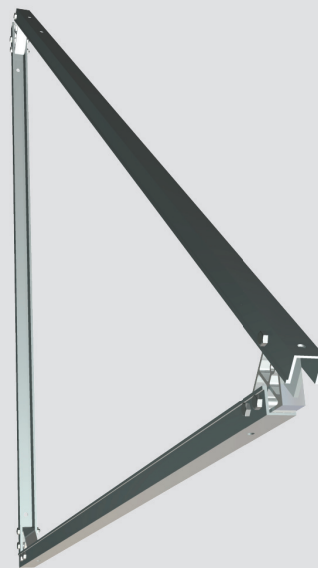


# OPERATION AND INSTALLATION

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## ROOF MOUNTING HARDWARE

### » VERTICAL TILT RACK 45°



**STIEBEL ELTRON**

### INSTALLATION INSTRUCTIONS VERTICAL TILT RACKS - 45° SIDE-BY-SIDE ORIENTATION

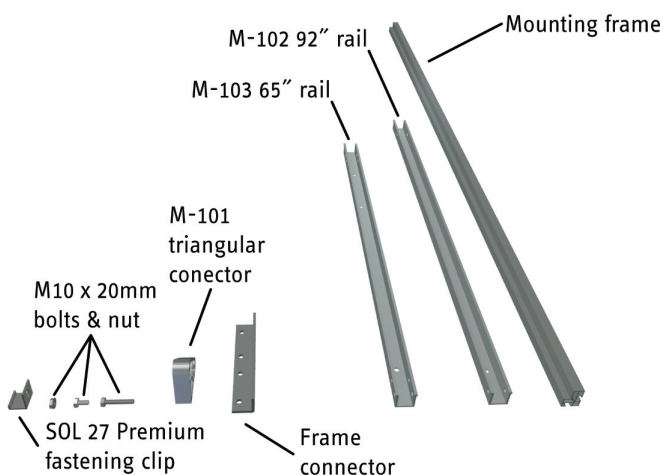
#### Table of Contents

- 1 Assembling the vertical tilt rack
- 2 Mounting
  - 2.1 Mounting on an asphalt roof
  - 2.2 Mounting on a raised-seam roof

**CAUTION: READ ALL INSTRUCTIONS BEFORE INSTALLING THIS KIT. ADDITIONAL ITEMS WILL BE NEEDED TO MOUNT THIS ASSEMBLY.**

This manual is intended to aid in the installation of 1-4 Stiebel Eltron SOL 27 Premium collectors tilted off of an asphalt roof in a side-by-side vertical orientation. This kit allows for quick and easy roof mounting of collectors. Please contact Stiebel Eltron, or visit our website for more information.

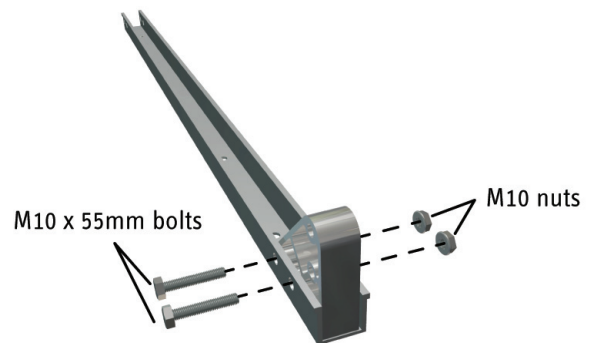
1. Familiarize yourself with the parts necessary to install this solar kit. The parts are pictured below:



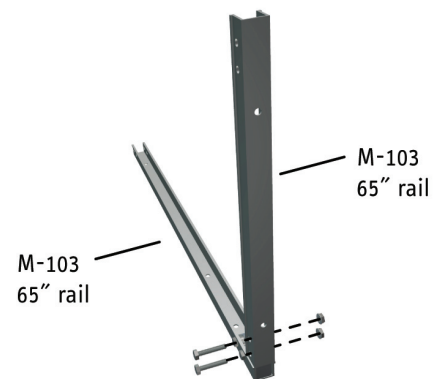
2. Consult the table below to make sure you have the right number of components for the appropriate number of collectors.

Part:	# of Collectors in Array:			
	1	2	3	4
	# of Parts Required:			
45° Vertical tilt rack	2	2	3	4
Vertical X-Brace	1	1	2	2
Single mounting frame kit	1	0	1	0
Double mounting frame kit	0	1	1	2
Frame connector kit	0	0	1	1
Roof attachment kit	4	4	6	8

3. Begin the assembly by removing the racking components from their boxes. Insert the M-101 triangular connector into the inside of the M-103 65" rail as shown below. Using the M10 nuts & bolts, fasten the two parts together.



4. Repeat the process with the other M-103 65" rail using two more M10 nuts & bolts.

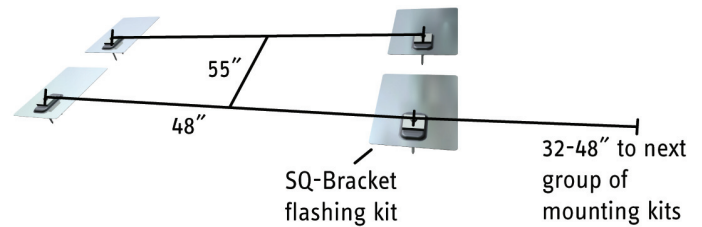


5. Again repeat the process with two more M-101 triangular connectors on the ends of each rail.

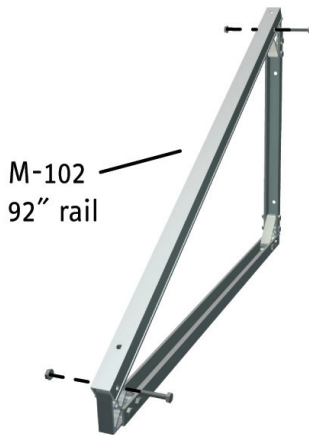
### INSTALLATION INSTRUCTIONS VERTICAL TILT RACKS - 45° SIDE-BY-SIDE ORIENTATION



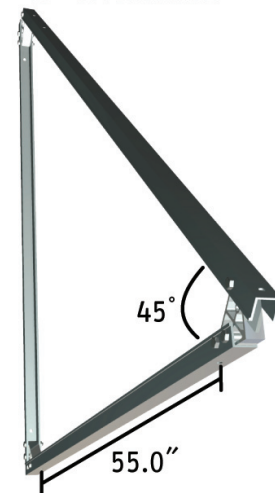
**Note:** For information regarding the installation of SQ-bracket flashing kits consult the Stiebel Eltron Flashing Kit Installation Guide.



6. Complete the rack assembly by attaching the remaining, M-102 92" rail and fastening it with two M10 nuts & bolts.



Mounting Hole Distance  
45° Orientation



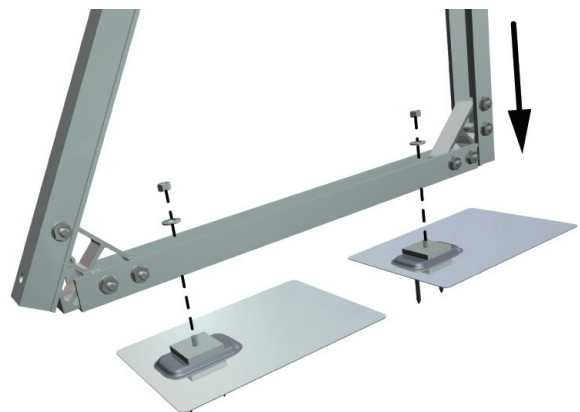
7. Repeat this process for all remaining racks.

## 2 Mounting

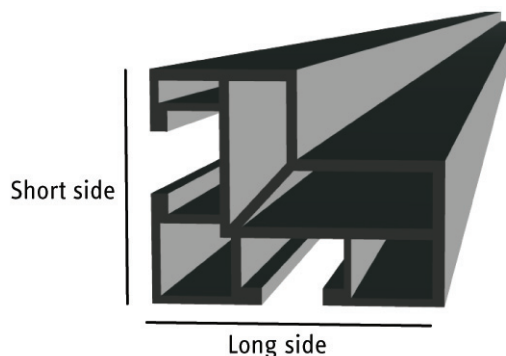
### 2.1 Mounting on an asphalt roof

1. The assembly is ready to be attached to the mounting hardware. Identify the location on the roof that the mounting kit will be installed. A proper site assessment should have been performed to determine the ideal location of the solar collectors. The following image shows the space necessary for the varying numbers of collectors & racks to be installed. Pictured are the SQ-bracket flashing kits that will fasten to the vertical tilt racks. The distances listed refer to the distance between the vertical mounting peg on the flashing kit. Depending on which angle the collectors will be mounted, the distances will vary.

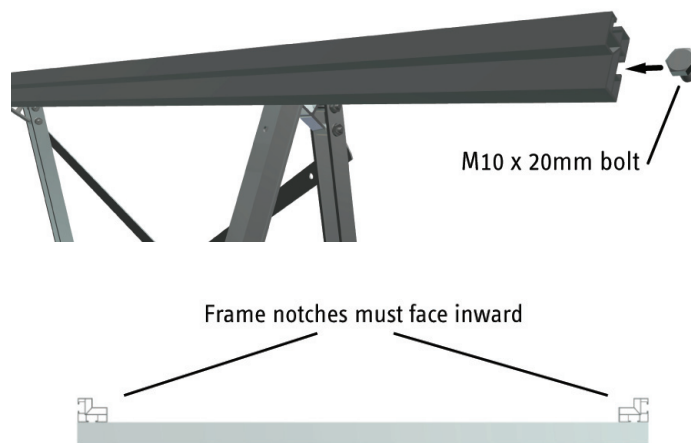
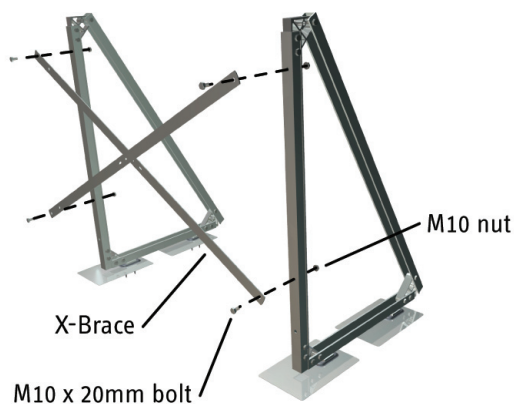
2. Fasten the racks to the flashing kits as shown below.



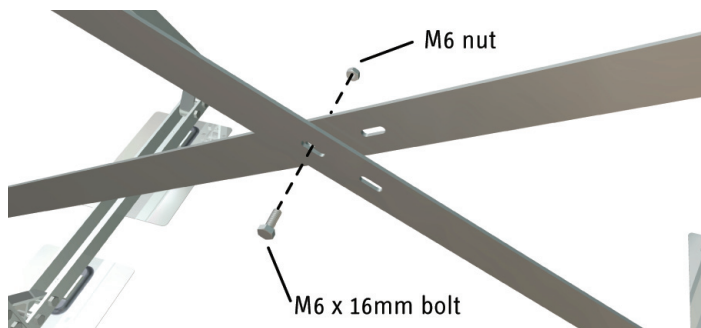
### INSTALLATION INSTRUCTIONS VERTICAL TILT RACKS - 45° SIDE-BY-SIDE ORIENTATION



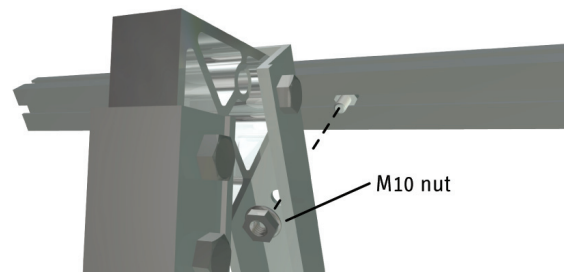
3. Remove X-Braces from its box (560106). Fasten the X-Braces to the racks using and M10 x 20mm bolts & nuts.



4. Use the M6 bolt and nut to secure the two X-Brace pieces together.

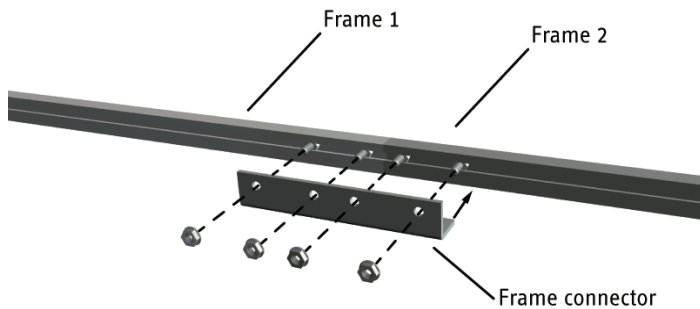


5. Remove the mounting frames from the box. Slide 2 M10 x 20mm bolts into the groove in the long side of the mounting frame. Do this for each mounting frame.

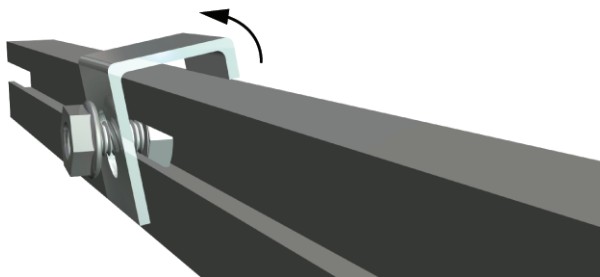
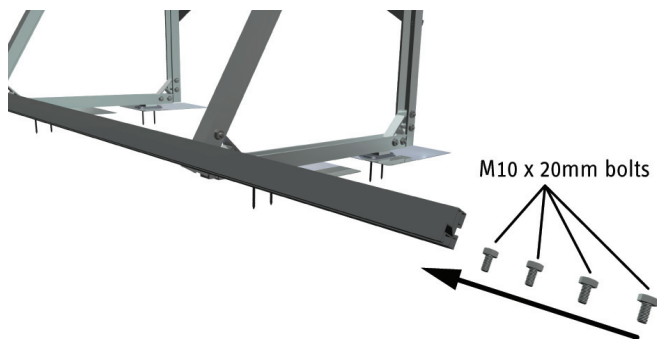


7. If multiple collectors are being installed, use the frame connector kit to fasten two frame pieces together. Slide the bolts into the groove on the short side of the frame piece. Abut the two frames together, and tighten the bolts over the frame connector.

### INSTALLATION INSTRUCTIONS VERTICAL TILT RACKS - 45° SIDE-BY-SIDE ORIENTATION



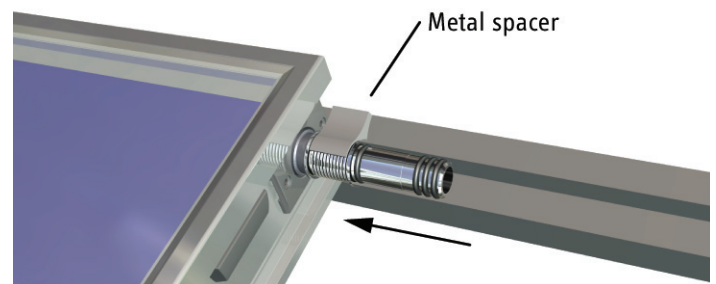
8. Before the assembly is bolted to the roof mount, the bolts for the collector fastening clips must be slid into the short side slot of all mounting frames. Slide four M10 x 20mm bolts in the short side of the mounting frame. Loosely attach the fastening clips to the bolts and lift them over the lip as shown for easy collector mounting.



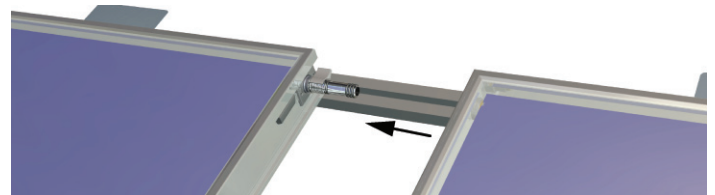
9. The collectors are ready to be mounted in the rack assembly. Lift the first collector into the assembly as shown, resting the bottom of it down first.



10. Insert the inter-panel connector into the collector port in preparation for the mounting of the second panel. Make sure to have the metal spacer attached



11. Mount the next collector in the same manner as step 16.



12. Remove the metal spacer and discard it.

13. Attach metal clamps that are provided with the connector to ensure a tight seal. This process is described in more detail in the SOL 27 Premium Connector manual.

14. Slip the fastening clips over the lip of the collectors and tighten down the nuts. A clamp may need to be used in

### INSTALLATION INSTRUCTIONS VERTICAL TILT RACKS - 45° SIDE-BY-SIDE ORIENTATION

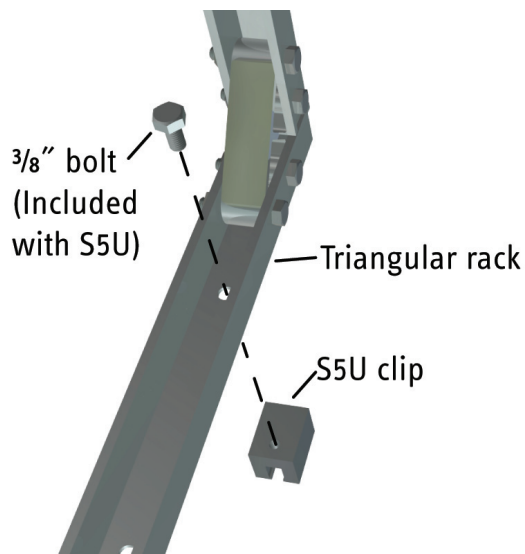
order to keep the clips from rotating due to the torque of a ratchet or wrench.

#### 2.2 Mounting on a raised-seam roof

This section is to aid in the mounting of the rail assembly onto a raised-seam roof using an S5U clip and L-102 L-Bracket.

Part:	# of Collectors in Array:			
	1	2	3	4
	# of Parts Required:			
S5U clip	4	4	6	8
L-102 L-Bracket	4	4	6	8

1. Assemble the S5U clip and triangular racks using the included fasteners.



2. Clip the S5U assembly to the roof ridges.

**Note:** For information regarding the installation of S5U clips and L-Brackets, consult the Stiebel Eltron Raised-seam Roof Installation Guide.

3. Follow the same procedures for the remaining assembly as shown in steps 3-14 in Section 2.1.



For any service or warranty related issue, contact Stiebel Eltron at:

800.582.8423

### STIEBEL ELTRON

17 West Street  
West Hatfield, MA 01088

TOLL FREE 800.582.8423

PHONE 413.247.3380

FAX 413.247.3369

info@stiebel-eltron-usa.com

www.stiebel-eltron-usa.com

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