

SOLAR MOUNTS LLC TOP CLAMP INSTALLATION MANUAL





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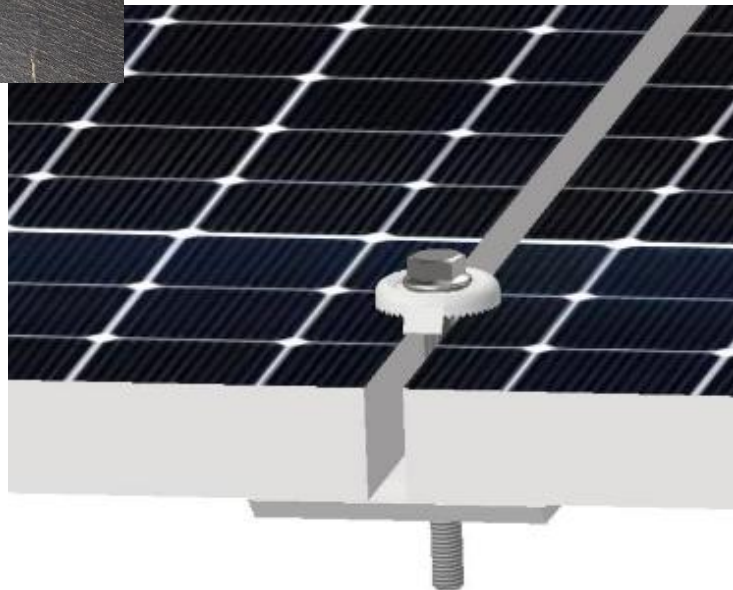
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INTRODUCTION

Solar Mounts, LLC is the premier North American provider of listed (UL 467 & 2703), US-sourced Solar Carports and Ballasted / Post-Driven Solar Mounting Structures. All Solar Mounts, LLC solutions are AIS-certified and meet BABAA (Buy America / Buy American Act) requirements. The Solar Mounts LLC Mid-Clamp (nick-named the “bottle cap” top clamp internally) is listed as a UL 2703 component of Solar Mounts LLC solutions and carries a 25-Year Warranty.



Mid-Clamp



The Solar Mounts, LLC Mid Clamp sub-components include a Magni-Coated 5/8ths Bolt, a G-90 Top Clamp, and aluminum, ribbed Base Plate



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The Solar Mounts, LLC. Mid-Clamp is used as a top clamp that fits in between adjacent PV modules and provides a UL 2703 electrical bond/ground connection. The CSA certification is stamped on the part.

Below are the components that make up the Mid-Clamp assembly. These parts include the magni-coated 3" bolt, that is screwed into the tapped and threaded hole in the aluminum bottom plate. Tension on the bolt (tightened to 8-10 ft. lbs.) will ensure the top clamp anodization-penetrating teeth, make a solid bonding connection.

Markings

Each top clamp is stamped with the manufacturing date and location. Every top clamp also has the UL 2703 mark and CSA project number. "SM" has been stamped on the part to indicate that the part comes from Solar Mounts, LLC.



Aluminum Bottom Plate, 3" Bolt, Top Clamp,

SOLAR MOUNTS, LLC. MID CLAMP RATINGS

PV Module Orientation	South (in the northern Hemisphere)
Grounding/Bonding Rating	UL 2703
Mechanical Rating	UL 2703

UL 2703 Ed.1 and TIL No. A-40 Mechanical Load ratings:

PV MODULE (PANEL) ATTACHMENT AND INSTALLATION USING SOLAR MOUNTS, LLC. TOP CLAMPS

- Place PV module (“panel”) on Z-Purlins
- Secure PV module in place with end clamps (½” socket).
 - Tighten PV Module End Clamp bolts to 8-10 ft. lbs.
 - **Use 2 clamps for each side of the PV module**
- Place second PV module on purlins in line with first panel.
- Secure the two PV modules together with the mid clamp as pictured.
 - Tighten to 8-10 ft. lbs.

ELECTRICAL GROUNDING USING SOLAR MOUNTS, LLC. TOP CLAMPS

- Solar electric contractors must electrically ground the structure to a single premises ground. If more than one Ground Lug is attached to the structure, all these ground points and EGC's must be properly bonded together.
- Please see NEC Article 690.41, 690.47(C)(3), 250.52 and 250.53(A) for guidance.
 - The recommended approach is to use a separate DC grounding electrode for the PV array and Solar Mounts Ballasted Ground Mount PV support structure, as this enhances protection against lightning and transient voltage. For lightning protection associated with grounding systems, refer to NEC 250.106.
- Attach the Ground Lug (e.g., Ilesco GBL Grounding Lugs, Part #18-GBL-4DBT or equivalent) to the C-channel post using a #10 self-drilling screw (zinc or stainless steel, e.g., 1 ¼") so that the lug is flush with the post.
- The Ground lug can be fastened to the C-channel post at any location along its length. Tighten to 5 ft. lbs.
- CAUTION: PV module removal may disrupt the bonding path and could introduce the risk of electric shock. Additional steps may be required to maintain the bonding path. A ground path can be extended 2 feet (between PV modules) within the PV array boundary using Solar Mounts wire ways. Modules should only be removed by qualified persons in compliance with the instructions in this manual
- As specified in UL 61730-1 5.2.3DV, PV modules are considered to be in compliance with the mechanical loading and bonding and grounding requirements of UL 61730-1 when mounted, bonded and grounded in the manner specified by either the PV module mounting instructions, or the mounting system manufacturer's instructions when the mounting, bonding, and grounding means have been evaluated with the PV module to UL 2703.



CONTACT INFORMATION

For general questions or for SMLLC designated sales rep, please contact:

Solar Mounts LLC

Website: <https://solarmounts.com>

Phone: (844) 757-7225

Warranty

To obtain the Solar Mounts LLC warranty, please fill out the SMLLC Commissioning Form for each project site and return to Solar Mounts, LLC.

(NOTE: The SMLLC warranty starts at delivery of materials to customer site.)

List of Approved PV Modules (“Panels”) for UL 2703 listed Solar Mounts, LLC Solar Support Structures*

Solar Mounts, LLC. support structures are certified to UL 2703 for electrical grounding/bonding and mechanical requirements. Solar Mounts, LLC. system owners retain this certification when support structures are used only in combination with PV modules listed in the chart below.

*Please contact Solar Mounts, LLC for the latest list of approved PV modules

Module Manufacturer	PV Module Model Number
Aptos	DNA-120-BF10-xxxW
Boviet Solar	BVM6612M-XXXS-H-HC-BF-DG
Canadian Solar	CS6W-xxxMS
Canadian Solar	CS7N-XXXTB-AG
Canadian Solar	CS6W-xxxMB-AG
Canadian Solar	CS6.1-54TM-xxxH
HT Solar (HT-SAAE)	HT72-18X (ND)-F
Imperial Star	ISM7-SHSB156-xxxM
JA Solar	JAM72D40-xxx/LB
JA Solar	JAM72D42-xxx/LB
JA Solar	JAM72D30-xxx/MB
Jinko	JKMXXXM-72HL4-TV
Jinko	JKMXXXN-72HL4-BDX
Jinko	JKMXXXN-72HL4-BDV
Jinko	JKMXXXN-78HL4-BDV
Longi	LR7-72HGD-XXXM
Longi	LR8-66HYD-XXXM
Longi	LR7-72HYD-XXXM
Maxeon	SPR-P6-XXX-UPP
Mission Solar Energy	MSN10xxxHN4G
Mission Solar Energy	MSN10xxxHT4T
Panasonic	EVPVxxxHK2
Peimer USA	DR10HxxxMB
Peimer USA	SFxxxM
Philadelphia Solar	PS-MNB108(HCBF)-xxxW
Phono Solar	PSxxxM8GF-24/TNH
Phono Solar	PSxxxM8GFH-24/TNH
Q Cells	Q.PEAK DUO ML-G12S
Q Cells	Q.PEAK DUO XL-G11S



REC	RECXXXAA PRO M
REC	RECxxxAA Pure
REC	RECXXXAA PURE-RX
SEG	SEG-xxx-BTC-BG
SEG	SEG-xxx-BTC-BG
SEG	SEG-495-BTD-BG
Silfab	SIL-620/630/640 XL
Silfab	SIL-520 QM
Silfab	SIL-420/430 QD
Trina	TSM-DEG19RC.20
Trina	TSM-NEG21C.20
Trina	TSM-DEG21C.20
Trina	TSM-NE09RC.05
Trina	TSM-NEG19RC.2
Waree	BiN-08-xxx
Waree	Bi-62-xxx
Waree	Bi-55-xxx