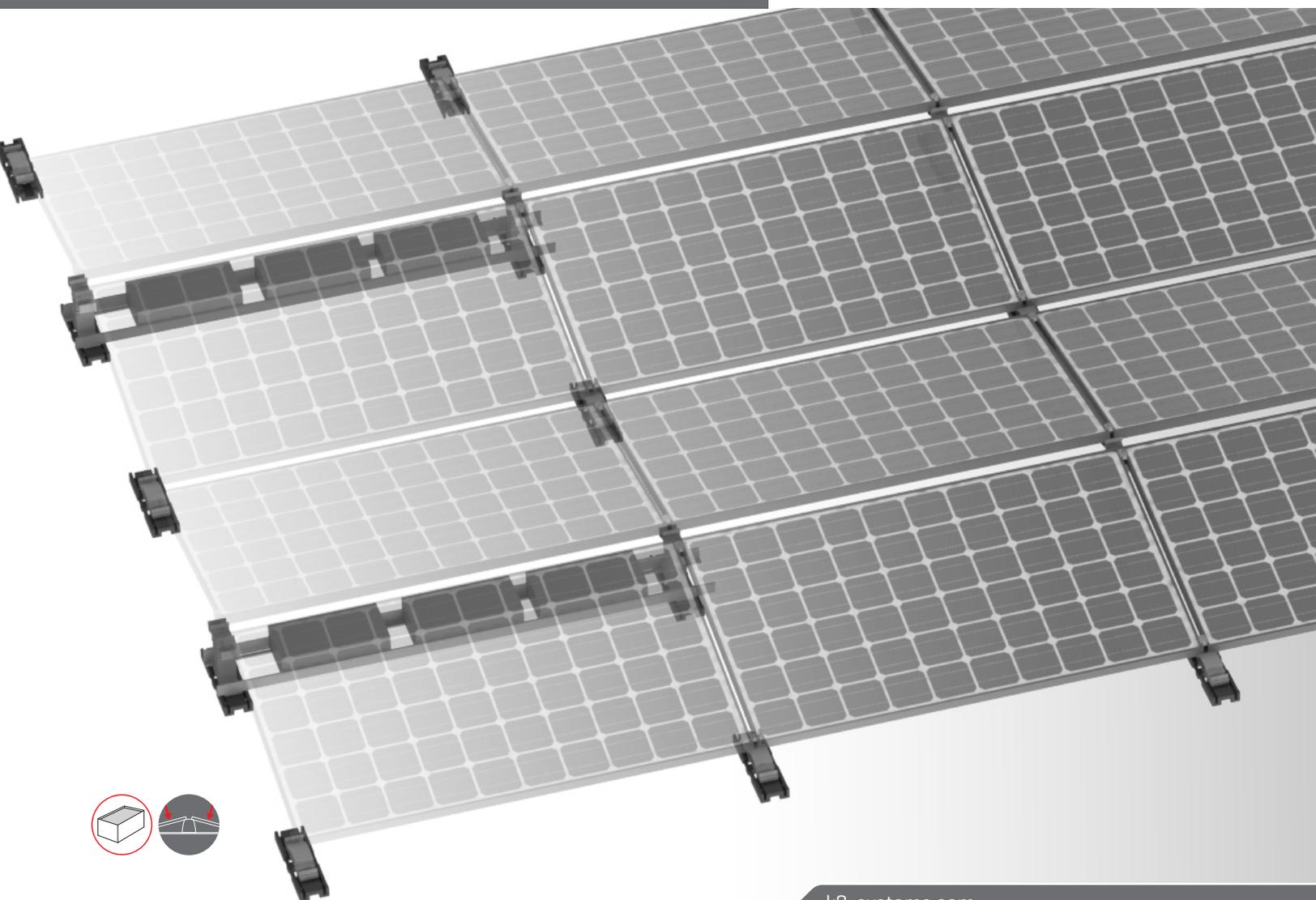


We support PV systems  
Formerly Everest Solar Systems 



# D-Dome Railless<sup>2</sup> System

## ASSEMBLY INSTRUCTIONS



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## Quality tested – several certifications

K2 Systems stands for secure connections, highest quality and precision. Our customers and business partners have known that for a long time. Independent institutes have tested, confirmed and certified our capabilities and components.

Please find our quality and product certificates under:  
[k2-systems.com/en-US/company/quality-management-and-certificates](https://k2-systems.com/en-US/company/quality-management-and-certificates)

# Engineering strength is at our core



With sophisticated product innovations and a deep customer focus, K2 Systems is the engineering leader for all your mounting system needs. We are a market leader with more than 20 GW installed worldwide.

We offer proven product solutions and innovative designs. Wind tunnel testing along with advanced structural and electrical validation to facilitate permitting, design and installation. Our designs result in cost competitive racking systems with dedicated support that will position you to win more projects.

We partner with our customers and suppliers for the long-term. High quality materials and cutting edge designs provide a durable, yet functional system. Our product line is comprised of a few, coordinated components that lower the cost of materials, and simplify installation, saving you time and money. All backed by German engineering, a long track record of quality and a company that is here to stay.

Thank you for choosing K2 Systems for your Solar PV Project.

# General Safety Information

Please note that our general mounting instructions must be followed at all times and can be viewed online at <https://k2-systems.com/en-US/downloads/documentation>

- ▶ The equipment may only be installed and operated by qualified and adequately trained installers.
- ▶ Prior to installation, ensure that the product complies with on-site static loading requirements. For roof-mounted systems, the roof load-bearing capacity must always be checked.
- ▶ National and local building regulations and environmental requirements must be adhered to.
- ▶ Compliance with health and safety regulations, accident prevention guidelines and applicable standards are required.
  - Protective equipment such as safety helmet, boots and gloves must be worn.
  - Roofing works must be in accordance with roofing regulations utilizing fall protection safeguards when eaves height exceeds 3 m.
  - At least two people must be present for the duration of the installation work in order to provide rapid assistance in the event of an emergency.
- ▶ K2 mounting systems are continuously developed and improved and the installation process may thereby change at any time. Prior to installation consult our website at: <https://k2-systems.com/en-US/downloads/documentation>. We can send you the latest version on request.
- ▶ The assembly instructions of the module manufacturer must be adhered to.
- ▶ Equipotential bonding/grounding/earthing between individual parts is to be performed according to country specific standards, as well as national laws and regulations.
- ▶ A thermal break is required at no more than 50 feet in both directions, North/South and East/West. A minimum separation of 2.5 inches is required between separate arrays.
- ▶ At least one copy of the assembly instructions should be available on site throughout the duration of the installation.
- ▶ Failure to adhere to our general safety and assembly instructions and not using all system components, K2 is not liable for any resulting defects or damages. We do not accept liability for any damage resulting in the use of competitor's parts. Warranty is excluded in such cases.
- ▶ If all safety instructions are adhered to and the system is correctly installed, there is a product warranty entitlement of 25 years! We strongly recommend reviewing our terms of guarantee, which can be viewed at <https://k2-systems.com/en-US/downloads/documentation>. We will also send this information on request.
- ▶ Dismantling of the system is performed in reverse order to the assembly.
- ▶ K2 stainless steel components are available in different corrosion resistance classes. Each structure or component must be carefully checked for possible corrosion exposure.
- ▶ The VdS 3145:2011-07 applies to the proper technical maintenance, inspection and any necessary repair. This includes regular visual inspections and visual inspections in case of events. We recommend annual regular inspections including: inspection of all system components for damage by e.g. weather, animals, dirt, debris, build-up, growth, roof penetration, sealing, structural stability and corrosion. In addition, the tight fit of screws must be checked and if necessary, re-tightened in accordance with the torques mentioned in the assembly instructions.

# The following guidelines apply



The D-Dome Railless<sup>2</sup> System can be installed as standard under the following conditions. Even if the system is capable of meeting higher demands through the integration of safety standards, please get in touch with your contact at K2 Systems if the specified values are exceeded.



## Roof requirements

- ▶ The structural integrity of the roof must be reviewed on site and approved by a licensed structural engineer.
- ▶ Maximum roof height: 150 ft
- ▶ Roof slope: 0° to 5°, mechanical fastening required from 3° to 5°
- ▶ Minimum clearance to roof edge: 19.7"
- ▶ Friction coefficient of the roof must be determined on site



## Structural requirements

- ▶ Wind speed: 90-200 mph

# Bonding and Grounding

The D-Dome Railless<sup>2</sup> System has obtained a UL 2703 system listing from Underwriter's Laboratories [UL].

A sample bonding path diagram is shown in Figure 1, below. Specific installations may vary based on site conditions and AHJ requirements.

Each electrical connection has been evaluated to a maximum fuse rating of 30A. When installed per these installation instructions, all connections meet the requirements of NEC 690.43.

Installation should be periodically reinspected for loose components or fasteners and any corrosion.

This racking system may be used to ground and/or mount a PV module complying with UL 1703 only when the specific module has been evaluated for grounding and/or mounting in compliance with the included instructions.

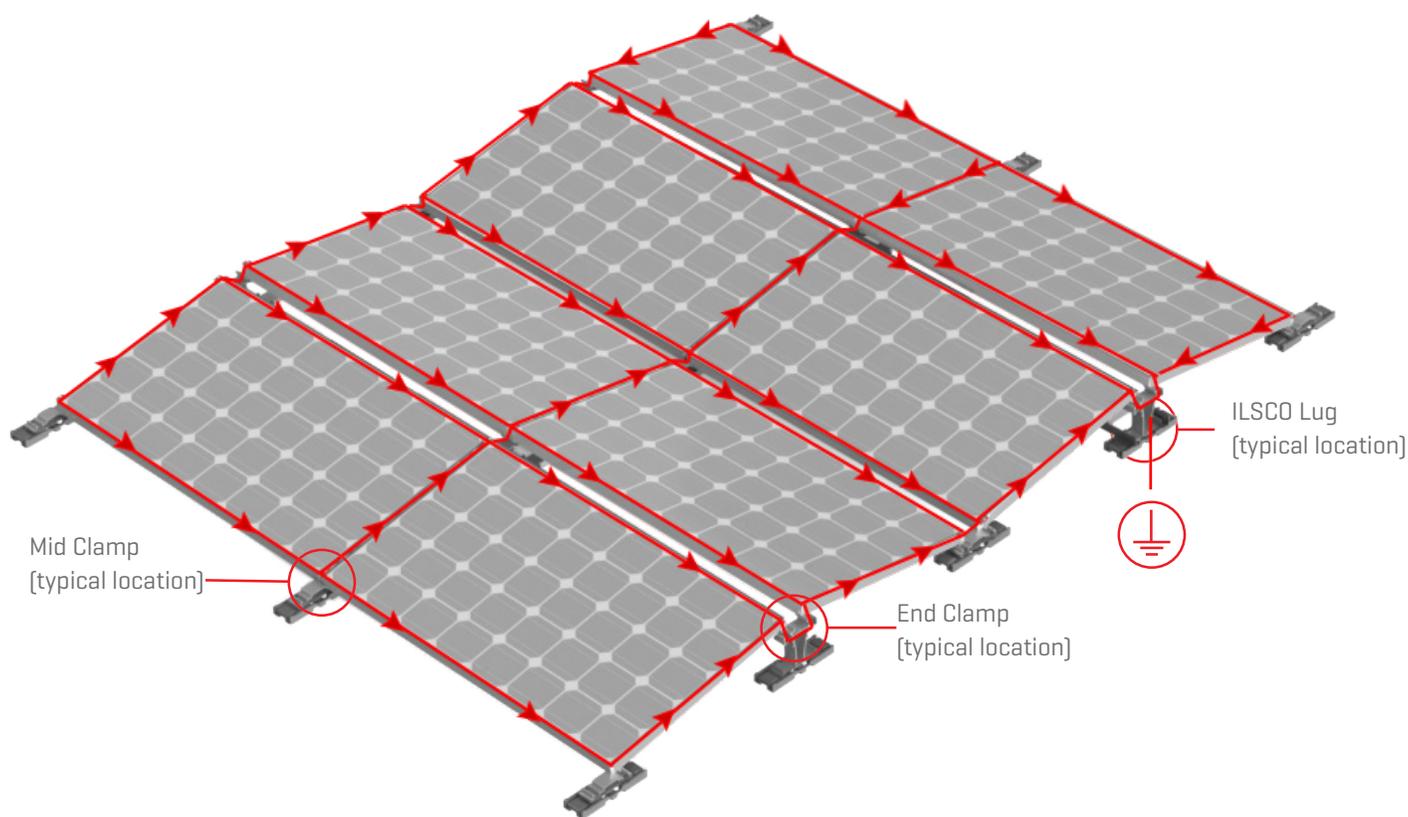


Figure 1: Bonding connections shown in red. For certain jurisdictions, bonding and grounding connections are identified at typical locations.



# Fire Rating

The D-Dome Railless<sup>2</sup> System has undergone fire performance testing in accordance with UL 2703, Fire Performance. A System Class A fire rating is achieved when using the D-Dome Railless<sup>2</sup> System under the following conditions:

- ▶ Roof slope of 0° to 5°
- ▶ Used in combination with a UL 1703 Listed module with a fire performance rating of Type 1, Type 2, or Type 3. Consult the module manufacturer for specific fire performance rating information.
- ▶ CrossRail may be mounted using any stand-off height to maintain the Class A fire rating. Always consult the module manufacturer's installation instructions to ensure your installation is in compliance with their UL 1703 Listing.
- ▶ The results of the racking system do not improve a roof covering Class rating.

All documentation can be found on UL's Online Database as well as K2 Systems' website.

# Compatible Modules

\*Please note that your module must be compatible with corner clamping to install with the D-Dome Railless<sup>2</sup> System. K2's D-Dome Railless<sup>2</sup> system was tested with the following:

- ▶ UL/NRTL Listed Aptos Solar Modules:
  - DNA-120-MF26-XXXW
  - DNA-144-MF26-XXXW
  - DNA-120-BF23-XXXW
  - DNA-120-MF23-XXXW
  - DNA-144-BF23-XXXW
- ▶ UL/NRTL Listed Axitec Modules:
  - AC-xxP/156-60S
  - AC-xxxM/156-60S
  - AC-xxxP/60V
  - AC-xxxP/60xV
  - AC-xxxP/60S
  - AC-xxxP/60x
  - AC-xxxMH/120S
  - AC-xxxM/60V
  - AC-xxxM/60xV
  - AC-xxxMH/120V
  - AC-xxxM/60S
  - AC-xxxM/60x
  - AC-xxxP/156-72S
  - AC-XXXP/72V
  - AC-XXXP/72XV
  - AC-XXXP/72S
  - AC-XXXP/72X
  - AC-XXXMH/144S
  - AC-XXXM/72V
  - AC-XXXM/72XV
  - AC-XXXMH/144V
  - AC-XXXM/72S
  - AC-XXXM/72X
- ▶ UL/NRTL Listed Boviet Modules:
  - BVM6612M 72-Cell Mono
- ▶ UL/NRTL Listed Canadian Solar Inc. Modules:
  - CS6U-xxx
  - CS6K-xxx
  - CS6X-xxx
  - CS6P-xxx
  - CS3K-xxxP
  - CS3K-xxxMS
  - CS3U-xxxP
  - CS3U-xxxMS
  - CS3W-xxxP
  - CS3U-xxxPB-AG
  - CS3U-xxxMB-AG
  - CS3W-xxxPB-AG
  - CS1H-xxxMS
- ▶ CONTINUED - Canadian Solar Inc Modules:
  - CS6K-xxxM
  - CS6K-P-FG DYMOND
  - CS1Y-xxxMS
  - CS3N-xxxMS
- ▶ UL/NRTL Listed CertainTeed Modules:
  - CTXXXHC11-04
  - CTXXXHC00-04
  - CTxxxHC11-06
- ▶ UL/NRTL Listed ET Solar Modules:
  - ET-M660xxxBB
- ▶ UL/NRTL Listed Hansol Modules:
  - UB-AN1 Black 270-300
  - UBAN1 Silver 270-300
  - UD-AN1 330-360
- ▶ UL/NRTL Listed Hanwha Q Cells Modules:
  - Q.PEAK- G4.1/MAx xxx
  - Q.PEAK BLK G4.1 xxx
  - Q.PRO G4 xxx
  - Q.PLUS G4 xxx
  - Q.PEAK-G4.1/TAA xxx
  - Q.PEAK BLK G4.1/TAA xxx
  - Q.PLUS BFR G4.1/TAA xxx
  - Q.PLUS BFR G4.1/MAx xxx
  - B.LINE PLUS BFR G4.1 xxx
  - B.LINE PRO BFR G4.1 xxx
  - Q.PEAK DUO-G5 xxx
  - Q.PEAK DUO BLK-G5 xxx
  - Q.PEAK DUO-G8 xxx
  - Q.PEAK DUO BLK-G8 xxx
  - Q.PEAK DUO-G7 xxx
  - Q.PEAK DUO BLK-G7 xxx
  - Q.PEAK DUO G7.2 xxx
  - Q.PEAK DUO-G6 xxx
  - Q.PEAK DUO BLK-G6 xxx
  - Q.PEAK DUO BLK-G6+ xxx
  - Q.PEAK DUO-G6+ xxx
  - Q.PEAK DUO-G8+ xxx
  - Q.PEAK DUO BLK-G8+ xxx
  - Q.PEAK DUO L-G8.3 xxx
  - Q.PEAK DUO L-G8.2 xxx
  - Q.PEAK DUO L-G8.1 xxx
  - Q.PEAK DUO L-G8 xxx
  - Q.PEAK DUO L-G7.3 xxx
  - Q.PEAK DUO L-G7.2 xxx
  - Q.PEAK DUO L-G7.1 xxx
  - Q.PEAK DUO L-G7 xxx
- ▶ CONTINUED - Hanwha Q Cells Modules:
  - Q.PEAK DUO L-G6 xxx
  - Q.PEAK DUO L-G6.2 xxx
  - Q.PEAK DUO L-G6.3 xxx
  - Q.PLUS DUO L-G5 xxx
  - Q.PLUS DUO L-G5.1 xxx
  - Q.PLUS DUO L-G5.2 xxx
  - Q.PLUS DUO L-G5.3 xxx
  - Q.PEAK DUO L-G5.2 xxx
  - Q.PEAK DUO L-G5.3 xxx
  - Q.PEAK L-G4.2 xxx
  - Q.PEAK L-G4.1 xxx
  - Q.PLUS L-G4.2 xxx
  - Q.PLUS L-G4.1 xxx
  - Q.PLUS L-G4 xxx
  - Q.PEAK DUO BLK G6+/SC xxx
  - Q.PEAK DUO G5/SC xxx
  - Q.PEAK DUO BLK G5/SC xxx
  - Q.Plus BFR-G4.1xxx
  - Q.Pro BFR-G4.1xxx
  - Q.Pro-G4.1/SCxxx
  - Q.PLUS BFR G4.1 xxx
  - Q.PRO BFR G4 xxx
  - Q.PRO BFR G4.1 xxx
  - Q.PRO BFR G4.3 xxx
  - Q.PEAK-G4.1 xxx
  - Q. PEAK DUO BLK G6+/TS XXX
  - Q.PEAK DUO G5/TS-XXX
  - Q.PEAK DUO BLK G6/TS XXX
  - Q.PEAK DUO G6/TS-XXX
  - Q.PEAK DUO G6+/TS-XXX
  - Q.PEAK DUO ML-G9 XXX
  - Q.PEAK DUO ML-G9.2 XXX
  - Q.PEAK DUO ML BLK-G9 XXX
  - Q.PEAK DUO ML BLK-G9.2 XXX
  - Q.PEAK DUO XL-G9 XXX
  - Q.PEAK DUO XL-G9.2 XXX
  - Q.PEAK DUO XL BLK-G9 XXX
  - Q.PEAK DUO XL BLK-G9.2 XXX
  - Q.PEAK DUO XL BLK-G9.3 XXX
  - Q.PEAK DUO XL -G9.3 XXX
  - Q.PEAK DUO ML -G9.3 XXX
  - Q.PEAK DUO ML BLK -G9.3 XXX
  - Q.PEAK DUO ML -G9 XXX
  - Q.PEAK DUO ML -G9+ XXX
  - Q.PEAK DUO BLK ML -G9+ XXX
  - Q.PEAK DUO BLK ML-G10+
  - Q.PEAK DUO BLK ML-G10+
  - Q.PEAK DUO BLK-G10+ / AC
  - Q.PEAK DUO BLK ML-G10.a
  - Q.PEAK DUO XL-G10.d

- ▶ CONTINUED - Hanwha Q Cells Modules:
  - Q.PEAK DUO BLK ML-G10
  - Q.PEAK DUO BLK ML-G10.a+
  - Q.PEAK DUO BLK ML-G10.a+ /TS
  - Q.PEAK DUO XL-G10.2
  - Q.PEAK DUO XL-G10.c
  - Q.PEAK DUO XL-G10.3
  - Q.PEAK DUO ML-G10
  - Q.PEAK DUO ML-G10+
- ▶ UL/NRTL Listed Hyundai Modules:
  - HiS-MxxxMG
  - HiS-MxxxMI
- ▶ CONTINUED - Hyundai Modules:
  - HiS-MxxxTI
  - HiS-MxxxRI
  - HiS-SxxxRI
  - HiS-MxxxRG
- ▶ UL/NRTL Listed Itek Modules
  - IT-xxx-SE
  - Hipro TP672M-xxx
- ▶ UL/NRTL Listed JA Solar Modules:
  - JAP6[DG]
  - JAM6[K]-60-xxx/4BB
- ▶ UL/NRTL Listed Jinko Solar Modules::
  - JKMxxxPP-72-DV
  - JKMxxxPP-60-DV
  - JKMxxxM-60HBL
  - JKMxxxM-72HL-V
  - JKMxxxM-72HL-TV
  - JKMxxx-P-60
  - JKMxxxM-72HL4-TV
  - JKMxxxM-6RL3-B
- ▶ UL/NRTL Listed Kyocera Modules:
  - KUxxxMCA
- ▶ UL/NRTL Listed LG Electronics Inc. Modules:
  - LGxxxS1C-G4
  - LGxxxN1C-G4
  - LGxxxS2WG4
  - LGxxxN1K-G4
  - LGxxxN2W-G4
  - LGxxxN1K-A5
  - LGxxxQ1C-V5
  - LGxxxQ1K-V5
  - LGxxxN2W-A5
  - LGxxxS2W-A5
- ▶ CONTINUED - LG Electronics Inc. Modules:
  - LGxxxN2T-A5
  - LGxxxQ1C-A5
  - LGxxxQ1K-A5
  - LGxxxN2W-V5
  - LGxxxN1C-V5
  - LGxxxN1W-V5
  - LGxxxN1K-V5
  - LGXXXN2W-V5
  - LGXXXN1C-V5
  - LGXXXN1W-V5
  - LGXXXN1K-V5
  - LGXXXN2T-V5
  - LGXXXN1C-N5
  - LGXXXQ1C-N5
  - LGXXXQ1K-N5
  - LGXXXN1K-L5
  - LGXXXN2W-L5
  - LGXXXN2T-L5
  - LGXXXN1W-L5
  - LGXXXN1T-L5
  - LGXXXA1C-V5
  - LGXXXA1K-V5
  - LGXXXM1C-N5
  - LGXXXM1K-L5
  - LGXXXQ1C-A6
  - LGXXXQ1K-A6
  - LGXXXQAC-A6
  - LGXXXQAK-A6
  - LGXXXN1C-A6
  - LGXXXN1K-A6
  - LGXXXN2W-E6
  - LGXXXN2W-E6.AW5
  - LGXXXN2T-E6
  - LGXXXN1K-B6
  - LGXXXQ1C-A6
  - LGXXXQ1K-A6
  - LGXXXQAC-A6
  - LGXXXQAK-A6
  - LGXXXN1C-A6
  - LGXXXN1K-A6
  - LGXXXN2W-E6
  - LGXXXN2W-E6.AW5
  - LGXXXN2T-E6
  - LGXXXN1K-B6
  - LGXXXA1C-A6
  - LGXXXM1C-A6
  - LGXXXM1K-A6
  - LGxxxN16-E6
- ▶ UL/NRTL Listed Longi Modules:
  - LR6-72-xxxM [xxx=320-350]
  - LR6-72HV-xxxM [xxx=320-350]
  - LR6-72BK-xxxM [xxx=320-350]
  - LR6-72PE-xxxM [xxx=340-380]
  - LR6-72PH-xxxM [xxx=340-380]
  - LR6-72PB-xxxM [xxx=340-380]
  - LR6-72HPB-xxxM [xxx=360-385]
  - LR6-60-xxxM [xxx=270-300]
  - LR6-60HV-xxxM [xxx=270-300]
  - LR6-60BK-xxxM [xxx=270-300]
  - LR6-60PE-xxxM [xxx=280-320]
  - LR6-60PH-xxxM [xxx=280-320]
  - LR6-60PB-xxxM [xxx=280-320]
  - LR6-72BP-xxxM
  - LR6-60BP-xxxM
  - LR6-72HBD-xxxM
  - LR6-60-xxxM
  - LR6-60BK-xxxM
  - LR6-60PE-xxxM
  - LR6-60PB-xxxM
  - LR6-60PH-xxxM
  - LR6-60HPB/HIB-xxxM
  - LR6-60HPH/HIH-xxxM
  - LR6-72-xxxM
  - LR6-72BK-xxxM
  - LR6-72HV-xxxM
  - LR6-72PE-xxxM
  - LR6-72PB-xxxM
  - LR6-72PH-xxxM
  - LR6-72HPH/HIH-xxxM
  - LR6-72BP-xxxM
  - LR6-72HBD/HIBD-xxxM
  - LR6-60BP-xxxM
  - LR6-60HBD/HIBD-xxxM
  - LR4-60HPH/HIH-xxxM
  - LR4-60HPB/HIB-xxxM
  - LR4-72HPH/HIH-xxxM
  - LR4-72HBD/HIBD-xxxM
  - LR4-72HBD/HIBD-xxxM
- ▶ UL/NRTL Listed Lumos Modules:
  - LSxxxx-60M-B/C
- ▶ UL/NRTL Listed Luxor Solar Modules:
  - Lx-xxxP
  - Lx-xxxM

# Compatible Modules continued

## ▶ UL/NRTL Listed Mission Solar Modules:

- MSExxxSB1J
- MSExxxS05T
- MSExxxS04J
- MSExxxSQ6S
- MSExxxS06J
- MSExxxSQ4S
- MSExxxSQ5T
- MSExxxSQ5K
- MSExxxSQ8T
- MSExxxSQ8K
- MSExxxSQ9J
- MSExxxSQ9S
- MSExxxSR8T
- MSExxxSR8K
- MSExxxSR9S
- MSExxxSB1J
- MSExxxSX5T
- MSExxxSX5K
- MSExxxSX6S
- MSExxxSX6W
- MSExxxSX6Z
- MSExxxSX5R

## ▶ UL/NRTL Listed Panasonic Modules:

- VBHNxxxSA16
- VBHNxxxKA01
- VBHNxxxKA03
- VBHNxxxKA04
- VBHNxxxSA17
- VBHNxxxSA18
- VBHNxxxSA17E
- EVPVxxx
- EVPVxxxK

## ▶ UL/NRTL Listed Peimar Modules:

- SGxxxP-[BF]
- SGxxxP
- SGxxxM-[BF]
- SGxxxM

## ▶ UL/NRTL Listed Phono Solar Modules:

- PSxxxMG-20/U
- PSxxxPG-20/U
- PSxxxM-20/U
- PSxxxMH-20/U

## ▶ UL/NRTL Listed Prism Solar Modules:

- Bi48 xxx Bifacial
- Bi60 xxx Bifacial

## ▶ UL/NRTL Listed REC Modules:

- RECxxxTP2 BLK2
- RECxxxTPS 72
- RECxxxTP2S 72 XV
- RECxxxTP2SM 72 XV
- RECxxxTP2SM 72
- RECxxx NP
- RECxxx NP Black
- RECxxxAA
- RECxxxAA Black
- RECxxxTP4
- RECxxxAAPure
- RECxxxTP4Black

## ▶ UL/NRTL Listed Sanyo Electric Co Ltd of Panasonic Group Modules:

- VBHNxxxSA16
- VBHNxxxSA17
- VBHNxxxSA18
- VBHNxxxSA16
- VBHNxxxSA17
- VBHNxxxSA18
- VBHNxxxKA01
- VBHNxxxKA03
- VBHNxxxKA04

## ▶ UL/NRTL Listed Seraphim Modules:

- SEG-XXX-6MA-HV
- SEG-XXX-BMA-HV

## ▶ UL/NRTL Listed Silfab Modules:

- SLAxxxM
- SLG-M-xxx
- SLA-x-xxx
- SLG-x-xxx
- SIL-xxx BL
- SIL-xxx HL
- SIL-xxx NL
- SIL-xxx ML
- SIL-xxx NT
- SIL-xxx BK
- SIL-xxx NU
- SIL-xxx NX
- SIL-xxxHC

## ▶ UL/NRTL Listed Sharp Modules:

- NU-SCxxx
- NU-SAxxx

## ▶ UL/NRTL Listed Solaria Modules:

- PowerxT® -xxxR-PD
- PowerxT® -xxxR-BD
- PowerxT® XXXR-PM

## ▶ UL/NRTL Listed Solarworld Modules "Sunmodule":

- Plus SW XXX Mono
- Plus SW XXX Poly

## ▶ UL/NRTL Listed Soluxtec Modules:

- FR xxx Wp
- Power Slate 54 Mono Dark Series
- Power Slate 54 Mono Series

## ▶ UL/NRTL Listed SunPower Modules:

- SPR-E19-xxx
- SPR-E20-xxx

## ▶ UL/NRTL Listed Sunpreme Modules:

- GxB-xxx
- GxB-xxxSM
- GxB-xxxSL

## ▶ UL/NRTL Listed Sunspark Modules:

- SST-275-300M
- SMX-250-265P
- SST-xxxM 60 cell
- SST-xxxM 72 cell
- SST-xxxMB 60 cell
- SST-XXXM3B-60/72
- SST-XXXM3-60/72
- SST-XXXM3B-60/72

## ▶ UL/NRTL Listed S-Energy Modules:

- SN15-60PAE/PCE-xxxV
- SN10-60PAE/PBE/PCE-xxxV
- SN15-60MAE/MCE-xxxV
- SN10-60MAE/MCE-xxxV
- SNxxxM-10T[SN60]
- SN15-72PAE/PCE-xxxV
- SN10-72PAE/PBE/PCE-xxxV
- SN15-72MAE/MCE-xxxV
- SN10-72MAE/MBE/MCE-xxxV
- SN20-60MAE/MBE/MCE-xxxV
- SN25-60MAE/MCE-xxxV
- SC20-60MAE/MBE/MCE-xxxV
- SC25-60MAE/MCE-xxxV
- SN20-72MAE/MBE/MCE-xxxV
- SN25-72MAE/MCE-xxxV
- SC20-72MAE/MBE/MCE-xxxV
- SC25-72MAE/MCE-xxxV
- SD25-60BDE-xxxV
- SD25-72BDE-xxxV

# Compatible Modules continued



## ▶ UL/NRTL Listed Talesun Modules

- Hipro TP660M-xxx
- Hipro TP672M-xxx

## ▶ UL/NRTL Listed Trina Solar Modules:

- TSM-xxxDE14A
- TSM-xxxDD05A.08
- DUOMAX SPECS 1. PEG14
- DUOMAX SPECS 2. PEG5
- DUOMAX SPECS 3. PEG5.07
- DUOMAX SPECS 4. PDG5
- TSM-DE15H(II)
- TSM-DE15M(II)
- TSM-DD06M.05(II)
- TSM-DD06H.05(II)
- TSM-DD06M.t5(II)
- TSM-DD06H.T5(II)
- TSM-PE15H
- TSM-DEG15HC.20(II)
- TSM-DEG15MC.20(II)
- TSM-DEG6HC.20(II)
- TSM-DEG6MC.20(II)
- TSM-xxxDE15V(II)
- TSM-xxxDE19
- TSM-xxxDEG15VC.20(II)
- TSM-xxxDEG19C.20

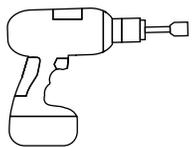
## ▶ UL/NRTL Listed V Energy Modules:

- Series 200 PV

## ▶ UL/NRTL Listed Yingli Solar Modules:

- YL-xxxP-29b
- YL-xxx-35b

# Tools Overview



13mm



6 - 35 Nm  
[4.5 - 22.2 lb-ft]



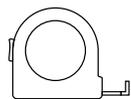
11mm



≥ 3.0 m



6mm

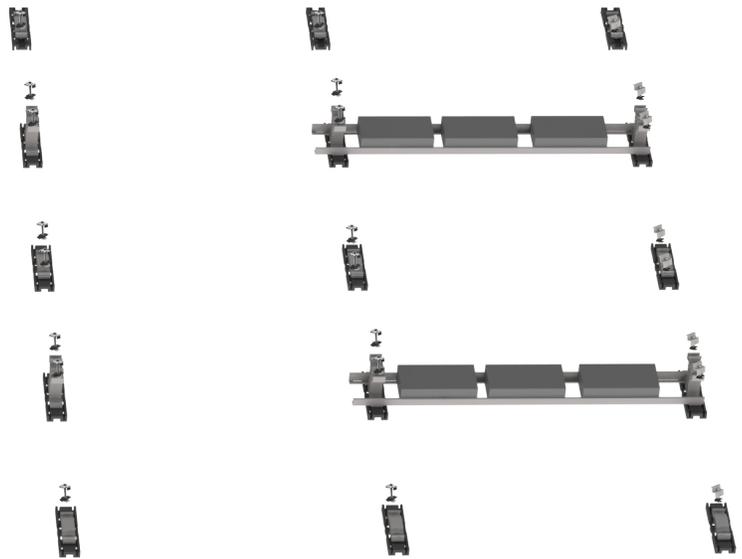
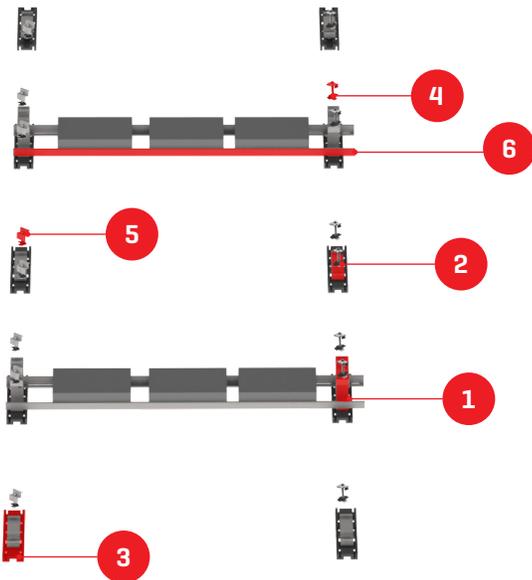


# Torque Overview

- ▶ End Clamps: 10.3 ft-lb
- ▶ Bonding Mid Clamp: 12 ft-lb
- ▶ Micro-Inverter Set: 10.3 ft-lb
- ▶ Dome Corner Strut R<sup>2</sup>: 12 ft-lb
- ▶ ILSCO Lug: 35 in-lb

Tools and materials for the installation of third party items such as roof attachment products, roof covering and sealing products or items used for bonding and grounding are not listed here. Please refer to the instructions of those third party products.

# Components



**1** 4000592



**Dome Peak R<sup>2</sup>**

**3** 4000594



**Roof Protection Mat R<sup>2</sup>**  
Material: recycled rubber

**2** 4000593



**Dome Base R<sup>2</sup>**

**4** 4000603/4000604/  
4000605/4000606



**Dome Mid Clamp**  
Available in sizes 30-50mm

5 multiple PNs



**End Clamps**  
Available in sizes 30-50mm

6 4000568/4000569/4000570

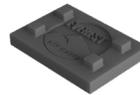


**Dome Porter R²**

## Other Components & Accessories



**Dome Corner Strut R²**  
4000637



**Roof Spacer Mat R²**  
4000636



**ILSCO Lug**  
4000960



**Dome Microinverter & Optimizer Mounting Kit**  
4000646



**OMG PowerGrip Plus**  
4000335



**Eco Fasten Eco65**  
4001442



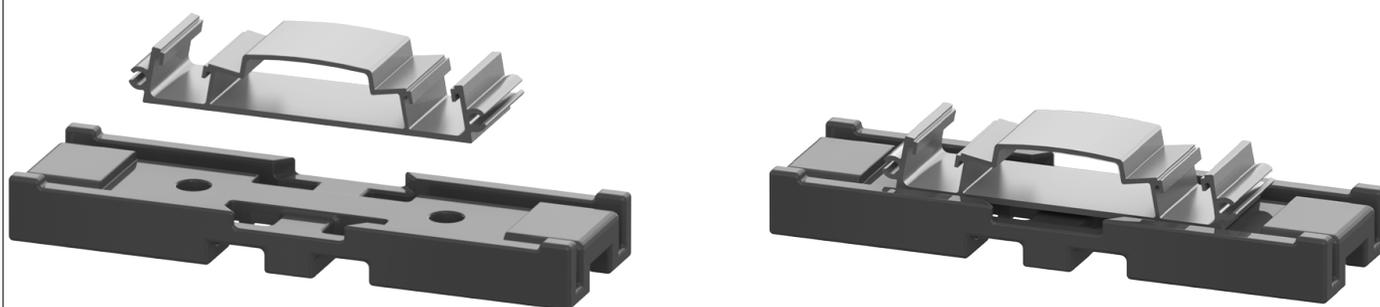
**Anchor Bracket for Porter Kit**  
4000639



**Omega Cable Clip**  
4005394

3

! To install Roof Protection Mats R<sup>2</sup>, place Dome Peak R<sup>2</sup> or Dome Base R<sup>2</sup> component on top of mat, ensuring that Dome is properly nested within protrusions in the mat.



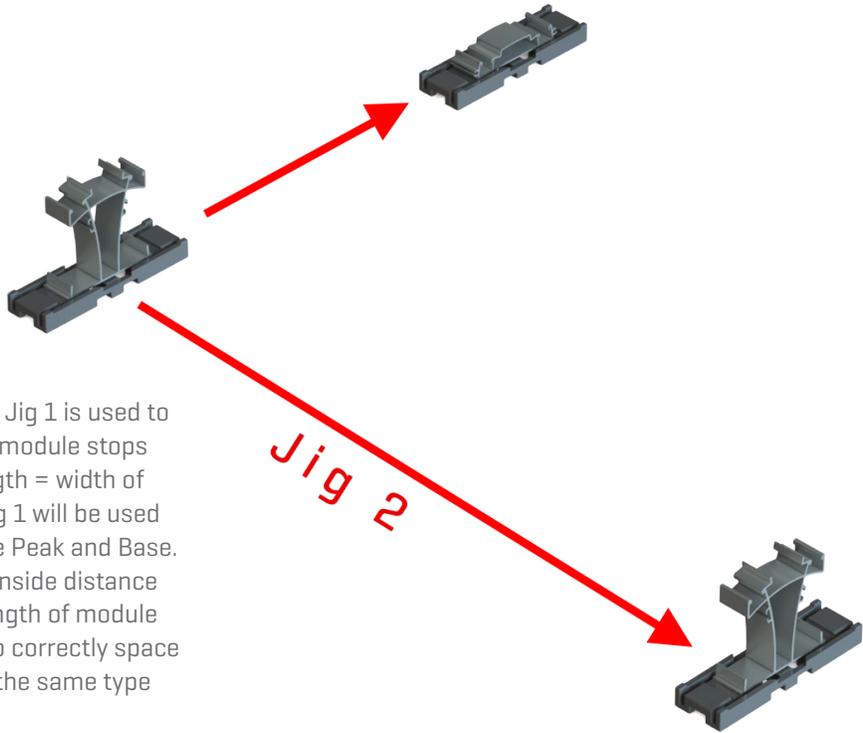
4

! Mark corner of array using chalk line. Snap line along entire North row. Snap another line along entire West column. Place all Dome Peak R<sup>2</sup>, Dome Base R<sup>2</sup> and Roof Protection Mat R<sup>2</sup> on the roof per the following scheme: Dome Base R<sup>2</sup>, Dome Corner Strut R<sup>2</sup> [only when called out on project plan], Dome Peak R<sup>2</sup>. Repeat Dome Base R<sup>2</sup>, Dome Peak R<sup>2</sup>, and always end with Dome Base R<sup>2</sup>. Refer to image. Arrange Domes, Mats, Porters and ballast blocks over rooftop, using job-site jigs on the North row and West column for spacing. We recommend building North row first and then West column, ensuring that you install the ballast and wiring as you go. If called out on the project drawing, install the Dome Corner Strut R<sup>2</sup>, Dome Porters R<sup>2</sup>, ballast blocks, and/or anchors. Refer to steps 5, 6 and 7.



# Assembly

1



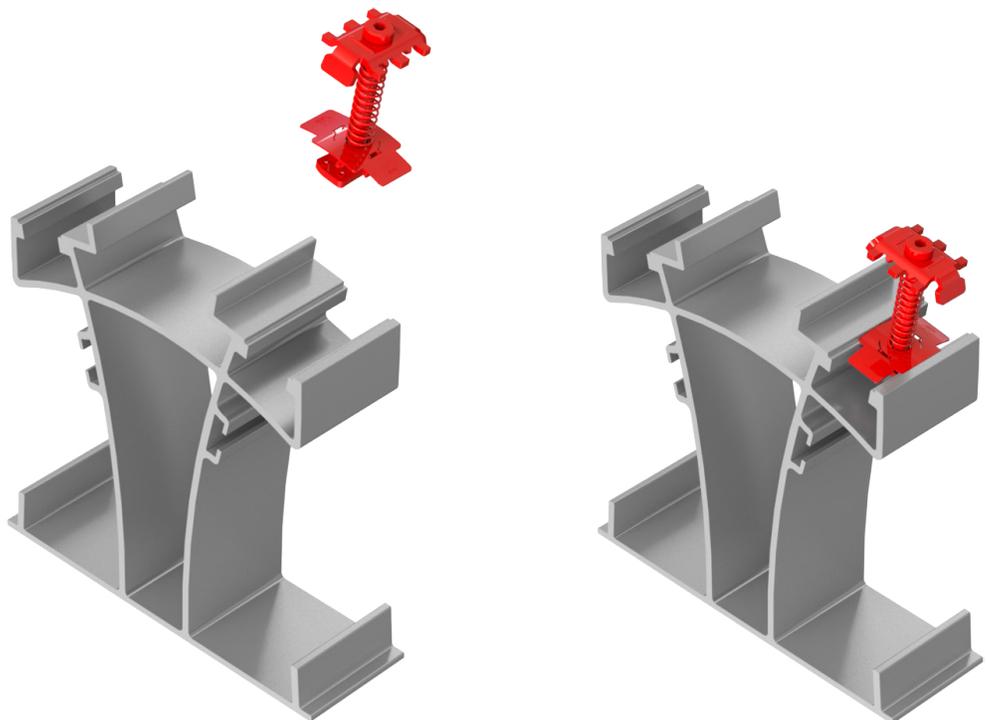
!

Two jigs will simplify array layout. Jig 1 is used to set East/West distance between module stops on each type of Domes. Jig 1 length = width of module being used on project. Jig 1 will be used to correctly space between Dome Peak and Base. Jig 2 is used to set North/South inside distance between Peaks. Jig 2 length = length of module minus 1 7/8" / Jig 2 will be used to correctly space between D-Dome assemblies of the same type [Base to Base, or Peak to Peak].

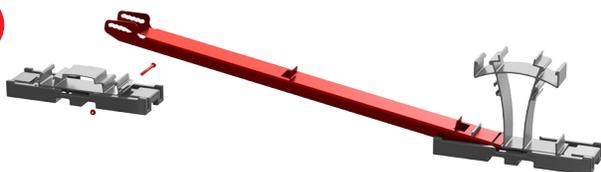
2

!

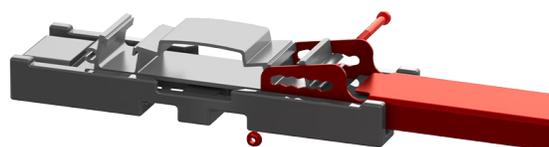
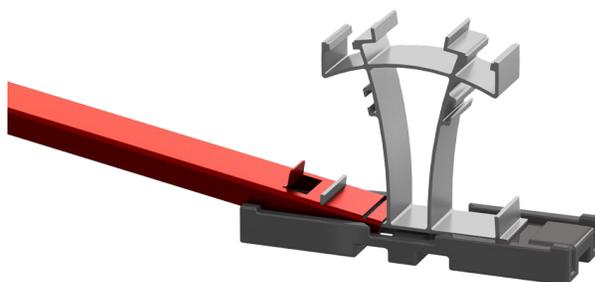
Insert appropriate clamps into MK3 channel of both Dome Peak and Dome Base. Bend the installation aid plastic tabs and insert the MK3 solt nut into the channel and turn 90° clockwise to lock into place. Release the installer aids and the clamp will stand on its won.



5

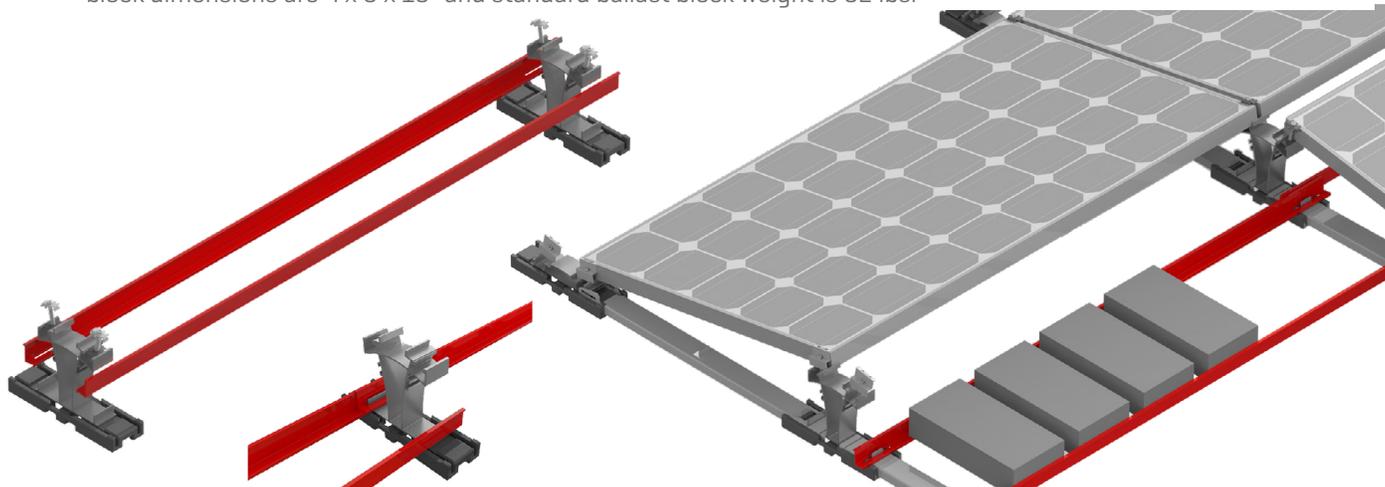


- ! Position Dome Corner Strut R<sup>2</sup> on the tabs of Dome Peak R<sup>2</sup> utilizing the slot in the end of the Corner Strut. Swing the Dome Corner Strut R<sup>2</sup> over the Dome Base and align the slot in the Corner Strut to the hole in the Dome Base. Slide socket cap screw through slot and hole and attach the nut. Torque to 12 ft-lbs.



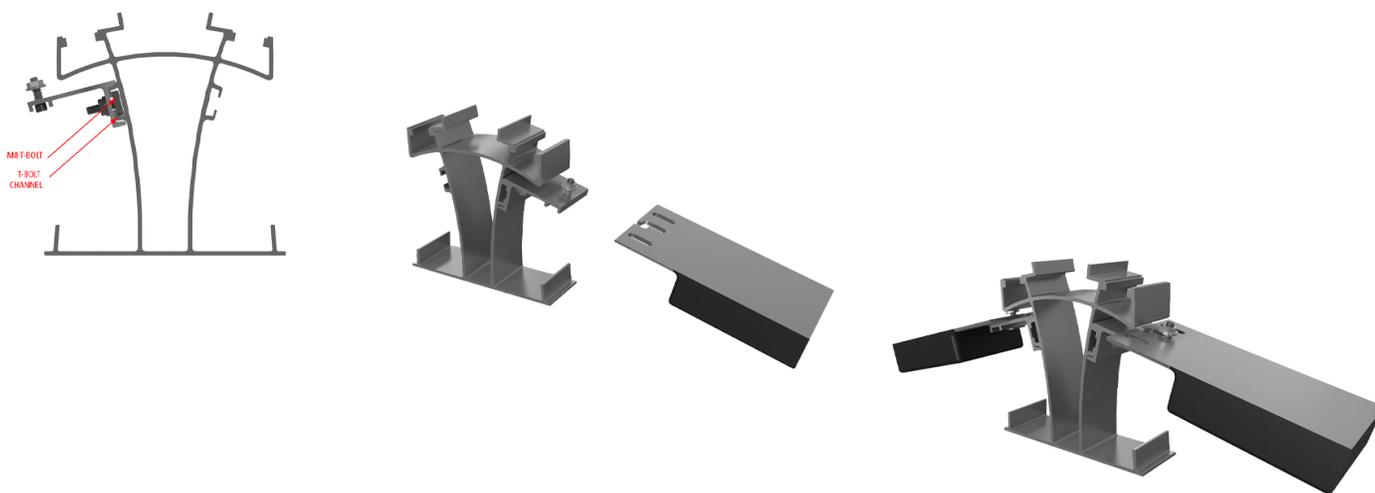
6

- ! Position porters on the tabs of Dome Peak with L facing inward and drop into place. If more than 4 blocks are required, install Corner Struts [refer to step 5] and utilize the tabs on the Corner Strut with L facing inward. Where required, stack Porters on top of each other in a nesting configuration. For corner and North/South edge modules, assemble porters and ballast on the Corner Struts that are located at the outer edge of the array.



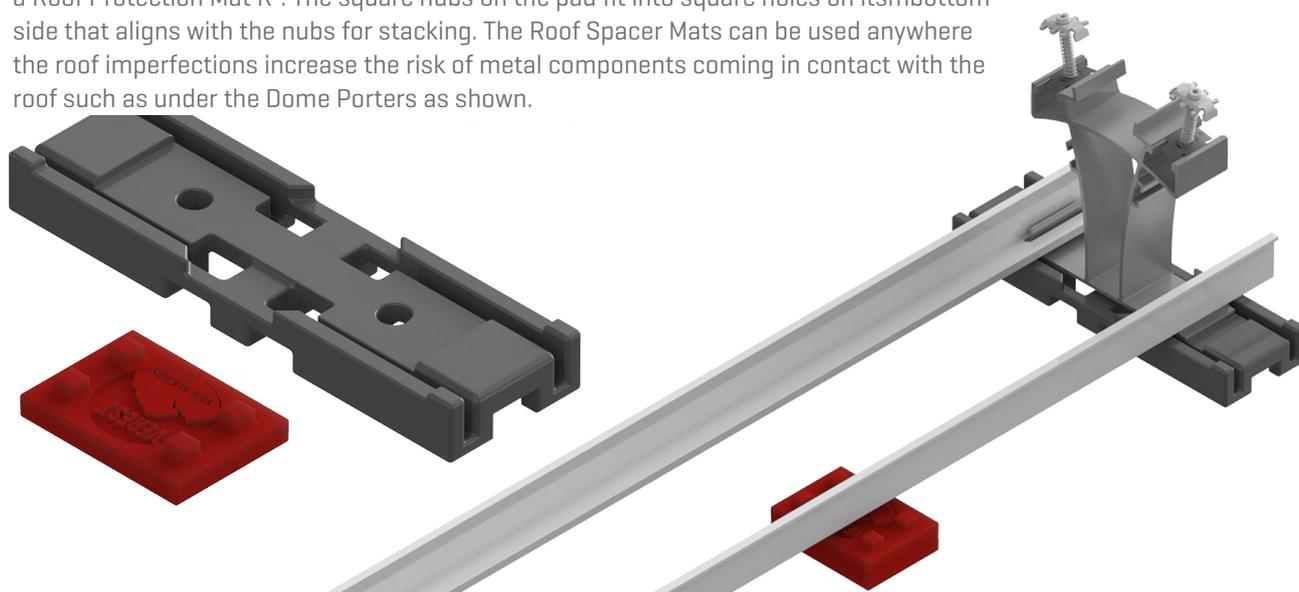
7

- ! Slide the T-Bolt on mounting bracket assembly through T-Bolt channel on the Dome Peak, until the side of bracket is flush with the side of the peak. Slide the slot on flange of micro-inverter or optimizer onto M8 T-Bolt. Torque to 10 - 15 ft-lbs. Repeat steps on opposite side of Dome Peak for additional micro-inverter or optimizers.



## 8 Optional

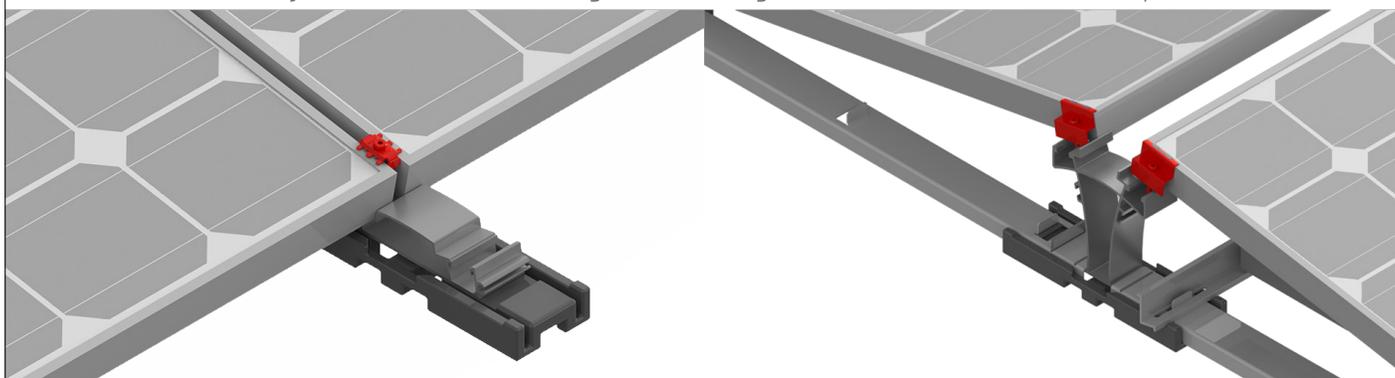
- ! Where required to level the array, as many as 4 spacer mats may be stacked underneath a Roof Protection Mat R<sup>2</sup>. The square nubs on the pad fit into square holes on its bottom side that aligns with the nubs for stacking. The Roof Spacer Mats can be used anywhere the roof imperfections increase the risk of metal components coming in contact with the roof such as under the Dome Porters as shown.



9a



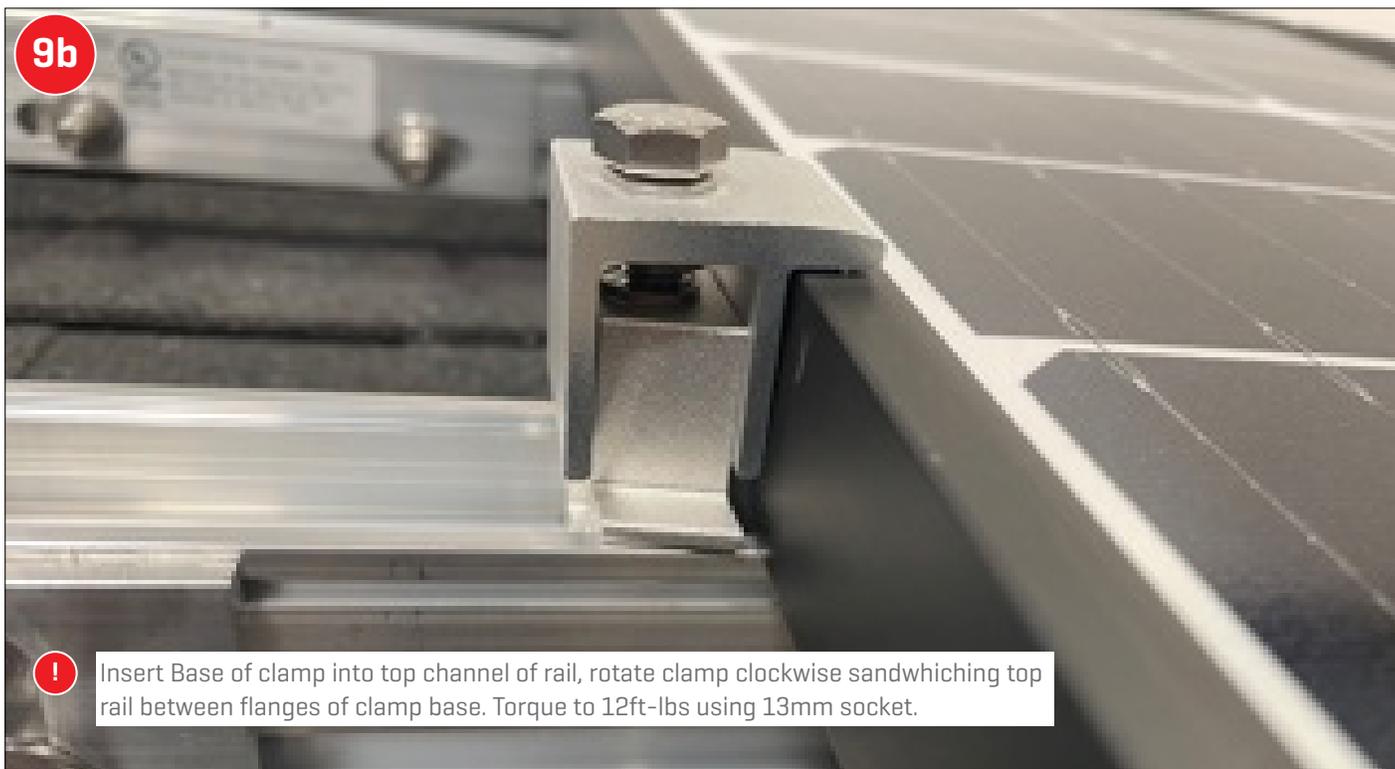
Important: Verify module manufacturer's recommended torque specification to ensure clamps are compatible.  
BUILD NORTH ROW: Start assembly on West module pair, then move to East. Continue with this pattern until entire row is complete. Insert ballast blocks as required. Secure clamps to module as you go. Torque End Clamps to 10.3 ft-lbs. Torque Bonding Mid Clamps to 12 ft-lbs. Remember: Always bias ballast to outside edges of sub-array.  
BUILD WEST COLUMN: Next, install the modules on West column. As before, if called out on project drawing, install porters, ballast blocks and corner struts as you go. Secure clamps to module. Torque to correct specification. We suggest clamping down as you add panels.  
Note: For certain jurisdictions, this item is regarded as a single-use item for a UL 2703 Listed System.



9b

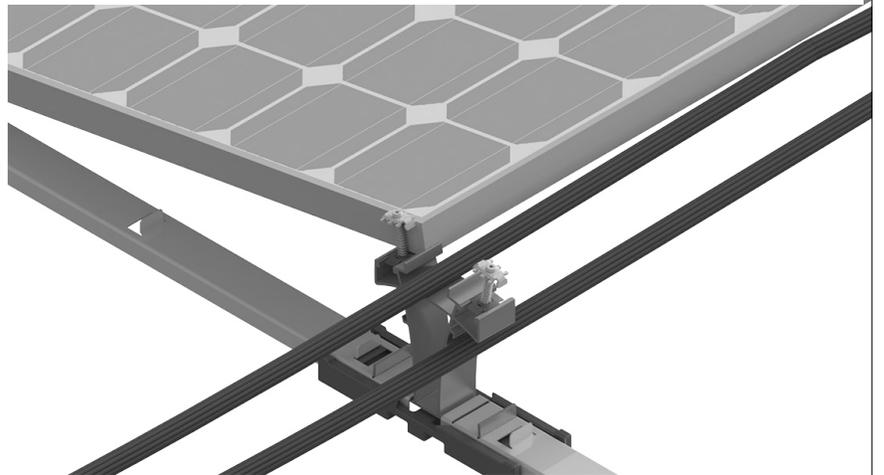


Insert Base of clamp into top channel of rail, rotate clamp clockwise sandwiching top rail between flanges of clamp base. Torque to 12ft-lbs using 13mm socket.



10

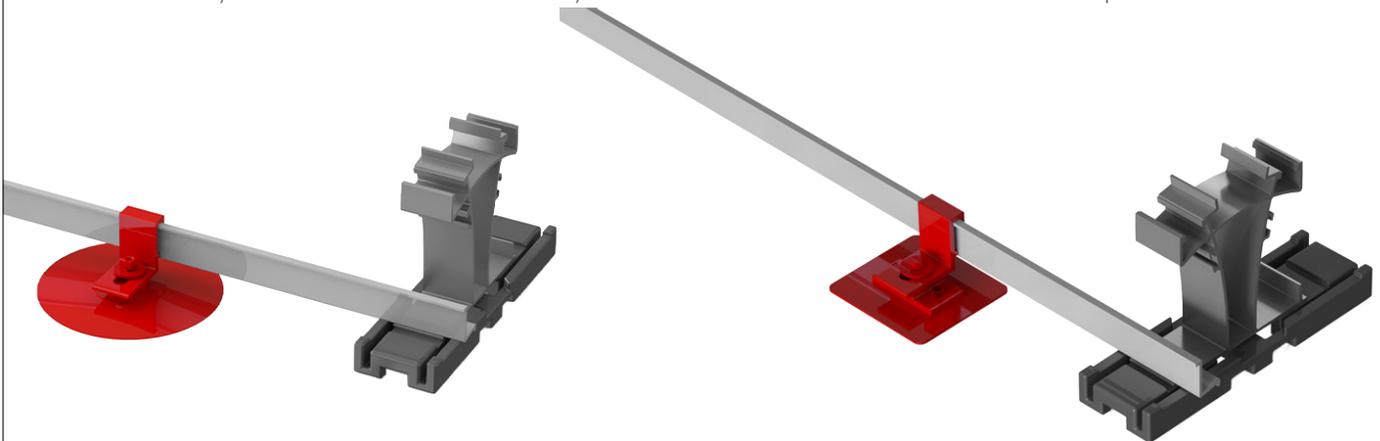
- ! D-Dome R<sup>2</sup> is compatible with many off-the-shelf wire clips from Heyco, HellermannTyton, Wiley and others. A few samples are shown. When stringing home runs in the North/South direction, utilize a product such as the Sun Runner with a Sun Bundler. The wires can be placed in the top of the Dome, or run alongside. When running home runs in the East/West Direction, use the Roof Protection Mats to cradle the wires and keep them off the roof. Secure them appropriately with zip ties or other products designed to safely bundle wires.



## 11 Optional

- ! Install one porter as described in step 6 if not already installed. Determine the desired anchor location. It must be located within 12" of the Dome Peak R<sup>2</sup>. Install anchor to roof per manufacturer's instructions. Slip anchor bracket over Dome Porter R<sup>2</sup> and bolt the anchor bracket to anchor plate with supplied hardware, and torque to anchor manufacturer's specification.

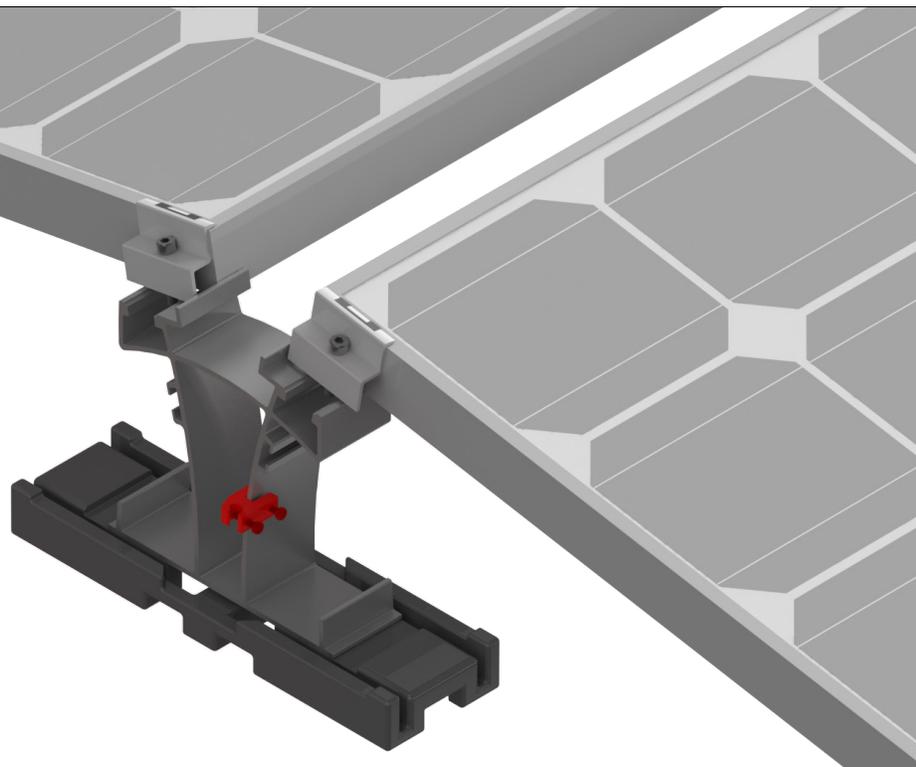
Note: K2 Systems' anchor bracket assembly allows for movement to account for thermal expansion.

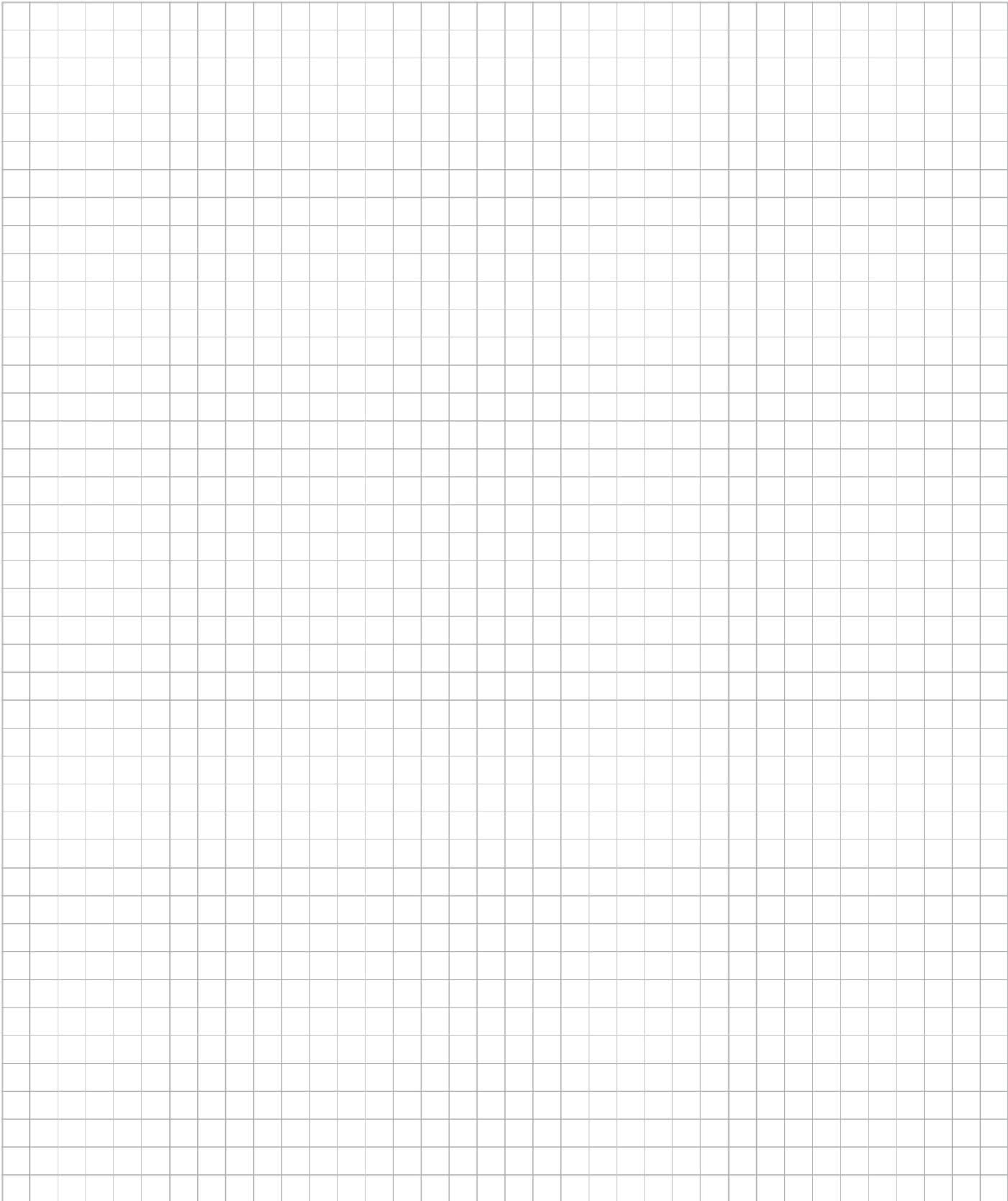


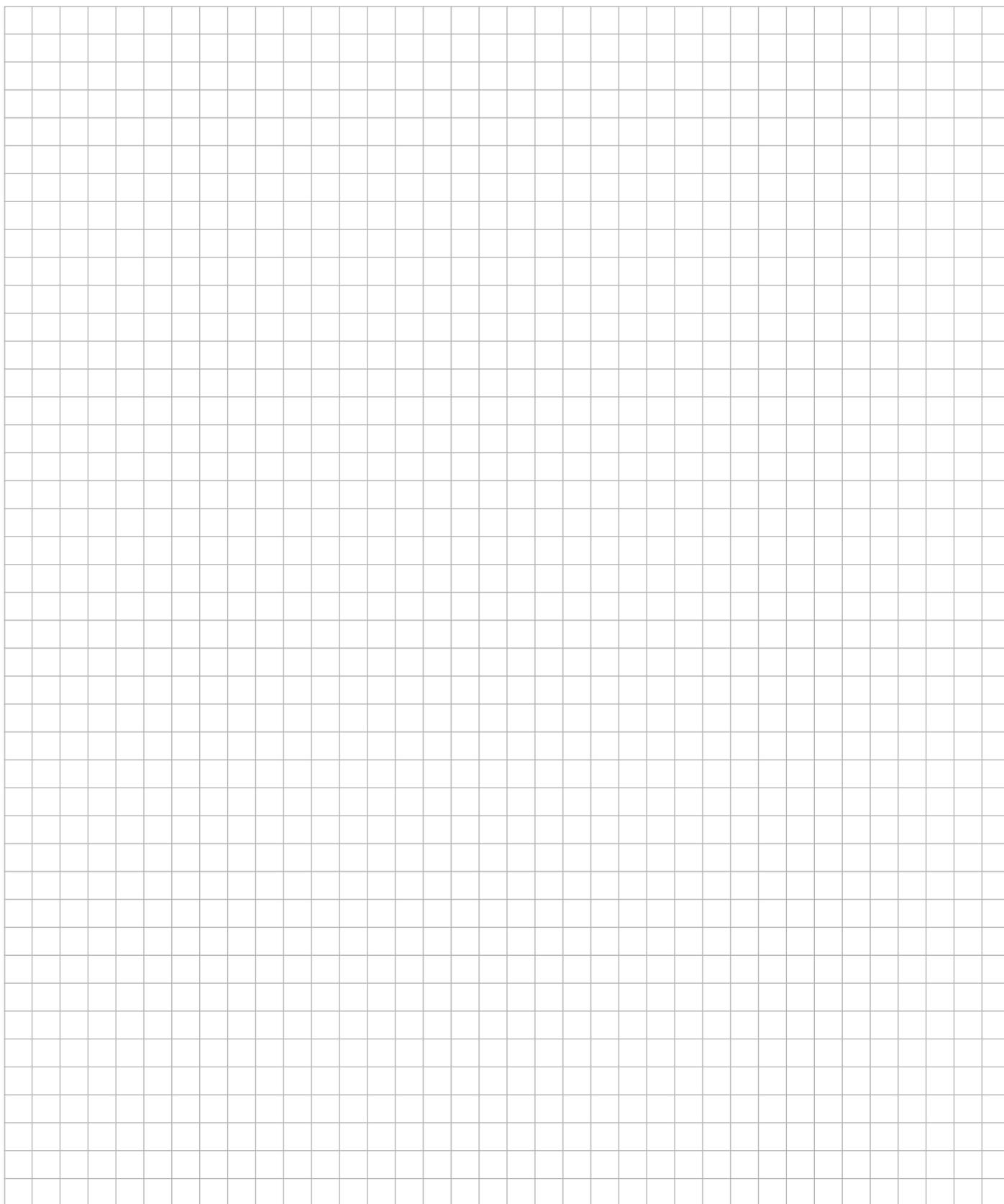
12



Secure the ILSCO SGB-4 ground lug to the horizontal flange or vertical walls of Dome Peak R<sup>2</sup>. Torque to 35 in-lbs as specified by lug manufacturer. For UL 2703 compliance, use 4- 14 AWG Solid/ Stranded Copper ground wire. Note: For certain jurisdictions, this item is regarded as a single-use item for a UL 2703 Listed System. Warning: Employ best industry practices to ensure that copper does not contact aluminum or galvanized steel. K2 Systems recommends installing two lugs on each sub-array. Do not install more than one lug on a single Peak.







**We support PV systems**  
Formerly Everest Solar Systems 



Thank you for choosing a K2 mounting system.

Systems from K2 Systems are quick and easy to install. We hope these instructions have helped. Please contact us with any questions or suggestions for improvement.

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