



April 17, 2018

Re: Unirac Tile Hook Product Compatibility

To Whom It May Concern:

Unirac has assessed the compatibility of several Unirac mounting systems (previously Solarhooks mounting systems) with commercially available solar racking systems. The purpose of this report is to evaluate the physical fit of the connection between each racking system and the Unirac mounting products.

### **SAMPLE DESCRIPTION**

Sample hardware of three systems was delivered to a 3<sup>rd</sup> party laboratory on April 27, 2017. Three racking systems, one manufactured by SnapNrack, one by IronRidge Inc, and one by Mounting Systems Inc were supplied along with three Unirac mounting systems, part #004CT5S, #004CT1S, and #004051D (previously Solarhooks part #KS-RH-CT5, #KS-RH-CT1, and #CMP-KT). Part#004AT1S is included thru similarity of mounting interface as well. The fit of Unirac's Solarmount racking system and Quickmount QRail system (added thru similarity to Mounting Systems racking) was also evaluated by Unirac outside of the lab evaluations and is included in the results of this letter. Appendix A includes a specification sheet for each Unirac tile hook system.

### **COMPATIBILITY PROCEDURE**

The three Unirac mounting systems products were assembled with each racking system using each racking system's corresponding hardware. For example, the SnapNrack racking system was supplied with SnapNrack bolts and hardware; the connection of the SnapNRack racking system to the Unirac mounting system via the SnapNrack bolts and hardware was assessed. The same procedure was followed for the other systems. Each connection between the various racking systems and Unirac mounting systems was evaluated for fit and any limitations were noted. Appendix B includes photos of the racking systems assembled to the Unirac mounting systems.

### **COMPATIBILITY RESULTS:**

Compatibility between the racking systems and Unirac mounting systems was evaluated for physical connection and fit. Unirac, SnapNrack, Iron Ridge, Mounting Systems and Quickmount QRail are all compatible with the evaluated Unirac mounting systems, as shown in Table 1, without limitation.

This letter does not quantify the mechanical properties of the various racking systems or associated strength capacities of those systems. Engineering requirements set by building codes, engineering standards and local jurisdictions take precedence.

Sincerely,

Ernest Gallegos  
Director of Products  
Unirac, Inc.

Ernest.gallegos@unirac.com

**Unirac, Inc. • [www.unirac.com](http://www.unirac.com)**

1411 Broadway Blvd. NE • Albuquerque, NM • 87102-1545 • Ph: (505) 242-6411 • Fax: (505) 242-6412



Table 1

PRODUCT COMPATIBILITY RESULTS

<b>Racking Manufacturer</b>	<b>Racking System</b>	<b>Unirac Mounting System Compatibility</b>	<b>Limitations</b>
<b>Unirac</b>	Solarmount	Compatible	None
<b>SnapNRack</b>	100	Compatible	None
<b>Ironridge</b>	XR	Compatible	None
<b>Mounting Systems</b>	10/48, 13/52	Compatible	None
<b>Quickmount PV</b>	QRail	Compatible	None

Unirac Mounting Systems Evaluated:

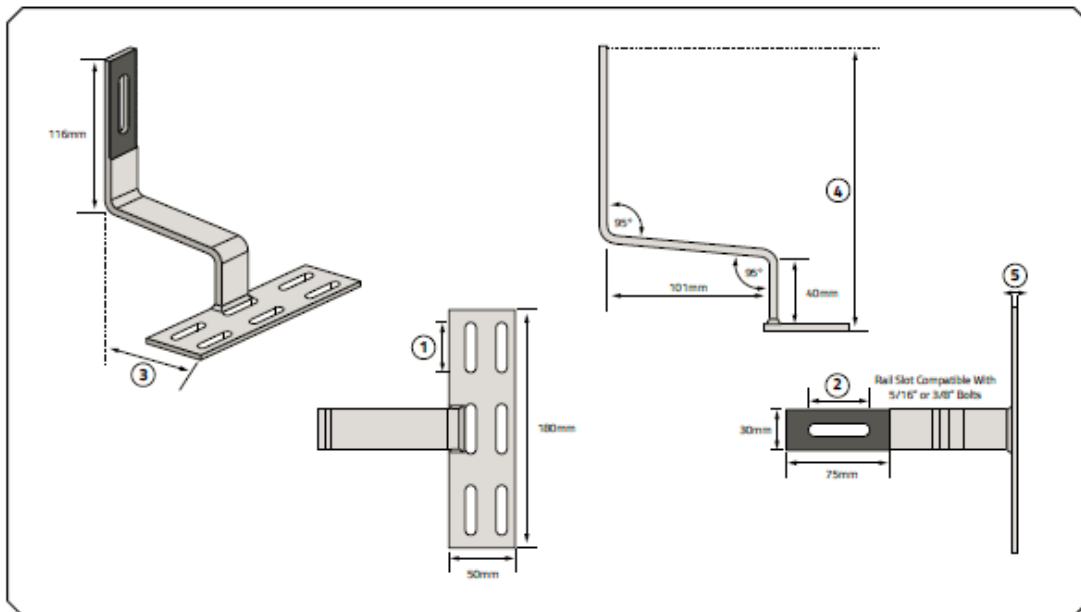
<b>Unirac Mounting System</b>	<b>Description</b>	<b>SolarHooks Part Number</b>
<b>004AT1S</b>	AT1 FLAT TILE HOOK SIDE MT	KS-RH-AT1
<b>004CT1S</b>	CT1 SPANISH TILE HOOK SIDE MT	KS-RH-CT1
<b>004CT5S</b>	CT5 UNIV TILE HOOK SIDE MT	KS-RH-CT5
<b>004051D</b>	COMPOSITION FLASHING KIT	CMP-KT

## APPENDIX A

Part #  
**KS-RH-CT1**

- ▶ Type 304 Stainless Steel
- ▶ Spanish tile roof hook
- ▶ For side mount rails

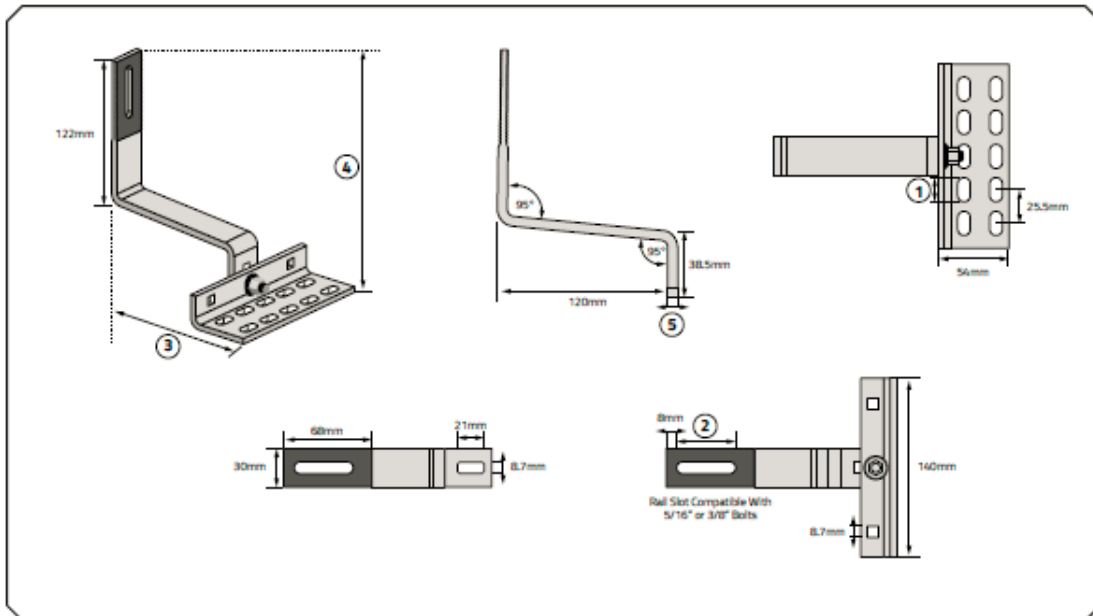
Number	Description	Size/Length
1	Mounting Screw Slots	7,5mm x 37mm
2	Rail Slot Size	10mm x 46mm
3	Length of Roof Hook	151mm
4	Bottom End to Top End	165mm
5	Thickness	5mm



Part #  
**KS-RH-CT5**

- ▶ Type 304 Stainless Steel
- ▶ All tile roof hook
- ▶ For side mount rails

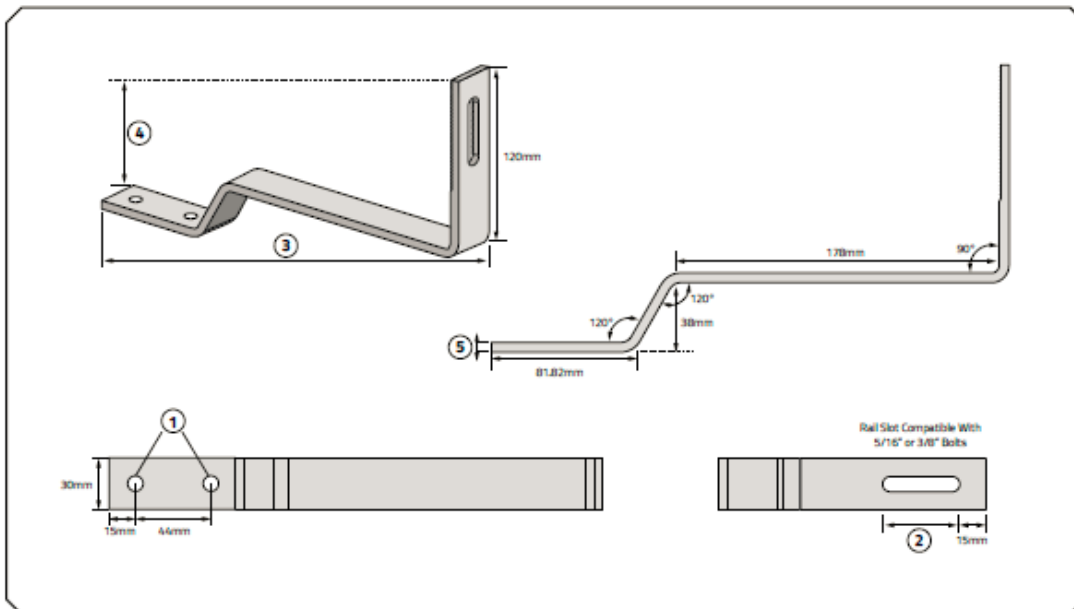
Number	Description	Size/Length
1	Mounting Screw Slots	9mm x 18mm
2	Rail Slot Size	10mm x 46mm
3	Length of Roof Hook	179.5mm
4	Bottom End to Top End	165.3mm - 173.5mm
5	Thickness	5mm



Part #  
**KS-RH-AT1**

- ▶ Type 304 Stainless Steel
- ▶ Flat tile hooks
- ▶ For side mount rails

Number	Description	Size/Length
1	Mounting Screw Holes	9mm
2	Rail Slot Size	10mm x 46mm
3	Length of Roof Hook	286mm
4	Rail Height From Finished Roof	70mm - 108mm
5	Thickness	5mm





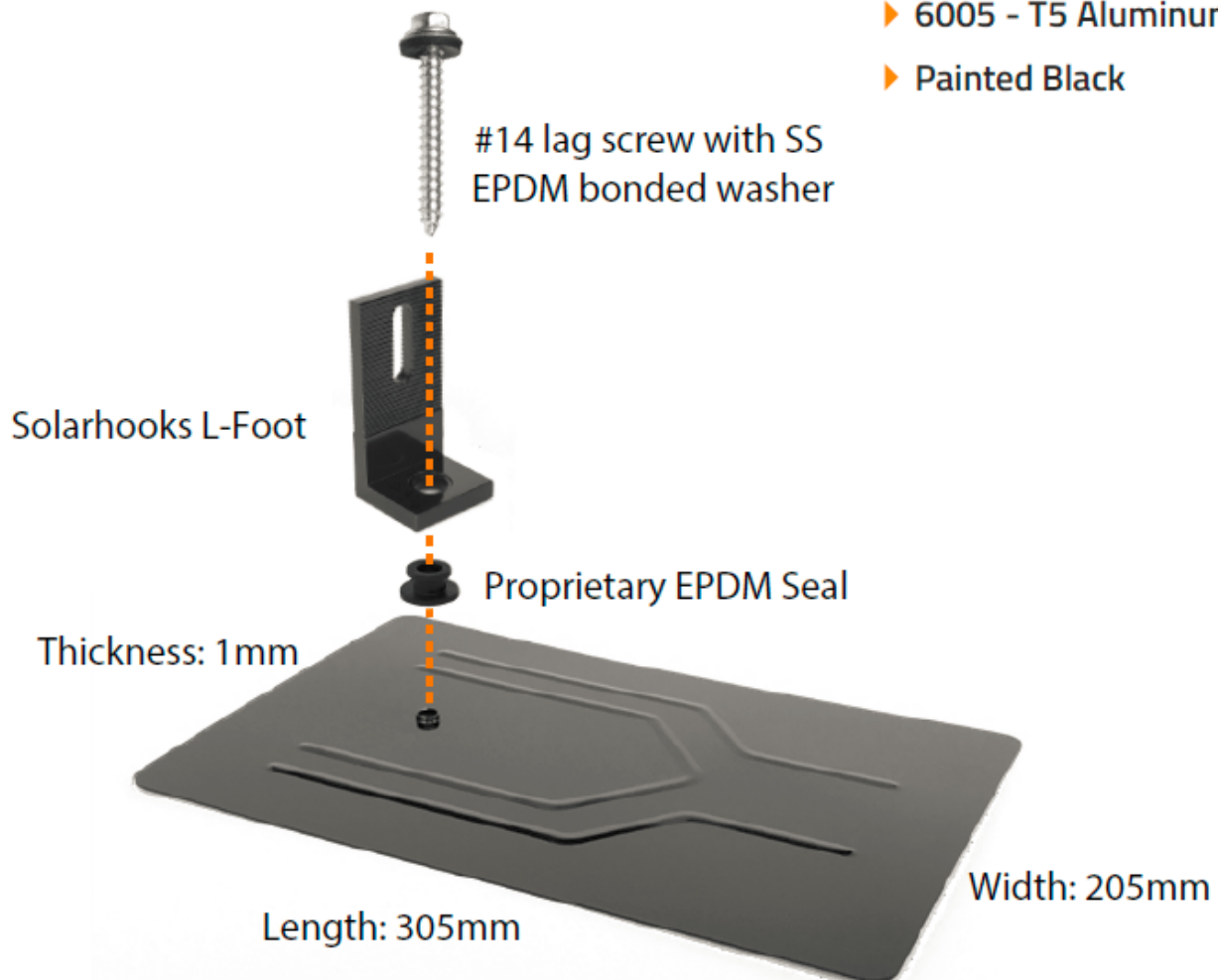
**SOLARHOOKS**  
.com

## Composition Flashing Kit

Part #

# CMP-KT

- ▶ 6005 - T5 Aluminum
- ▶ Painted Black



**PATENT PENDING**



## APPENDIX B

### RACKING SYSTEM COMPATIBILITY





**Figure B1a.** #KS-RH-CT1 connected to SnapNrack racking system



**Figure B1b.** Side view of connection



**Figure B1c.** #KS-RH-CT1 connected to Ironridge racking system



**Figure B1d.** Side view of connection



**Figure B1e.** #KS-RH-CTI connected to Mounting Systems racking system



**Figure B1f.** Side view of connection



**Figure B2a.** #KS-RH-CT5 connected to SnapNrack racking system



**Figure B2b.** Side view of connection



**Figure B2c.** #KS-RH-CT5 connected to Ironridge racking system



**Figure B2d.** Side view of connection



**Figure B2e.** #KS-RH-CT5 connected to Mounting Systems racking system



**Figure B2f.** Side view of connection



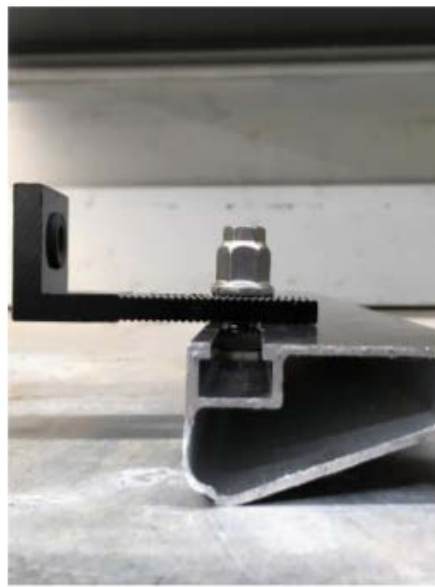
**Figure B3a.** #CMP-KT connected to SnapNrack racking system



**Figure B3b.** Side view of connection



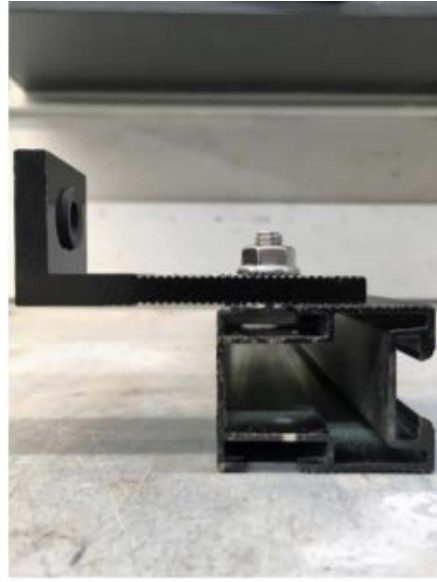
**Figure B3c.** #CMP-KT connected to Ironridge racking system



**Figure B3d.** Side view of connection



**Figure B3e.** #CMP-KT connected to Mounting Systems racking system



**Figure B3f.** Side view of connection