EXEGI

User and Installation Manual

USB 10, USB 20, USB 24, and USB 30

The information in this manual must be read and understood prior to installing or operating the Exegi Solar hot water unit.

Important Information

- The Exegi Solar USB10, USB 20, USB 24, and USB 30 systems must be installed by a qualified tradesperson. At all times the qualified tradesperson must adhere to occupational health and safety guidelines as set out by Worksafe/Workcover and any other relevant industry associations or regulations.
- The water supply should be shut off prior to installation or maintenance to prevent scalding or burning.
- Children should be supervised to ensure that they do not play with the system.

Important: Plumbing Requirements

- Install with 500kPa Pressure Reducing Valve on the input supply if water pressure exceeds 500kPa
- Install with 600kPa Expansion Control Valve on Tank cold water supply pipe in a FROST FREE position - Drain pipe facing continuously downwards (Valve to AS1357.1)
- Install water heater to requirements of AS/NZS3500.4
- The tank that the manifold feeds into must have 850kPa or lower rated PTR valve

Max Energy Output: 2.4kW
Max Working Pressure: 600kPa

1. Notice

The information in this manual is subject to change without notification. Additional pages may be inserted in future editions.

The evacuated glass solar heat pipes ("the tubes") can stand temperatures as low as -30º.

The serial number is located on the bottom of the manifold. If the serial number is missing or damaged the system may not be covered by the warranty.

The system must be installed by a qualified tradesperson in accordance with local laws and regulations. Improper installation my void the warranty

The system should be mounted in a position that maximizes the amount of sunlight exposure. In Australia this is generally north but depending on the installation site, either east or west may be chosen. They are a number of factors to be taking into consideration including, shading, micro climates and roof availability. Please contact Exegi to discuss design details.

Exegi recommends insulating all external pipework to protect against frost and heat loss. Please use a solar hot water specific lagging.

Any modifications to the components will void the warranty.

2. Transporting and Receiving the Solar Hot Water Unit

Please ensure that the system is not damaged prior to taking delivery. Gently tilting the tube boxes is recommended to check for breakages – if any tubes are broken you should be able to hear them. If the system does not appear to be in good condition, contact Red Circle Solar as soon as practicable and do not sign for the goods.

Handle all cartons with care. Stacking evacuated tube, or heat pipe boxes more than 6 high during transport is not recommended

It is advisable to put padding under the boxes during transport.

Keep all cartons dry.

Please ensure that all components have been received. If you believe that parts are missing, contact Red Circle Solar as soon as possible. A failure to advise of missing parts within a reasonable period may incur a fee to provide the part.

The Exegi solar system is not covered under warranty against failure as a result of damage incurred during transport or installation.

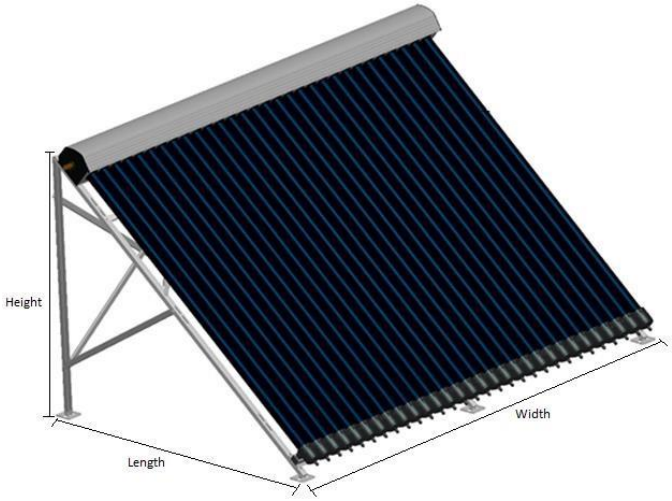
3. General

3.1 Evacuated tube solar collectors capture the sun's energy to heat the water within the manifold to very high temperatures. The copper heat exchanger within the manifold transfers the in the manifold to the circulated water

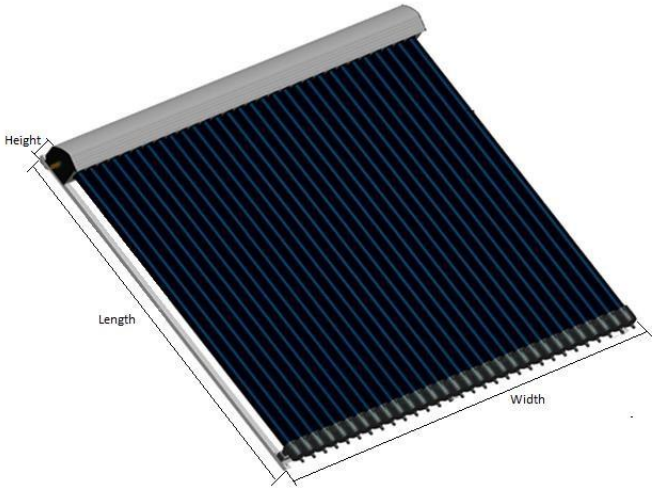
3.2 Dimensions

The frame supplied has two pitch options, a high or a low frame. When selecting the pitch for your installation, ensure that the total pitch is not below 20˚, as the heat pipes will not operate as designed at angles lower than 20˚.

USB High Angle Frame



USB Low Angle Frame



	Length	Width	Height
USB 10	1550mm	870mm	1300mm
USB 20	1550mm	1750mm	1300mm
USB 24	1550mm	2070mm	1300mm
USB 30	1550mm	2550mm	1300mm

	Length	Width	Height
USB 10	2000mm	870mm	200mm
USB 20	2000mm	1750mm	200mm
USB 24	2000mm	2070mm	200mm
USB 30	2000mm	2550mm	200mm

3.3 Gas Boosting:

The Exegi hot water system is compatible with gas boosting including, but not limited to, the following products:

- Takagi Rapid instantaneous gas booster
- Thermann instantaneous gas booster
- Rinnai Solar instantaneous gas booster

3.4 Maintenance

Under normal condition little maintenance of the system is required. Due to the shape of the tubes regular wind and rainfall should keep the tubes clean. If the tubes are particularly dirty they can be washed with a soft cloth and soapy water.

If you are installing a 12V solar pump and controller, he photovoltaic panel powering the pump and controller may require occasional cleaning to remove dirt and maintain power. The panel can be cleaned by wiping with a soft cloth and soapy water.

Leaf litter may gather between or beneath the tubes and should be removed for optimal performance of the system.

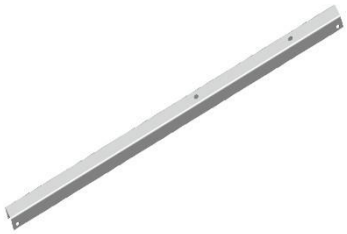
Safety Warning: If the tubes are not easily or safely accessible, a high pressure spray can be used to clean the tubes. Common sense applies. Always take appropriate safety precautions and do not endanger yourself or others during installation, cleaning or maintenance of the system. Wear appropriate personal protective equipment. Beware of electrical hazards or falling from heights.

4. Installation

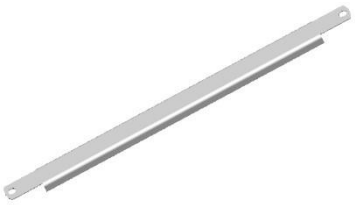
4.1 Pre-Installation Checks:

Using the parts list provided, ensure you have all the components. This is the Parts list for 24 and 30 Tube system, for 20 and 10 tube systems please see page 5. Please check you have all components. If you believe parts are missing please contact Red Circle Solar within 28 days of purchase.

1. front legs
(1990mm, 3pcs)



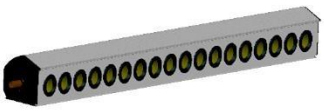
2. Triangle Braces
(USB-24: 646mm, 4pcs)
USB-30: 677mm, 4pcs)



3. Top Braces
(USB-24: 961mm, 2pcs)
(USB-30: 1201mm, 2pcs)

4. Bottom Support
(USB-24: 1920mm, 1pc)
(USB-30: 2400mm, 1pc)

5. Manifold
(USB-24; USB30, 1pc)



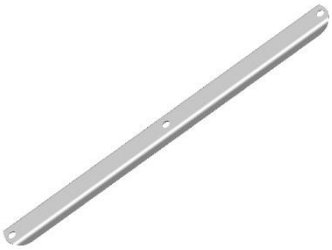
6. Heat Pipes
(USB-24, 24pc)
(USB-30, 30pc)

7. Plastic Holders

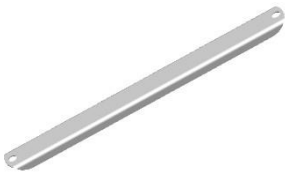
8. Feet
6pcs

9. Back Legs
(1282mm, 3pcs)

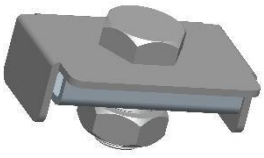
10. Diagonal Brace for Back Legs
(USB-24: 1254mm, 4pcs)
(USB-30: 1445mm, 4pcs)



11. Side Diagonal Brace
(851mm, 3pcs)

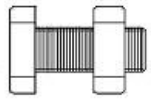


12.Clamps and Bolts
9pcs



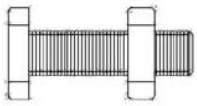
B1

M8X16=31



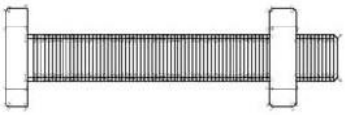
B2

M6*25=2



B3

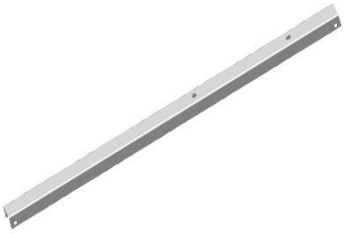
M6X45=9



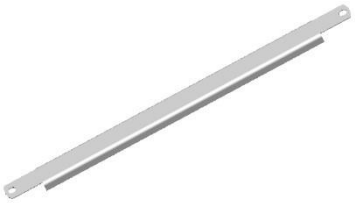
Heat Paste x 1

Parts list for 10 and 20 tube manifolds

1. front legs
(2pcs)



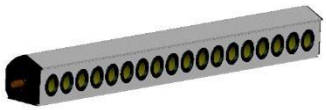
2. Triangle Braces
(2pcs)



3. Top Braces (2pcs)

4. Bottom Support
(1pc)

5. Manifold
(1pc)



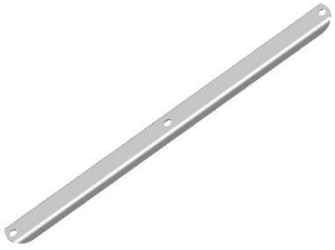
6. Heat Pipes
(USB-10, 10pcs)
(USB-20, 20pcs)

7. Plastic Holders
(USB-10, 10pcs)
(USB-20, 20pcs)

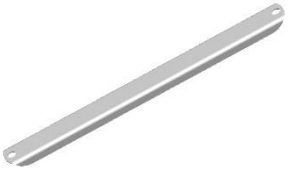
8. Feet
4pcs

9. Back Legs
(2pcs)

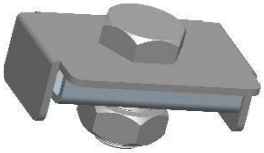
10. Diagonal Brace for Back Legs
(2pcs)



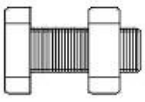
11. Side Diagonal Brace
(2pcs)



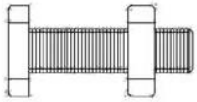
12. Clamps and Bolts
6pcs



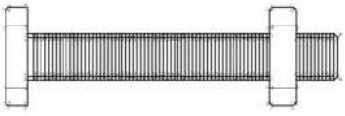
B1
M8X16=16



B2
M6*25=1



B3
M6X45=5



Heat Paste x 1

4.2 **Assemble the frame**

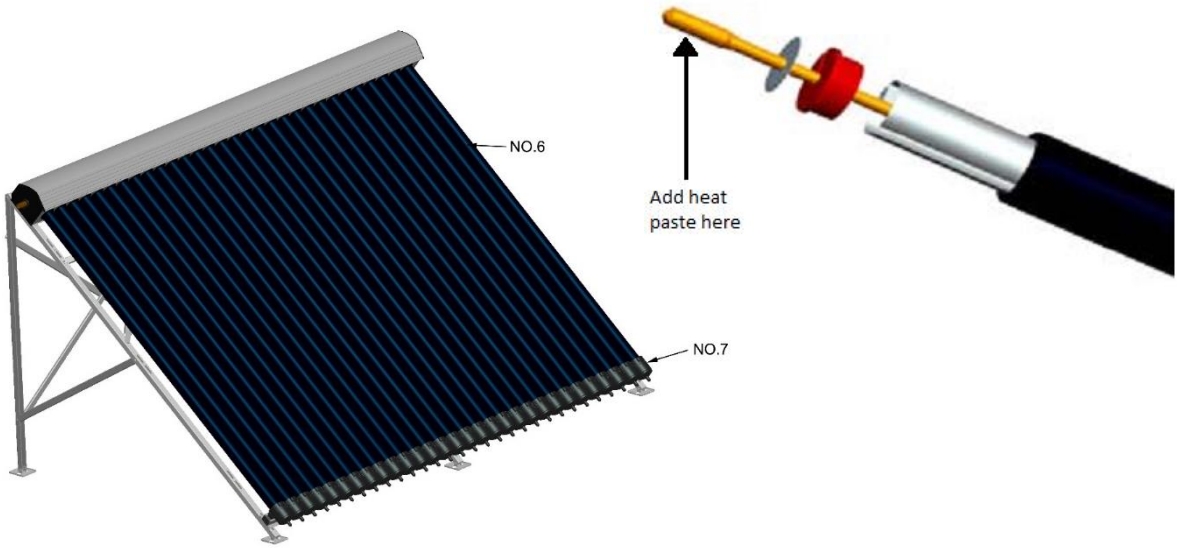
Assemble the frame in accordance with the frame assembly guide, which can be found in the frame box. The guide provides instructions for the assembly of the frame as a high or a low pitch as your installation requires.

4.3 **Insert heat pipes**

Parts Needed:

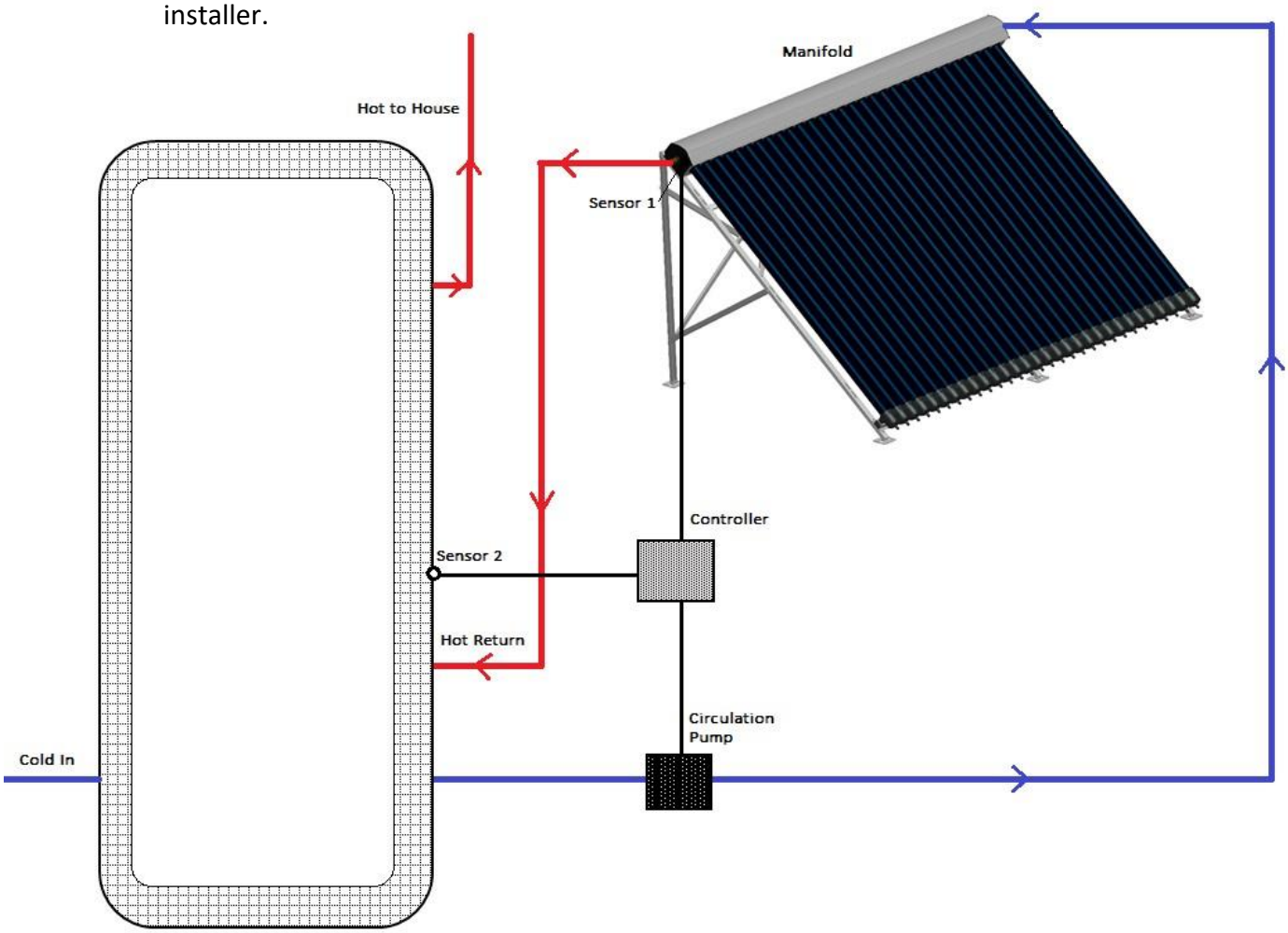
- Heat pipes (no.6) x 20;24; or 30 depending on model
- Plastic holders (no.7) x 20; 24; or 30 depending on model
- Heat paste

Connect the plastic holders (no.7) to the bottom brace (no.4). Take a heat pipe (no.6) and slide the copper bulb approximated 150mm out of the tube, apply a small amount of heat paste to the bulb, and insert into manifold. Slide the glass tube over the exposed copper and settle the other end in the plastic holder. Repeat with the other heat pipes.

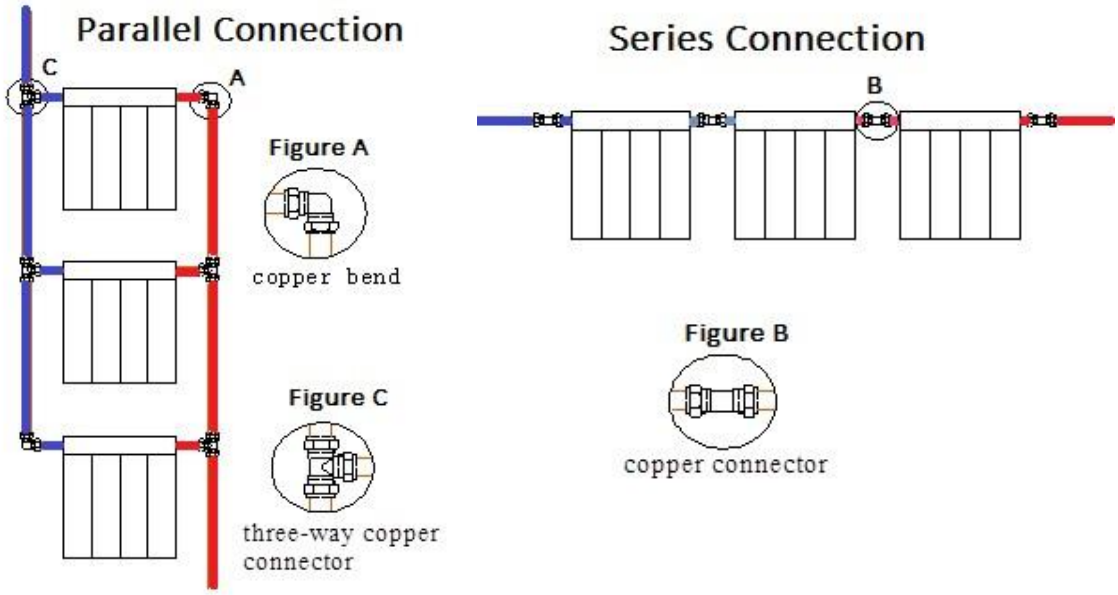


4.4 **Connecting the Manifold.**

Please note that the following diagram is intended as a concept indication only. The details of your particular installation should be discussed with your qualified installer.



If connecting more than one manifold:



Warranty Certificate

Exegi USB 20, 24, 30 Solar Hot Water System Please keep a

copy of this document and proof of purchase.

Warranty Period:

Manifold Tubes, and Frame 15 years from date of sale (Pro Rata)
Electrical Components 1 year from date of sale

Important Information:

Please keep a record of the following information.

Invoice number:	
Date of Installation:	
Product serial number (can be found on manifold and also on manifold box)	
Installer's name:	
Installer's plumbing certificate number:	
Location of installation:	

The warranty does not cover:

1. Any component outside the applicable warranty period as specified above.
2. Damage arising from incorrect installation or use, including but not limited to failure to follow the directions in the manual provided by Exegi ("the manual").
3. Damage caused in transport once the customer has taken possession of the tank.
4. Damage caused by use of the tank with low quality water that exceeds the maximum particulate count specified in the manual.

Claim Procedure: Claims under the warranty should be lodged with:

Exegi Pty Ltd (ABN:41021313620). (03) 9397 3993
4/3 Techno Park Drive info@exegi.com.au
Williamstown, Vic 3016

Please provide the following to support your claim:

1. Photos of the installed unit, and all safety and isolation valves.
2. The information requested in the above table.

Please note that additional information may be requested to confirm the nature of the fault. There may be freight charges payable if no fault is found.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.