



*Bellaforté*<sup>TM</sup>

by DAVINCI

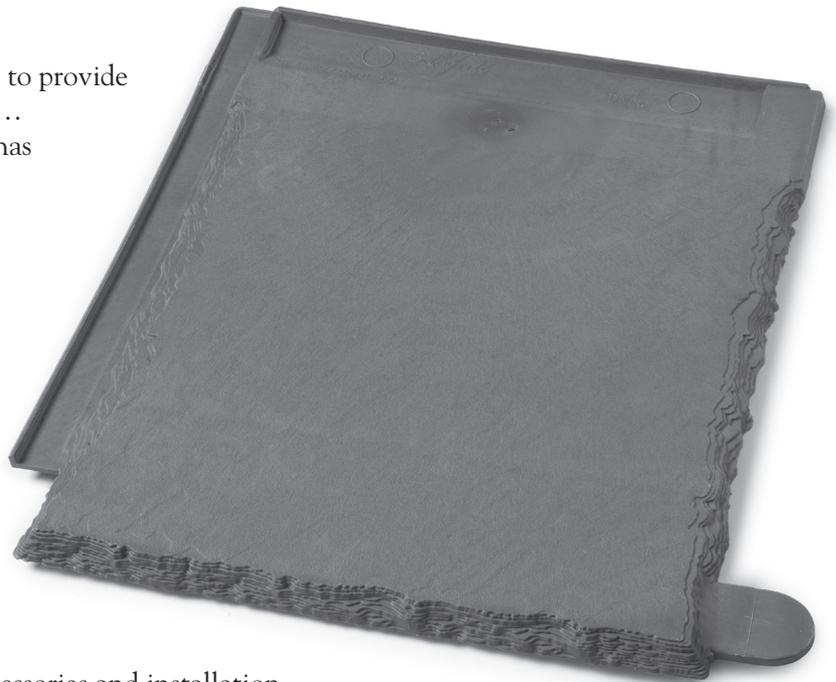
# INSTALLATION GUIDE

Bellaforté is a synthetic slate carefully engineered to provide the authentic look and durability of natural slate... at a fraction of the cost and weight. Special care has been taken to make the product easy to install. By following these instructions, and using good installation practices, you will be assured of a quality installation.

## NOTE TO INSTALLER

Bellaforté offers a 1/2" thick profile, yet remains lightweight, because the slates are not solid. When cutting slates for open valleys for example, some special flashing detail may be required.

Pay special attention to recommendations for accessories and installation at gable ends (page 5) and valleys (page 4-5).



This information is provided for the use of professional roofing contractors. This Installation Guide does not supersede local building codes which should always be followed. DaVinci Roofscapes® does not warranty or have any responsibility for installation of its products. The DaVinci Roofscapes Limited Fifty Year Warranty outlines its warranty responsibilities for the roofing materials it manufactures.

For questions about DaVinci Bellaforté or its application, contact DaVinci Roofscapes®, LLC  
913-599-0766 or 800-DaVinci (800-328-4624) or [www.davinciroofscapes.com](http://www.davinciroofscapes.com)  
Please be sure to check DaVinci's website for updates. Installation Guide is subject to change without notice.

# INSTALLATION

## DECKING INSTALLATION

Bellaforté must be installed on a smooth flat surface; minimum 15/32" APA approved plywood or 7/16" approved OSB. It is also necessary that all previous roofing materials be torn off prior to installation of Bellaforté. Imperfection in the decking may transmit through to finished roof.

## DRIP-EDGE

Metal drip-edge made from copper, aluminum, or painted metal should be installed underneath underlayment on all eaves. Drip edge on gable ends is optional.

## ICE AND WATER SHIELD

A full sheet of ice and water shield is required in all valleys. At least 18" of ice and water shield is required on all gable ends, against walls, and around projections.

In areas where the average daily temperature in January is 25° F or lower or where ice buildup is possible, DaVinci requires ice and water shield be installed: from the bottom edge to two feet above the exterior wall line on all eaves.

## UNDERLAYMENT

In addition to ice and water shield a minimum 30 lb felt that meets ASTM D 226 standard is required over the entire roof.

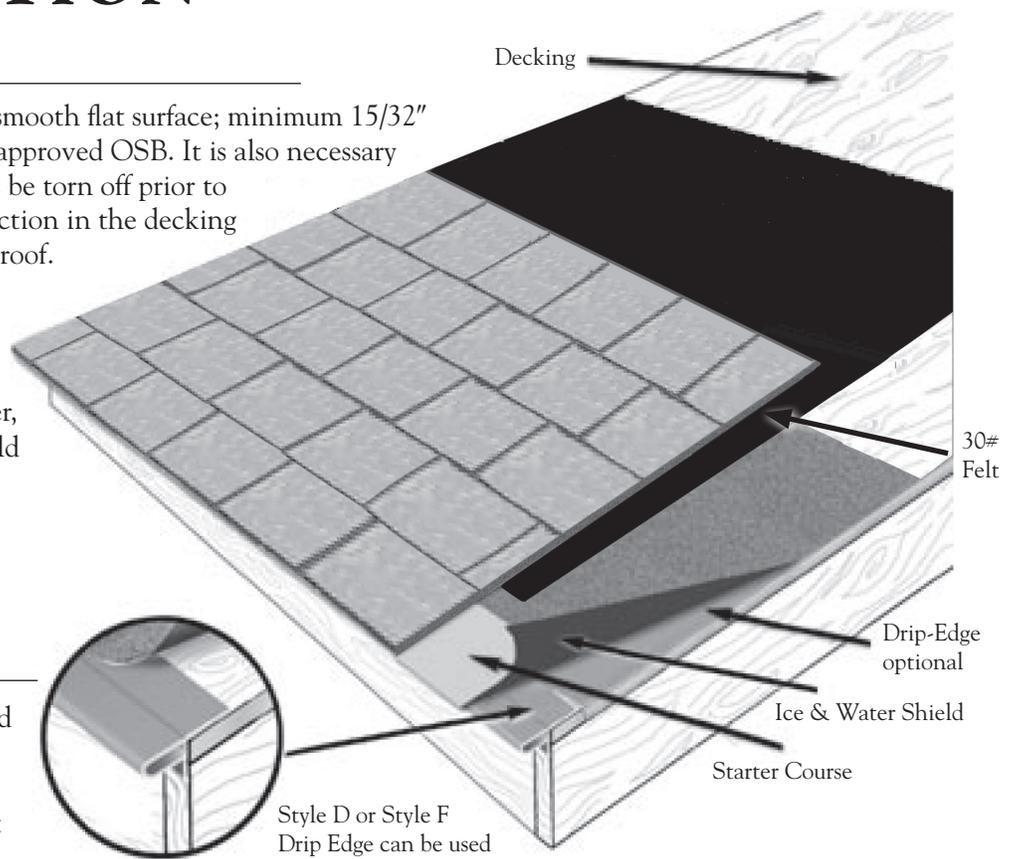
If ice and water shield is required in the field of the roof (if there is a skylight for example) it must be installed so that if water ever lands on it, it will flow on top of the other underlayment, not the plywood.

## CLASS A SYSTEM

In order to meet a Class A system for fire a minimum two layers of FONTANA VulcaSeal G-40 laid on a staggered pattern is recommended. (Two layers MB Technology T-U35 are also acceptable). This underlayment must be used in addition to the ice and water shield in order to fulfill the requirements of a Class A system.

## STARTER COURSE

It is imperative that the starter course be straight. The Bellaforté field tiles rely on the starter course to maintain straight coursing. It is therefore recommended that there be a chalk line laid to assure that the starter is straight. The chalk line should be laid 2½" from the bottom of the eaves flashing to allow for 1" of overhang. The starter and the field tiles should be installed with 1½" roofing nails. We recommend copper, stainless steel, or hot-dipped galvanized nails. Ring-shanked nails should be used in high wind areas.



# INSTALLATION

## FIELD TILE

The Bellaforté field tiles must be laid from left to right. The “gutter” on the left side of the first tile on a gable end may be removed or not depending on preference. The outside edge of the tile will be covered by a rake tile on a gable end or a hip and ridge tile on a hip. If using a rake tile is unacceptable an alternate method for gable end installation is to use a T metal (or gravel stop) which requires the removal of the “gutter” on the left edge of each tile on the edge of the gable.

The first tile should seat directly on the starter tile. The stop or ledge on the bottom of the field tile rests directly on the top of the starter. Slide the tile as far left as possible. The field tile should then be nailed on the tab first and then on the top of the tile in the left hand corner.

Once the first tile is in place a tile should be placed on top of it to start the second course. This tile should be placed so that it nests on top of the first tile with the ledge on back resting on the top of the first course tile. Slide the tile to the left so that the right side edges of the two tiles are offset by a minimum 3". Before nailing, the overhanging portion on the left side of the tile should be removed. The cut tile should be installed with two nails, one on the tab and another in the top left corner.

The first tile on the third course should be installed in a like manner. It should be setback a minimum 3".

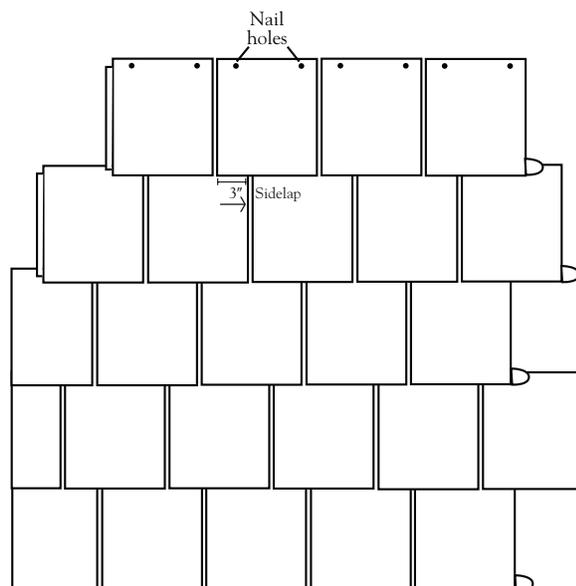
**Note:** It is important to note that Bellaforté may be installed in several different patterns. A random or inconsistent pattern is the simplest pattern and one that is aesthetically pleasing to many. This pattern is literally accomplished by setting the shingles back random amounts as long as there is a minimum 3" sidelap from the gutter on the adjacent course. A random pattern is forgiving in that vertical pattern alignment does not need to be constantly checked to make sure it is straight.

Other pattern methods are the 5" and 6" patterns. The 5" pattern is accomplished by setting each tile back 5". This will prove to show a consistent vertical pattern that is diagonal. The 6" pattern is accomplished by setting each tile back 6". With this method the gutters between tiles are in alignment on alternate courses. This installation method makes for a very orderly look. This installation pattern is the most difficult and requires frequent checking of vertical alignment by the means of chalk lines. Both a 5" and 6" pattern will also require the installer to use extra effort around a dormer or other protrusion to ensure the pattern stays straight all the way to the end of the roof.

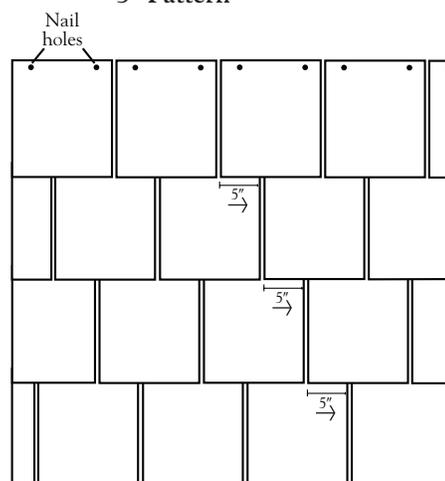
When installing Bellaforté tiles there should be a horizontal line chalked occasionally to assure horizontal straightness. If tiles must be adjusted to assure straightness the adjustment should be taken out over several courses. Tiles cannot be lowered because of the stop mechanism and can only be raised ¼" per course.

**Chalk lines should be snapped on underlayment. Do not snap lines on Bellaforté or use red chalk as the chalk may permanently discolor the slate.**

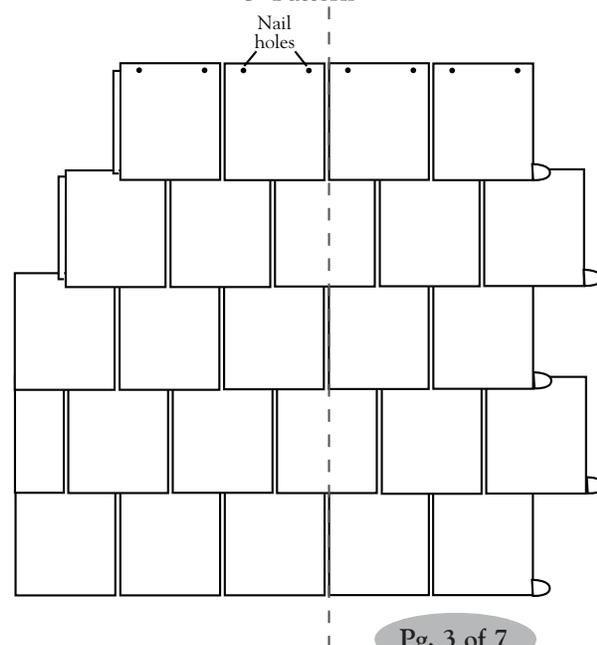
Random Pattern



5" Pattern



6" Pattern



# INSTALLATION

## INSTALLATION AGAINST WALLS OR OTHER ABUTMENTS

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Walls or projections must be prepared by installing a minimum of 18" ice and water shield that turns up the wall at least 4" and back on the deck at least 14". With the ice and water shield in place an 8" x 4" piece of "L" metal should be installed so that 4" goes up the wall and 8" lies on the roof deck. If the abutment terminates the "field" the ice and water shield must go over the top of the "field" underlayment. The roof edge of the metal should be crimped. This metal should extend on top of the field tile below. When installing the first tile on the flashing a Bellaforté accessory tile should be used.

The Bellaforté accessory tile is a tile without the ledge on the back. This accessory tile may be used as a transition on to flashing, on valley metal, or used on top of toe-irons (scaffolding jacks) for example. Once the first accessory tile makes the transition, subsequent tiles may be regular Bellaforté field tiles laid on top of the flashing. An accessory tile may be fabricated in the field by removing the back ledge with a knife or planer.

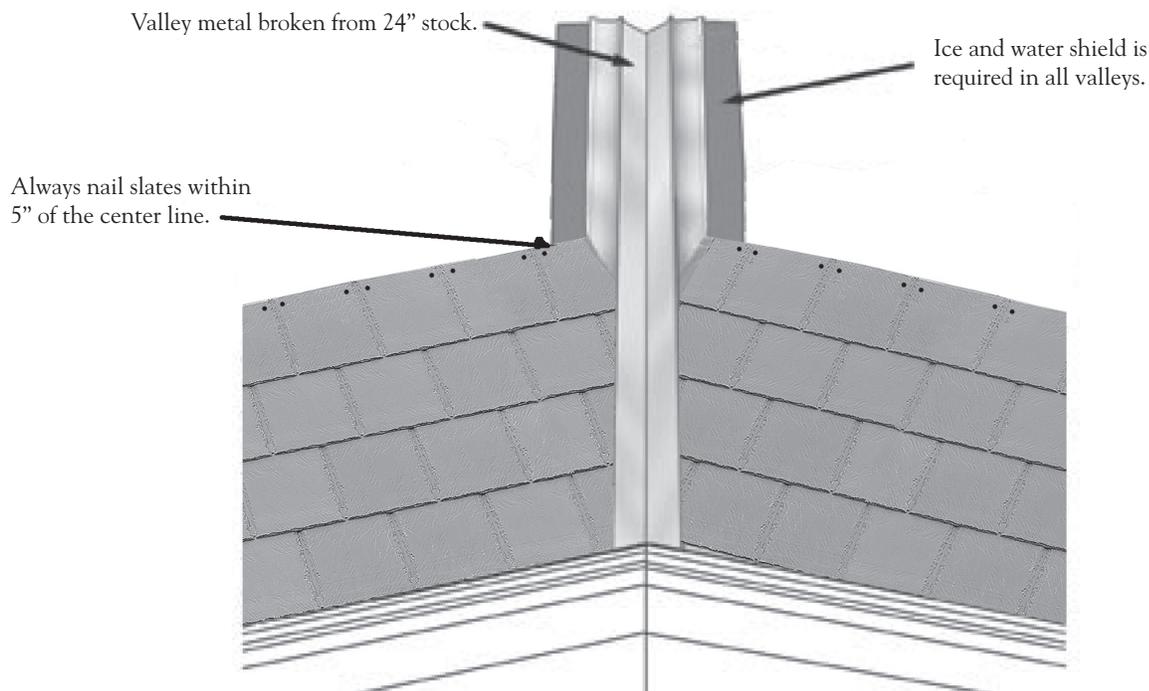
## VALLEYS

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Open Valleys are the preferred method of installing Bellaforté tiles. It is good practice to make the bottom of the valley an inch wider than on the top. A line should be chalked on the valley metal to assure straightness. The tiles should be cut with a circular saw. The transition piece from the field installation to on top of the valley metal should be a Bellaforté accessory piece.

### Closed Valley:

Closed valleys may also be used. With this method valley metal with a standing seam should be used. The tiles should then be cut and butted to the diverter.



# INSTALLATION

## GABLE ENDS / RAKES

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When a gable end is reached and the last tile is cut the tile may be nailed in the body of the tile since there will not be a nail tab. The nail will be covered by the rake tile.

## CUTTING

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Bellaforté tiles are most easily cut with a 18 volt or greater battery operated circular saw. They may also be cut with a box knife although it is more difficult.

## MAKING THE PATTERN MATCH

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When using the 5" or 6" method it is important to make the pattern come out both vertically and horizontally on top of a dormer or gable that abuts the roof lower than the ridge gable. In order to do this the left side of a dormer (for example) must be installed with several tiles above the top of the dormer. With this completed a chalk line may be struck that aligns the right corners of the installed tiles and goes all the way down to eave on the right side of the dormer. Once the chalk line is in place the installer may place the right side of the top tip of the bottom tile on the line. He should use this as a guide to install the necessary tiles to the left. Subsequent courses are installed with a 5" or 6" setback. Good horizontal alignment may be assured by snapping occasional horizontal lines.

## RAKE TILE

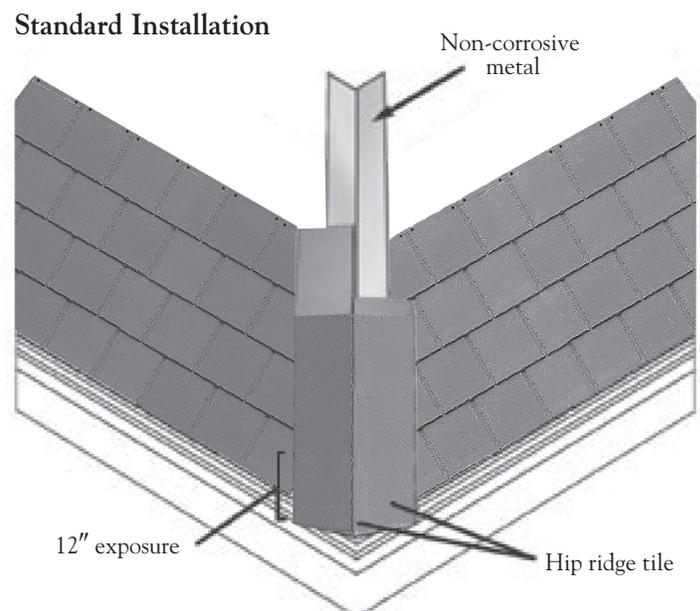
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The rake tiles are installed to finish the gable ends. The first tile is installed on the gable end so that the butt of the tile is flush with the butt of the first course of Bellaforté. The tip of the first rake tile should be cut so that it doesn't overlap the second course of tile. The rake tile should be nailed with a minimum 2" roofing nails of copper, stainless steel or hot-dipped galvanized; once on the roof side and once on the wall side. The tile should be nailed high enough so that the nails are covered by the next rake tile. The second rake tile should be installed so that the tip of the rake tile just touches the butt of the second course. Subsequent rake tiles should be installed in the same way.

## HIP AND RIDGE TILE

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The one piece hip and ridge tile should be installed at a 12" exposure. The tiles should be nailed once on each side about 3/4" from the outside edge with 2" roofing nails. The hip and ridge should be nailed approximately 12 1/2" from the butt of the tile so that it just covers the tile on top of it. A chalk line should be used on the hips to assure straightness. A shingle over type continuous ridge vent may be used if wanted. If continuous ridge vent is used nails used to secure the hip and ridge tiles should be able to penetrate the decking by 3/4".

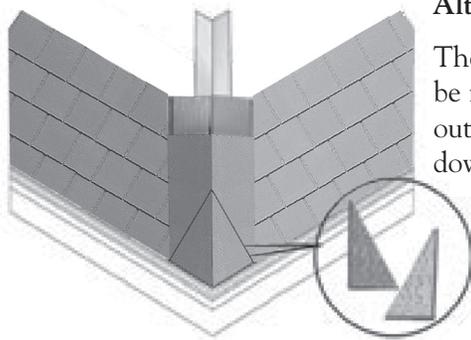


# INSTALLATION

## ALTERNATE HIP STARTER

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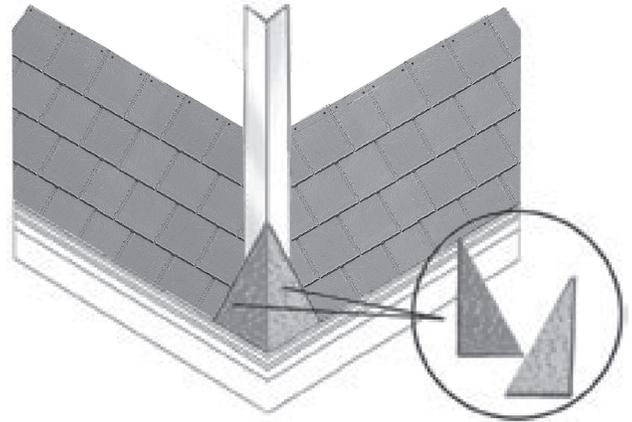
At the bottom of a hip, the hip and ridge tile may be cut on an angle so that the bottom shaded edge may be installed parallel with the eave. The cut hip and ridge tile is assembled so that the two cut pieces are butted together to form the bottom piece of hip and ridge. Once these two tiles are in place a full hip and ridge tile is installed and pulled down so the outside corners just reach the bottom of the roof.



### Alternate Installation: Step 2

The second set of slate should be installed uncut with these outside edges pulled all the way down to the eave of the roof.

### Alternate Installation: Step 1



## FLASHING

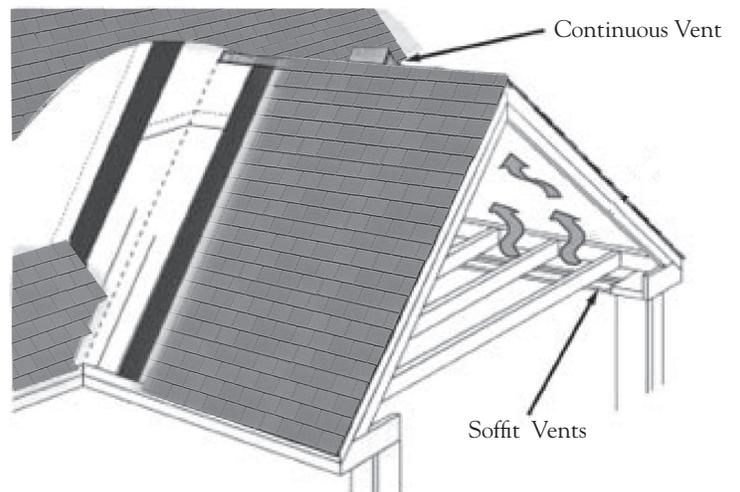
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Flashing should be used in all areas in which the roof abuts a vertical wall, dormer, chimney, skylight or other structural protrusions. Use Copper, clad steel or aluminum is acceptable.

## VENTILATION

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In some climatic regions of the country, proper ventilation is crucial to the proper performance of a roofing system. Proper ventilation is especially important in cold climates where modern houses are well insulated and weather-tight. We suggest you follow standard building practices in your area and meet all national and local building codes. A continuous ridge vent is an especially effective ventilation system that we highly recommend.



# SPECIAL ISSUES

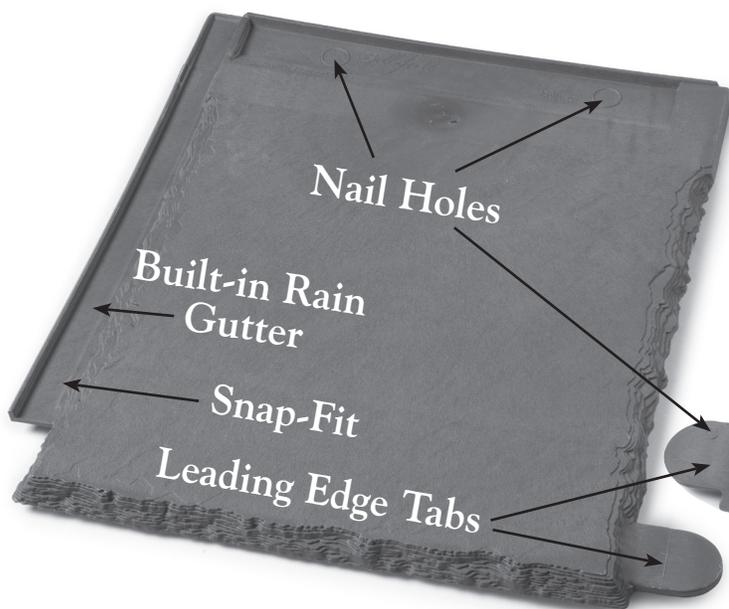
## SNOW GUARDS

Snow guards should be used in all geographic areas where heavy snow fall is possible. Most kinds of brass or copper snow guard systems work well with DaVinci. Details regarding installation remain the responsibility of the installer and the customer. For additional information please contact DaVinci at any of the numbers listed on the first page of this guide.

## NAILING

Each shingle should be applied with three corrosion-resistant, 3/8" head x 1.5" length nails. Slates can be nailed by hand or with a pneumatic nail gun. Don't overdrive nails or nail at an angle. Keep the nail head flush with the surface of the shingle to avoid creating "craters" which can collect moisture and can also prevent the exposed end of the shingles from laying flat.

**Bellaforté Front**



**Bellaforté Back**



## QUICK REFERENCE

ISSUE	DAVINCI RECOMMENDS	ACCEPTABLE ALTERNATIVES
Valley	Copper	28-gauge clad metal
Flashing	Copper	28-gauge clad metal
Eaves Flashing	Copper	28-gauge clad metal
Nails	Non-corrosive stainless steel	Hot-dipped Galvanized

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