.**

Because of newer construction methods and the increasing need for energy efficiency in our homes, this installation method seals the window to the exterior weather barrier. A sill pan is used to capture any water that may collect under the window and redirects it to the outside preventing it from entering the wall cavity.

These installation instructions are to be used in the installation of flat windows only. For any other window type such as bays and bows consult your local Norwood dealer. Norwood is not responsible for any wind or water infiltration due to installation issues.

### **Material and Tools required for Installation.**

#### **Step 1.**

- Check to ensure that the window or door is the size, color, configuration, and grill pattern as ordered.
- Examine the windows and doors for any shipping damage such as scuffed paint, broken glass, broken hardware or torn screens.

If there are any discrepancies, **DO NOT INSTALL THE UNIT**, please contact your local Norwood dealer for further instructions.

Unpack the window:

- Remove all cardboard wrapping and shipping blocks.
- Remove all strapping.
- Remove any dirt and dust from all trims with a clean cloth; this is to ensure that the silicone and flashing will stick.

#### **Step 2.**

Check the rough opening (RO):

- Make sure that the opening is level, square and plumb.
- Measure the opening, the opening should be  $\frac{3}{4}$ " larger than the window in both height and width. For larger windows measure in several places to ensure that the studs or header is not bowed.

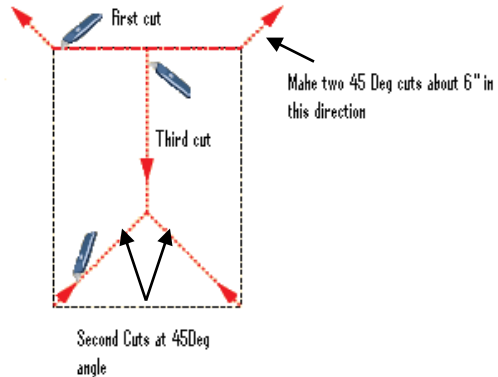
**Note: If a pre-manufactured sill pan is being used, the height of the sill pan must be added to the height of the R.O. Any problems found with the opening should be fixed before you continue.**

### Step 3.

Cutting the Weather resistant Barrier:

-Start by cutting along the top of the weather barrier (tight to the header) from one side to the other.

-At the bottom of the opening cut an inverted “Y” in the weather barrier. Start at each bottom corner and cut at a 45° angle toward the center. From the center where the 2 angle cuts meet cut straight up to the header.



-Fold the two sides and bottom of the weather barrier over the rough opening and fasten using staples to the interior of the opening. **DO NOT FASTEN THE TOP.**

- At the top of the opening cut two 6” 45° angle cuts in the weather barrier. Make the cuts up and away from the opening.

- Temporarily staple the top flap of weather barrier up and away from the opening, exposing the wall sheathing.

### Step 4.

**Note: With the development of more advanced and flexible water proofing materials by manufacturers such as Tyvec and Dupont, Norwood endorses their use for the sill pan applications in lieu of method below. The materials must be installed according to the manufactures directions and they must be applied in such a way that any potential water does not enter the building cavity.**

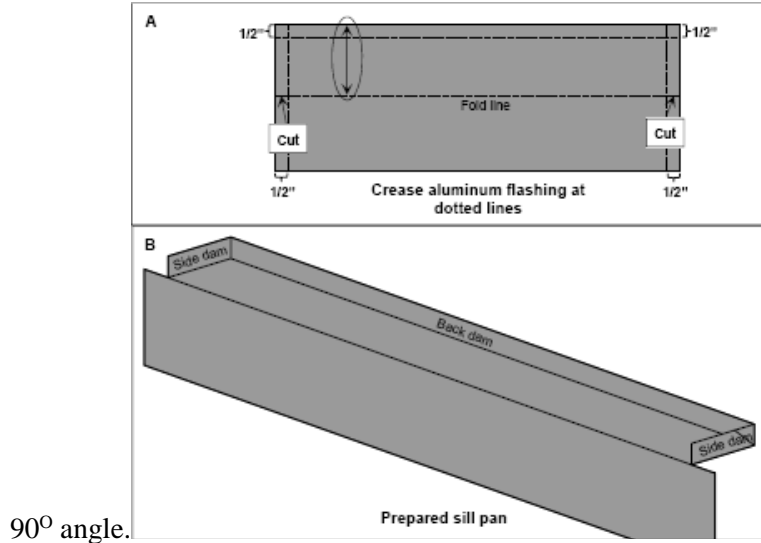
Installing the sill pan:

How to make the sill pan:

- The sill pan is made from thin, rigid and bendable sheet metal
- Measure the width of rough opening and cut the sheet metal 1” longer
- Measure the thickness of the wall and cut the sheet metal 3” wider.
- Measure the thickness of the wall and add ½”. Make a line on the length of the sheet metal equal to that measurement. From that line cut in ½” from each end.
- On the wider side of the sheet metal bend the side and two ends (where you made the ½” cuts) up until they are at 90° angle. Fold the corners toward the outside of the bend.
- Fold the narrower side of the sheet metal in the opposite direction at a

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- Place sill pan in the opening for a “dry fit”.
- If sill is not level place shims under the sill pan (not the window) to level it.
- Remove the sill pan and put two 3/8” beads of silicone on the sill.
- Put 3/8” bead of silicone on the inside of the downward lip of the sill pan.
- Place sill pan back into opening and press into silicone to ensure a good fit.
- Fasten sill pan to framing using screws 16” on center.
- Cover the heads of the screws with silicone.

**Note: If a Pre-manufactured sill pan is being used, install it in accordance to manufacturer’s instructions.**

## **Step 5:**

Installing the window:

**Note: All Norwood windows are installed using installation straps screwed to the side of the window (at the factory).**

- For operating windows ensure the window is closed and locked.
- Place window in the opening.
- Center window in the opening.
- Level and Plumb the window using shims.
- Place shims 1” from top and bottom and every 16” around the window.
- For Double and Single hung windows shims must be placed at the meet rail.
- Where multiple windows are joined, place shims under joins.
- Bend the installation straps over the interior framing and every other strap over the exterior framing to hold the window in place, secure with screws.
- Check any operating window for proper operation. If window is not operating properly, adjustments may be required to the shims (may be over shimmed).

## **Tip:**

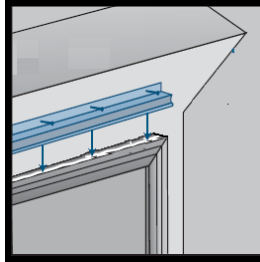
**Keep checking the gap between the sash and the window frame to ensure proper shimming. If the gap between the sash and the window frame is consistent, then the window is not over shimmed.**

**Note: DO NOT over shim and DO NOT shim the top.**

**Step 6.**

Installing Drip cap:

- Cut galvanized drip cap ¼” longer than width of window.
- Apply ¼” bead of silicone to top of the exterior trim of the window and the wall.
- Center drip cap over window on top of exterior trim and nail in place. Place nails in the exterior wall sheathing not through the top of exterior trim. Put silicone on the heads of the nails.



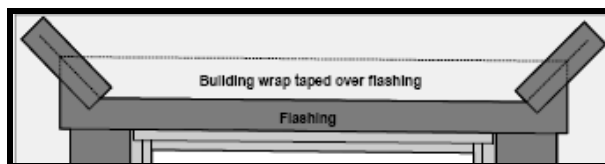
**Step 7:**

Sealing the sides of the window

The sides of the window must be sealed to form a weather tight barrier and this can be done either by using a product such as “blue skin” or backer rod with silicone or a combination of both for maximum protection.

Minimum silicone should be used at the sill to allow any water that should get into the sill pan to run freely to the exterior.

- Cut 2 pieces of self-adhesive flashing 12” longer than the height of the window and 1 piece 14” longer than the width of the window.
- Apply the two longer pieces of flashing tight to the exterior frame (1 piece on each side). Allow the flashing to go above the window 5” on each side.
- Apply the third piece of flashing at the top of the window tight to the exterior frame.
- Fold the weather barrier (temporarily stapled up above window) down over the flashing at the top of the window. Secure in place using building tape or silicone.
- Place tape over the diagonal cuts in the weather barrier at the top of the window.



**Step 8:**

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Finishing the installation:

-You could use either fiberglass insulation or low/minimal expansion foam to insulate the window.

**Note: DO NOT pack fiberglass insulation too tight. FOLLOW ALL manufacturer's installation instruction on any expanding foam used.**

-After the exterior finish is complete silicone the sides and top of the window.

