

EcoOnline™

OKU Panel Technical Service Bulletin 1

Important updates for systems sold prior to 05/07/2013



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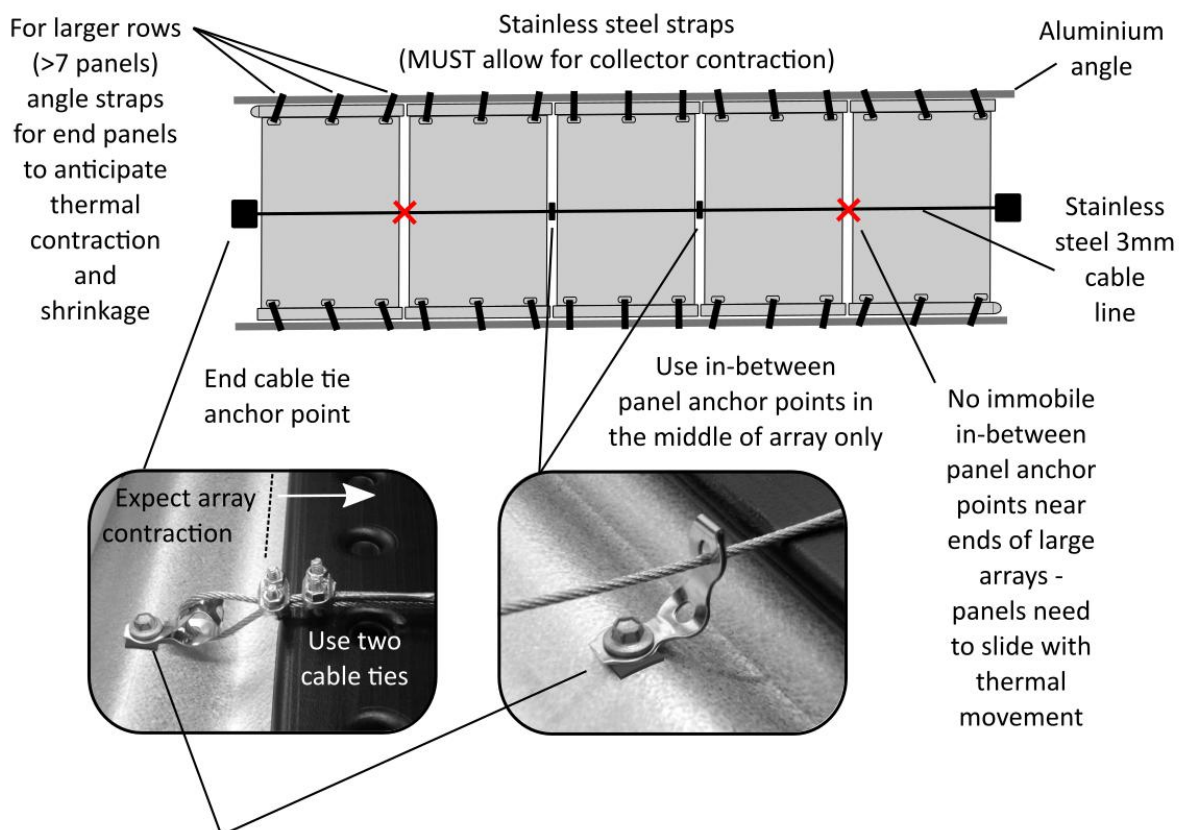
1 New Wind Loading Australian Standard (Level of Importance: HIGH)

In December 2012 new changes were made to the Australian Standard Wind Loading for roof mounted panels. The new standard substantially increased the required fixing strength for solar panels mounted with a gap 50mm or above the roof structure. After a review of OKU based EcoOnline systems we now recommend the following ...

1.1 Mid-Panel Stainless Guide Line (Level of Importance: HIGH)

We recommend that the stainless steel guide running across mid section of the panels with in-between anchor points be installed for high wind loading situations. **You may or may not require this, see new manual under Wind Proofing section.** For metal roofs use perforated galvanised bands (hoop iron) to create attachment points as show below.

1.2 Single or Multi-Row Metal Roof Fixings Wind Region A



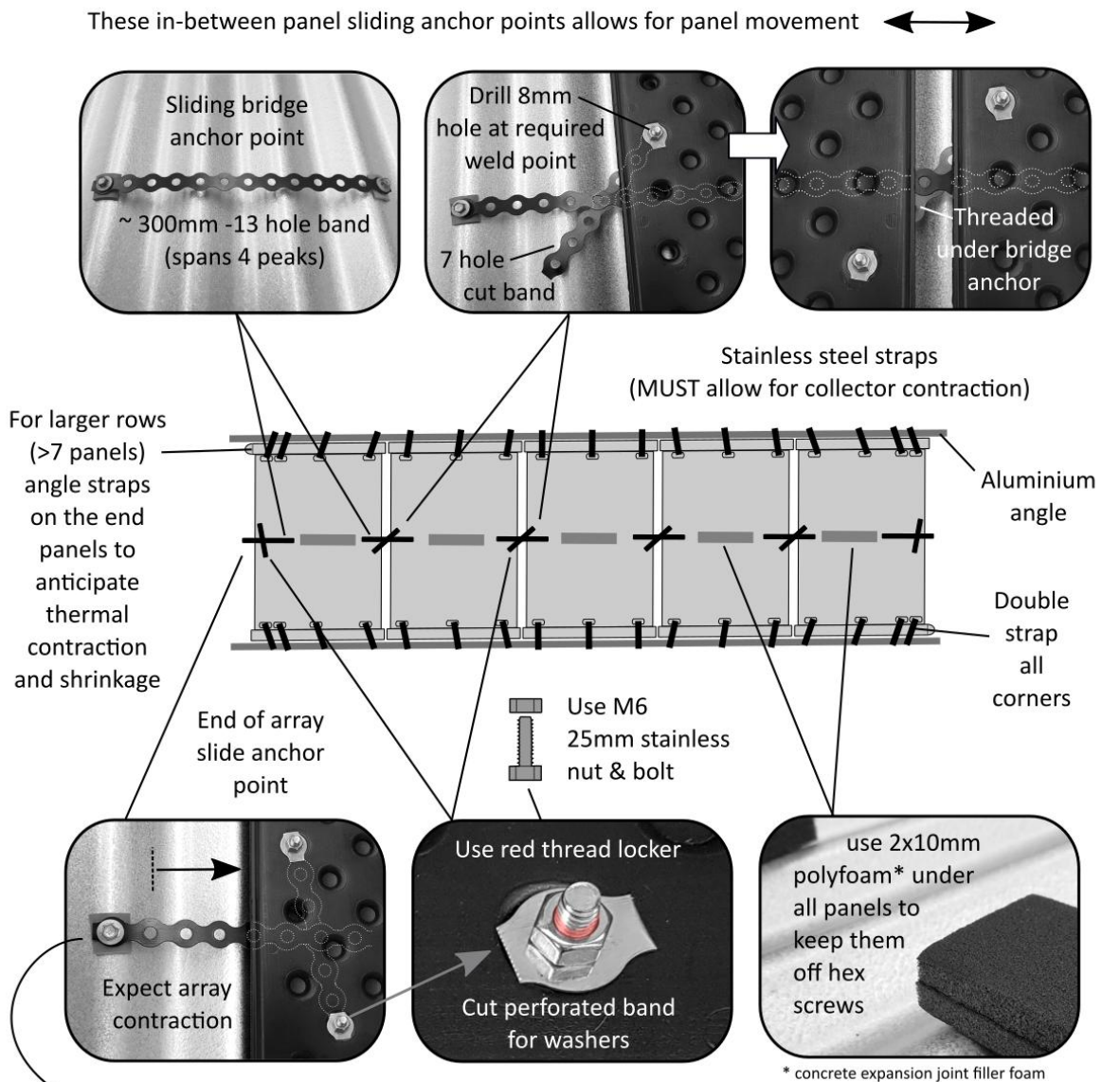
All roofing screws must be sunk 50mm into batten, rafter or wooden back blocking
 Use rubber isolation pad (No self-tapping screws or pop-rivets allowed)



CAUTION

For row arrays **exceeding 15 panels** per row, **expansion joiners** MUST be used (contact info@EcoOnline.com.au)

1.3 Single or Multi-Row Metal Roof Fixings for Wind Regions B & C



- * All roofing screws must be sunk 50mm into batten, rafter or wooden back blocking
- * Use rubber isolation pad (No self-tapping screws or pop-rivets allowed)



WARNING

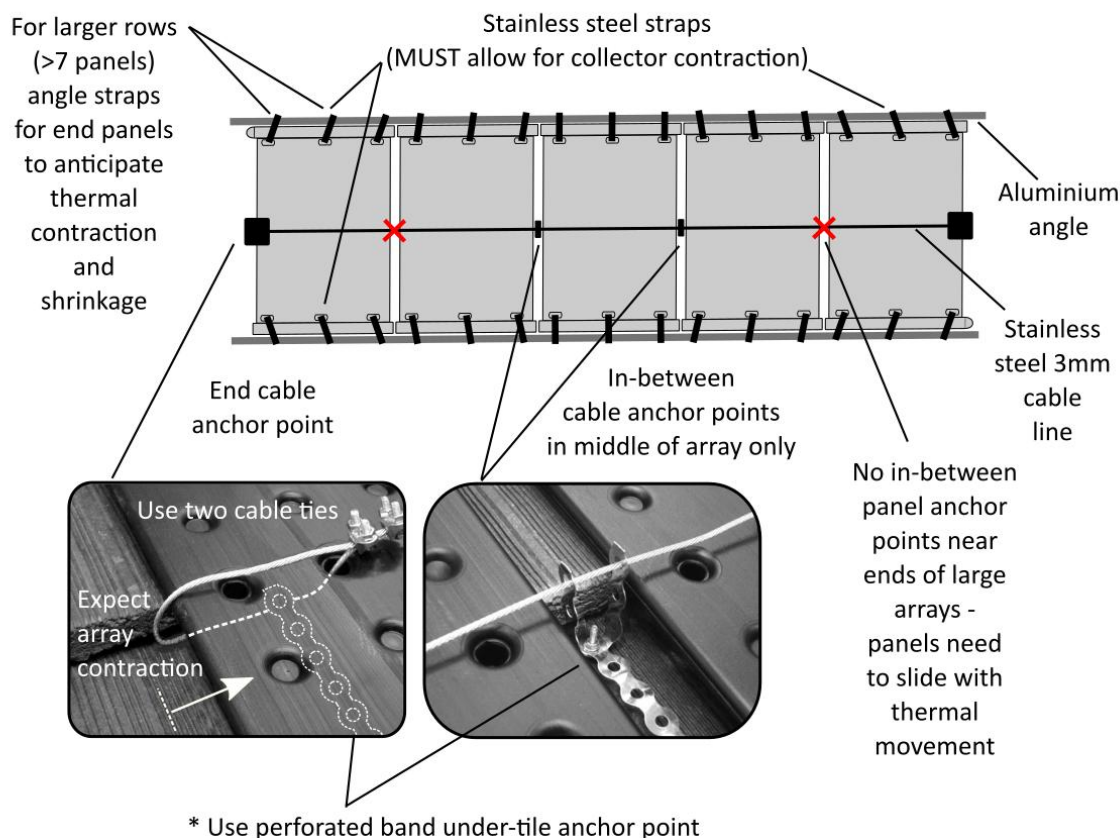
NOTE: For single or multi-row arrays in wind regions B or C, aluminium L-angle MUST be run for the top and bottom of each row.



CAUTION

For row arrays **exceeding 15 panels** per row, **expansion joiners** MUST be used (contact info@EcoOnline.com.au)

1.4 Single or Multi-Row Tile Roof Fixings for Wind Region A & B



WARNING

For single or multi-row arrays in wind regions B, aluminium L-angle MUST be run for the top and bottom of each row.



CAUTION

For row arrays **exceeding 15 panels** per row, **expansion joiners** MUST be used (contact info@EcoOnline.com.au)

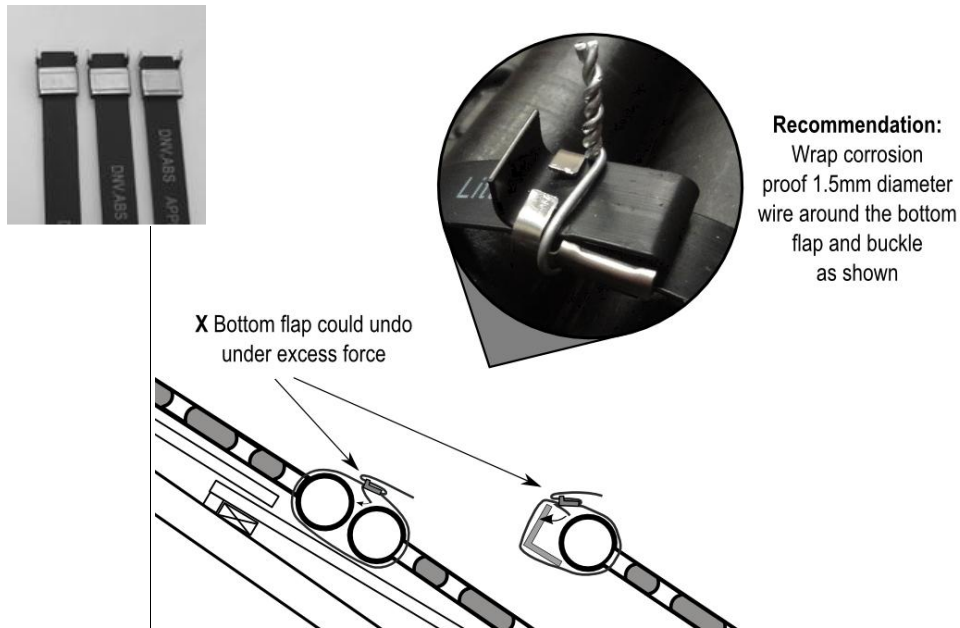
1.5 Collector Contraction Issue (Level of Importance: HIGH)

We recently found that collectors can contract by up to 10mm in length; this is on top the thermal contraction. We recommend straps be checked the next time you service your system. If the top strap seems too tight they may need to be loosened to allow for thermal contraction. This check should be carried out while the panels are cool. **Please note, we now don't recommend the strapping of three rows between a top and bottom aluminium channel, an extra two channels should be included in the system.**

1.6 Stainless Steel Strap Performance (Level of Importance: HIGH)

Due to the recent Australian Standard upgrade we now we recommend the holding performance of the supplied

stainless steel straps be improve via the applicaition of a wire loop holding the back flap in place.



If you have installed these straps, we strongly recommend applying the wire fixings as shown. However before carrying out this fix please check that the straps are not too tight.

1.7 6 Stainless Steel Straps per Panel (Level of Importance: HIGH)

Due to the recent Australian Standard upgrade we now strongly recommend 6 straps per panel and double straps on all array corners. Some early systems were supplied with 4 straps per panel. Please contact info@EcoOnline.com.au if you have a system with 4 straps per panel. These can be supplied at cost price (not including shipping).

1.8 Wind Proofing Fundamentals (Level of Importance: HIGH)

For our panels please note these fundamentals.

- The roof to panel air gap (and air volume) under the panel is critical and should be reduced as much as practical.
- The roof edge exclusion zone should be observed or fixings strengthened.

If you have installed panel with a large underside air gap we strongly recommend you lower your collector array. To help with wind loadings EcoOnline (in consultation with wind engineers) has created a new wind loading table in the latest manual. Please check that your fixings would withstand these worst case loadings (see Wind Loading section in new manual).

2 Service and Maintenance Schedule (Level of Importance: HIGH)

Service and Maintenance Schedule was added to our manual, please download a copy of the latest manual on our website. We recommend servicing be carried out at specified periods.

3 Pool Chemistry Compatibility (Level of Importance: MEDIUM)

Recent test results show that our Silicon joiners are susceptible to **Acid Attack and/or Bromide Chlorination**

(graduals or tabs). Tests strongly showed that keeping your pH between 7.2-7.8 is critical to the longevity the entire system. We don't recommend the use of **Bromide Chlorination** since these chemicals were found to dramatically drop pH as they dissolved. If you need to change sanitation type please note, you will need to change the water. It is not sufficient to just change chlorination chemicals due to residual bromide load in the old water.

4 Silicon Glue in your Inlet/Outlet Adapter Barbs (Level of Importance: MEDIUM)

Due to the record hot weather last summer one of our customers reported barbs slipping out. We now recommend all barbs be silicon glued, see new manual. Note, the clamp should be applied to the middle of the barbs - do not clamp near the end tip of the barb, the pressure from the barb could narrow the tip of the barb and result in slippage.

5 Optimizing Pressure in the Panels (Level of Importance: MEDIUM/LOW)

Recent manual additions include a procedure for obtaining zero pressure inside the panels using ball valves and the vacuum release valve. **We recommend this procedure be carried out once to limit any excessive negative or positive pressure in the panels to maximize lifetimes if you have not done so.**