


# CERAMIC ROOF SOLUTIONS 

Single H fire supports that allow the tiles to be fired individually at high temperatures, obtaining perfect definition.

PERFECTION IS TO REACH THE TOP. La Escandella stands once again by the latest technology, heavily investing in a new production line designed to optimize the finish of its products and creating a Premium product range. Discover the new H -Selection line, made for excellence.

H-Selection is the result of applying modern manufacturing processes in H-Cassette to a selection of our products, endowing them with numerous functional and aesthetic advantages and benefits.


High definition on each piece

Individual curing of each tile thanks to support in H. Excellent flatness with no contact points.


Excellent
flatness
It provides a perfect definition on each piece, made with gypsum moulds, providing a much finer texture.


Low
absorption
Higher resistance to ice and mould formation.


Lifetime warranty

Our 100 years of warranty ensure your peace of mind and demonstrate the quality of our manufacturing process.

## VISUM3

3 in 1 tile
Visum3 is a patented interlocking tile with an innovative triple cambered design that gives the appearance of three plain tiles.

Wide range of colors
Its triple exclusive decoration system offers a broader range in tones and hues, so no two tiles are alike.

## Excellent flatness

H-Cassette manufacturing provides a perfect finish to each product.

## Double interlocking

The double interlocking -horizontal and vertical- allows the roof to be more watertight, ensuring its impermeability.

## Cost reduction

Its large format ( 11,5 units $/ \mathrm{m}^{2}$ ) and strapping every 6 units, as well as its packaging on pallets of 216 and 288 units, reduce installation costs.

Lower absorption (<5\%)
High quality clay together with high firing temperature mean higher resistance to ice and mildew.

Higher resistance
The clay composition together with the perfect pressing allows flexion higher than the required while only weighing 3.5 kg .

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: $280 \mathrm{~mm} ; \mathrm{B}: 471 \mathrm{~mm} ; \mathrm{C}: 35 \mathrm{~mm}$ |
| :--- | :--- |
| A: $11^{\prime \prime} ; \mathrm{B}: 18.54^{\prime \prime} ; \mathrm{C}: 1.38^{\prime \prime}$ |  |
| Pieces $/ \mathrm{m}^{2} / \mathrm{sq}$. | $11,5 / 106.7$ |
| Weight piece | $3.5 \mathrm{~kg} / 7.71 \mathrm{lbs}$ |
| Longitudinal fit ${ }^{* *}$ | $187 \mathrm{~mm}(+4 \mathrm{~mm} /-10 \mathrm{~mm}) / 7.36^{\prime \prime}\left(+0.16 ;-0.39^{\prime \prime}\right)$ |
| Transversal fit ** | $435 \mathrm{~mm}( \pm 1 \mathrm{~mm}) / 17.12^{\prime \prime}\left( \pm 0.04^{\prime \prime}\right)$ |
| Units per pallet | $216 / 288$ |
| Laying | Broken bond |
| *The tile dimensions indicated in this chart allow a tolerance of approximately + +-2\% <br> **Theoretic value: this should be re-calculated on site with the tiles that are to be used. |  |


Geometric
characteristics


ONE TILE CREATES THE VISUAL EFFECT OF THREE

FINISHES



## LAID METHOD

Visum3 roof tile is laid on a discontinuous frame or battens, which will be fixed by building a batten and counter batten deck or by fixing them directly to the frame.
The laying of Visum3 roof tile is carried out by broken bond (also referred as cross bond) as follows:
A. The Starter course will begin with a Visum3 Right side course klinker (Q99*K). Then continue with full tiles Visum3 all the course. It is recommended to add a $4 \times 9 \mathrm{~cm}$ (1.57. $\times 3.54$ ") inox, zinc or plastic part under the right side course to direct the water to a gutter as shown in Fig. 2.
B. The second course will start again with the Q99*K followed by Visum3 Right Half roof tile (Q100*K), creating a cross bond visual effect, with full tiles all the course and ending on the left side with the Visum3 Left Half roof tile (Q102*K) and its Left side course (Q101*K).
C. The process should be repeated alternating steps $A$ and $B$ until reaching the ridge.
D. At top course, beneath ridge line, the excess of Q99*K right side course must be cut, as shown in Fig. 3.



- Visum3 tile
- Q99*K Visum3 right side course klinker

Q100*K Visum3 right half roof tile klinker

- Q101*K Visum3 left side course klinker
- Q102*K Visum3 left half roof tile klinker

First course batten should be $20 \mathrm{~mm}(3 / 4]$ higher than all succeding course battens to provide a vertical alignment and to assure a symmetrical installation
+20 mm *
$+3 / 4$



## 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 adhesive Alu-Roll (La Escandella Aluminum roll for hip and ridges - CAM01) or similar approved breathable waterproof underlayment. Underlayment should be secured over the ridge nailed with non-corrosive roofing nails.
-Apply ridge tiles with a minimum overlapping of $5 \mathrm{~cm}\left(2^{\prime \prime}\right)$ throughout the ridge line 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 (La Escandella Aluminum roll for hip and ridges - CAM01) 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 $5 \mathrm{~cm}\left(2^{\prime \prime}\right)$ 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 $10 \mathrm{~cm}\left(4^{\prime \prime}\right)$.
-Tiles at each side of the valley crease should be laid to provide a minimum $15 \mathrm{~cm}\left(6^{\prime \prime}\right)$ width gap (tiles should held back minimum $7.5 \mathrm{~cm}\left(3^{\prime \prime}\right)$ 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

Q02*K | Round ridge / Hip klinker


Q04*K | Round ridge end / Hip starter klinker

$3,600 \mathrm{gr} / 7.93 \mathrm{lbs}$ with Q02*K

Q83*K I End cap round ridge klinker


Q91*K I Pyramid ridge-side course / Rake klinker



Q93*K | Q93*K Pyramid end ridge klinker

$3,500 \mathrm{gr} / 7.71 \mathrm{lbs}$ with Q91*K

Q92*K | Pyramid end cap klinker

Q90*K | Atica ridge $120^{\circ}$ klinker


Q109*K | Atica $120^{\circ}$ hip / end ridge klinker


Q110*K I Atica collar ridge klinker


Q120*K | Angular ridge klinker


Q122*K | Angular hip / end ridge klinker


Q124*K | Angular end cap klinker



## ROOFING COMPONENTS

La Escandella offers a wide range of non-ceramic accessories which help finish off any type of roof. From waterprofing 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, paja, brown, black.

CAM65 / CAM21 / CAM52 / CAM53 Waterproof membrane


Dimensions: $1,5 \mathrm{~m} \times 50 \mathrm{~m} / 1.64 \mathrm{yd} \mathrm{x}$ 54.68 yd

Weight: several weights.

CAM08 / CAMF8
Alu-Flex


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

CAM27 / CAM70 / CAM07 / CAM10
Ridge Tile Hook


Colours: Red, brown, black.

CAM09 / CAMF9
Alu-Roll Membrane


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

CAM18
Alu-Valley Tape


Width: $50 \mathrm{~mm} / 1.96^{\prime \prime}$
Colours: Red, black, brown.

CAM14
Eaves Ventilation Comb


Dimensions: $6 \mathrm{~cm} \times 1 \mathrm{~m} / 2.36^{\prime \prime} \times 39.37^{\prime \prime}$ Colours: Red, black.


## 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 capillarity 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 |  |  |  |
| :--- | :---: | :--- | :---: |
| Gables | $<6,5 m$ | $6,5 m-9,5 m$ | $9,5 m-12 m$ |
| Protected | $45 \% / 24^{\circ}$ | $50 \% / 26^{\circ}$ | $55 \% / 28^{\circ}$ |
| Normal | $50 \% / 26^{\circ}$ | $55 \% / 28^{\circ}$ | $65 \% / 33^{\circ}$ |
| Exposed | $65 \% / 33^{\circ}$ | $75 \% / 36^{\circ}$ | $85 \% / 40^{\circ}$ |


| WITH UNDERLAYMENT |  |  |  |
| :--- | :---: | :---: | :---: |
| Gables | $<6,5 \mathrm{~m}$ | $6,5 \mathrm{~m}-9,5 \mathrm{~m}$ |  |
| $9,5 \mathrm{~m}-12 \mathrm{~m}$ |  |  |  |
| Protected | $40 \% / 22^{\circ}$ | $45 \% / 24^{\circ}$ |  |
| Normal | $45 \% / 24^{\circ}$ | $45 \% / 24^{\circ}$ |  |
| Exposed | $55 \% / 28^{\circ}$ | $65 \% / 28^{\circ}$ |  |

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 $5 \mathrm{~km} / 3$ 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 12 m long ( $39.4^{\prime}$ ), a waterproof underlayment on the entire roof deck MUST be applied and the ventilation underneath must be reinforced (check with the manufacturer).

## FIXATION

The manner in which roof tiles are installed makes them a highly effective water shedding assembly that affords years of service and protection. The effectiveness of a tile roof system as a weather resistant assembly however depends on the proper installation of all the tile roof components, and installing them properly is critical to the performance of the installed system.


A: Every tile should be securely fastened (Nailed, screwed, clipped...) ( $60^{\circ} / 203 / 4: 12$ ).

B: As a minimum, each tile in every five proportion, should be secured with (10 gauge) non-corrosive ring shank nails or screws ( $45^{\circ} / 12: 12$ ).

C: Each tile hangs on the batten (held by the nib) ( $38^{\circ} / 10: 12$ ).
D: Each tile hangs on the batten, held by the nib. When mortar is used, back bed and face point with color matched mortar. Clean off all excess mortar from the face of the tiles. For Foam Adhesive, refer to local building codes.

La Escandella recommended minimum slope requirement is 30\% (4:12).

## 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 Flat/Alicantina ventilation tile (Q96*K) for every $7 \mathrm{~m}^{2}$ (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.


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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

