



WHITEPAPER

eGuide: Proper Techniques for Slate Roof Installation

Even with all the advances in technology and techniques, slate roofs, when properly installed, are still the longest lasting and easily cared for roofs available. In a society where immediate cost cutting measures took precedence over durability, slate roofs fell out of favor with home builders and home owners. However, attitudes are finally changing, and more people are thinking long term now and opting for the beauty and reliability of slate roofs.

Now there is a new problem - a lack of contractors who truly understand how to properly install and maintain a slate roof. For roofers or contractors who would like to begin their journey into learning how to install slate roofs, here are a few things you should know about their installation that may be different than the techniques used to install tar paper or metal roofs.

Think Long Term

A properly installed slate tiled roof should last 150 years or more. This is only true, however, if the roof and its components that support it are able to do the same. When selecting construction materials to build the roof decking, avoid the current popular materials like plywood and laminate materials. They are simply not capable of standing the test of time. Instead, choose solid lumber at least 3/4 of an inch thick, or other materials shown to be able to last over 100 years like gypsum or nailable concrete.

Slate Selection is Key

Not all slate tiles are created the same, and as such, not all types work for every roofing job. Aside from color and price, you need to consider thickness, composition, size and source:

- Thicker slates are harder to work with and are more likely to crack if handled improperly. However, when correctly installed, they will last longer.
- Slate that has been mined from different areas will contain different materials, thus the difference in color. However, if the slate contains too much iron or other elements, these will bleed out over time when exposed to rain and snow. This can lead to red or other colored streaking down your roof.
- The smaller the slate tile, the more work it will take to cover the roof, so you may assume that larger tiles are a better option. This is not always the case, and in many instances, smaller tiles not only offer more effective protection from the elements, but also have a look that may be more appealing. While there is no perfect size (every roof is different, after all) try to find a balance between the advantages of using less material and less labor intensive large slates, and the better coverage and usually longer lasting smaller slates.



WHITEPAPER

- As with most materials used in roofing or anything else, it is vital that you get the slates from a reliable source, especially as a novice. While a person who has worked with slate for some time may be able to discern a batch of slate tiles' quality easily, newcomers may not be able to do so. When buying slate, at least at first, stick to companies with good reputations for supplying high quality, long lasting slates.

Underlayment is Only Temporary

While the underlayment in modern roofs is used to help enhance the waterproofing of the tiles, this is not the case for slate roofs. Remember that slate roofs should last over a hundred years, while no underlayment material will. Choose a material that will prevent moisture from entering the house while construction is in process, but then rely on the proper placement and installation of the slate tiles to create a long term waterproof seal.

Proper Overlap Is Vital

When installing slate tiles, it is important that the amount of overlap, both from top to bottom, (called headlap) and side to side (called sidelap) is correct. Too small an overlap, and the tiles will not keep a tight seal against the elements. Too big an overlap, and you run the risk of the fasteners from the slate eroding the ones above them. This can significantly shorten the slate's functional lifespan.

Mix Different Pallets of Slate Tiles

Like most naturally made items, slates are not universal in color or quality. Although sorted by the vendor as to color and thickness, there will be variations, especially from pallet to pallet. To ensure that the roof does not end up looking patchy or have weak spots, take a few slates from each pallet and blend them together while installing.

Outline Your Course

Before applying a single slate tile, take the time to chart your course. Draw carefully measured lines to use as guides, or a batch of slightly larger or smaller tiles may throw you off course. This will result in a roof that appears haphazard and shaky instead of the stable and attractive look of straight lines.

Do Not Walk On The Slates

Slates can withstand the elements but they were never designed to withstand direct, heavy pressure. Walking on slate tiles may crack or break them, or weaken them with micro-fractures that you can't see, which will significantly shorten the tiles' lifespan. Make sure you stage the roof properly, using roof jacks and planks to keep your weight off the slates, while still providing you access to every area of the roof.

Choosing the Right Tools for Speed and Cost Savings

Slate roof installation and repair can be a tedious and time consuming job. Choosing tools and fasteners that provide the quality you need but also save you time is key to a successful and profitable install.



WHITEPAPER

Consider, for example, the time saving analysis conducted by The BECK Fastener Group® on their Slate Roof System, demonstrating the time their roofing tools and fasteners can save a roofer:

- Save a fifth of the time for battens installation; typical manual installation time for 40-45 feet² is 1 hour, versus only 12 minutes with The BECK Slate Roof System.
- Save half of the time for sheathing; typical manual installation time for 40-45 feet² is 1 hour, versus only 30 minutes with The BECK Slate Roof System.
- Labor cost savings are roughly \$63 per hour with the proper tools of The BECK Slate Roof System.

Consider Using The BECK Fastener Group®'s Slate Roofing Tools and Hardware

The BECK Fastener Group® has done for slate roofing what they have done for so many construction jobs - make it possible to get the work done more quickly and accurately than ever before. BECK's Slate Roof System makes it possible to install the roof tiles in less time, while maintaining universal depth and spacing.

The collated hooks meet or exceed the European standards for slate roofing materials, including these technical specifications:

- The ratio of wire diameter to length.
- Materials used: All of BECK's collated slate roofing hooks are made of high grade stainless steel
- Proper geometric form.

The nail sides have precision diamond points and the hook ends have diamond-tipped blunt edges to prevent undue wear on the slates and make the hooks themselves more resistant to the elements. They are available in either colorless or black painted versions.

The Pneumatic Slate Roof Tool makes it easy to drive the hooks in to a universal depth. While the use of a hammer may require three or more poundings, and then a pause while you properly place the next hook, this pneumatic tool accomplishes all of that with a single motion. This makes the backbreaking job of installing slate roofs just a bit easier and saves on labor costs.

For more information about how The BECK Fastener Group®'s collated slate roof hooks and pneumatic tool can help you install slate roofs more efficiently, or to place an order, contact Fasco America®, the master distributor of The BECK Fastener Group®'s innovative and reliable fastening systems in North America.

Fasco America®
105 Industrial Park
P. O. Box 2389



WHITEPAPER

Muscle Shoals, Alabama 35662

Phone Toll Free 800-239-TOOL (8665) or fax 256-381-6659

www.fascoamerica.com