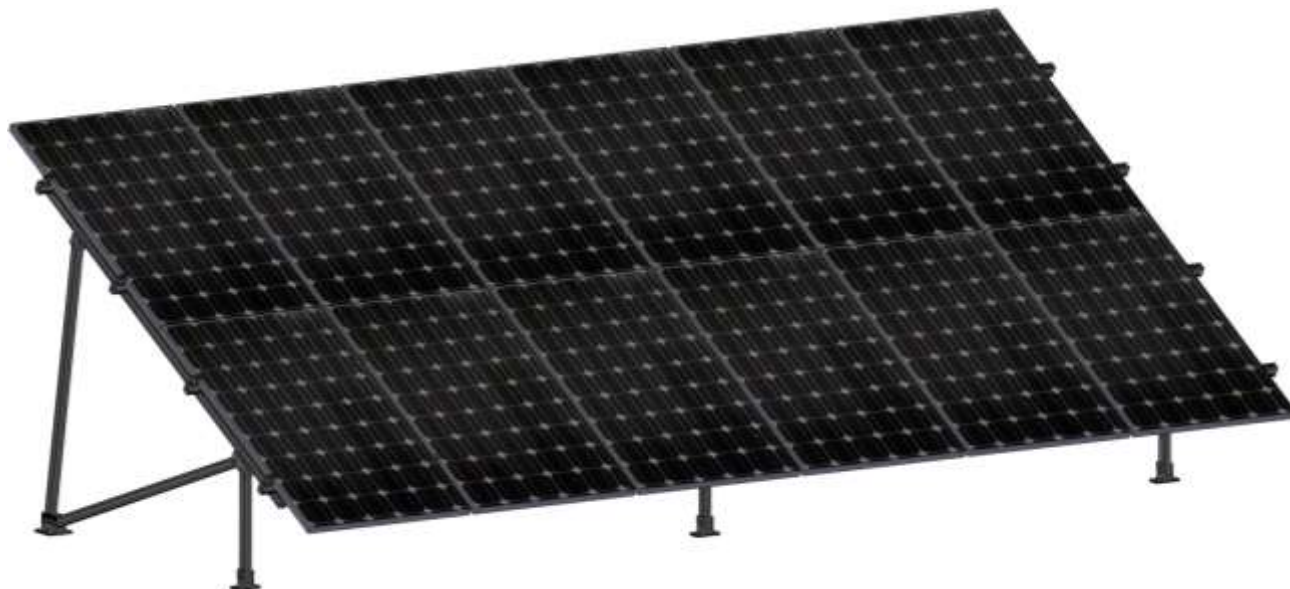


Radiant TerrainRac N&T Planning and Installation Guide



The PV-Solar TerrainRac N&T System has been developed as a universal system for ground mounting. The use of patented (pending) aluminum base rails, Click-In Clamp and Base Rail Pre-Clamp technology eliminates custom cutting and enables particularly fast installation.

Please review this manual thoroughly before installing your PV-solar TerrainRac N&T system. This manual provides (1) supporting documentation for building permit applications relating to PV-solar TerrainRac N&T Universal PV Module Mounting system, and (2) planning and installation instructions for RMS™.

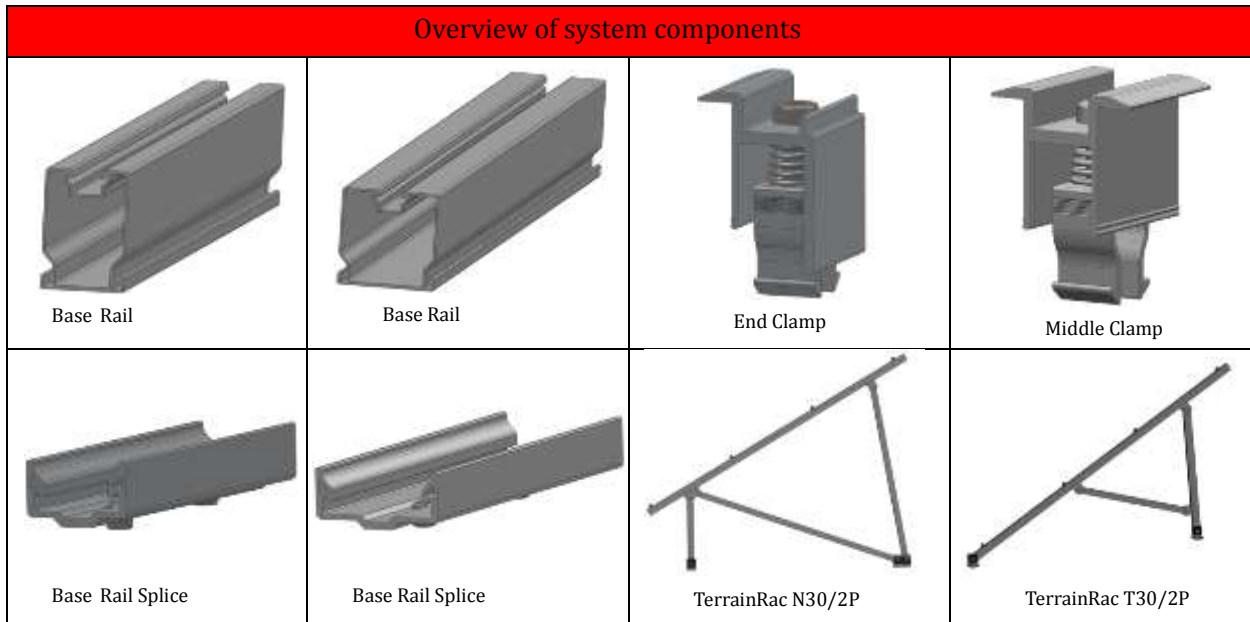
The installer is solely responsible for:

1. Complying with all applicable local or national building codes, including any that may supersede this manual;
2. Ensuring that all components supplied by Radiant and other products are appropriate for the particular installation and the installation environment;
3. Ensuring that the roof, its rafters, connections, and other structural support members can support the array under building live load conditions (this total assembly is hereafter referred to as the roof rafter assembly);
4. Using only rack parts and installer-supplied parts as specified by Rack (substitution of parts may void the warranty and invalidate the letter of certification on page 2);
5. Ensuring that lag screws have adequate pullout strength and shear capacities as installed;
6. Maintaining the waterproof integrity of the roof, including selection of appropriate flashing;
7. Ensuring safe installation of all electrical aspects of the PV array.

Installation tools

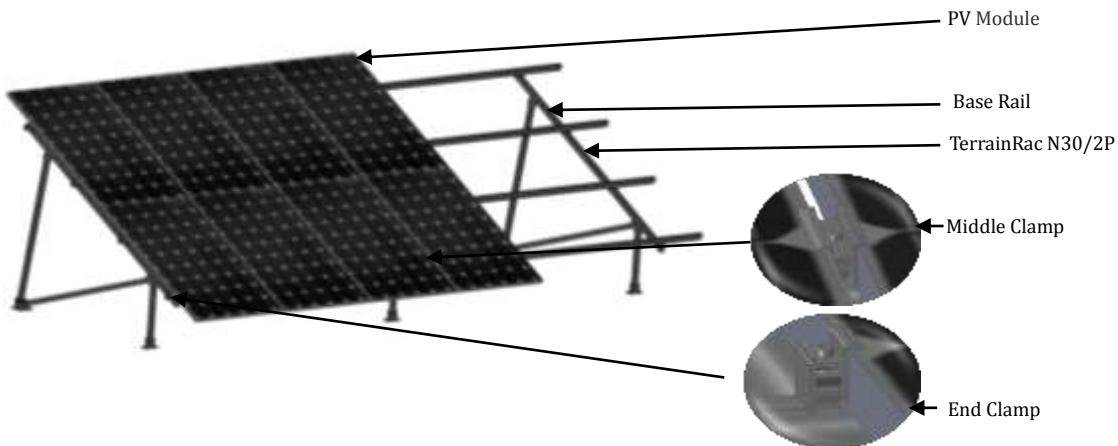
- 1) 6 mm Allen key;
- 2) Open-end spanner set 13, 17 mm;
- 3) Plain end screwdriver
- 4) Cordless drill;

1. TerrainRac N&T Components for Terrain Installation



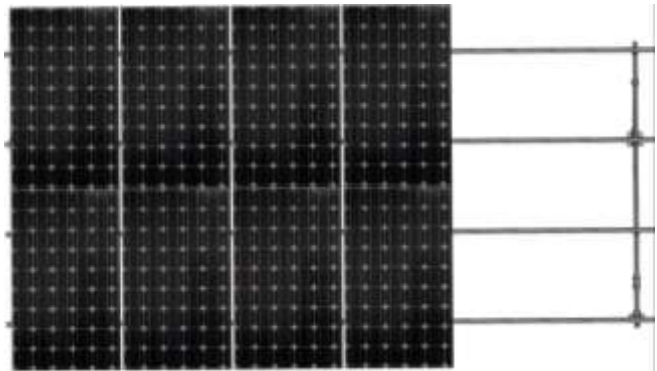
2. Installation preparation

Overview of system components

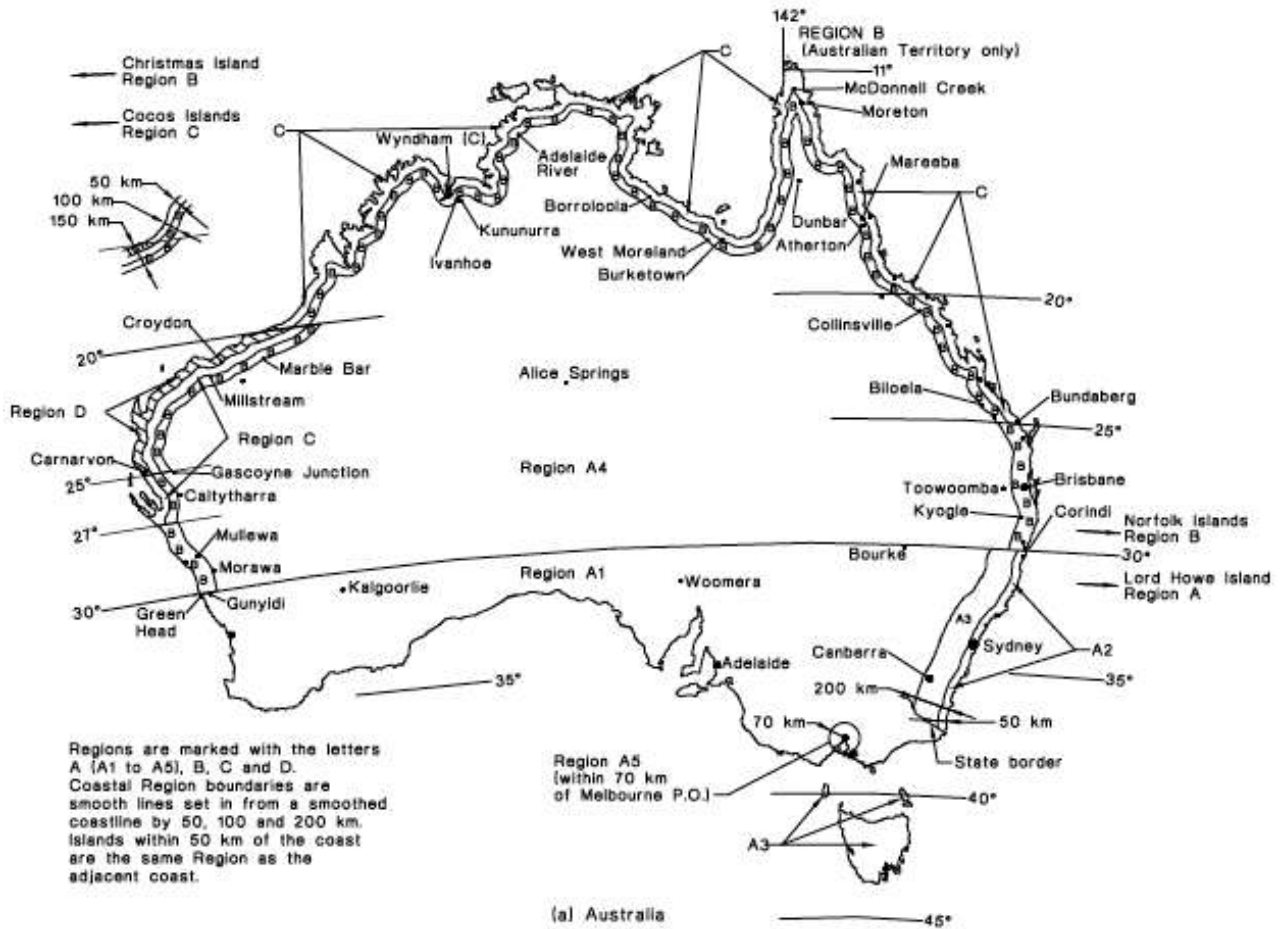


Planning the module area

1. Number of modules in vertical direction \times (module length + 20 mm) - 20 mm
2. Number of modules in horizontal direction \times (module width + 23.5 mm) + 60 mm.
3. Components at the end of the vertical direction for the component is a quarter of the component length
4. Distance between the modules: 23.5 mm



3. Determine the wind region of your installation site



Region Definition:

Wind regions are pre defined for all of Australia by Australian Standard 1170.

The Wind Region has nothing to do with surrounding topography or buildings.

Most of Australia is designated Region A which indicates a Regional Ultimate Basic Wind Velocity of 45msec.

Some areas are designated Region B (57msec). Local authorities will advise if this applies in your area.

Region C areas (66msec) are generally referred to as Cyclonic and are generally limited to northern coastal areas. Most Region C zones end 100km inland.

Region D (80msec) Australia's worst Cyclonic Region between Carnarvon and Pardoo in Western Australia

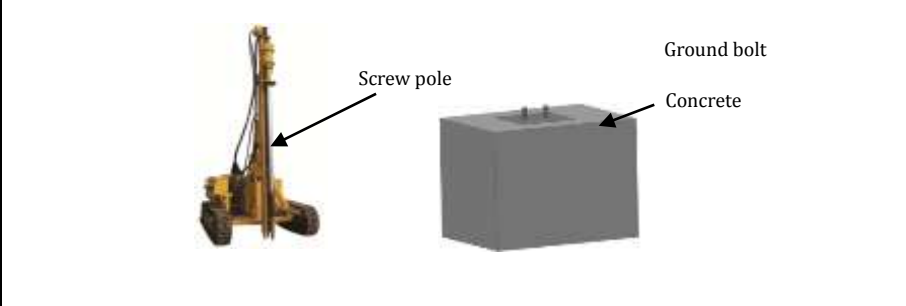
Spacing between Terrain Rac (ground systems) are dependent on Radiant project drawings supplied on request.

4. Installation Instruction

TerrainRac N Installation	
<p>1. Choose the Fixed Base : TerrainRac N is suitable for concrete or screw pole as the fixed base.</p>	<p>The diagram shows two options for a fixed base. On the left is a yellow screw pole. On the right is a grey concrete block with a 'Ground bolt' protruding from its top surface.</p>
<p>2. Open the component a and component b like the picture showed.</p>	<p>The diagram shows two long metal rods, 'Component a' and 'Component b'. A green arrow points to the right, where the two rods are joined at one end. A green curved arrow indicates that Component b is being rotated to meet Component a.</p>
<p>3. Open the component a and component b like the picture showed.</p>	<p>The diagram shows the two rods from the previous step. A green arrow points to the right, where they are joined at the other end. A green curved arrow indicates that Component b is being rotated to meet Component a.</p>
<p>4. Insert a hexbolt M10*65 from component a&b and flangenut M10 , fix the hexbolt M10*65 tightly by the Open-end spanner set 17 mm.</p>	<p>The diagram shows the two rods joined at both ends. A hex bolt is being inserted through the joint of Component a and Component b. Arrows point to the joint area.</p>
<p>5. Insert a hexbolt M10*65 from component a&b and flangenut M10 , fix the hexbolt M10*65 tightly by the Open-end spanner set 17 mm.</p>	<p>The diagram shows the two rods joined at both ends. A hex bolt is being inserted through the joint of Component a and Component b. Arrows point to the joint area.</p>

TerrainRac T Installation

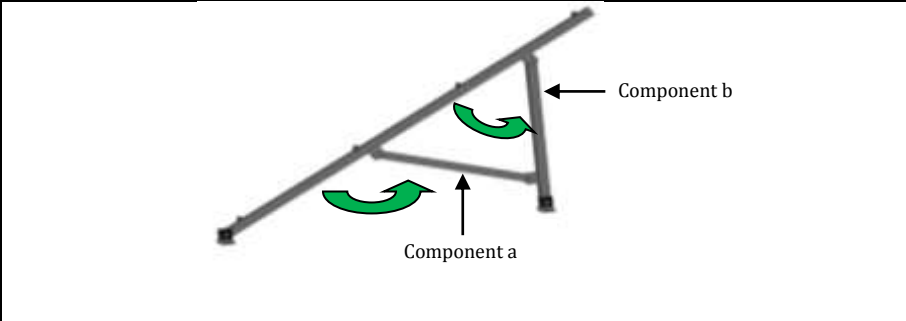
6. Choose the Fixed Base :
TerrainRac T is suitable for concrete or screw pole as the fixed base.



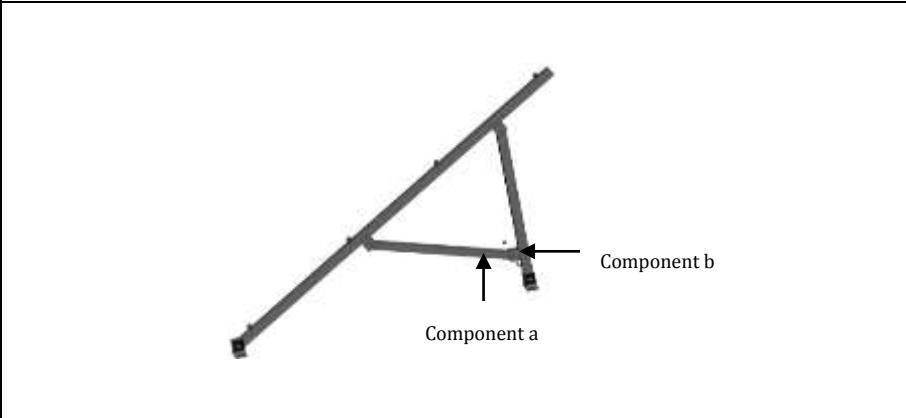
7. The picture showed is the TerrainRac N in the package.



8. Open the component a and component b like the picture showed.

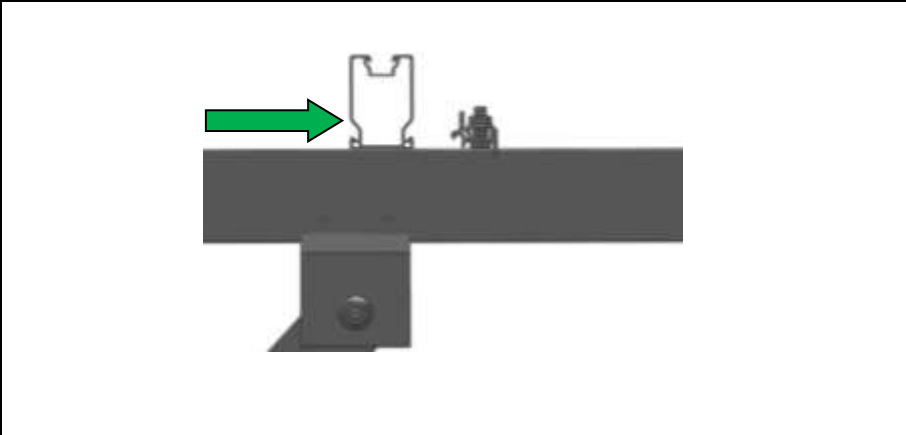


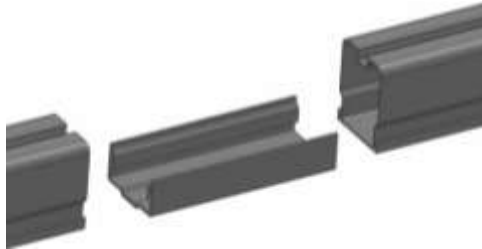

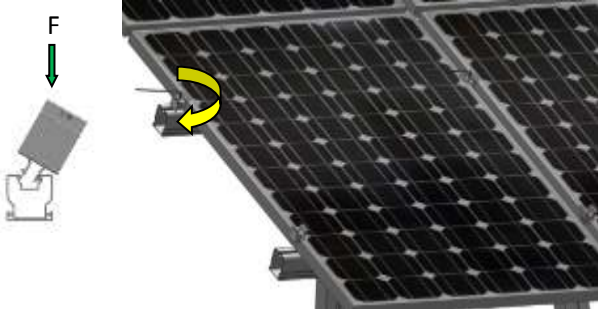
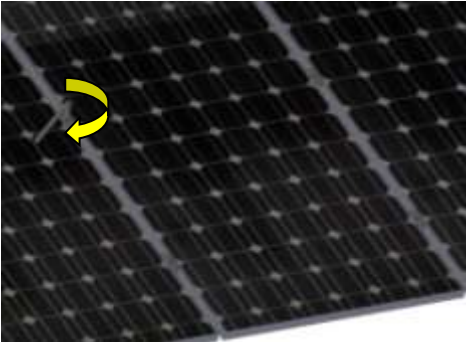

9. Insert a hexbolt M10*65 from component a&b and flangenut M10 , fix the hexbolt M10*65 tightly by the Open-end spanner set 17 mm.



Base Rail Installation

10. Install the base rails on the TerrainRac N or T, If your set of rails consist of different lengths, always begin with the shortest piece. Put the base rail slide into clamp of the TerrainRac N or T, and fasten the nut tightly using the Open-end spanner set 13mm . (Recommended torque is 18 Nm).



<p>11. Installation splice with base rail: Put the splices under the rails halfway, put other rail on the halfway. Fasten the first M12*12 Allen bolt firmly using the Allen key. Fasten the other side M12*12 Allen bolt firmly using the Allen key.</p>	
<p>12. Tighten the second M12*12 Allen bolt using the Allen key. Fasten the other side M12*12 Allen bolt firmly using the Allen key .The connection is finished.</p>	
<p>PV Module Installation</p>	
<p>13. Put the module end clamp inset the base rail tightly against the module and fastens tightly using 6mm Allen key (recommended torque is 8 Nm).</p>	
<p>14. Put module middle clamp inset the rails from above, place it firmly against the module and fasten loosely (approx. 2 - 3 turns). Now inset the next module against the previously installed module and tighten the inter-module clamp using the 6mm Allen key (recommended torque is 8 Nm).</p>	
<p>PV Module Dismounting</p>	
<p>15. Disassembly of end clamp kit. Loose the PV Module using 6mm Allen key, then hold out against the bottom part of clamp kit using plain end screwdriver. Put down the handle of plain end screwdriver</p>	



15 Years Standard Warranty Terms and Conditions

RADIANT International ("RADIANT") warrants to the original purchaser ("Purchaser") of product(s) that it manufactures ("Product") at the original installation site that the Product shall be free from defects in material and workmanship for a period of ten (15) years, except for the anodized finish which shall be free from visible peeling, or cracking or chalking under normal atmospheric conditions, from the earlier of:

- 1). the date the installation of the Product is completed, or;
- 2). 30 days after the purchase of the Product by the original Purchaser.

The Warranty does not apply to any foreign residue deposited on the finish. All installations in corrosive atmospheric conditions are excluded. The Warranty is VOID if the practices specified by AAMA 609 & 610-02 – "Cleaning and Maintenance for Architecturally Finished Aluminium" (www.aamanet.org) are not followed by Purchaser. This Warranty does not cover damage to the Product that occurs during its shipment, storage, or installation. This Warranty shall be VOID if installation of the Product is not performed in accordance with RADIANT's written installation instructions, or if the Product has been modified, repaired, or reworked in a manner not previously authorized by RADIANT IN WRITING, or if the Product is installed in an environment for which it was not designed.

RADIANT shall not be liable for consequential, contingent or incidental damages arising out of the use of the Product by Purchaser under any circumstances. If within the specified Warranty periods the Product shall be reasonably proven to be defective, then RADIANT shall repair or replace the defective Product, or any part thereof, in RADIANT's sole discretion. Such repair or replacement shall completely satisfy and discharge all of RADIANT's liability with respect to this Limited Warranty. Under no circumstances shall RADIANT be liable for special, indirect or consequential damages arising out of or related to use by Purchaser of the Product. Manufacturers of related items, such as PV modules and flashings, may provide written warranties of their own. RADIANT's Limited Warranty covers only its Product, and not any related items.