

# FLAT





# FLAT

## Versatility & Simplicity for today's buildings

A versatile and easy-to-fit roof tile. As there are bigger pieces, the installation and material costs are consequently reduced, enhancing the elegance and durability of this kind of roof tile

\*This low profile is also known as Alicantina or French/Marseille Tile





# FLAT



## Double interlocking

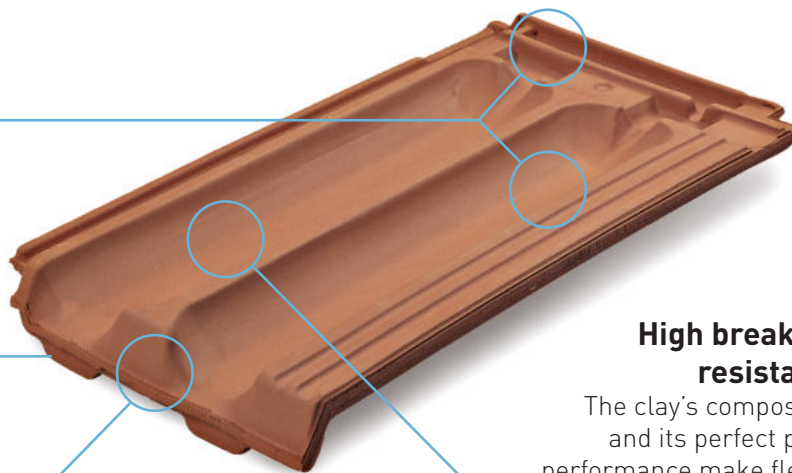
The double side and upper interlocking, allows the roof to be extremely watertight, ensuring its impermeability

## Cost reduction

Its large format (11 units/m<sup>2</sup>) and strapping every 5 units, as well as its packaging on pallets of 180 and 240 units, reduce installation costs

## Easy and quick fixation

It's traditional shape together it's installation by crossbond, allows a great adaptation to restoration



## High breakage resistance

The clay's composition and its perfect press performance make flexion rates even higher than Standard

## TECHNICAL CHARACTERISTICS

Flexural Strength test (EN 538)	Resistance > 1200N
Water Impermeability (EN 539-1)	Complies with level 1
Frost Resistance (EN 539-2)	Complies 150 cycles
Geometric Characteristics (EN 1024)	Flatness / Straightness ≤ 1,5%

Dimensions*	A: 466 mm; B: 260 mm; C: 55 mm A: 18.35"; B: 10.24"; C: 2.16"
Pieces /m <sup>2</sup> - P./sq.	11 - 101
Weight piece	3.6 kg / 7.93 lbs
Longitudinal fit **	403 mm (± 5mm) / 15.86" (± 0.19")
Transversal fit **	225 mm (± 1mm) / 8.85" (± 0.04")
Units per pallet	180
Weight per pallet	648 kg (1,428.6 lbs)
Laying	Straight / Broken bond

\*The tile dimensions indicated in this chart allow a tolerance of approximately +/-2%  
\*\*Theoretic value: this should be re-calculated on site with the tiles that are to be used.





RED



JASPEE RED

Colour variations within one batch, affecting the whole of that batch and produced specifically for aesthetic reasons, are permissible.

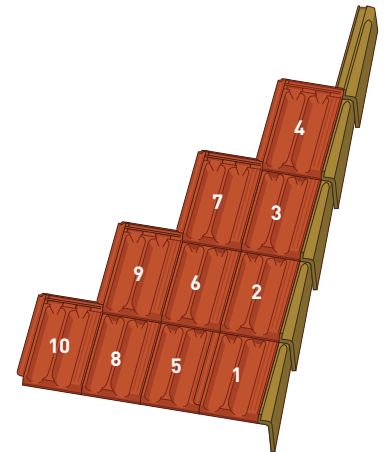
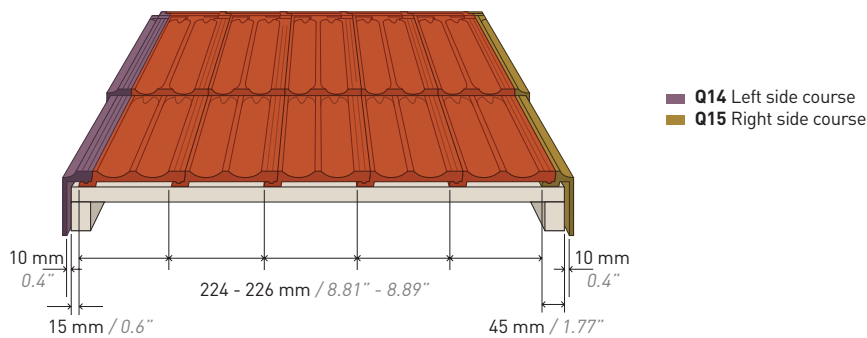
For tiles of one single colour, variations in color due to the ceramic process itself are accepted.

The names of the colours shown in the photos, only represent the finishes of the models identified as Flat Roof tile

# LAI D METHOD

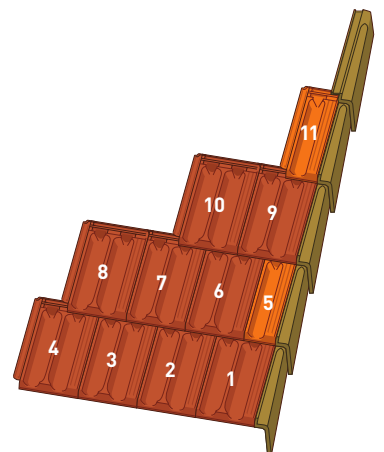
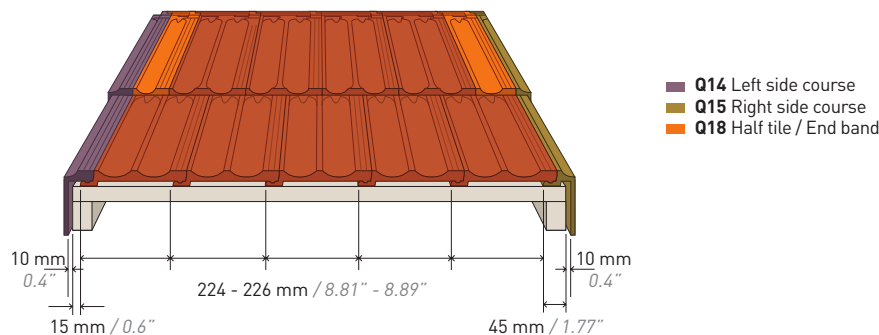
## STRAIGHT BOND PATTERN - Continuous joints laying

1. The starter course will begin with a full tile from the eave to the ridge, (allowing a 3.15" (8cm) overhang at the eave).
2. The tiles structuring the eave will have to overlap the side course (rake) and fit together one to another.
3. The second course of the tile will lay up directly over the previously installed field tile to the proper exposure and overlapping. See Figure for sequence of installation for fist and succeeding courses of tiles from the eave to the ridge.
4. The left section (vertical terminating end) of the roof can be closed by using a half (1/2) tile (end band) - Q18 to overlap the left side course (rake) -Q14.



## BROKEN BOND PATTERN - Opposite joints laying

1. The starter course will begin with a full tile from the eave to the ridge, (allowing a 3.15" (8cm) overhang at the eave). The tiles structuring the eave will have to overlap the side course (rake) and fit together one to another.
2. The second course will be started with half (1/2) tile (end band) - Q18 and will be laid to provide the proper vertical exposure.
3. All joints of the second course and succeeding courses should be at the center line of the previous course, alternating half tiles and full tile at the start and at the end of each course. This is continued through each successive course.

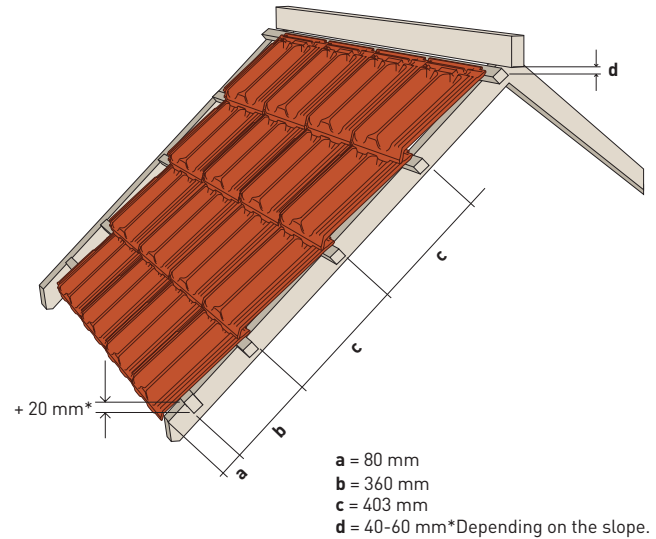


## TIP

Widthwise or lengthwise laid suggested in the technical catalogues are theoretical. The roofer must calculate the real widthwise or lengthwise laid of the tiles to be installed according to the methods defined in the rules in force in our installation manual.

Tiles are manufactured with natural components and fired at high temperature which generates small dimensional variations.

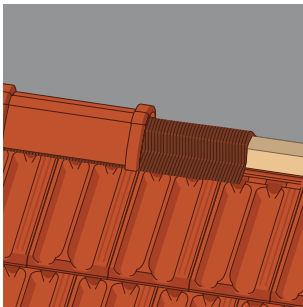
Download the  
**INSTALLATION  
MANUAL**



\*First course batten should be 20 mm (3/4") higher than all succeeding course battens to provide a vertical alignment and to assure a symmetrical installation

**NOTE:** A control line between 3 and 5 rows of tiles (maximum) is recommended.

# INSTALLATION DETAILS

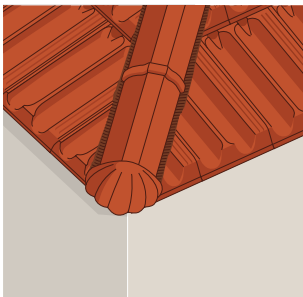


## RIDGE

- Ridge tiles must be installed lap facing away from the prevailing winds, in order to assure water tightness.
- Field tiles at top course should be secured directly either into the deck or top batten with stainless ring screw nails or similar.
- All ridges and hips shall be covered with self ad-

hesive Alu-Roll (CAM01, CAMF1, CAM09, CAMF9) or similar approved breathable waterproof underlayment. Underlayment should be secured over the ridge nailer with non-corrosive roofing nails.

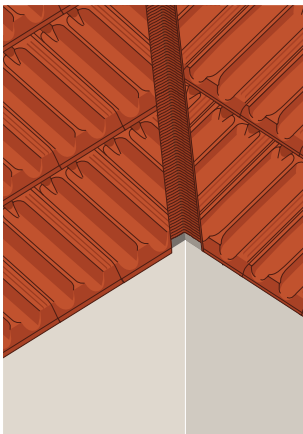
- Apply ridge tiles with a minimum overlapping of 5 cm (2") throughout the ridgeline facing away from the prevailing wind-driven rain.



## HIP

- Hip tiles must be installed in the same way as in the ridge.
- Field tiles must be mitter cut parallel to the hip line and secured.
- All ridges and hips shall be covered with self adhesive Alu-Roll (CAM01, CAMF1, CAM09, CAMF9) or similar approved breathable waterproof underlayment.

- Air should be able to flow through the ridge and hip area. Be sure not to close these off with mortar or similar. Closing them off could result in cracks, peeling off., in freezing and thawing cycles.



## VALLEY

- Both Valley and eave line channel are particularly vulnerable to water migration and leakage. Valleys should have a clear and unobstructed pathway for quick water drainage.
- Install valley battens on each side of the valley crease. Alu-roll Valley (CAM18), or similar approved adhered waterproof valley underlayment, shall be laid vertically up all valleys in addition to other required underlayment that should be fixed by using glue, resin or similar.
- Where valley intersects with ridge line, apply Alu-roll Valley (CAM18), or similar approved underlayment, which should be covered by the ridge

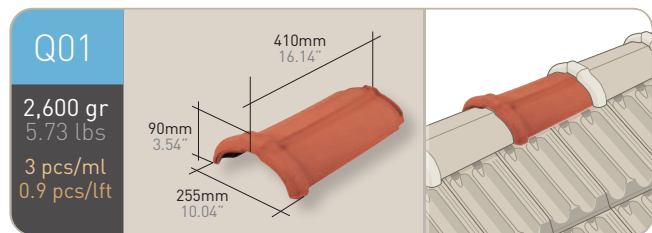
tile. Valley should be extended along the eaves to overhang the fascia board by 5cm (2") or over the gutter.

- Tiles should be laid parallel to the valley line, at same relative angle and should overhang the valley battens by at least 10 cm (4").
- Tiles at each side of the valley crease should be laid to provide a minimum 15 cm (6") width gap (tiles should held back minimum 7.5 cm (3") from the center of the valley each way).
- Valley tiles must be secured.
- Proper Valley flashing installation is required to ensure water tightness in order to avoid cracks, peeling off,...

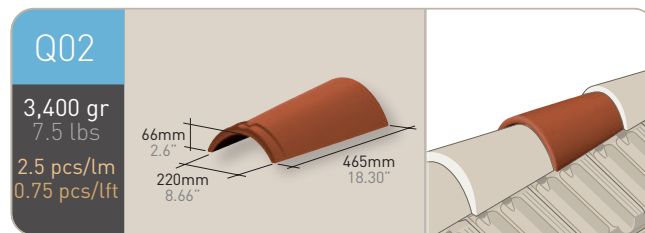
# ACCESSORIES

La Escandella offers a complete line of Flat roof tile accessories, available in any standard color, to customize your roof.

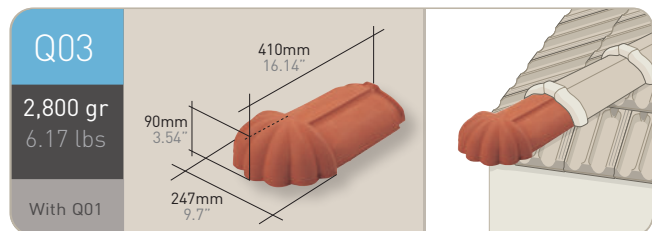
## Ridge / hip



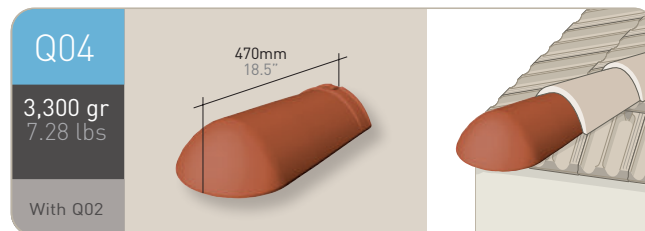
## Round ridge / Hip



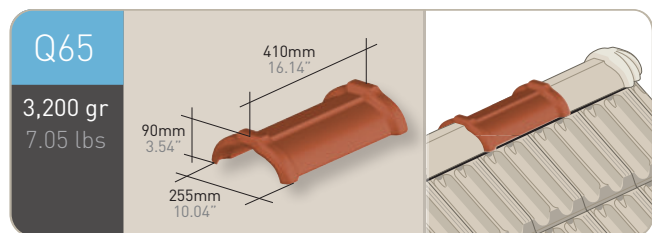
## Ridge end / hip starter



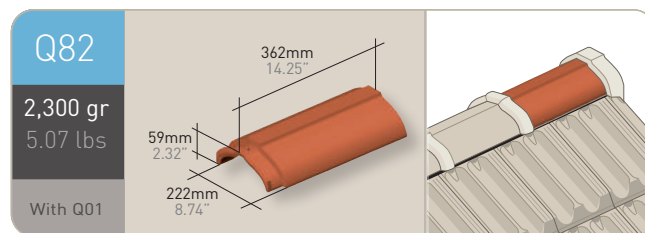
## Round ridge end / Hip starter



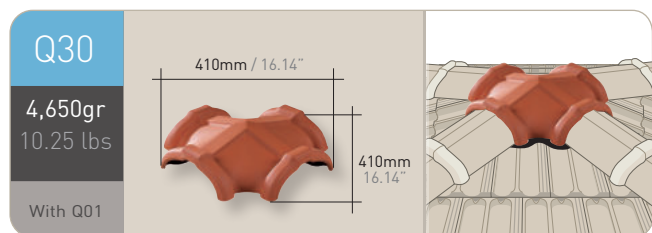
## Two way female ridge tile



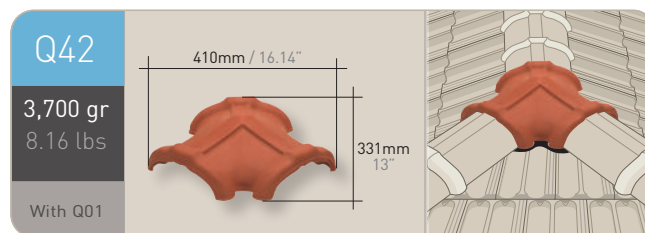
## Two way male ridge tile



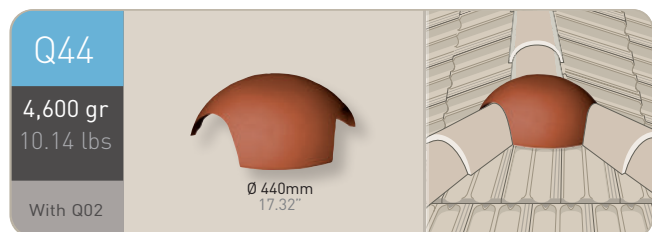
## 4 Way ridge (with Q01)



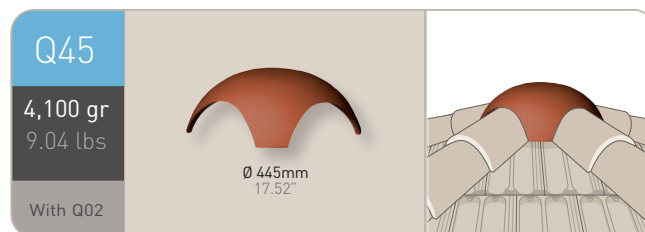
## 3 Way ridge female



## Round 3 way ridge

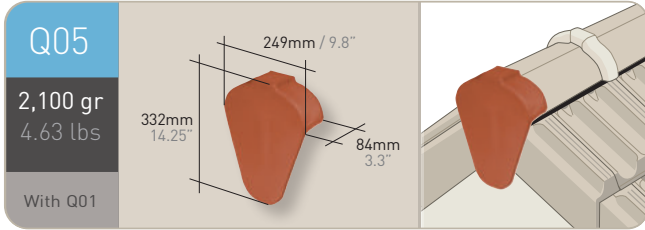


## Round 4 way ridge

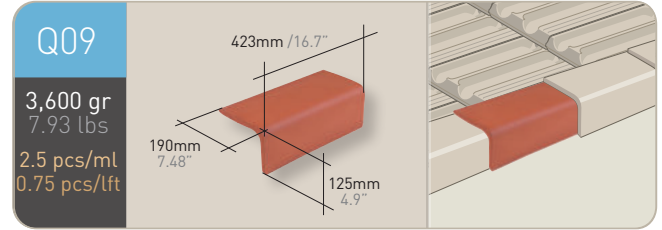




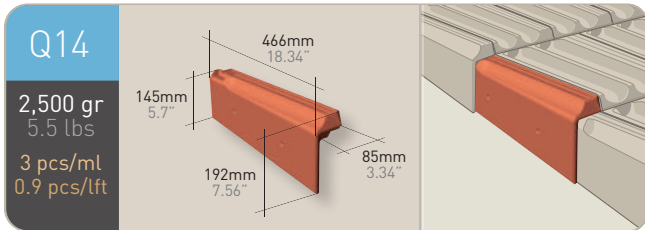
End cap / straight gable end



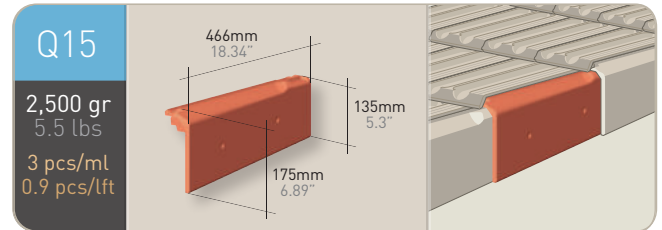
Universal side course / rake



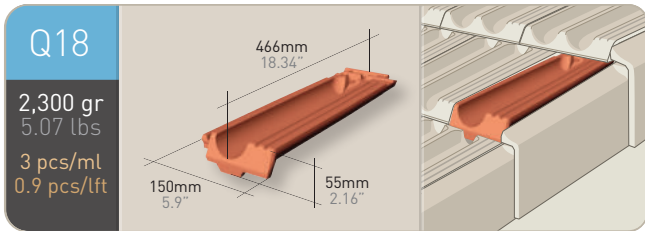
Left side course / rake



Right side course / rake



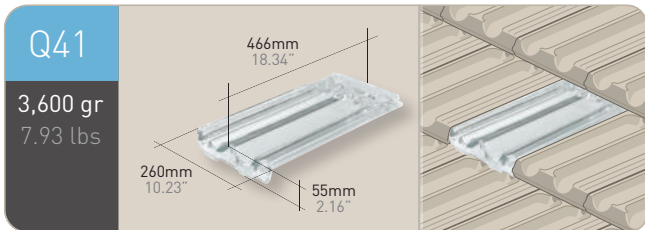
Half roof tile (End band)



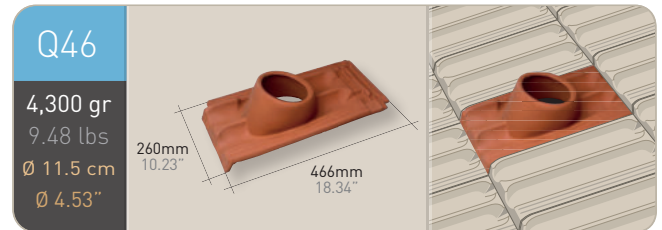
Ventilation roof tile



Glass roof tile / Skylight



Chimney support roof tile / Pipe tile



Chimney / pipe cover (with Q46)



# ROOF ACCESSORIES FOR VENTILATED ROOFS

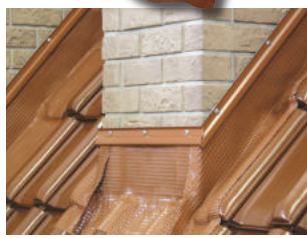
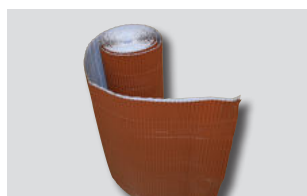
La Escandella offers a wide range of non-ceramic accessories which help finish off any type of roof. From waterproofing to ventilation, fixing and batten installing, safety implementation and multiple profiles can be found here. (Ask for wider range in last Price List).

**CAM01 / CAMF1**  
Alu-Roll With Micro Cut



Width: Several sizes  
Colours: Red, brown, black.

**CAM08 / CAMF8**  
Alu-Flex



Width: Several sizes  
Colours: Red, brown, black.

**CAM09 / CAMF9**  
Alu-Roll Membrane



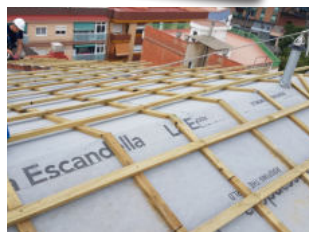
Width: Several sizes  
Colours: Red, brown, black.

**CAM18**  
Alu-Valley Tape



Width: 50 mm / 1.96"  
Colours: Red, black, brown.

**CAM65 / CAM21 / CAM52 / CAM53**  
Waterproof membrane



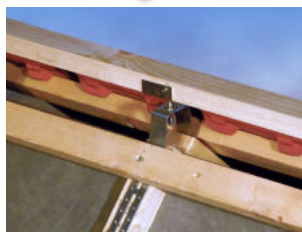
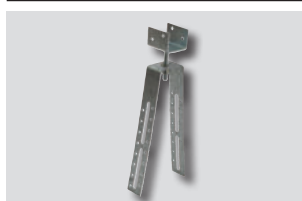
Dimensions: 1,5 m x 50 m / 1.64 yd x 54.68 yd  
Weight: several weights.

**CAM27NEW / CAM07**  
Ridge Tile Hook



Colours: Red, brown, black.

**CAM05 / CAM010 / CAM51**  
Ridge Batten Bracket



Dimensions: Several sizes.

**CAM14**  
Eaves Ventilation Comb



Dimensions: 6cm x 1m / 2.36" x 39.37"  
Colours: Red, black.

MORE INFO  
ON THE  
WEBSITE



**CAM26**  
Universal clip for roof tiles with lace



**CAM62**  
Eave hook/clip for roof tiles with lace



# TECHNICAL INFORMATION

## SLOPES / PITCHES

The minimum pitch standard recommendations should always be followed (see values in the referral table). On all pitches below the standard recommended minimums, or in regions where ice dams may occur, a waterproof underlayment on the entire deck **MUST** be applied. Most problems with water-shedding roof installations occur from water that migrates through the joints of the tiles through capillary action, wind-driven rain, and runoff or ice damming. Because of this possibility, the underlayment is critical to the success of the roof.

	WITHOUT UNDERLAYMENT		WITH UNDERLAYMENT
<b>Protected</b>	35% / 19,5°	<b>&lt; 6,5 m</b> <b>&lt; 21.32'</b>	30% / 17°
<b>Normal</b>	40% / 22°		35% / 19,5°
<b>Exposed</b>	60% / 31°		50% / 26,5°
<b>Protected</b>	35% / 19,5°	<b>6,5 m - 9,5 m</b> <b>21.32' - 31.13'</b>	30% / 17°
<b>Normal</b>	50% / 26,5°		45% / 24,5°
<b>Exposed</b>	70% / 35°		60% / 31°
<b>Protected</b>	50% / 26,5°	<b>9,5 m - 12 m</b> <b>31.13' - 39.37'</b>	45% / 24,5°
<b>Normal</b>	60% / 31°		50% / 26,5°
<b>Exposed</b>	80% / 39°		70% / 35°

**PROTECTED LOCATIONS:** hollow area which is surrounded by hills that protect the hollow from the winds in all directions..

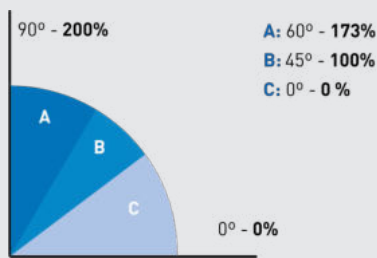
**NORMAL LOCATIONS::** Flat area, plateau with minimal elevation changes.

**EXPOSED LOCATIONS:** Places open to strong winds, coastal areas (up to 5 km / 3 miles from the shoreline), islands or narrow peninsulas, estuaries or closed bays, narrow valleys, isolated mountains, mountain passes and earthquake zones.

**Note:** For hips MORE than 12m long (39.4'), a waterproof underlayment on the entire roof deck **MUST** be applied and the ventilation underneath must be reinforced (check with the manufacturer).

## FIXATION

The slope of a roof determines the level of fixation of the tiles required. The fixation of the tiles may be necessary to prevent the sliding of the roof tiles or to prevent their lifting by the effect of the air. **In eaves, right and left side course, lines of ridge, valleys, encounters with vertical walls and other singular points, all the pieces will be fixed.** For all other parts, the level of fixation will depend on the pitch.



**A:** Every roof tile should be securely fastened by nailed, screwed, clipped...

**B:** Roof tiles will be fixed at least once every two or three, depending on the exposure of the roof and the height of the building.

**C:** The roof tiles shall be fixed at least in the proportion of one in five from a horizontal line, initiating fixation by rows alternately and regularly on the battens.

In case of high wind exposure, all roof tiles must be fixed.

## VENTILATION

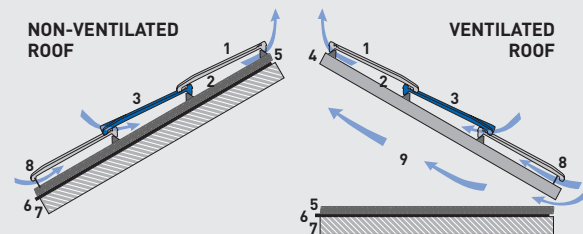
Ventilation is one of key elements to assure a good hygrothermal behavior of the roof and preservation of the roof structure. The key to a good and well preserved roof is a good ventilated roof. Proper installation of Ventilation tiles combined with ventilated roof can result in energy savings, in a more energy efficient home.

Air should be able to flow through the eave and ridge; be sure not to close these off with cement, mortar or similar. Eave and ridge areas should be protected to help minimize the access of birds and vermin infiltration.

A free flowing ventilation area must be provided through the roof deck. This ventilation should be evenly distributed throughout the roof space to eliminate any dead air space.

La Escandella recommends a minimum of 1 ventilation tile (Q21) for every 7 m<sup>2</sup> (1.32 vent tiles per 100 sq ft.) and with a minimum of 2 ventilation tiles per roof surface, installed on the upper part of the roof.

Using a proper ventilation system is the best way to avoid moisture in a roof, that could cause peeling, cracking and other defects on the tile.



- |                           |                                     |                                       |
|---------------------------|-------------------------------------|---------------------------------------|
| 1. Roof tile              | 5. Heat insulation underlayment     | 7. Frame                              |
| 2. Micro-ventilation void | 6. Waterproof underlayment material | 8. Eaves ventilation comb / bird stop |
| 3. Ventilation roof tile  |                                     | 9. Attic                              |
| 4. Rafter                 |                                     |                                       |

La Escandella warranty will be honored when installation is in strict accordance with local building codes, particularly to those referring to the ventilation of the deck and minimum slope requirements. Clay roof tiles should always be installed in full compliance with the local building codes and good tiling practice. For each country, please refer to local building codes.



[www.laescandella.com](http://www.laescandella.com)



Colour Shall be Harmonized but clay tiles are a natural product and some shade variations between individual pieces enhance their beauty and should be expected. All Tiles should be blended regardless of the number of colours supplied. Colours of the tiles shown in this catalogue can not faithfully reflect the colours of the ceramic tiles.

On their products, La Escandella has right to make changes in dimensions, fittings, weight & units per pallet, without previous notice. For more information, please contact your Sales Representative or our Customer Service.

This catalogue, printed in October 2022, replaces the existing ones.