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# SunMaxx

## Evacuated Tube Solar Collector Installation Manual



## WARNING!

For your safety, please read through this manual carefully before installation to minimize the risk of fire, property damage, and personal injury!

## SAFETY PRECAUTIONS

- ▲ Only use solar hot water system as intended and described in the Installation Manual and the Technical Manual; use other described will void warrant and may led fire, property damage, and personal injury.
- ▲ Solar hot water system must be properly installed in accordance with Installation and Technical Manual before it is used.
- ▲ Do not store any combustible materials in the vicinity of the system. (dry leaves, tree branches, gasoline, and other combustible materials)
- ▲ Wear protective gloves and safety glasses during installation.
- ▲ Use caution while handling the evacuated tubes; the metal put of the evacuated tube might be HOT.
- ▲ Keep solar hot water system and components away from children and animals.

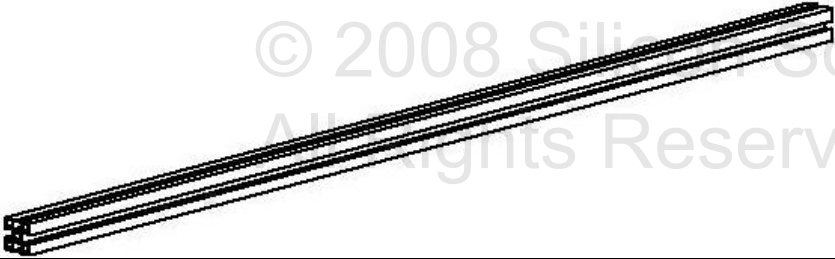
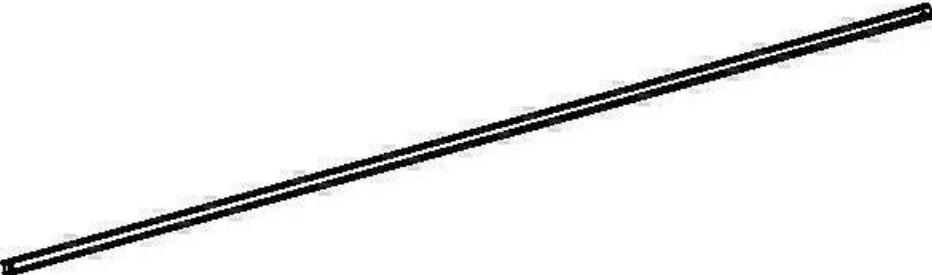
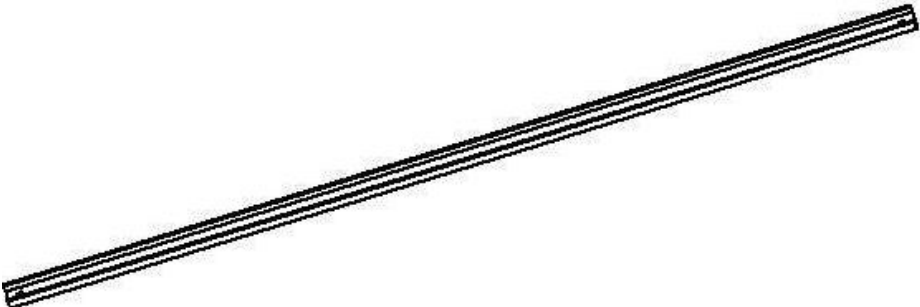
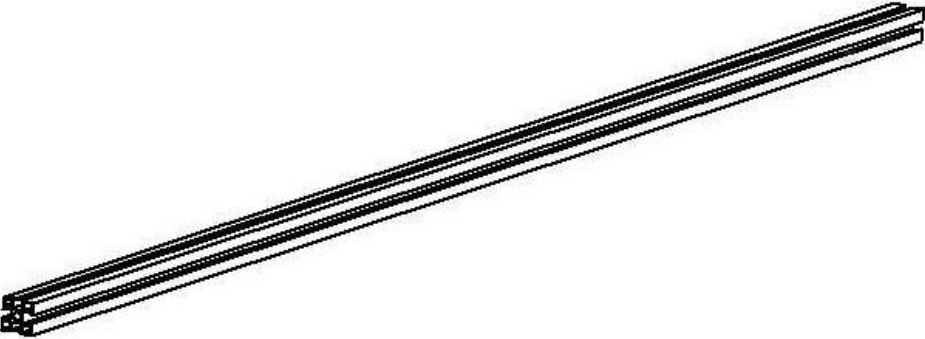
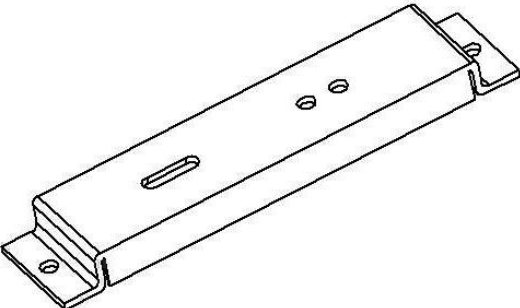
## BEFORE YOU START

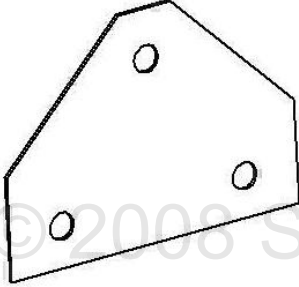
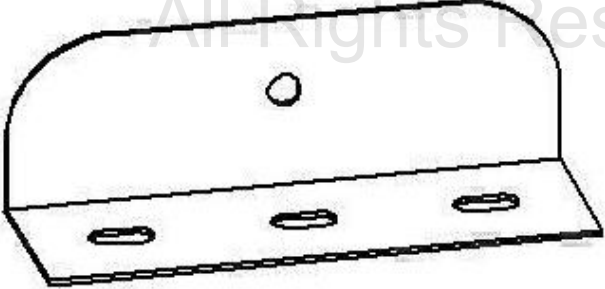
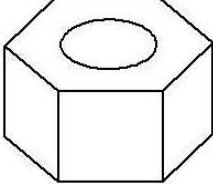


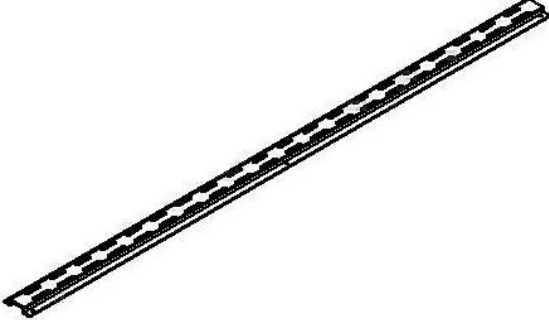
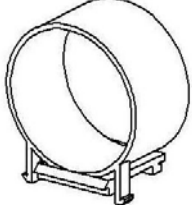
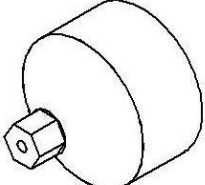
- The assembly of the solar hot water system requires two able persons with the ability to lift 50 pound each.
- Best to install on cool and cloudy day.
- Store evacuated tubes in dark or shaded places until insertion into the manifold.

## THINGS YOU NEED

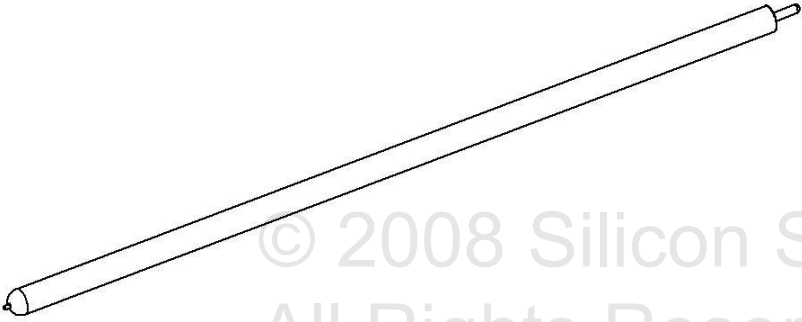
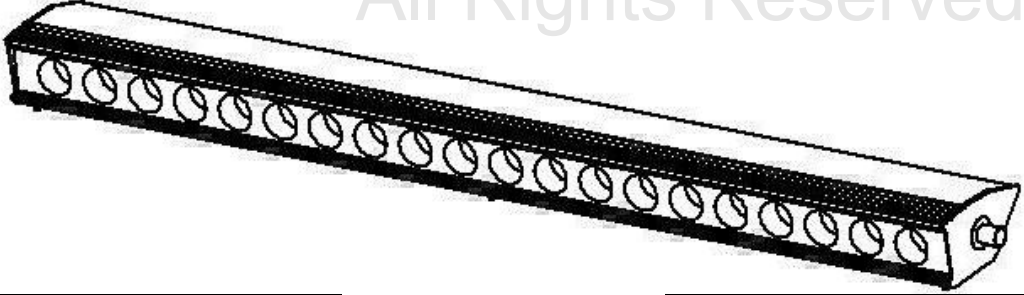
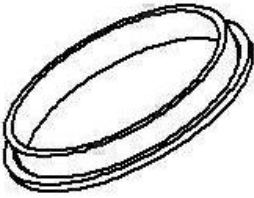
- ½ inch ratchet
- Adjustable Wrench
- Liquid soap or other non-flammable lubricant

## Components

<p><b>Part A: Manifold Leg (3)</b> (Shorter than part D)</p>	
<p><b>Part B: Back Brace (4)</b> (Longer than Part C)</p>	
<p><b>Part C: Horizontal Support Brace (3)</b> (Shorter than Part B)</p>	
<p><b>Part D: Manifold Arm (3)</b> (Longer than Part A)</p>	
<p><b>Part E: Clamp (6)</b></p>	

<p><b>Part F: Triangle Plate (3)</b></p>	
<p><b>Part G: Feet (6)</b></p>	
<p><b>Part H: Nut (50)</b></p>	
<p><b>Part I-1: Small Bolt (40)</b></p>	
<p><b>Part I-2: Large Bolt (10)</b></p>	
<p><b>Part J: Base Tube Frame (1)</b></p>	
<p><b>Part K-1: Plastic End Cap (Female)</b></p>	
<p><b>Part K-2: Plastic End Cap (Male)</b></p>	

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<p><b>Part L: Evacuate d Tube</b></p>	
<p><b>Part M: Manifold</b></p>	
<p><b>Part N: Fit Ring</b></p>	

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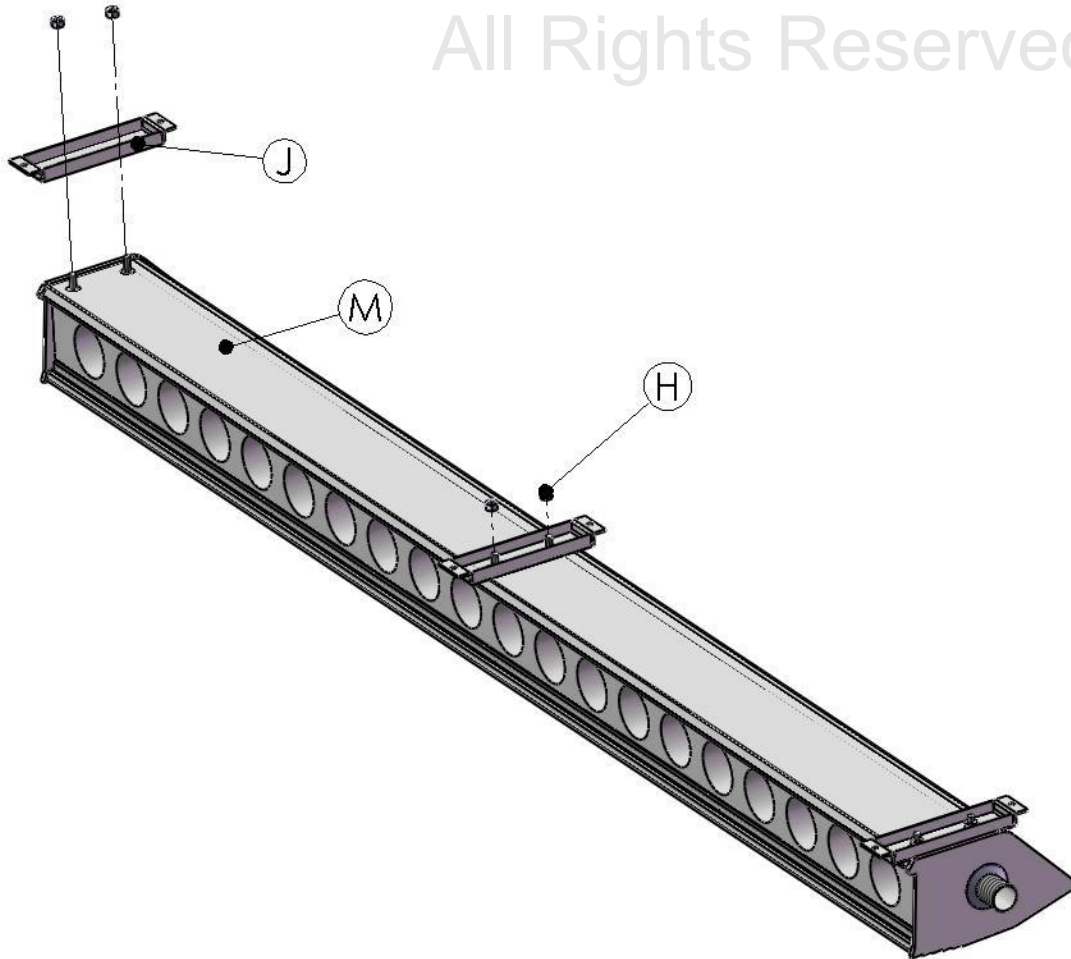
# Installation Instructions

These Instructions are valid for all SunMaxx Heat Pipe Evacuated Tube Solar Collectors.

## 1) INSTALLING CLAMP TO MANIFOLD

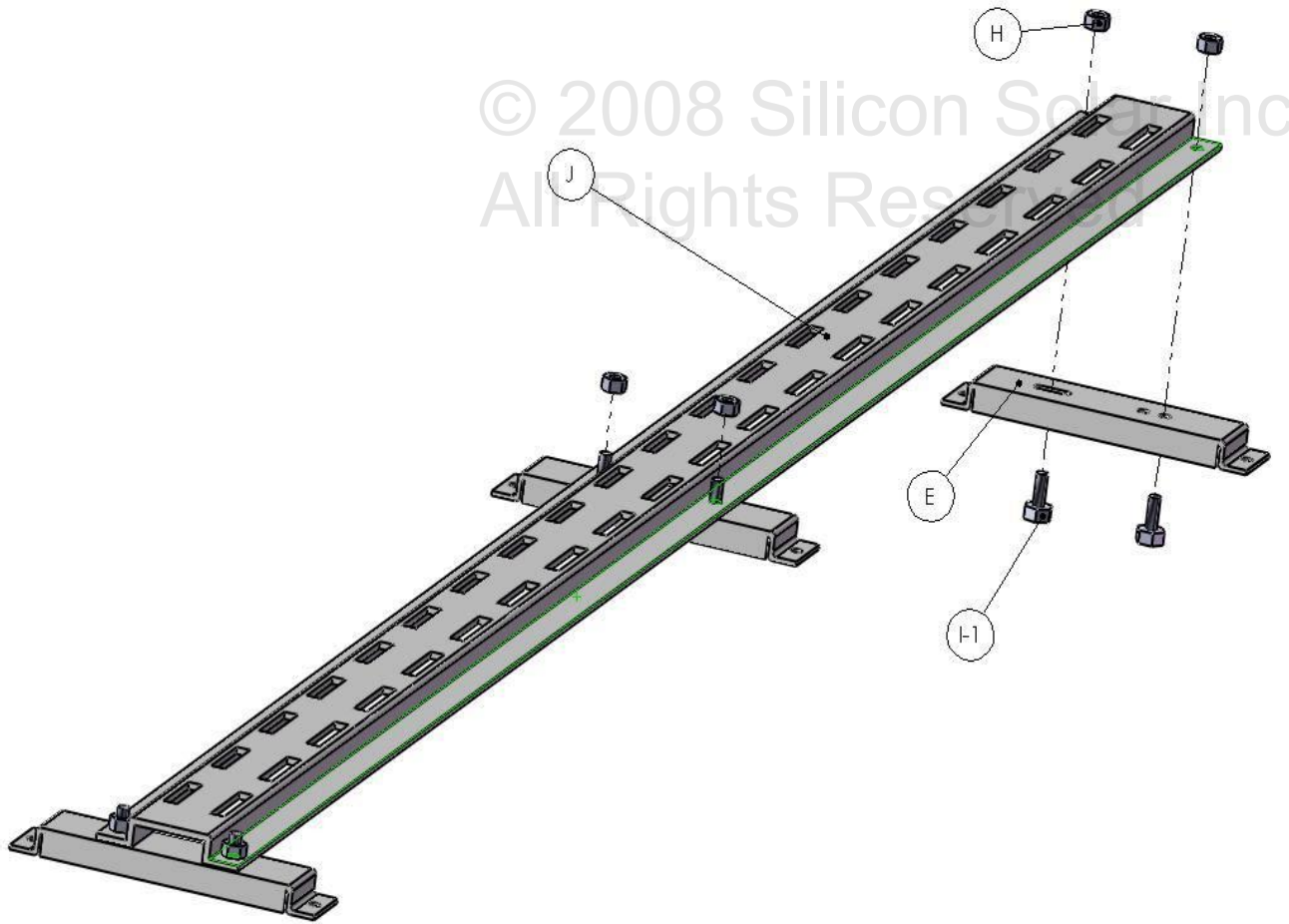
- a) Place the manifold flat so the bolts are facing up.
- b) Remove nuts already attached to bolts on manifold.
- c) Secure clamps to the bottom of the manifold using a ratchet (1/2”).

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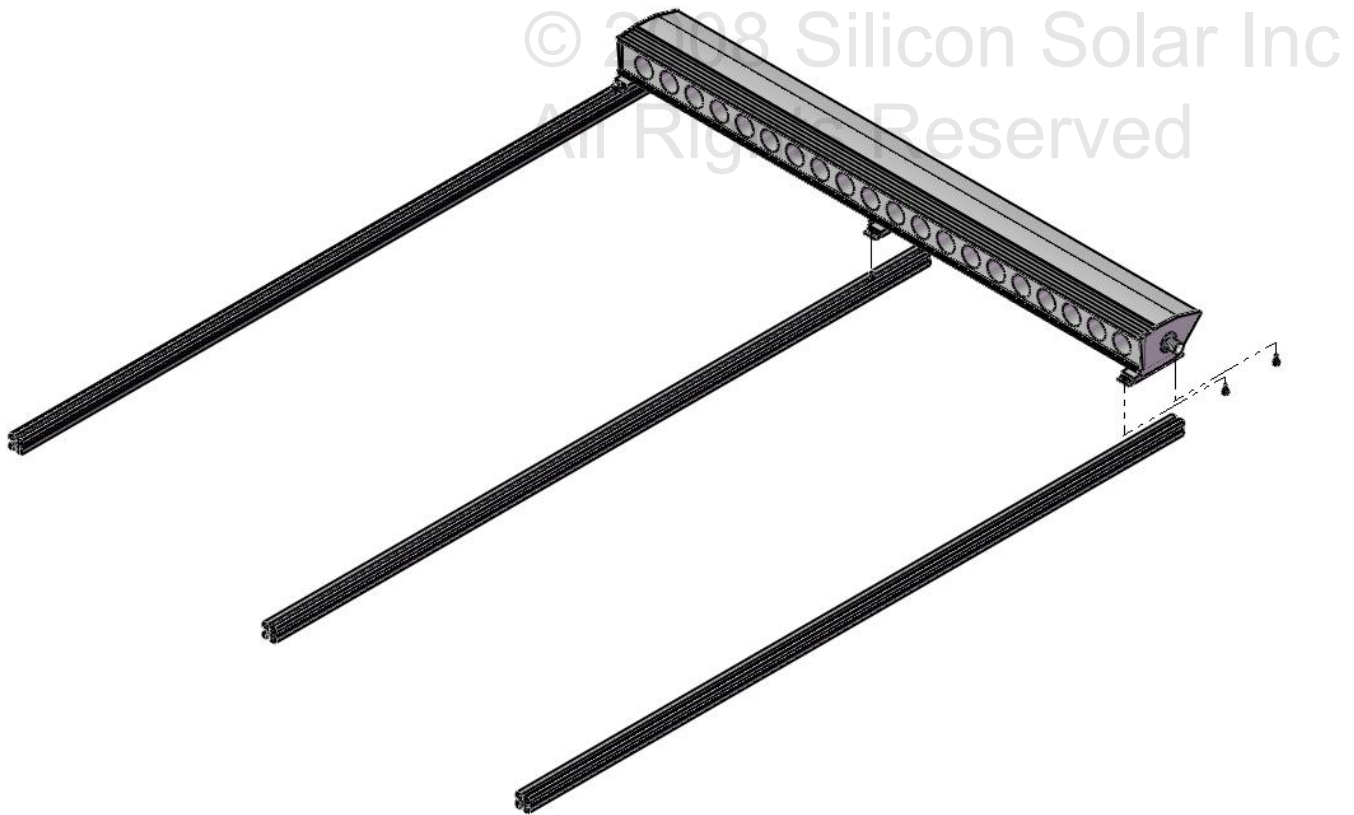


2) INSTALLING CLAMP TO BASE TUBE FRAME

- a) Secure clamps to the base tube frame using short bolts.
- b) Tighten the bolts with ½ inch ratchet.

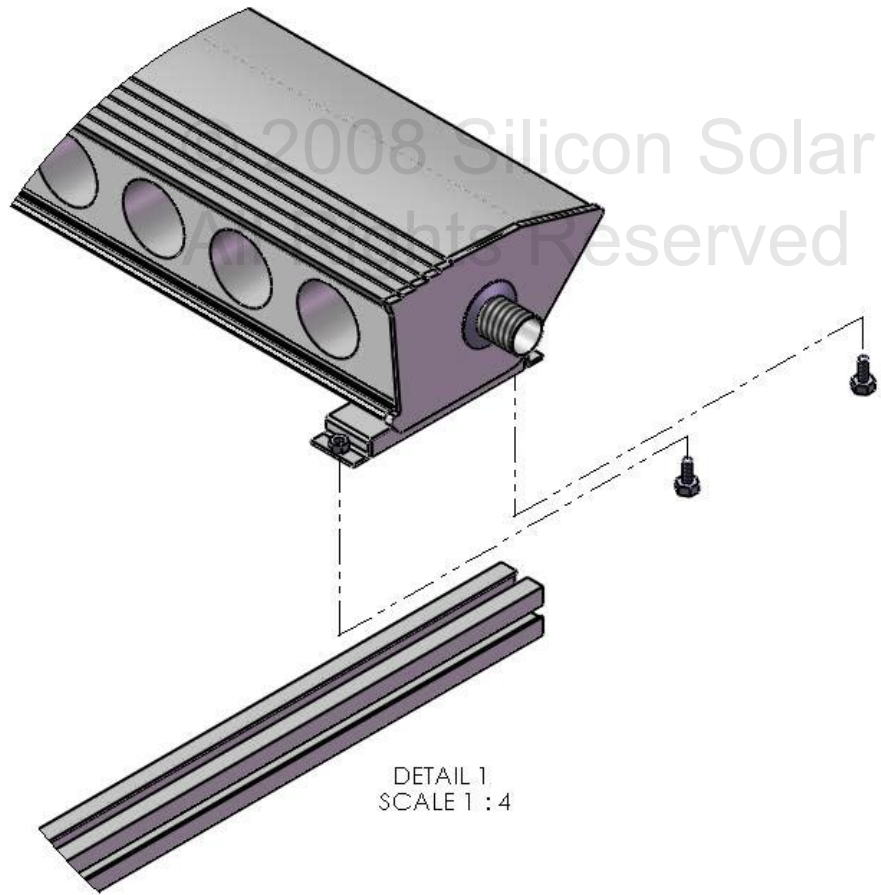


- 3) **INSTALLING MANIFOLD AND BASE TUBE FRAME TO MANIFOLD ARMS**
  - a) Space out manifold arms so the rails line up with the clamps on the manifold and the base tube frame.
  - b) Slide in the short bolts in the arms first.

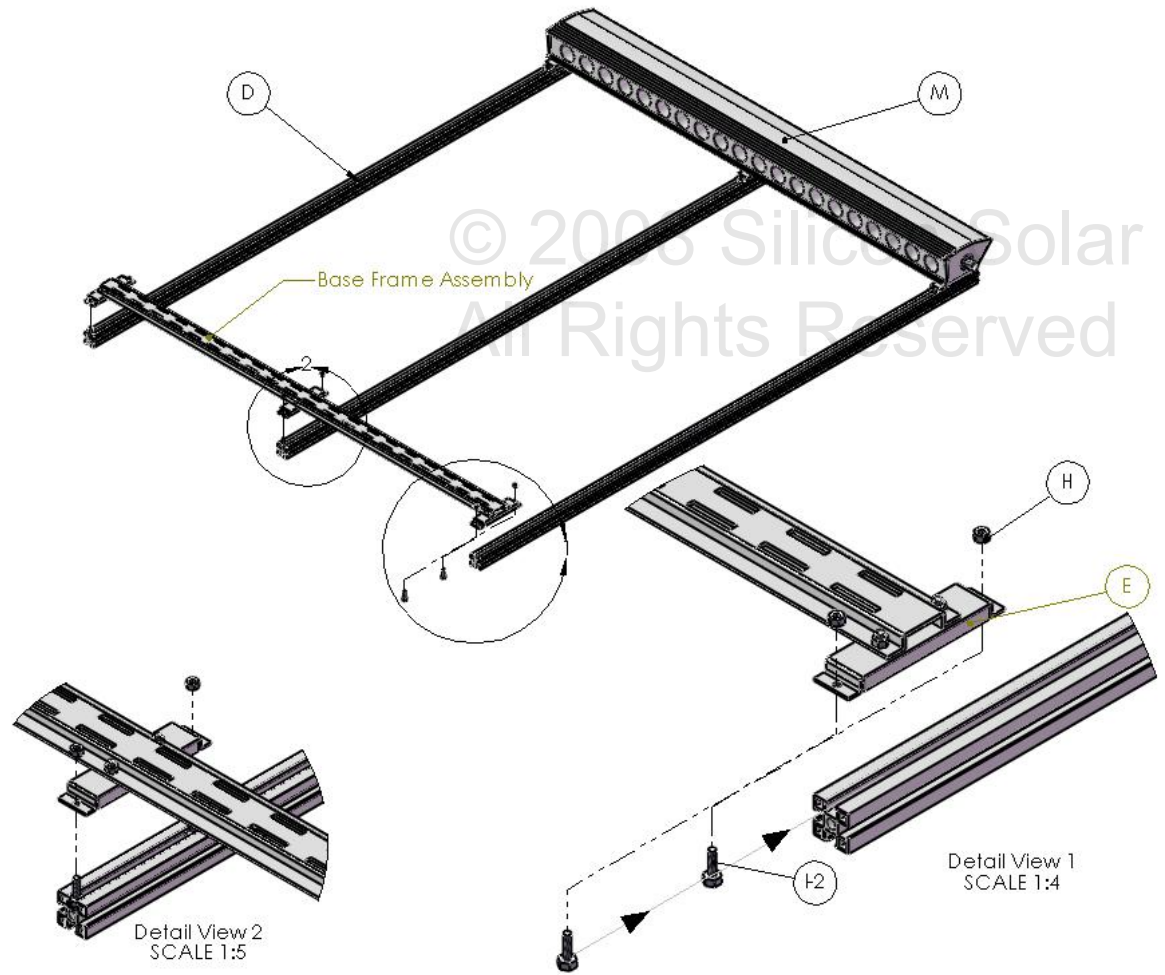


- c) Slide small bolts into the rail before securing any nuts. Align so the ends of the clamps are flush along the end of the rails. Secure manifold to the manifold arms.





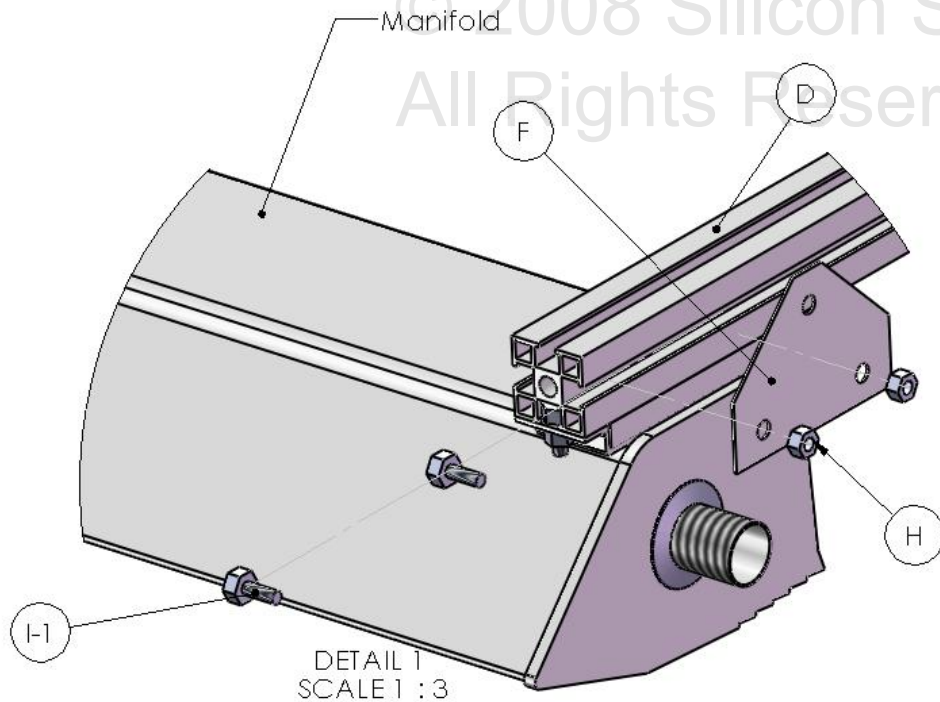
- d) Secure the bolts with nuts and tighten with ratchet.
- e) Line up the clamps on the base tube frame to the manifold arms.



- f) Slide in the short bolts in the arms first.
- g) Secure the bolts with nuts and tighten with ratchet.

4) **INSTALLING TRIANGLE PLATE ASSEMBLY**

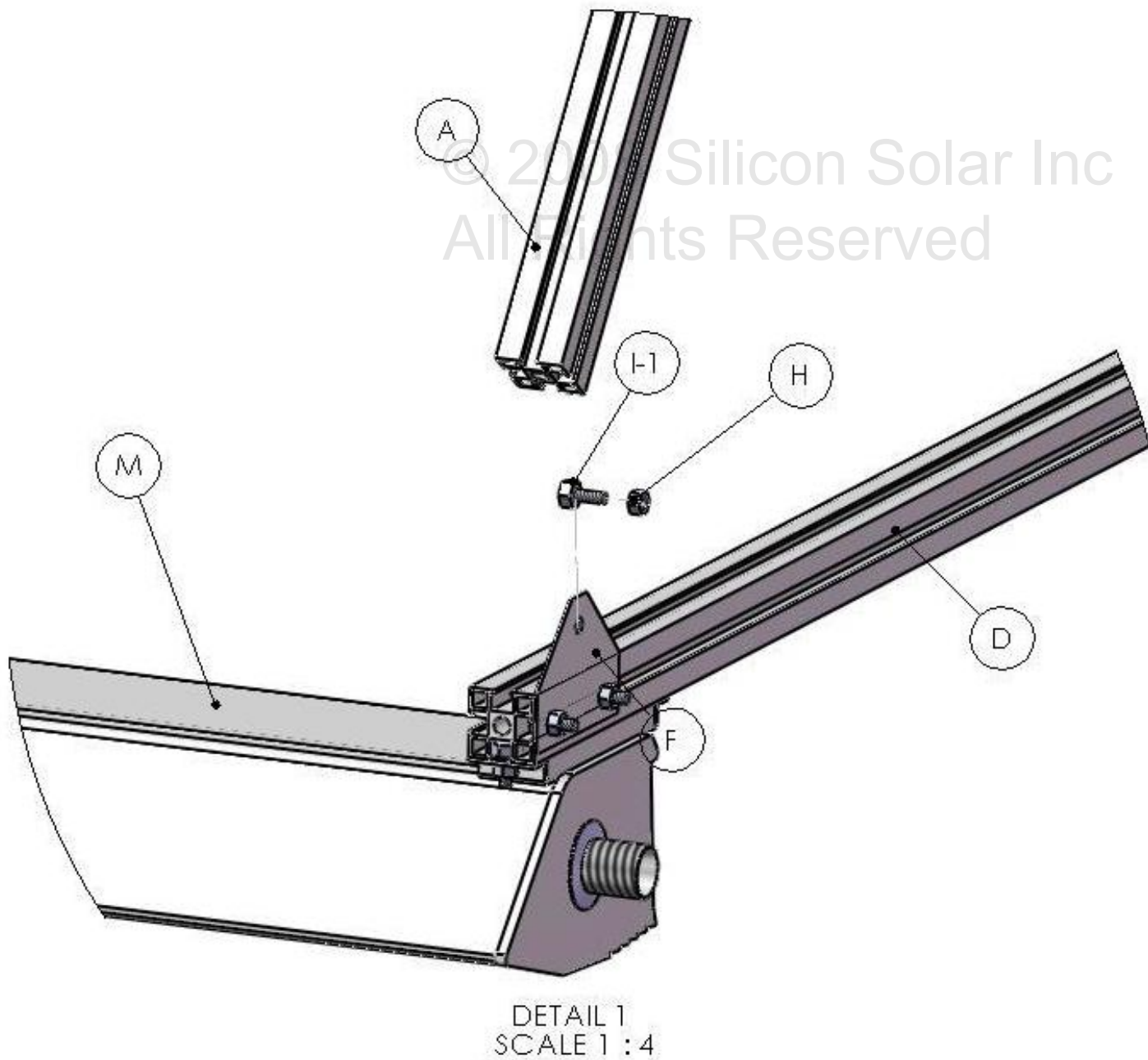
- a) Slide two short bolts in the manifold arm.
- b) Align the edge of the triangle plate to the edge of the manifold arm.



- c) Secure the triangle plate to manifold arm with nut, tighten with ratchet.
- d) Repeat for the next two arms.

5) **INSTALLING LEGS TO ASSEMBLY**

- a) Slide manifold legs onto the top bolt of the triangle plates.
- b) Align the edge of the manifold leg with the corner of the top edge of the triangle base plate.  
The legs should be able to pivot about the bolt without interference.

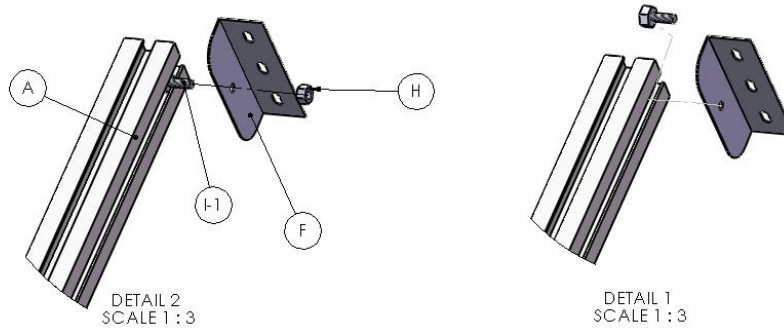


**FOR FLAT MOUNTING, SKIP TO PAGE 17**

**ANGLED MOUNTING**

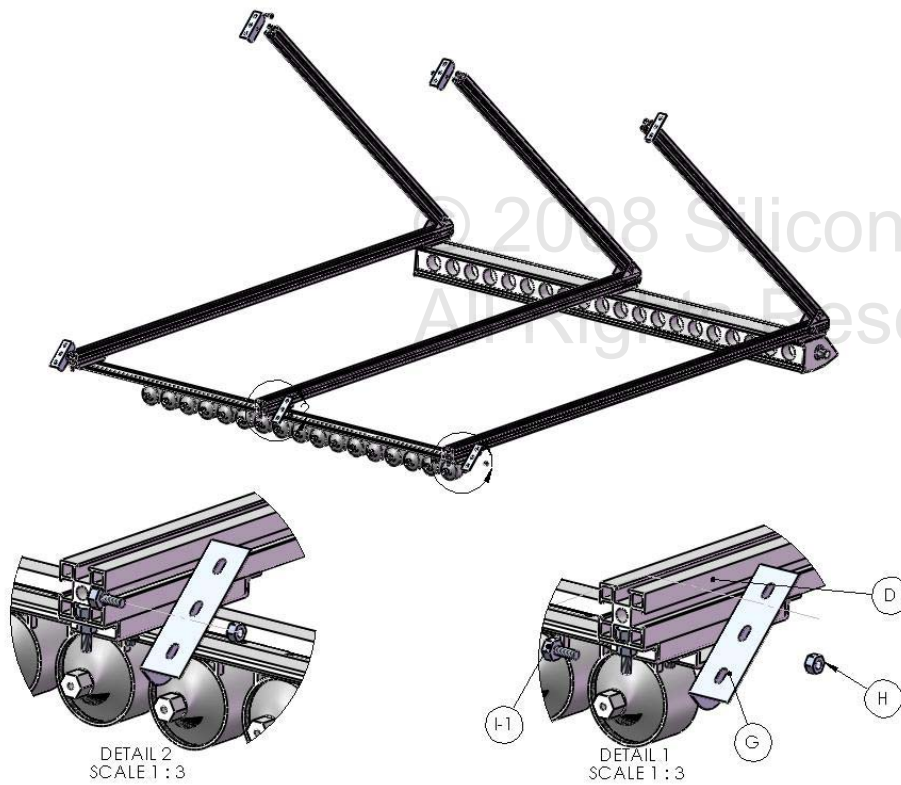
6) **INSTALLING FEET TO ASSEMBLY**

- a) Place feet on the side of the manifold leg facing outward. The foot on the middle leg can be placed on either side.



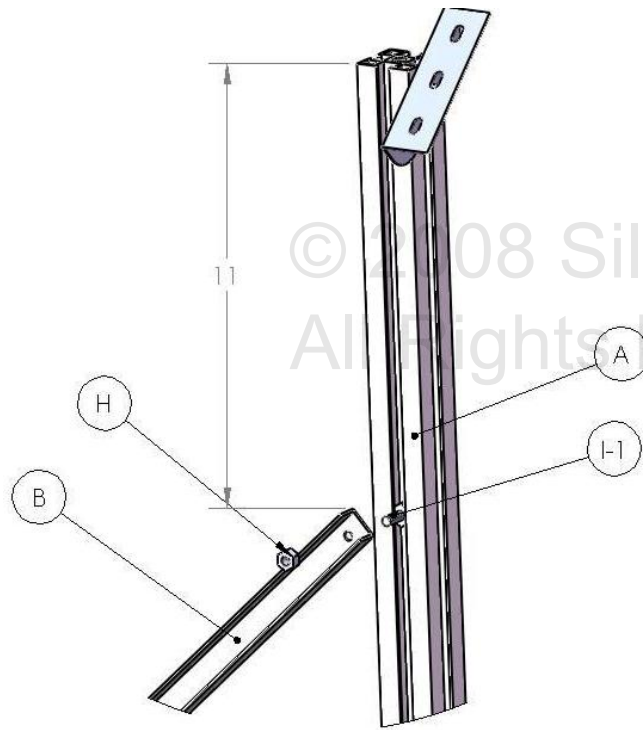
b) Align so the bottom of foot is flush along the bottom of the manifold leg.

c) Attach feet to manifold arms. Align so foot is flush to the bottom of the manifold arms in the same direction as the feet on the manifold legs.



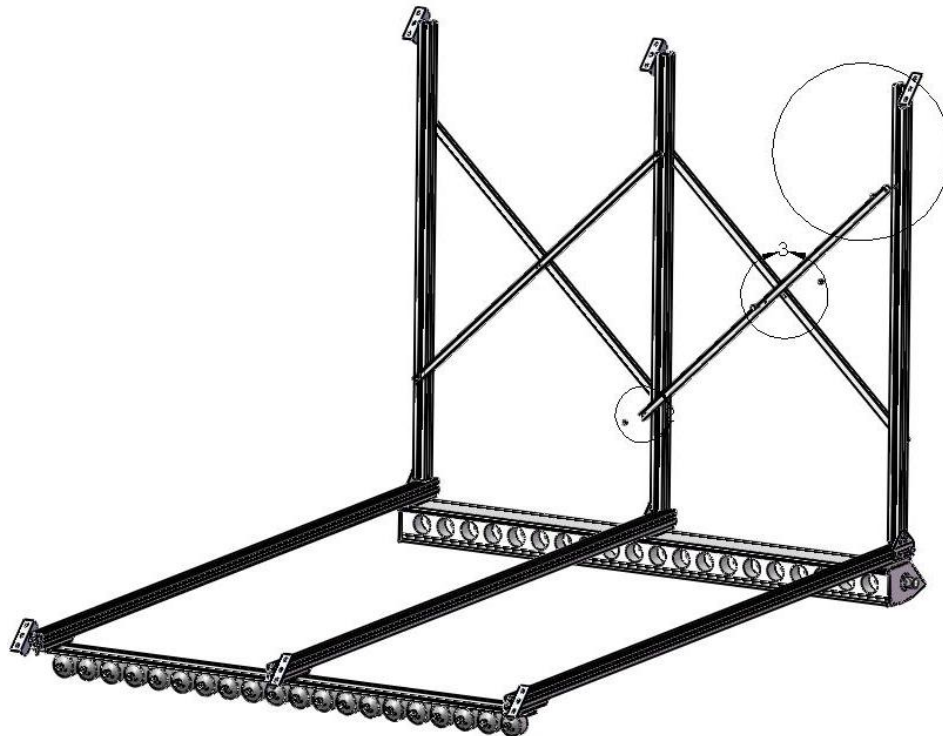
## 7) INSTALLING SUPPORTS

- a) Attach back brace across manifold legs.
- b) Align so that both are 11 inches from the edge of the manifold legs.



DETAIL 1  
SCALE 1 : 4

c) Attach the remaining back brace supports across the previous ones, creating an X.



- d) Affix the back brace supports together with a large bolt through the middle of both supports.
- e) Attach horizontal supports at the midpoint of manifold leg and arm. These braces can be adjusted along either support in order to create the desired angle.

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## **FLAT MOUNTING**

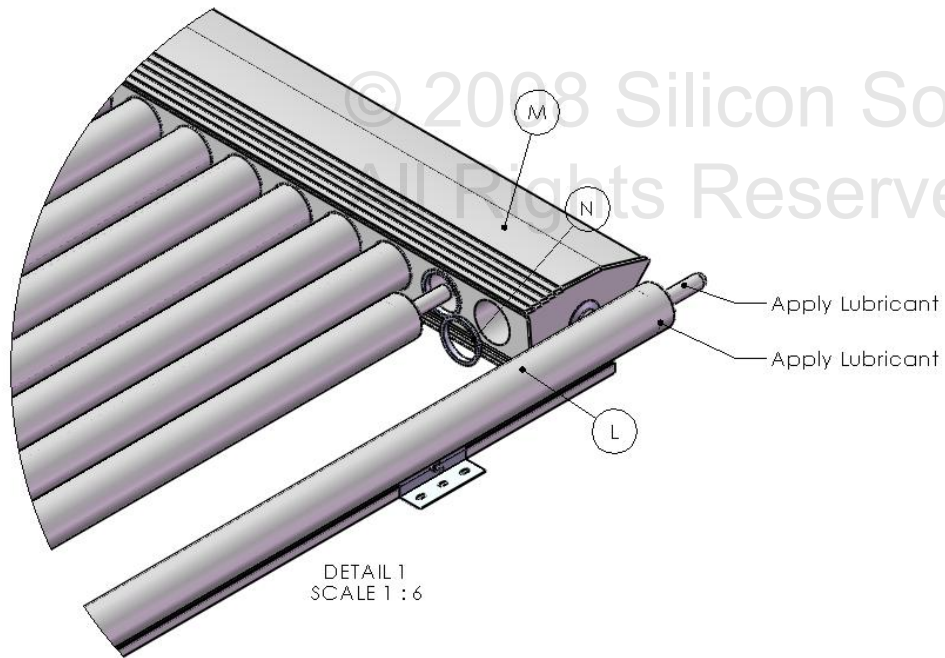
- 1) Attach feet to the manifold arms so the feet are facing outwards. Feet on the middle support can be facing either side.

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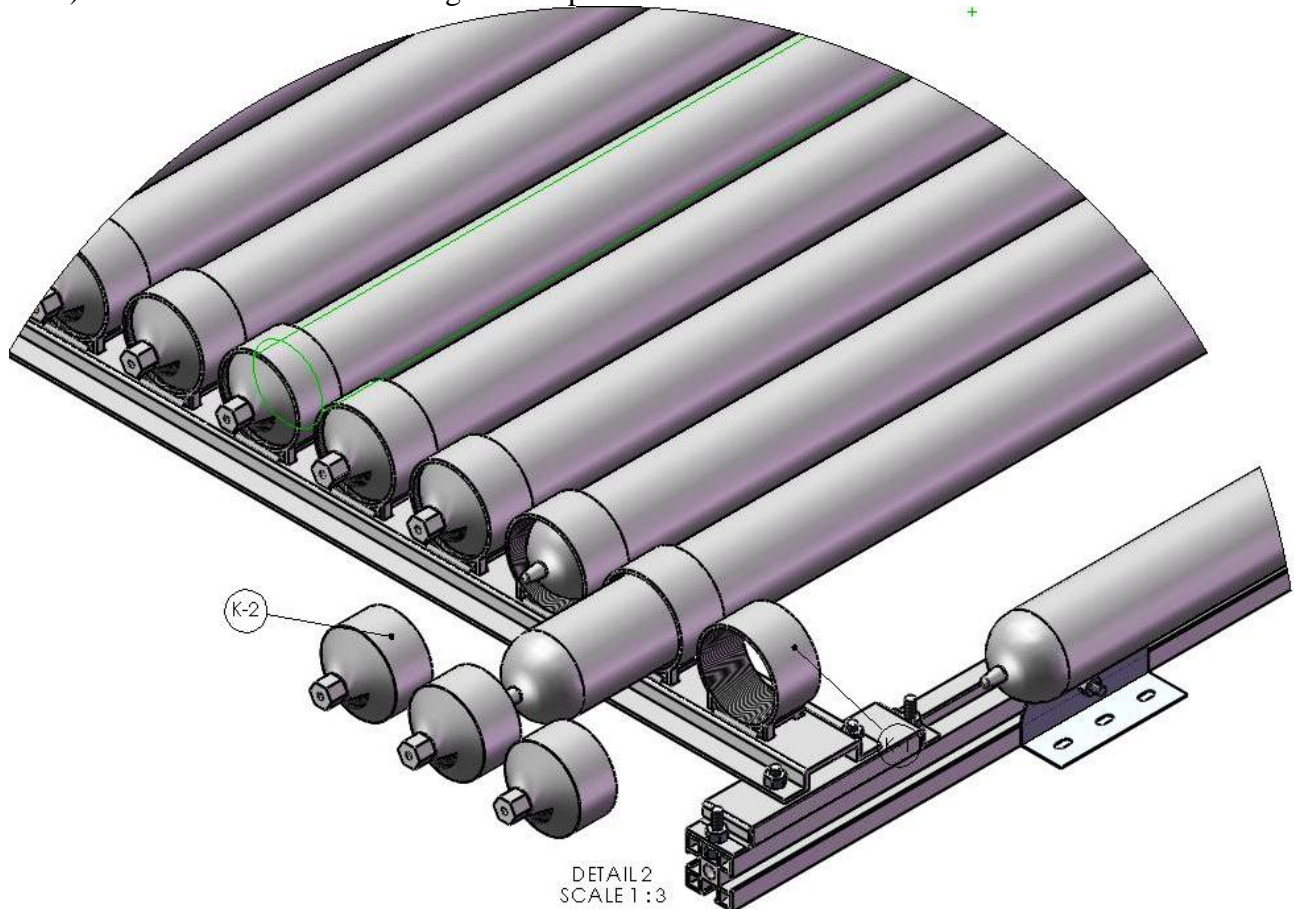


### 8) INSTALLING EVACUATED TUBES

- a) Unscrew plastic end caps.
- b) Insert fit ring into hole in manifold.
- c) Apply a small amount of liquid soap or other non-flammable lubricant around marked area to insure smooth insertion.



d) Place evacuated tube through end cap and screw into manifold.



e) Screw plastic end cap back into place.

- f) Repeat to install all evacuated tubes.

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9) THE END PRODUCT SHOULD LOOK LIKE THIS

a)



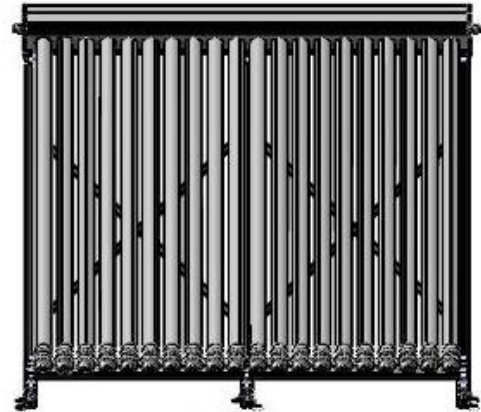
ISOMETRIC VIEW



BACK VIEW



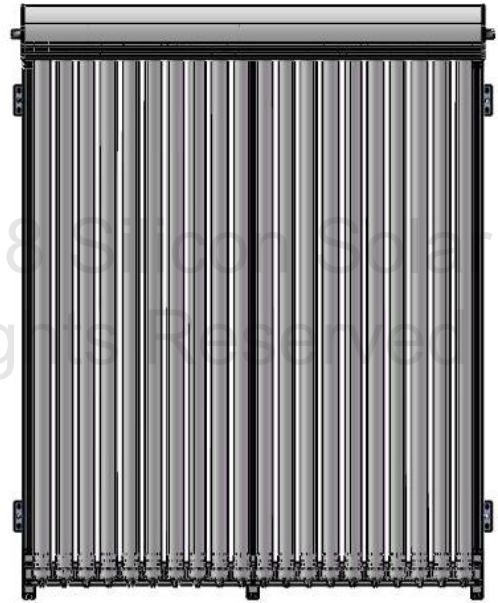
RIGHT VIEW



FRONT VIEW



ISOMETRIC VIEW



TOP VIEW



RIGHT VIEW



FRONT VIEW