# PALRUF® Rooflights Technical Guide

## Profile: 177/51 (5,6 waves)

### Profile Drawing

<table>
<thead>
<tr>
<th>Product name</th>
<th>Drawing</th>
</tr>
</thead>
<tbody>
<tr>
<td>177 / 51 - 920</td>
<td><img src="image1.png" alt="Drawing" /></td>
</tr>
<tr>
<td>177 / 51 - 1020</td>
<td><img src="image2.png" alt="Drawing" /></td>
</tr>
<tr>
<td>177 / 51 - 1100</td>
<td><img src="image3.png" alt="Drawing" /></td>
</tr>
<tr>
<td>177 / 51 - 1170</td>
<td><img src="image4.png" alt="Drawing" /></td>
</tr>
</tbody>
</table>

### Profile Dimensions

<table>
<thead>
<tr>
<th>Profile (mm)</th>
<th>Thickness (mm)</th>
<th>Length (m)</th>
<th>Overall width (mm)</th>
<th>Cover Width (mm)</th>
<th>Side-Lap (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>177 / 51 - 920</td>
<td>0.8 – 2.0</td>
<td>1.5 – 11.8</td>
<td>9200</td>
<td>885</td>
<td>5.8</td>
</tr>
<tr>
<td>177 / 51 - 1020</td>
<td>0.8 – 2.0</td>
<td>1.5 – 11.8</td>
<td>1020</td>
<td>885</td>
<td>13.2</td>
</tr>
<tr>
<td>177 / 51 - 1100</td>
<td>0.8 – 2.0</td>
<td>1.5 – 11.8</td>
<td>1100</td>
<td>885 / 1062</td>
<td>20.6 / 4.8</td>
</tr>
<tr>
<td>177 / 51 - 1170</td>
<td>0.8 – 2.0</td>
<td>1.5 – 11.8</td>
<td>1170</td>
<td>1062</td>
<td>9.2</td>
</tr>
</tbody>
</table>
### Load / Span Data

<table>
<thead>
<tr>
<th>Load (kg/m²)</th>
<th>1.0 mm</th>
<th>1.2 mm</th>
<th>1.5 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mid Field</td>
<td>End Field</td>
<td>Mid Field</td>
</tr>
<tr>
<td>50</td>
<td>1600</td>
<td>1200</td>
<td>1800</td>
</tr>
<tr>
<td>75</td>
<td>1500</td>
<td>1125</td>
<td>1700</td>
</tr>
<tr>
<td>100</td>
<td>1400</td>
<td>1050</td>
<td>1600</td>
</tr>
<tr>
<td>125</td>
<td>1300</td>
<td>975</td>
<td>1500</td>
</tr>
<tr>
<td>150</td>
<td>1200</td>
<td>900</td>
<td>1400</td>
</tr>
</tbody>
</table>

- The specified dimensions do not supersede the requirements of local construction codes.
- The maximum purlin spans are based on continuous beam calculation model and practical testing.
- The criterion for allowed deflections is L/20.
- The mentioned load refers to both wind and snow loads.
- Minimum recommended slope – 10%.

### Panel Length

- Maximum recommended panel length - 7.0 m.
- Recommended longitude overlaps of 200mm above purlin.
- Each panel to extend 100mm over the fixings line on the purlin.
- Panels should overhang Min. 50mm and Max. 150mm beyond the last fixings line.

### Curved Roof

- Minimum curving radius 20.0 m.

### Positioning

- Do not install PALRUF over existing roof or ceiling, without prior consultation with the manufacturer PALRAM.
- For contact details please refer to PALRAM's official website at www.palram.com.
- Make sure the UV protected side faces out.
- Side-lap of PALRUF panels must be installed against the primary direction of rain.
- The PALRUF panels must be located and installed without any stresses.
  - Do not pull, stretch or force the sheets when the profiles are not perfectly matched.
Screws and Washers Specification

- Crest fixing: Self-drilling 5.5mm x 90mm (3.5") screw + matched metal crest rider (Storm washers) with EPDM gasket.
- Side Stitching: 5.5mm x 25mm (¼"x1") Stitching Screws (Grommet seals) with EPDM seal.

Fastening

- Apply sealing tape over the PALRUF panel side-lap corrugation crests, where covered by the next panel.
- Apply sealing tape along the bottom and top End-lap (if there is), along screws centerline or two tapes on both sides of screw centerline.
- Pre-drill 10mm holes at crests where screws are positioned.
- Start fastening the screws from the first side-lap (left) through the pre-drilled holes (3).
- Start fastening the screws on the lower edge purlin (End-lap), on each corrugation crest (1).
- Fasten screws at the internal purlins, on the side-lap and on every second corrugation crest, starting at the same side (2, 3).
- Fasten screws at the upper edge purlins, at each corrugation crest, starting at the same side (1, 3).
- Do not over-tighten!
- Fasten the stitching screws at every 300-400 mm (4).

Fastening Location

(1) (2) (3) (4)
**Important Notes**

- **IMPORTANT**: Do not install Palruf over existing roof without proper ventilation of the air trapped between them.
- Use only PALRAM approved accessories, including EPDM rubber washers, silicones, sealing tape, closure fixtures etc.
- For clear PALRUF onto wooden purlins, apply white acrylic paint, or aluminum tape, in order to prevent over-heating of the purlins.

**Cutting Tips**

- Use jigsaw or circular saw with fine tooth blades.
- Apply high blade speed with moderate feeding rate.
- Support the sheets near the cutting line.
- Clean the dust and cutting chips after cutting.

**Fastening Tips**

- Use adjustable electric screwdriver.
- The screw must be installed perpendicular to the PALRUF sheet.
- **Important**: Do not over-tighten.

**Safety**

- Do not step directly on the panel.
- Use stepping boards.
- Work according to local safety regulations.

**Handling and Storage**

- Store in a dry shaded place, protect from direct sunlight and rain.
- Cover PALRUF stack with white opaque covering.
- Avoid covering the sheets with heat absorbing materials.
- Avoid contact or environment of chemicals.
- Protect the sheets from any physical damage.
- After installation keep sheets free of dust and soot.
- Sheets should be cleaned frequently with a water hose.

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