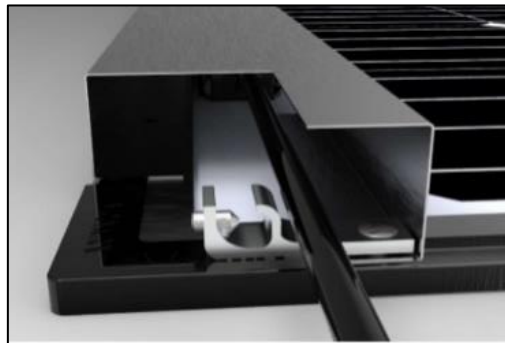# Sunman eArc Panel Tech and Install Guide

Key features:

- ❖ **Lightweight** - 5.6kg for 295W panel and 6.6kg for 355W panel.
- ❖ **Front Junction Box** – Cabling run on the front within the cable duct.
- ❖ **Integrated Cable Management** - factory fitted front CABLE DUCT enclosing EARTHING LUG.
- ❖ **Reduced Logistics Cost** - 50 panels/pallet.
- ❖ **Quick installation –** 50% quicker, no traditional racking needed.
- ❖ **Aesthetic Design** - easily integrated on curved surfaces.
- ❖ **Metal Roof** – only metal roof, not applicable to tile roof.
- ❖ **Reduced BOS costs** - no traditional racking needed, roughly save up to 6c/W on racking.
- ❖ **Increased Rooftop Safety** - no longer need to handle heavy panels and railing.

Residential Applications:

Unconventional residential roof structures, such as:

- ✧ Pergolas;
- ✧ Patios;
- ✧ Verandas;
- ✧ Carports, etc.

Commercial Applications:

Commercial and industrial roof structures, such as:

✧ Roofs that cannot bear the weight or uplift associated with traditional glass panels.
✧ Agricultural sector roofs (Farm shelters).
✧ Weak commercial roofs (Old factory/industrial roofs).
✧ Roofs with dead load, etc.

Installation Tutorial

Ensure before installation you have read the general, handling, installation and fire safety related bulletins in the provided Sunman 'eArc PV System Installation Manual'.

Special material/tools needed:

1) **Silicon Adhesive (**Tonsan 1527**)** - This silicon is a must use, to glue the panels to the metal roof sheet.
   Sold at OSW (item code: SMN-Silicone) and see specification sheet **here**;
2) **Sausage Caulking Gun** – This is the tool to use to apply the silicon adhesive.
   Sold at most tool shops which supply goods for handyman, e.g: **here**;
3) **Isopropyl alcohol (IPA)** - Cleaning material needed to ensure a clean binding surface for the silicon and panel. Available at local supermarket or hardware store, e.g: **here**.
4) **Garden pressure sprayer kit** - This is a great tool to quickly apply the IPA to the roof. Available at any hardware store, e.g: **here**.
5) **Outdoor heavy-duty broom**.
   Helpful cleaning tool to quickly scrub the cleaning agent on the roof. Note only in areas where panel is being laid. Available at local supermarket, e.g: **here**.

Installation Steps:

1) ALL METAL BLUESCOPE COLOR BOND ROOFS are suitable for installation of eArche panels, see note from manufacturer here. Roof interfaces compatible include corrugated, klip-lok, Kingspan, etc.).
2) The day before installation, plan and mark out the panel layout. This is a critical step to ensure everything is organized and the productivity of manpower is high. **NOTE: Do not install panels over roof screw lines, always design around these screws on the roof.**
3) Sunman recommends a production line style installation process with the optimal number of installers being 5. One person cleans, 1 person lays silicon, 2 people lay panels and 1 replenishes and repeat for each panel. Note only clean the sections where silicon/panel is being laid.
4) Once draft panel layout is ready execute the installation procedure in step 3. The guide diagram for laying out silicon for different roof types and panels can be found here.
5) The silicone should be drawn out at an approximate dimension of 8mm wide and 5mm high.
6) If you're not sure about any of the above steps see Sunman's quick and comprehensive manuals. Alternatively contact Sunman's helpline: 0402 064 445 or OSW for any other inquiries.

See installation example for 31.7kWp School Project here.