

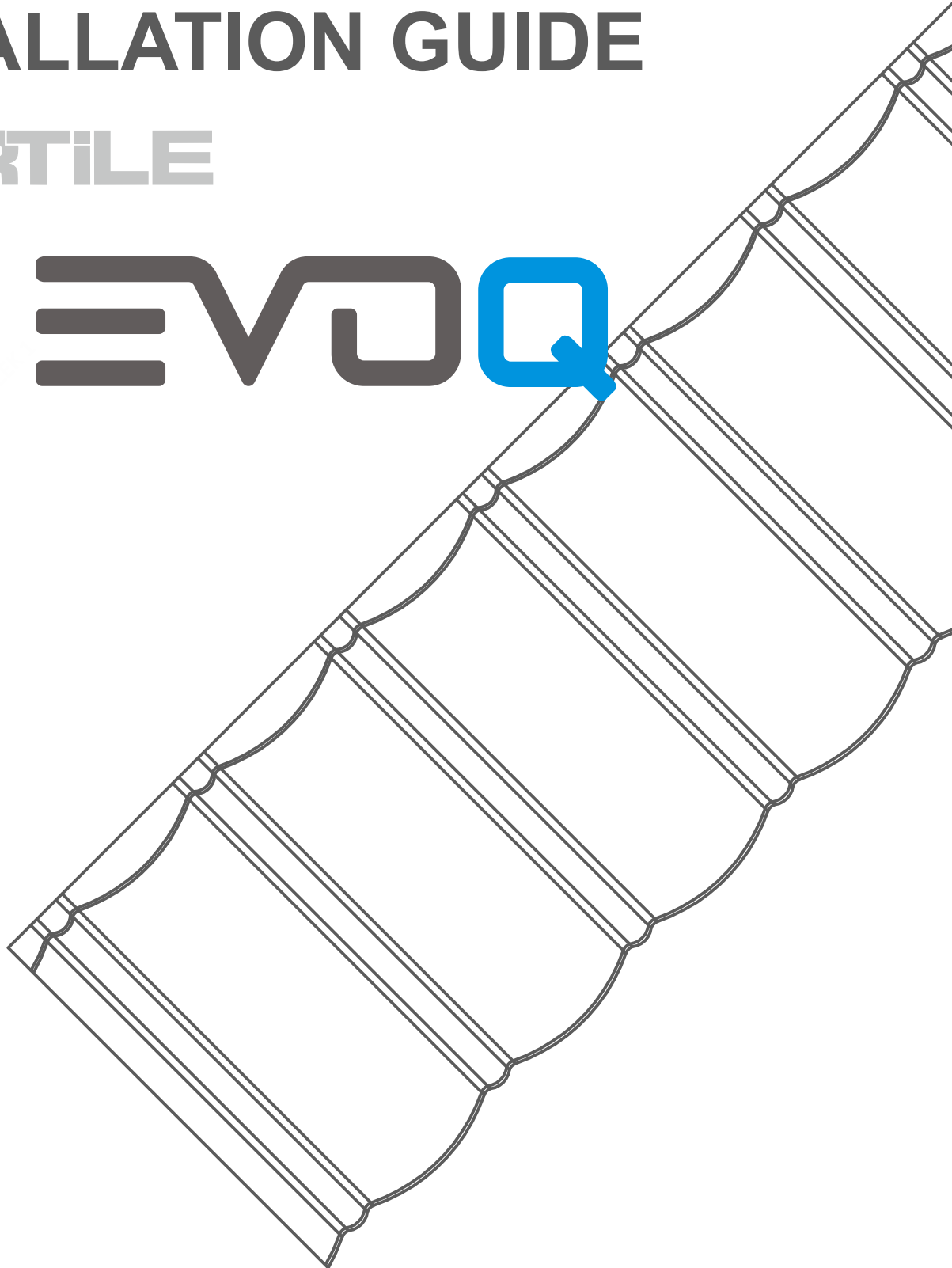
EVERTILE

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INSTALLATION GUIDE

EVERTILE

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1. THESE INSTRUCTIONS WILL HELP WITH THE INSTALLATION OF A SIMPLE ROOF. FOR INSTALLATIONS OF MORE COMPLICATED ROOFS, IT IS RECOMMENDED TO HIRE AN AUTHORIZED ROOFING COMPANY.

2. THE TILES ARE DESIGNED FOR ROOFS THAT PITCH RANGE FROM 10° TO 90° DEPENDING ON THE ALTITUDE ABOVE SEA LEVEL OF THE SITE AND THE „SNOW AREA“.

3. MINIMAL TEMPERATURE OF THE AIR, AS WELL AS THE TILES, DURING INSTALLATION SHOULD BE ABOVE +5°. IN THE SAKE THAT THE INSTALLATION HAS TO BE PROCEEDED EVEN IN TEMPERATURES BELOW 5°C, IT IS NECESSARY TO KEEP THE TEMPERATURE OF THE MATERIAL ABOVE 5°C UNTIL THE MOMENT OF INSTALLATION. THE SURFACE FINISH CAN CRACK OR EXFOLIATE IN LOWER TEMPERATURE IN THE SPOTS OF CUTTING, BENDING OR NAILING.

4. REMEMBER THAT THE TILE IS A LIGHTWEIGHT MATERIAL AND UNDER WINDY CONDITIONS THE UN-SECURED PANELS CAN FALL DOWN AND CAUSE DAMAGE AND/OR INJURY. RESPECT THE RULES FOR SAFE WORK.

5. DURING STORAGE OF THE TILES ON THE SITE, IT IS NECESSARY TO KEEP THE MATERIAL AWAY FROM DUST AND WATER, THAT COULD LEAK INSIDE THE PALETTES AND BETWEEN TILES.

6. STEPPING ON THE ROOF SHOULD BE MINIMIZED. IF NECESSARY, STEP ONTO THE BOTTOM SECTION OF THE WIDE PROFILE, WHERE THE TILE IS SUPPORTED BY A BATTEN.

7. TILES SHOULD BE INSTALLED FROM THE RIDGE TO THE EAVES. SPOTS FOR THE CORRECT NAILING OF THE TILES, RIDGES AND TRIMS CAN BE FOUND IN THE ENCLOSED PICTURES. IT IS RECOMMENDED TO INSTALL JUST 3 ROWS OF TILES AT THE SAME TIME AND RESOLVE ALL DETAILS CONTAINED (CHIMNEYS, VENTILATORS, ETC.) IMMEDIATELY. THIS PREVENTS FURTHER STEPPING ON THE INSTALLED TILES.

8. THE TILES' WARRANTY IS VALID, UNDER CONDITION OF CORRECT INSTALLATION AND USE. THE WARRANTY IS NOT RELATING TO ROOFS WITH INCORRECT INSTALLATION, INSUFFICIENT OR MISSING VENTILATION, AND IF IT'S USED OTHER THEN THE ORIGINAL STAINLESS SCREW-NAILS AND NAILS AND THE SYSTEM ACCESSORIES. ATYPICAL DETAILS SHALL BE MADE WITH MATERIALS WITH ADEQUATE DURABILITY AND CORROSION RESISTANCE AND WITH MATERIALS WHICH DO NOT CAUSE THE ELECTRO-CHEMICAL REACTION IN A CONTACT WITH THE TILES AND WHICH DO NOT EXUDE COMPOUNDS EFFECTING COLOUR AND CHANGES ON THE SURFACE FINISH.

9. VENTILATION MUST BE PROVIDED WITH THE SYSTEM VENTILATORS OR OTHER PROCEEDING BACKED BY TECHNICAL CALCULATION.

10. IT IS NECESSARY TO ENSURE, THAT THE TILES ARE NOT EXPOSED TO PERMANENT CONTACT OR POOR DOWN WATER FROM THAT CONSTRUCTION PARTS, WHICH CONTAIN COPPER, CEMENT, LIME, BITUMEN, CORRODED IRON, CONTAMINATED WITH CARBON BLACKS FROM LOCAL HEATING DEVICES OR ANIMALS' EXCREMENTS AND OTHER MATERIALS WHICH CAN CHEMICALLY ATTACK THE SURFACE FINISH OR ACCELERATE CORROSION OF THE TILES.

WARNING!

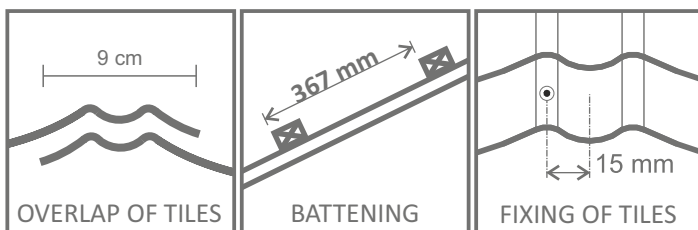
TILES SHOULD NOT BE CUT WITH CIRCULAR SAWS OR GRINDING WHEELS BECAUSE THEY COULD BURN THE ANTICORROSIVE PROTECTION OF THE MATERIAL. IT IS RECOMMENDED TO USE GUILLOTINES, HAND OR ELECTRICAL SCISSORS ONLY. ZINC GALVANIZED NAILS OR SCREWS DO NOT REACH A LIFETIME OF THE TILES AND CAN SIGNIFICANTLY SHORTEN A LIFETIME OF THE ROOF AND POLLUTE ITS' SURFACE.

SCREW-NAILS.

ORIGINAL NAILS AND SCREW-NAILS SUPPLIED BY THE MANUFACTURER ARE STAINLESS AND PAINTED. NAILS ARE AVAILABLE IN BOXES AND FREE (NF) PACKED BY 500PCS. SCREW-NAILS ARE AVAILABLE IN COILS (NCS) TO BE USED WITH PNEUMATIC GUNS. THERE ARE ALWAYS NEEDED 4 NAILS/1 TILE FOR PROPER FIXING.



INSTALLATION TOOLS



BATTENING / DISTANCE OF THE BATTENS BOTTOM EDGES

RECOMMENDED DIMENSIONS OF BATTENS 50x40mm

INSTALLATION OF HORIZONTAL BATTENS

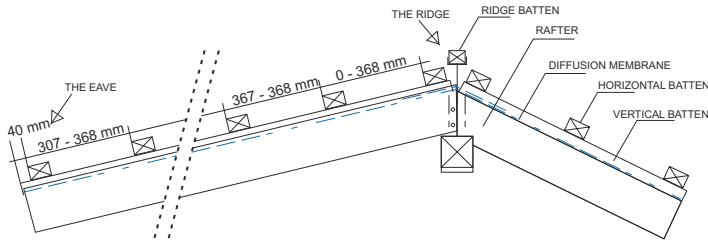
1. DIFFUSION MEMBRANE ON RAFTERS
2. VERTICAL BATTENS (COUNTER-BATTENS)
3. INSTALLATION OF BATTENS FROM THE EAVE TO THE RIDGE
4. THE LAST BATTEN MAX. 20mm FROM THE EDGE OF VERTICAL BATTENS

OVERLAP OF TILES

MAXIMUM OVERHANG OF TILES IS 60 m

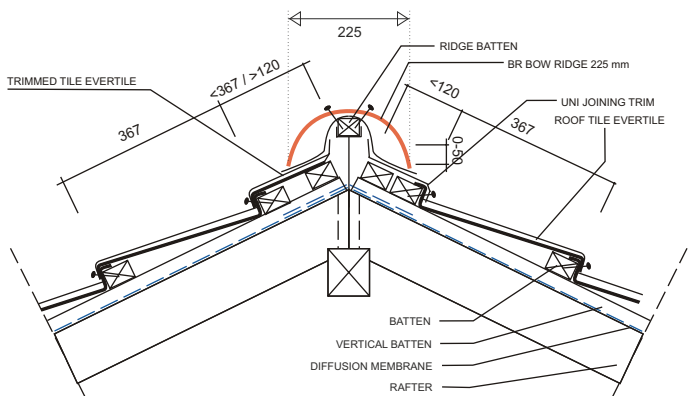
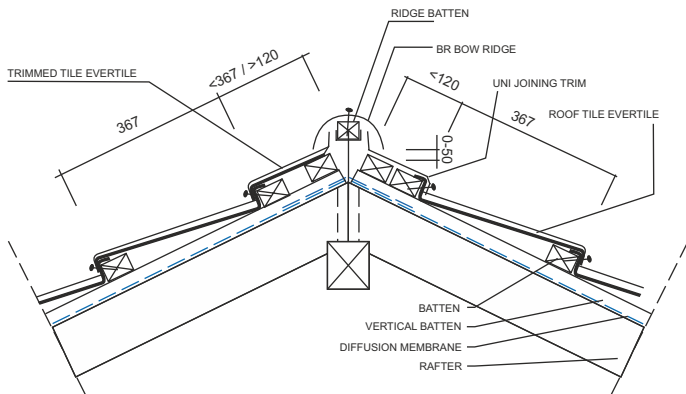
EAVE TRIM

EAVE TRIM - FIXING REQUIRES DISPLACEMENT OF THE FIRST BATTEN BY 40 mm HIGHER, TO GET ITS' SUPPORT ON VERTICAL BATTENS

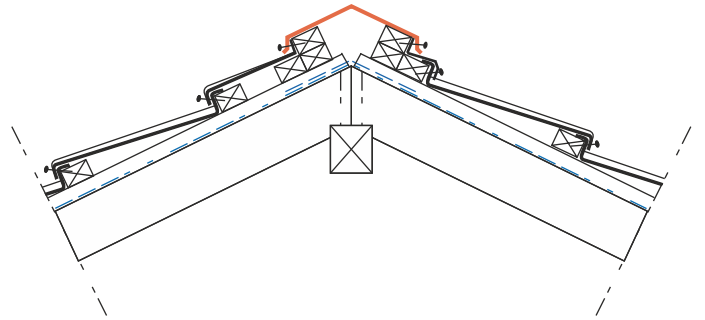


BATTENING FOR RIDGES

VENTILATION GAP MUST BE LEFT BELOW THE RIDGE BATTEN (MIN.20 mm) BETWEEN THE LAST TILE AND THE RIDGE

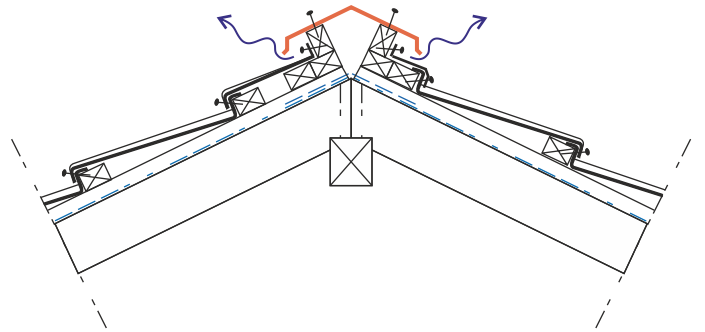


BATTENING FOR V-FORM RIDGE "NON VENTILATED"



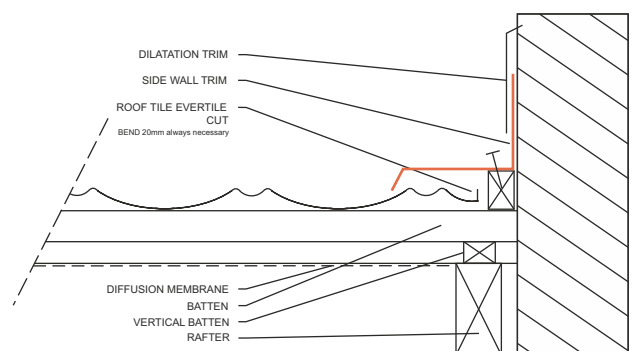
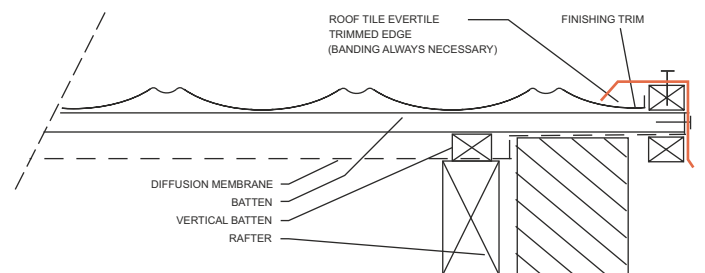
BATTENING FOR V-FORM RIDGE "VENTILATED"

THE RIDGE CAN VENTILATE, IF YOU MAKE SUFFICIENT GAP BETWEEN THE RIDGE AND THE PARALEL RIDGE BATTENS



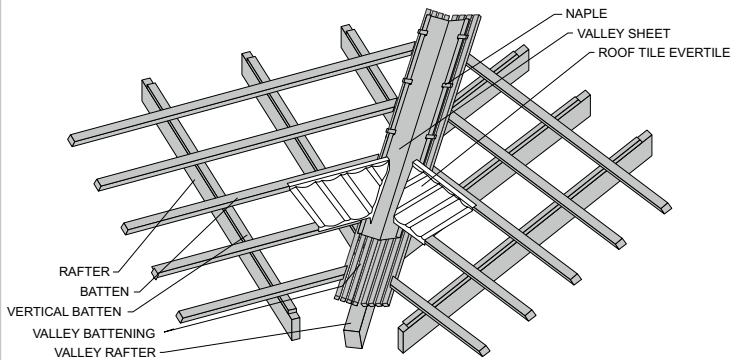
GABLE BATTENING

PLACE AND ATTACH AN ORTHOGONAL VERTICAL BATTEN (SIZE 30X50MM) ON THE BATTENS EDGE. THE VERTICAL BATTEN MAKES A SUPPORT FOR THE FINISHING TRIM (FT/FT155).

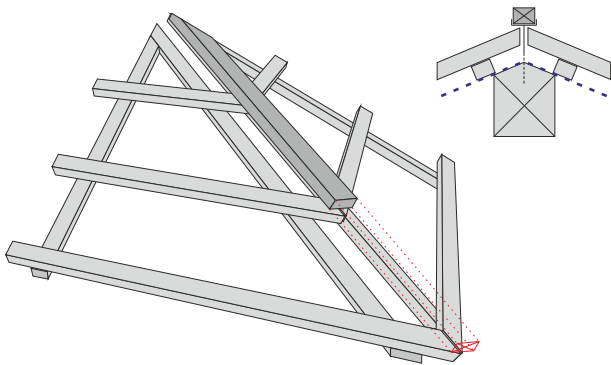


VALLEY BATTENING

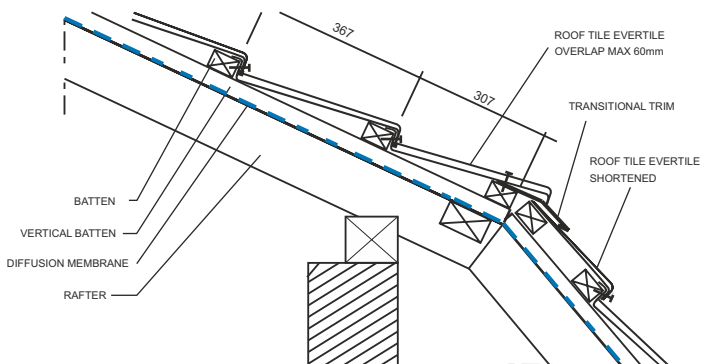
THE VALLEY SHALL BE LAID ON LEVEL WITH THE COUNTER-BATTENS



HIP BATTENING

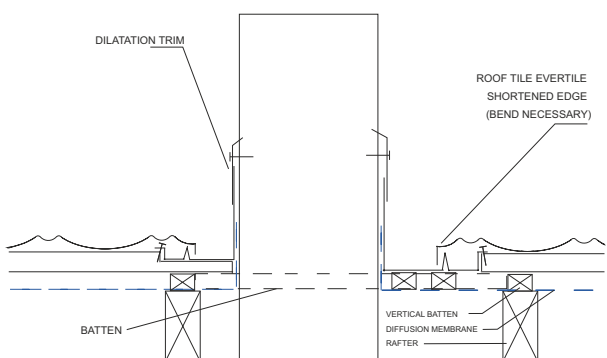


ROOF SLOPE CHANGE



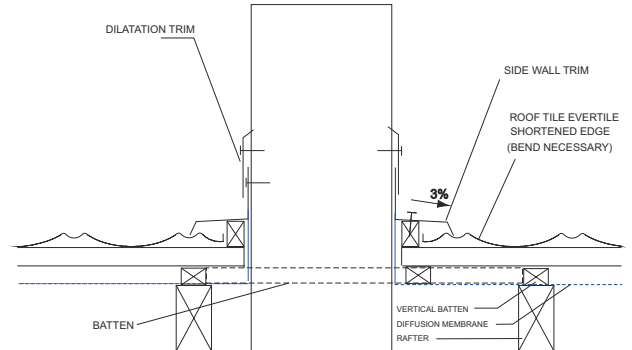
CHIMNEY BOTTOM FLASHING

IT IS MADE FROM FLAT STEEL SHEET, LIKE FOR ANY OTHER ROOFING TILE. THE ONLY EXCEPTION IS THAT THE FLASHING SHALL BE LAID ON THE VERTICAL-BATTENS TO AVOID LIFTING OF THE TILE EDGE. THE TILES' EDGE IS BENT DOWN TO THE FLASHING.



CHIMNEY FLASHING WITH SWT TRIM

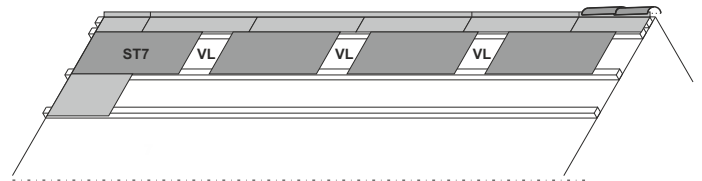
TILES ARE FINISHED NEAR THE SIDE CHIMNEY BODY ALONG A VERTICAL BATTEN (30MM FROM THE CHIMNEY BODY). EDGES OF TILES ARE BENDED UP (MIN. 20MM) AND COVERED WITH SWT TRIM.



ROOF VENTILATION

AN ENGINEER SHALL CALCULATE THE NUMBER OF VENTILATORS NEEDED FOR A CONCRETE ROOF. IN A CASE OF ORDINARY ROOF WITH ITS' VERTICAL LENGTH NO MORE THEN 10M, THERE IS USUALLY SUFFICIENT TO USE ONE VENTILATOR (VL) BETWEEN TWO NEIGHBOUR TILES IN THE UPPER ROW OF TILES.

VENTILATION AREA LG75 IS 7500MM².
VENTILATION AREA VL IS 12500MM².



HALF BOND LAYOUT

THE FIRST TILE OF EVERY SECOND ROW SHALL BE SHORTENED BY 2-4 PROFILES. THAT WILL MAKE THE TILES LAID IN "HALF-BOND". VENTILATORS AND OTHER ELEMENTS MUST BE INSTALLED AT THE SAME TIME WITH TILES IN THE FIRST ROW (FULL MODULE) BELOW THE RIDGE.

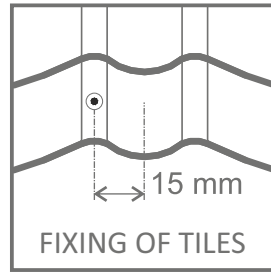
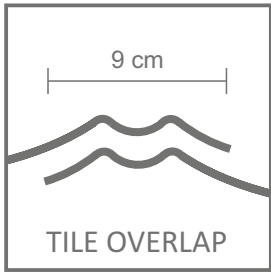
WARNING

ALL CONSTRUCTION WORKS ABOVE THE ROOF SHALL BE FINISHED (CHIMNEY, FASADE FINISHING) TO AVOID DAMAGE OR POLUTION OF THE ROOFING TILES.

FIXING OF TILES

THE BEST WAY OF FIXING TILES IS WITH THE PNEUMATIC GUN WITH THE ORIGINAL STAINLESS SCREW-NAILS. THERE IS ALSO POSSIBLE A HAMMER NAILING WITH THE ORIGINAL STAINLESS NAILS, WHICH IS MUCH SLOWER, UNCOMFORTABLE AND WITH A RISK OF DAMAGE OF THE SURFACE OF TILES. WITH THE EXCEPTION OF THE FIRST ROW AND THE EAVE ROW, TILES ARE FIXED THROUGHOUT THE FRONT EDGE ON THE SPOTS SUPPORTED BY A BATTEN – IT MEANS BETWEEN THE ENTRY OF THE GROOVE AND THE WIDE PROFILE. EVERY SECOND PROFILE OF THE TILE SHALL BE FIXED AND ALWAYS THE OVERLAP WITH THE NEXT TILE (4 NAIL/TILE). PLACE THE NAILS IN THE CENTRE OF THE FRONT EDGE OF THE TILES. THE HEAD OF THE NAIL SHOULD BE TIGHT TO THE FRONT EDGE OF THE TILE AND SHOULD NOT PENETRATE OR DEFORM THE TILE. CHECK A PROPER GRIP OF THE NAILS IN THE BATTENS. (ANY SPACE LEFT BETWEEN THE TILE AND BATTEN CAN CAUSE A SPRINGY SHOCK IN THE SPOT ON NAILING AND A BREAK OF THE PAINT LAYERS.)

EDGES OF TILES OVERLAY EACHOTHER BY 1 GROOVE. IT IS RECOMMENDED TO EXTEND THE OVERLAP BY WHOLE PROFILE, IF THE SLOPE IS LESS THEN 15° (WITH TAKING INTO ACCOUNT THE GEOGRAFIC POSITION, ALTITUDE AND USUAL SNOW LOAD).



CONNECT TILES TO THE RIDGE
THE DETAIL CAN BE MADE TWO WAYS:

A) WITH SHORTENED TILES.

MARK A HORIZONTAL LINE WHERE THE TILE SHALL BE BENT UPWARDS ALONG THE RIDGE BATTEN (20MM LOWER FROM THE RIDGE BATTEN TO KEEP A SPACE FOR VENTILATION) AND ANOTHER MARK + 40 MM OUTSIDE FROM THE BEND LINE – WHERE THE TILE SHALL BE TRIMMED. BEND THE TILES, FIRST, AND THEN CUT OFF.

B) WITH A TRIM (UNI).

WHEN THE DISTANCE FROM THE LAST MODULE TO THE RIDGE BATTEN IS SHORTER THEN 120MM, THEN THE JOINING SHEET (UNI) CAN BE USED INSTEAD OF THE TILE.

FIXING OF BOW RIDGES (BR/BR225).

BOW RIDGES SHALL BE FIXED FROM THE TOP IN THE OVERLAY BY 1 NAIL SLANTWISE TO THE RIDGE BATTEN. BR 225 RIDGES SHALL BE FIXED BY USING 2 NAILS AT AN ANGLE OF 60° FROM EACH SIDE TO THE RIDGE BATTEN. THE RIDGE FOR FINISHING OF HIP (BRSP) IS PLASTIC AND IT IS RECOMMENDED TO DRILL THE SPOT FOR FIXING, FIRST, NAMELY IN A COLD WEATHER AND HAMMER IT BY HAND.



ROOF WINDOW

THE INSTALLATION OF ROOF WINDOWS SHALL BE MADE ACCORDING TO THE SPECIFICATION OF ITS MANUFACTURER. THE ONLY EXCEPTION IS THAT THE FRAME AND FLASHINGS SHALL BE LAID ON LEVEL WITH THE COUNTER-BATTENS IN ORDER TO AVOID LIFTING THE TILES OVER THE FLASHINGS. TILE EDGES SHALL BE CUT, MEASURED AND BENT DOWN TO THE FLASHING.

THE UPPER SIDE OF THE WINDOW IS USUALLY FINISHED IN THE MIDDLE OF THE TILE. IN THIS CASE, DO NOT CUT THE TILE, BUT USE WINDOW UNI SHEET (WUNI).

TECHNICAL RECOMMENDATIONS OF THE WINDOW MANUFACTURER ARE DECISIVE.



NAILING FOR WIND SPEEDS UPTO 110 miles/hour

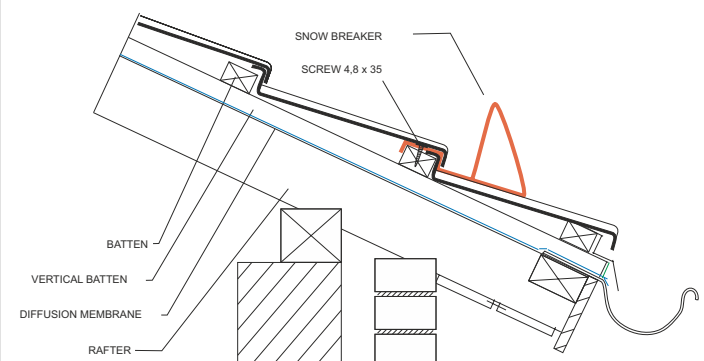


NAILING IN THE HURRICANE ZONES



USE OF THE SNOW BREAKERS (SB) HOLDERS OR SNOW FENCES(SHS) IS RECOMMENDED IN THE FOLLOWING CASES:

PREVENTION OF SNOW FALL FROM THE ROOF. ITS' USE DEPENDS ON THE SNOW TERRITORY, SLOPE AND LENGTH OF THE ROOF AND TYPE OF THE ROOF COVERING. (SEE YOUR NATIONAL OR LOCAL NORMS)



ACCESSORIES

SOME ACCESSORIES HAVE BASEMENT WITH TILE SHAPE. THE BASEMENT OF EACH ELEMENT SHALL BE UNDERLAID BELOW EDGES OF THE NEIGHBOUR TILES. ALIGN THE GROOVES AND NAIL THEM THROUGH THE FRONT EDGE OF TILES. BEFORE NAILING THE PLASTIC MADE ACCESSORIES, IT IS RECOMMENDED TO DRILL THE SPOTS FIRST, IN ORDER TO AVOID TEARING THE PLASTIC. IMPORTANT IN COLD TEMPERATURES!



TRIMMING

CUTTING OF TILES IS POSSIBLE WITH DIFFERENT TYPES OF TIN-CUTTERS, HAND SCISSORS AND ELECTRIC SCISSORS (RECOMMENDED !) OR GUILLOTINES. ALL NAKED EDGES OF THE STEEL SHEET SHALL BE PAINTED WITH ACRYLIC PAINT (INCLUDED IN THE REPAIR SET REP).



WARNING! IT IS FORBIDDEN TO USE FOR CUTTING CIRCULAR SAW OR GRINDING WHEEL, BECAUSE THEY BURN THE ANTICORROSIVE PROTECTION OF THE MATERIAL!

VERTICAL (SHORT) BENDING

IT IS NECESSARY TO BEND THE EDGES OF TILES UP OR DOWN TO ASSURE TIGHTNESS OF DETAILS - FINISHING TRIMS, VALLEYS, HIPS, ETC. IT IS RECOMMENDED TO USE MODIFIED BENDERS TO MAKE PROPER BEND AND TO PREVENT THE RISK OF DAMAGE OF THE SURFACE FINISHING.

HORIZONTAL (LONG) BENDING

IT IS NECESSARY TO BEND THE EDGES OF TILES UP OR DOWN TO ASSURE TIGHTNESS OF DETAILS - FINISHING TRIMS, VALLEYS, HIPS, ETC. IT IS RECOMMENDED TO USE MODIFIED BENDERS TO MAKE PROPER BEND AND TO PREVENT THE RISK OF DAMAGE OF THE SURFACE FINISHING.

CLEANING

ALL PLACES AND DETAILS, DEMANDING FREQUENT SERVICE SHALL BE PROVIDED WITH ORIGINAL ELEMENTS - FOOT STEPS (FSN, QFS) AND WALKWAY GRIDS (BPN+GRIDS).

IF THE TILES GET POLLUTED AFTER INSTALLATION (DUE TO FACADE WORKS, ETC.), IT IS RECOMMENDED TO CHANGE THE STRUCK TILES. ANY MECHANICAL OR CHEMICAL ATTEMPT FOR CLEANING IS BREACHING THE WARRANTY AND LIABILITY OF THE MANUFACTURER FOR DAMAGES.

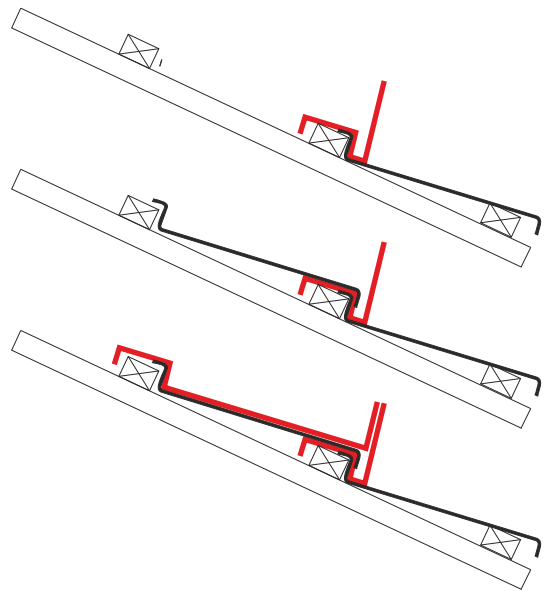
SNOW REMOVAL

REMOVE SNOW FROM THE ROOF ONLY IN THE CASES OF EMERGENCY. ALWAYS KEEP 100MM OF SNOW COVER ON THE TILES, TO AVOID MECHANICAL DAMAGE OF THE SURFACE. CLEANING SHALL BE MADE FROM HYDRAULIC PLATFORM IN ORDER TO AVOID STEPPING ON THE ROOF.

LIFESPAN OF THE SURFACE FINISHING CAN BE DECREASED BY A BIOLOGICAL POLLUTION - MOSS, ALGAE, LICHEN . CLEANING IS RECOMMENDED BY SUITABLE BIOCIDAL LOTION.

UNIVERSAL CONSOLE FOR BPN/FSN/HSC/SHS/LSH

THE UNIVERSAL CONSOLE SYSTEM PROVIDES A STRONG AND STABLE SUPPORT TO THE RANGE OF ACCESSORIES AND SUPPLEMENTARY DEVICES WITHOUT PENETRATION OF TILES. THE CONSOLES ARE INSTALLED AT THE SAME TIME WITH FIXING OF TILES ON THE REQUIRED PLACE.



EVERTILE