Geyser wise

intelligent energy control

GeyserWise 220V Hot Water Circulation Pump

Tested in terms of IEC 60335-2-51

Before operating and installation, carefully read all instructions. Do not discard this manual.

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Warranty conditions apply:

1. We, GeyserWise CC, warrant to you that, for a period of six months from the date of purchase, the GeyserWise 220V Hot Water Circulation Pump (the "good") will be free of any defect.
2. If any defect in the good is discovered by you within six months from date of purchase, you can return the good to our service centre or to one of our duly authorised service agents. We will then, at your option -
   - repair or replace the good; or
   - refund to you the price paid by you for the good.
3. A good returned under this warranty must be presented to us in its original packaging together with all accessories.
4. We will refuse the return of any good which has been -
   - partially or wholly dissembled;
   - physically altered;
   - used in a manner contrary to any instructions provided by us; or
   - permanently installed or attached and/or combined with other goods or property in any way.
5. We will not -
   - repair the good where the defect or damage to the good is found to be a direct result of your negligence, recklessness or malicious behaviour; and/or
   - be liable for damage caused to the good as a result of wear and tear unless such damage manifests itself -
     - within 12 months from date of purchase (where the good has been used for normal family, personal or household purposes); or
     - six months from the date of purchase (where the good has been used for commercial or professional purposes).
6. Where we issue a refund under this warranty, we will deduct the charges we are allowed to deduct under the Consumer Protection Act, No 68 of 2008.

BY SIGNING BELOW, YOU ACKNOWLEDGE THAT YOU HAVE READ AND UNDERSTOOD ALL THE TERMS AND CONDITIONS CONTAINED IN THIS WARRANTY.

Signed at _____ on _____

Components

Pump

Fittings

About the 220V Hot Water Circulation Pump

Application

GeyserWise 220V Hot Water Circulation Pump is suitable for installation in balanced pressured solar systems or for hot water circulation.

When installing the pump be sure to follow the appropriate instructions of each particular manufacturer for all other components as well:

- Installation of geyser.
- Installation of solar collectors.
- Installation of controllers.
- Follow rules according to SANS10106.

Installation

Installation, maintenance and dismantling may only be performed by trained personnel in accordance with this instruction manual and safety instructions.

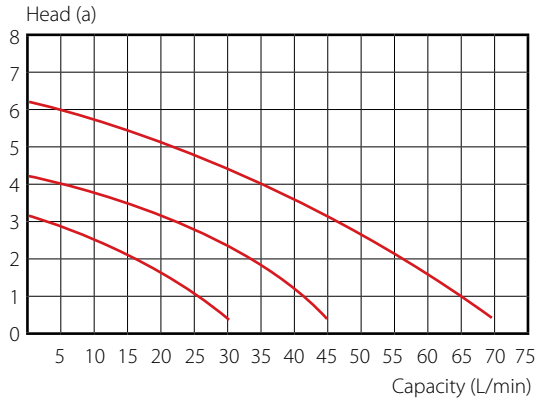
Use the pump only after first thoroughly reading and understanding this instruction manual and the safety instructions. In the event of any ambiguities regarding the installation and operation, consult trained personnel or contact our offices.

Technical information

- Maximum Power 100W
- Rated Power 90W
- Minimum Power 46W
- Diameter 25mm
- Voltage 220V
- Frequency 50Hz
- Maximum water temperature 110°C
- Maximum ambient temperature 40°C
- Maximum working pressure 10 bar

Speed	Head	Max capacity L/min	Speed (r/min)
III	6	40	2200
II	5	35	1900
1	3	20	1450

Performance curve



Improper usage

The GeyserWise 220V Hot Water Circulation Pump must not be operated in the following environments:

- Outdoors.
- In damp rooms.
- In rooms in which the operation of electrical and electronic components may be dangerous.

Dangers during installation

- Risk of death by electrocution.
- Risk of fire due to short circuit.

Be sure to follow the below instructions:

- All work on GeyserWise 220V Hot Water Circulation Pump must be performed with the mains supply disconnected.
- All safety regulations apply when working on the mains supply.
- Before connecting the GeyserWise 220V Hot Water Pump, make sure that the power supply matches the specifications on the type plate.
- Factory labels and markings may not be altered, removed or rendered unreadable.
- Make sure that all devices which are connected to the GeyserWise 220V Hot Water Pump conform to the technical specifications of the pump.
- Check that the body and parts have not been damaged during transport.
- Before installation ensure the mains water is switched off and a stopcock is installed on either side of the pump.

Exclusion of liability

The manufacturer cannot monitor the compliance to this manual as well as the conditions and methods during installation and operation. Improper installation of the system may result in damage to the property and, as a result, in bodily injury.

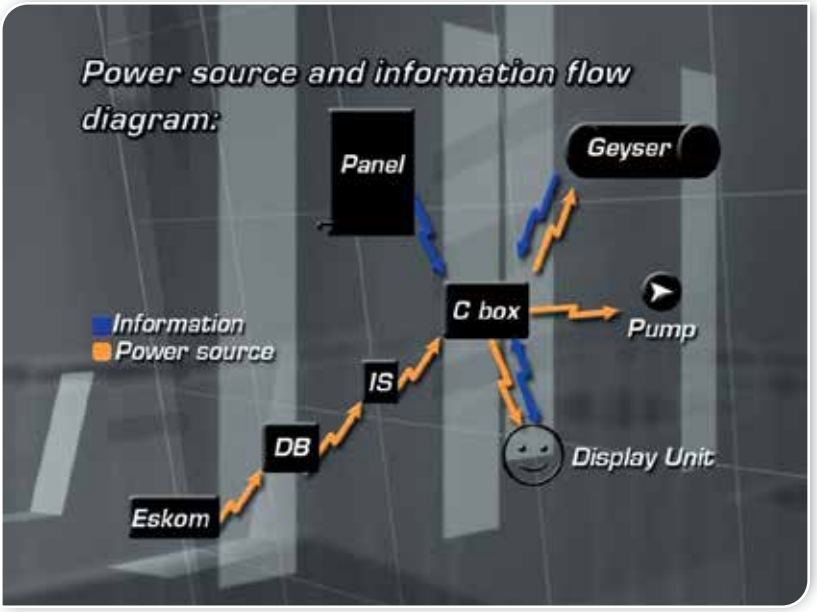
Therefore, we assume no responsibility for loss, damage or costs which result from or are in any way related to incorrect installation, improper operation, incorrect execution of installation work and incorrect usage and maintenance.

Please note that our normal warranty does not cover:

- Flooding
- Lightening
- Earthquakes
- Power spikes

The manufacturer reserves the right to make changes to the product, technical data or assembly and operating instructions without prior notice.

220V pumped solar system



Installation procedure steps

A summary of the installation steps are as follow:

1. Apply all safety measures.
2. Pump direction and position.
3. Electrical connection.
4. Prime the pump.

1. Apply all safety measures

An installer should always take precautions when working with electricity.
The most important safety precautions to perform BEFORE doing any maintenance on a geyser and when replacing a 220V pump are:

1. **Switch off circuit breaker** of geyser at main DB. This is done to ensure that there is no power supply to the geyser.

2. **Switch off isolator switch** in the roof. The isolator switch acts as a switch to isolate both live and neutral from the main supply should someone accidentally switch on the main supply or the circuit breaker fails.

3. **Test with a MULTIMETER** to ensure that there is no current on the wires. **IMPORTANT!** Make sure that there is no reading on the multimeter

4. Check that the body and parts have not been damaged during transport.

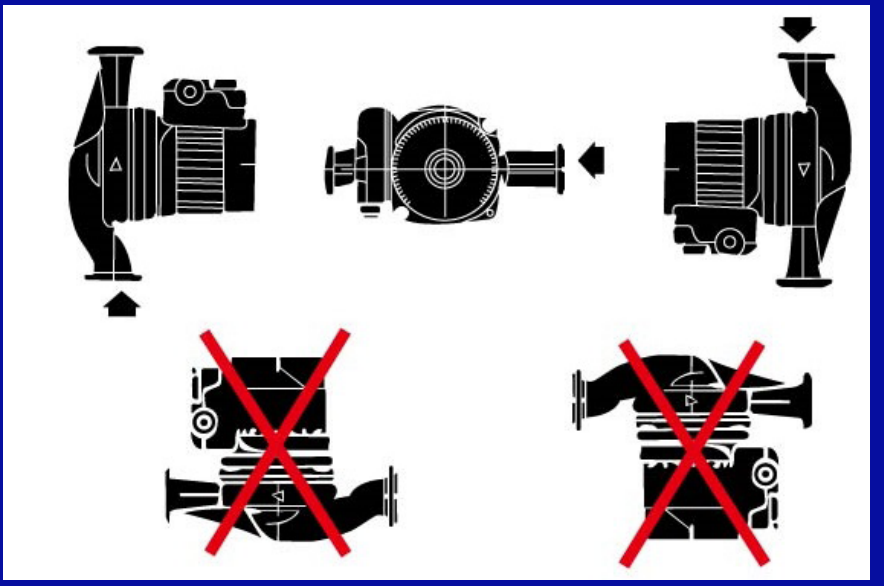
5. Before installation ensure that the mains water is switched off and a stopcock is installed on either side of the pump. Ensure the stopcock on either side of the pump is closed before installation (SANS10106).

6. **Further electrical safety precautions**
When installing a 220V pump in a pumped solar system, the pump and the geyser must be earthed (SANS 10142). There is a risk of electrocution if the pump or geyser is not earthed. Never unite the earth and neutral wire as there is a risk of electrocution. Do not cover the pump. All 220V pumps must be earth leakage protected in terms of SANS 10142.

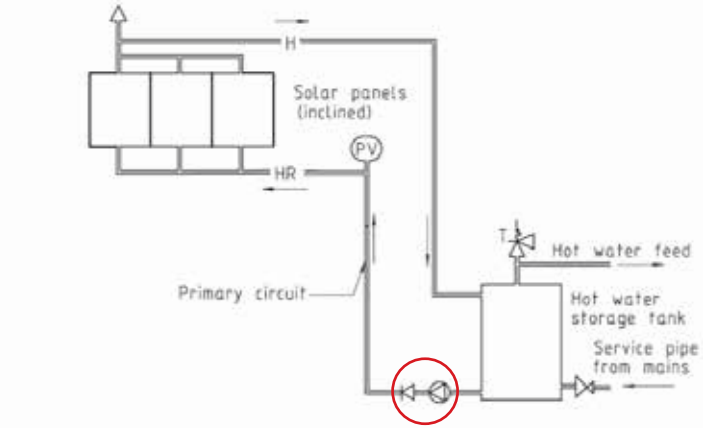
2. Installation pump direction & position

Installation

- *It is important to observe the correct position of the installed pump to prevent the impeller operating in a dry state. Please see pictures below.*
- *It is preferred that the pump remains in a horizontal position, pumping upwards.*
- *It is acceptable for the pump to be mounted under the piping in a vertical position.*
- *The pump cannot be mounted over the piping in a vertical direction or any position of the motor over the pump chamber, as this can cause the pump to run dry and cause premature failure of the pump.*



- *It is recommended that the pump is installed.*
  - *Over the drip tray.*
  - *In a position of at least 30cm **LOWER** than the water level of the tank, otherwise air may enter the pump and cause damage.*
- *To minimise frictional resistance, the shortest piping possible with a minimum number of bends should be utilised on the inlet or suction side of the pump.*
- *Switch off water supply and electricity to system.*
- *An arrow at the top of the pump indicates the correct direction of the water flow. The installation of an isolation valve either side of the pump is important, should the pump need to be serviced.*
- *A non-return valve should be placed after the pump to keep the pipes primed.*



- *Make sure the system is filled with water and all air has been purged before starting the pump.*
- ***DO NOT** leave the solar system without power.*

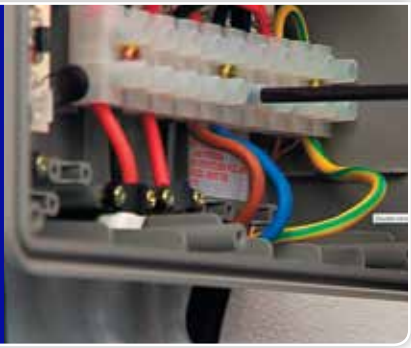
3. Electrical connection

- The installation must be carried out by a qualified electrician.
- Be sure that the power source conforms with the requirements of the pump, as the pump may be damaged in case of an incorrect power source.
- Brown wire is live.
- Blue wire is neutral.
- Green/yellow wire is earth.
- For connection to the GeyserWise units follow the instructions below.

GeyserWise Max connection

Connect wire between controller and pump

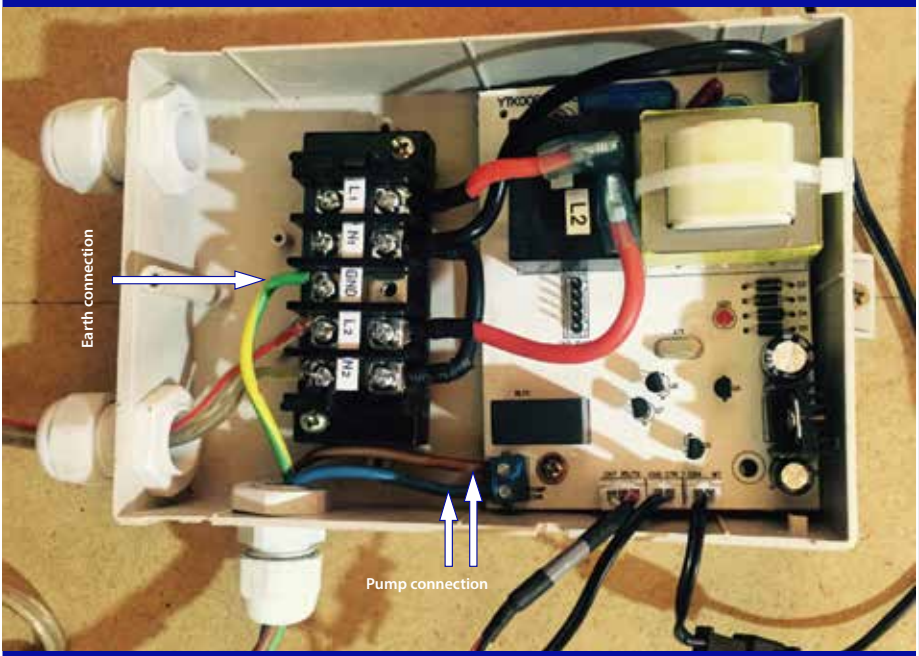
1. Connect Live (Brown) and Neutral (Blue) as indicated. Ensure that the wires are properly fastened both sides of the terminal block as they are drawing a large current. Loose connections can damage the connector block.
2. Connect Earth (Green/Yellow) wire as indicated.
3. Fasten all connections with the cord grip and screws as indicated to ensure that the wire cannot be moved.



Delta T connection

Connect wire between controller and pump

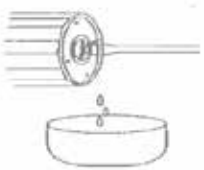
1. Connect Live (Brown) and Neutral (Blue) as indicated. Ensure that the wires are properly fastened both sides of the terminal block as they are drawing a large current. Loose connections can damage the connector block.



2. Connect Earth (Green/Yellow) wire as indicated.
3. Fasten all connections with the cord grip and screws as indicated to ensure that the wire cannot be moved.

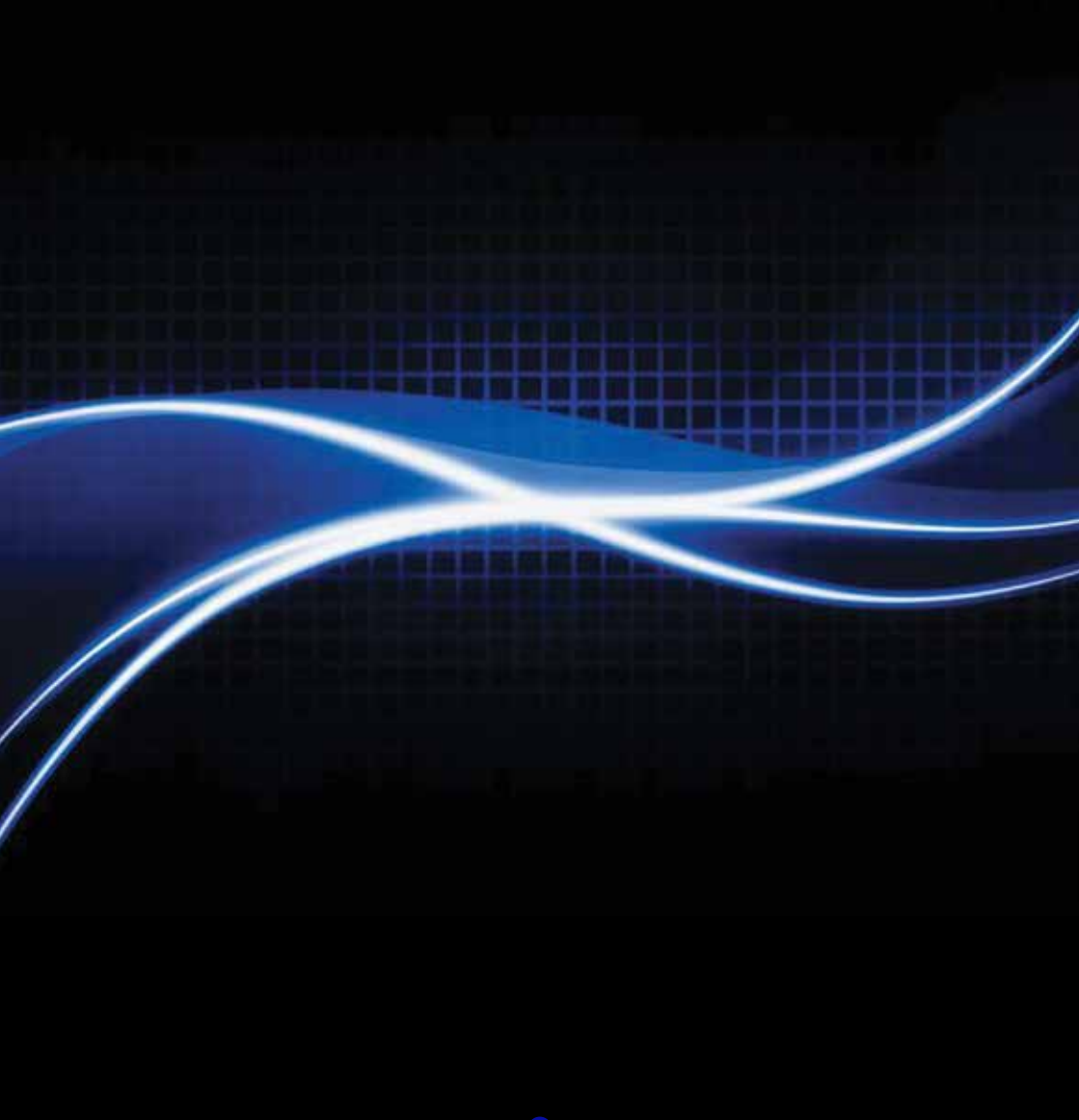
4. Prime the pump

1. Power must be off.
2. Switch on mains water.
3. Ensure there is a bucket/container under the pump to catch the water.
4. Loosen the screw and remove screw on the back of pump as indicated.
5. Let water circulate until you get a solid stream of water.
6. Put screw back and tighten.
7. Switch on electricity and let pump circulate and ensure there is circulation in the system.



Important:
If the collector is warm, beware of high temperature water circulating through the system. Danger of scalding.

Notes



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