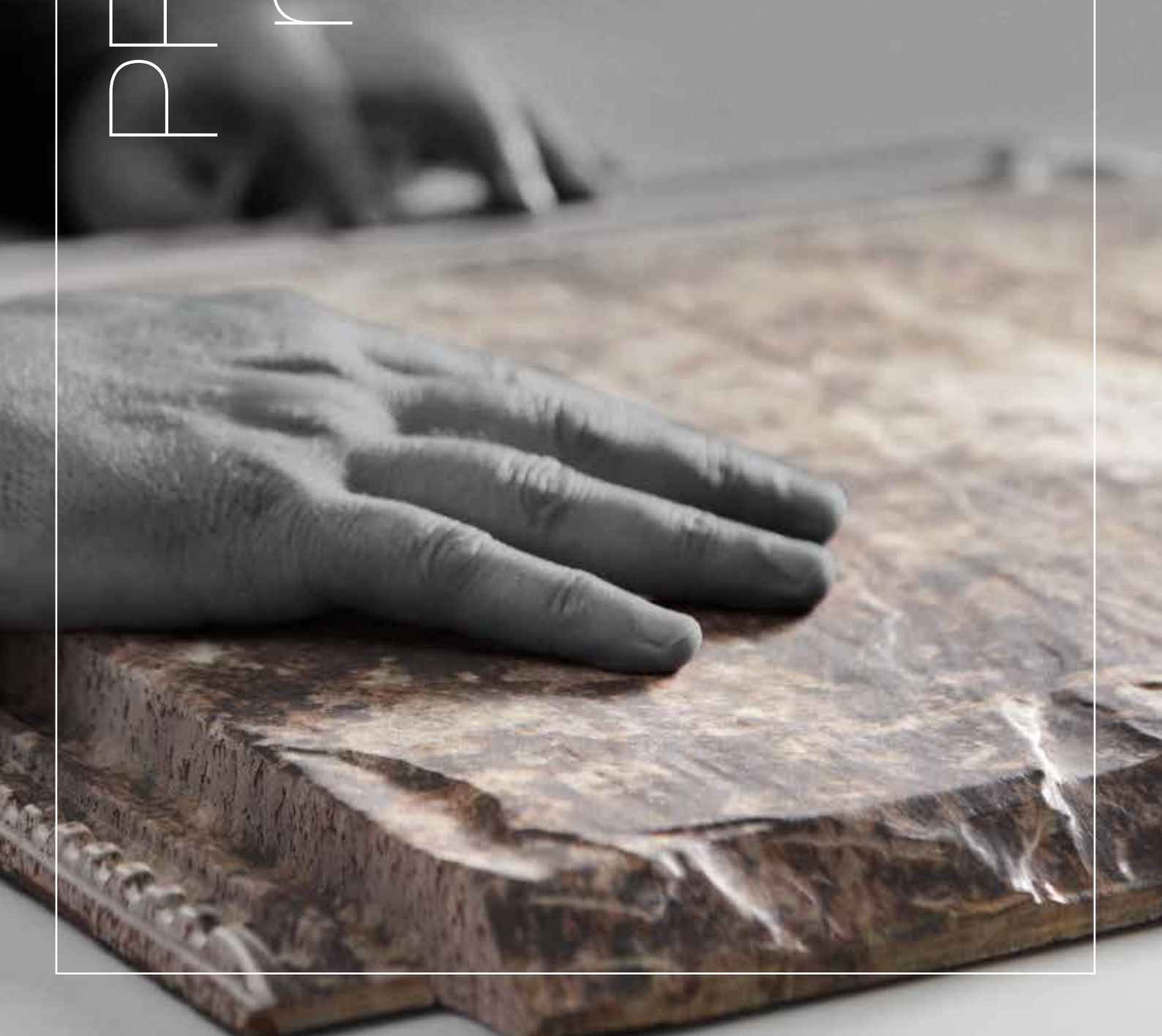
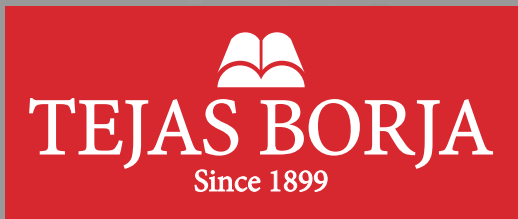


PREMIUM roof tiles





TEJAS BORJA

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06

PREMIUM tiles, accessories and installation

28

Roof components

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Projects

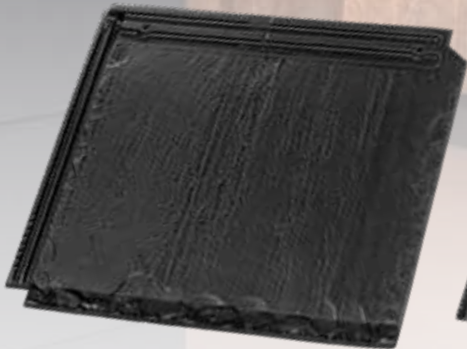
44

Solar Ceramic Tile

46

BorjaCLAD

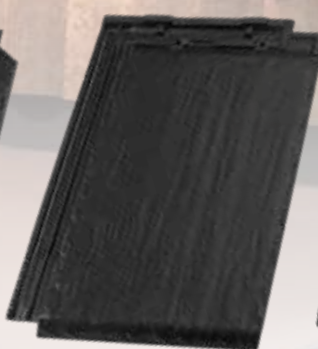
Note: The colour reproduction is approximate, subject to change due to the natural colours of the clays.
Check finishing colours for different accessories by telephone at: **+34 96 279 80 16.**



FLAT-5XL

An example of the innovation and technological development in ceramic roof tiles. The largest ceramic tile in the world.

P.06



FLAT-10

A new generation of flat tiles now lighter and with greater definition. Suitable for roofs and facades.

P.08



TECHNICA-10

Innovative flat tile in a Marseille style. Safer and technologically up-to-date. The most versatile format on the market. Ideal for all kinds of projects.

P.10



TB-10 Tech

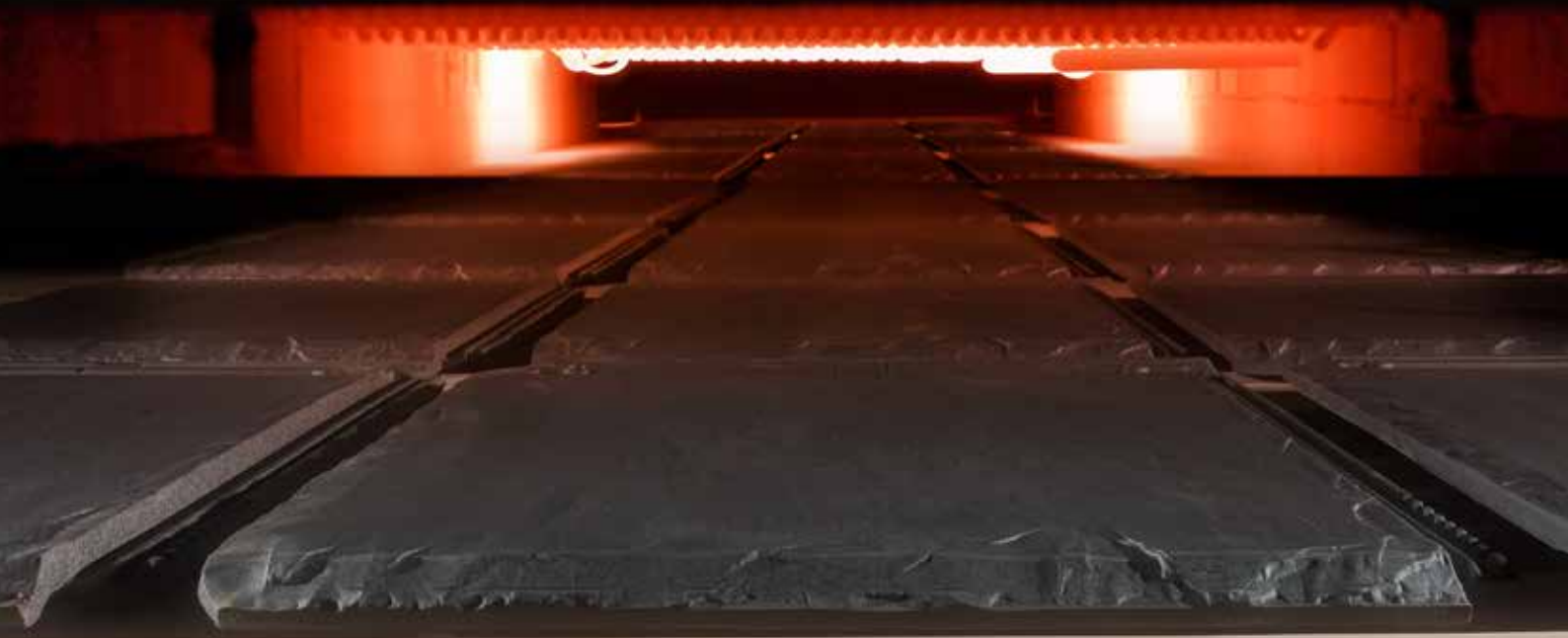
Technological evolution in the large size S-interlocking roof tile format. Its perfect definition and finishing simulate curved roof tiles aesthetics.

P.20



Borja **EXTREM**

How we produce



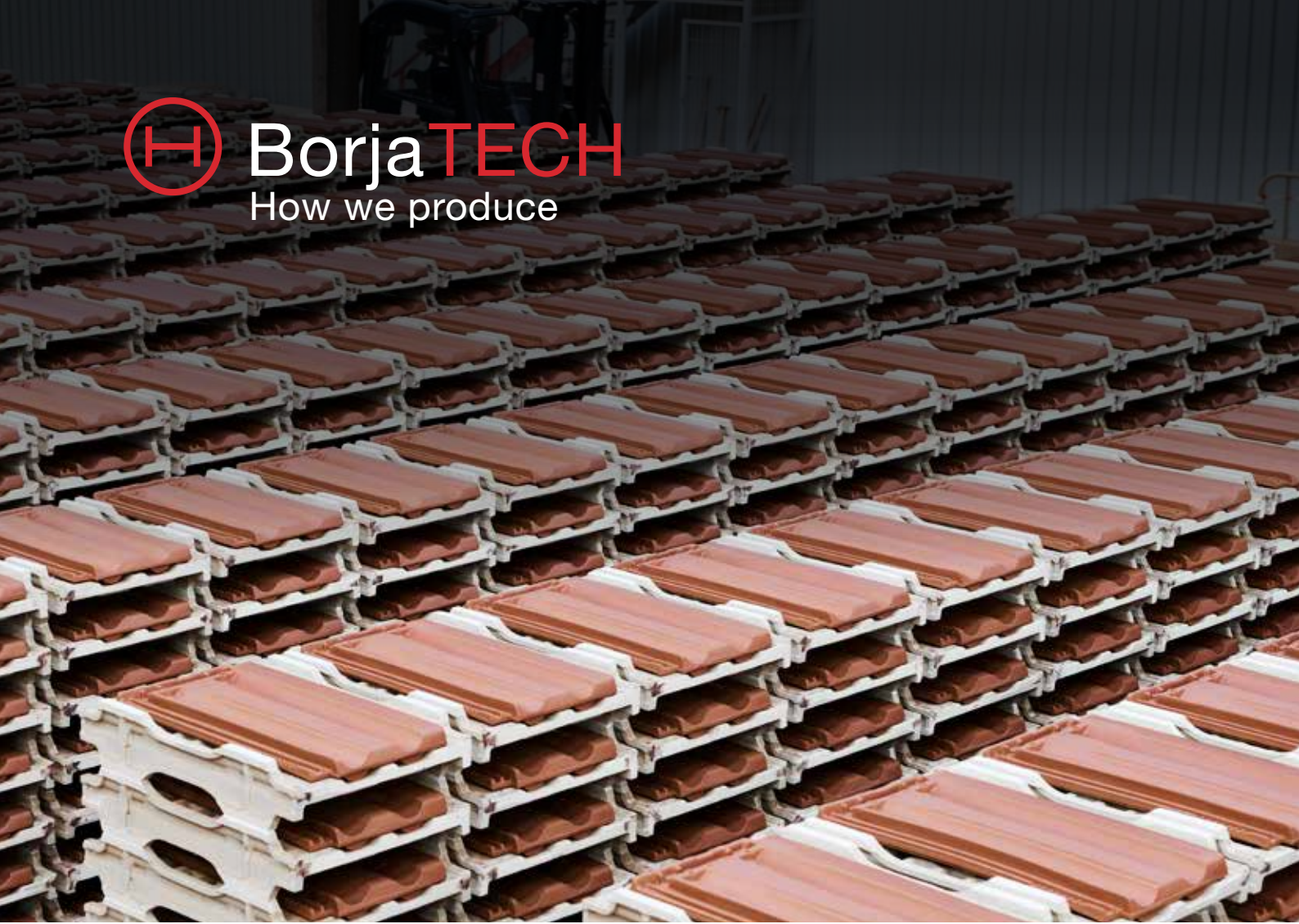
- ✔ Roller kiln
- ✔ Plaster molds
- ✔ Large format
- ✔ Very low water absorption rate < 3%





BorjaTECH

How we produce



- ☑ H-cassettes
- ☑ > Klinker
- ☑ Plaster molds
- ☑ Mountain climate





Borja JET

How we decorate



- ✔ Inkjet digital printing
- ✔ The fusion of natural materials with the technical properties of ceramic tiles
- ✔ Unique finishes
- ✔ Long lasting colours





Borja LINE

How we decorate



- ✔ Engobes and ceramic deposits applications
 - ✔ Unique aged finishes
- ✔ Monochrome colours by engobe application



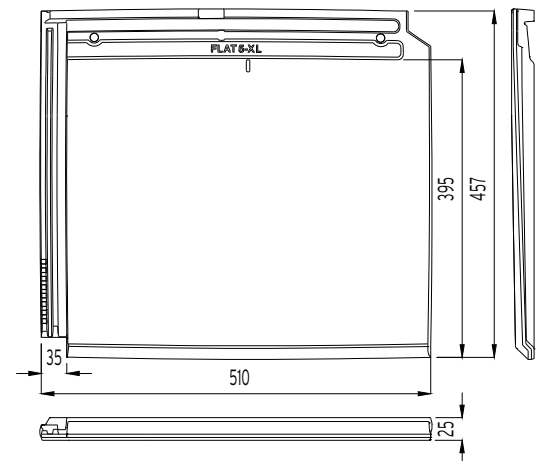
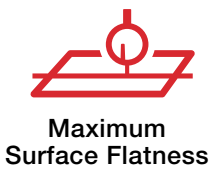


reddot award 2019
winner

The largest ceramic tile ever made
High performance in installation (5 units/sq.m.)
Wide range of finishes
(BorjaJET exclusive)



® TRADE MODEL
> Klinker



Dimensions	457 mm x 510 mm
Minimum pitch recommended	30% - 17° (*)
Weight	6.55 Kg./Unit
Units / sq. m.	5.48 Units
Units per LM eave line	2 Units
Useful width	474 mm
Useful length (Batten distance) VARIABLE	340-385 mm
Pallet data	(G1) 152 Units / 990 Kg.
Minimum order	2 Units **

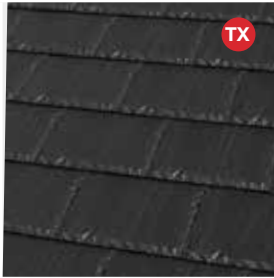


Approximate values: If the roof tiles are installed on battens, the useful length must be calculated on site. A tolerance of ± 2% is allowed on the dimensions of the roof tiles according to EN 1024.

(*) In zone 1 (protected area), arranged in staggered formation with waterproof membrane and batten distance of 340 mm on a skirt of up to 6.5 m. Check pitch panel according to the roof length and the geographical area according to EN 136020.

FLAT-5XL / FINISHES

PLAIN COLOUR



Leon Matte

Ceramic SLATE



Nepal Orange



Paris Ocre

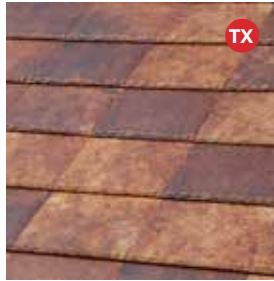


Irish Green

Ceramic STONE



Austin Grey

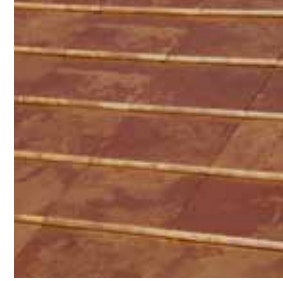


Denver Gold



Denver Iris

Ceramic OXIDE



Tokyo Copper

Ceramic CEMENT



Sidney Graphite

Ceramic MARBLE



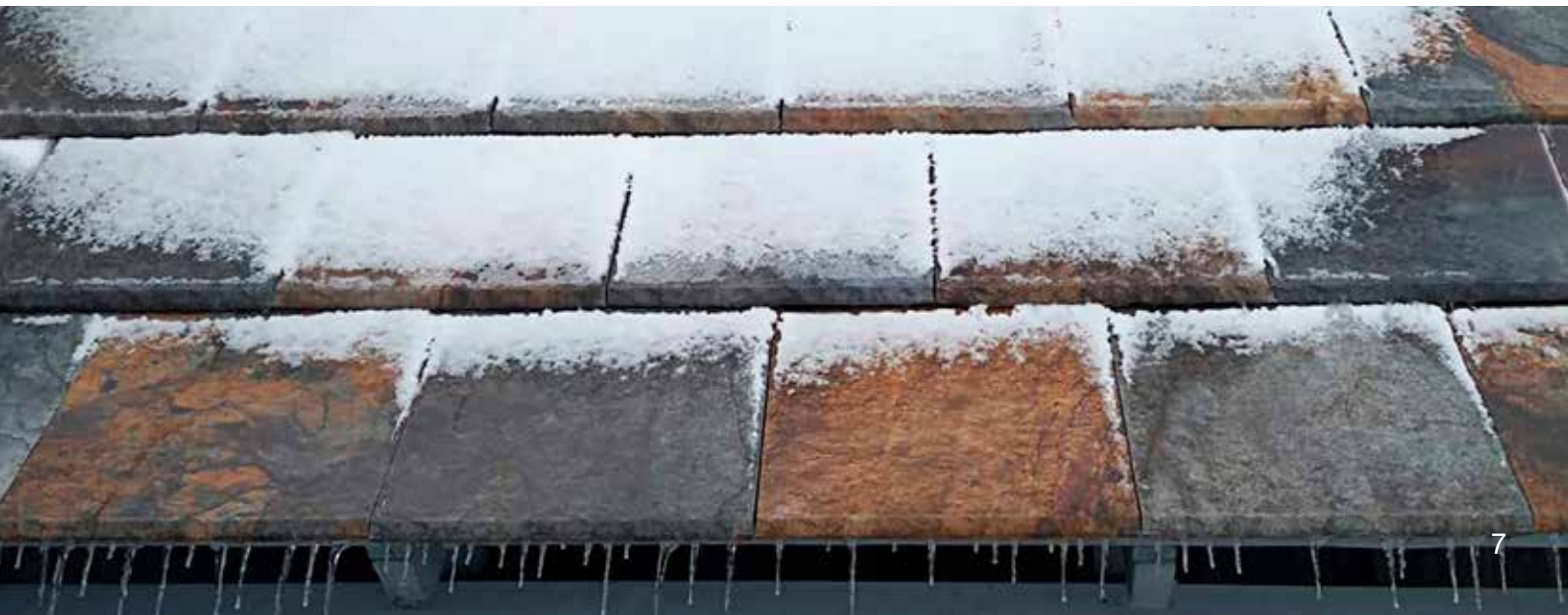
Roma Dark

Ceramic COTTO



Ibiza Pink

NOTES:
 FLAT-5XL BorjaJET available upon request. Delivery time 4-6 weeks.
 All Flat-5XL finishes are produced only on 1 side colour. TX Leon Matte, Ceramic Slate and Ceramic Stone are models with texture.



FLAT-10



- Perfect, deep fit
- Large format - 10 units per sq. m.
- Exclusive BorjaJET finishes
- Lightweight



> Klinker



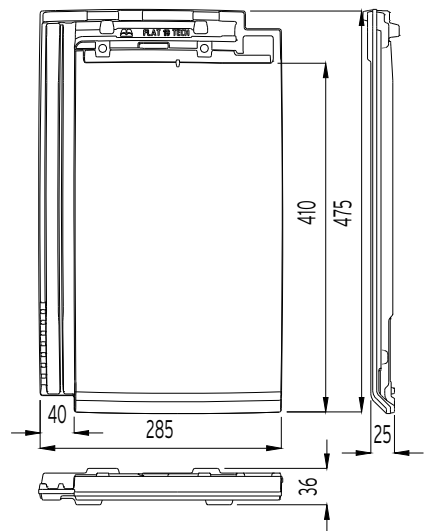
Maximum Surface Flatness



Mountain climate



Longitudinal Overlap 35 mm



Dimensions	475 mm x 285 mm
Minimum pitch recommended	30% - 17° (*)
Weight	3,5 Kg./Unit
Units / sq. m.	10.20 Units
Units per LM eave line	4 Units
Useful width	245 mm
Useful length (Batten distance) VARIABLE	365-400 mm
Pallet data	(T1) 252 Units / 885 Kg. (T2) 336 Units / 1,180 Kg.
Minimum order	6 Units**



Approximate values: If the roof tiles are installed on battens, the useful length must be calculated on site. A tolerance of $\pm 2\%$ is allowed on the dimensions of the roof tiles according to EN 1024. The certified characteristics for the **NF** Terracotta tiles are: Structural faults, the geometric characteristics, resistance to flexural strength, impermeability, frost resistance for all products made with red clay. AFNOR Certification / 11 rue Francis de Pressensé / 93571 LA PLAINE / SAINT-DENIS CEDEX / www.marque-nf.com

(*) In zone 1 (protected area), arranged in staggered formation with waterproof membrane and batten distance of 365 mm on a skirt of up to 6.5 m. Check pitch panel according to the roof length and the geographical area according to EN 136020.

FLAT-10 / FINISHES

PLAIN COLOUR



Graphite



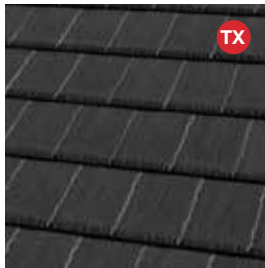
Chocolate



Mid Grey



Natural Black



Leon Matte



Ártica

NATURE



Red



Moss Red



Ceramic SLATE



Nepal Orange



Paris Ocre

Ceramic WOOD



Toronto Oak



Weathered Cedar

Ceramic CEMENT



Sidney Graphite

Ceramic OXIDE



Tokyo Copper

Ceramic COTTO



Ibiza Pink

NOTES: Leon Matte, Ceramic Slate and Weathered Cedar are models with texture. All Flat-10 finishes are produced only on 1 side colour.



Deep channel, extremely watertight

Great definition

Easy to install

> Klinker



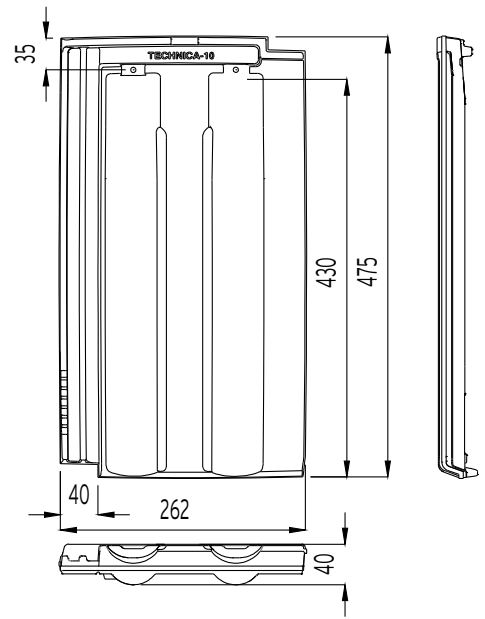
Easy to install



Mountain climate



Longitudinal Overlap 45 mm



Dimensions	475 mm x 262 mm
Minimum pitch recommended	30% - 17° (*)
Weight	3.05 Kg./Unit
Units / sq. m.	10.90 Units
Units per LM eave line	4,5 Units
Useful width	220 mm
Useful length (Batten distance) VARIABLE	370-415 mm
Pallet data	(TB) 320 Units / 1.070 Kg. (TC) 240 Units / 805 Kg.
Minimum order	6 Units**



Approximate values: If the roof tiles are installed on battens, the useful length must be calculated on site. A tolerance of ± 2% is allowed on the dimensions of the roof tiles according to EN 1024.

The certified characteristics for the **NF** Terracotta tiles are: Structural faults, the geometric characteristics, resistance to flexural strength, impermeability, frost resistance for all products made with red clay. AFNOR Certification / 11 rue Francis de Pressensé / 93571 LA PLAINE / SAINT-DENIS CEDEX / www.marque-nf.com

(*) In zone 1 (protected area), arranged in staggered formation with waterproof membrane and batten distance of 370 mm on a skirt of up to 6.5 m. Check pitch panel according to the roof length and the geographical area according to EN 136020.

Ⓜ PLAIN COLOUR



Graphite



Chocolate



Mid Grey

Ⓜ NATURE



Red



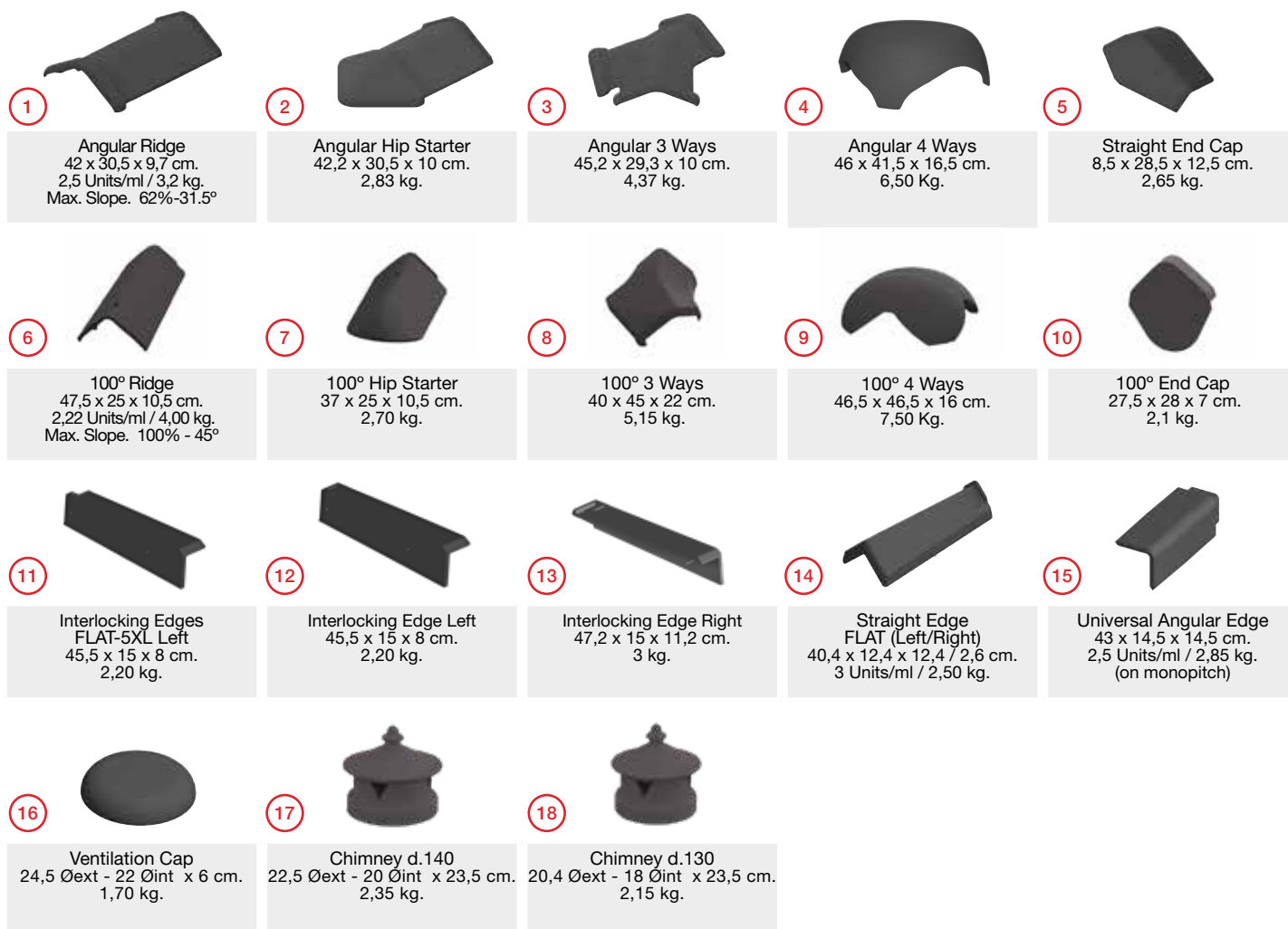
Moss Red

NOTE: Finishes for the Technica-10 roof tile are produced only one side.



ACCESSORIES

FLAT ROOF TILES



FLAT-5XL



FLAT-10



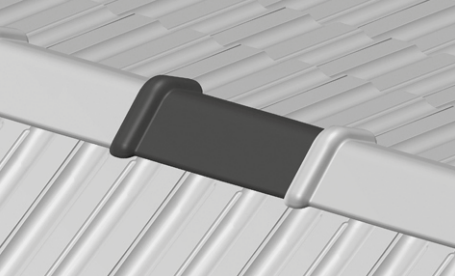
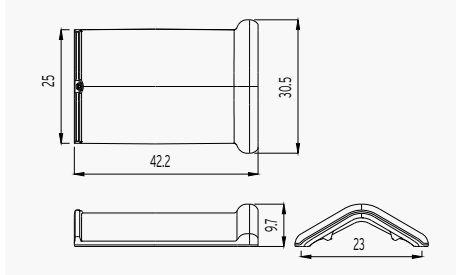
TECHNICA-10



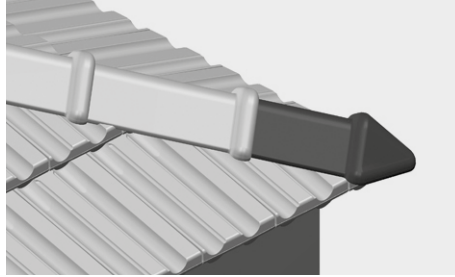
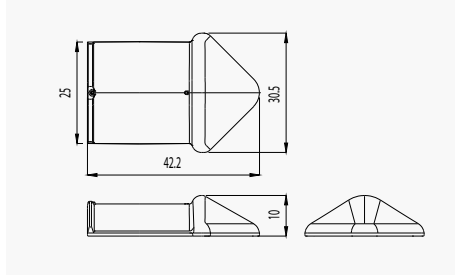
A tolerance of $\pm 2\%$ is allowed on the dimensions of the roof tiles according to EN 1024. Dimensions in centimeters. Check finishing colours for different accessories. Accessories are subject to minimum order and must be multiples thereof. For textured roof tiles finishes, the Half and Ventilation roof tiles are with texture; other accessories are without texture.

ACCESSORIES

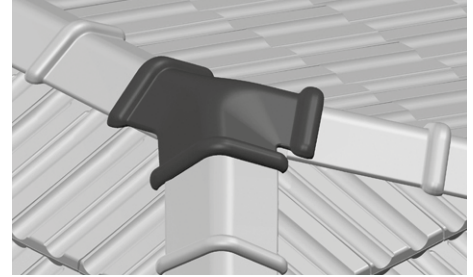
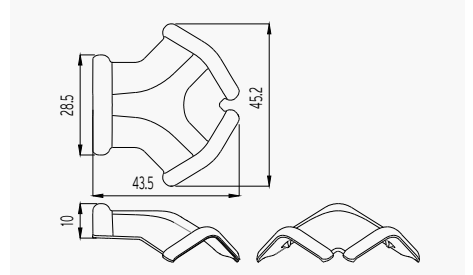
1 Angular Ridge



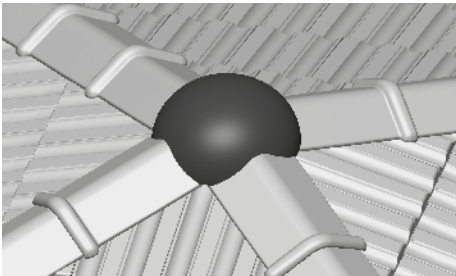
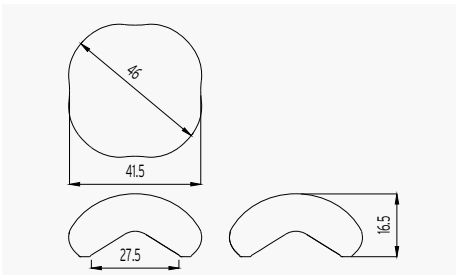
2 Angular Hip Starter



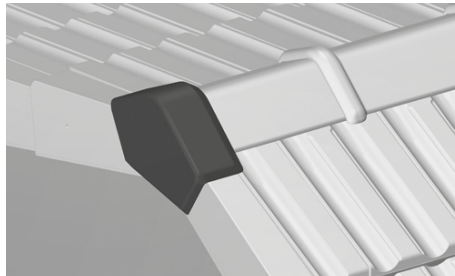
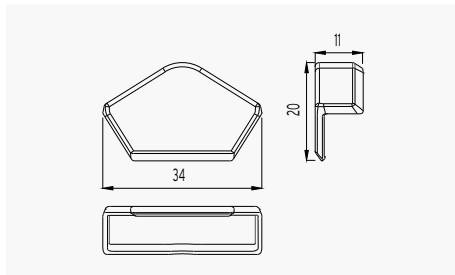
3 Angular 3 Ways



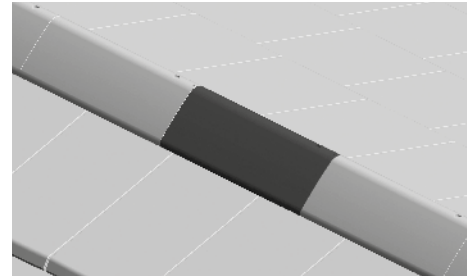
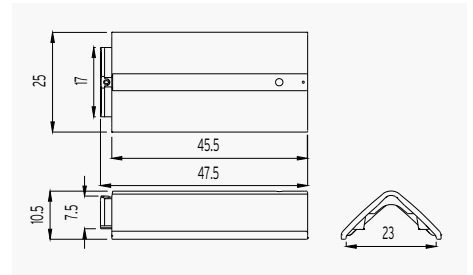
4 Angular 4 Ways



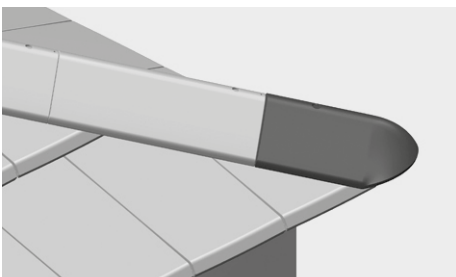
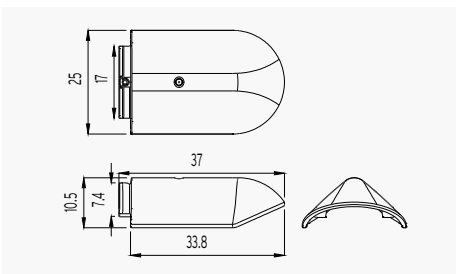
5 Straight End Cap



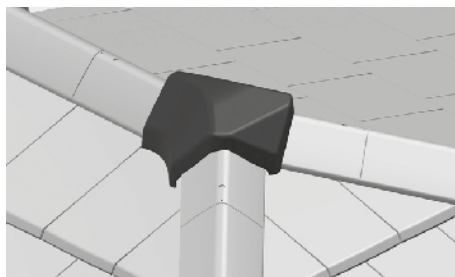
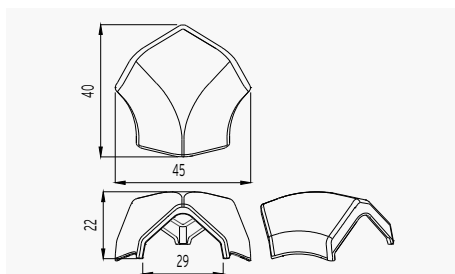
6 100° Ridge



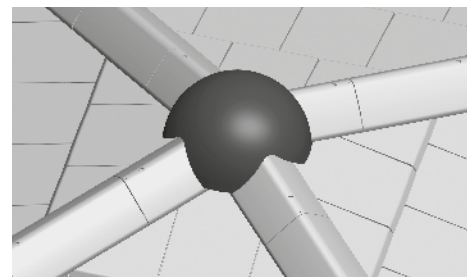
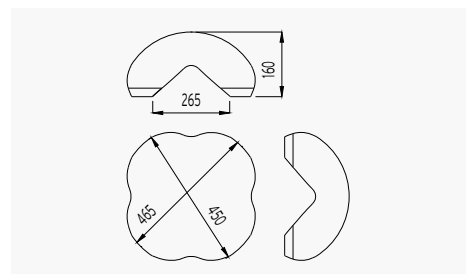
7 100° Hip Starter



8 100° 3 Ways

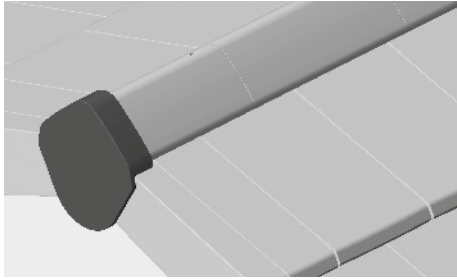
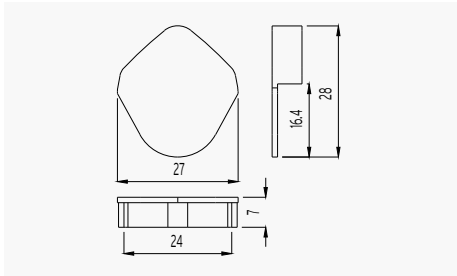


9 100° 4 Ways

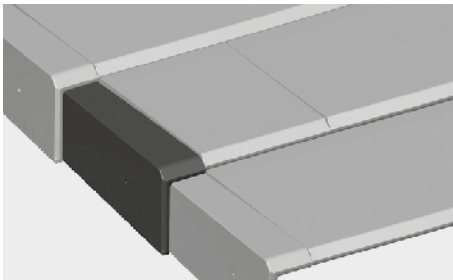
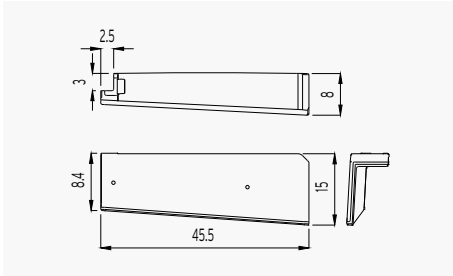


ACCESSORIES

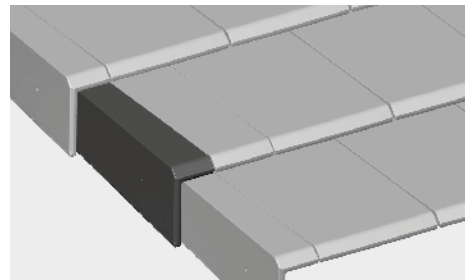
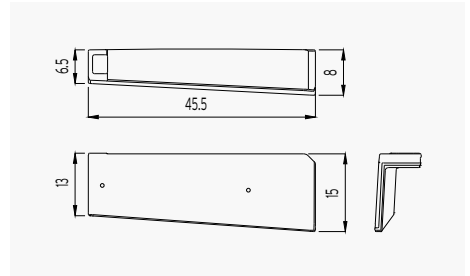
10 100° End Cap



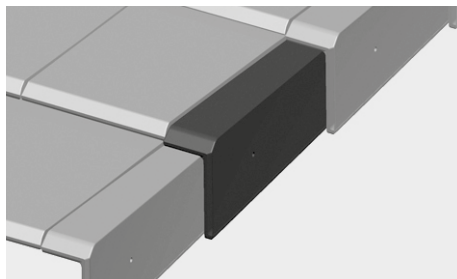
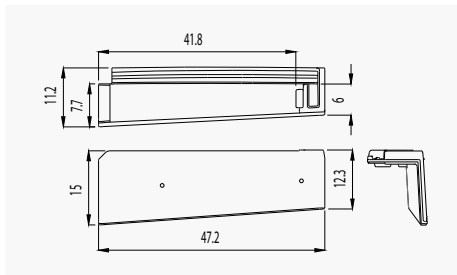
11 Interlocking Edge FLAT-5XL Left



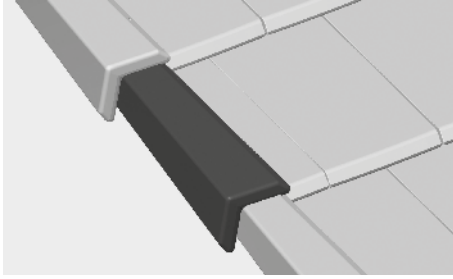
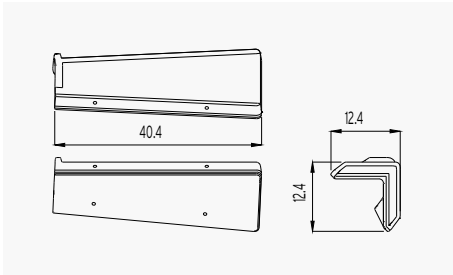
12 Interlocking Edge Left



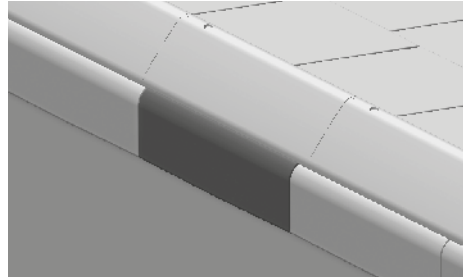
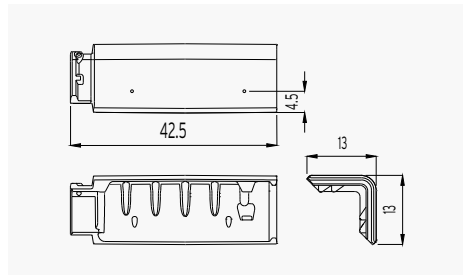
13 Interlocking Edge Right



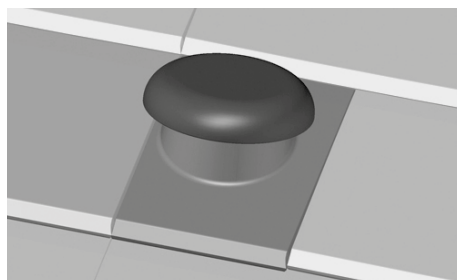
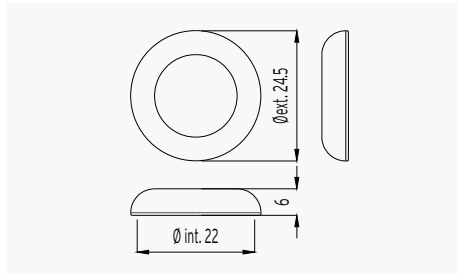
14 Straight Edge FLAT (Left/Right)



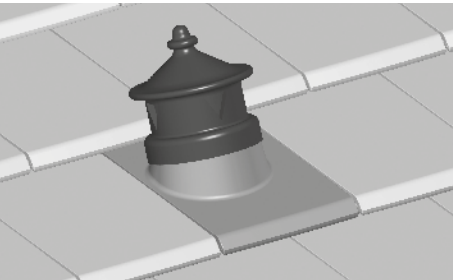
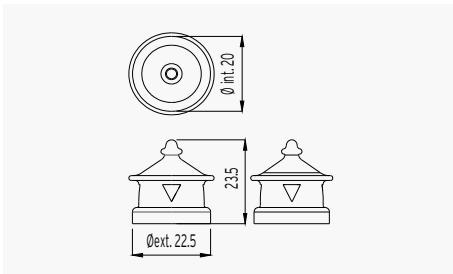
15 Universal Angular Edge (on monopitch)



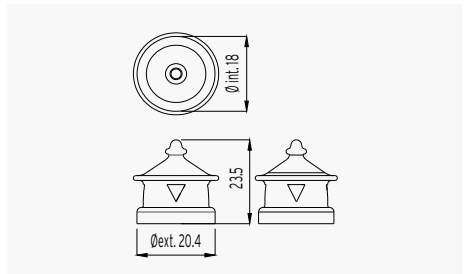
16 Ventilation Cap



17 Chimney d.140

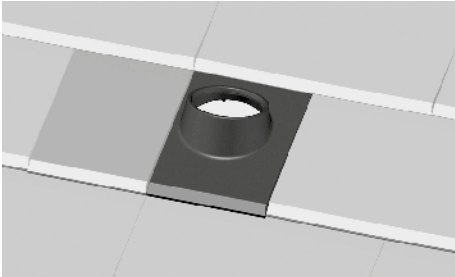
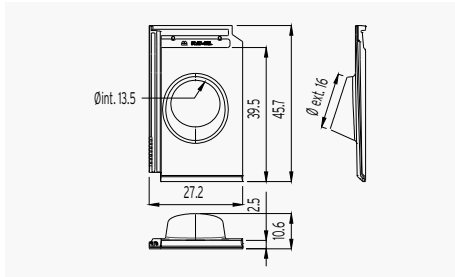


18 Chimney d.130

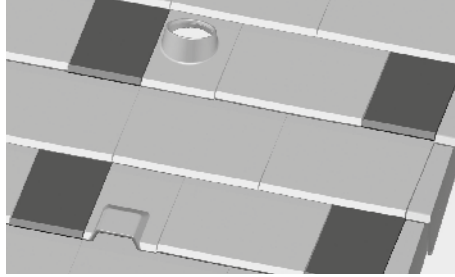
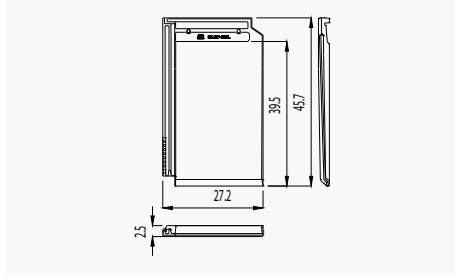


ACCESSORIES

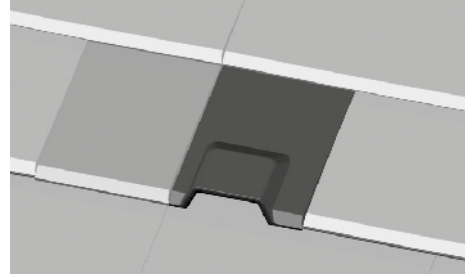
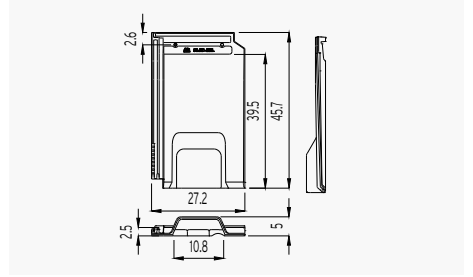
19 Chimney Carrier FLAT-5XL d.140



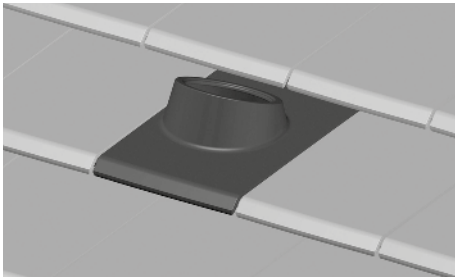
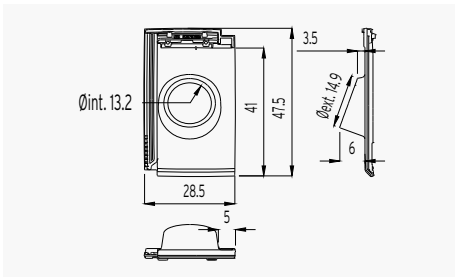
20 Half FLAT-5XL



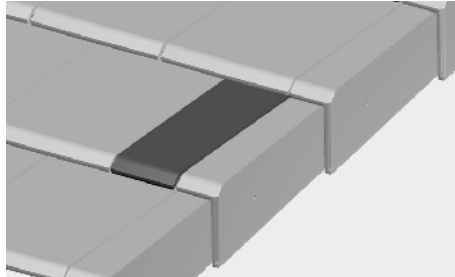
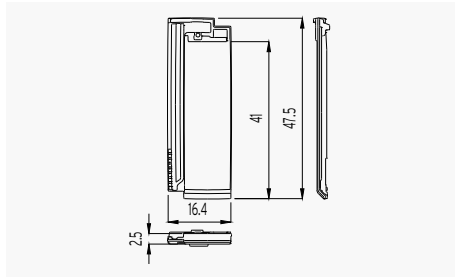
21 Ventilation FLAT-5XL



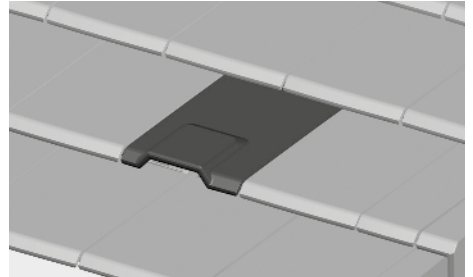
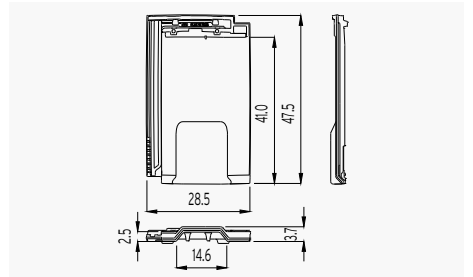
22 Chimney Carrier FLAT-10 d.140



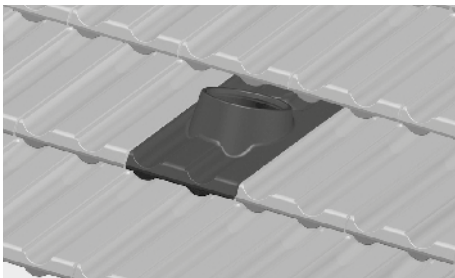
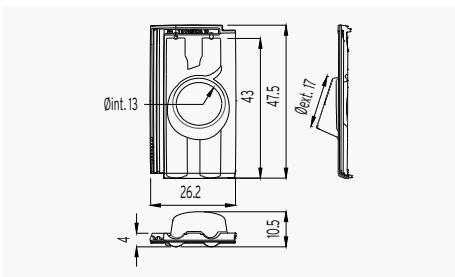
23 Half FLAT-10



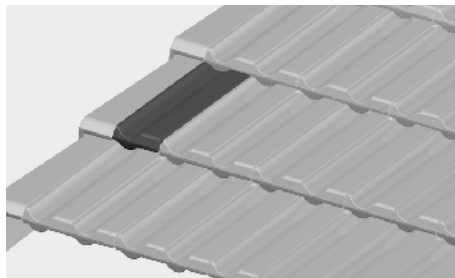
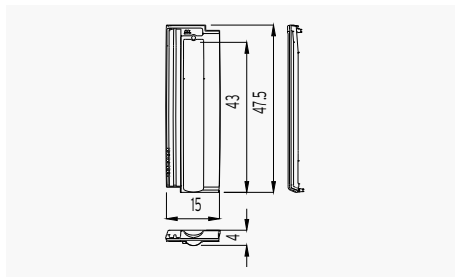
24 Ventilation FLAT-10



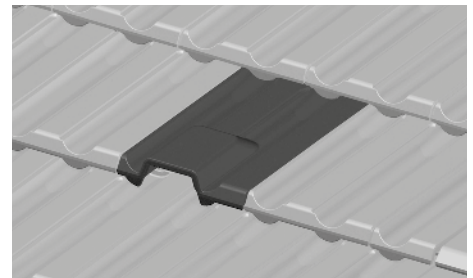
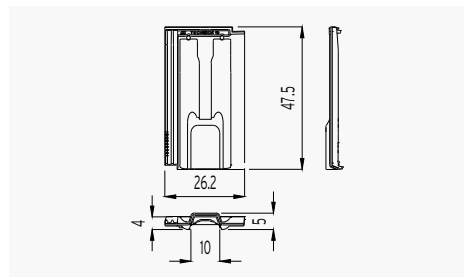
25 Chimney Carrier TECHNICA-10 d.130



26 Half TECHNICA-10



27 Ventilation TECHNICA-10



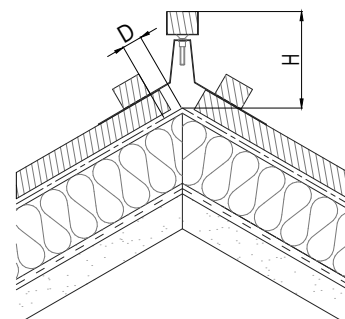
FLAT ROOF TILES INSTALLATION

ROOF SLOPES

Each roof must be planned taking into account where it should be built and the length of the deck, in accordance with the technical standards applicable in each territory. It is for this reason that for each area and location, must take into account of the minimum slopes for installation and the roof length.

Pitch panel according to the roof length and the location.
(according to UNE - 136020)

Location	Roof length up to 6.5 m	Roof length from 6.5 to 9 m	Roof length from 9 to 12 m
Protected	42% - 22,5°	50% - 26,5°	55% - 29°
Normal	50% - 26,5°	55% - 29°	65% - 33°
Exposed	65% - 33°	75% - 37°	85% - 40,5°



Use the breathable/waterproof membrane on the support.
A special study should be carried out for roof length more than 12m in length (ask us).

°	FLAT-5XL 100° Ridge			FLAT-10 100° Ridge			TECHNICA-10 Angular Ridge	
	20°	30°	40°	20°	30°	40°	20°	30°
D (mm)	60	55	55	70	65	65	90	55
H (mm)	60	45	35	60	45	35	50	40

D - Distance between the last batten and ridge line; H - Height of ridge batten; ° - Pitch
The technical drawing is an example of construction. The roof tiles must be overlapped approx. 7-9 cm with the ridge.

FITTING

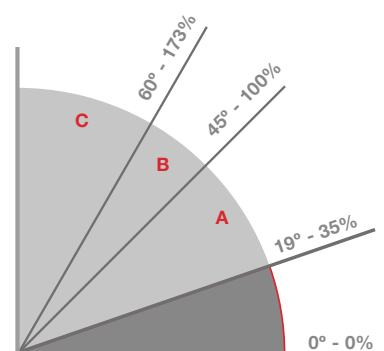
Roof tiles on the roof surface must be fixed to the support to a greater or lesser extent, depending on the pitch. In the case of singular points such as eave lines, edges, hip lines, valleys, joints and the ridge line, all roof tiles and accessories of these joints must be fixed to the battens.

We recommend that all roof tiles that form the perimeter of each skirt be fixed mechanically.

Batten type:	Metallic
	Treated wood
Dry installation:	Screws, nails and clips (depending on the support)
	Roof tiles adhesives

- A** 35% - 100% The roof tiles will rest on battens, since they are provided with nib support.
- B** 100%-173% All the roof tiles around the perimeter of each roof surface must be fixed and at least one in every five should be fixed in a regular manner.
- C** > 173% In areas with strong winds, exposed areas or areas with basic seismic acceleration of > 0.12g, all roof tiles should be fixed mechanically to the battens.

Installation must comply with the technical standards applicable in each territory Code of practice for design and fixing of roofs with clay roofing tiles and Tejas Borja specifications.



Less than 35% - Total waterproof of the entire roof surface is required for any pitch.

VENTILATION

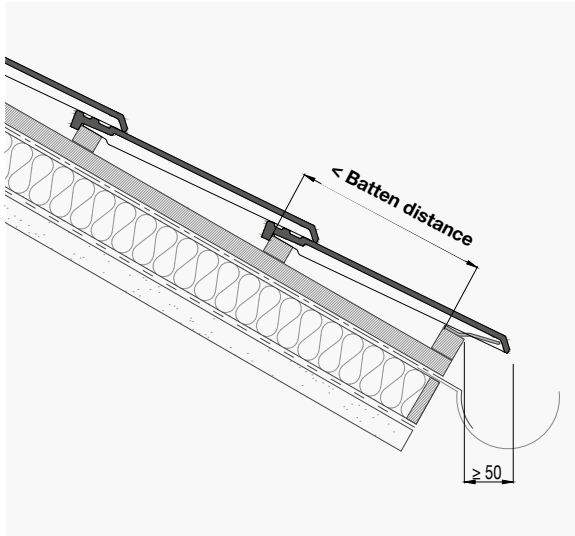
Under-tile ventilation is necessary at all times. This will guarantee the durability of the material used to build the roof with their optimal characteristics, improving the hygrothermal performance of the roof tiles against the moisture resulting from condensation.

There must be a continuous air flow between eave lines and ridge line. Therefore, a space must be left between the roof tiles and the support. As a result, eave lines, ridge lines and singular points must never be filled in with mortar, as this will impede micro-ventilation.

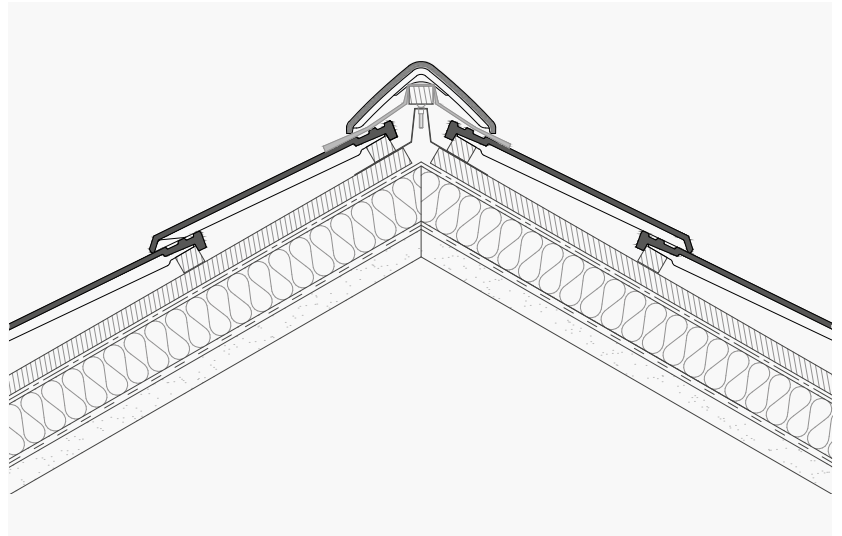
Ventilation roof tiles will also be installed in a uniform manner across the surface of the roof. In case of dry installation, it is recommended that at least 1 ventilation roof tile be used every 10 sq.m. and 4 ventilation roof tiles per each roof skirt.

FLAT-5XL ROOF TILES INSTALLATION

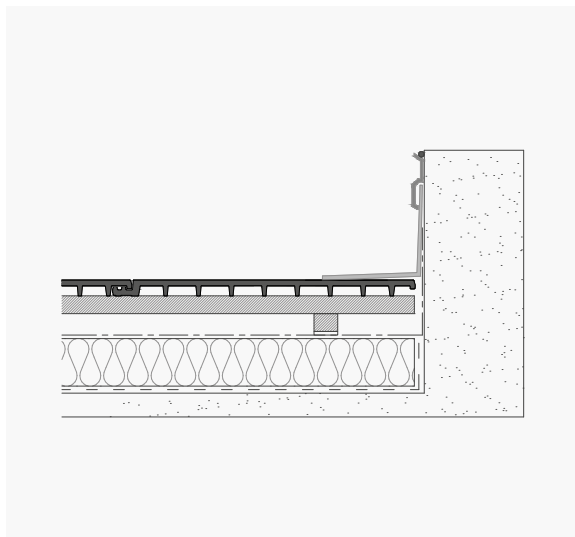
EAVE LINE



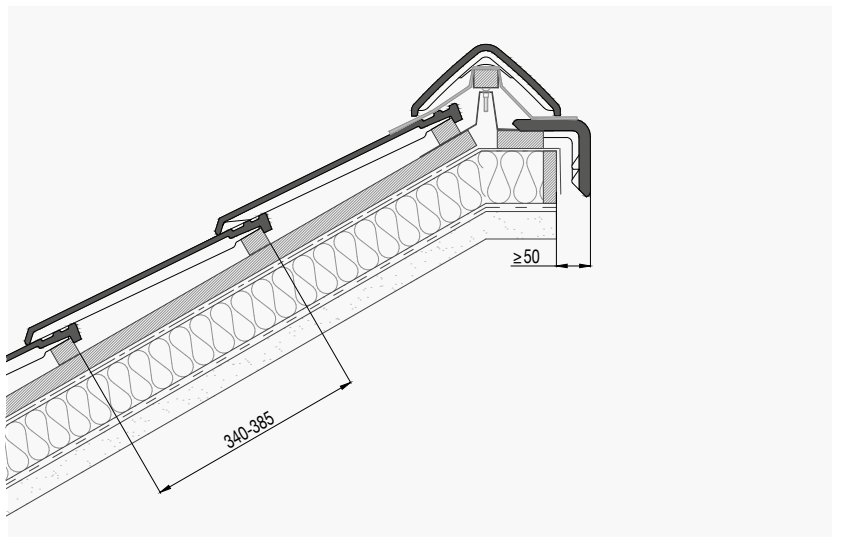
RIDGE LINE



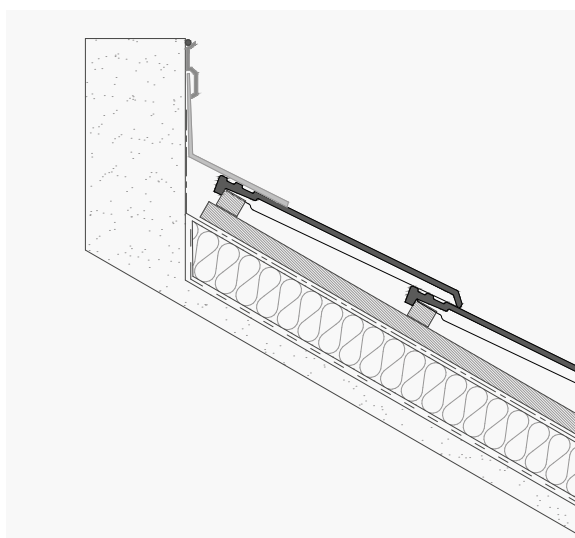
HORIZONTAL FLASHING



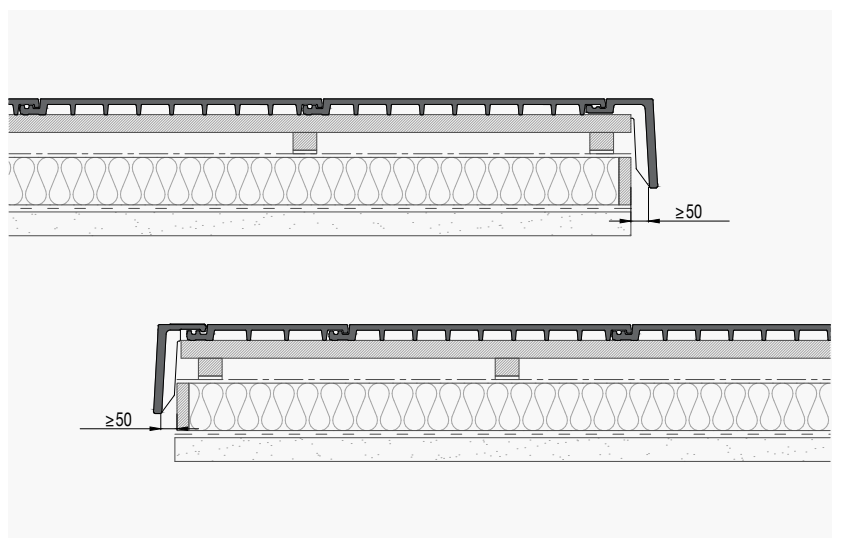
MONOPITCH



UPPER FLASHING

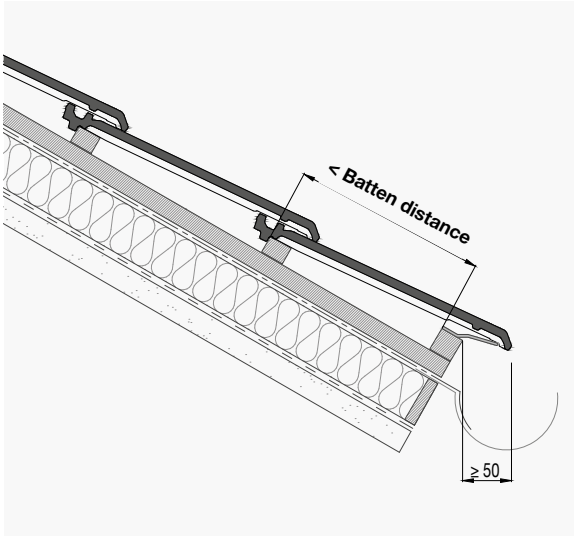


GABLES

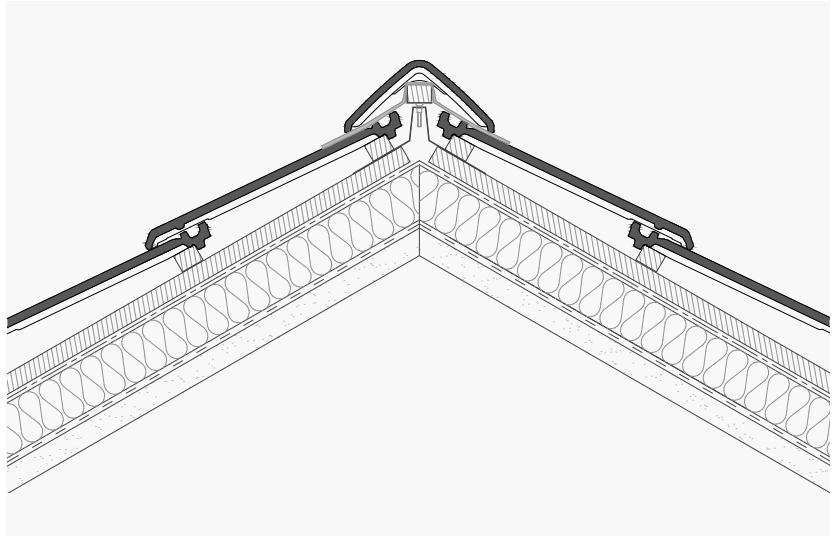


FLAT-10 ROOF TILES INSTALLATION

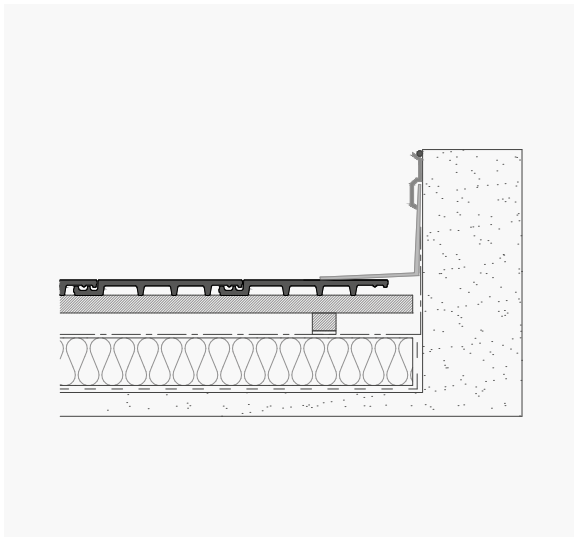
EAVE LINE



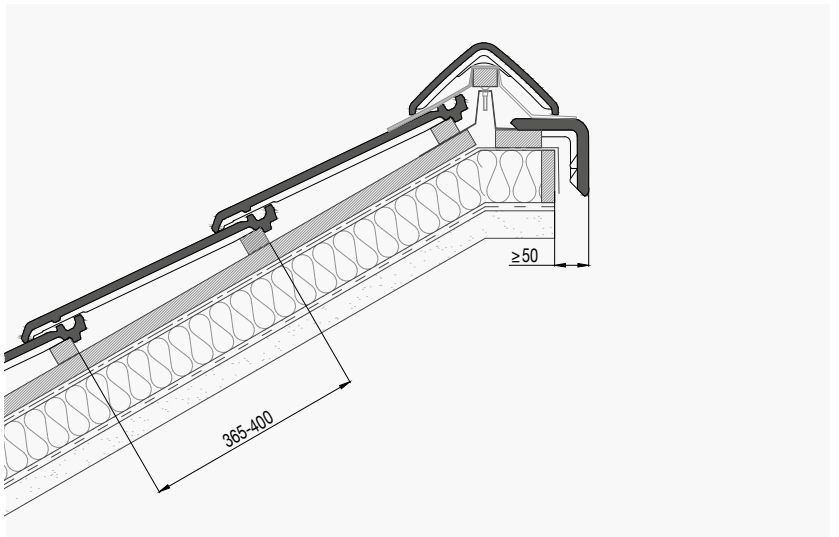
RIDGE LINE



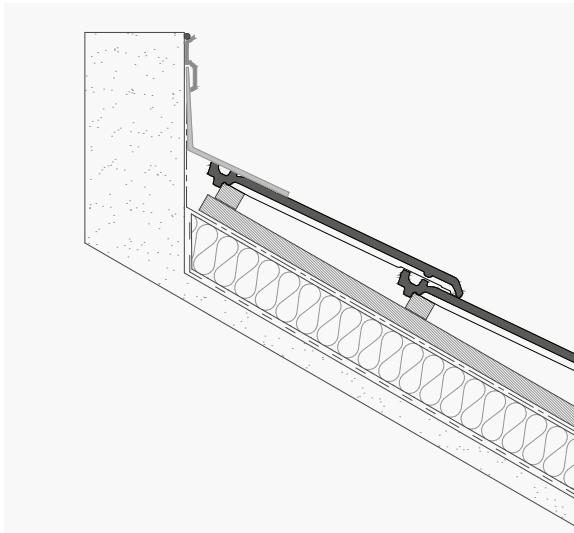
HORIZONTAL FLASHING



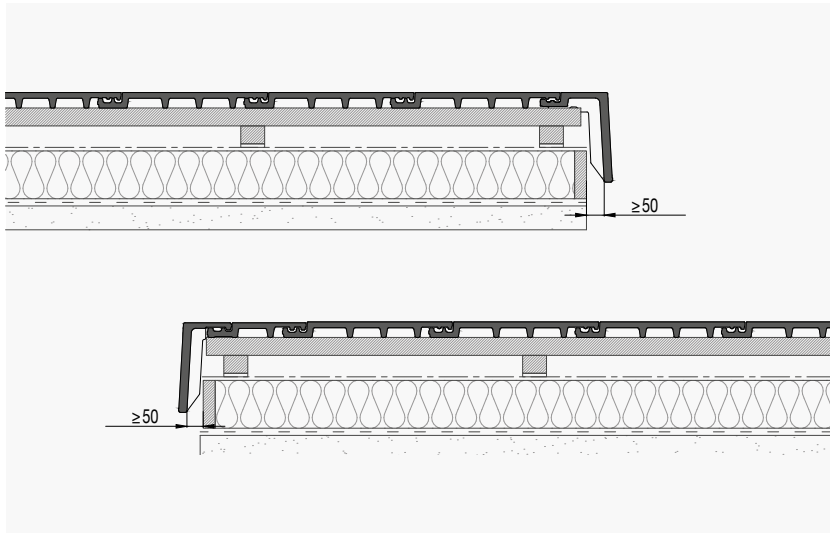
MONOPITCH



UPPER FLASHING

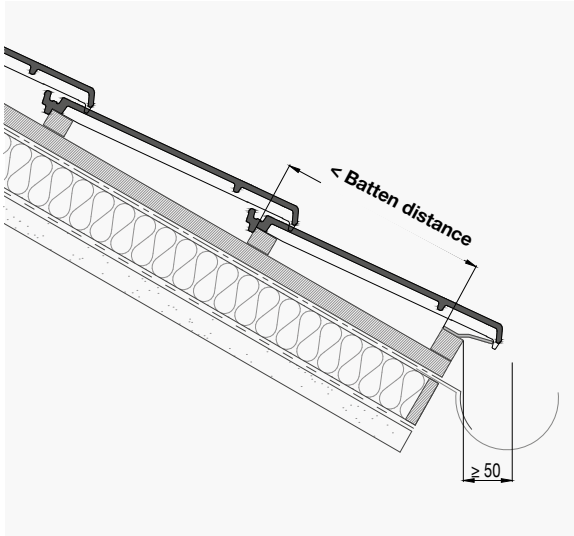


GABLES

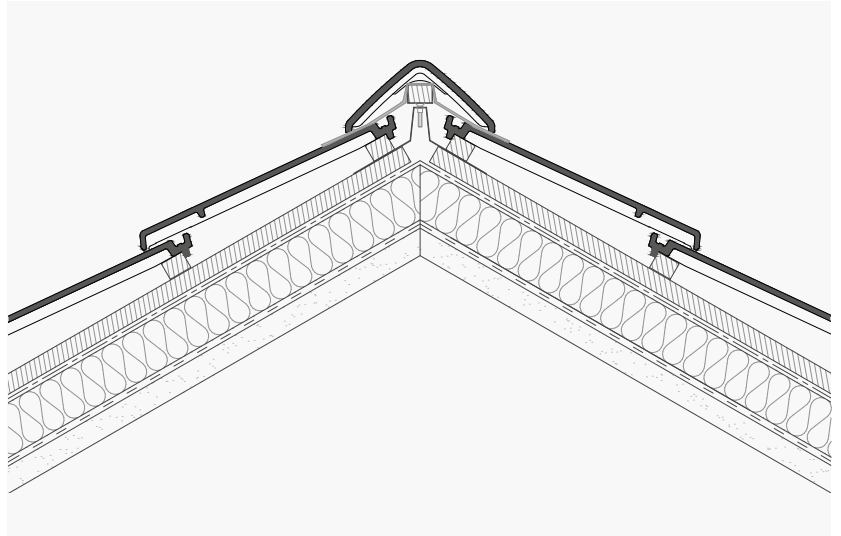


TECHNICA-10 ROOF TILES INSTALLATION

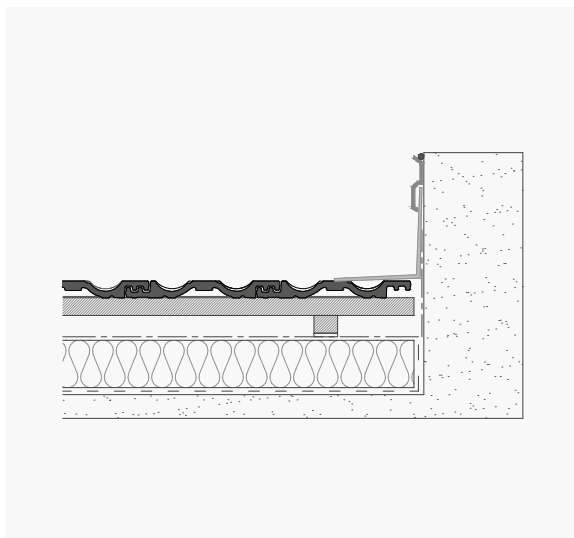
EAVE LINE



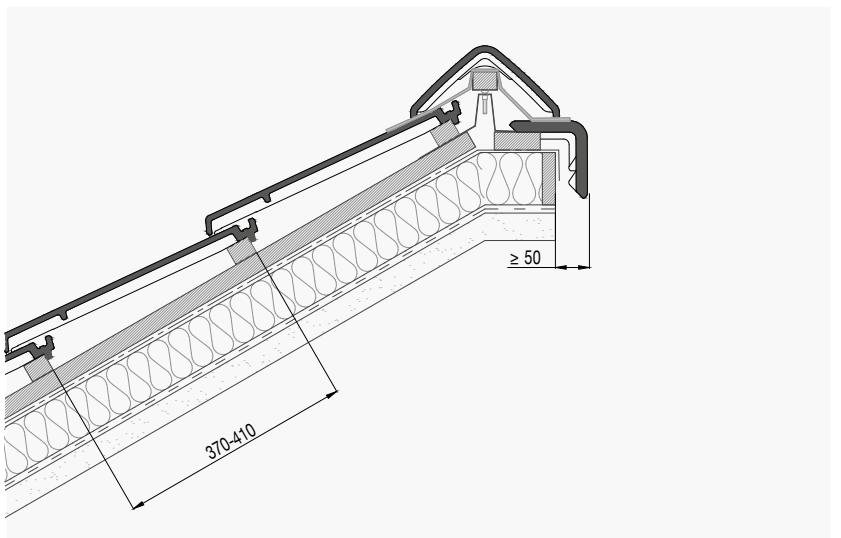
RIDGE LINE



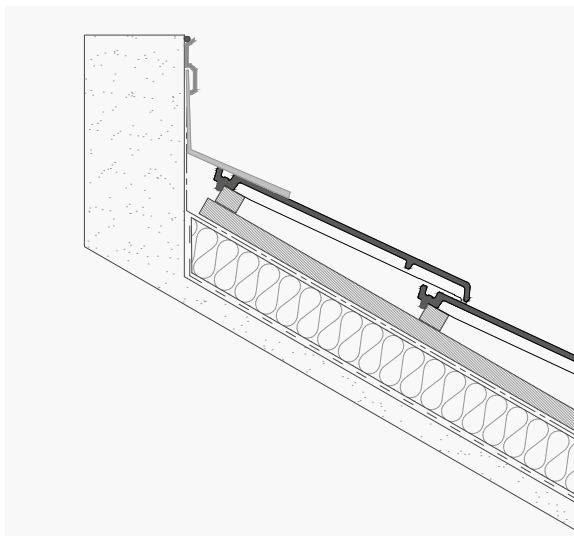
HORIZONTAL FLASHING



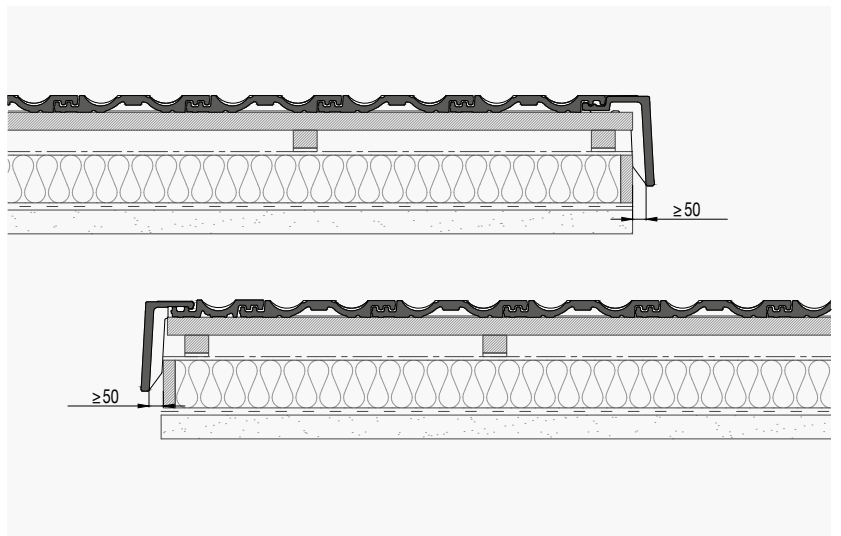
MONOPITCH



UPPER FLASHING



GABLES





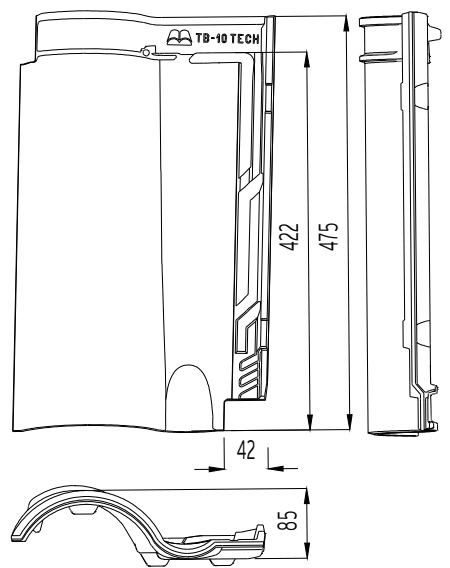
Easy to install



Mountain climate



Longitudinal Overlap 15 mm



Dimensions	475 mm x 282 mm
Minimum pitch recommended	30% - 17° (*)
Weight	3.45 Kg./Unit
Units / sq. m.	10.30 Units
Units per LM eave line	4.25-4.54 Units
Useful width	232 mm
Useful length (Batten distance) VARIABLE	395-410 mm
Pallet data	
T7 - Standard	(T7) 210 Units / 720 Kg.
T8 - Exclusive container	(T8) 140 Units / 480 Kg.
Minimum order	6 Units**



Approximate values: If the roof tiles are installed on battens, the useful length must be calculated on site. A tolerance of ± 2% is allowed on the dimensions of the roof tiles according to EN 1024.

The certified characteristics for the **NF** Terracotta tiles are: Structural faults, the geometric characteristics, resistance to flexural strength, impermeability, frost resistance for all products made with red clay. AFNOR Certification / 11 rue Francis de Pressensé / 93571 LA PLAINE / SAINT-DENIS CEDEX / www.marque-nf.com

Type: Double lateral overlapping and double longitudinal overlapping. Installation must comply with Code of practice for the design and fixing of roofs with clay roofing tiles for the region and Tejas Borja specifications.

(*) Check pitch panel according to the roof length and the geographical area.

NATURE



Red



Moss Red



Fosca



Manoir®



Edetania®



Lamalou®

PLAIN COLOUR



Chocolate



Graphite

BorjaJET - Ceramic COTTO



Entrepins



Irati

CENTENARIA®



Ground



Sand

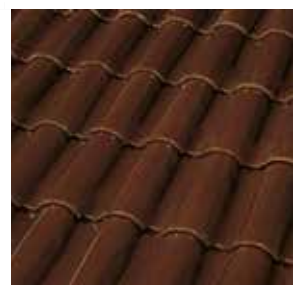
BorjaDECOR



Glazed Green



Glazed Cobalt Blue








Glazed Mocca

NOTES:
TB-10 Tech Centenaria® finishes
are models without texture.
Finishes for the TB-10 Tech roof
tile are produced only one side.

ACCESSORIES

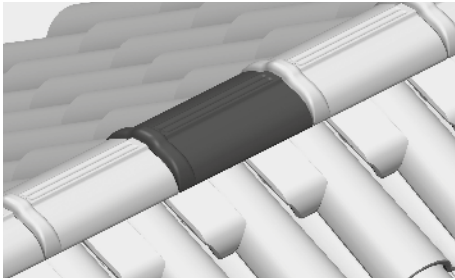
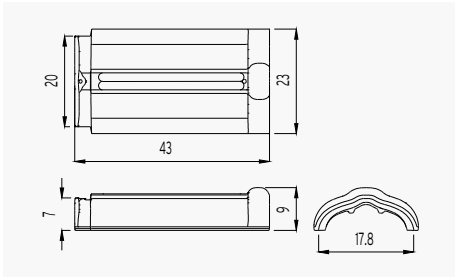
S-INTERLOCKING ROOF TILES

 1	 2	 3	 4	 5
Circular Ridge 43 x 23 x 9 cm. 2,5 Units/ml / 2,90 Kg. Max. Slope. 47%-25.10°	Circular Hip Starter 43 x 20 x 8,5 cm. 2,95 Kg.	Circular 3 Ways 37,5 x 23 x 9,5 cm. 4,20 Kg.	Circular 4 Ways 38,5 x 44,5 x 13,5 cm. 4,50 Kg.	Circular Straight End Cap 7,5 x 24,5 x 27,9 cm. 2,40 Kg.
 6	 7	 8	 9	 10
Circular Curved End Cap 17,5 x 26,7 x 27 cm. 2,80 Kg.	Cover+ Ridge 44 x 28,5 x 10,5 cm. 2,5 Units/ml / 3,40 Kg. Max. Slope. 47%-25.10°	Cover+ Hip Starter 43,5 x 23 x 8,5 cm. 3,20 Kg.	Cover+ 3 Ways 32,5 x 42,5 x 14,5 cm. 3,10 Kg.	Cover+ 4 Ways 40,5 x 40,5 x 14 cm. 4,00 Kg.
 11	 12	 13	 14	 15
Cover+ Straight End Cap 6,5 x 27 x 31 cm. 2,00 Kg.	Cover+ Curved End Cap 14,7 x 27,5 x 29,5 cm. 2,25 Kg.	Under Ridge 24 x 12,2 x 5,6 cm. 5 Units/ml (on monopitch) 0,80 Kg.	Straight Edge Left 47 x 9 x 17 cm. 2,5 Units/ml 3,00 Kg.	Straight Edge Right 47 x 9 x 17 cm. 2,5 Units/ml 3,00 Kg.
 16	 17	 18	 19	 20
Curved Edge Left 47 x 24,5 x 16 cm. 2,5 Units/ml / 3,30 Kg.	Curved Edge Right 47 x 24,5 x 16 cm. 2,5 Units/ml / 3,30 Kg.	Universal Angular Edge (on monopitch) 43 x 14,5 x 14,5 cm. 2,5 Units/ml / 2,85 Kg.	Chimney d.140 22,5 Øext-20 Øint x 23,5 cm. 2,35 Kg.	Ventilation Cap 24,5 Øext-22 Øint x 6 cm. 1,70 Kg.
 21	 22	 23	 24	
Half TB-10 Tech 47,5 x 18 x 7,5 cm. 2,10 Kg.	Tile and a Half TB-10 Tech 47,5 x 40 x 7,5 cm. 5,40 Kg.	Ventilation TB-10 Tech 47,4 x 28,2 x 7,5 cm. 3,6 Kg.	Chimney Carrier TB-10 Tech d.140 47,5 x 28,2 x 18 cm. 20 Øext-14 Øint / 4,6 Kg.	

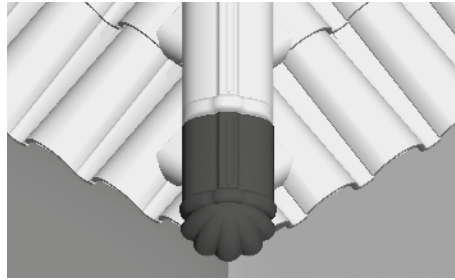
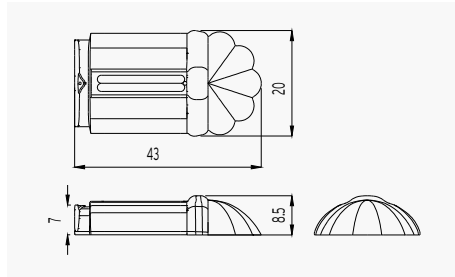
A tolerance of $\pm 2\%$ is allowed on the dimensions according to EN 1024. Dimensions in centimeters. Check finishing colours for different accessories. Accessories are subject to minimum order and must be multiples thereof. For the Irati finish, the accessories (ridge line and edges) are available in compatible colours, not digital. For the Entrepins finish, check accessories (ridge lines and edges) in compatible version and digital version.

ACCESSORIES

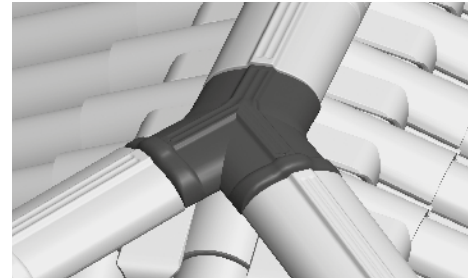
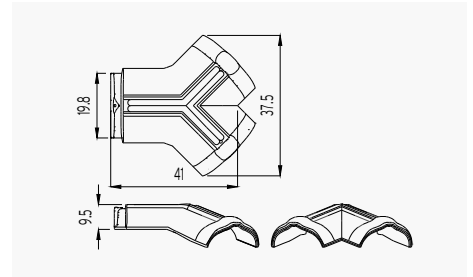
1 Circular Ridge



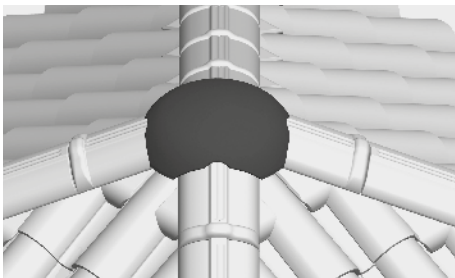
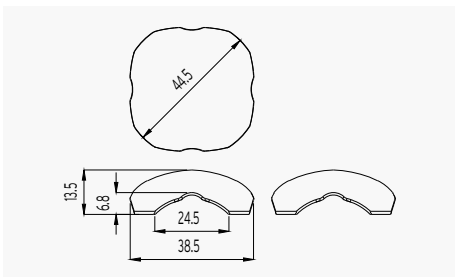
2 Circular Hip Starter



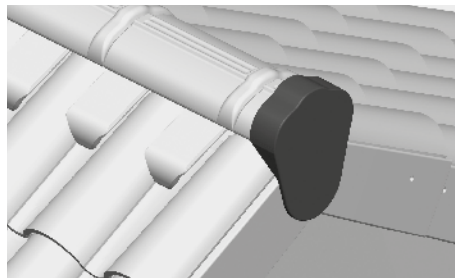
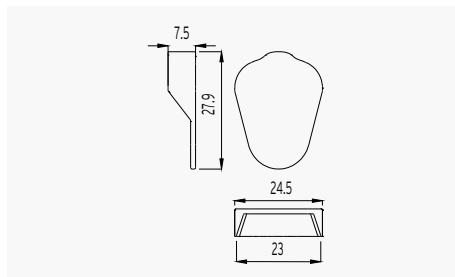
3 Circular 3 Ways



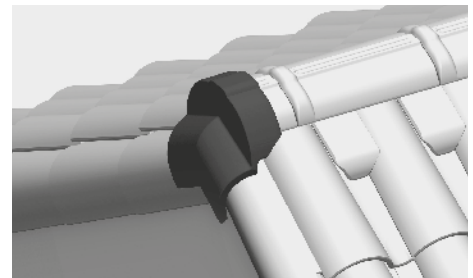
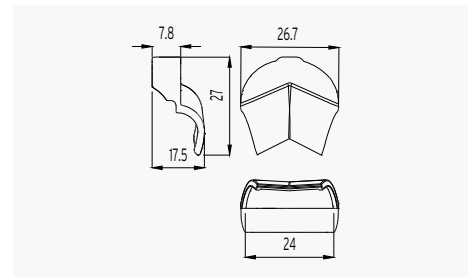
4 Circular 4 Ways



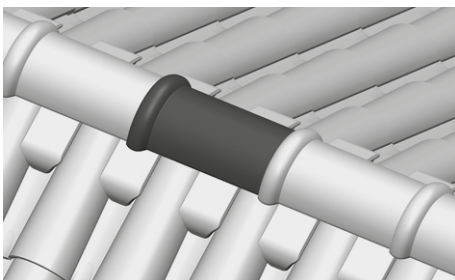
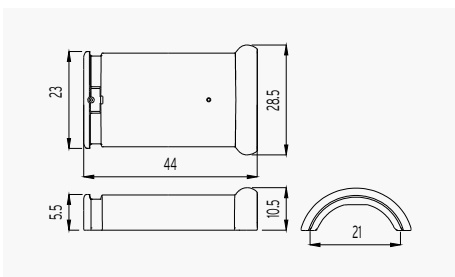
5 Circular Straight End Cap



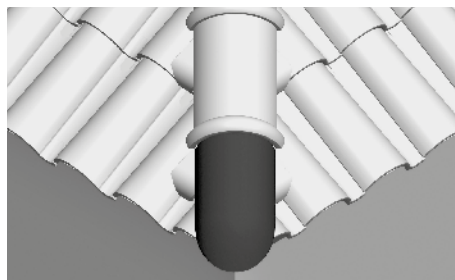
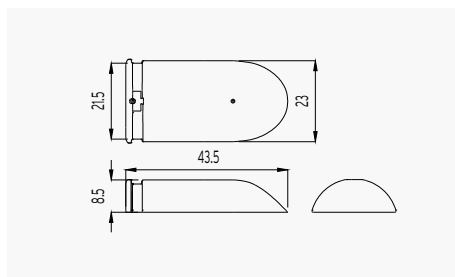
6 Circular Curved End Cap



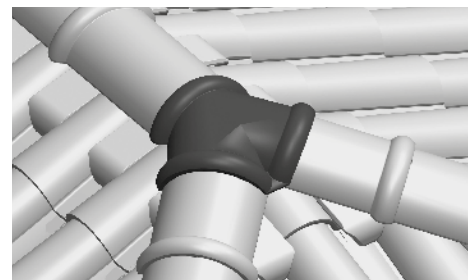
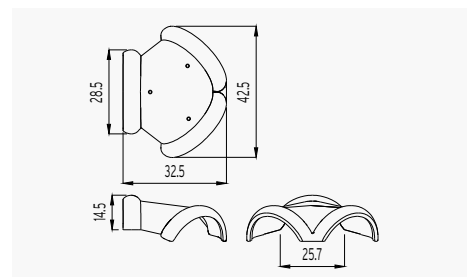
7 Cover+ Ridge



8 Cover+ Hip Starter

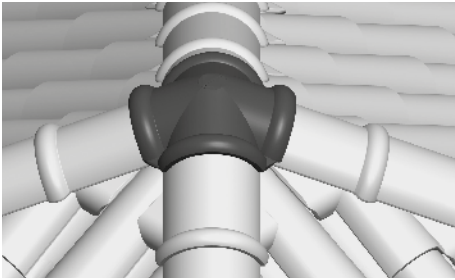
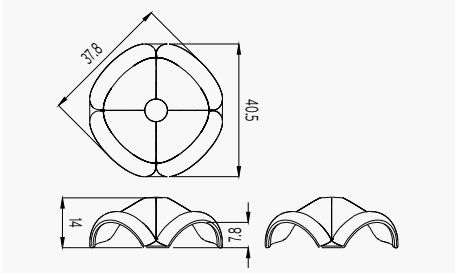


9 Cover+ 3 Ways

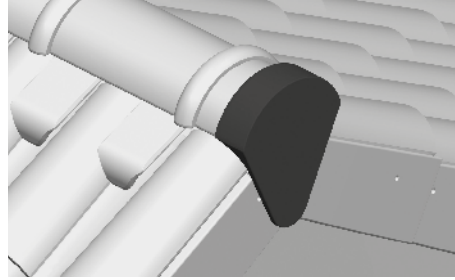
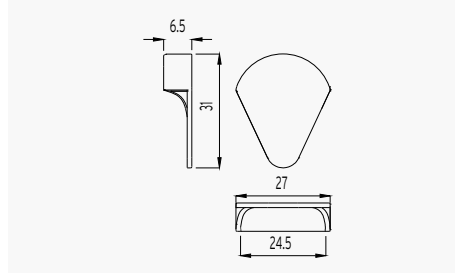


ACCESSORIES

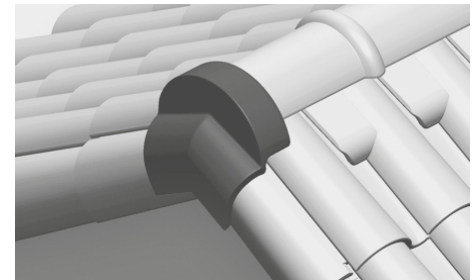
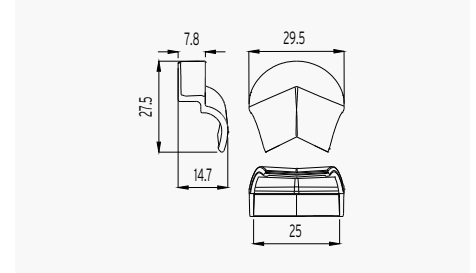
10 Cover+ 4 Ways



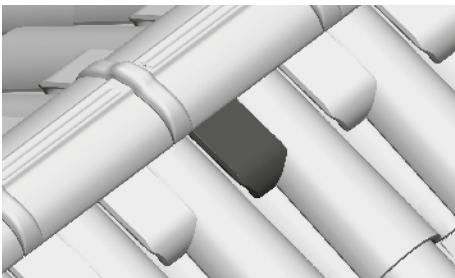
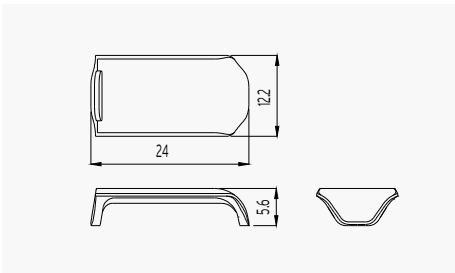
11 Cover+ Straight End Cap



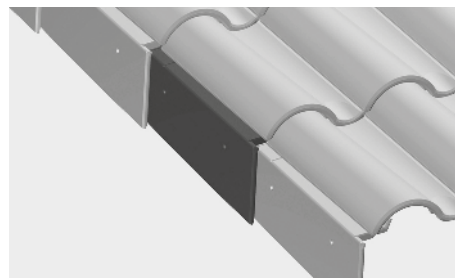
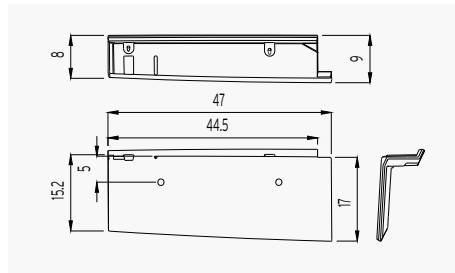
12 Cover+ Curved End Cap



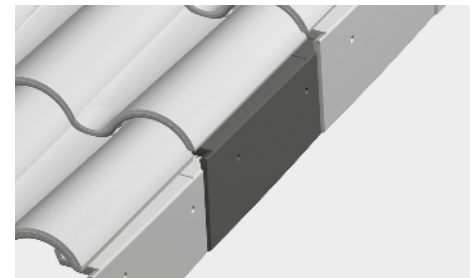
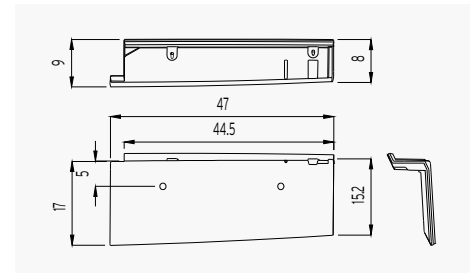
13 Under Ridge



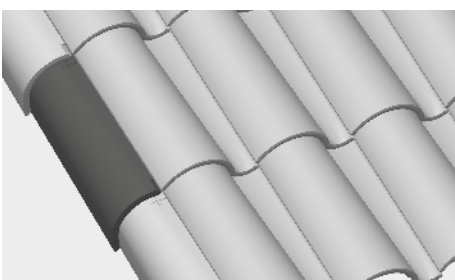
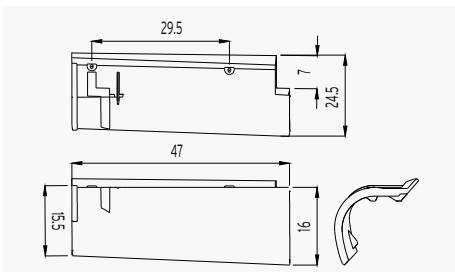
14 Straight Edge Left



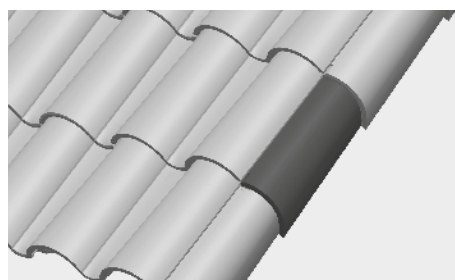
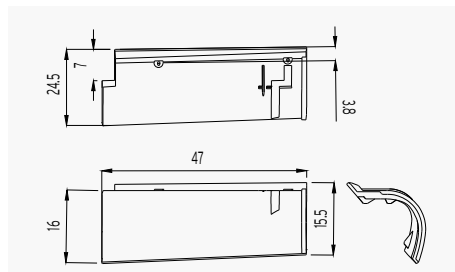
15 Straight Edge Right



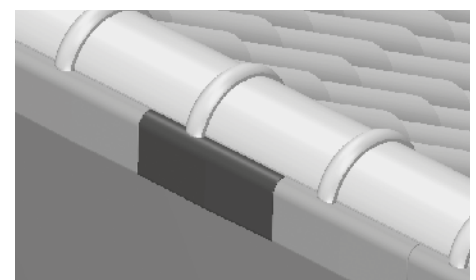
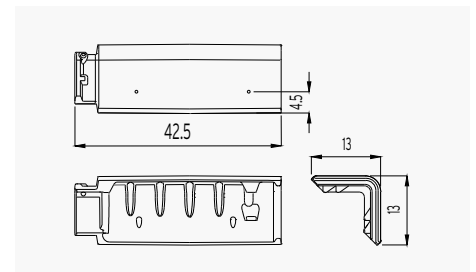
16 Curved Edge Left



17 Curved Edge Right

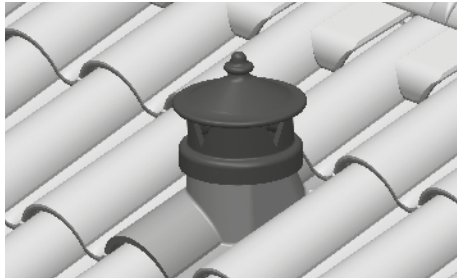
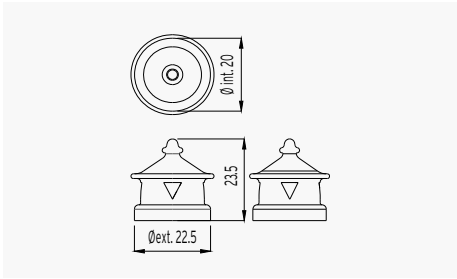


18 Universal Angular Edge (on monopitch)

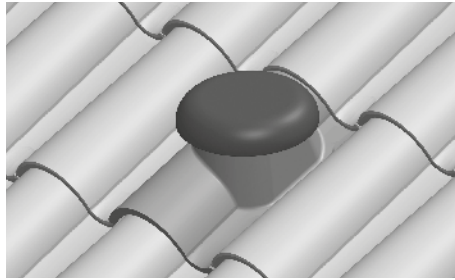
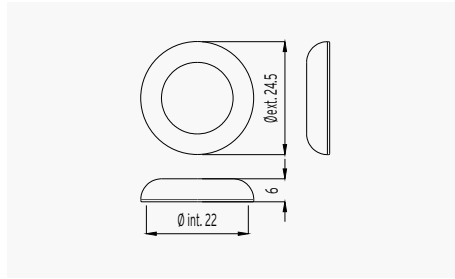


ACCESSORIES

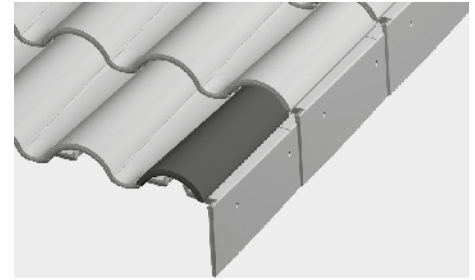
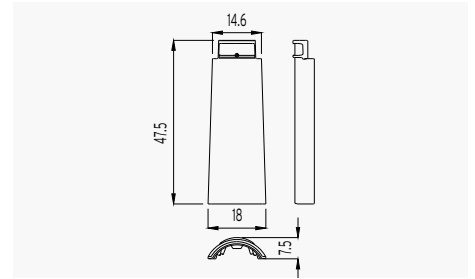
19 Chimney d.140



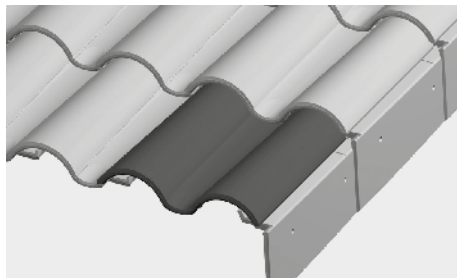
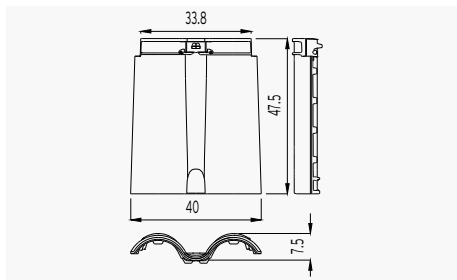
20 Ventilation Cap



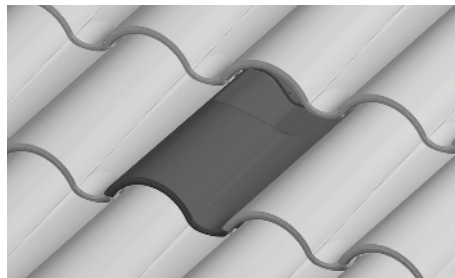
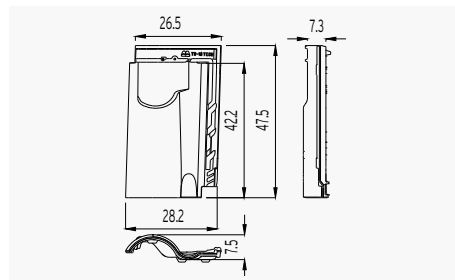
21 Half TB-10 Tech



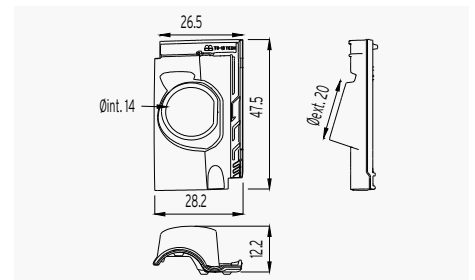
22 Tile and a Half TB-10 Tech



23 Ventilation TB-10 Tech



24 Chimney Carrier TB-10 Tech d.140



S-INTERLOCKING ROOF TILES INSTALLATION

ROOF SLOPES

Pitch panel according to the roof length and the location.
(according to UNE - 136020)

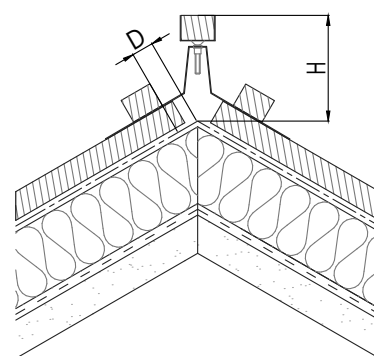
	Location	Roof length up to 6.5 m	Roof length from 6.5 to 9 m	Roof length from 9 to 12 m
Zone 1	Protected	25% - 14°	26% - 15°	27% - 15,5°
	Normal	25% - 14°	28% - 16°	32% - 18°
	Exposed	33% - 18,5°	35% - 19,5°	42% - 23°
Zone 2	Protected	25% - 14°	28% - 16°	30% - 17°
	Normal	27% - 15,5°	32% - 18°	35% - 19,5°
	Exposed	37% - 20,5°	39% - 21,5°	45% - 24,5°
Zone 2	Protected	27% - 15,5°	30% - 17°	35% - 19,5°
	Normal	30% - 17°	36% - 20°	40% - 22°
	Exposed	40% - 22°	43% - 23,5°	50% - 26,5°

°	TB-10 Tech Cover + Ridge		TB-10 Tech Circular Ridge	
	20°	30°	20°	30°
D (mm)	58 mm	40 mm	42 mm	23 mm
H (mm)	100 mm	95 mm	85 mm	70 mm

D - Distance between the last batten and ridge line; H - Height of ridge batten; ° - Pitch
The technical drawing is an example of construction. The roof tiles must be overlapped approx. 7-9 cm with the ridge.

Each roof must be planned taking into account where it should be built and the length of the deck, in accordance with the technical standards applicable in each territory. It is for this reason that for each area and location, must take into account of the minimum slopes for installation and the roof length.

Use the breathable/waterproof membrane on the support. A special study should be carried out for roof length more than 12m in length (ask us).



FITTING

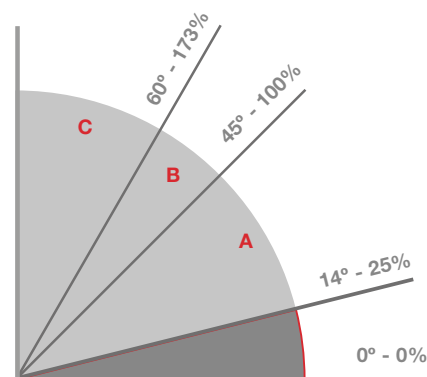
Roof tiles on the roof surface must be fixed to the support to a greater or lesser extent, depending on the pitch. In the case of singular points such as eave lines, edges, hip lines, valleys, joints and the ridge line, all roof tiles and accessories of these joints must be fixed to the battens.

We recommend that all roof tiles that form the perimeter of each skirt be fixed mechanically.

Batten type:	Metallic
	Treated wood
Dry installation:	Screws, nails and clips (depending on the support)
	Roof tiles adhesives

- A** 25% - 100% The roof tiles will rest on battens, since they are provided with nib support.
- B** 100%-173% All the roof tiles around the perimeter of each roof surface must be fixed and at least one in every five should be fixed in a regular manner.
- C** > 173% In areas with strong winds, exposed areas or areas with basic seismic acceleration of > 0.12g, all roof tiles should be fixed mechanically to the battens.

Installation must comply with the technical standards applicable in each territory Code of practice for design and fixing of roofs with clay roofing tiles and Tejas Borja specifications.



Less than 25% - Total waterproof of the entire roof surface is required for any pitch.

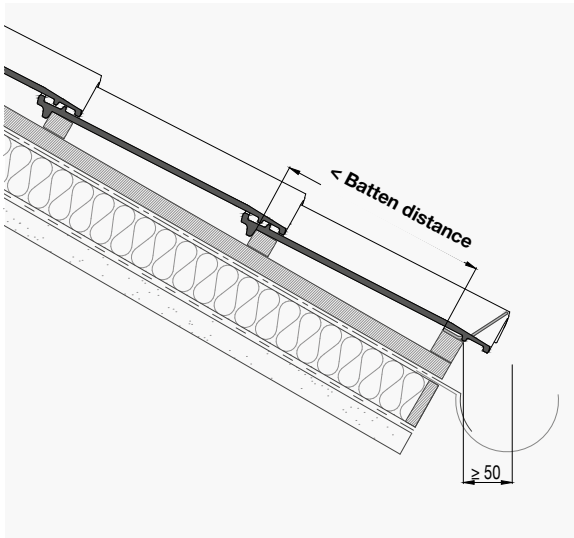
VENTILATION

Under-tile ventilation is necessary at all times. This will guarantee the durability of the material used to build the roof with their optimal characteristics, improving the hygrothermal performance of the roof tiles against the moisture resulting from condensation.

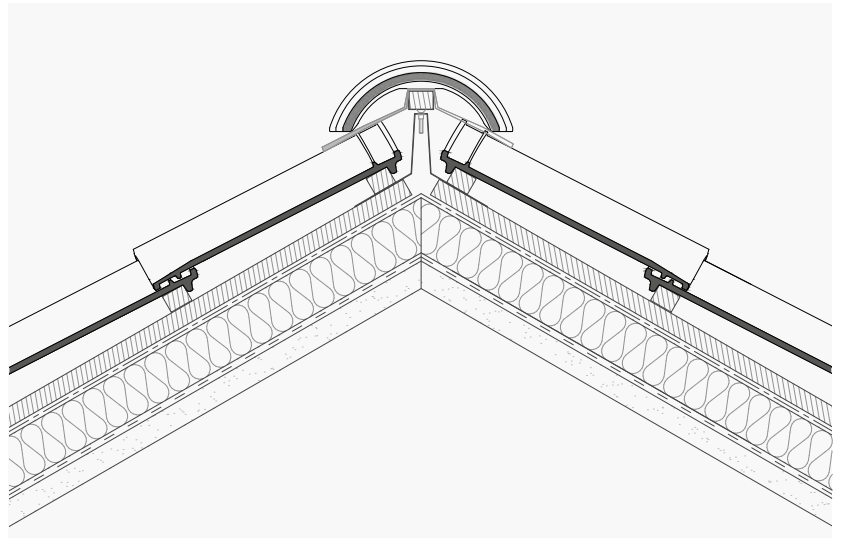
There must be a continuous air flow between eave lines and ridge line. Therefore, a space must be left between the roof tiles and the support. As a result, eave lines, ridge lines and singular points must never be filled in with mortar, as this will impede micro-ventilation.

Ventilation roof tiles will also be installed in a uniform manner across the surface of the roof. In case of dry installation, it is recommended that at least 1 ventilation roof tile be used every 10 sq.m. and 4 ventilation roof tiles per each roof skirt.

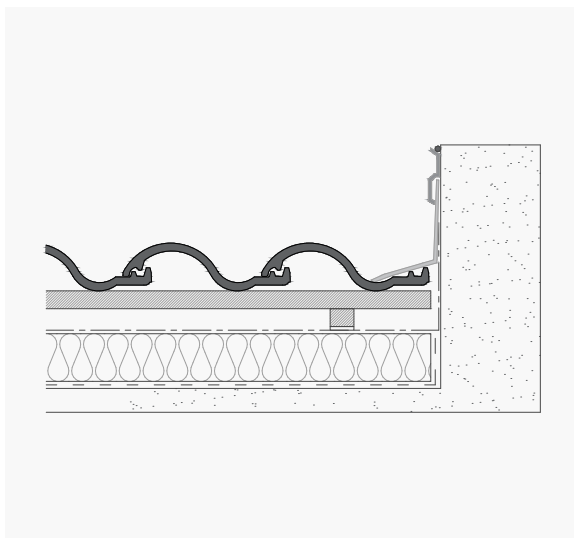
EAVE LINE



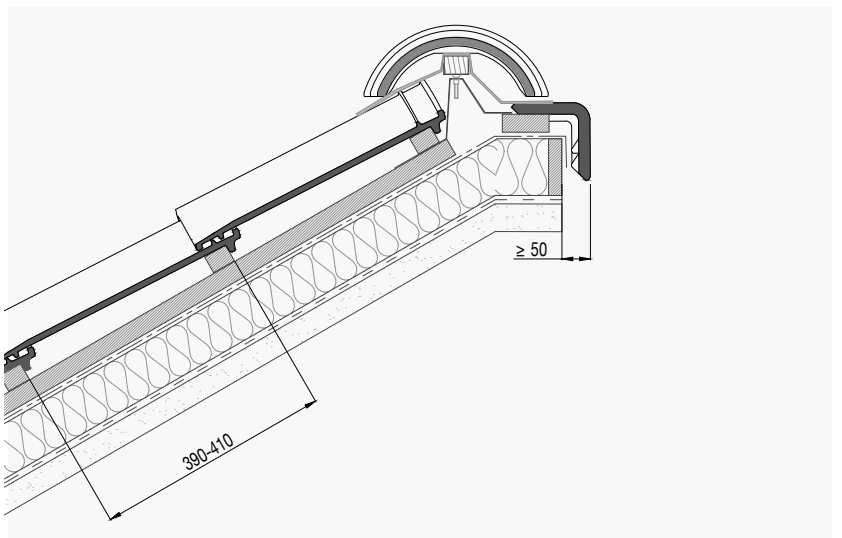
RIDGE LINE



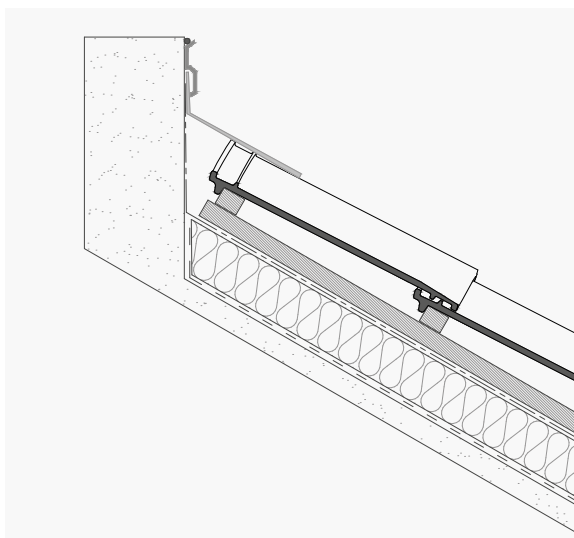
HORIZONTAL FLASHING



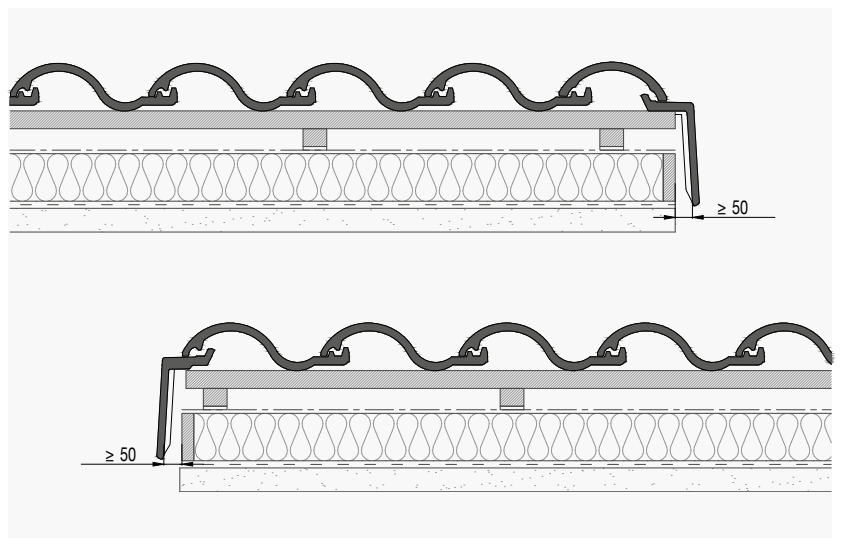
MONOPITCH



UPPER FLASHING



GABLES



ROOF COMPONENTS

WATERPROOFING OF ENCOUNTERS



Multi-Use Premium 300/450
(waterproofing flashing)



Multi-Use Alu 300
(waterproofing flashing)



Counter Flashing
Profile



Valley Adjustable
Alu Flashing



Auto-adhesive
Butyl Band 300



BATTENS



Metall-Lattung Batten
30x30



Ventilated Batten
30x20



Treated Wooden
Batten 40x30



ROOF COMPONENTS

WATERPROOF AND BREATHING



Waterproof and Breathing Membrane 180 Premium



Waterproof and Breathing Membrane TB 160



Waterproof and Breathing Membrane TB 130



Vapour Barrier 100 (installation under insulation)



Nail Sealing Tape



Roofing Adhesive Tape 50 mm

ROOF SHEETS



Fiber Cement Sheet 234 Reinforced (For curved roof tiles 45 and 50 cm)



Corrugated Bitumen Sheet for Tiles with Battens (INTERLOCKING Roof Tiles)



Corrugated Bitumen Sheet 235 (For curved roof tiles 45 and 50)

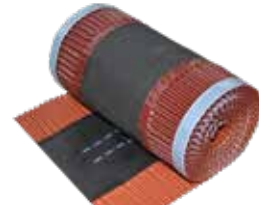
RIDGE LINE VENTILATION



Under Ridge Mixed Roll Tape



Under Ridge Alu Roll Tape



TB-Roll Ridge Tape (under ridge waterproof)



NOTE: The roof components are subject to minimum order and must be multiples thereof.

ROOF COMPONENTS

FIXING



Roof tiles adhesives



Ridge batten supports



Fixing clips for roof tiles



Ridge clips

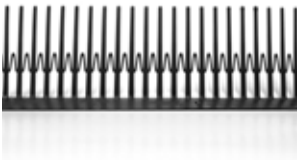


Straight snow stopper



Fixing screws

EAVE LINE VENTILATION



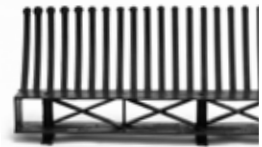
Ventilation Comb 100 mm



Ventilation Comb 60 mm



Bird Stop Grate 80 mm



Batten + Ventilation Comb
(Batten 30 mm; comb 60 mm)



PAINT



Touch-up paints

NOTE: The roof components are subject to minimum order and must be multiples thereof.

BORJATHERM®

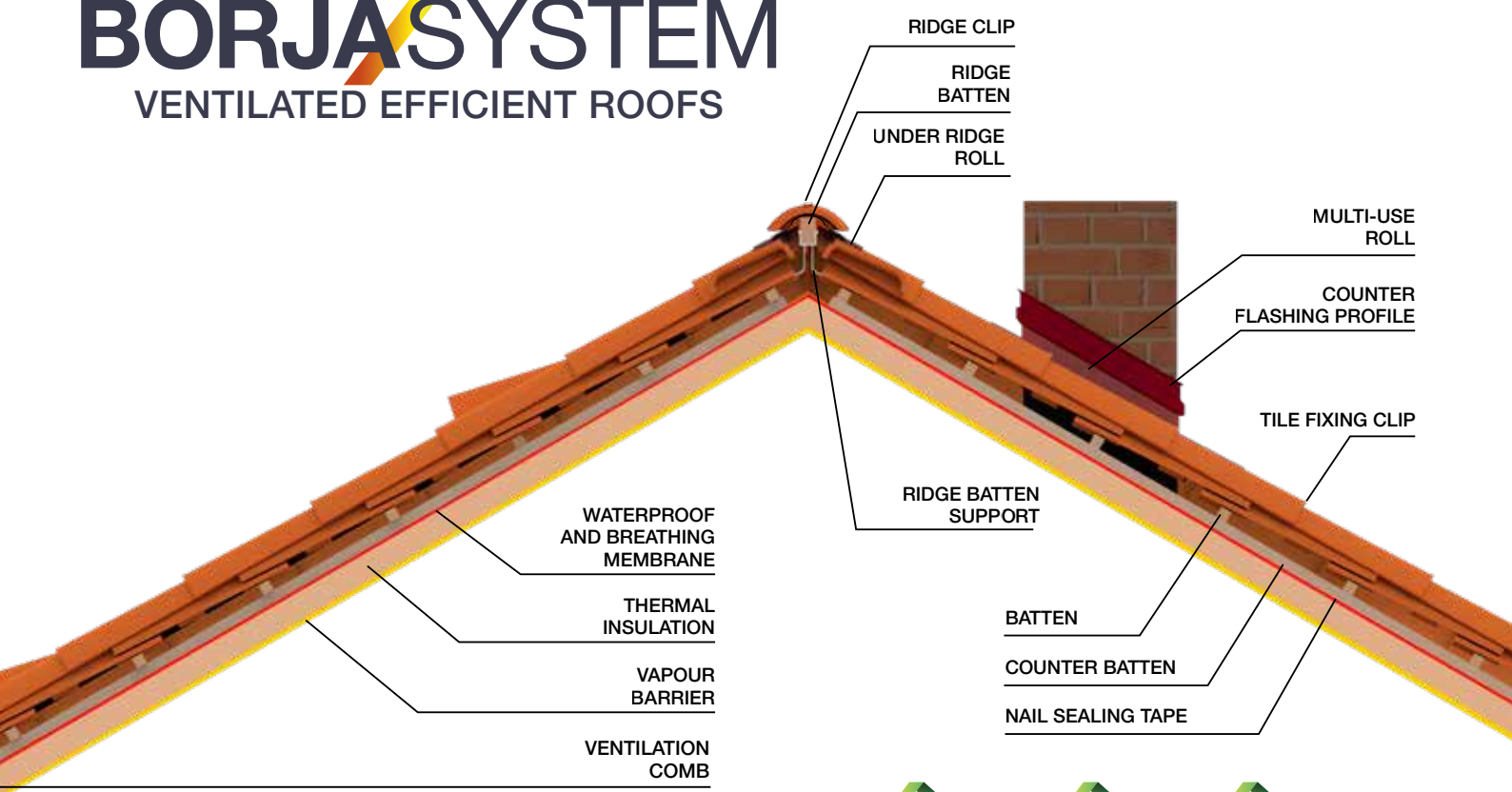
Thermal insulated roofing SYSTEM



Installation on any support

BORJASYSTEM

VENTILATED EFFICIENT ROOFS





Ceramic **SLATE**

Nepal
Orange



Available in:

 FLAT-5XL

 FLAT-10



NEW



Ceramic **SLATE**

Irish
Green



Available in:

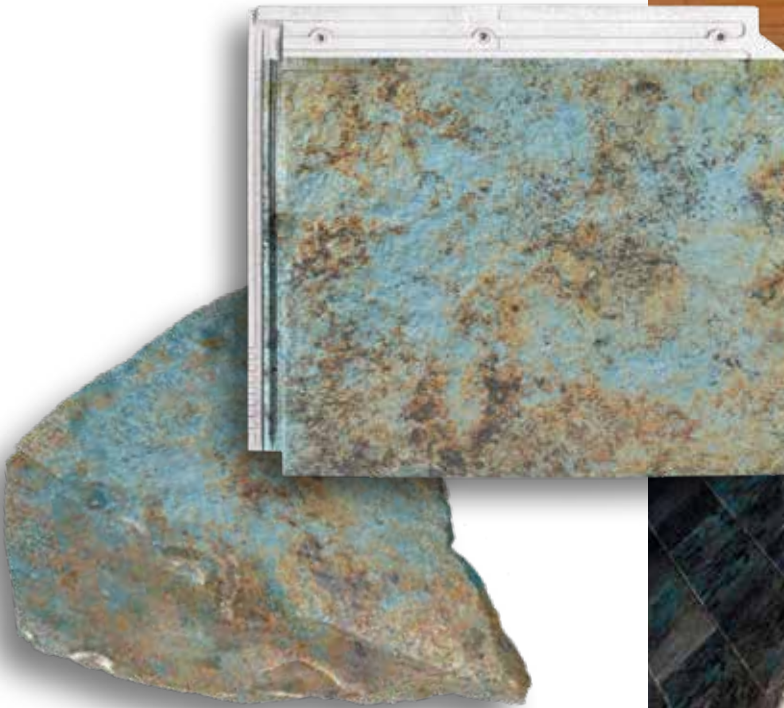
FLAT-5XL





Ceramic **STONE**

Denver
Iris



Available in:

 **FLAT-5XL**





Ceramic **SLATE**

Paris
Ocre



Available in:

-  FLAT-5XL
-  FLAT-10





Ceramic **CEMENT**

Sidney
Graphite



Available in:

-  FLAT-5XL
-  FLAT-10





Ceramic **OXIDE**

Tokyo
Copper



Available in:

 FLAT-5XL

 FLAT-10





Ceramic **WOOD**

Weathered
Cedar



Available in:

 **FLAT-10**





Ceramic **COTTO**

Ibiza
Pink



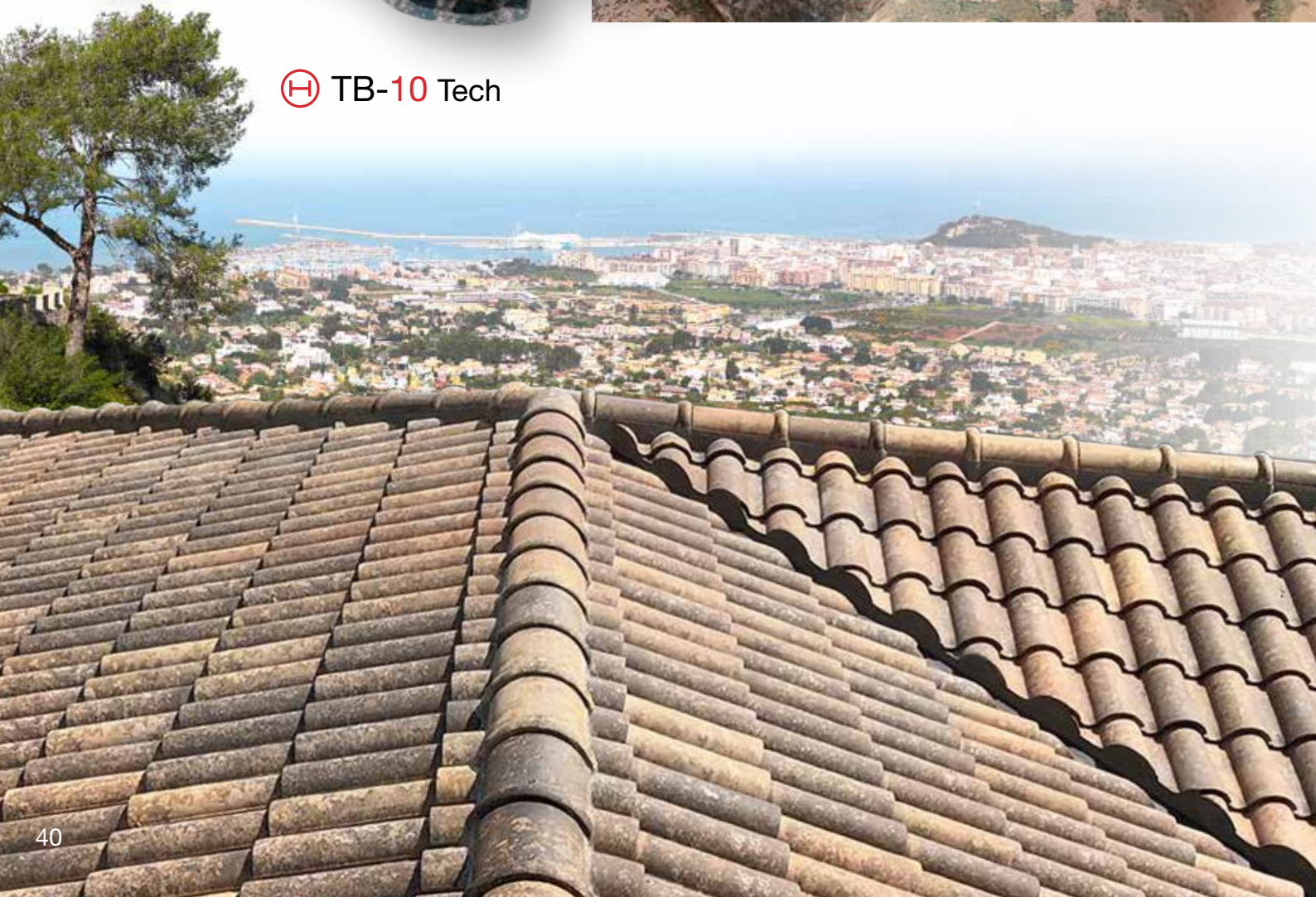
Available in:

-  FLAT-5XL
-  FLAT-10






 **TB-10** Tech



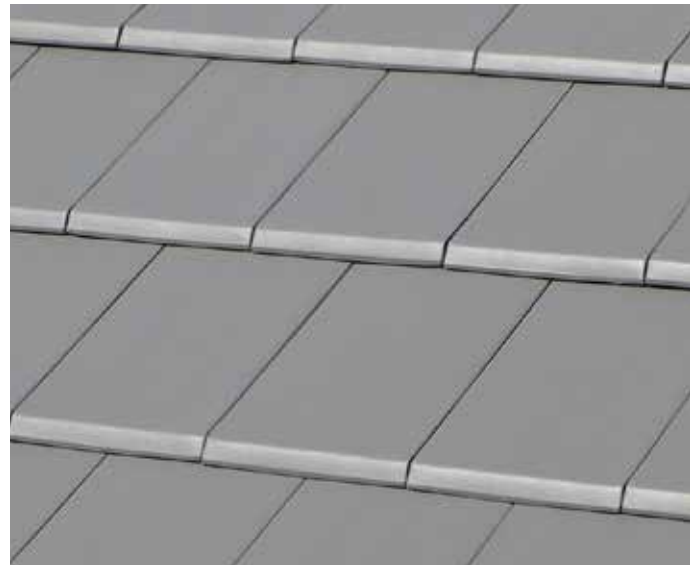


 **CENTENARIA**®
Irati



 TB-10 Tech







SOLAR FLAT-5XL

Ceramic Tile

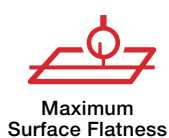
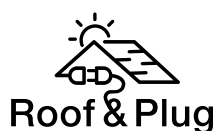


TECHNICAL characteristics

Dimensions: 457 x 510 mm	Peak power (P_{max}): 23 Wp
Weight: 7,50 Kg./Unit	Rated power intensity (I_{mp}): 1.79 A
Units / sq. m.: 5,85- 5,50 Units	Rated power voltage (V_{mp}): 14.30 V
Useful length (Batten distance) VARIABLE: 340-385 mm - 360-380 mm recommended batten spacing. - 340-360 mm, if shadow occurs, may lose effectiveness of solar energy collection.	Panel dimension: 410 x 360 mm
Units per LM eave line: 2 Units	Cell Type: Monocrystalline Silicon
Useful width: 474 mm	Front glass: 3.2 mm tempered glass
Installation type: staggered or continuous array	Junction Box: IP 67
	Connection plug: MC4
	DC cable: 4.0 mm ² CU (12 AWG)

NOTE: SOLAR Flat-5XL has always the same ceramic base as Flat-5XL roof tile. It can be available in all Flat-5XL finished. The solar panel it's always FULL-BLACK. The SOLAR roof tiles must be installed always on ventilated roofs, being able to use double batten system or equivalent system. STC standard conditions: Irradiance 1.000 W / sq. m., Cell temperature: 25°C, AM =1,5.

Check always the last version on the website.





ADVANTAGE

MAXIMUM DESIGN OPTIMIZATION

The SOLAR FLAT-5XL ceramic tile is the same as the standard FLAT-5XL model, which means it is easy to install and brings the highest levels of watertightness and safety to the roof.

THE ONLY SOLAR TILE WITH A CERAMIC BASE

The SOLAR FLAT-5XL tile is the only one of its kind with a ceramic base which guarantees the highest levels of durability over time.

PERFECT INTEGRATION

The panels have a **FULL BLACK** anti-reflective coating and no visible connections, thereby integrating perfectly into the aesthetics of the property.

HIGH RESISTANCE

The roof tile includes an encapsulated photovoltaic panel made of tempered glass supported on a ceramic base, which ensures greater durability and reliability.

HIGH EFFICIENCY

Each unit has the potential to capture **23 Wp** and a **performance of 134.55 Wp/m²**. Consequently, users can enjoy the maximum benefits of the tiles without having to alter the aesthetics and harmony of their home.



Borja CLAD
Ventilated Facade

A creative and
sustainable solution.



ADVANTAGE

WATERTIGHTNESS

Protection from the wind and rain. Reduction in moisture condensation thanks to the ventilated cavity.

EASY TO INSTALL

The facade cladding is installed methodically, following established steps. As only mechanical fixings are used in the cladding system, replacing one or various elements is straightforward.

ENERGY SAVING

The circulation of air prevents heating of the interior face of the facade, reducing the need for air conditioning. Moreover, it enables the installation of continuous insulation, without thermal bridges, to prevent loss of heat in winter and gains in summer.

MINIMAL MAINTENANCE

The tiles are made from a material designed to resist the most adverse weather conditions. Consequently, using them in facades means hardly any maintenance is necessary to preserve their appearance and functionality.

DIFFERENTIATION

New aesthetic options for facade design, with the possibility of using the same cladding on the roof and facade. Our wide range of finishes in various formats give a distinctive personality to each project. Suitable for new builds and renovations.

INVISIBLE FIXINGS

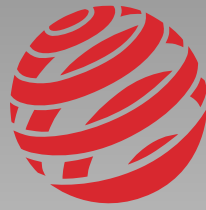
A complete technical system, installed over an aluminium substructure resistant to corrosion in any environment, with hidden fixings and a perfectly plumb facade.



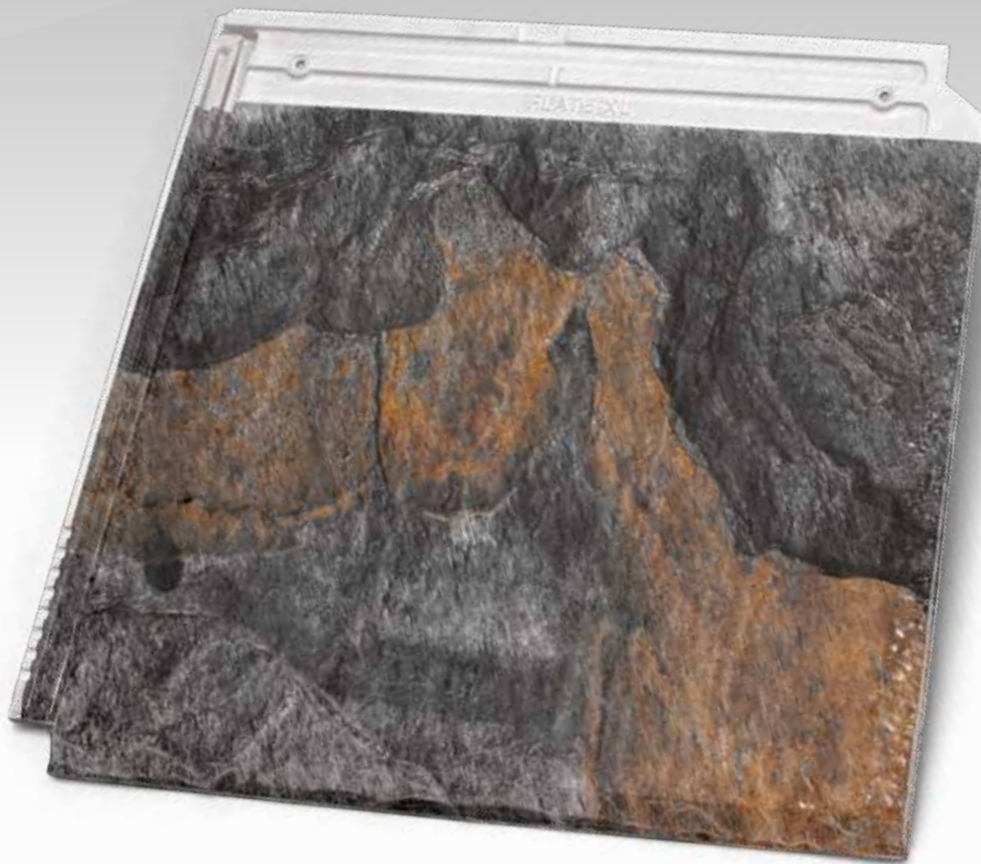
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THE ® EVOLUTION
of the ceramic tile sector

FLAT-5XL Borja JET



reddot award 2019
winner



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