

PREMIUM SERIES

TECHNICAL and **INSTALLATION**

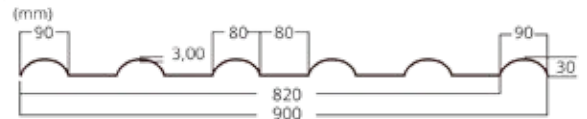
**PROOF
YOUR
ROOF**



PREMIUM SERIES



ROYAL	
Width:	900 mm
Length :	Times of 250 mm
Thickness:	2.5 mm, 3.0 mm
Working Width:	820 mm
Pitch Height:	30 mm
Weight:	4.75 kg/m ²
Head Lap:	250 mm
Purline Space:	750 mm



ROYAL MAXI	
Width:	1050 mm
Length :	Times of 220 mm
Thickness:	2.5 mm, 3.0 mm
Working Width:	960 mm
Pitch Height:	30 mm
Weight:	4.75 kg/m ²
Head Lap:	220 mm
Purline Space:	660 mm

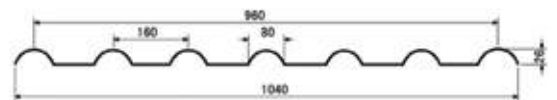


TABLE LENGTHS FOR ROYAL MAXI

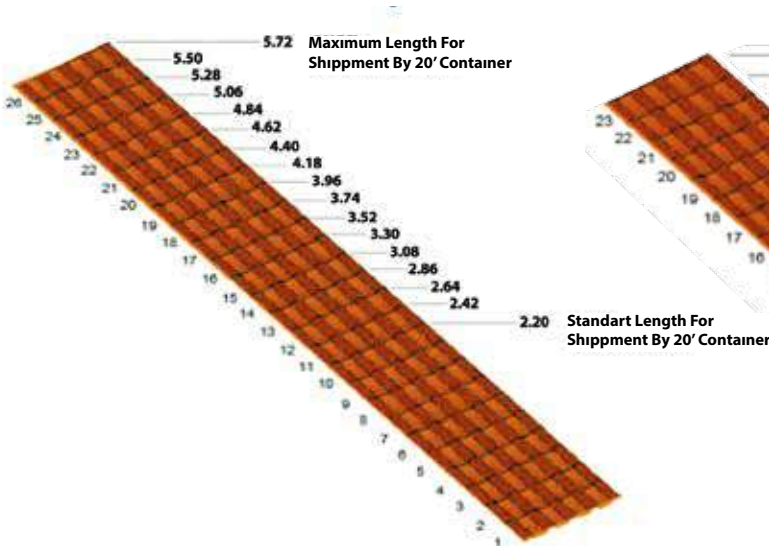
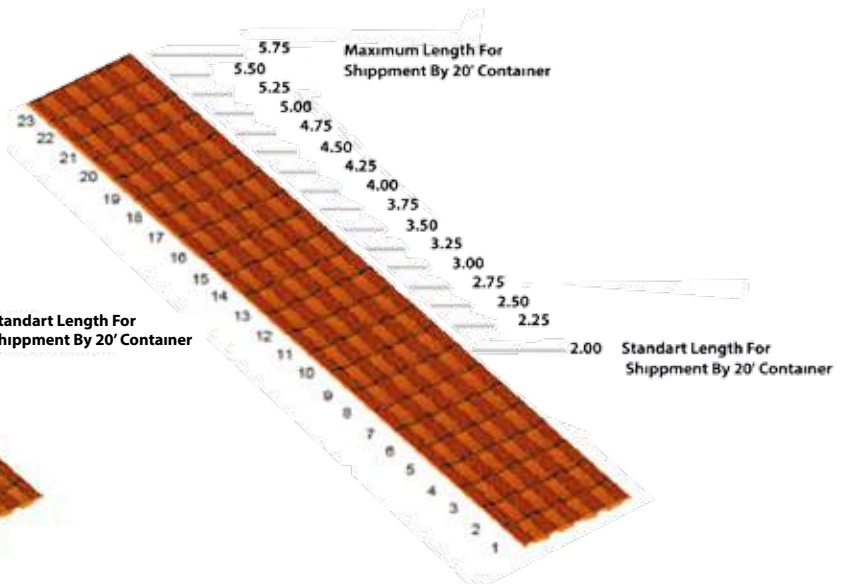


TABLE LENGTHS FOR ROYAL



PREMIUM SERIES ACCESSORIES AND FITTINGS



Royal Maxi Top Ridge



Royal Top Ridge



Side Ending Ridge



Headwall Flashing



Side Ridge



Barge Board



Eave Tile



3-Way Ridge



Valley Gutter



Caps



Saddle



Pvc Waterproof Ring

Self - Tapping Screw

PREMIUM SERIES PRODUCT FEATURES



Perfect Sound and Heat Insulation

Ondumit sheets insulate rain sound perfectly even under stormy weathers. With a very low thermal conductivity rate of 0,19W/mK they insulate the buildings without the need for extra insulation materials.



Fireproof and Nonflammable

Ondumit sheets are in the B1 flammability class. When contacted to flame, they don't ignite and spread it. They are self extinguished as soon as the contact with the flame source is cut. Ondumit increases the building safety compared especially to the materials containing bitumen.



Protection against Water and Humidity

Ondumit sheets have just a 0.02% of water absorption rate. Without the need for any extra material, they insulate the building against water.



Nondeformable in Acidic Environment, Non-corrodible

Ondumit sheets don't react with salt, alkali, and acids under 60% concentration.



Transportation and Installation are Cheaper and Easier

Ondumit's lightweight and panel shaped structure creates advantages through all steps from transportation to installation. More than 5000sqm of Ondumit can be carried in a single container. Ease of installation also decreases labor costs by saving time.

PREMIUM SERIES PRODUCT FEATURES

Warranted for 30 Years against Atmospheric Conditions. Fit for All Climates

ASA, produced by Samsung, which covers the surface of Ondumit sheets, provides perfect resistance both to sunlight and frosting. Ondumit sheets are warranted for 30 years against atmospheric conditions.



10 Times Lighter than Clay Tiles

Ondumit sheets are lighter than 5kg per sqm and therefore 10 times lighter than clay tiles. They are carried easily, installed fast, and lightens the weight of buildings.



Long Lasting Color Stability and Physical Resistance

Thanks to PVC and ASA raw materials in it, Ondumit is perfectly resistant to both colour and shape deformations. No such deformation was observed during the tests ranging from -40°C to +94°C.



Resistant to Impacts. Don't Break or Crack.

No breaking or cracking were observed during a test while which a 25kg weight was dropped onto an Ondumit sheet which had been installed with a purlin space of 1m.



Highest Load Capacity

Ondumit sheets, among all other alternatives, has the highest load capacity. They can carry more than 600 kg of spread weight on a sqm.



APPLICATION AREAS



DECK STRUCTURE

The surface of the deck should be smooth, the material of the deck should be of small deformation, the deck should be more than 12 mm thick (according to the purlin span). A 3-5 mm gap between two decks is essential for deformation. The waterproof rolls should be unrolled smoothly and vertically with accurate overlaps.



STEEL STRUCTURE

The angles of steel structure should be precisely controlled during processing, which will influence the pitch of the roof. The deviation of angles will cause an uneven roof. All the steels should be anti-corrosion treated.

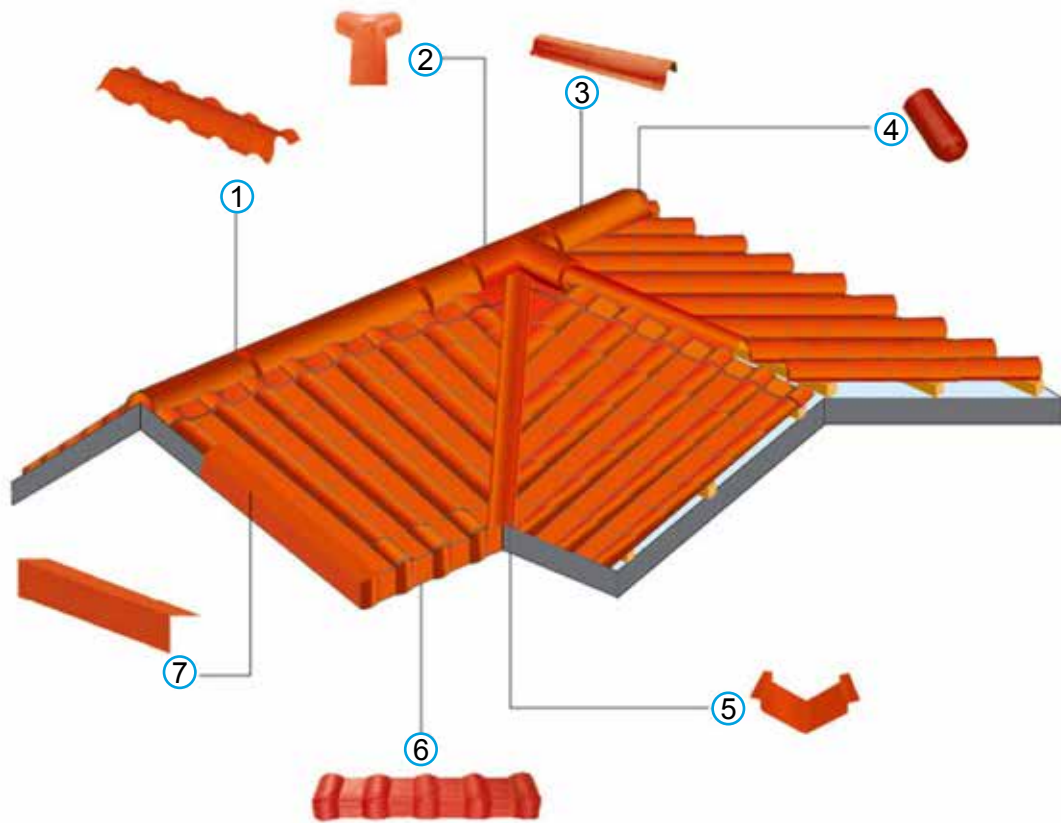


REINFORCED CONCRETE STRUCTURE

The underlay of concrete has no crucial influence on the evenness of the roof, while the embedded inserts and purlins should be very neat and in a plane. Both steel and wood embedded inserts and purlins should be anti-corrosion treated to extend the life of roof structure. Steel purlins should be welded to the steel embedded inserts or wood purlins can be nailed to the wood embedded inserts directly.

PITCH

Ondumit Premium Series are applicable to roof pitches from from 20° to 80°, For the pitch beyond this range, special measures should be taken during installation.



- | | | | |
|-----------------|---------------|---------------|---------------------|
| ① Top Ridge | ② 3-Way Ridge | ③ Side Ridge | ④ Side Ending Ridge |
| ⑤ Valley Gutter | ⑥ Eave Tile | ⑦ Barge Board | |

PRODUCT INTRODUCTION

- Ondumit roofing sheets are the result of the most advanced technology in the roofing industry.
- Ondumit sheets, thanks to its four-layer structure consisting of PVC, ASA and insulation layers, are manufactured for those who want their roof to last for life.
- While providing the buildings a modern and progressive outlook, Ondumit also resists physical and atmospheric impacts of utmost level.
- Ondumit sheets are suitable to use on any kind of roof, and they stand out with properties such as lightweight, ease of installation and ability to use without any maintenance.
- The surface layer, coated with ASA, provides a further insulation and therefore an economic gain compared to all other alternatives which require extra insulation materials.

INSTALLATION GUIDELINE

VENTILATION

Ondumit Premium Series Roof Tile is a kind of thermal-plastic, which carries out its best functions within a wide range of temperatures: from -20° to $+90^{\circ}\text{C}$. To prevent a roof temperature of more than 90°C , it is necessary to have ventilation space below the sheet itself and as a consequence, sufficient openings on the gutter line and the ridge.

The pitch and length of the roof is highly relevant to the functioning of ventilation. The more inclined the pitch and the shorter the roof, the more accentuated the movement of hot air. A long roof only slightly inclined, in order to have enough ventilation, needs to increase the air volume below the roof sheet.

LINEAR HEAT EXPANSION

No material exists which is not subject to dimensional alterations in the presence of notable changes in temperature. Ondumit synthetic roofing tile has a coefficient of linear expansion of $0.0000546/^{\circ}\text{C}$.

The linear expansion must be understood to be in the two longitudinal directions of the sheet: for example, if a 6000 mm sheet with a heat rise of 40°C has an expansion of 12 mm, this is overall and therefore 6 mm for each of the two sides.

HANDLING

During handling, the products must not be thrown rudely to avoid damaging or scratching the product surface. For single sheet longer than 8 m, enough supporting points are essential to avoid the cracking of tile.

FIXING

In order to allow normal linear heat expansion of the sheets, it is necessary to piece the sheet with a $\text{Ø}10$ mm drill bit, then fasten the sheets with $\text{Ø}6.3$ mm fittings.

We advise you not to use direct fixings without piercing the sheets with self perforating screws because doing so prevents any dilatation of the sheet. Do not use a hammer to put the screws in.

Original Ondumit supplied fixings must always be used.

INSTALLATION GUIDELINE

STORAGE

Store the tiles in dry and flat site with good ventilation. Products should be protected by coverings with good air permeability. Ridge units should be stored vertically.

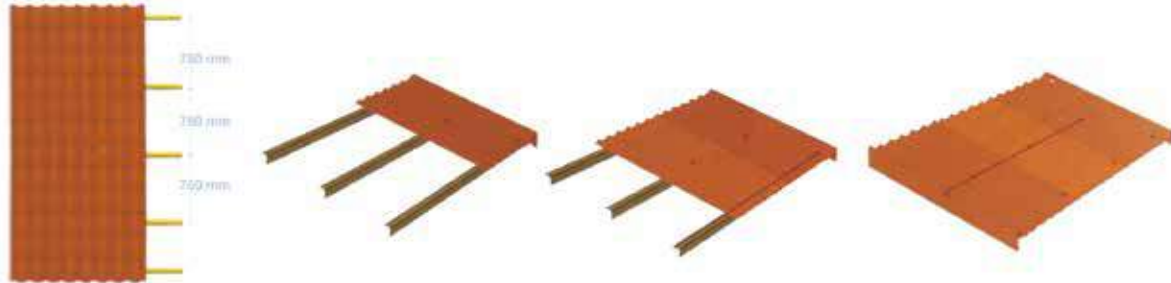
INSTALLATION TOOLS



PURLIN

1. Anti-corrosion treatment: Metal purlins should be coated with one layer of anti-rust paint and two layers of finishing coatings. Wood purlins should be coated with anti-corrosion or asphalt oil.
2. The top purlin should have 180 mm distance from the ridge line in order to install the ridge tiles.
3. The bottom purlin should have 50 - 70 mm distance from the eave.
4. The purlin space is 660mm. For Royal Maxi Tile and 750mm. For Royal Tile.

INSTALLATION OF MAIN TILE



Correct alignment is very important to no matter what kind of roof structure, only this can the sheets be assembled closely and straightly. The vertical line should be 50-70mm to the interior of sidewall for a gabled roof, and horizontal line 150mm to the bottom purlin .

Place the first sheet as close as possible to the vertical construction line, fix onto the first tile of the second vertical row, according to the supporting framework. The first row must under no circumstances be perforated. Fixings should be assembled at the wave crest of tile.

Particular care needs to be taken when aligning the first row because on long sheets even an off lining of a few millimeters for each sheet will cause problems. Then go on to do the second fixing, overlap the second sheet laterally onto the first and fix with self-tapping screws on the first lowest tile which corresponds to the overlap.

To keep the correct alignment of the fixings we recommend the use of a line of reference fixed to the extreme of the rafter. Continue in the same way with the third and fourth sheets, and re-check the condition of the four sheets, then fix on every other tile. Assemble the sheets in the same way until the final one, if necessary, the width of the final sheet may have to be cut accordingly.



For the second row we recommend as always that you begin from the left with a sheet that is cut in half lengthways (three rows of tiles). This allows you to continue with a horizontal overlap of staggered rows, and as such you avoid a crossover of four sheets on the overlap.

The remaining sheets cut at the beginning are not wasted as they can be used at the end of the roofing as adjustments.

Complete the opposite side in the same way. Line up the vertical rows of tiles on the opposite side with those of the first, in order to assemble the ridge tile.



For the triangle side of a four slope roof, the first sheet should be started from the middle, then continue to both left and right directions. Cut the sheets along the hip line to assemble diagonal ridge.

PREMIUM SERIES ACCESSORIES INSTALLATION



TOP RIDGE

The installation of ridge tile should begin from one side. For the first tile, it should be half cut to avoid the crossover of four sheets on the overlap.

Self-tapping screws with length of 75 mm and diameter of 6.3mm will be needed to fix the ridge tile into the main tile. Take care not to fix the ridge near to the edge and therefore not to have infiltration problems.



SIDE RIDGE

As to the installation of side ridge, it should be aligned to keep straight with the hip line. Self-tapping screws with length of 75 mm and diameter of 6.3 mm are needed to fix the prefabricated edges to the main tile. Side ridge tile must be installed from bottom to top with an overlap of 50 mm.



SIDE ENDING RIDGE

After finishing the assembling of side ridge, insert the side ending ridge piece into the bottom end of side ridge, and fix to the side ridge by rivets.



THREE-WAY RIDGE

A three-way connection is used as the joining element between the top ridge and the side ridge one for a four slope roof.



VALLEY

The corner created by joining two converging pitches is called the valley. Position and fix two parallel strips, 240 mm from the centre of the corner, parallel to the corner of the valley. Fix the valley gutter made in synthetic resin panel or metal on the strips using self-tapping screws or nails. Galvanized valley roll can also be used for valley gutter. Position it on the corner starting from the ridge line, setting it down carefully on the slab. Begin to fix the extreme edges of the valley on the strips using self-tapping screws or nails. The sheets corresponding to the valley line must be pre-shaped before positioning, but leaving the possibility to hang them again, after fixing, to have a perfectly straight valley line.



CONNECTION WITH WALL

Use sidewall flashing made in synthetic resin panel or metal, stick the flashing board to the wall and tiles by self-tapping screws or nails and seal the higher end of flashing with silicon sealant.

CONNECTION WITH CHIMNEYS

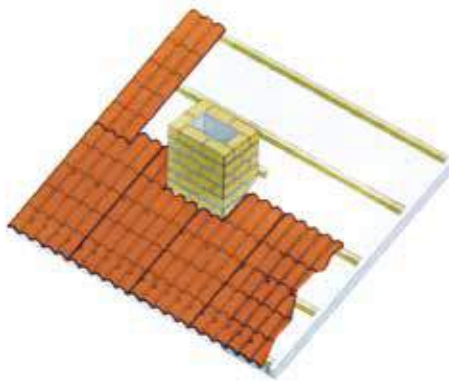
Assemble the sheets from one side normally until they get close to the chimney. Cut the sheets around the chimney accordingly.

Add extra purlins next to the chimney if necessary to fix roof sheets.

Use synthetic resin or metal flashings, stick the flashing board to the wall and tiles by self-tapping screws or nails and seal the higher end of flashing with Silicon sealant.

Flashings are recommended to be processed at site by metal board, as the roof pitches and position of chimneys are variable for different roofs.

Aluminum or galvanized rolls can also be used for the connection between tiles and chimney. Stick the rolls to the sheets all around the chimney. Fix the other end of rolls to chimney by nails and then seal the higher end.



CONNECTION WITH SKYLIGHT

The sheets must be assembled in the usual way until getting close to the skylight.

Take exact measurements of the skylight, make an exact slot on the sheet with a flexible polisher or a portable thin-tooth saw.

Overlap the lead hinge for the lower connection on the tiled sheet and shape it with your hands to fit the sheet well.

Then, place the shaped sheet, fitting it well to the side and upper connections and overlap in part, with extremity of the inferior elements, the lead hinge on the lower side of the skylight.

