

## TURRET INSTALLATION GUIDANCE

### SUMMARY

This bulletin provides step-by-step guidance for installing Brava Roof Systems on turrets. Turret installations require extra time and care in the planning and installation stages. Still, your roofing project's resulting aesthetic and distinctiveness will be worth the effort, showcasing craftsmanship that stands the test of time.

### TURRET TYPES

Historically, turrets were an integral part of defense for castles. Modern turrets may be recreations of those symbols or even remnants of that time and have become an architectural design feature.

Turrets come in many shapes and sizes depending on the style and design of the building. Other terms for a turret include steeple, tower, and spire. From an installation perspective, major types include round, semi-round, square, and hipped turrets. Round and semi-round turrets have a continuous curve, while square and hipped turrets can be sectioned into small triangles allowing for a flat installation.

### SYSTEM COMPATIBILITY

#### ROUND OR SEMI-ROUND TURRETS

Round or semi-round turrets have a continuous curve in a circle or semi-circle.

**BRAVA CEDAR SHAKE, BRAVA SLATE, AND  
BRAVA SPANISH BARREL TILE\***



#### SQUARE OR HIPPED TURRETS

Square or hipped turrets can be sectioned into small triangles allowing for a flat installation.

**BRAVA CEDAR SHAKE, BRAVA SLATE,  
BRAVA SPANISH BARREL TILE**

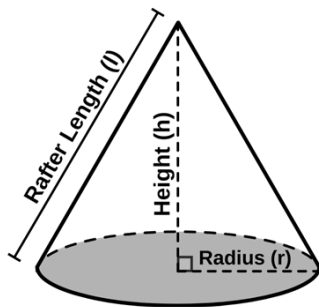


Solid Shakes or Solid Slates are recommended at cut edges and may be appropriate for the entire turret, depending on the design and desired appearance.

Trimming of Shake, Slate, and Barrel Tile may require additional material. For turret sections, the waste factor should be increased by 5-10% for Field Tiles and Accessories.

\*Adjustment to eaves and decking, and addition of hips may be required for Spanish Barrel Tile as all Field Tile courses must be installed to straight lines.

## MEASURING TURRET AREA



### ROUND OR SEMI-ROUND TURRETS

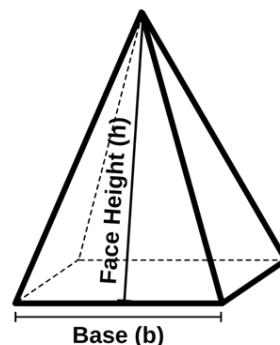
Measure the Height (  $h$  ) and the Rafter Length (  $l$  ) of the Turret.

Solve for the Radius (  $r$  ).

$$r = \sqrt{l^2 - h^2}$$

Solve for the lateral roof area (  $A_l$  )

$$A_l = \pi * r * l$$



### SQUARE OR HIPPED TURRETS

Measure the Face Height (  $h$  ) and Base (  $b$  ) of each turret section.

(Note that the face height is used; not the apex height of the pyramid.)

Solve for the section Area (  $A_s$  ).

$$A_s = h * b * \frac{1}{2}$$

Combine  $A_s$  of all sections for total Area (  $A$  ).

## MATERIAL REQUIREMENTS & RECOMMENDATIONS

### SHAKE AND SLATE

For rounded turrets, Shake and Slate tiles must be trimmed for a natural look, and keyway spacing (3/16" minimum required) between each piece.

On very steep slope (>24:12) turrets, or turrets with a large radius, the early courses - near the eave - may not require trimming. Shakes and Slates may be cut in these locations to provide a consistent keyway.

### SOLIDS

When cut, standard Field Shake and Field Slate structural ribbing may be visible from some areas. This does not affect performance; however, solids are recommended at cut edges and may be appropriate for the entire turret, depending on the design and desired appearance.

Solids (4.16 ft<sup>2</sup> per bundle) are manufactured in 12" widths and can be estimated at 24 bundles per square (100 ft<sup>2</sup>) with no waste.



### BARREL TILE

Barrel Tile must be installed in straight lines. Tiles at eaves may be trimmed to form a rounded appearance.

Hip nailers are required and should be sized appropriately for Hip & Rake pieces to sit flush with the Field Tile.

Hip & Rake pieces (5.6 lineal feet of coverage per bundle) and a finishing Bullnose (hip starter) pieces should be ordered for hips added to turret sections.



For rounded turrets, decking must be modified to form hipped flat sections.

## INSTALLATION GUIDANCE

Installation should be completed using the published [Brava Cedar Shake Installation Guide](#), the [Brava Slate Installation Guide](#), or the [Brava Barrel Tile Installation Guide](#) supplemented by the installation videos available on the [Resources Page](#) on the [Brava Website](#) and on [Brava's YouTube Channel](#).

Estimate additional time and material to account for additional layout, cutting, and any required deck modifications. Take note of the Keys to Success in each Installation Guide and contact Brava Technical Support for clarification on any unique details.

### PRE-PLANNING & LAYOUT

Accurately measure the turret and plan the layout on paper first. This will help visualize the roof system layout and identify any potential adjustments needed before installation begins.



### CHALK LINES

Use standard horizontal chalk lines for square and hipped turrets. For rounded turrets, snap vertical chalk lines from the peak to the eave every 2-3 feet as guides. Do not align keyways or tile edges with these lines. Only use them to ensure each course is correctly oriented towards the turret's peak.



### SIDELAP

For Shake and Slate installations, ensure that the joints between tiles are staggered from one course to the next, leaving a minimum sidelap of 1-1/2". This enhances the overall aesthetic and ensures correct keyway offset to prevent water infiltration.

### KEYWAY SPACING

Shake and Slate must be installed to allow a minimum 3/16" keyway space between each piece. This allows for thermal expansion and contraction. On turrets, cuts may need to be made at an angle to ensure the minimum keyway along the entire side of each piece.



### CUTTING & SOLIDS

More cutting is usually necessary during turret installation. Take care to make cuts clean, especially when a cut edge might be visible. Use of a circular saw, jig saw, or miter saw may be appropriate depending on the type and visibility of the cut edge. When possible, do not cut corners off Field Shakes or Field Slates to preserve the full coverage width and avoid exposing structural ribbing. Use Solid Shakes or Solid Slates for cut shakes and slates when appropriate for the best appearance.

### FLASHING

Use appropriate metal or flexible flashing around transitions and other intersections to prevent water ingress. Ensure that flashing is sealed and conforms well to the contours of the roof.

### REGULAR CHECKS

Step back and check the alignment and symmetry of the tiles from a distance frequently. Adjustments are easier to manage before the entire installation is complete.

### TURRET CAP

Custom metal caps are common on turrets and are recommended when possible. Measurements for the final cap should be done after the roofing system is installed to ensure a perfect fit and finish.





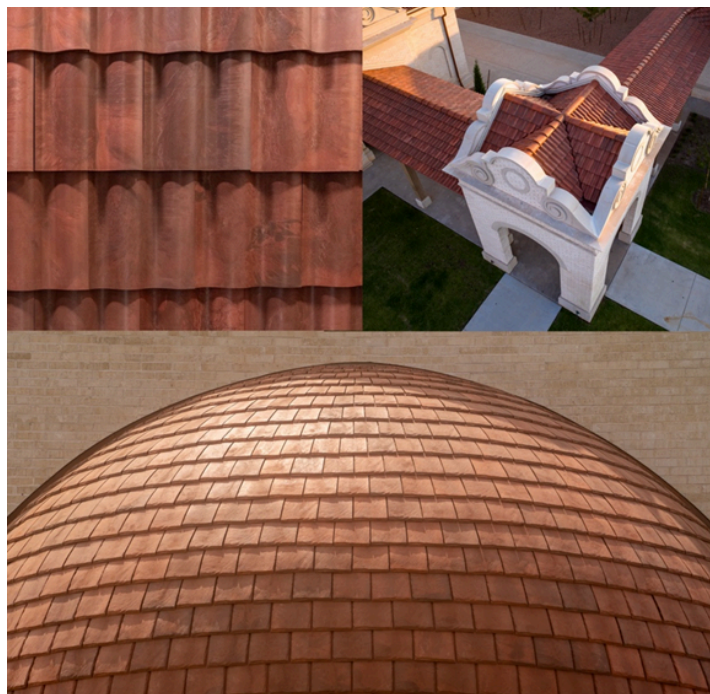
## NOTES

Each turret is different and will be an architectural focal point. Plan extra time and ensure adequate materials are ordered to complete these unique architectural roof features.

Consider adding to the standard waste factor for turret sections due to additional cuts at keyways and/or added hips. Solid Shakes and Solid Slates are recommended for the best appearance at cut edges and may be appropriate for a percentage of the turrets or the entire turret, depending on specifics.

Brava Barrel Tile must be installed to straight lines. For rounded turrets, adjustment to decking is required. Alternatively, a color-matched Brava Slate pairs well with projects that do not meet Barrel Tile installation requirements.

Shake and Slate Hip & Ridge Caps are available for Low (160°), Standard (120°), and Steep (90°) slopes. Measure the angle of the hips and confirm that the correct Hip & Ridge Caps are ordered to match the roof angle.



Matching Brava Slate and Brava Barrel Tile  
[Blessed Stanley Rother Shrine, Oklahoma City, OK](#)

## RESOURCES

Check for updates to this and other [Technical Bulletins](#) on our [Resources Page](#).

Complete Installation Training, View Resources, and Contact Technical Support by visiting our [Technical Support Portal](#).

Training before any installation can improve project outcomes.

## QUESTIONS

If you have any questions regarding Brava Roof Tile products and accessories, call 844-290-4196 and ask for Technical Support.

Or contact us through the [Technical Support Portal](#).

