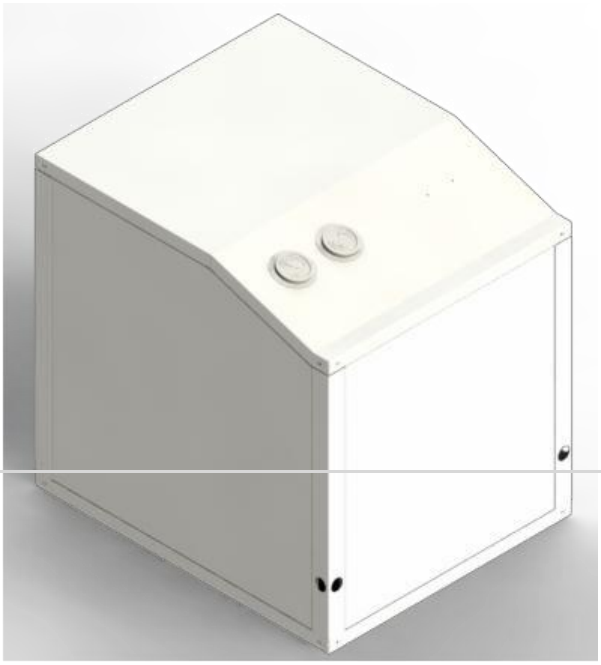


Installer Manual

Water Source Heat Pump

Important information

This manual is intended as a general guide and do not supersede local codes in any way. Consult authorities having jurisdiction before installation. This appliance must only be installed by a qualified person who is certified and trained to operate water to water heat pump system.

After receiving our products, please inspect the state of the system to ensure components are not damaged. Any damage related to transport is the responsibility of the purchaser's shipping company and should be promptly addressed.

Modifications of any electrical connections in the water to water heat pump system may cause the warranty to become void. Homes with unstable power require protection devices to manage Brown Power or voltage spikes. Consult with your Electrician for advice.

Please note that Zephair decline any responsibilities as regards damages deriving from an incorrect installation and a failure to follow the instructions detailed in the document. Any damage caused or mal-function of systems, which do not comply with this manual and any deviation from this manual will invalidate the guarantee.

Marking

CGS-72 is CE marked.

The CE marking means that Zephair ensures that the product meets all regulations that are placed on it based on relevant EU directives. The CE mark is obligatory for most products sold in the EU, regardless where they are made.

Symbols

Caution

This symbol indicates important information about what you should observe when maintaining your installation.

Warning

This symbol indicates danger to machine or person.

Note

This symbol indicates tips on how to facilitate using the product.

1. Safety information

Before install the unit, make sure you read all the "Safety precautions".
Please report to your supply authority or obtain their consent before connecting this equipment to the power supply system.

⚠Warning:

- The unit must not be installed by the user. Ask an installer or an authorized technician to install the unit. If the unit is installed improperly, electric shock, or fire may be caused.
- For installation work, follow the instructions in the Installation Manual and use tools and pipe components specifically made for use with refrigerant specified in the outdoor unit installation manual.
- The unit must be installed according to the instructions in order to minimize the risk of damages by earthquakes, typhoons, or strong winds. Improperly installed unit may fall down and cause damages or injuries.
- The unit must be securely installed on a structure that can sustain its weight. If the unit is mounted on an unstable structure, it may fall down and cause damages or injuries.
- All electric work must be performed by a qualified technician according to local regulations and the instructions given in this manual. The unit must be powered by dedicated power lines and the correct voltage and circuit breakers must be used. Power lines with insufficient capacity or incorrect electrical work may result in electric shock or fire.
- Only the specified cables can be used for wiring. Connections must be made securely without tension on the terminals. If cables are connected or installed improperly, it may result in overheating or fire
- Terminal block cover panel of the unit must be firmly fixed. If the cover panel is mounted improperly, dust and moisture may enter the unit, and it may cause electric shock or fire.
- Make sure to use accessories authorized by Zephair and ask an installer or an authorized technician to install them. If accessories are improperly installed, it may cause electric shock, or fire.
- Do not remodel the unit. Consult an installer for repairs. If alternations or repairs are not performed correctly, it may cause electric shock or fire.
- The user should never attempt to repair the unit or transfer it to another location. If the unit is installed improperly, it may cause electric shock or fire. If the unit needs to be repaired or moved, ask an installer or an authorized technician.
- When installing the unit in a hospital or in a building where communications equipment are installed, you may need to take measure to noise and electronic interference. Inverters, home appliances, high-frequency medical equipment, and radio communications equipment can cause the Cgs-22 unit to malfunction or to breakdown. At the same time, the noise and electric interference from the Cgs-22 unit may disturb the proper operation of medical equipment, and communications equipment.
- Be sure to safely dispose of the packaging materials. Packaging materials, such as nails and other metal or wooden parts may cause injuries.

4. Be sure to safely dispose of the packaging materials. Packaging materials, such as nails and other metal or wooden parts may cause injuries.
5. Do not wash the CGS-72 may receive an electric shock

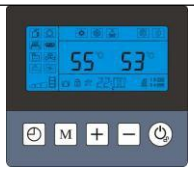
Before electric work ❗Caution:

- Be sure to install a circuit breaker. If it is not installed, there may be a risk to get an electric shock.
- For the power lines, use standard cables of sufficient capacity. Otherwise, it may cause a short circuit, overheating, or fire.
- When installing the power lines, do not apply tension to the cables. The cables may be cut or overheated resulting in a fire.

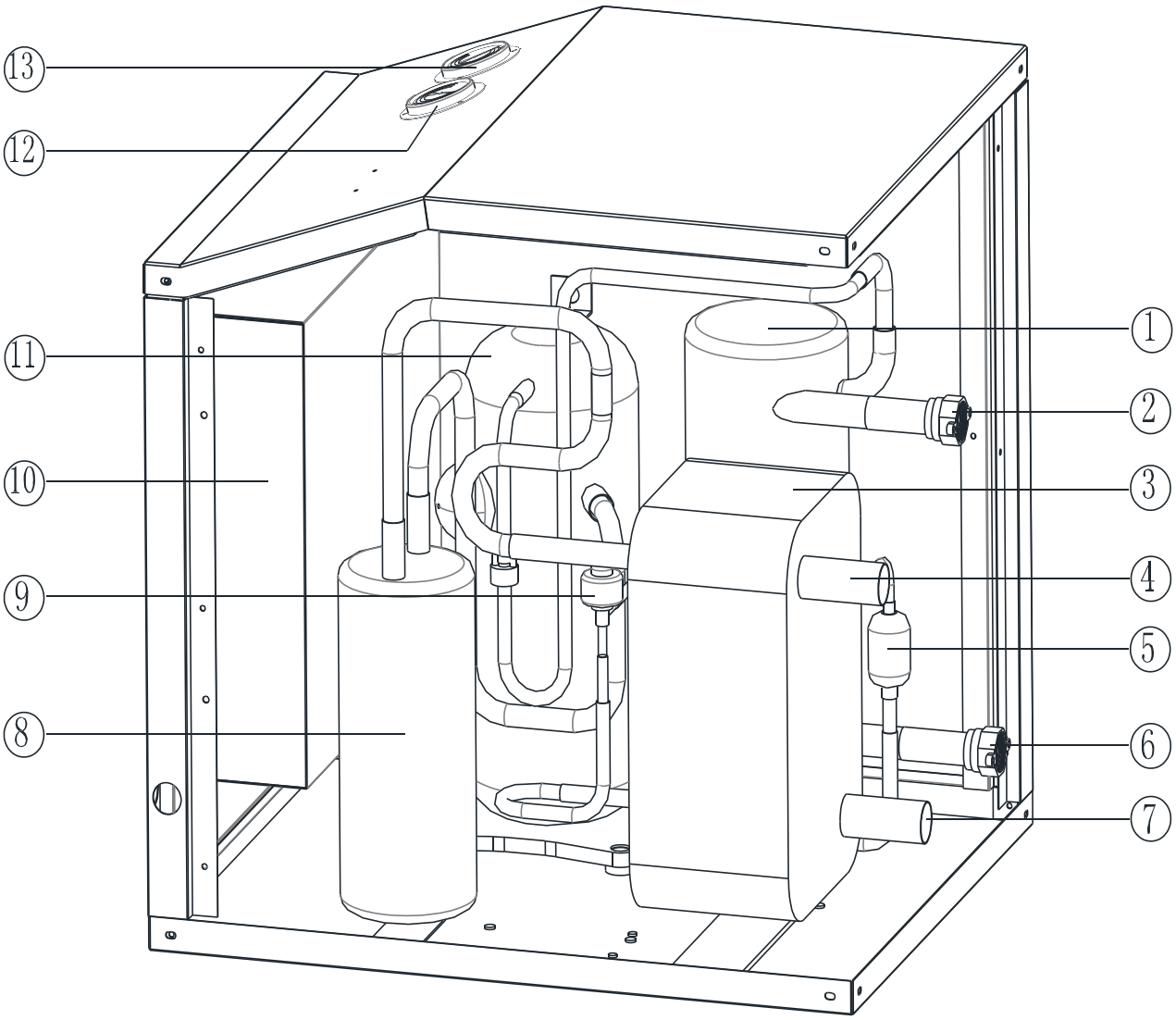
Before starting the test run ❗Caution:

- Before starting operation, check that all protective parts are correctly installed. Make sure not to get injured by touching high voltage parts.
- Make sure to ground the unit. Do not connect the ground wire to gas or water pipes, lightning rods, or telephone grounding lines. If the unit is not properly grounded, there may be a risk to get an electric shock.
- Make sure to use circuit breakers (ground fault interrupter, isolating switch (+B fuse), and molded case circuit breaker) with the specified capacity. If the circuit breaker capacity is larger than the specified capacity, breakdown or fire may result.
- Do not touch any switch with wet hands. There may be a risk to get an electric shock.
- After stopping operation, make sure to wait at least 5 minutes before turning off the main power.
- Otherwise, it may cause breakdown.

2. Key Components

Item	Discription	Pics
Condenser	Tube in shell heat exchanger	
Compressor	Scroll compressor	
Evaporator	Plate to plate heat exchanger	
Expansion valve	EEV	
AC contactor and thermal relay	Schneider	
Controller	Multiple function controller	
High pressure switch	3.6/4.4MPa	
Low pressure switch	0.15/0.56MPa	

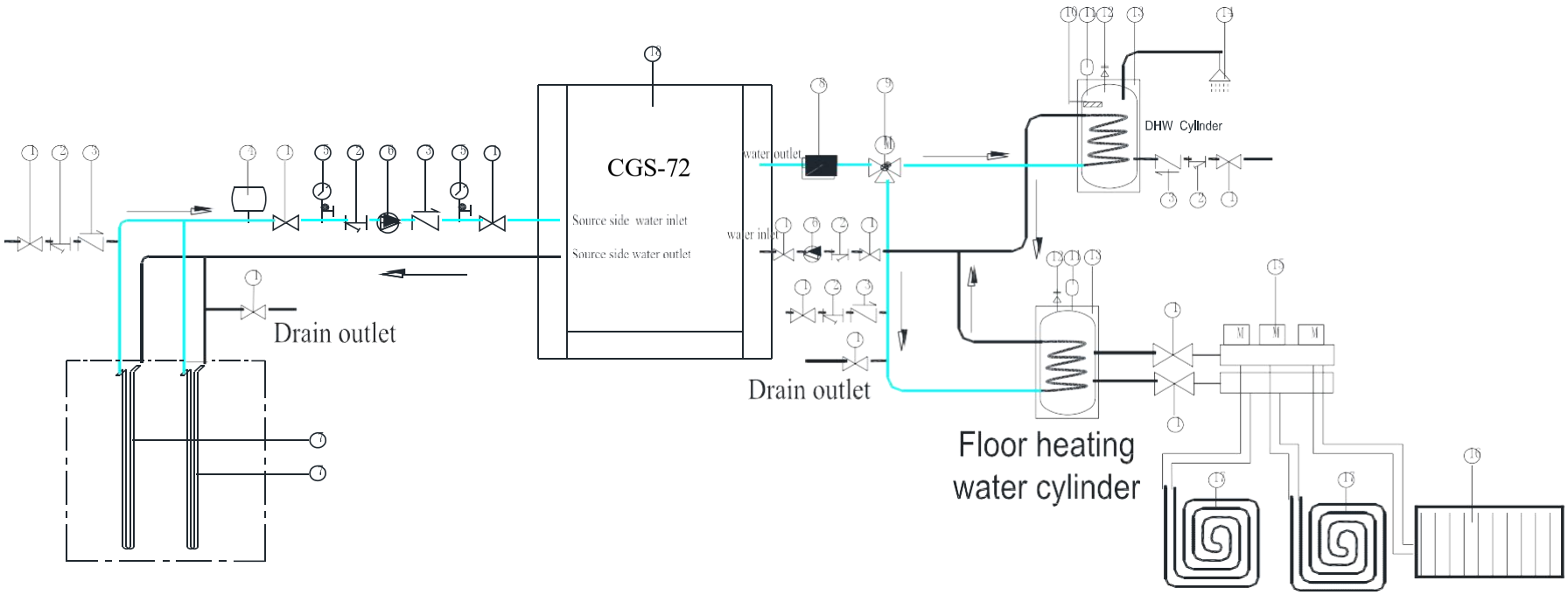
3. Unit Design



1. Tube in shell evaporator
2. Water Outlet
3. Plate to plate heat exchanger
4. Source side water outlet
5. Filter
6. Water inlet
7. Source side Water inlet
8. Liquid storage
9. Electrical expansion valve
10. Electrical box
11. Compressor
12. Low Pressure gage
13. High pressure gage

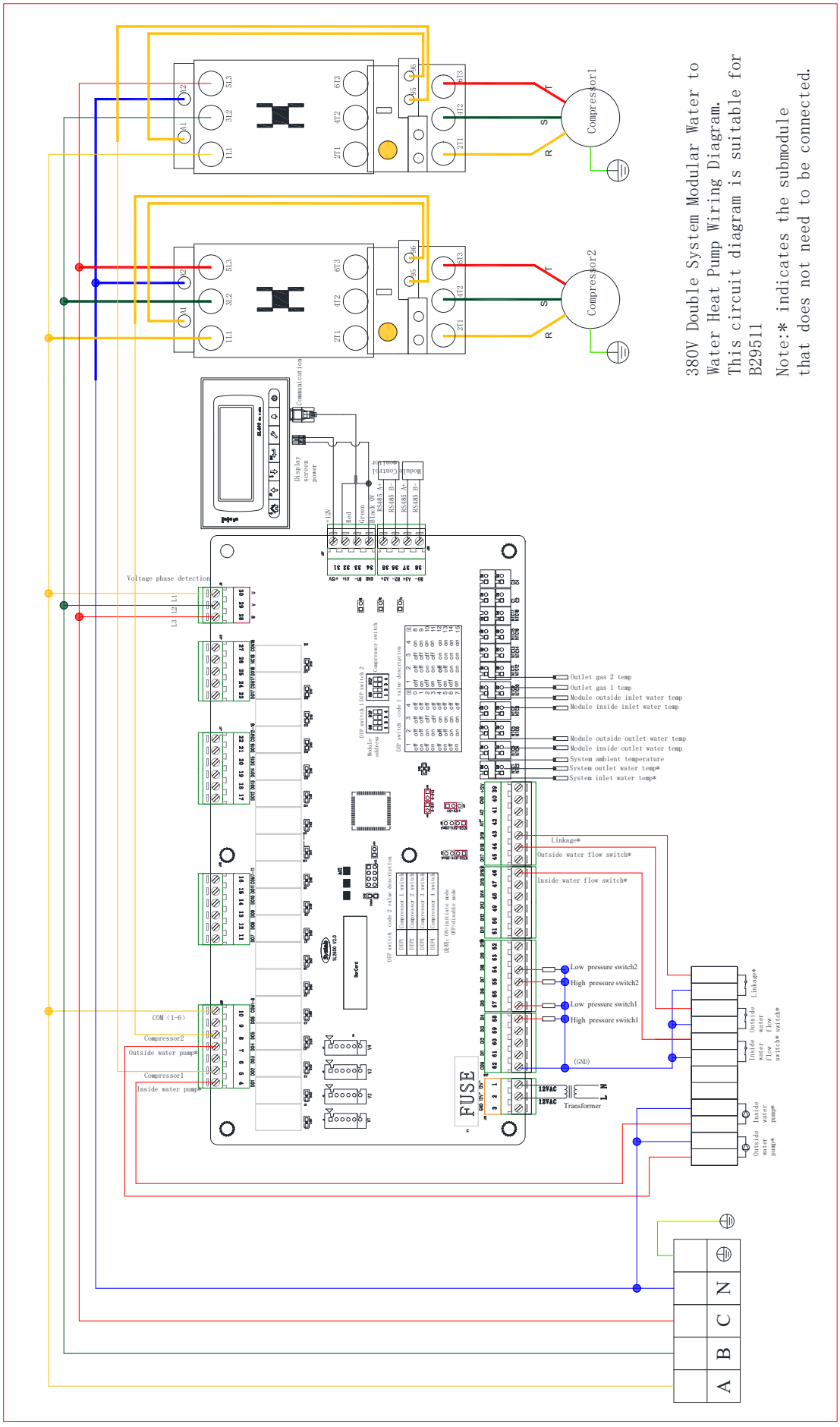
4. Hydraulic Connections

DHW + Heating System Installation Layout



1 Stop valve	4 Expansion vessel	7 Buried pipes	10 Immersion	13 Cylinder	16 Radiator
2 Y-Filter	5 Pressure gage	8 Backup heater	11 Expansion tank	14 Tapping	17 Floor heating coil
3 No-return valve	6 Water pump	9 Motorised 3-Way valve	12 Automatic air in valve	15 Collector	18 Heat pump unit

Wiring diagram



5. Temperature Sensor Installation

THE TEMPERATURE PROBE MUST BE INSTERTED INTO THE PROBE POCKET, OR DRY POCKET OF THE CYLINDER.

The temperature probe is used to monitor the temperature of the cylinder. If there is no pocket available to use, it shall be attached 1/3rd position from the bottom of cylinder.

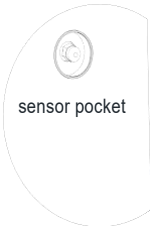
To ensure a reliable and solid contact between the probe and cylinder side, thermal paste should be used.

Note

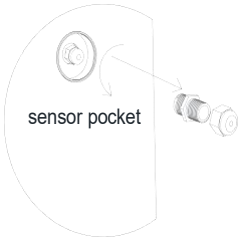
To make sure the reliable and solid contact between the probe and cylinder side, the thermal paste shall be used.

Steps

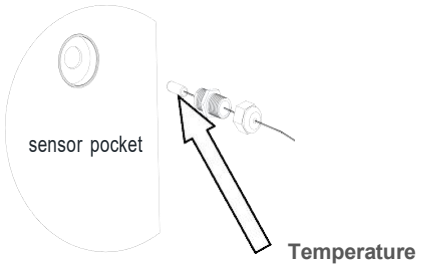
1. Locate the position of sensor pocket on the cylinder.



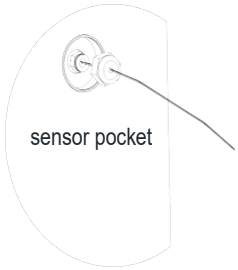
2. Remove the sensor pocket cover.



3. Pass the temperature probe through the cover.



4. Push the temperature probe as far as possible into the cylinder pocket, and then tighten the cover.



6. User Registration – Guarantee Card

Please spend time on registering your new CGS-72 as a required part to the Warranty activation, and complete it online.

Customer Data:

First Name: _____ Last Name:

Address: _____

City / Country: _____ Postal Code:

Email: _____ Contact Tel:

Sales Company Data:

Name: _____

Address: _____

_____

City / Country: _____

Postal Code: _____

Phone: _____

Email: _____

Installer Data:

Name:

Address:

City / Country:

Postal Code:

Phone:

Email:

Product Data:

Model: _____ Serial Number:

Installation Date: _____ No. of Invoice:

Customer

Cylinder Capacity (L):

GB

Disposal

Leave the disposal of the packaging to the installer who installed the product or to special waste stations.

Do not dispose of used products with normal household waste. It must be disposed of at a special waste station or dealer who provides this type of service.

Improper disposal of the product by the user results in administrative penalties in accordance with current legislation.