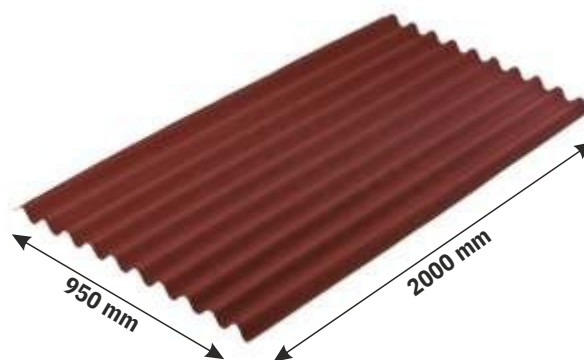




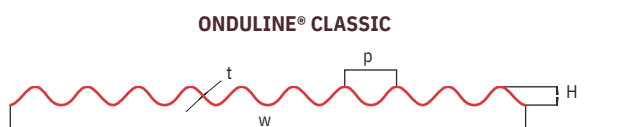
ONDULINE® CLASSIC

ONDULINE® is the original corrugated roofing system, an extremely tough lightweight roofing and wall cladding system. Extra resistance to hot and humid climates in it's Drversion.



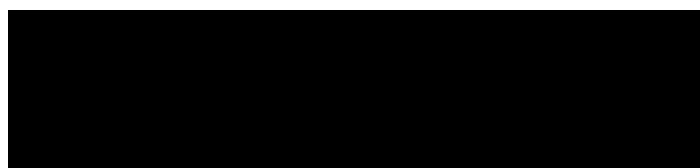
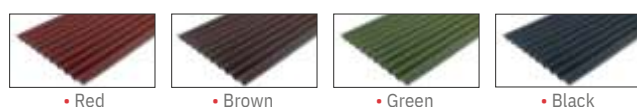
- Lightweight
- Waterproofing
- Reduces Rain Noise
- Thermal-comfort
- Wind Resistant
- Green Products

Technical Characteristics



Length	2000 mm
Width (W)	950 mm
Thickness (T)	3 mm
Height of corrugation (H)	38 mm
Pitch of corrugation (P)	95 mm
# Corrugations per sheet	10
Gross surface	1.90 m ²
Net surface	1.56 m ²
Weight	3.4 kg/m ²

Colours



Installation principles

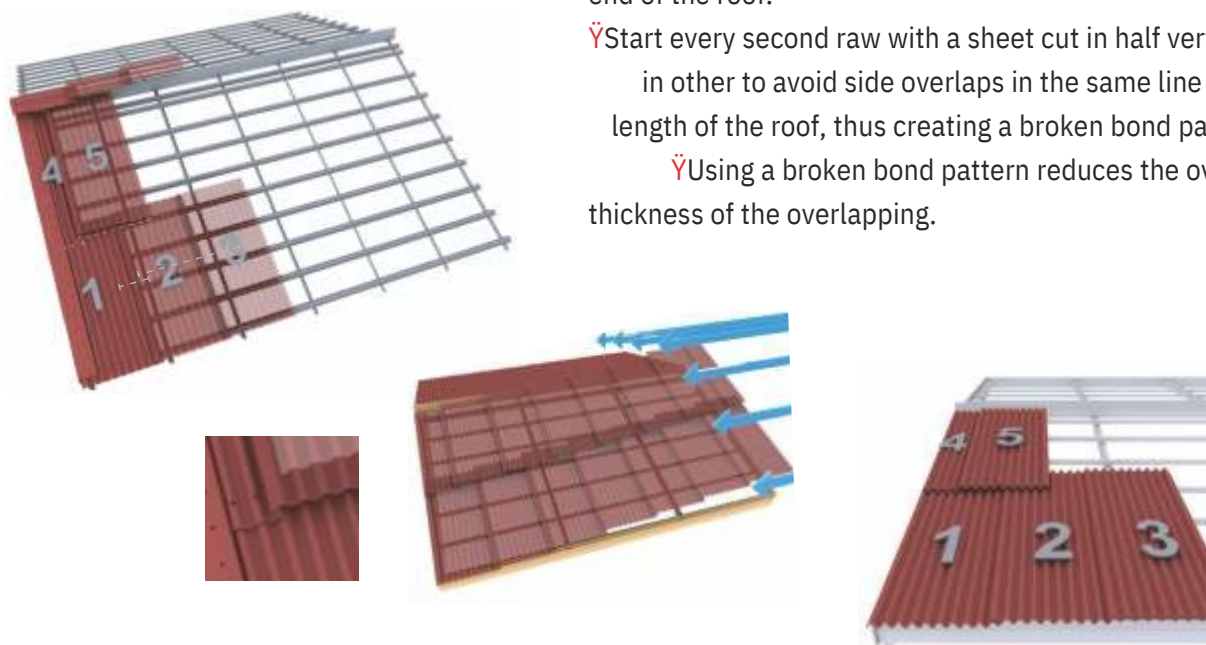
SHEET LAYOUT

GENERAL

Start fixing sheets at the opposite to prevailing winds end of the roof.

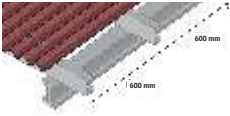
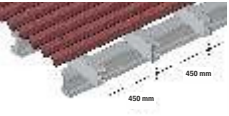










Start every second row with a sheet cut in half vertically in order to avoid side overlaps in the same line on all length of the roof, thus creating a broken bond pattern.

Using a broken bond pattern reduces the overall thickness of the overlapping.



OVERLAPPING RULES

Following the overlapping rules is important to ensure a total waterproofing over time. Side and end overlapping vary according to the roof pitches.

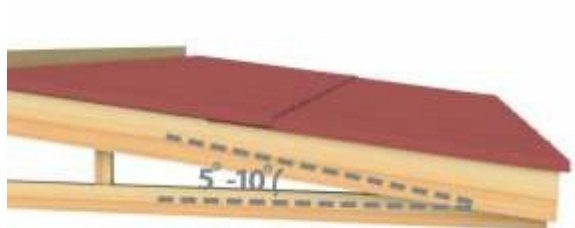
ROOF PITCHES	> 15° (over 27%)	10° - 15° (17% - 27%)	5° - 10° (9% - 17%)
Maximum purlin distance	60 cm 	45 cm 	Full deck or close batten 
Overhang at eaves	7 cm 	7 cm 	7 cm 
Minimum end overlap	17 cm 	20 cm 	30 cm 
Minimum side overlap	1 corrugation 	1 corrugation 	2 corrugations 

WOOD FRAME WITH ROOF PITCHES 5° - 10° (9% - 17%)



FRAME

For roof pitches 5 to 10°, ONDULINE sheet shall be supported by full deck frame or close battening.



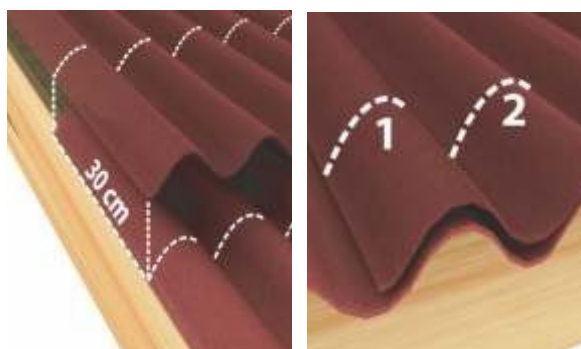
FIXING

- 16 nails should be hammered per sheet.
- 8 nails at each corrugation at the end overlap or eaves.
- 2 intermediate rows of 4 nails.
- Screws should be drilled at each corrugation at the end overlap and side overlap. To have a long-lasting and guaranteed roof, it is mandatory to follow the nailing order and pattern.

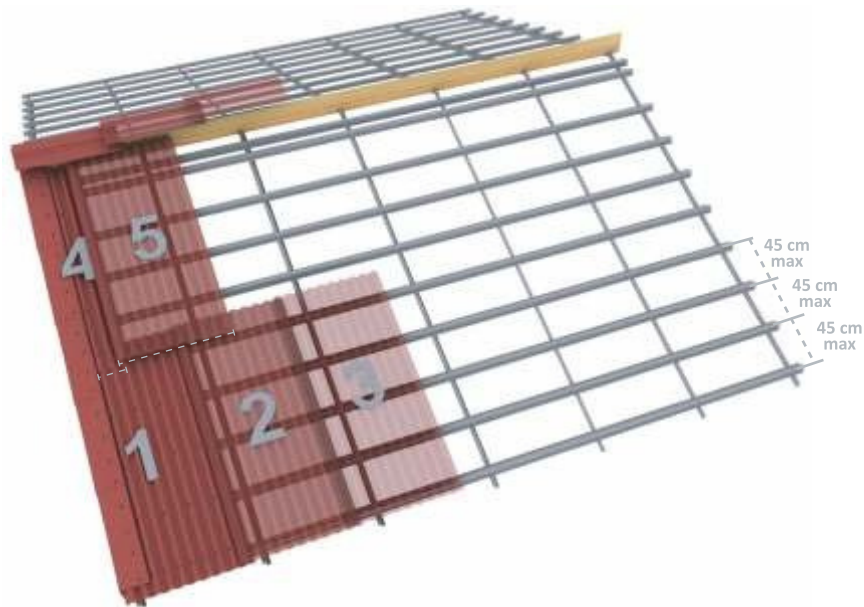


OVERLAP

- For the end overlap, use minimum 30 cm.
- For the side overlap, use minimum 2 corrugations.

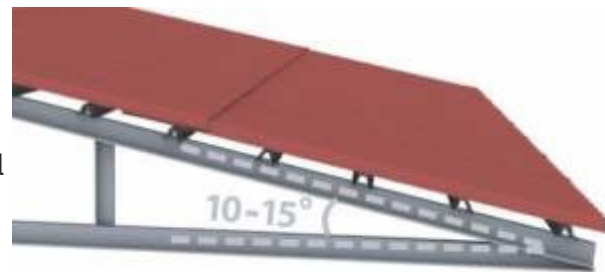


METAL FRAME WITH ROOF PITCHES 10° - 15° (17% - 27%)



FRAME

For roof pitches 10 to 15°, ONDULINE sheet shall be supported by purlins with maximum width distance of 45 cm.



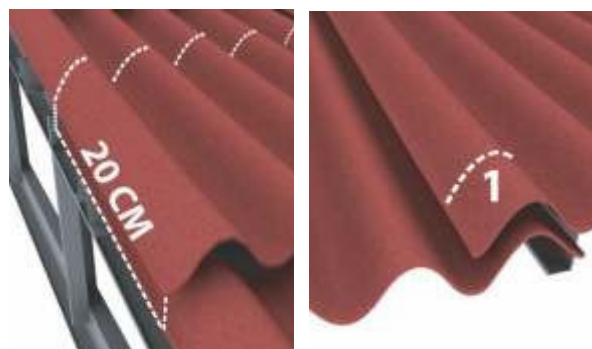
FIXING

- 14 nails should be hammered per sheet.
 - 5 nails at each corrugation at the end overlap or eaves.
 - 3 nails at first intermediate purlin of the sheet.
 - 3 nails at second intermediate purlin of the sheet.
 - 3 nails at third intermediate purlin of the sheet.
- Screws should be drilled at each corrugation at the end overlap and side overlap. To have a long-lasting and guaranteed roof, it is mandatory to follow the nailing order and pattern.



OVERLAP

- For the end overlap, use minimum 20 cm.
- For the side overlap, use minimum 1 corrugation.



METAL FRAME WITH ROOF PITCHES OVER 15° (>27%)



FRAME

For roof pitches over 15°, ONDULINE sheet shall be supported by purlins with maximum width distance of 60 cm. In particularly high conditions of temperature and humidity please ask our technical service.



FIXING

- 11 nails should be nailed per sheet.
- Every alternate corrugation should be nailed at eaves.
- 1 corrugation out of 2 should be nailed at 2nd and 3rd intermediate purlin.
- To have a long-lasting and guaranteed roof, it is mandatory to follow the nailing order and pattern.



OVERLAP

- For the end overlap, use minimum 17 cm.
- For the side overlap, use minimum 1 corrugation.



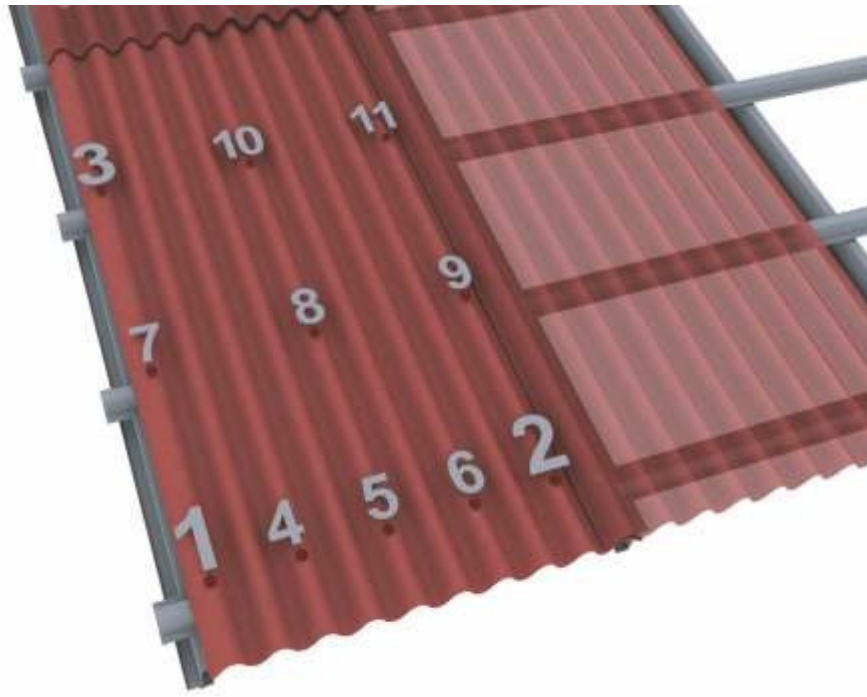
DETAILED FIXING STEPS

To have a longlasting and garanted roof, it is mandatory to follow the fixing order and pattern.

! Use only ONDULINE recommended fasteners

Fix every corrugation at eaves, sheets overlaps and either side of vertical joints.

Fix every corrugation on intermediate purlins. Fastening must always be carried out at the top of corrugation.



1 - Select the correct type of drill screw to suit purlin type.

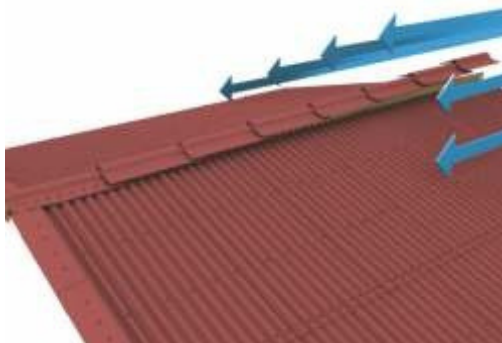
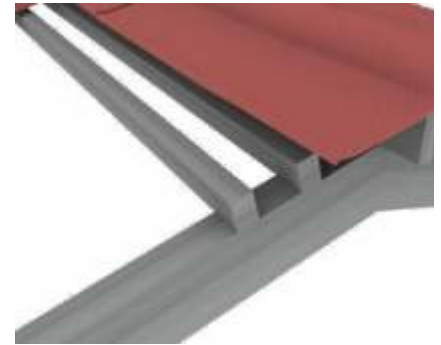
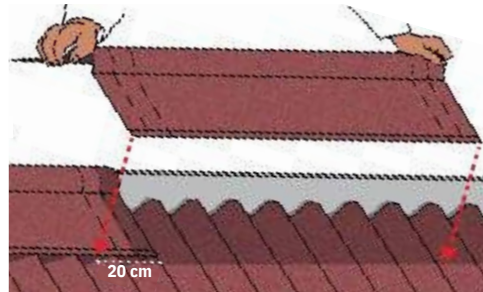
2 - Drive the drill screw through the top of the corrugation.

3 - Be careful to avoid over compressing of the corrugation.



RIDGES

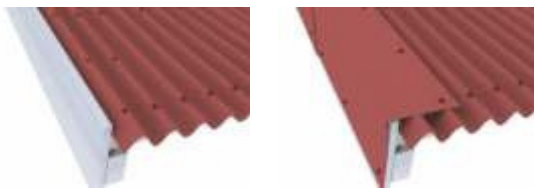
- Use a ridge plank to support the ridge.
- 8 screws should be drilled per ridge.
- Add an extra purlin when necessary if, the distance between the last purlin and the ridge is too wide.



- Start fixing the ridge element opposite to the prevailing winds end, of the roof.
- The ridge element should overlap the ONDULINE® sheet at minimum **20 cm**.
- Lay ridge elements with a minimum overlap of **20 cm**.

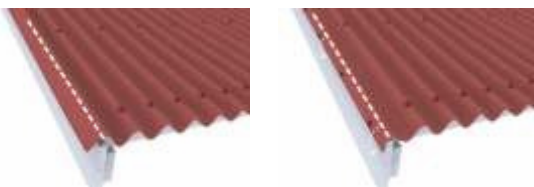
VERGES

Optimize aesthetic, waterproofing, and wind uplift resistance by using a verge element. Fix it first into the sidewall, then on the top of the corrugation.



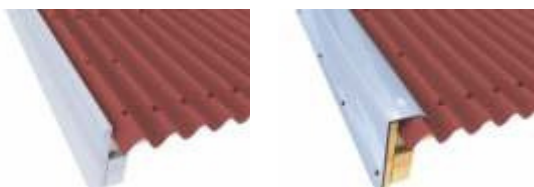
COVERING WITH AN ONDULINE® VERGE ELEMENT

- Fasten bargeboard level with top of ONDULINE® sheet.
- The ONDULINE® verge is then overlaid and nailed into position.
- It is possible to use a ridge element for this purpose.



COVERING WITH AN ONDULINE® SHEET CORRUGATIO

- Fasten bargeboard to reach the underside of ONDULINE® of overhang corrugation.
- Fold down and nail into position.



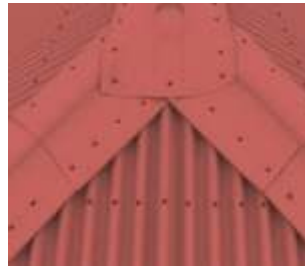
COVERING WITH A METAL FLASHING VERGE UNI

- Fasten bargeboard level with top of finished ONDULINE® roof.
- Covering with the metal verge unit is then, overlaid and nailed into position.

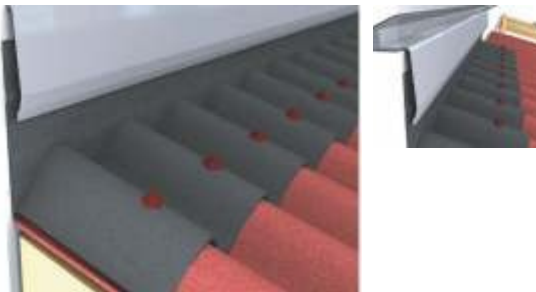
HIP DETAIL



- Fix the hips before the ridge element.
- Overlay with the hip elements and fix it as shown on the picture.

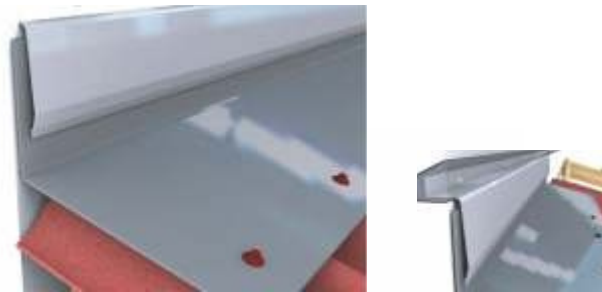


END WALL ABUTMENTS



ONDULINE ABUTMENT APRON FLASHING

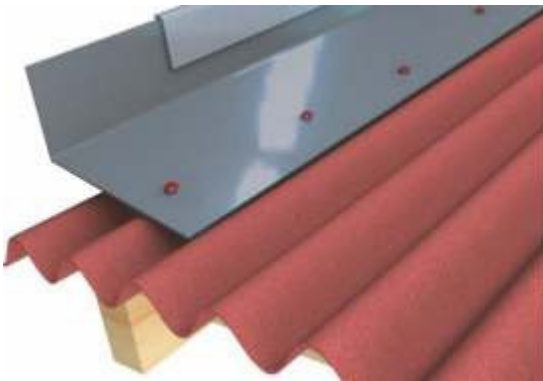
- Use ONDULINE® pre-formed apron flashing to seal end the wall abutment enabling the ventilation.
- Use a separate cover flashing for the wall.



3R D PARTY FLASHING

- Use ONDULINE® pre-formed plate of metal to seal end wall abutment enabling the ventilation.
- Use a separate cover flashing for the wall.

SIDE WALL ABUTMENTS



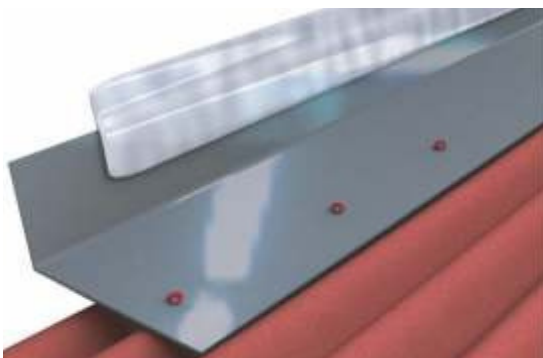
HARD COVER FLASHING TO WALL

- Use a pre-formed plate of metal flashing to seal side wall abutment. Take into consideration the possible dilation while drilling.



ONDULINE® FLASHING TAPE TO WALL

- Use a pre-formed plate of metal flashing to seal side wall abutment.
- Take into consideration or possible dilation while drilling.
- Use ONDULINE® flashing tape (ONDUBAND®) as cover flashing to the wall.

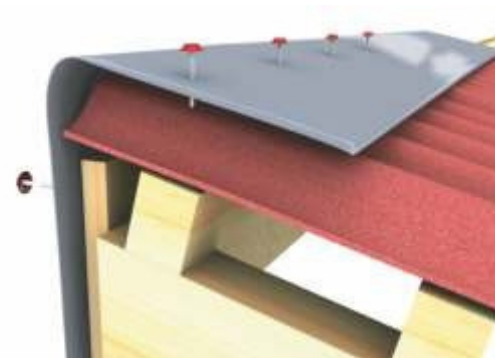


END ROOF



USING ONDULINE® RIDGE UNIT

ÿFit ridge board and purlin. The ONDULINE® ridge unit is then overlaid and nailed or screwed into position.

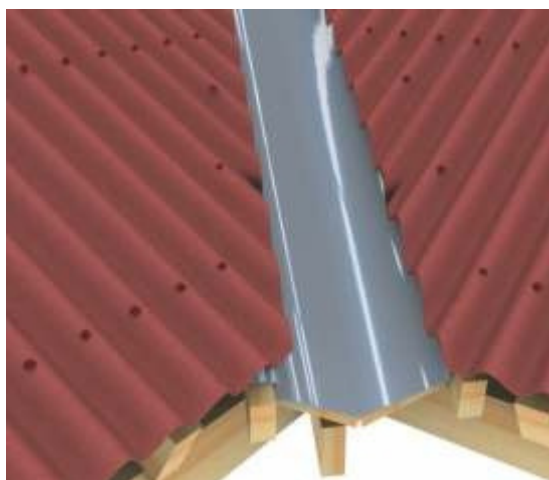


USING A PIECE OF METAL RIDGE ELEMENT

ÿFit metal ridge element and purlin. The metal ridge element is then overlaid and nailed or screwed into.

VALLEY

- Fix valley board / trim purlin and line with metal pre-formed unit.
- The vertical valley depth should be sufficient to allow the water to flow.
- The sheets are cut across (parallel to the valley line). The overhang is max 4 cm.
- You can use ONDULINE® valley or a metal valley.



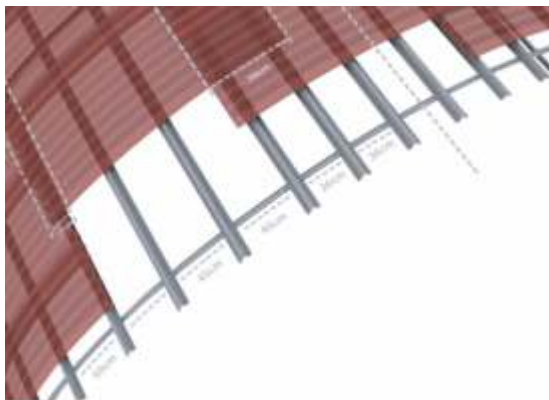
SKYLIGHT - ONDUCLAIR® PC



- Perfect complement to the ONDULINE® corrugated sheet.



CURVED ROOFS / DOMES



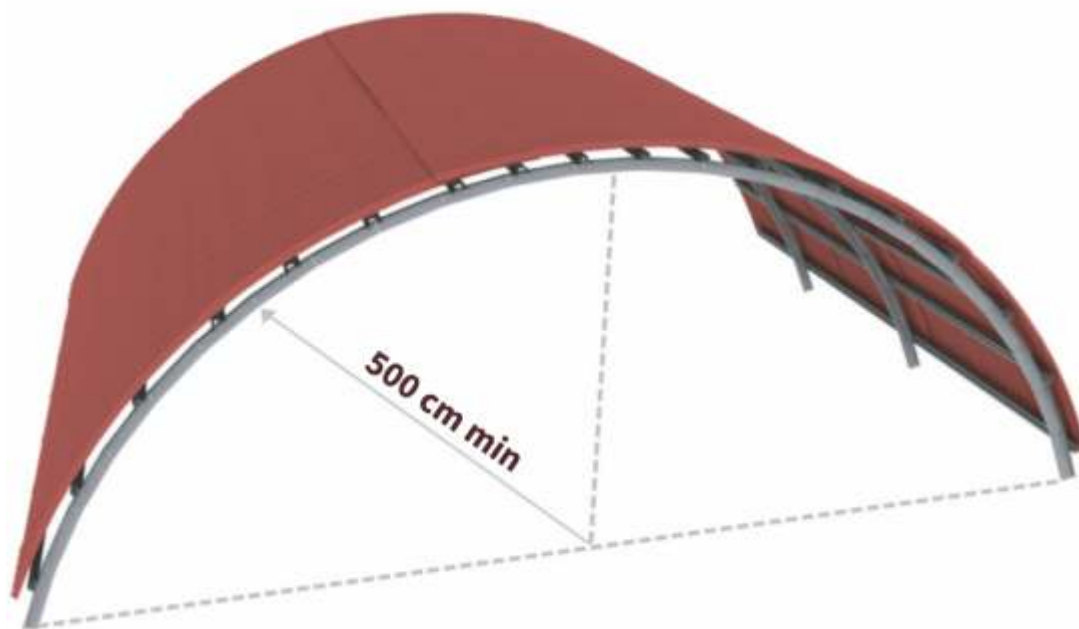
When the frame design is established, continuously setup the lines courses to get the right positions of purlins :

- Top dome : (pitch < 17%) - maximum span is **36 cm**.
- 17% < pitch < 27% - maximum span is **45 cm**.
- Pitch > 35% - maximum span is **60 cm**.

A

t rooftop (slope = 0%)

- Avoid sheet overlap (lay the top sheet centered in its middle).
- No sheet overhang more than **7 cm**.
- Side lap: **2 corrugations**.



An **Ondura** Group Company



Onduline Building Materials (M) Sdn. Bhd.

Factory Address: 27715, Mukim 1,
Tingkat Perusahaan Enam,
Kawasan Perusahaan Perai,
13600 Perai, Pulau Pinang,
Malaysia.
Telephone: +604 398 7398 & 7399 (ext. 123)

sea.onduline.com/en



Onduline V. Jan 2021

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Lightweight Roofing Systems