# Installing window flashing

**This window install method takes a little longer, but will help protect the home from the damage of water intrusion.**

Windows and doors represent a thermal short circuit in a wall assembly. These openings or holes in walls also represent a connection point in the wall assemblies that needs to effectively and redundantly manage air and water intrusion for the life of the building.

Flashing system integration is one of the key factors in creating a continuous drainage plane. A drainage plane sits behind the wall cladding. After the cladding, the drainage plane creates a second line of defense against wind, rain and other moisture-related weather events.

New windows typically have an integral nailing flange that must be sealed and flashed to shed water. Over the years, getting this detail wrong has been the cause of many leaks and many lawsuits. While there is still ongoing debate about the best way to flash a window with an integral nailing flange, peel-and-stick flashing tape or membrane, peel and stick butyl adhesive flashing tape is a commonly accepted approach to ensure the continuity of the drainage plane when a weather resistive barrier is part of the wall assembly.

Adding an intentional air space between the weather resistive barrier and cladding materials, commonly called a rain screen, provides an even greater safety margin.

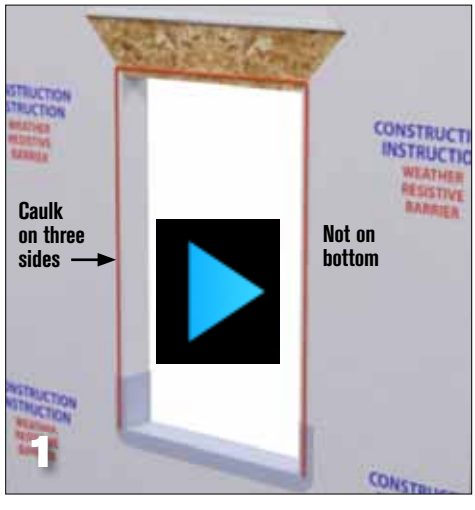
Installation of a system that relies primarily on two layers of metal flashing above the window can effectively catch and drain water or redirect water away from the assembly. The additional layers act as a back-up or redundant system to effectively manage water and air intrusion.

Tried and true techniques, such as sloped metal flashings, can provide a long-term foundation to water management techniques. Installing butyl adhesive flashings and using high-performance sealants on window and door installations provide a great starting point, but rely on the long-term performance of the materials and installation consistency. Properly integrating metal flashing into the mix can provide another layer of weather protection.

## Flashing installation

The first step is to cut an opening in the weather resistive barrier and fold the sides back into the framed opening. Next, make angled cuts at the top corners to create a flap and fold up to install the metal drip cap directly onto the sheathing.

Add a monolithic pan flashing system at the rough opening sill to drain any water that may get into the window opening from a window leak or other sources. The sill pan should cover the exposed face of the sill extending up the vertical jambs of the rough stud opening and over the weather resistive barrier to ensure a continuous seal.

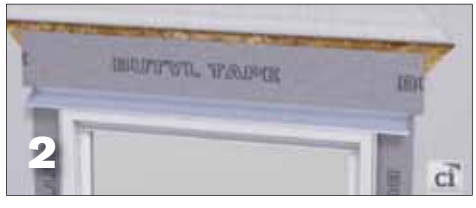



**Apply a bead of sealant or caulk to the window flanges at the head and sides, leaving the bottom free to drain. If sealant is preferred at the bottom flange be certain to leave a 3-inch gap in the sealant every 2 feet for drainage.**

Next, apply a bed of sealant or caulk to the window flanges at the head and sides, leaving the bottom free to drain. If sealant is preferred at the bottom flange be certain to leave a 3-inch gap in the sealant every 2 feet for drainage. Set the window into the opening. Plumb, level and square the window with nails installed in the fastener holes provided.

Install the window over the weather resistive barrier and sill pan, and cover the vertical flanges and the house wrap adjacent to the window unit with peel-and-stick butyl adhesive tape. These vertical strips must extend past the head of the window so the ends will be well-covered by metal flashing, butyl head tape and the flap of weather resistive barrier that will go over the top flashing.

When you install any butyl flashing tape, lap the flashing layers shingle style, always installing upper flashing layers over lower ones. All




**Install the window over the weather resistive barrier and sill pan, and cover the vertical flanges and the house wrap adjacent to the window unit with peel-and-stick butyl adhesive tape.**

### >> TIP

**Use adhesive primers in any situation where adverse weather conditions exist.**


**While there is still ongoing debate about the best way to flash a window with an integral nailing flange, peel-and-stick flashing tape or adhesive membrane, peel and stick butyl adhesive flashing tape is a commonly accepted approach to ensure the continuity of the drainage plane when a weather resistive barrier is part of the wall assembly.**

**ALL FLASHING TAPES SHOULD BE ROLLED OR PRESSURE APPLIED AT 30 TO 40 POUNDS PER SQUARE INCH FOR PROPER ADHESION. THIS IS KEY TO LONG-TERM, CONTINUOUS PROTECTION OF THE ADHESIVE FLASHING SYSTEM.**

flashing tapes should be applied to clean and dry surfaces.

All flashing tapes should also be rolled or pressure applied at 30 to 40 pounds per square inch for proper adhesion. This is key to long-term, continuous protection of the adhesive flashing system.

**Remember:** There is also sealant behind the window flanges. If all else fails, the pan flashing will act as the last line of defense to properly drain the water from the window opening.

The bent metal flashing above the window has a few interesting features. It has a back leg of greater than 4 inches, a slope on the flashing to shed water with a drip edge on the bottom extended leg. It is also cut to the width of the window plus the vertical trim with end dams.

The end dams force water to run out and away from the siding and trim, not off the sides of the metal flashing. The top flashing is caulked in two places with a bed of sealant: Along the horizontal edges that extend up the sheathing and where the drip cap meets the head of the window unit.

The drip cap is installed directly on the sheathing and sealed with a strip of butyl flashing tape. Drop the flap of weather resistive barrier and seal with acrylic tape, but leave a few small 1-inch gaps in the tape to allow water to drain out if it ever gets behind the weather resistive barrier.

Install the top trim and then the metal drip cap. Seal the drip cap to the house wrap with acrylic tape.

Do not caulk any horizontal joints above or below the window or any flashing (between the trim and the flashing). This allows these areas to shed water to the layer below. Caulking traps water instead of allowing it to drain.

---

*This special feature is provided by Construction Instruction. Among the most-respected building scientists in North America, Construction Instruction (constructioninstruction.com) teaches best-practice building methods.*

*Use Construction Instruction's mobile app to get construction videos, building science articles, technical data and best practices anytime.*