**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.

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lay the Front Tracks out parallel on the ground. <strong>Do NOT overtighten Nuts!</strong></td>
</tr>
<tr>
<td>2</td>
<td>Attach Horizontal Braces which set the Front Track spacing on SS frames only. <em>(These are useful for angled frames, but not required for flush roof installations and can be removed if adjustment to spacing is required)</em></td>
</tr>
<tr>
<td>3</td>
<td>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 ± 2 tubes.</td>
</tr>
</tbody>
</table>

**Piping and Sensor Connection**

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

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

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Evacuated Tube & Heat Pipe Installation

Step 1: Open top end of tube box to access heat pipes.

Step 2: Holding spring plate in place, pull out each heat pipe by >150mm. (This allows easy insertion of the heat pipe into the header port.)

Step 3: Coat each heat pipe with THIN layer of heat transfer paste.

Step 4: Turn ET up-side-down for 5 seconds, then return to normal position. (This ensures that copper powder returns to bottom of heat pipe.)

Step 5: Hold the ET with two hands, taking care not to bang the glass against the metal frame.

Step 6: Insert heat pipe into header port, push in full depth. (Heat pipe port is at the TOP of the manifold hole, not centre.)

Step 7: Lubricate outside of ET with water. (DO NOT spray water inside ET.)

Step 8: Push ET up into manifold.

Step 9: Adjust rubber cap position to align with bottom track, do NOT pull the ET down.

Step 10: Make sure hole in rubber cap is at top of tube.

Step 11: 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