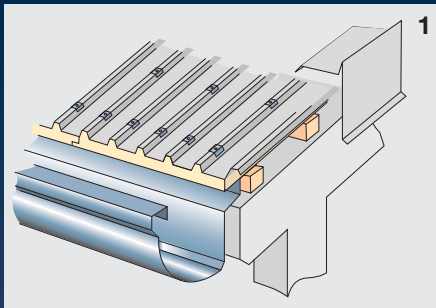


Applications

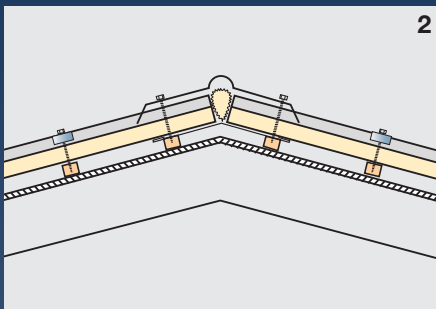


1

CIVIL ROOFS

1) TWO REGULAR PITCHES

FOR THIS TYPE OF COMMON ROOFS, THE ROOF PANELS ARE SUPPLIED IN THE LENGTH OF THE PITCH. THE LENGTH IS ESTABLISHED CONSIDERING THE FRONT POSITION COMPARED TO THE EAVES GUTTER MODEL USED (DRAWING 1). THE PANEL IS GENERALLY INSTALLED ON A FRAME CONSISTING OF HORIZONTALLY POSITIONED WOOD STRIPS. THE POSITION OF THE FIRST STRIP (WHERE THE EAVES GUTTER FIN WILL BE HOOKED TO) AND OF THE LAST STRIP (POSITIONED AT LEAST 20 CM FROM THE RIDGE CAP LINE, IS VERY IMPORTANT, SO AS TO ALLOW THE SIMULTANEOUS FIXING OF SHAPED RIDGE CAP-PANEL-STRIP) (DRAWING 2). GENERAL RULES ADVISE TO FIT FIXING GROUPS ON ALL THE PANEL RIBS ON THE TWO SUPPORTS. THE USE OF THE SILUETTE PROFILES IS ALSO RECOMMENDED TO PROTECT THE PANEL HEADS FROM ATMOSPHERIC AGENTS AND GUARANTEE THE ROOF DURABILITY.



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2) FOUR REGULAR PITCHES

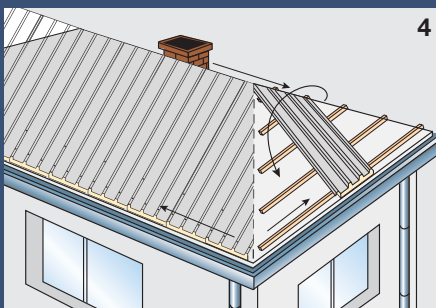
THIS TYPE OF ROOF FASTENING IS THE SAME AS FOR TWO-PITCHES ROOFS BUT REQUIRES PANELS WITH A SLANTED CUT (THAT CAN BE OBTAINED USING A SUITABLE CUTTING TOOL). ALL PANELS ARE SUPPLIED IN THE MEASURE CORRESPONDING TO THE MAXIMUM HEIGHT OF THE PITCH (DRAWING 3). EACH PANEL WILL THEN BE CUT DIAGONALLY FOLLOWING THE RIDGE CAP LINE AND THE EXCESS PIECE WILL BE USED FOR THE OPPOSITE SIDE OF THE NEXT PITCH (DRAWING 4). USING THIS METHOD THE PRODUCTION WASTE IS REDUCED TO THE MINIMUM. WE RECOMMEND TO CARRY OUT THE DIAGONAL CUTS ON THE GROUND RATHER THAN ON THE ROOF, IN ORDER TO AVOID DAMAGING THE PANELS THAT HAVE ALREADY BEEN INSTALLED. THE RIDGE CAP LINES WILL THEN BE COVERED WITH A SPECIFIC METAL RIDGE CAP, NOT SHAPED OR TO BE SHAPED DURING INSTALLATION, SINCE THE SHAPING VARIES DEPENDING ON THE SLOPE OF THE PITCHES.



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3) IRREGULAR PITCHES

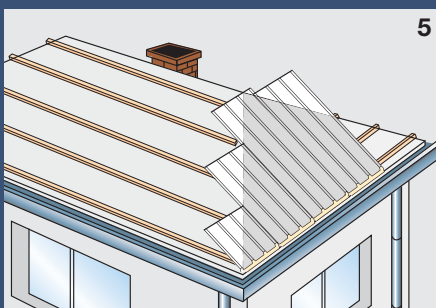
FOLLOW THE INDICATIONS DESCRIBED FOR THE TWO CASES ABOVE. THE DIFFERENCE CONSISTS IN THE DIMENSION AND METHOD OF INSTALLING THE PANELS: IN CASE OF IRREGULAR TRIANGULAR PITCHES, A RANGE OF PROGRESSIVE DIMENSIONS WILL BE ESTABLISHED FOR THE PANELS, TO BE CUT DIAGONALLY (DRAWING 5). WITH THIS METHOD THE EXCESS PIECE WILL UNLIKELY BE USED FOR OTHER PITCHES AND WILL THEREFORE BE DISCARDED. ALSO IN THIS CASE THE METAL JOINT RIDGE CAP MUST BE SPECIFICALLY PREPARED. IS GENERALLY ADVISABLE TO ORDER AT LEAST ONE OR TWO ADDITIONAL SHEETS OF THE MAXIMUM LENGTH, IN ORDER TO BE SURE TO COMPLETE THE ROOF ALSO IN CASE OF A CUTTING ERROR DURING INSTALLATION.



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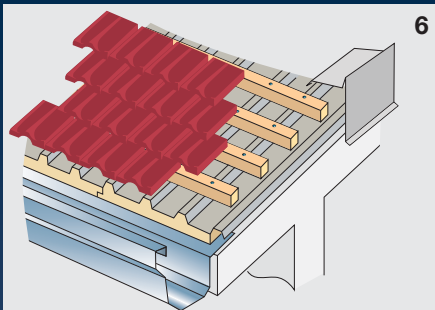
4) SUB TILE

THANKS TO ITS THERMAL INSULATION PROPERTIES, THE ROOF PANEL CAN ALSO BE USED IN BRICK ROOF SYSTEMS, PARTICULARLY AS A SUB-TILE ELEMENT. AS REGARDS THE MODEL, WE RECOMMEND THE USE OF A PANEL WITH THE EXTERNAL RIBBED METAL FACING AND THE INTERNAL FACING MADE OF ROOFING FELT, TO BE APPLIED DIRECTLY TO THE SLAB. THERE ARE TWO RECOMMENDED INSTALLATION METHODS:



5

- EITHER INSTALL THE ROOF PANEL ON WHICH A FRAME OF WOOD STRIPS MUST BE FITTED IN ORTHOGONAL DIRECTION TO FIX THE STANDARD TILES (DRAWING 6), OR EXPLOIT THE PITCH OF THE PANEL RIBS TO FIT THE TRADITIONAL TILES DIRECTLY TO THIS, FOLLOWING THE CONCAVE-CONVEX SYSTEM (DRAWING 7). IN THIS CASE IT IS NECESSARY TO ADD A METAL TILE STOP PROFILE ON THE STARTING SIDE, OR IN ANY CASE GUARANTEE SUITABLE FASTENING. THE SILUETTE PROFILE MUST BE USED ALSO IN THIS CASE.



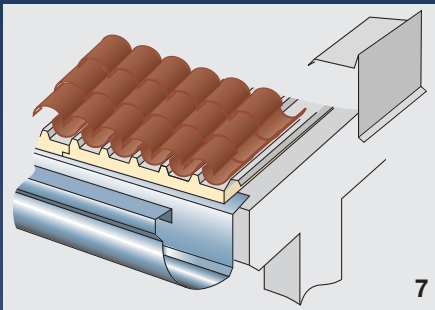
6

INDUSTRIAL ROOF

1) TWO PITCHES- STEEL STRUCTURE

FOR THIS TYPE OF ARCHITECTURAL STRUCTURE IT IS ADVISABLE TO USE ROOF PANELS WITH ESTERNA AND INTERNAL STEEL FACINGS. IT IS A GOOD RULE TO SELECT ALUMINIUM FOR THE EXTERNAL FACING ONLY IF THE LENGTH OF THE PITCHES DOES NOT EXCEED 10 METRES, IN ORDER TO PREVENT ANY COMPLICATIONS DUE TO METAL THERMAL EXPANSION. FOR ALL PITCHES LONGER THAN 13 METRES, IT IS ADVISABLE TO PROVIDE AN OVERLAPPING ELEMENT ON A CENTRAL SUPPORT (DRAWING 8).

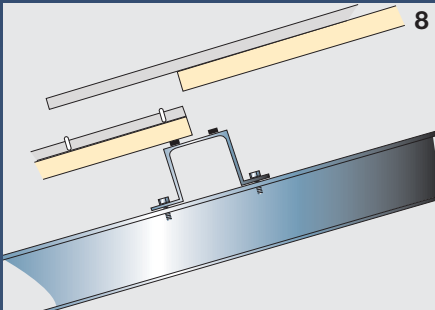
HERE ARE THE MAIN INDICATIONS FOR THIS TYPE OF WORK: APPLY A SUITABLE LINEAR SEAL LINING ON THE PANEL JOINTS IN ORDER TO PREVENT ANY CONDENSATION (DRAWING 9); WHEN INSTALLING THE RIDGE CAP, APPLY THE RIBBED SPONGE SEAL LINING, AVAILABLE ON REQUEST AND BEND THE FLAT END PART OF THE PANEL WITH A PAIR OF PLIERS WHERE IT MEETS THE RIDGE CAP, IN ORDER TO PREVENT INFILTRATION CAUSED BY STRONG WIND; APPLY A METAL SUB RIDGE CAP, SO AS TO CLOSE THE RIDGE CAP LINE BETWEEN THE TWO PITCHES AND INJECT POLYURETHANE FOAM BETWEEN THE PANELS (DRAWING 10).



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2) SHED ROOF

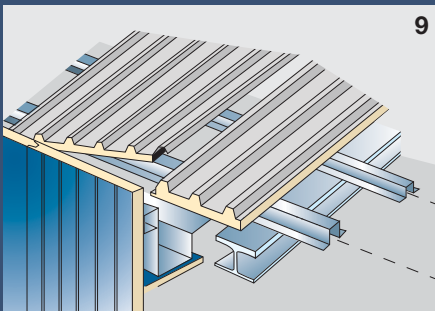
THIS KIND OF ROOF DOES NOT REQUIRE PARTICULAR TECHNIQUES, SINCE IN GENERAL THE VERY STEEP PITCH GUARANTEES A GOOD WATER FLOW. IN ORDER TO FIND A GOOD JOINING SOLUTION BETWEEN THE SLOPING PITCH MADE OF PANELS AND THE VERTICAL GLAZED STRUCTURE, WE RECOMMEND THE CREATION OF A SPECIAL CLOSURE FLASHING ACCORDING TO THE CUSTOMER'S DESIGN, AND SHAPED TO BE COMBINED WITH THE RIBBED PANEL (DRAWING 11).



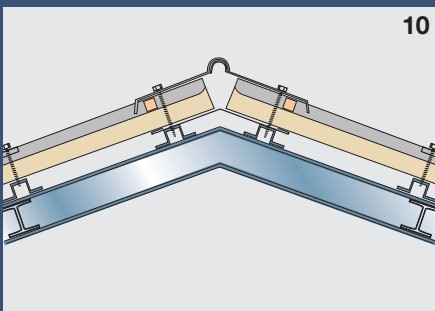
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3) ROOF FOR PREFABRICATED STRUCTURE

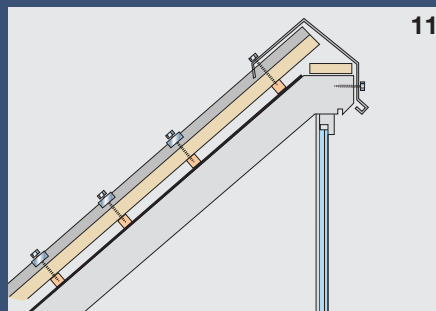
IN THE FIELD OF CONCRETE PREFABRICATED BUILDING CONSTRUCTION THE INSULATING PANEL CAN BE USED AS AN ALTERNATIVE TO CURVED CONNECTION PANELS BETWEEN "Y" BEAMS, WITH CONSIDERABLE SAVING (DRAWING 12) OR TO COVER THE WHOLE ROOF, OFTEN IN COMBINATION WITH FIXED POLYCARBONATE OR GLASS-REINFORCED PLASTIC ROOFLIGHTS. IN THE LATTER CASE, IT MAY BE NECESSARY TO BEND THE PANEL SLIGHTLY TO ADAPT IT TO THE STRUCTURE OF THE PREFABRICATED BUILDING TILED ROOF. IT IS THEREFORE POSSIBLE TO EXPLOIT THE ELASTIC CHARACTERISTICS OF THE PANEL COMPONENTS AND ADAPT IT TO THE SLIGHT BEND OF THE TILED ROOF, REMEMBERING THAT THE POLYURETHANE FOAM SHOULD NOT HAVE A THICKNESS OF OVER 40 MM. IF THE PANEL HAS TO BE FIXED DIRECTLY TO THE TILED ROOF, ITS LOWER SUPPORT MUST BE MADE OF CENTESIMAL ALUMINIUM OR ROOFING FELT (DRAWING 13), WHILE IF IT HAS TO BE FIXED TO A METAL STRUCTURE OR COMBINED WITH FIXED ROOFLIGHTS, ITS LOWER SUPPORT MUST BE MADE OF STEEL. IN THESE TWO CASES THE NUMBER OF FIXING GROUPS MUST BE INCREASED AND THE RULES FOR THE LENGTH OF THE PANELS MUST BE COMPLIED WITH AS WELL. IF



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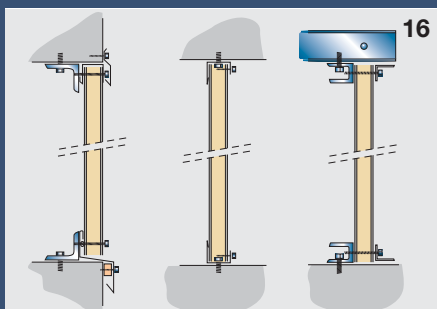
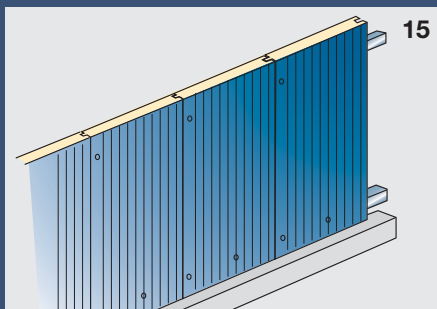
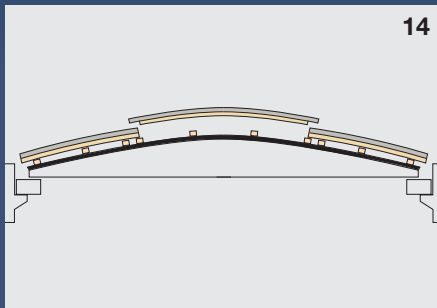
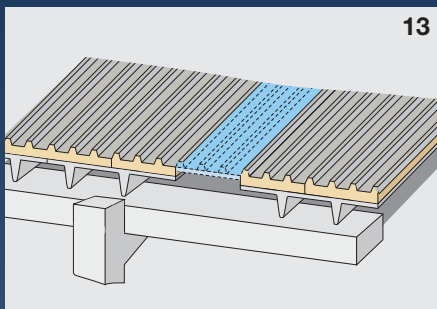
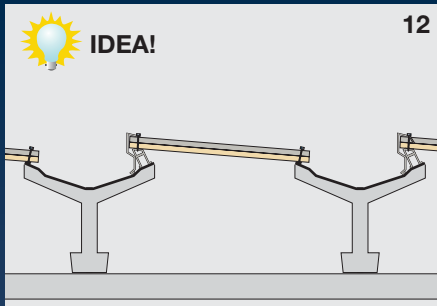


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Applications



OVERLAPPING OPERATIONS HAVE TO BE CARRIED OUT, AS OCCURS FREQUENTLY IN THESE CASES, IT IS A GOOD RULE TO SUBDIVIDE THE TOTAL LENGTH INTO THREE, IN ORDER NOT TO HAVE ANY OVERLAPPING AT THE HIGHEST POINT (DRAWING 14). ON THE OTHER HAND, IT IS NOT ADVISABLE TO USE THE PANEL WITH NARROWER BENDING RADIUS, SINCE THE EXTERNAL AND INTERNAL METAL FACING COULD BE SCRATCHED AND THE POLYURETHANE FOAM WOULD LOOSE CONTINUITY.

EXTERNAL CLADDING

1) ASSEMBLY INSTRUCTIONS

THE ASSEMBLY OF A WALL PANELS FORESEES THE APPLICATION OF SELF-TAPPING SCREWS APPLIED FROM THE EXTERIOR TOWARDS THE INTERIOR. IN GENERAL, THE SCREW MUST JOIN THE TWO FINS OF THE FEMALE SCREW AND THE MALE SCREW OF TWO CONTIGUOUS PANELS, AND MORE OVER, IN PROXIMITY OF END (EXTERNAL AND INTERNAL) SUPPORTS, IT IS SUGGESTED TO ALSO APPLY A SAFETY SCREW AT THE CENTRE (DRAWING 15). PARTICULAR ATTENTION MUST BE PAID TO THE POWER OF THE ELECTRIC SCREWER, BECAUSE AN EXCESSIVE FORCE TOWARDS THE INTERIOR COULD SCRATCH THE PANEL EXTERNAL SURFACE. REGARDLESS THE PANEL THICKNESS, THE SUPPORT STRUCTURE MUST ANYHOW FORESEE HORIZONTAL CURRENTS LOCATED AT A MAXIMUM DISTANCE OF 3.5 M IN CASE OF POSSIBLE CUTS TO PERFORM DURING THE INSTALLATION, THE BORDERS MUST BE PROPERLY CLEANED FROM OFF-CUTS IN ORDER TO AVOID FOLLOWING DEGRADATION PHENOMENA. THESE OPERATIONS ARE OFTEN FORESEEN WHEN A CONNECTION AT AN ORTHOGONAL ANGLE MUST BE MADE BETWEEN THE WALLS.

2) FINISHING

THE USE OF THE WALL PANEL FORESEES A SERIES OF FINISHES THAT MUST BE CARRIED OUT IN ORDER TO RENDER THE COVERING WORK FUNCTIONAL AND AESTHETIC. THESE FINISHES, MADE WITH PREPAINTED STEEL OR ALUMINIUM PROFILES (NOT NECESSARILY OF THE SAME COLOUR OF THE PANEL) ARE OF TWO TYPES. THE FIRST ONE INCLUDES SUPPORT STRUCTURAL PROFILES, SUCH AS HORIZONTAL ELEMENTS ON THE GROUND AND ON TOP (WITH "U", "L", OR "Z" SHAPE ACCORDING TO THE DESIGN) OR INTERNAL VERTICAL ELEMENTS (IN GENERAL WITH "U" OR "L" SHAPE); THESE PROFILES ARE GENERALLY OF HIGH THICKNESS, OF 8/10 OR 10/10 ACCORDING TO THE SELECTED MATERIAL, AND THEY FORESEE AN ANCHORING TO THE PANEL OR TO THE BUILDING STRUCTURE THROUGH SELF-TAPPING SCREWS (DRAWING 16). THE SECOND TYPE INCLUDES PROFILES WITH NO STRUCTURAL FUNCTION, BUT THEY ARE NEEDED TO COVER THE JOINTS BETWEEN THE ANGULAR WALLS OR SPECIAL JOINTS, AND THEY ARE GENERALLY 5/10 THICK AND THEY ARE ONLY ANCHORED TO THE PANEL WITH STEEL RIVETS (DRAWING 17).

