

Conical Turret Installation Guide



How to Install EcoStar Tiles on a Conical Turret

EcoStar synthetic slate and shake roofing tiles are a great choice for conical turrets. The flexibility of the tiles eases the challenges associated with conical turret installation. The following is a step-by-step guide to help the installer estimate the amount of material required to accomplish the installation.

First, determine the area of the turret:

$\text{Pi} \times \text{R} \times \text{S} = \text{area in sq. ft.}$

$$\text{S} = \sqrt{\text{H}^2 + \text{R}^2}$$

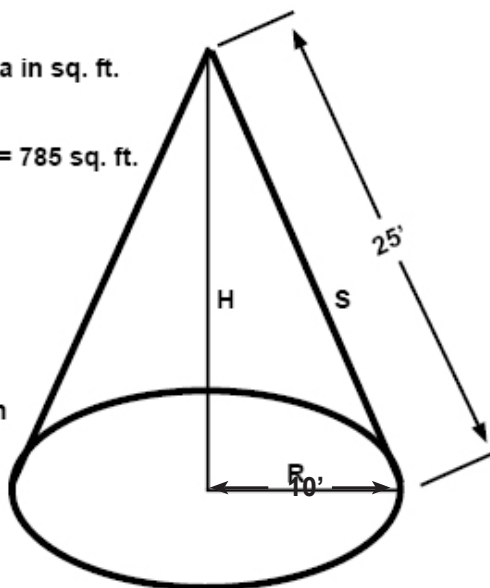
$$3.14 \times 10' \times 25' = 785 \text{ sq. ft.}$$

$\text{Pi} = 3.14$

$\text{R} = \text{Radius}$

$\text{H} = \text{Height}$

$\text{S} = \text{Side Length}$



Considerations when estimating material required to cover turret:

A metal finial will be necessary to cap the turret. EcoStar tiles should not be cut to a width less than 3". Therefore, the metal finial needs to be large enough to extend down the turret to the point where tiles can no longer be used.

EcoStar Random-Width Blend in Majestic or Empire Slate is the best choice for use on conical turrets because there are 6", 9" and 12" wide tiles in every bundle.

Seneca/Empire Shake and Majestic/Empire Niagara Shake tiles work equally as well if a wood shake look is desired. The gaps between tiles can not be aligned on a conical turret like they can be during a standard EcoStar installation. The gaps and tile sizes will always be random. The use of three or four sizes of tiles will reduce the amount of waste and make the installation go quicker.

To maintain the required 3/8" gap between tiles on a turret installation, the sides of every single tile will have to be cut to the correct angle. To determine the proper angle, temporarily install a tile at the eave, parallel to the eave. Connect a chalk line from the top point of the turret and lay it across the tile at each bottom corner of the tile. The string position(s) on the tile will show the angle at which every tile will be cut. Mark the angle on the tile, cut the tile on the mark and use it for a pattern. Please note that every tile must have the turret angle cut on both sides of the tile.

Snapping several chalk lines from the point to the eave around the turret will help in aligning the tiles during installation. These lines are for vertical reference only, not tile edge alignment. **Do not use red chalk as it will stain the tiles.**

Installation

Start by cutting the sides of a few full size 6", 9" and 12" tiles to the proper angle leaving the full width at the bottom of the tile. A table saw works great for this. The cut edges of EcoStar slate tiles can be quickly and easily scalloped with a utility knife to restore a slate like detail. Only the exposed portion of the tile will need to be scalloped. Install the starter row using a random selection of the three widths gapped at 3/8" between tiles.

Install the first exposed row using the tile that will cover the gap, cover the nail, and leave the opportunity to do so with the next tile. The random pattern will dictate which tile works next. Use full bottom width tiles until the pattern dictates that smaller widths are necessary. At this point each tile becomes "cut-to-fit."

As the installation progresses up the turret there will be rows where mostly full bottom width tiles work again. Eventually all tiles will be small widths.

Tips

If you have never installed EcoStar tiles, familiarize yourself with the standard EcoStar Installation Instructions (available at www.ecostarllc.com) **BEFORE** you attempt a conical turret installation.

When installing slate tiles, **scallop the cut edges on the tile** for a more slate like appearance. Don't bother scalloping the edges of the starter row tiles as they will not be seen.

Don't forget to **bend the tiles** in a downward arc before installation as per standard EcoStar Installation Instructions (bending is not required for Niagara products).

Designer slate tiles only come in 12" widths, however, you can **make different width tiles using a table saw or jig saw**. Scallop the edges after cutting.



Niagara Slate or Shake on Conical Roof Decks

When considering Niagara Slate or Shake tiles for a conical roof deck or turret it is important to remember that the tiles are the largest profiles offered by EcoStar and they may not be aesthetically pleasing for small circumference turrets. Some roofs, such as the one pictured here, have a fan or rounded feature that would be effectively coverable with the Niagara Slate or Shake profile. Because of the ribbed design of the tiles, it is not recommended to cut the exposed portion of the tile to the roof angle as described in the Majestic/Empire Slate and Seneca/Empire Shake instructions. Instead, the angle cut would be from the top of the tile, ending at the side of the tile even with the nail location.



See Figure 1.

Trim each tile edge in this manner. A table saw works the best for making the multiple cuts necessary for a conical roof. Any blade designed to cut wood will work. Install the tiles maintaining a minimum 3/8" gap between

tiles. The gaps at the bottom of the tiles will be wider, and this is acceptable for performance and aesthetics.

See Figure 2.

When smaller width tiles are needed, full size tiles can be cut along one of the ribs on the back of the tile leaving the rib as the edge of the tile. Cutting tiles in this manner gives the appearance that all of the tiles were manufactured in those widths. The two tiles in Figure 3 were made from one 10" wide Niagara Shake tile.

See Figure 3.

Remember that the tiles at the top of a turret can get very small. For Niagara Slate or Shake installations the finial at the top of the turret should come down the turret far enough to negate the need for very small pieces (less than 3").

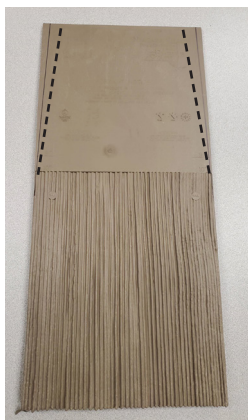


Figure 1

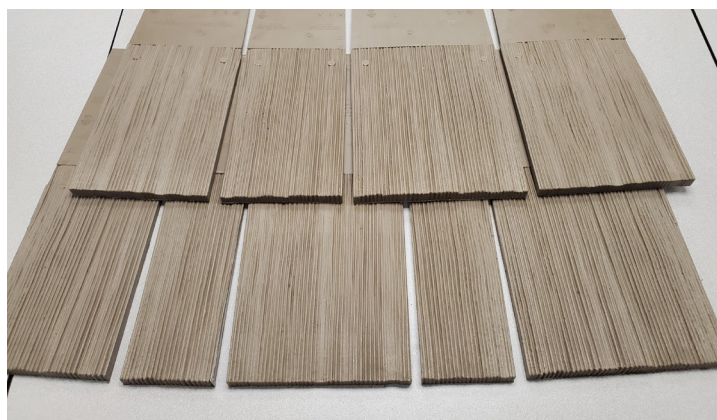


Figure 2



Figure 3