

Please refer to the full installation manual, available at [www.apricus.com](http://www.apricus.com) for full installation and safety information. Installation must only be completed by suitably qualified and experienced technicians and in accordance with all local relevant codes and regulations.

## Installation Safety

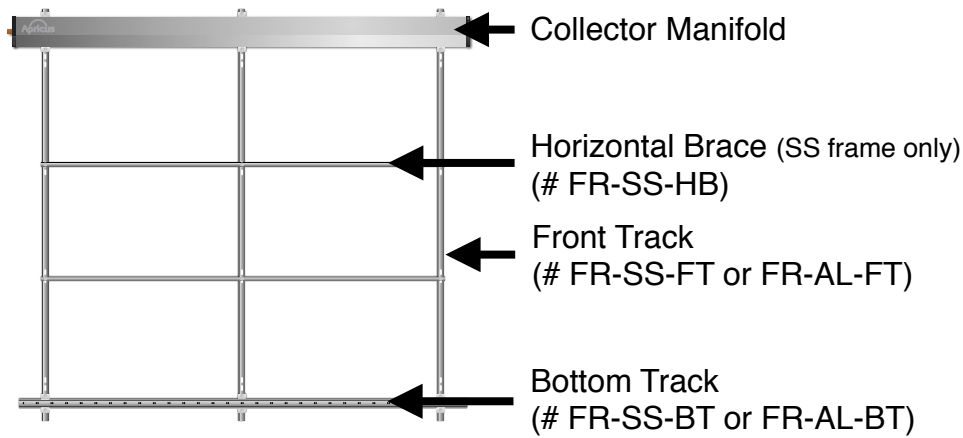
- Safety harness when working at heights
- Gloves & safety glasses as required
- Tubes and Heat Pipe are HOT once exposed to sunlight
- Adhere to all local safety codes and regulations
- Ensure roof structure is of suitable strength.



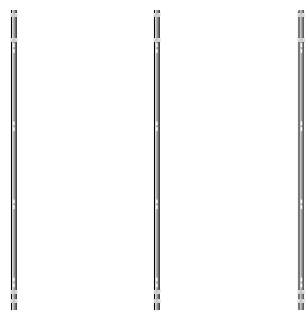
**Complete plumbing connection and commissioning BEFORE installing evacuated tubes. Cover collector if tubes are installed prior to commissioning**

## Standard Frame Assembly

- Refer to the diagram with the frame kit and also the full installation manual for more details.
- If possible install the frames at ground level, then lift onto roof.



### Step 1

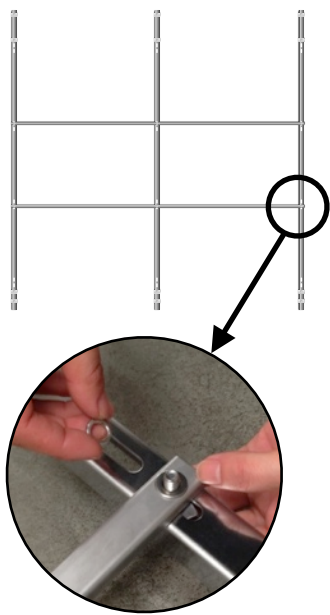


- Lay the Front Tracks out parallel on the ground.

**Do NOT overtighten Nuts!**

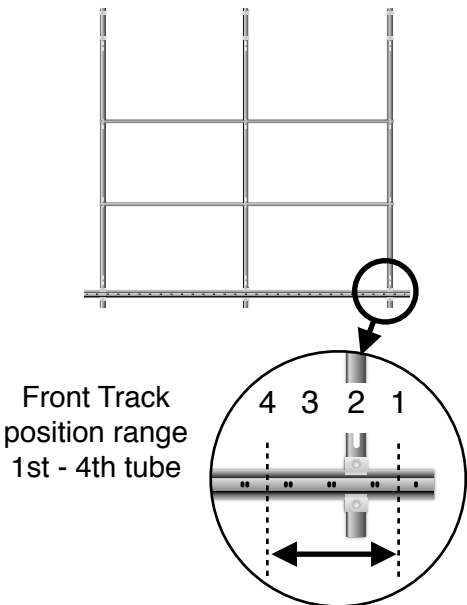


### Step 2



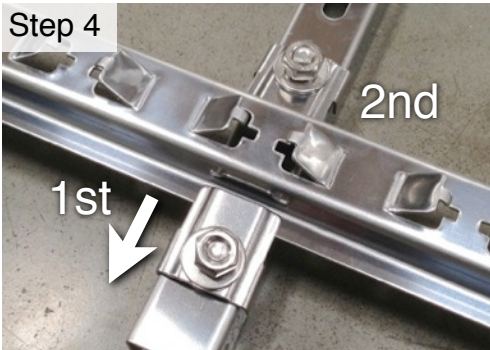
- Attach Horizontal Braces which set the Front Track spacing on SS frames only. *(These are useful for angled frames, but not required for flush roof installations and can be removed if adjustment to spacing is required)*
- Attach Horizontal Brace facing U channel down with the nut on top.

### Step 3



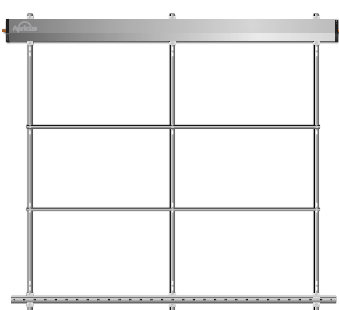
- Position the Bottom Track ensuring even left-right alignment on Front Tracks.
- If possible position the Front Tracks under evacuated tubes so they are hidden.
- Front Track position can be adjusted but must be between the 1st and 4th tube from each end. Middle Front Track should be centre  $\pm 2$  tubes.

### Step 4



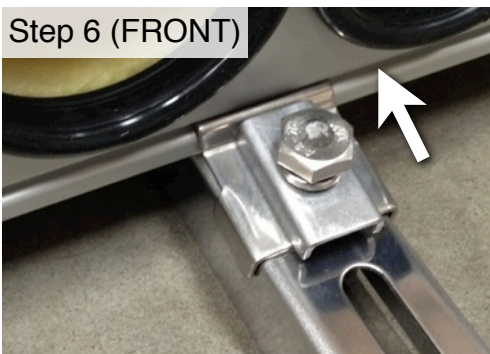
- 1st Push Bottom Track down and finger tighten bottom attachment plate.
- 2nd push down top attachment plate and tighten.

### Step 5



- Mount manifold on frame
- Loosen nuts/bolts enough so attachment plates can be lifted up and the manifold dropped in.
- Make sure manifold is aligned with bottom track.
- Pull manifold down so that attachment plate sits in front groove.
- The U channel under the bolt head must be parallel with the front track.
- Finger tighten front attachment plates first.

### Step 6 (FRONT)



### Step 7 (REAR)



- Push rear attachment plates tight into rear groove and tighten fully then tighten front attachment plates.

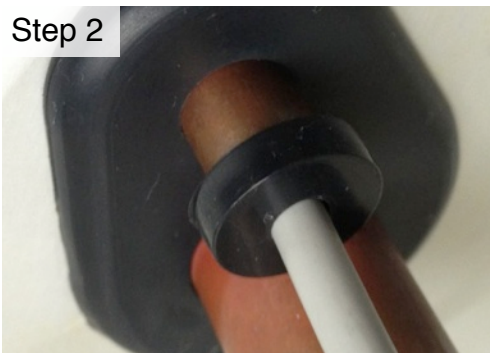
## Piping and Sensor Connection

### Step 1



- Temperature sensor should be inserted into the small copper pipe on the outlet end of the collector.
- Lubricate the sensor probe with water and slide through the rubber plug.

### Step 2



- Squirt some heat transfer paste into the sensor port and insert the sensor probe.
- Push the rubber plug into the sensor port.

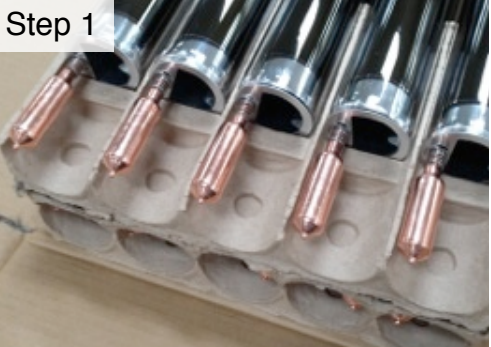
### Step 3



- Connect copper piping to the collector inlet/outlet.
- Insulate right up to the manifold with high temperature, UV rated material.
- Insulation thickness:
  - Cold region:  $\geq 25\text{mm}$
  - Warm region:  $\geq 15\text{mm}$



# Evacuated Tube & Heat Pipe Installation



- Open top end of tube box to access heat pipes.



- Holding spring plate in place, pull out each heat pipe by >150mm. *(This allows easy insertion of the heat pipe into the header port.)*



- Coat each heat pipe with THIN layer of heat transfer paste.
- Do not get dirty as will be difficult to insert.



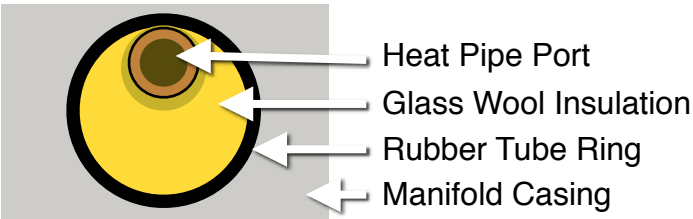
- Turn ET up-side-down for 5 seconds, then return to normal position. *(This ensures that copper powder returns to bottom of heat pipe.)*



- Hold the ET with two hands, taking care not to bang the glass against the metal frame.



- Insert heat pipe into header port, push in full depth. *(Heat pipe port is at the TOP of the manifold hole, not centre.)*



- Lubricate outside of ET with water. *(DO NOT spray water inside ET.)*



- Push ET up into manifold.
- Use a small left-right twisting action when pushing in.
- Push ET in until no clear inner tube is visible.



- Adjust rubber cap position to align with bottom track, do NOT pull the ET down.
- Make sure hole in rubber cap is at top of tube.
- Looking through the hole the glass should be silver colour indicating good vacuum.



- Secure ET with tube clips.
- Align one side and click into place.
- Centralise the clip over the rubber tube cap and push down other side of clip until it clicks.



- Clean tubes with glass cleaner and soft cloth.

## BEFORE YOU LEAVE

- CHECK THE OPERATION OF THE SYSTEM
- CLEAN UP THE INSTALLATION SITE
- COMPLETE INSTALLATION RECORD FORM
- EXPLAIN OPERATION TO THE CUSTOMERS