



AceClamp® A2® Solar Kit
Patent # US 8505864

Installation Instructions for attaching the AceClamp® A2® Solar Kit

Please read carefully before installing.

SunModo is proud to offer the AceClamp® A2® Solar Kit for mounting PV panels to standing seam metal roofs.

You will only need the following to install your PV panels to a standing seam roof:

- AceClamp® A2® (fully assembled and ready to install)
- AceClamp® A2® Solar-Kit (fully assembled and ready to install)
- AceClamp® A2® End Spacer – sized for your specific PV panel thickness

Tools Required for Installation:

- Industrial grade screw gun
- Dial indicator torque wrench
- 9/16" hex socket and adaptor for your screw gun
- 3/16" hex drive bit
- Chalk line or laser

AceClamp® A2® & Solar-Kit Installation:

- A. Follow the instructions that apply to the AceClamp® A2® selected to fit your roof panel, for the correct orientation of the AceClamp® A2® on the panel rib. (See the AceClamp® A2® data sheet or contact us directly if you have questions.)
- B. Snap a line or use a laser to line up the brackets on the roof panel seams. Use a 9/16" hex socket and adaptor for your screw gun to attach the first row of AceClamp® A2® and tighten to the torque values that are appropriate for your panel material and thickness. (Unless otherwise specified, tighten to 175 in-lbs for steel panels and 135 in-lbs for aluminum.)
- C. Insert the Solar-Kit mounting post into the 3/8" dia. attachment hole in the AceClamp® A2® and using the 3/16" hex drive bit tighten the mounting post to 100 in-lbs torque and complete the first row.
- D. Measure and snap lines for the locations of the next several rows of AceClamp® A2® and attach them loosely in position.
- E. Set the first row of PV panels in place (do not tighten the top flange of the solar kit).
 1. Install the Solar-Kits into the next row of AceClamp® A2®
 2. Go back to the first row of Solar-Kits and insert the End Spacer* and tighten to 100 in. lbs. Torque.
 3. Continue to install the AceClamp® A2®, Solar-Kits and PV panels in the same sequence for the remainder of the PV array.



End Spacers are available to match the correct PV frame thickness and are installed at the edge rows to allow the Solar-Kit to be tightened correctly and maintain a neat, finished appearance to your system.

Caution:

- Use the correct length Solar-Kit mounting posts and End Spacers to fit the PV panel thickness.
- 2-1/2" for panels 35mm or less; 3-1/2" for panels 35mm to 60mm.
- When you order the Solar-Kits, tell us the panel thickness and we will ship End Spacers made to fit.
- Tighten 9/16" hex head screws to the recommended torque levels.
- AceClamp[®] A2[®] and the Solar-Kits have been specifically designed and tested for resistance to vibration. Loosening should not occur due to wind vibrations or minor seismic tremors if the correct torque levels have been met.
- Do not use the AceClamp[®] A2[®] as any part of your fall protection apparatus.
- The AceClamp[®] A2[®] Solar-Kit has been designed to "bond" PV panels together and eliminating the need for a separate ground wire if installed correctly. However, follow the requirements of your local building code official in all aspects of the installation.

Note:

- Consult with a structural engineer for attachment frequency and roof construction.





AceClamp® ML Solar Kit

**Installation Instructions for attaching the
AceClamp® ML Solar Kit**

Please read carefully before installing.

SunModo is proud to offer the AceClamp® ML Solar Kit for mounting PV panels to standing seam metal roofs.

You will only need the following to install your PV panels to a standing seam roof:

- AceClamp® ML (fully assembled and ready to install)
- AceClamp® ML Solar-Kit (fully assembled and ready to install)
- AceClamp® ML End Spacer – sized for your specific PV panel thickness

Tools Required for Installation:

- Industrial grade screw gun
- Dial indicator torque wrench
- 1/4" hex drive bit
- 3/16" hex drive bit
- 9/16" hex head
- 4" long extension 1/4" hex drive bit
- Chalk line or laser

AceClamp® & Solar-Kit Installation:

- A. Follow the instructions that apply to the AceClamp® ML, selected to fit your roof panel, for the correct orientation of the AceClamp® ML on the panel rib. (See the AceClamp® ML data sheets or contact us directly if you have questions.)
- B. Snap a line or use a laser to line up the brackets on the roof panel seams. Use a 1/4" hex bit in your screw gun to attach the first row of AceClamps® ML and tighten to the torque values that are appropriate for your panel material and thickness. (Unless otherwise specified, tighten to 175 in-lbs for steel panels and 135 in-lbs for aluminum.)

- C. Insert the Solar-Kit mounting post into the 3/8" dia. attachment hole in the AceClamp® ML, and using the 3/16" hex drive bit tighten the mounting post to 100 in-lbs torque and complete the first row.



- D. Measure and snap lines for the locations of the next several rows of AceClamps® ML and attach them loosely in position.

- E. Set the first row of PV panels in place (do not tighten the top flange of the solar kit.)



1. Install the Solar-Kits into the next row of AceClamps® ML.
2. When the exact position of the AceClamp® ML and Solar-Kit is determined, using the 1/4" hex bit 4" extension tighten the AceClamp® ML.



3. Go back to the first row of Solar-Kits and insert the End Spacer and tighten using a 9/16 socket to 100 in. lbs. Torque.



4. Continue to install the AceClamps® ML, Solar-Kits and PV panels in the same sequence for the remainder of the PV array.
5. As you install, AceClamps® ML can be easily repositioned without removing the Solar-Kit when necessary to compensate for PV frame variations. Loosen the top mounted hex head tightening screw using the 4" long 1/4" hex bit extension. Move the AceClamp® ML into position and retighten. Don't forget to reset the torque.
6. End Spacers are available to match the correct PV frame thickness and are installed at the edge rows to allow the Solar-Kit to be tightened correctly and maintain a neat, finished appearance to your system.

Caution:

- Use the correct length Solar-Kit mounting posts to fit the PV panel thickness.
- 2-1/2" for panels 35mm or less – 3-1/2" for panels 35mm – 60mm
- When you order the Solar-Kits, tell us the panel thickness and we will ship End Spacers made to fit.
- Tighten hex screws to the recommended torque levels. AceClamps® ML and the Solar-Kits have been specifically designed and tested for resistance to vibration. Loosening should not occur due to wind vibrations or minor seismic tremors if the correct torque levels have been met.
- Do not use the AceClamp® ML as any part of your fall protection apparatus.
- The AceClamp® ML Solar-Kit has been designed to "bond" PV panels together maintaining electrical conductivity if installed correctly. However, follow the requirements of your local building code official in all aspects of the installation.