

La Escandella Ceramica

European Terracotta Roof Tiles
Technical Manual



May 2014 Edition

 **bristleroofting**





la escandella collection technical manual contents

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La Escandella Collection

Fixing Requirements for Tiles & Accessories

TABLE 1
AS 2050 Wind Classification and Maximum Design Gust Wind Speed

Wind Classification	Maximum Design Gust Wind Speed (m/s)	
	Serviceability Limit State (Vs)	Ultimate Limit State (Vu)
N1	26	34
N2	26	40
N3C1	32	50
N4C2	39	61
C3	47	74

Note: Wind classifications in Table 1 are as defined in AS 4055

TABLE 2
Minimum Mechanical Installation Requirements for Tiles and Ancillaries

Wind Classification	Tile Installation		Ancillary Wind Installation (See Figures 1 & 2)
	Edge Of Roof	Field Of Roof	Ridge, Hip And Barge Tiles
N1 and N2	Mechanically fasten each full tile in second course and then every second tile in every course or every tile in each alternate course.		Mechanically fasten every tile
N3	Mechanically fasten each full tile in second course	Mechanically fasten each second full tile in every course	Mechanically fasten every tile
N4	Mechanically fasten each full tile	Mechanically fasten every full tile	Mechanically fasten every tile
C1	Mechanically fasten every full tile	Mechanically fasten each second full tile in every course	Mechanically fasten every tile
C2/C3	Mechanically fasten every full tile	Mechanically fasten every full tile	Mechanically fasten every tile

Notes:

- Laboratory testing has shown that only a minor deflection of truly adherent mortar will result in a breakage of either, or both, ridge or tile upon deflection of the roof. In most instances of mortar bedding and pointing, a truly long-term adherent bond does not exist. Experience has shown that roofs in practice deflect and mortar does inevitably break. Therefore, mortar bonding should not be used as a minimum mechanical installation.
- For pitches over 35°, extra precautions shall be taken. Refer to tile manufacturer for technical recommendations.
- For values greater than C3, refer to manufacturer's recommendations.
- All tiles fixed in C2 or C3 rated sites must not use flexible pointing material, even where labelled as a mechanical fixing product, as the sole means of fixing ridge and hip tiles. All such tiles must now be fixed with an approved clip or screw, or such other method as advised by your tile manufacturer.

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Fixing Requirements for Tiles & Accessories

Bristle Roofing terracotta roof tiles are manufactured and tested to cope with a varied range of weather conditions. Factors that can affect the design of your roof include:

Selecting the Roof Tile

The water courses formed in the body of a shaped/profiled roof tile prevent water from entering the side lap weather channel.

Flat roof tiles that do not feature water courses have greater potential to experience side lap weather channel inundation.

The shape of a tile should be considered carefully, particularly on roofs that are built in exposed areas where high winds and rainfall are common.

The Pitch of the Roof

The pitch of the roof affects the speed of water flow down the roof plane. The greater the pitch, the faster the

water will drain, conversely roofs with less pitch will drain more slowly and water depth, particularly towards the bottom of the roof, may be increased.

Tiling is not recommended for a roof pitch below 15 degrees without special safeguards being put in place. AS 2050 states where it is intended to fix tiles to roofs with a pitch of less than 15 degrees, the tile manufacturer's advice should be adhered to.

Sarking is a pliable foil installed prior to fixing the roof battens. Sarking acts as insulation keeping your home cool and free from dust as well as acting as a secondary water catchment.

Your Bristle Roofing representative should be consulted when choosing the correct grade of sarking for your roof design. Table 3 (below) identifies the minimum roof pitch at which Bristle Roofing tiles are to be installed, showing each region with and without the need for sarking.

TABLE 3
Minimum Pitches for Fixing La Escandella Collection Ranges

La Escandella Roof Tile	Minimum Without Sark	Minimum With Sark
Curvado/Curvado Glazed	20°	15°
Planum	n/a	15° *
Grande	20°	15°
Vienna	20°	15°
Visum3	n/a	25° **
Medio Curva	n/a	10° ***

*Sarking required regardless of pitch

** Proctor sarking membrane to be used regardless of pitch

*** Rigid Underlay used instead of sarking

Note: Roofs with pitches of less than 20° with sarking installed require Anti Ponding Boards to be fitted.

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Rafter Lengths and Pitches

The minimum roof pitch recommended can be influenced by the water run off depth. Extremely long runs accumulate water to a considerable depth at the bottom of the run, particularly at low pitches, and in heavy rainfall conditions.

It is for this reason that Bristle Roofing recommends that any roof with rafter lengths in excess of 4.5 metres should be built at a pitch greater than the minimum stated in Table 7 on page 5 of this manual. The specified pitch should increase by 2° for every additional metre of rafter length.

Informative Notes in AS 2050 "Installation of Roof Tiles", state: "Long rafter lengths may require sarking to prevent inundation of the roof.

These lengths may vary according to the tile profile used, the pitch of the roof and the exposure. The manufacturer's specification should be consulted." Table 4 indicates the maximum rafter lengths after which sarking must be installed to the area of roof that exceeds the noted maximum length.

TABLE 4
Sarking Requirements in Relation to Pitch/Rafter Length

Roof - Degrees of Pitch	Maximum Rafter Length Without Sarking (mm)
≥18 < 20	4,500
≥20 < 22	5,500
≥22	6,000



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Colour for Life Warranty



1. Warranty – Terracotta Roof Tiles

Bristile Roofing terracotta roof tiles (the "Tiles") are fired at extremely high temperatures ensuring a no fade product. As such, Bristile Roofing warrants that there will be no significant change to the colour of the product over the life of the Tile. However, the Tiles are a natural product, and accordingly, there will be natural colour variation between Tiles, and this is not covered by this warranty.

Bristile Roofing warrants that the tiles are manufactured in accordance with Australian Standard AS 2049, and that the tiles are tested to Australian Standard AS 4046. Bristile Roofing also warrants that for 50 years from the date of installation or purchase, whichever is earlier, the tiles will not become porous or warp due to defective manufacture.

This warranty only applies to terracotta roof tiles supplied by Bristile Roofing on or after 1 May 2013.

2. Bristile Roofing's Obligations

(a) If your Tiles significantly change in colour over time, or are not manufactured in conformity with the above standards, Bristile Roofing will, without limiting any other statutory rights you may have, and subject to the provisions stated in paragraphs 3 and 4 below, at its own expense and on a pro rata basis, take such steps as it determines to be reasonably required in the circumstances, including, where necessary:

- (i) the replacement of the Tiles or the supply of equivalent Tiles;
- (ii) the repair of the Tiles;
- (iii) the payment of the cost of replacing the Tiles or of acquiring equivalent Tiles; or
- (iv) the payment of the cost of having the Tiles repaired;

provided that you have:

- (i) produced written proof confirming date of purchase and date of installation of the Tiles; and
- (ii) afforded Bristile Roofing a reasonable opportunity to inspect and, where necessary, test the Tiles.

To make a claim under this warranty, to discuss your warranty service or to obtain locations for your nearest Bristile Roofing centre, phone 1300 274 784, or refer to the Bristile Roofing website, www.bristileroofting.com.au.

(b) Small surface imperfections and glaze chipping are inherent to all Tiles. These imperfections in no way affect the performance of the Tile. However, if any significant chipping of glazed Tiles occurs during a roof installation performed by Bristile Roofing, it will be repaired by Bristile Roofing, at its own cost, using an after firing glazing operation, after installation.



3. Limitation of Liability in Certain Situations

(a) Bristile Roofing tiles are provided with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the tiles repaired or replaced if the tiles fail to be of acceptable quality and the failure does not amount to a major failure.

(b) Notwithstanding the preceding paragraph, the liability of Bristile Roofing for a breach of a consumer guarantee for any tiles supplied pursuant to this warranty not of a kind ordinarily acquired for personal, domestic or household use is limited to the extent permissible by law and at the option of Bristile Roofing:

- (i) replacing the Tiles or the supply of equivalent goods;
- (ii) the repair of the Tiles;
- (iii) the payment of the cost of replacing the Tiles or of acquiring equivalent goods; or
- (iv) the payment of the cost of having the Tiles repaired.

(c) To the extent permitted by law, all other warranties whether implied or otherwise that are not set out in this warranty are excluded and Bristile Roofing is under no liability in contract, tort (including without limitation, negligence or breach of statutory duty) or otherwise to compensate you for:

- (i) increased costs or expenses;
- (ii) any loss of profit, revenue, business, contracts or anticipated savings;
- (iii) any loss or expense resulting from a claim by a third party; or
- (iv) any special, indirect or consequential losses or damage of any nature whatsoever caused by Bristile Roofing's failure to complete any obligation pursuant to this warranty.

(d) The benefits given to you in this warranty are in addition to all other rights and remedies you may have under a law in relation to the services which this warranty applies.

4. Exclusions

(a) This product warranty only applies to Tiles that are manufactured or imported by Bristile Roofing: no other products or materials used to install your roof are covered by the warranty.

(b) This product warranty does not apply to damage caused to the Tiles by:

- (i) the transportation of the Tiles by anyone other than Bristile Roofing;
- (ii) people (other than Bristile Roofing roof installers) walking or working on the roof;
- (iii) animals, insects, mould, mildew, lichens or other plant growths;
- (iv) falling objects;
- (v) air pollution or environmental change;
- (vi) their treatment by chemicals, cleaners or coatings which have not first been checked for suit ability with Bristile Roofing; or
- (vii) any other factor beyond the control of Bristile Roofing (including but not limited to earthquakes, tornadoes, cyclones, gales, lightning, hail, fires, flood, war, riot, or act of God)

(c) This product warranty does not apply to any Tiles which are removed from their first place of installation and reinstalled.

(d) You must pay all applicable freight costs when claiming under this warranty.

See www.bristilerooting.com.au for full details.

Bristle Roofing

Total Roof Warranty



Where the Company supplies and installs a roof consisting of concrete or terracotta roof tiles the Company warrants that the roof tiles are manufactured and installed in accordance with the relevant Australian Standards and are fit for the purposes for which goods of this kind are commonly supplied ("intended purpose"). The Company also warrants all other products that are installed by the Company as part of the original roof installation.

The term of this warranty is 10 years from the date of original installation by the Company. If a verified claim is received by the Company all efforts will be made to resolve it in accordance with the terms and conditions stated below. At the expiration of this warranty customers will still have the ability to claim for any roof tile related issues as described in the Bristle Roofing 50 Year Product Warranty.

This warranty extends only to:

- defects occurring in roof tiles supplied and installed by the Company;
- all accessory materials including but not limited to mechanical fasteners, battens and sarking or permeable membrane used as part of the roof installed by the Company;
- workmanship carried out by the Company as part of the original installation;
- Roofs installed from 1 January 2014.

All reasonable costs including disposal, re-installation, and cartage associated with this warranty will be paid by the Company.

The provision of the builder's name, address where product is installed and approximate installation date will allow for quicker verification and processing of a claim made against this warranty.

This warranty does not cover:

- to the extent permissible by law, consequential damage (whether structural or otherwise) or failure due to accidental damage, impact, misuse or negligence of any third party;
- variations in colour and shade;
- roof tiles that are re-used;
- damage arising out of any 'force majeure' event including but not limited to earthquake, flood, act of God or war;
- damage arising out of extreme weather events including but not limited to cyclones, tornadoes, hail storms, and lightning strike;
- removal or reinstallation of any roof mounted appliances or fixtures installed on the roof including but not limited to solar hot water systems, pool heating, air conditioners, solar electric panels, television antennas and satellite dishes;
- damage caused by the installation of any roof mounted appliance or fixture on the roof including but not limited to solar hot water systems, pool heating, air conditioners, solar electric panels, television antennas and satellite dishes;



- damage caused by persons other than Bristile Roofing personnel while accessing the roof for any reason.

The following statement applies if the supply and installation of the roof tiles to you is a consumer sale as defined in the Australian Consumer Law. In this statement, 'Our' means 'the Company', and 'goods' means 'roof tiles':

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Notwithstanding the preceding clause, the liability of the Company is limited, in relation to its roofs, to the extent permissible by law and at the discretion of the Company to:

- Repair or replace the defective roof tiles or other products covered by this warranty. Note that replaced or repaired tiles or other products are warranted for the remainder of the original 10 year warranty term.

To the extent permitted by law, all other warranties whether implied or otherwise, not set out in these warranty terms and conditions are excluded and the Company is not liable in contract, tort (including, without limitation, negligence or breach of statutory duty) or otherwise to compensate you for:

- any increased costs or expenses;
- any loss of profit, revenue, business, contracts or anticipated savings;
- any loss or expense resulting from a claim by a third party;
- any special, indirect or consequential loss or damage of any nature whatsoever caused by the Company's failure in complying with its obligations.

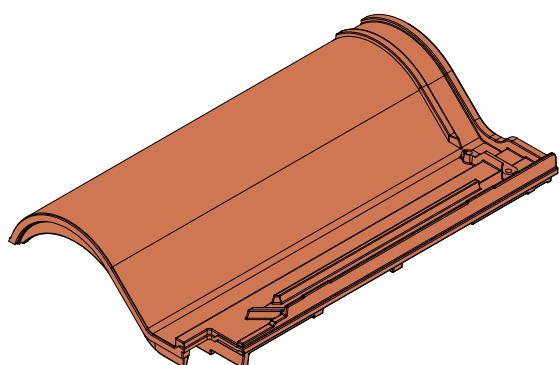
The benefits given to you in this warranty are in addition to other rights and remedies under law in relation to the roof tiles and other products to which this warranty applies.

This warranty is not applicable outside Australia.

All claims made against this warranty must be submitted in writing and either posted to PO Box 3040 Darra QLD 4076 or emailed to warrantyclaims@bristile.com.au within thirty (30) days of the fault being identified. To validate a warranty claim the claimant must allow the Company reasonable access to the property to inspect and test any products being claimed under this warranty. Reasonable access must also be granted to the property to allow the Company to repair or replace defective products.

La Escandella Collection

Curvado



The Curvado range captures a look of grandeur with a distinctively European style.

A roof tile conceived to satisfy the needs and preferences of building professionals, the Curvado offers a variety of features which guarantee enduring popularity with home builders seeking a European style.

Manufactured from the highest quality clays, the Curvado incorporates a modern interlocking design which replicates the traditional pan and cover tile that has been a hallmark of European and Mediterranean architecture for centuries.

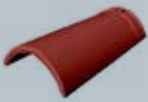



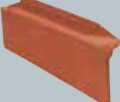



La Escandella Collection

Curvado

Curvado Product Specification

Product Specification	
Min Pitch:	15 Degrees with Sarking, 20 Degrees without Sarking
Optimum Set Out:	400mm (+/- 5mm)
First Batten:	360mm
Sarking:	As noted in "Min Pitch" above
Dimensions:	470mm x 286mm x 75mm
Weight:	3.9kg
Layed:	Straight Bonded
Tiles Per m2:	11.1
Weight per M²:	43kg
Cuts per LM:	3
Ridges per LM:	2.5
Batten per M²:	2.9
Batten:	40 x 25 HWD (QLD) / 38 x 38 Pine (NSW, ACT, VIC, SA, TAS)
Fixing:	Head Lap Clip or Nailed
Pallet Quantity:	240 / 180

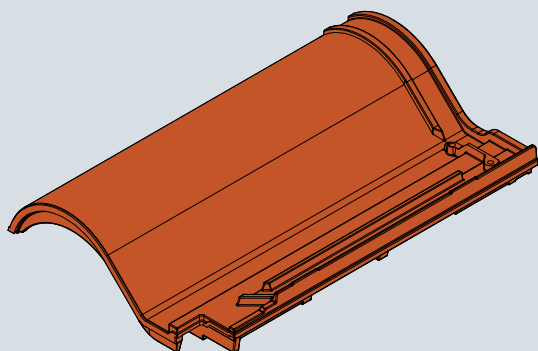
Curvado Fittings

Ridges	Apex	End Cap	Double Roll	Barges	Extras
					
Q02 Round Ridge	Q44 Round 3 Way Apex Ridge	Q83 Round Hip End Ridge Cap	Q33 Double Large Roof Tile (One per course on the left side) only)	Q12 Round LHS Course	Q10 Straight LHS Course
					
Q04 Round Hip End Ridge	Q45 Round 4 Way Apex Ridge			Q13 Round RHS Course	Q11 Straight LHS Course

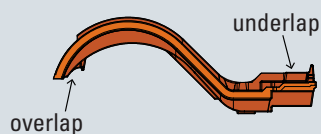
La Escandella Collection

Curvado

Curvado Product & Test Specification



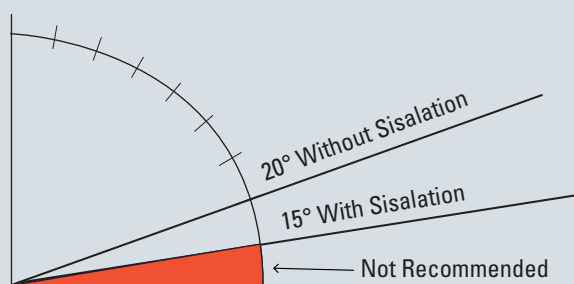
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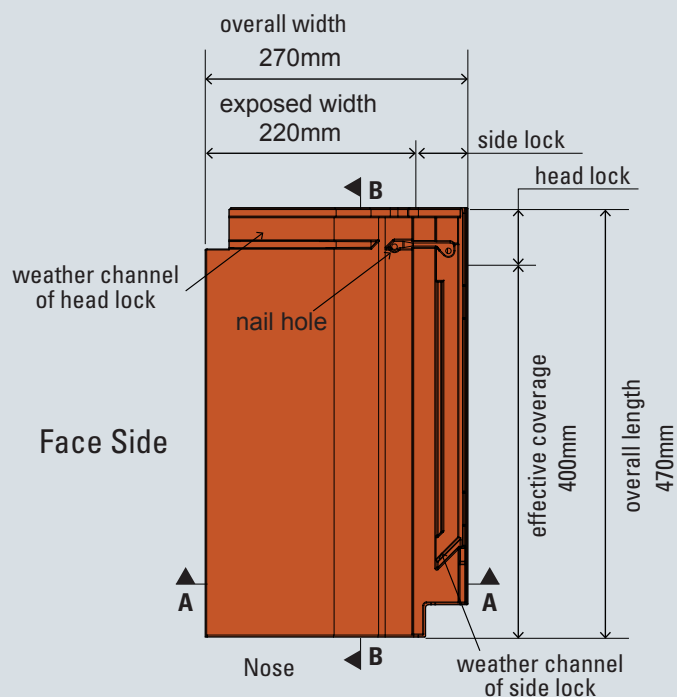
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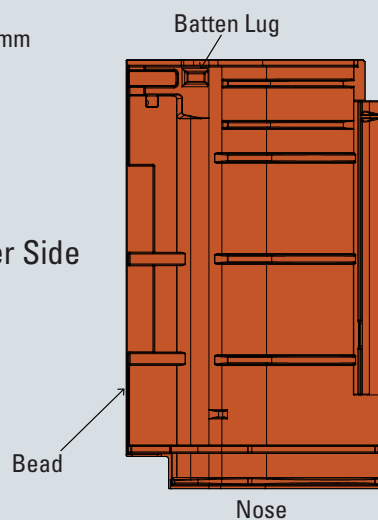
Section - B-B



Roof Pitch



Under Side



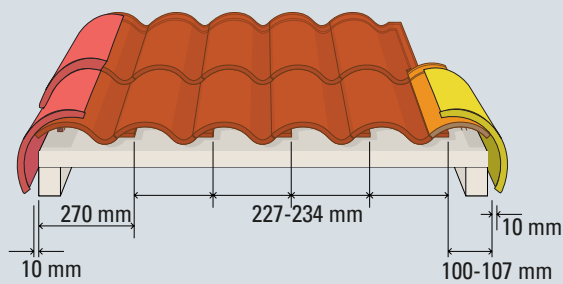
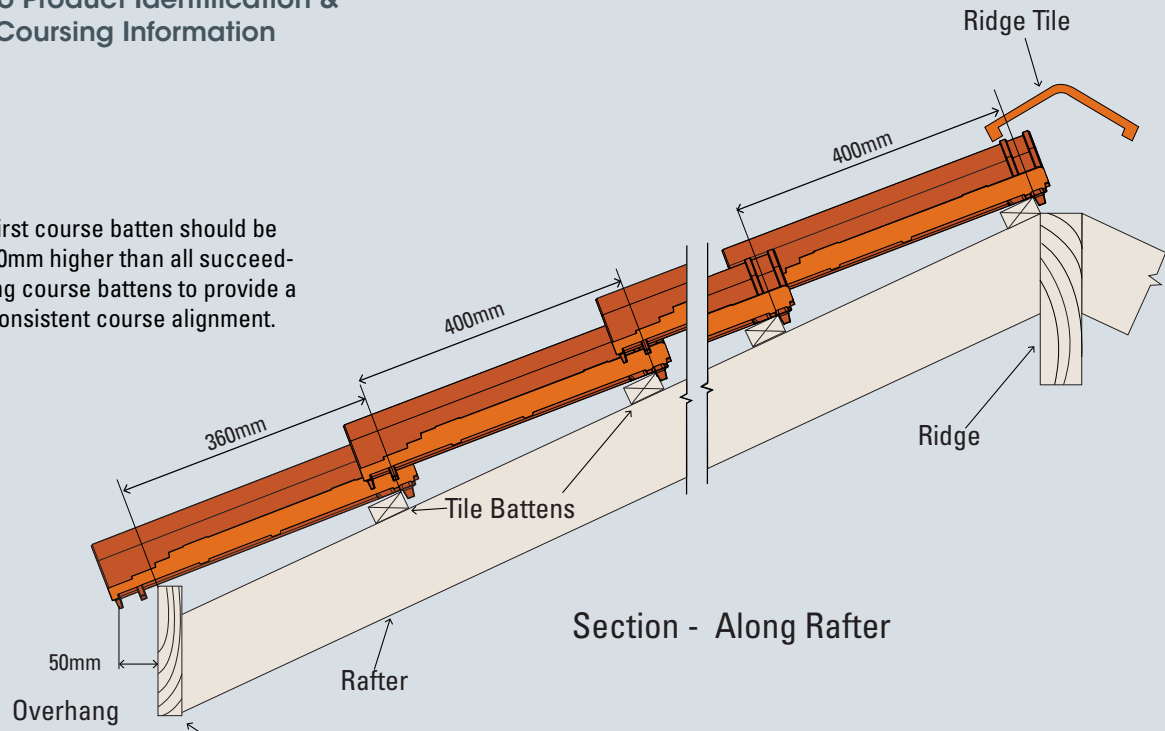
Testing Standard	Test Description	Std Tolerance	Average Curvado Result
AS - 4046.1	Distortion & Warpage	< 8mm	All Curvado tiles either comply or exceed the standard tolerances listed in this table
AS - 4046.2	Batten lugs & Squareness	< 1.5% Length	
EN - 538	Transverse Strength	3 Nt/exposed mm of width	
EN - 539-2	Water Absorption	<10%	
EN - 539-1	Permeability	Two hour test	
EN - 539-1&2	Freeze / Thaw	150 cycles	
AS - 4046.7	Resistance to Salt Attack	Exposure	
AS - 4046.8	Dynamic weather resistance	Calibrated Datum	

La Escandella Collection

Curvado

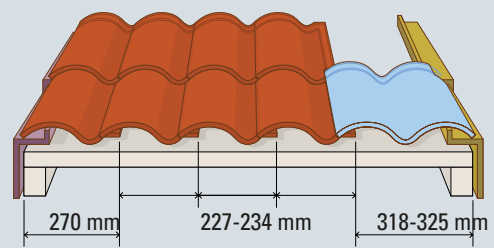
Curvado Product Identification & Layout Coursing Information

First course batten should be 20mm higher than all succeeding course battens to provide a consistent course alignment.



Half tile roof laying

- Curvado roof tile
- Q12 Round LHS course
- Q13 Round RHS course
- Half tile (Cut on site)

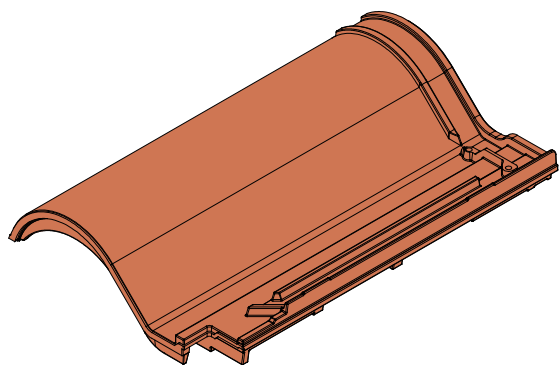


Double roll roof tile laying

- Curvado roof tile
- Q10 Straight LHS course
- Q11 Straight RHS course
- Q33 Double Roll Tile

La Escandella Collection

Curvado Glazed



For a bold, eye catching tile in colours designed to reflect your character, Bristle Roofing offers the Curvado Glazed range.

A roof tile conceived to satisfy the needs and preferences of building professionals, the Curvado Glazed tile is available in two sizes and has a variety of features which guarantee enduring popularity with home builders seeking a European style.

Manufactured from the highest quality clays, the Curvado Glazed incorporates a modern interlocking design which replicates the traditional pan and cover tile that has been a hallmark of European and Mediterranean architecture for centuries.

La Escandella Collection

Curvado Glazed

Curvado Glazed Product Specification

Product Specification	
Min Pitch:	15 Degrees with Sarking, 20 Degrees without Sarking
Optimum Set Out:	400mm (+/- 5mm)
First Batten:	360mm
Sarking:	As noted in "Min Pitch" above
Dimensions:	470mm x 286mm x 75mm
Weight:	3.9kg
Layed:	Straight Bonded
Tiles Per m2:	11.1
Weight per M²:	43kg
Cuts per LM:	3
Ridges per LM:	2.5
Batten per M²:	2.9
Batten:	40 x 25 HWD (QLD) / 38 x 38 Pine (NSW, ACT, VIC, SA, TAS)
Fixing:	Head Lap Clip or Nailed
Pallet Quantity:	240 / 180

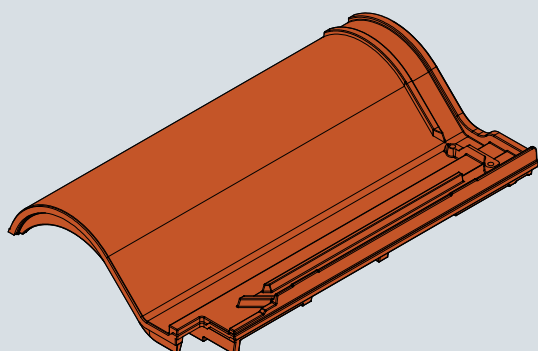
Curvado Glazed Fittings

Ridges	Apex	End Cap	Double Roll	Barges	Extras
					
EQ02 Round Ridge	Q45 Round 4 Way Apex Ridge OR Mitre Ridges and Flash	EQ83 Round Hip End Ridge Cap	EQ33 Double Large Roof Tile (One per course on the left side) only	Q12 Round LHS Course	EQ10 Straight LHS Course
					
EQ04 Round Hip End Ridge	Q44 Round 3 Way Apex Ridge			Q13 Round RHS Course	EQ11 Straight RHS Course

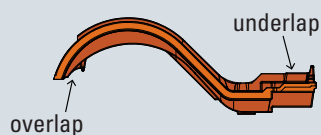
La Escandella Collection

Curvado Glazed

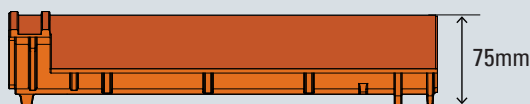
Curvado Glazed Product & Test Specification



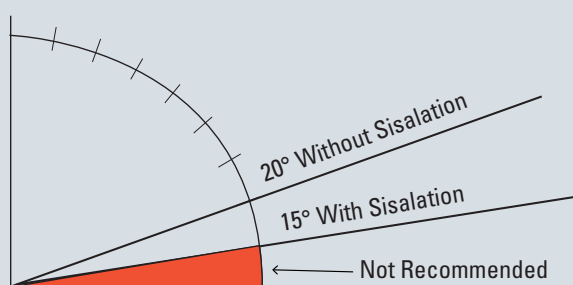
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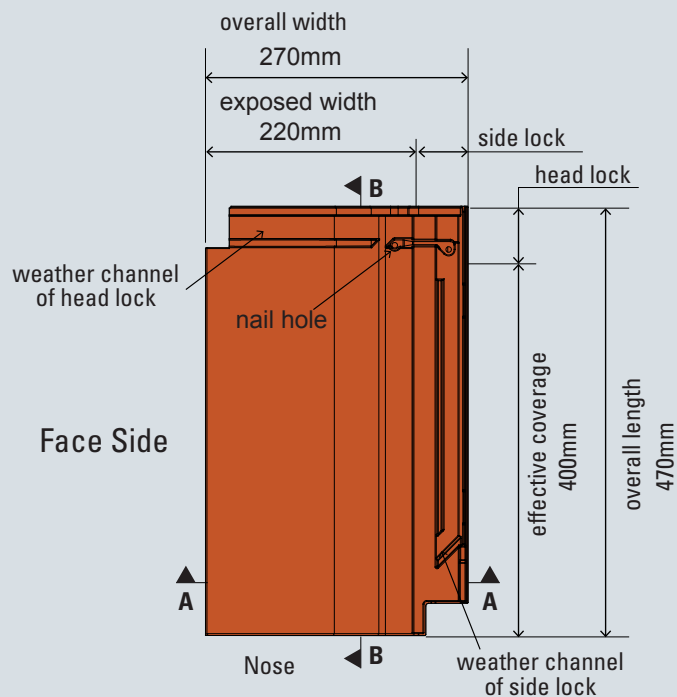
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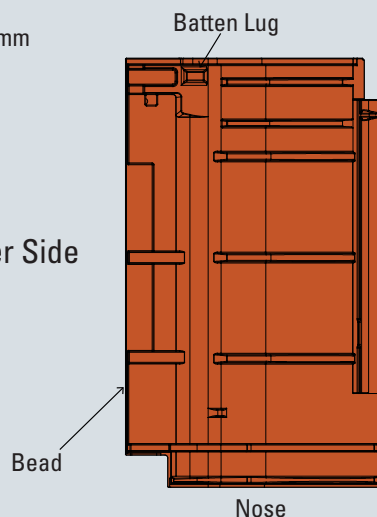
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Roof Pitch



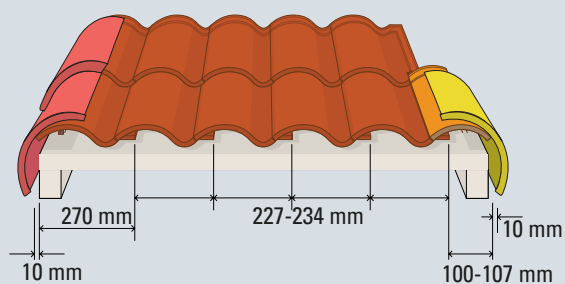
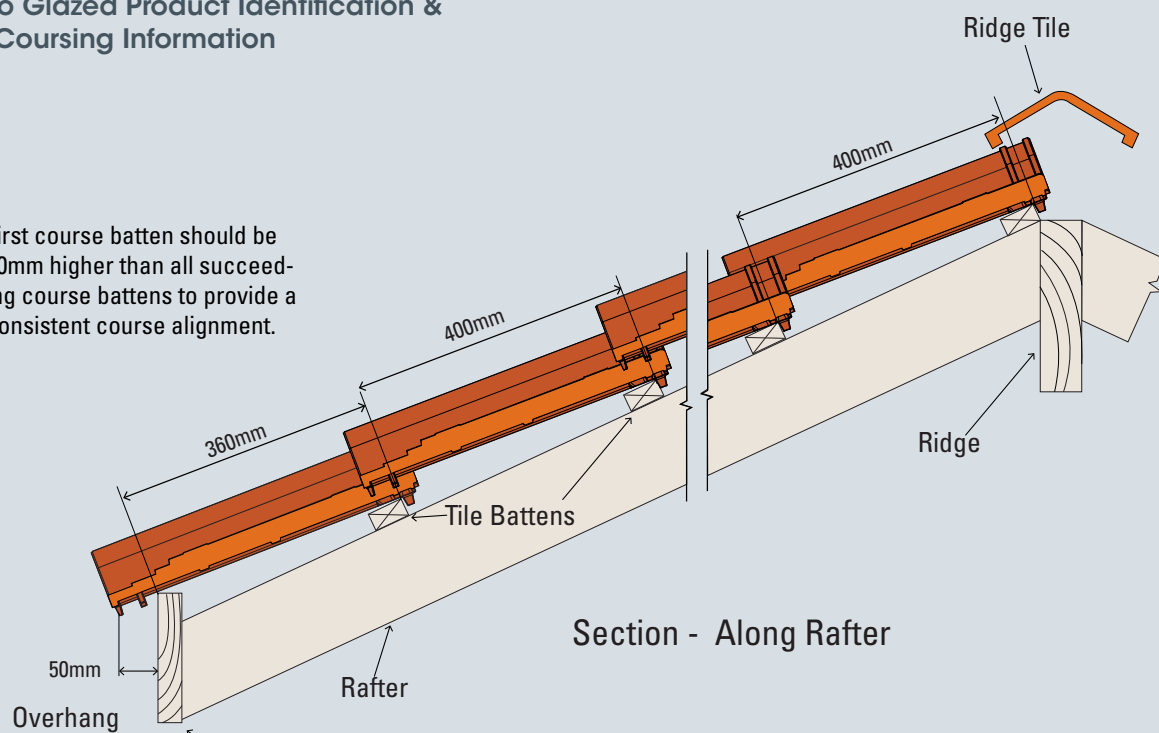
Under Side



Testing Standard	Test Description	Std Tolerance	Average Curvado Result
AS - 4046.1	Distortion & Warpage	< 8mm	All Curvado tiles either comply or exceed the standard tolerances listed in this table
AS - 4046.2	Batten lugs & Squareness	< 1.5% Length	
EN - 538	Transverse Strength	3 Nt/exposed mm of width	
EN - 539-2	Water Absorption	<10%	
EN - 539-1	Permeability	Two hour test	
EN - 539-1&2	Freeze / Thaw	150 cycles	
AS - 4046.7	Resistance to Salt Attack	Exposure	
AS - 4046.8	Dynamic weather resistance	Calibrated Datum	

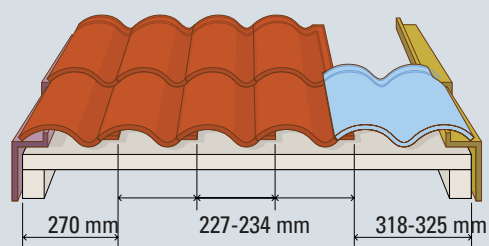
Curvado Glazed Product Identification & Layout Coursing Information

First course batten should be 20mm higher than all succeeding course battens to provide a consistent course alignment.



Half tile roof laying

- Curvado roof tile
- Q12 Round LHS course
- Q13 Round RHS course
- Half tile (Cut on site)

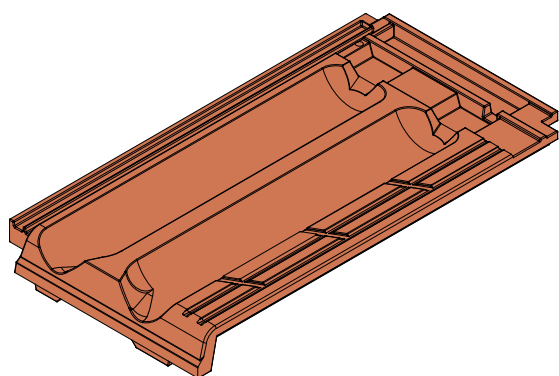


Double roll roof tile laying

- Curvado roof tile
- Q10 Straight LHS course
- Q11 Straight RHS course
- Q33 Double Roll Tile

La Escandella Collection

Grande



Originating from France, the Grande tile offers versatility and simplicity in a classic style terracotta roof tile.

The Grande tile continues the proud tradition of the tile maker's craft with a tile that suits a range of architectural styles.

The combination of its sharp clean lines and natural terracotta colour palette result in a roof tile with a timeless look and unmistakable style. Offering the colour longevity, strength, and durability of terracotta, the Grande is ideal for homes of distinction.

La Escandella Collection

Grande Product Specification

Product Specification		
Min Pitch:	15 Degrees with Sarking, 20 Degrees without Sarking	
Optimum Set Out:	398mm (+/- 5mm)	
First Batten:	360mm	
Sarking:	As noted in "Min Pitch" above	
Dimensions:	466mm x 260mm x 55mm	
Weight:	3.6kg	
Layed:	N/A	Cross Bonded
Tiles Per m2:	11.1	
Weight per M²:	42kg	
Cuts per LM:	3	
Ridges per LM:	2.5	
Batten per M²:	2.9	
Batten:	40 x 25 HWD (QLD) / 38 x 38 Pine (NSW, ACT, VIC, SA, TAS)	
Fixing:	Head Lap Clip or Nailed	
Pallet Quantity:	240 / 180	

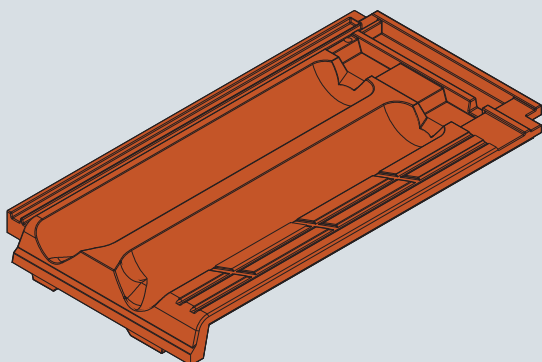
Grande Fittings

Ridges	Apex	Hip End	Double Roll	Barges	Extras
					
Q110 Standard Ridge	Q111 Standard 3 Way Apex Ridge	Q109 Collarless Hip End Ridge	N/A	Q91 Pyramid Ridge	Q21 Ventilation Tile

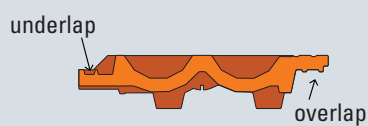
La Escandella Collection

Grande

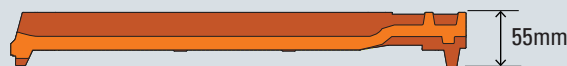
Grande Product & Test Specification



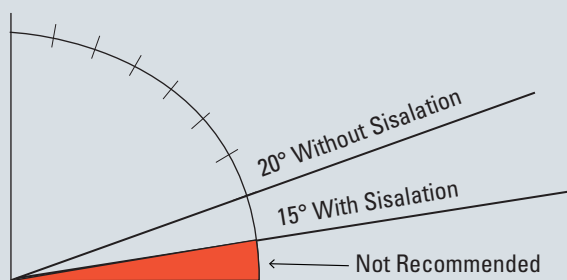
Isometric



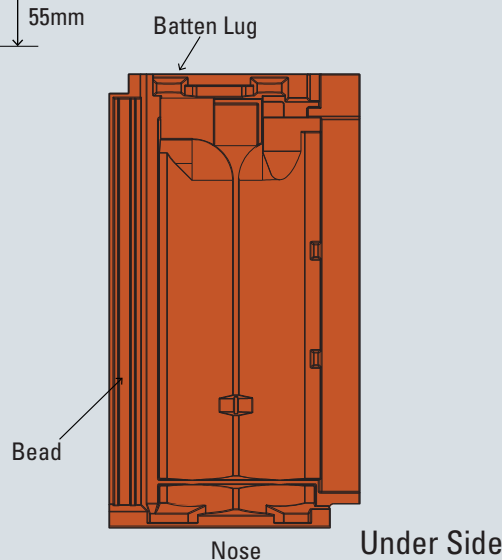
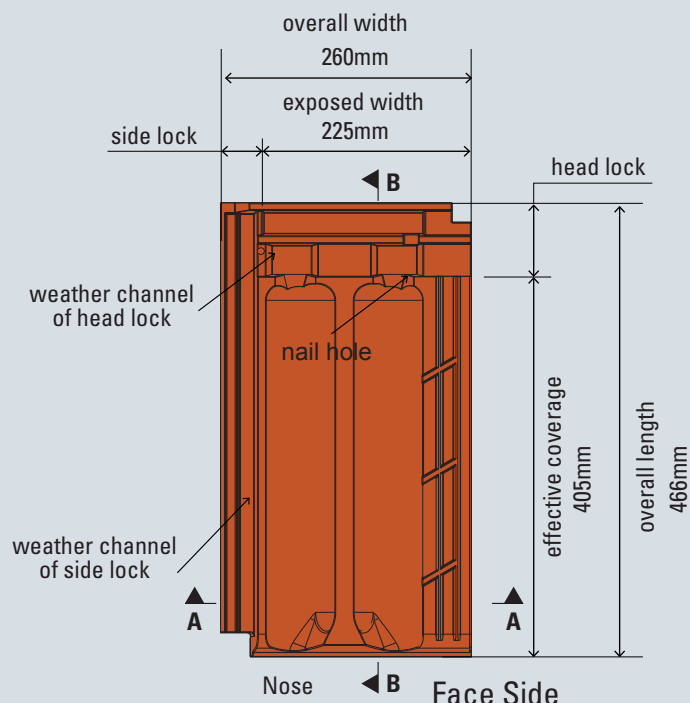
Section - A-A



Section - B-B



Roof Pitch



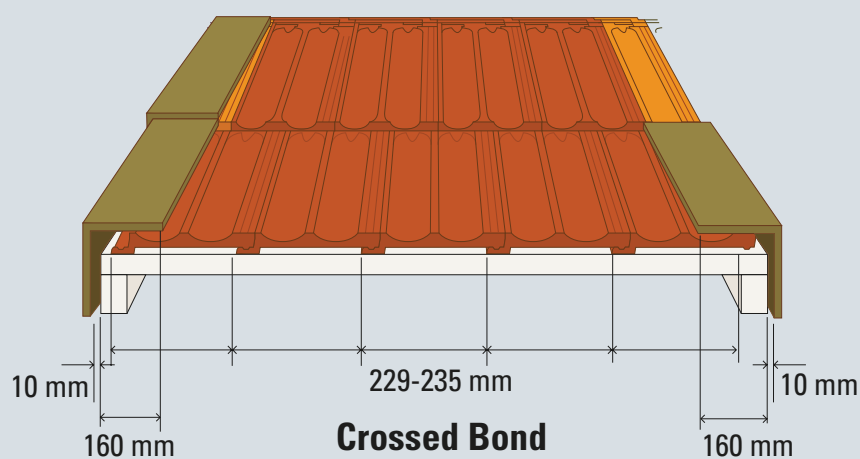
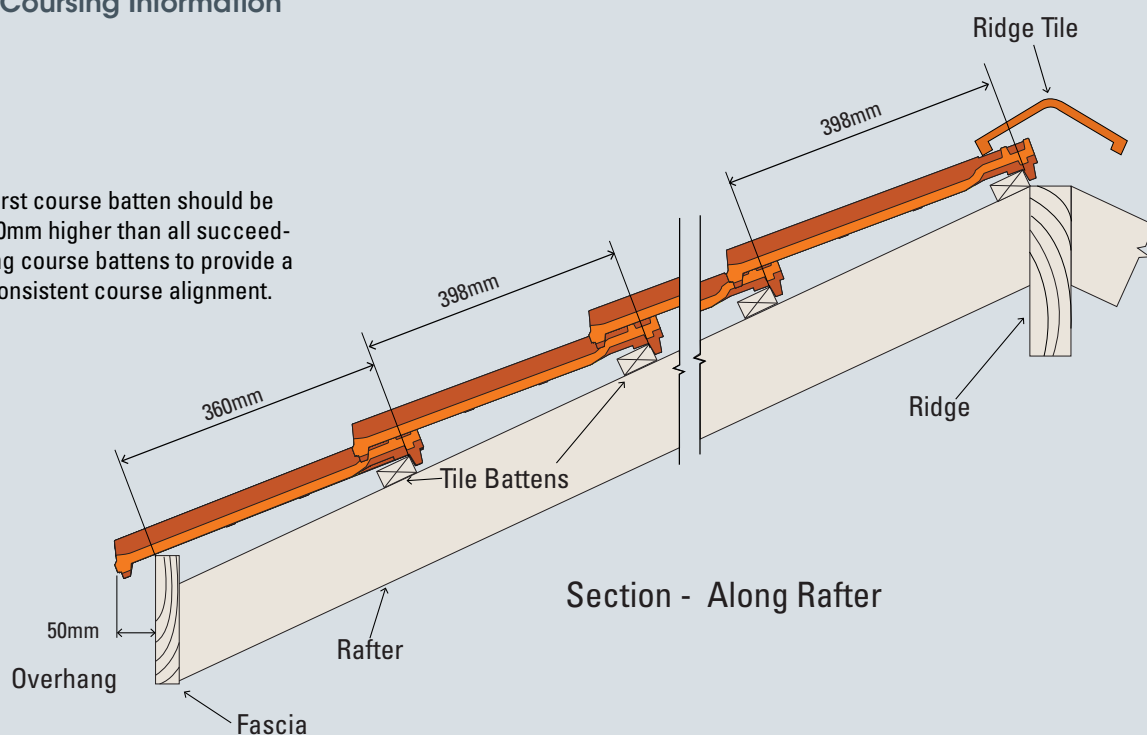
Testing Standard	Test Description	Std Tolerance	Average Grande Result
AS - 4046.1	Distortion & Warpage	< 8mm	All Grande tiles either comply or exceed the standard tolerances listed in this table
AS - 4046.2	Batten lugs & Squareness	< 1.5% Length	
EN - 538	Transverse Strength	3 Nt/exposed mm of width	
EN - 539-2	Water Absorption	<10%	
EN - 539-1	Permeability	Two hour test	
EN - 539-1&2	Freeze / Thaw	150 cycles	
AS - 4046.7	Resistance to Salt Attack	Exposure	
AS - 4046.8	Dynamic weather resistance	Calibrated Datum	

La Escandella Collection

Grande

Grande Product Identification & Layout Coursing Information

First course batten should be 20mm higher than all succeeding course battens to provide a consistent course alignment.

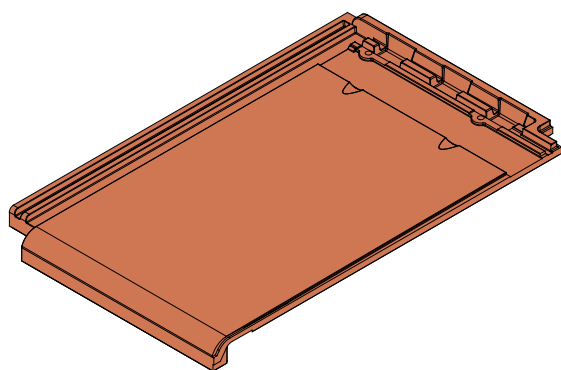


Grande Cross bond pattern

- Grande tile
- Q91 Pyramid Ridge
- Half tile (Cut on site)

La Escandella Collection

Planum



Aesthetics and functionality are brought together in the Planum range, a collection of tiles that combines a traditional roofing material with contemporary architectural style.

Planum creates a look of simplicity and elegance aged and monotone colour options developed to complement the sleek, refined shape of the tile.

Due to its innovative design and size, the Planum tile is faster and easier to install, lowering installation time and costs. Furthermore the highly weatherproof design means it can be applied to roof pitches as low as twenty degrees.

La Escandella Collection

Planum

Planum Product Specification

Product Specification	
Min Pitch:	15 Degrees with Sarking
Optimum Set Out:	370mm (+/- 5mm)
First Batten:	320mm
Sarking:	Mandatory
Dimensions:	450mm x 280mm x 32mm
Weight:	3.6kg
Layed:	Cross Bonded
Tiles Per m2:	11.3
Weight per M ² :	43kg
Cuts per LM:	3.5
Ridges per LM:	2.5
Batten per M ² :	3.2
Batten:	40 x 25 HWD (QLD) / 38 x 38 Pine (NSW, ACT, VIC, SA, TAS)
Fixing:	Head Lap Clip or Nailed
Pallet Quantity:	240 / 320

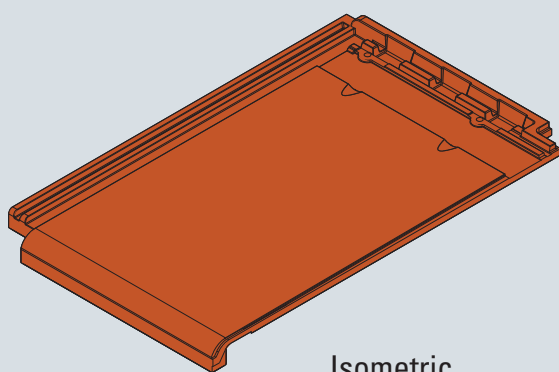
Planum Fittings

Ridges	Apex	Hip End	Double Roll	Barges	Extras
					
Q90 Collarless Ridge	N/A	Q109 Collarless Hip End Ridge	N/A	Q91 Pyramid Ridge	

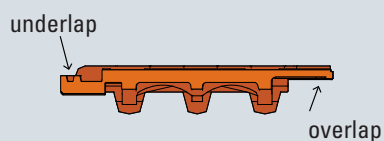
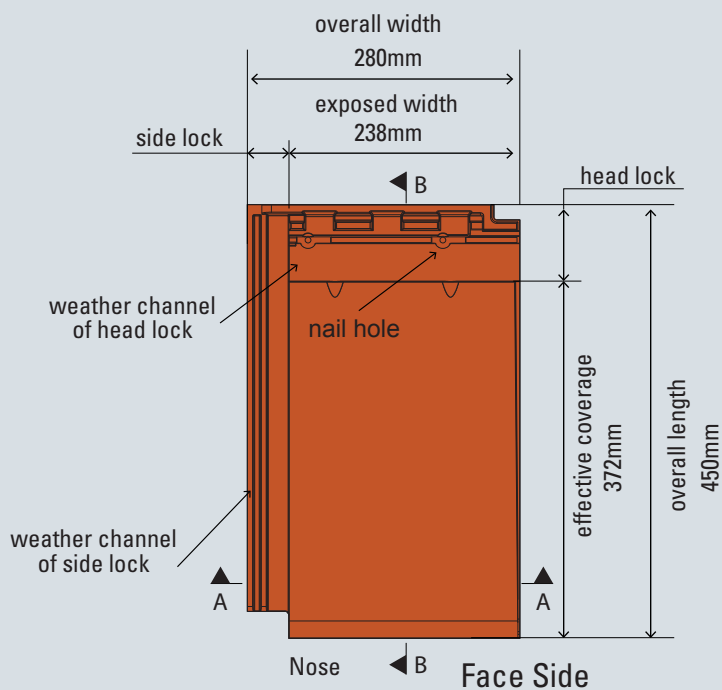
La Escandella Collection

Planum

Planum Product & Test Specification



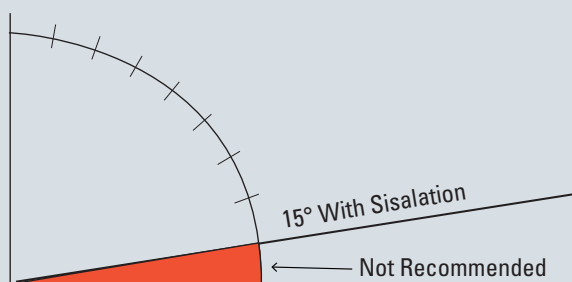
Isometric



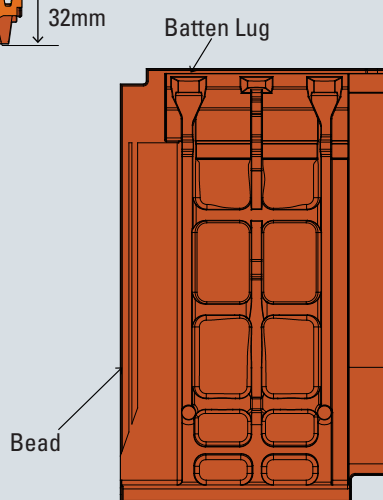
Section - A-A



Section - B-B



Roof Pitch



Under Side

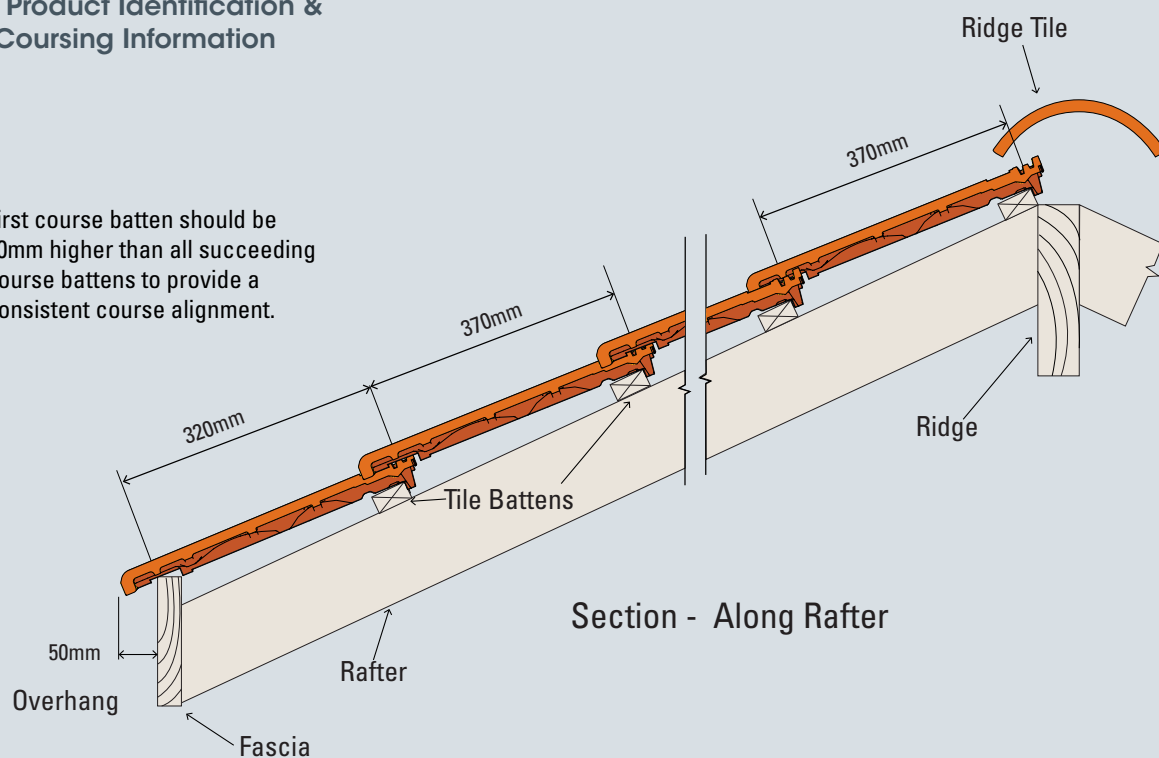
Testing Standard	Test Description	Std Tolerance	Average Planum Result
AS - 4046.1	Distortion & Warpage	< 8mm	All Planum tiles either comply or exceed the standard tolerances listed in this table
AS - 4046.2	Batten lugs & Squareness	< 1.5% Length	
EN - 538	Transverse Strength	3 Nt/exposed mm of width	
EN - 539-2	Water Absorption	<10%	
EN - 539-1	Permeability	Two hour test	
EN - 539-1&2	Freeze / Thaw	150 cycles	
AS - 4046.7	Resistance to Salt Attack	Exposure	
AS - 4046.8	Dynamic weather resistance	Calibrated Datum	

La Escandella Collection

Planum

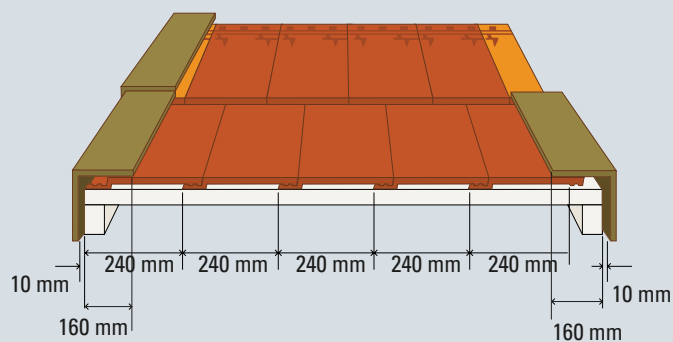
Planum Product Identification & Layout Coursing Information

First course batten should be 20mm higher than all succeeding course battens to provide a consistent course alignment.



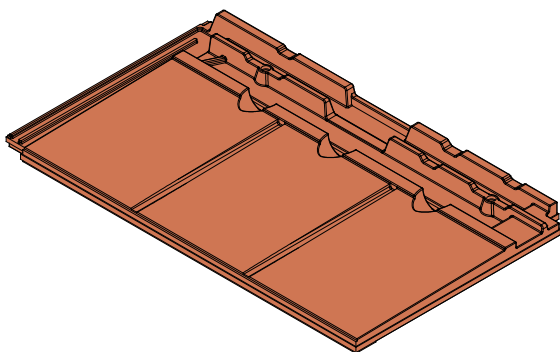
Planum cross bonded roof tile laying

- Planum Roof tile
- Q91 Pyramid Ridge
- Half tile (Cut on site)



La Escandella Collection

Visum3



A new era in roofing products has arrived with the Visum3 tile from Bristle Roofing.

Featuring a truly revolutionary interlocking design, the Visum3 has been designed to replicate smaller slate and clay tiles without the associated costs.

Introduced with a 20 year patent, the Visum3 provides an affordable alternative for those desiring a shingle roof. Industry leading technology enables each tile to be coloured individually with realistic pitting on the tiles surface for authenticity. Featuring a slim 9mm nose, the Visum3 achieves ultra flat laying for the ultimate shingle and slate appearance.

La Escandella Collection

Visum3

Visum3 Product Specification

Product Specification	
Min Pitch:	25 Degrees with Proctor Membrane
Set Out:	193mm (+/- 3mm)
First Batten:	206mm
Sarking:	Mandatory (Proctor membrane to be used)
Dimensions:	280mm x 470mm x 35mm
Weight:	4.3kg
Layed:	Cross Bonded (watercourse high bead in line with central frog)
Tiles Per m2:	11.8
Weight per M ² :	52kg
Cuts per LM:	6
Ridges per LM:	2.5
Batten per M ² :	5.8
Batten:	40 x 25 HWD (QLD) / 38 x 38 Pine (NSW, ACT, VIC, SA, TAS)
Fixing:	Head Lap Clip or Nailed
Pallet Quantity:	280 / 210

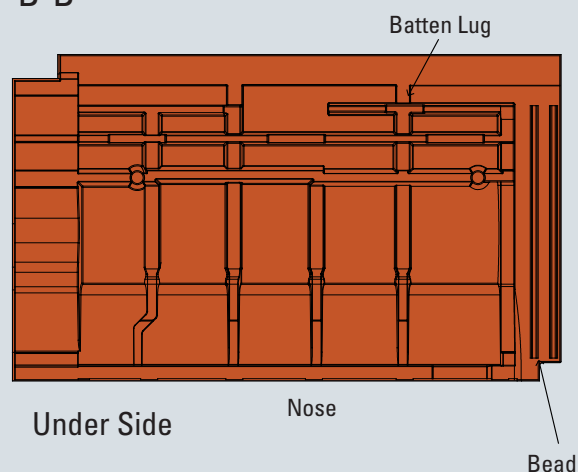
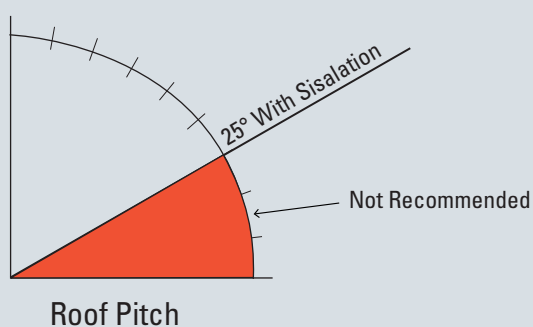
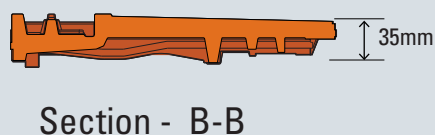
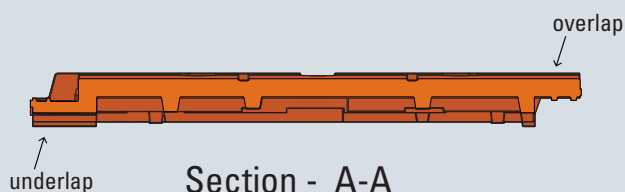
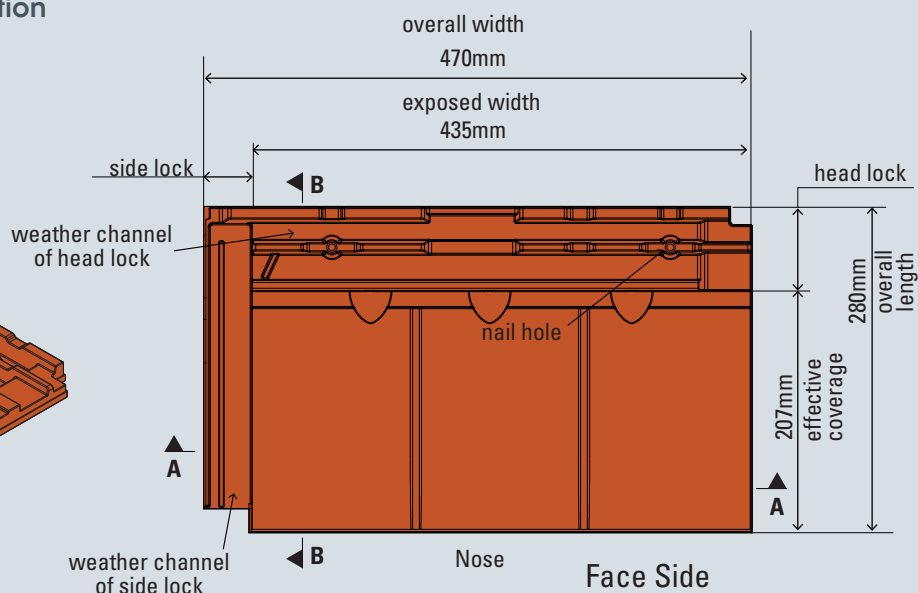
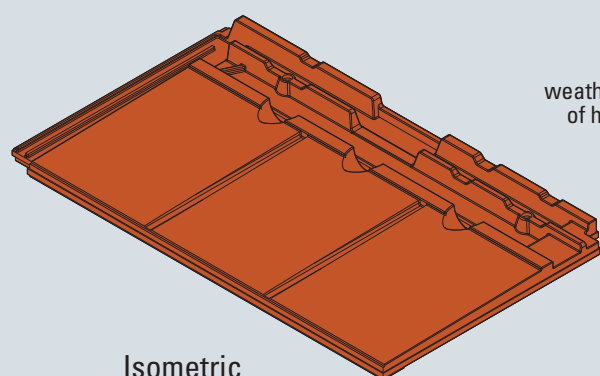
Visum Fittings

Ridges	Apex	Hip End	Double Roll	Barges	Extras
					
Q90 Collarless Ridge	N/A	Q109 Collarless Hip End Ridge	N/A	Q91 Pyramid Ridge	Q96 Ventiation Tile

La Escandella Collection

Visum3

Visum3 Product & Test Specification



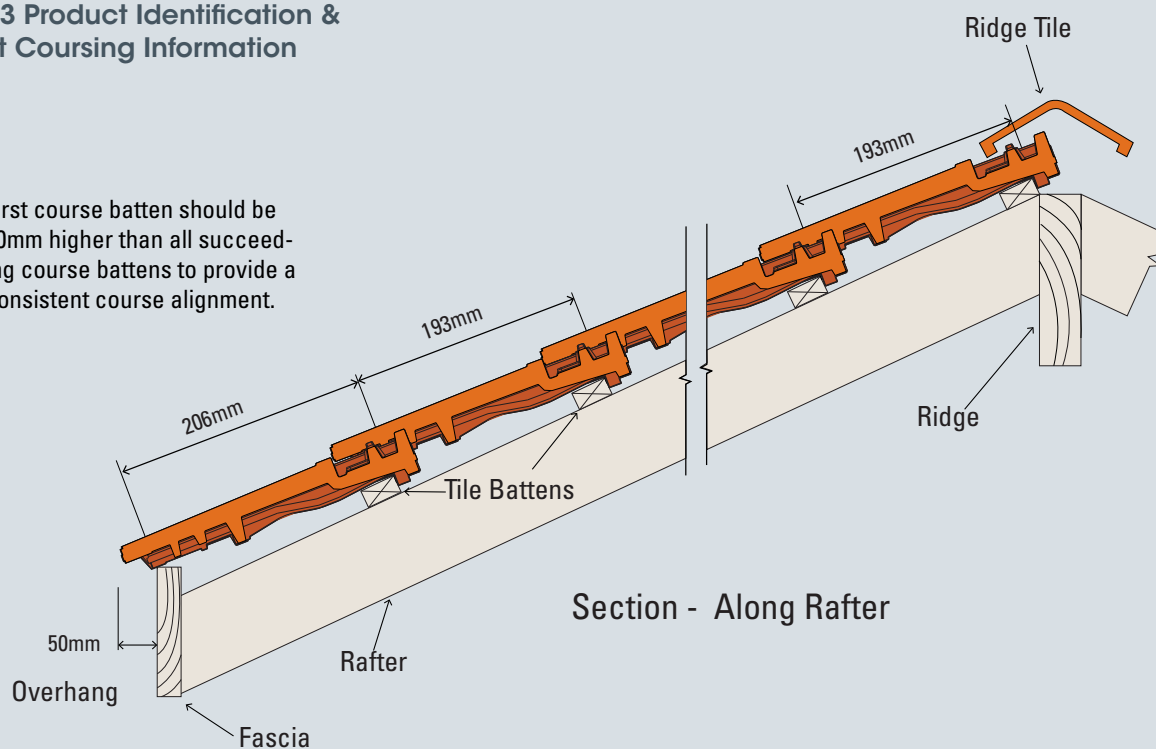
Testing Standard	Test Description	Std Tolerance	Average Visum3 Result
AS - 4046.1	Distortion & Warpage	< 8mm	All Visum3 tiles either comply or exceed the standard tolerances listed in this table
AS - 4046.2	Batten lugs & Squareness	< 1.5% Length	
EN - 538	Transverse Strength	3 Nt/exposed mm of width	
EN - 539-2	Water Absorption	<10%	
EN - 539-1	Permeability	Two hour test	
EN - 539-1&2	Freeze / Thaw	150 cycles	
AS - 4046.7	Resistance to Salt Attack	Exposure	
AS - 4046.8	Dynamic weather resistance	Calibrated Datum	

La Escandella Collection

Visum3

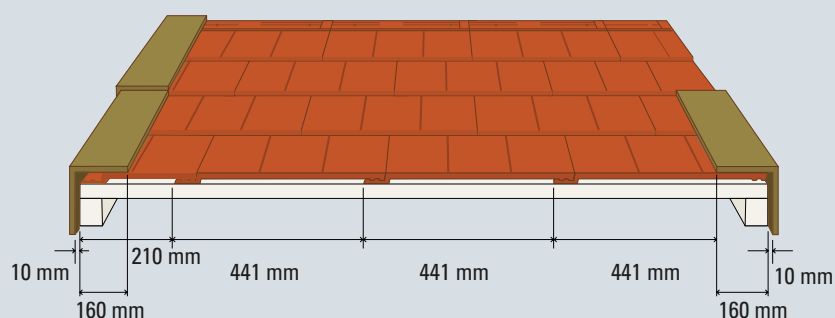
Visum3 Product Identification & Layout Coursing Information

First course batten should be 20mm higher than all succeeding course battens to provide a consistent course alignment.



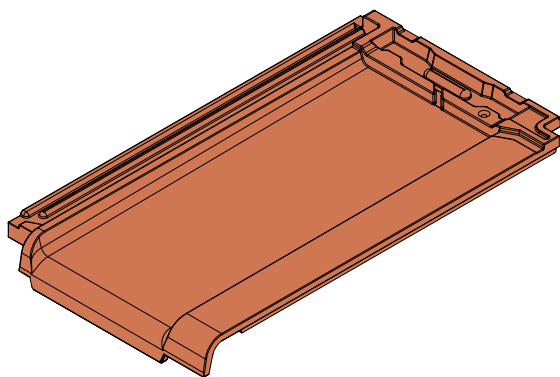
Visum3 roof tile laying

- Visum3 Roof tile
- Q91 Pyramid Ridge



La Escandella Collection

Vienna



With sharp lines and bold pastel colours the Vienna range is designed for contemporary homes.

A tile to compliment today's varied architectural styles, the pace and diversity of modern city living reflected in the strong straight lines of this tile.

La Escandella Collection

Vienna

Vienna Product Specification

Product Specification	
Min Pitch:	15 Degrees with Sarking, 20 Degrees without Sarking
Set Out:	395mm (+/- 5mm)
First Batten:	360mm
Sarking:	As noted in "Min Pitch" below
Dimensions:	470mm x 260mm x 55mm
Weight:	3.8kg
Layed:	Straight Bonded
Tiles Per m2:	11.1
Weight per M²:	43kg
Cuts per LM:	3
Ridges per LM:	2.5
Batten per M²:	2.9
Batten:	40 x 25 HWD (QLD) / 38 x 38 Pine (NSW, ACT, VIC, SA, TAS)
Fixing:	Head Lap Clip or Nailed
Pallet Quantity:	180 / 240

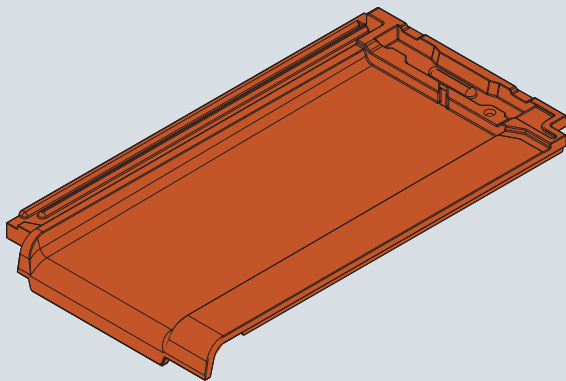
Vienna Fittings

Ridges	Apex	Hip End	Double Roll	Barges	Extras
					
Q90 Collarless Ridge	N/A	Q109 Collarless Hip End Ridge	N/A	Q91 Pyramid Ridge	N/A

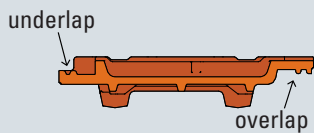
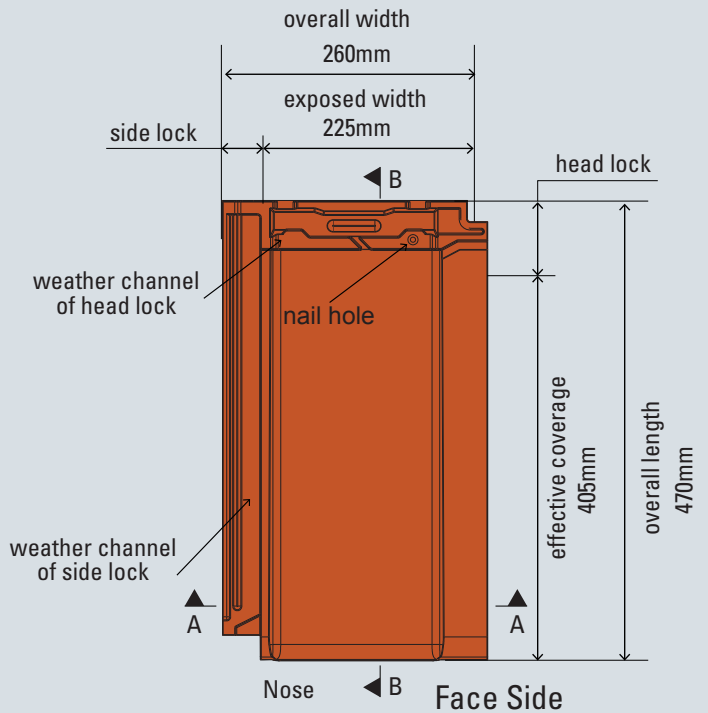
La Escandella Collection

Vienna

Vienna Product & Test Specification



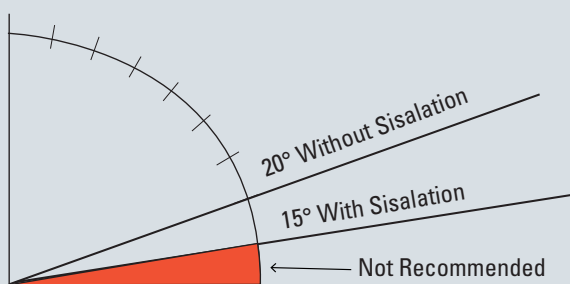
Isometric



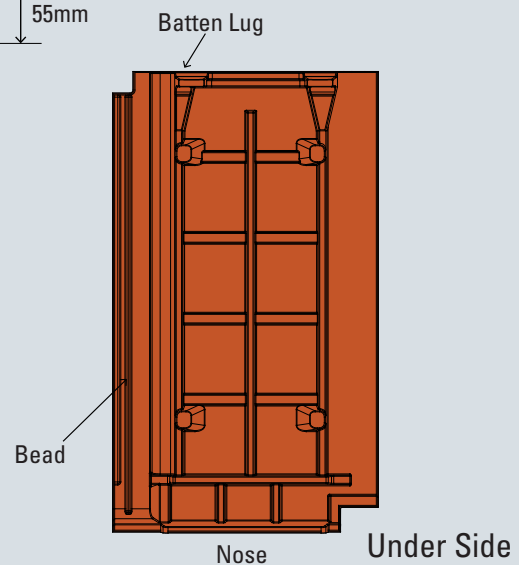
Section - A-A



Section - B-B



Roof Pitch



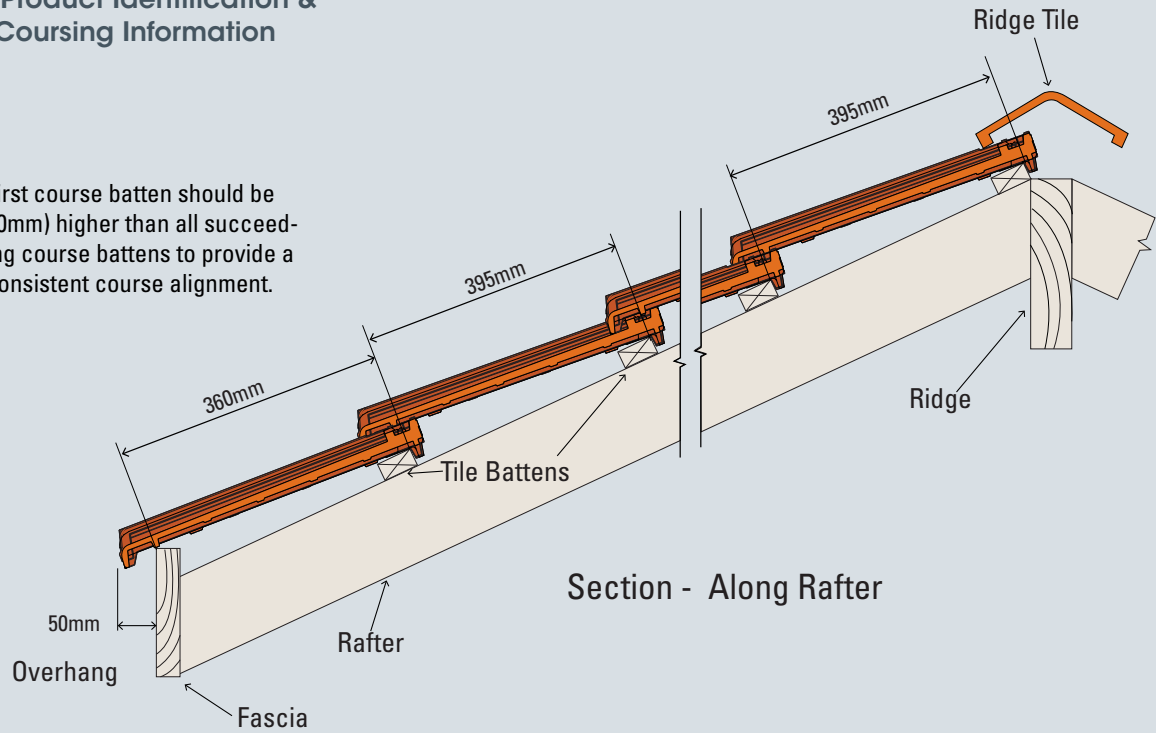
Testing Standard	Test Description	Std Tolerance	Average Vienna Result
AS - 4046.1	Distortion & Warpage	< 8mm	All Vienna tiles either comply or exceed the standard tolerances listed in this table
AS - 4046.2	Batten lugs & Squareness	< 1.5% Length	
EN - 538	Transverse Strength	3 Nt/exposed mm of width	
EN - 539-2	Water Absorption	<10%	
EN - 539-1	Permeability	Two hour test	
EN - 539-1&2	Freeze / Thaw	150 cycles	
AS - 4046.7	Resistance to Salt Attack	Exposure	
AS - 4046.8	Dynamic weather resistance	Calibrated Datum	

La Escandella Collection

Vienna

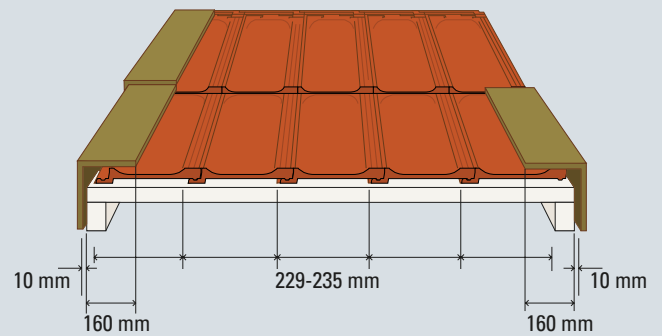
Vienna Product Identification & Layout Coursing Information

First course batten should be 20mm higher than all succeeding course battens to provide a consistent course alignment.



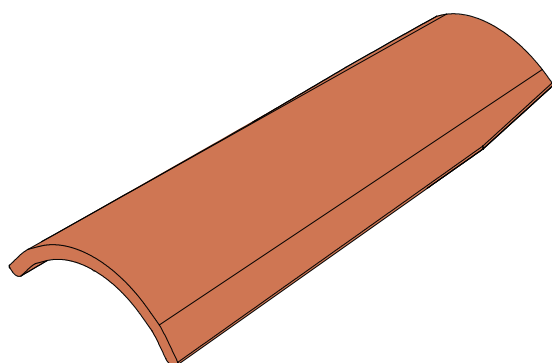
Straight bond pattern / Continuous joints laying

- Vienna tile
- Q91 Pyramid Ridge



La Escandella Collection

Medio Curva



A roof tile used through the ages, reintroduced in colours designed for the new world.

Traditionally, this two piece tile, also referred to as 'Mission Barrel', was the most frequently used roof tile in Europe and in Spanish colonial buildings in the new world. Today the Medio Curva tile is used in the construction of new homes, due to the beauty and wide variety of colours available, or on existing projects to restore historic roofs to their former beauty.

La Escandella Collection

Medio Curva

Medio Curva Product Specification

Product Specification	
Min Pitch:	10 Degrees with rigid underlay
Set Out:	See Longitudinal fit information on page 39
First Batten:	See Longitudinal fit information on page 39
Sarking:	N/A
Dimensions:	See Product Specification Table on page 39
Weight:	See Product Specification Table on page 39
Layed:	Straight Bonded
Tiles Per m2:	See Product Specification Table on page 39
Weight per M ² :	See Product Specification Table on page 39
Cuts per LM:	16
Ridges per LM:	2.5
Batten per M ² :	2.9
Batten:	40 x 25 HWD (QLD) / 75 x 35 Pine (NSW, ACT, VIC, SA, TAS)
Fixing:	Adhesive
Pallet Quantity:	See Product Specification Table on page 39

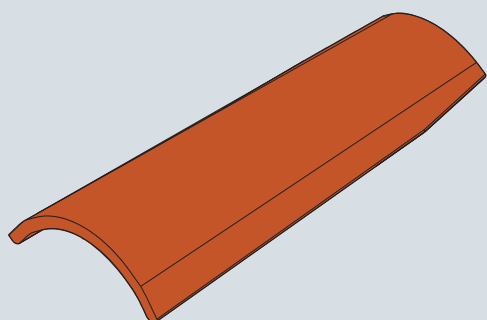
Medio Curva Tiles & Fittings

Ridges	Apex	End Cap	Double Roll	Tile	Extras
					
T5	N/A	Q83 Round Hip End Ridge Cap	N/A	T5	N/A

La Escandella Collection

Medio Curva

Medio Curva Product & Test Specification



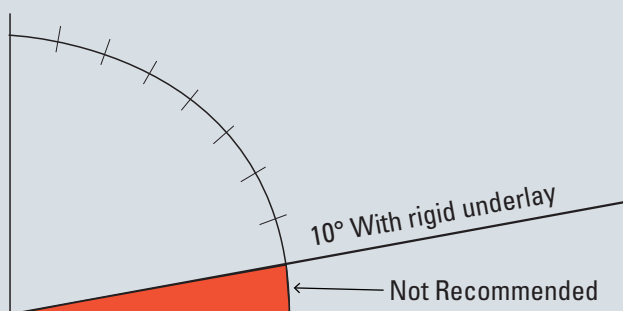
Isometric



Section - A-A

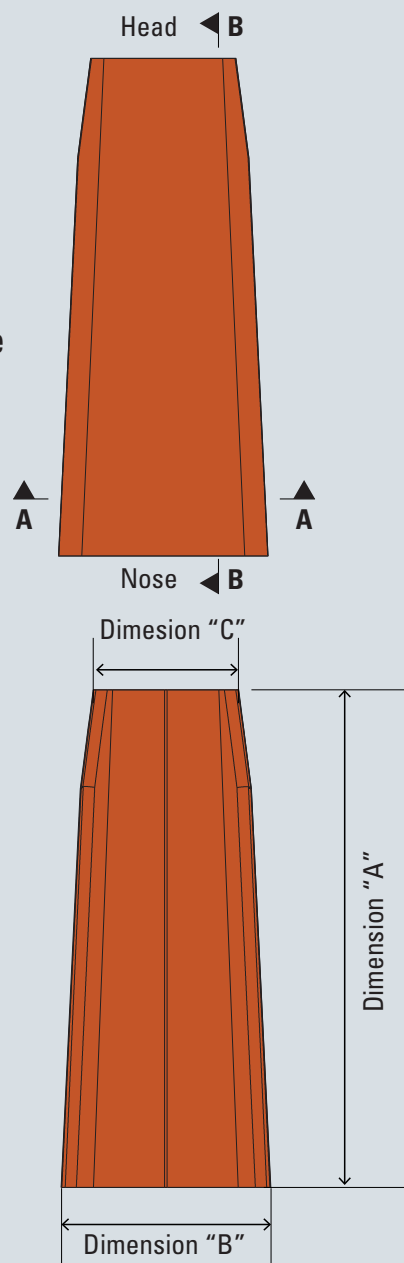


Section - B-B



Roof Pitch

Face Side



Under Side

Testing Standard	Test Description	Std Tolerance	Average Medio Curva Result
AS - 4046.1	Distortion & Warpage	< 8mm	All Medio Curva tiles either comply or exceed the standard tolerances listed in this table
AS - 4046.2	Batten lugs & Squareness	< 1.5% Length	
EN - 538	Transverse Strength	3 Nt/exposed mm of width	
EN - 539-2	Water Absorption	<10%	
EN - 539-1	Permeability	Two hour test	
EN - 539-1&2	Freeze / Thaw	150 cycles	
AS - 4046.7	Resistance to Salt Attack	Exposure	
AS - 4046.8	Dynamic weather resistance	Calibrated Datum	

La Escandella Collection

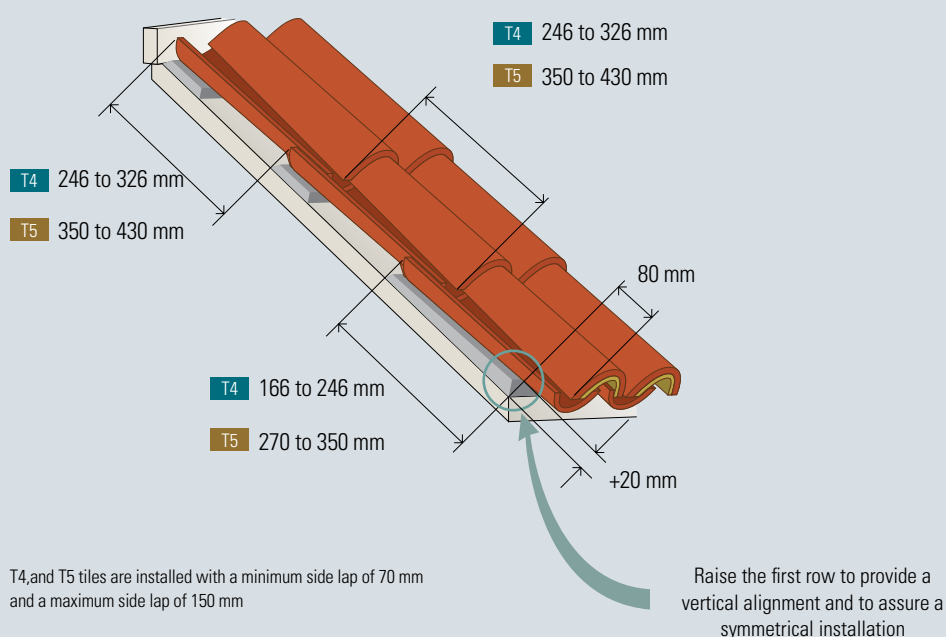
Medio Curva

Product Specification Table

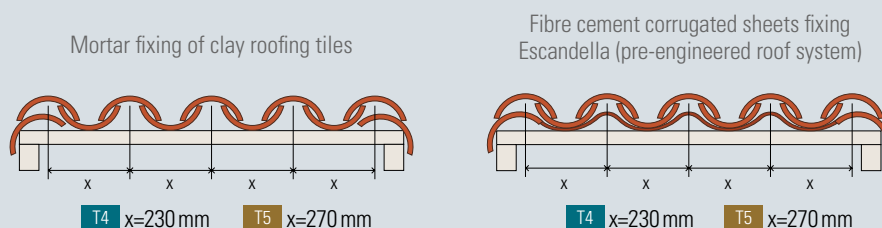
	T4 Red clay	T4 White clay	T5 Red clay	T5 White clay
Dimensions	a: 396 mm b: 182 mm c: 130 mm	a: 400 mm b: 185 mm c: 134 mm	a: 500 mm b: 210 mm c: 160 mm	a: 500 mm b: 215 mm c: 165 mm
Pieces /m ²	28	28	18	18
Weight piece	1.6 kg	1.5 kg	2.55 kg	2.4 kg
Pieces /pallet	648 / 660	648 / 660	275	275
Average weight (including sheet) /m ²	58.7 kg	55.9 kg	59.78 kg	57.08 kg

Medio Curva Product Specification Laying Method

Longitudinal fit

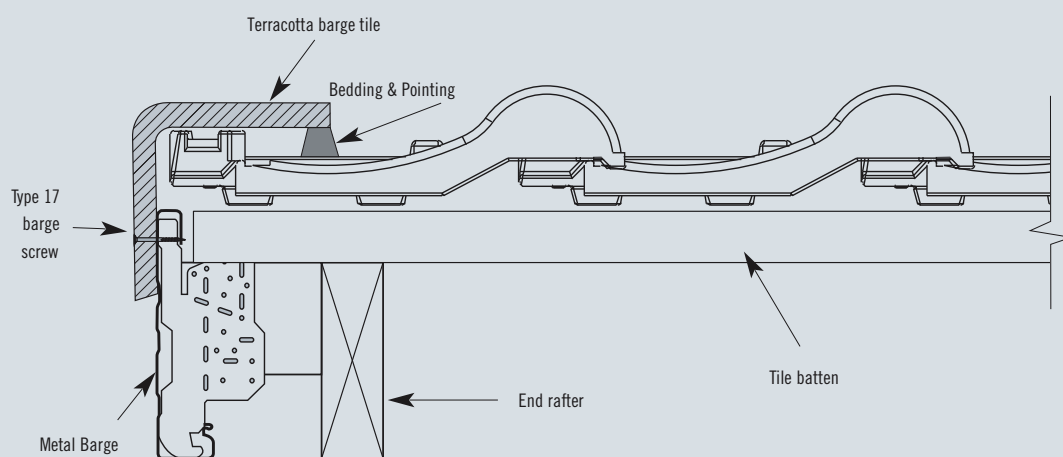


Transversal fit



La Escandella Collection

Terracotta Barge Tile



Drawing No. BTR012
 Not to scale
 Author: Bristle Roofing
 Issued: September 2005



La Escandella Collection

Associated Companies



Austral Bricks

Austral Bricks is the largest and most efficient producer of pavers, bricks, building materials, façade systems and landscaping products in Australia.

Austral Bricks continues to set the pace for quality, efficiency and high levels of environmental performance.

The introduction of robotic brick handling equipment at plants around Australia enables us to greatly reduce manufacturing costs and enhance production flexibility.



Austral Masonry

The acquisition of a number of concrete masonry manufacturers, most notably GB Masonry in Queensland, complemented established manufacturing Victorian facilities and led to the formation of Austral Masonry.

Through natural growth and acquisition Austral Masonry has become a significant player in the market for grey block building materials in Queensland and provides further diversification of earnings for the group.



Austral Precast

Austral Precast is Australia's premier supplier of high quality, innovative and customisable precast concrete product solutions, to meet the needs of an evolving building and construction industry.

Operating from five plants located across Australia using state of the art technology, production techniques and systems, Austral Precast produces a diversified range of customised wall, floor, column, and client specific precast solutions.



Bristile Roofing

Bristile Roofing was established in 1929 when Sir Lance Brisbane opened his first terracotta products factory in Perth.

The division is now one of Australia's largest manufacturers and expert installers of quality terracotta, and concrete roof tiles.

Auswest Timbers

Auswest Timbers manufactures a diverse range of timber products including heavy structural timbers, roof tile battens through to floor boards and decking.

The company has manufacturing plants in Western Australia, Victoria and the A.C.T.

Brickworks Design Centres Sales & Selection

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Beresfield
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Port Macquarie
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Punchbowl
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& Westport Highway
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Trading hours

For trading hours please visit www.bristileroofting.com.au

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