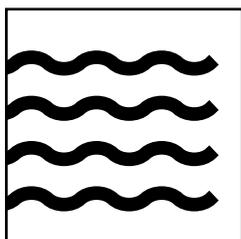


## Processing directives

### **R.CARBONAT Welle Sinus and Trapez 76/18**

#### **Thickness 0,5 - 2,8 mm**



#### **Properties**

 **R.CARBONAT Welle** corrugated sheets are extruded from high impact Polycarbonate. They do have a very high light transmission and impact resistance.

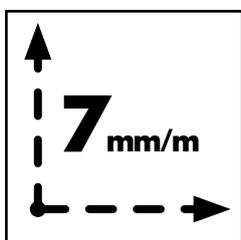
 **R.CARBONAT Welle**-sheets provide extra-ordinary UV- and hailstone resistance at low weight.

Sheets with one-side extruded grain offer visual cover. Transparent coloured sheets adds good sun-protection and the option to install decorative glazing.



#### **Storage**

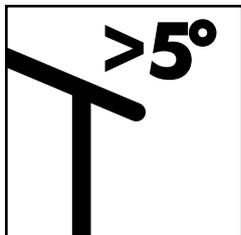
 **R.CARBONAT Welle**-sheets have to be stored dry and on flat underground. Unpacked sheets are not allowed to be stored in direct sunlight (burning-glass-effect). Do not store the material in hot air or near sources of heat. Avoid water- and heat-accumulation in the surrounding. Sheets should be stored inside and covered with white PE-film. Maximum stack-height is three pallets.



#### **Expansion**

Expansion of the Material by heat and humidity is to expect with approx. 7 mm/m and has to be taken account with during installation.

Maximum installation-length is 7000 mm.



### Sub-construction

The sub-construction can be made in steel, aluminium or wood, that is free of distortions. The sheets should be installed overlapping and on top of load-bearing structures (purlins or crossbars) in downgrade or stream direction.

Purlins have to be installed in distances that correspond with the needed and given wind- and snow-load in the surrounding country. Wherever the sheets overlap sidewise and edgewise, the corners have to be cut out to avoid a 4-fold overlapping. The corners of the middle sheets need to be cut that way the sheets can lay side by side. Between the bias cutting edges a margin of 5-10 mm is recommended.

### Purlin spacing (maximum support distance):

Roofing at 75 kg/m<sup>2</sup> wind-/snowload

Thickness 0,5 mm: max. 400 mm

Thickness 0,8-1,3 mm: max. 850 mm

Thickness 2,5-2,8 mm: max. 1200 mm

### Horizontal overlap:

At Roof Pitch 5°-15°: min. 200 mm

At Roof Pitch over 15°: min. 150 mm

Wall area: 100 mm

The Top-Side of the subconstruction should be covered by an aluminium tape or painted with white emulsion paint in order to avoid stress cracking and heat accumulation. To avoid cracking of the sheets, the painting of the sub construction must be complete dry. (Attention: Solvent-containing colors take up to six weeks until being complete dry).

 **R.CARBONAT Welle** corrugated sheets have to be installed with a roof pitch of at least 5° (complies 9 cm/m).

At higher roof pitch the self-cleaning effect of the sheets is higher as well.

Sheets with grained surface need to be installed with structured side face down.

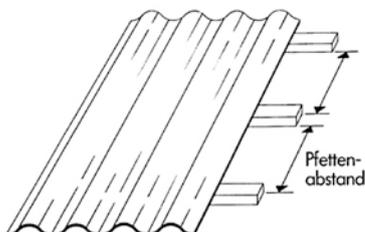
Top-side of the sheets ist the UV-protected side (see printing at the sheets):

Fastenings for  **R.CARBONAT Welle** corrugated sheets in roof applications are placed at top of the waves. Only in vertical glazing fastenings at bottom of the waves are possible.

To allow the thermal expansion of the sheets sufficient bigger drill-holes for the fixing screws are highly recommended as well as good sealing of the screw fitting. To screw  **R.CARBONAT Welle** sheets onto the sub-construction, we recommend wood-screws or hook-clamps in combination with sealing washers and rain cones. Fixing with calottes is recommended as well.

Roof Fixing of  **R.CARBONAT Welle** sheets in thickness 0,5–1,3 mm has to be done with spacers towards the underconstruction.

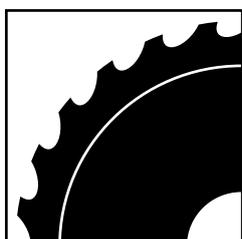
Sheets from 2,5 mm upwards are fixed without spacers.





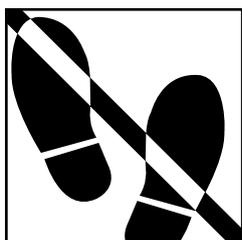
### Drilling

For drilling of  **R.CARBONAT Welle**-sheets use twist or conical drills.  
To avoid stress cracking at the drill-holes smooth drill edges are needed.  
Diameter of the drill hole should be 2,5 time of the screw diameter.



### Sawing

To saw the sheets use high speed circular saws (rotational speed > 4000 U/Min.) and saw blades unset, fine-toothed and with hard metal fitted teeth.  
 **R.CARBONAT Welle**-sheets need to be cut with depth guard and on plane surface. While sawing, care must be taken that the sheets are secured against flutter and vibration.



### Roof access

Step on  **R.CARBONAT Welle** corrugated sheets is only allowed on people loading bearing elements of the sub-construction in order to avoid damage of the sheets.



### Cleaning

For cleaning Water and a mild soap-solution are recommended.  
Abrasive agents are not to use to avoid scratches.  
All washing and cleaning agents need to be tested for acceptance before use.



### Warranty

We provide for  **R.CARBONAT Welle**-sheets warranties for UV-resistance, light-transmission and hailstone-resistance according to our warranty-conditions.