This is an excerpt from The 2018 Residential Rooftop Report, now available to download for free on solarbuildermag.com.

Every solar installer must find a way to prevent the roof from leaking, but most are either unaware or too busy to know what's happening in flashing technology. This isn't surprising, due to the fact that flashing typically makes up less than 5 percent of the total cost of a standard 7-kW install on an asphalt shingle roof. As our industry continues to look for ways to reduce costs, successful companies will emphasize reducing labor costs over the raw cost of materials.

After speaking with installers, our team identified three common problems that installers face on the roof related to using flashing: size of the flashing, number of components and speed (time it takes to install).

Most of the flashing products used in the past included a 12-in. x 12-in. piece of metal to cover a hole that is typically only 5/16-in. in diameter. Installers ended up cutting the material to fit according to the array or simply to remove excess metal. We did find that some installers were willing to pay for the larger size because they were able to cover up any other holes made on the roof, for instance, when an installer might miss the rafters when pre-drilling or driving mounting screws.

As more manufacturers have integrated flashing with their mounting products, the number of components has increased. Most of the rubber bushed flashing and elevated flashing products we researched consisted of more than five individual parts, often including numerous small washers and nuts. The problem many installers face dealing with so many individual components is obvious: they are easy to lose on the roof. Many professional solar installers wear gloves, so it is difficult to manipulate all these small parts — and if one falls off the roof, good luck finding it.

Also, as the number of components increases, so does time to install. What used to only take a couple minutes -- apply sealant to a piece of aluminum flashing, pre-drill a hole, then drive the screws -- could take up to 30 minutes for a single flashing product, according to the installers we interviewed.

Microflashing method explained

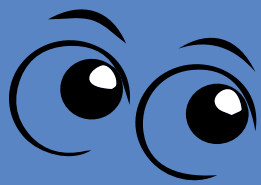
In 2010 SolarRoofHook launched the QuickBOLT Mounting System for asphalt shingle roofs and what has become known in the industry as microflashing. We wanted a product that addressed the problems installers were facing — size of the flashing, number of components and speed — because of the direct link between install time and profits for solar installation companies.

The QuickBOLT consists of only three components: a 3-in. stainless steel-backed EPDM rubber compression washer, a 5.25-in. hangar bolt with a Type 17 point and unique collar, and a 5/16-in. nut. When installers drive the bolt down, the collar compresses the microflashing washer down onto the roof, creating a watertight seal. Any racking system can then be mounted by connecting a T-bolt to the L-Foot. Installers have fewer components to worry about losing and can install the system in less than 60 seconds. The microflashing is large enough to cover any other holes that might be made from missing the rafters, but unlike the traditional flashing methods, installers no longer have to pay for extra, unused material.

The other key difference with microflashing is its placement. Traditionally, installers would have to lift up the shingles and slide in the flashing underneath. Not only is this time consuming, but it is against code and increases the installer's risk. Instead, microflashing is designed to be placed directly over the shingle. This way, water is redirected around the washer just like other flashing methods but requiring fewer components for an easier install.

This innovation in flashing methods has given installers a new way to install more solar and increase profits. In an ever-changing solar market, especially with the pending Trump tariff decision, installers need as many ways as possible to be more cost effective.

Jared Wiener is marketing manager for SolarRoofHook.



PRODUCT TO WATCH

PowerMount

Corrugated metal roofs present a unique set of challenges for solar installers. The PowerMount for Corrugated Metal Roof Systems from Solar Connections simplifies those issues. It starts with Cross Stitch Attachment Technology that secures to the roof with four custom screws angled to provide maximum strength and uplift. The high-grade, fully EPDM gasketed mount forms a water-tight seal, and the stainless fasteners and EPDM washers provide additional layers of water protection. The PowerMount is made from solid 6061-T6 aluminum and allows for 2-in. of adjustment. Solar Connections' 6061-T6 Universal PV Cube is also compatible with all PowerMounts.