Ground Mounting System | Installation Manual

PV6X120RACK
PV6X250RACK
Thank You For Choosing AIMS Power!

AIMS Power is a leading supplier of solar products, specializing in PV mounting systems. We have been providing products for back up and off grid power applications for over 20 years. AIMS Power has DC to AC power inverters, deep cycle batteries, solar charge controllers, generators and cables. We guarantee our products are of the highest quality.
AIMS Power’s innovative ground mount assembly is fast, convenient and secure. Attach clamps and brackets to rails in one sliding motion. The racking system includes pre-assembled legs that unfold quickly, allowing for easy bolt connection, minimizing labor. Various types of bases may be used. Check with local regulations.

When unpacking the system familiarize yourself with all components and confirm all parts arrived in good condition. Use proper safety precautions.
The racks are durable and made of Aluminium 6005-T5 and stainless steel SUS304 hardware, includes a 25 year warranty.

Compliant with the following standards:
GB50009-2001
GB50011-2001
GB/T 13912-92
GBT 14846-2008
GB-T 6892-2006
GB50429-2007
GB50017-2003
AS NZS 1170
ASCE/SEI 7-05
ASCE/SEI 7-010
2007 California Administrative Code
IBC 2006
Euro Code 8
DIN1055
EN 1991-1-3 - Snow Load
EN 1991-1-4 - Wind Actions
Planning the Array Layout

*Solar panel orientation is portrait when viewing rack from the front.

PV6X120 - Fits @120-170 Watt Panels

PV6X250 - Fits @230-330 Watt Panels

PV6X120RACK RAIL

PV6X250RACK RAIL

PV6X120RACK

PV6X250RACK
Base Foot Dimension:

Using M10 Grade 5.8 Carbon Steel anchor studs with Ramset Chemset REO502 chemical injection anchoring system. Minimum anchor embedment depth of 90mm with concrete strength of 32MPa. There are several ways to mount the racks depending on application and structural guidelines. Check with local area.
Maximum spacing between legs:

<table>
<thead>
<tr>
<th>PV6X250RACK</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind Speed (mph)</td>
<td>101</td>
<td>118</td>
<td>145</td>
</tr>
<tr>
<td>Max Foot Spacing</td>
<td>102&quot;</td>
<td>67.5&quot;</td>
<td>44&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
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<td>63&quot;</td>
<td>42&quot;</td>
<td>28&quot;</td>
</tr>
</tbody>
</table>

Features:

- Design Life: 25 years
- Importance Level: Type 2: Ordinary
- Annual Probability of Exceedance: 1/250
- Terrain Category to AS1170.2: 2
- Maximum Pitch: 20°
- Aluminum Rails: 6005 - T5
- Maximum Solar panels: 6
## Components List

<table>
<thead>
<tr>
<th></th>
<th>Product Name</th>
<th>Picture</th>
<th>Material</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HD Rail</td>
<td><img src="Image_1" alt="HD Rail Picture" /></td>
<td>AL 6005-T5</td>
<td>Quantity 4</td>
</tr>
</tbody>
</table>
| 2 | End Clamp          | ![End Clamp Picture](Image_2) | AL 6005-T5 | Includes: Quantity 9  
a. A2-70 M8 Hexagon screw  
b. Aluminum fixing nut |
| 3 | Mid Clamp          | ![Mid Clamp Picture](Image_3) | AL 6005-T5 | Includes: Quantity 9  
a. A2-70 M8 Hexagon screw  
b. Aluminum fixing nut |
| 4 | HD Rail Clamp      | ![HD Rail Clamp Picture](Image_4) | AL 6005-T5 | Includes: Quantity 16  
a. A2-70 M8 Hexagon screw  
b. Aluminum fixing nut |
| 5 | Pre-assembled Leg  | ![Pre-assembled Leg Picture](Image_5) | AL 6005-T5 & SUS 304 | Quantity 2 |
Installation Steps

1. Unfold the pre-assembled leg and connecting upright. Fasten the base of the legs to the attached anchor bolts. Tighten all anchor bolts to secure leg and upright.
2. Once legs are secure, ensure the legs and uprights are aligned before installing the cross rails.
3. Before installing the rails, mark the position of the rails on the upright. To assist installers, the bottom rail clamps are pre-assembled in the recommended position. Adjust as required. 

\[ L = \text{Solar Panel length} \]

4. Place the rails on the pre-assembled legs, adjust the rails so they are evenly aligned. Tighten clamps to secure.
5. Place solar panels on the rails.

6. Use end clamps with M8*25 Hexagon screws and fixing nuts to attach solar panels to the rails. Adjacent solar panels are attached by using mid clamps with M8 Hexagon screws. (The hexagon screw length is determined by the solar panel's thickness)
8. Repeat steps until installation is completed.