



AQUATANK MB 300L

Serie

WITD-AQUATANK MB-300-2

WITD-AQUATANK MB-300-3

Edition

07-23

To Users


Thank you for selecting this product. Please read this instruction manual carefully before installing and using the product, so as to master and correctly use the product. In order to guide you to correctly install and use our product and achieve expected operating effect, we hereby instruct as below:


- (1) This equipment should be installed, operated or maintained by the qualified servicemen who have had specific training. During operation, all safety issues covered in the labels, User's Manual and other literature should be followed strictly. This equipment is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
- (2) This product has gone through strict inspection and operational test before leaving the factory. In order to avoid damage due to improper disassembly and inspection, which may impact the normal operation of unit, please do not disassemble the unit by yourself. You can contact our designated dealer or local service center for professional support if necessary.
- (3) When the product is faulted and cannot be operated, please contact our designated dealer or local service center as soon as possible by providing the following information..
 - Contents of nameplate of product (model, cooling/heating capacity, product No., ex-factory date).
 - Malfunction status (specify the situations before and after the error occurs).
- (4) All the illustrations and information in the instruction manual are only for reference. In order to make the product better, we will continuously conduct improvement and innovation without further notice.


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Safety Notices (Please be sure to abide)

 **WARNING:** If not abide strictly, it may cause severe damage to the unit or the people.

 **NOTE:** If not abide strictly, it may cause slight or medium damage to the unit or the people.

 This sign indicates that the operation must be prohibited. Improper operation may cause severe damage or death to people

 This sign indicates that the items must be observed. Improper operation may cause damage to people or property.

NOTE

After receipt of the unit, check it for appearance, unit model compared with your desire and attachments.

Design and installation work of the unit must be performed by authorized personnel according to applicable laws and regulations and this Instruction.

After installation work, the unit cannot be energized unless there is not any problem in check.

Ensure periodical clean and maintenance of the unit after normal operation of the unit for longer life and reliable operation.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

The appliance shall be installed in accordance with national wiring regulations.

This product is a kind of comfort air conditioning, and is not allowed to be installed where there are corrosive, explosive and inflammable substances or smog; otherwise it would lead to operation failure, shortened service life, five hazard or even severe injuries. Special air conditions are required for where mentioned above.

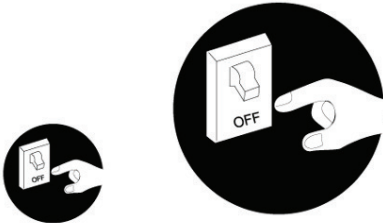


Correct Disposure

This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

⚠ WARNING

Once abnormality like burning smell occurs, please cut off the power supply immediately and then contact with service center.



If the abnormality still exists, the unit may be damaged and electric shock or fire may result.

Don't operate the unit with wet hand.



Otherwise, it may cause electric shock.

Before installation, please see if the voltage of local place accords with that on nameplate of unit and capacity of power supply, power cord or socket is suitable for input power of this unit.

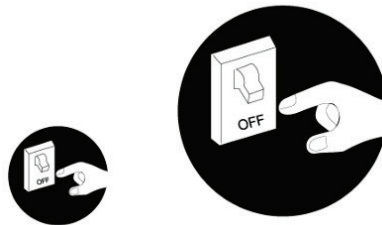


Special circuit must be adopted for power supply to prevent fire.



Do not use octopus multipurpose plug or mobile terminal board for wire connection.

Be sure to pull out the power plug and drain the indoor unit and when unit is not in use for a long time.

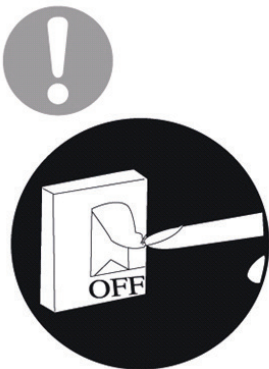


Never damage the electric wire or use the one which is not specified.



Otherwise, it may cause overheating or fire.

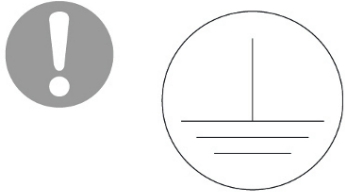

Before cleaning please cut off the power supply.



Otherwise, it may cause electric shock or damage.

The power supply must adopt special circuit with leakage switch and enough capacity.

User can not change power cord socket without prior consent. Wiring working must be done by professionals. Ensure good earthing and don't change earthing mode of unit.

<p>Earthing: the unit must be earthed reliably ! The earthing wire should connect with special device of buildings.</p>  <p>If not, please ask the qualified personnel to install. Furthermore, don't connect earth wire to gas pipe, water pipe, drainage pipe or any other improper places which professional does not recognize.</p>	<p>Keep pressurized spray, gas holder and so on away from the unit above 1m .</p>  <p>It may cause fire or explosion.</p>	<p>Unit should be installed at the place with good ventilation to save energy.</p>
<p>When there is not water in water tank, never power the unit on to run.</p>		

⚠ WARNING

Should repair be necessary, contact your nearest authorized service centre. Any repairs carried out by unqualified personnel may be dangerous. If a stationary appliance is not fitted with a supply cord and a plug, or with other means for disconnection from the supply mains having a contact separation in all poles that provides full disconnection under overvoltage category III conditions, the instructions shall state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

The appliance shall be stored so as to prevent mechanical damage from occurring.

 **NOTE**


Before use the appliance, read the owner's manual first.

Before installation, please check if the adopted power is accordance with that listed on nameplate, and check the safety of power.

Before using, please check and confirm if wires and water pipes are connected correctly to avoid water leakage, electric shock or fire etc.

Don't operate the unit with wet hand, and don't allow children to operate the unit.

The On/off in the instruction is for the operation to on and off button of PCB for users; cut off power means to stop supplying power to the unit.

Don't directly expose the unit under the corrosive ambient with water or dampness.

Don't operate the unit without water in .

The water in unit and pipeline should be discharged if the unit is not in use, to prevent the water tank, pipe line and water pump from frost-cracking.

The power cord must be separated with the communication line.

Servicing shall only be performed as recommended by the equipment manufacturer.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

If any hot work is to be conducted on the equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO2 fire extinguisher adjacent to the charging area.

 **NOTE**

Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer's maintenance and service guidelines shall be followed. If in doubt consult the manufacturer's technical department for assistance.

Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.

Initial safety checks shall include: that capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking; that no live electrical components and wiring are exposed while charging, recovering or purging the system; that there is continuity of earth bonding.

During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.

Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.

Ensure that apparatus is mounted securely.

Ensure that seals or sealing materials have not degraded such that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts shall be in accordance with the manufacturer's specifications.

NOTE The use of silicon sealant may inhibit the effectiveness of some types of leak detection equipment.

Intrinsically safe components do not have to be isolated prior to working on them.

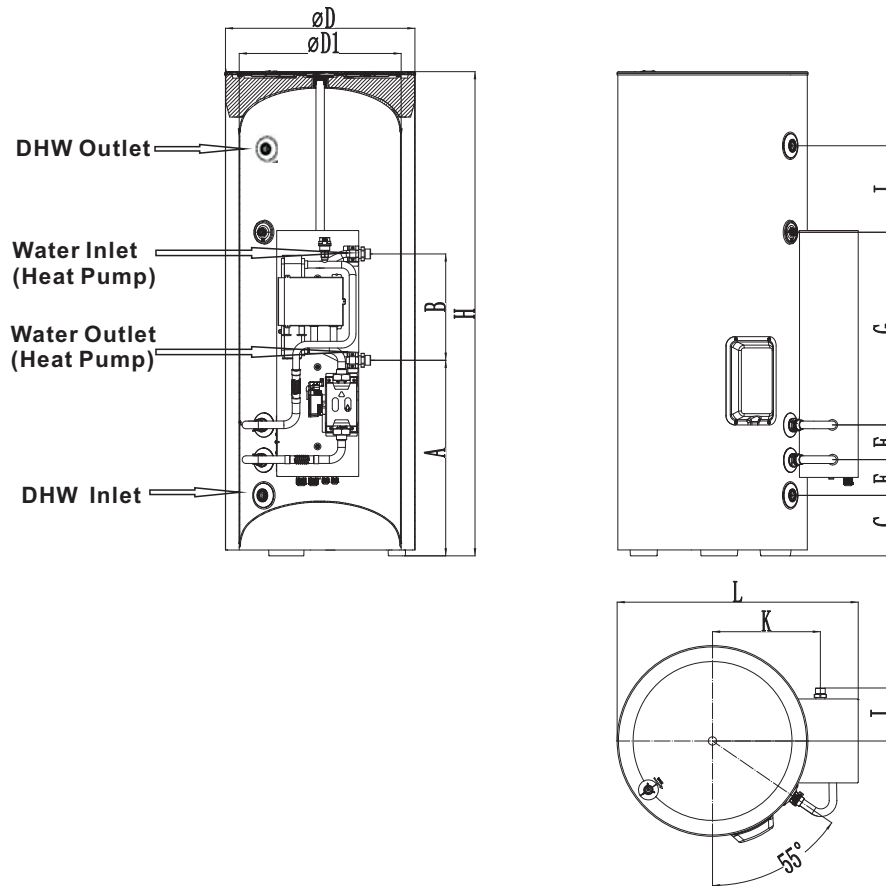
Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.

Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere. The test apparatus shall be at the correct rating.

Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of ageing or continual vibration from sources such as compressors or fans.

Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.

2. Outline Dimensions



Model	WITD-AQUATANK MB-300-2	SXTVD300LC/B-M
Litre	300L	300L
D(mm)	620	620
D1(mm)	530	530
H(mm)	1585	1585
A(mm)	640	640
B(mm)	348	348

Model	WITD-AQUATANK MB-300-2	WITD-AQUATANK MB-300-3
C(mm)	198	198
E(mm)	117	117
F(mm)	114	114
G(mm)	631	631
I(mm)	283	283
J(mm)	174	174
K(mm)	353	353
L(mm)	789	789

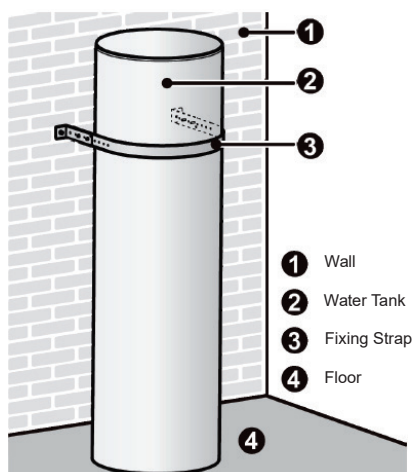
Model		WITD-AQUATANK MB-300-2	WITD-AQUATANK MB-300-3
Outline (Diameter×H) (mm)		Φ620×1585	Φ620×1585
Package (W×D×H)(mm)		815×920×1745	815×920×1745
Net weight	kg	105	105
Gross weight	kg	132	132

Joints Dimension	
Description	Joint pipe thread
Hot water outlet of water tank	3/4"Female BSP
Circulating water inlet/outlet of water tank	3/4"Female BSP
Cooling water inlet of water tank	3/4"Female BSP
Pipe joint	3/4"Female BSP

3. Installation Instructions

The insulated water tank should be installed and keep levelly within 5m and vertically within 3m from the indoor unit. It can be installed in the room.

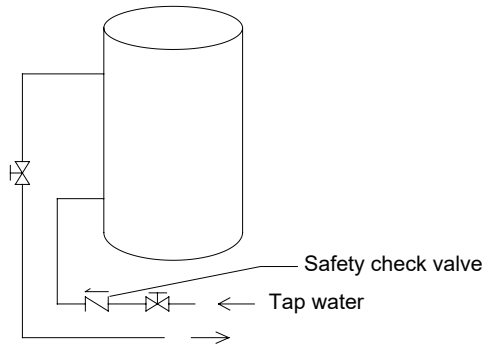
Standing water tank must be installed vertically with the bottom on the ground, never suspended. Installation place must be firm enough and the water tank should be fixed on the wall with bolts to avoid vibration, as shown in the following figure. Weight capacity of water tank during installation should also be considered.



The minimum clearance from the water tank to combustible surface must be 500mm.

There should be water pipe, hot water joint and floor drain near the water tank in favor of water replenishment, hot water supply and drainage of water tank.

Connection of inlet/outlet waterway: Connect the safety check valve attached with the unit (with the arrow on it pointing at the water tank) with the water inlet of water tank with PPR pipe according to the following figure, sealing with unsintered tape. The other end of the safety check valve should connect with tap water joint. Connect the hot water pipe and water outlet of water tank with PPR pipe.

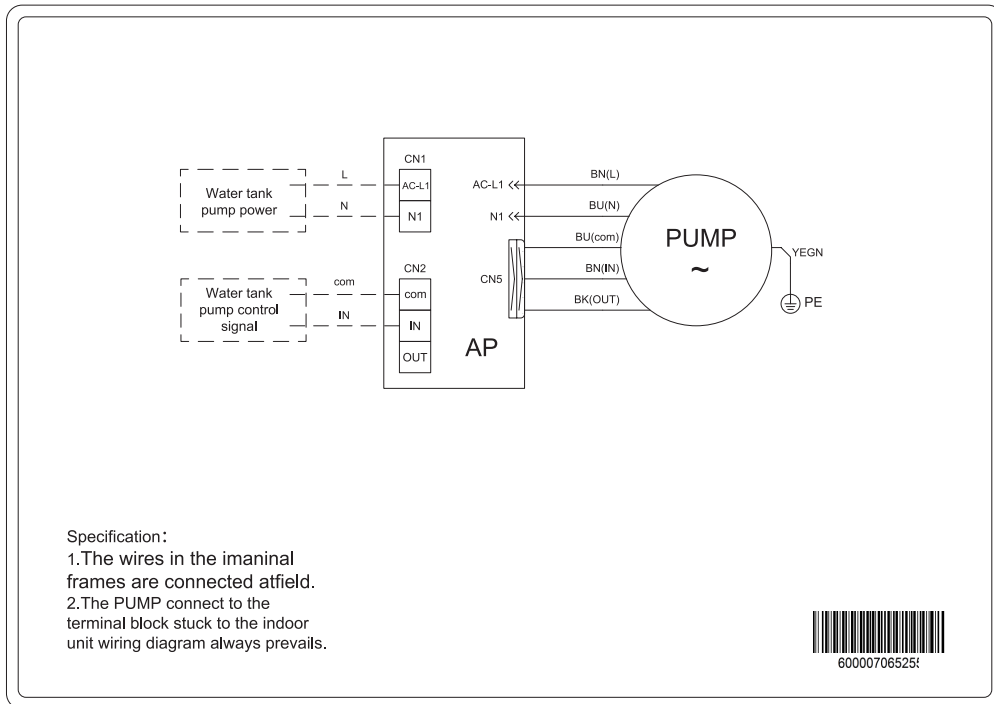


Notes

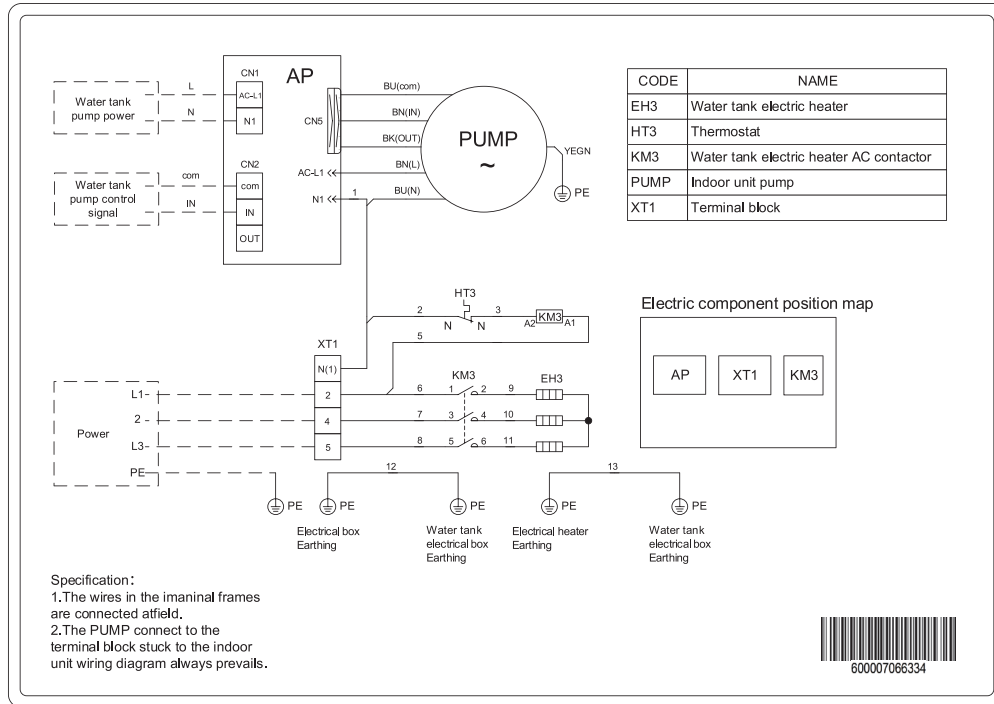
- (1) For safe use of water, water outlet/inlet of water tank must connect with a certain length of PPR pipe ,L $\geq 70 \times R2$ (cm, R is inside radius of the pipe). Moreover, heat preservation should be conducted and metal pipe cannot be used. For the first use, water tank must be full of water before the power is on.
- (2) The water may drip from the discharge pipe of the pressure-relief device and that this pipe must be left open to the atmosphere.
- (3) The pressure-relief device is to be operated regularly to remove lime deposits and to verify that it is not blocked.
- (4) The discharge pipe connected to the pressure-relief device is to be installed in a continuously downward direction and in a frost-free environment.
- (5) The appliance is intended to be permanently connected to the water mains and not connected by a hose-set.
- (6) The type of the pressure-relief device is A3J, and this device shall be installed with threaded connection.
- (7) The replenishing water pressure in water tank shall be beyond 0.2MPa and below 0.7MPa.
- (8) The method of water drainage must be operated strictly abide by the instruction on the label of the water tank.

4. Wiring Diagrams

- (1) Single-phase water tank

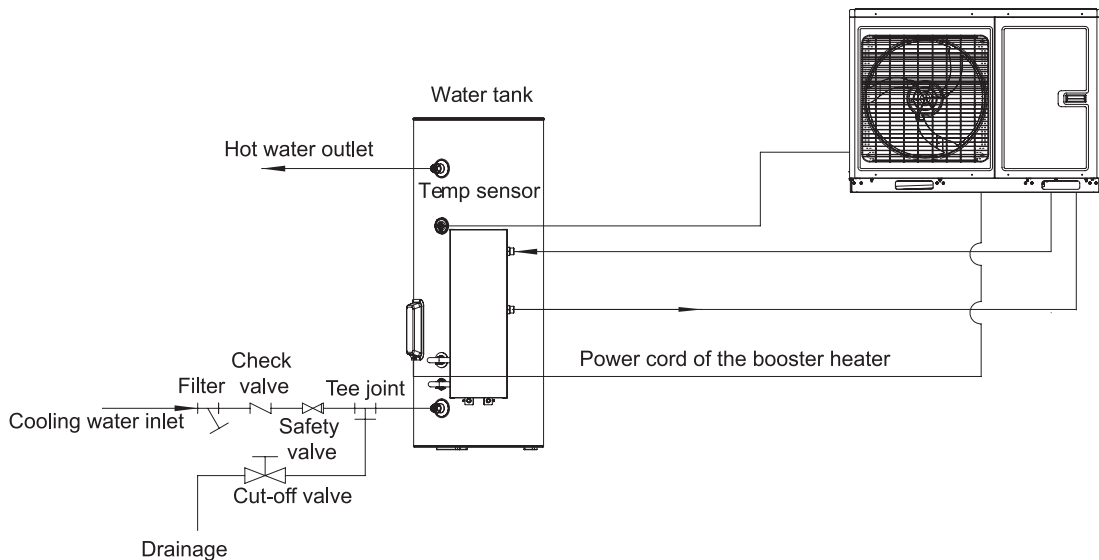


(2) 3-phase



5. Connection of the Waterway System

- (1) If connection between water tank and indoor unit should be through the wall, drill a hole $\Phi 70$ for pass of circulating water pipe. It is unnecessary if the hole is not needed.
- (2) Preparation of pipelines: Circulating water outlet/inlet pipe must be hot water pipe, PPR pipe with nominal out diameter of DN25 and S2.5 series (wall thickness of 4.2mm) being recommended. Cooling water inlet pipe and hot water outlet pipe of water tank should also be hot water pipe, PPR pipe with nominal out diameter of DN20 and S2.5 series (wall thickness of 3.4mm) being recommended. If other insulated pipes are adopted, refer to the above dimensions for out diameter and wall thickness.
- (3) Installation of circulating water inlet/outlet pipes: connect the water inlet of the unit with circulating outlet of water tank and water outlet of unit with circulating inlet of water tank.
- (4) Installation of water inlet/outlet pipes of the water tank: safety check valve, filter and cut-off valve must be installed for the water inlet pipe according to the installation sketch of the unit. At least a cut-off valve is needed for the water outlet pipe.
- (5) Installation of blow-off pipes at the bottom of water tank: connect a piece of PPR pipe with drainage outlet to floor drain. A cut-off valve must be installed in the middle of the drainage pipe and at the place where it is easy to be operated by the users.
- (6) After connection of all waterway pipelines, perform the leakage test firstly. After that, bind up the water pipes, water temp sensor and wires with wrapping tapes attached with the unit.
- (7) Refer to Installation Sketch of the Unit for details.



Description	Joint pipe thread
Circulating water inlet/outlet of main unit	1"Male BSP
Cooling water inlet of water tank	3/4"Female BSP
Circulating water inlet/outlet of water tank	3/4"Female BSP
Hot water outlet of water tank	3/4"Female BSP

Code	Name	QTY.	Function
0184280004P01	Retaining Plate Sub-Assy	2	Fix the water tank to the wall
70210087	Bolt M6X16	4	/
70110066	Swell Screw M8X60	2	/
0738280101	Relief Valve 1/2	1	/
035033000012	Water Pipe Connector	1	Connect the water pipe and Water inlet pipe sub-assy
06332800003	Nut	1	Install on the 3way connector
75042805	Gasket	2	Sealing function, see below blue circle
030059000120	Water inlet pipe sub-assy	2	/
05332800002	Drainage Pipe(Rubber)	1	The drainage pipe using for the relief valve to drainage the water
70814016	Pipe Hoop Φ13	1	Fix the drainage pipe
2690280000502	Extruded strip	1	Fix the water tank and avoid the damage appearance of the water tank
0184280000502P	Fixing strap	1	Fix the water tank to the wall

Notes

- Distance between indoor unit and water tank should not exceed 5m levelly and 3m vertically. If higher, please contact with us. Water tank on lower and main unit on higher side is recommended.
- Prepare the materials according to the above joints dimension. If cut-off valve is installed outside the room, PPR pipe is recommended to avoid freeze damage.
- Waterway pipelines can't be installed until water heater unit is fixed. Do not let dust and other sundries enter into pipeline system during installation of connection pipes.
- After connection of all waterway pipelines, perform leakage test firstly. After that, perform heat preservation of waterway system; meanwhile, pay more attention to valves and pipe joints. Ensure enough thickness of insulated cotton. If necessary, install heating device for pipeline to prevent the pipeline from freezing.
- Hot water supplied from insulated water tank depends on pressure of water tap, so there must be supply of tap water.
- During using, the cut-off valve of cooling water inlet of water tank should be kept normally on.

6. Safety Considerations

(1) Pressure relief of the water tank

The water may drip from the discharge pipe of the pressure-relief device and that this pipe must be left open to the atmosphere.

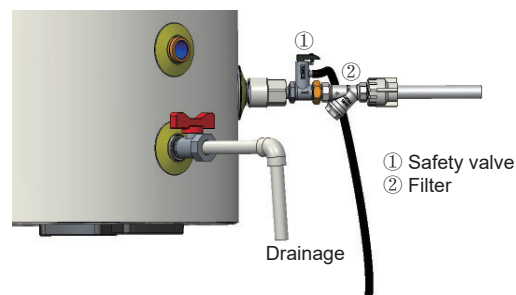
The pressure-relief device is to be operated regularly to remove lime deposits and to verify that it is not blocked

A discharge pipe connected to the pressure-relief device is to be installed in a continuously downward direction and in a frost-free environment.

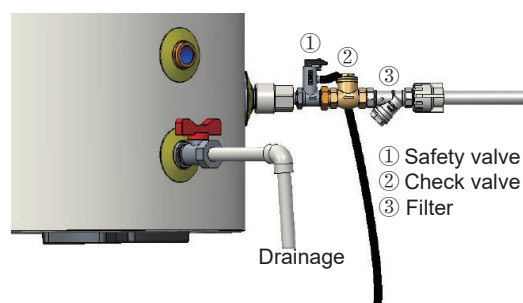
(2) Installation of the water tank safety valve

Pressure of the water tank will gradually increase during heating and a safety valve is required to discharge some water for pressure relief. If not or installed incorrectly, it would cause the water tank to expand, to be deformed, to be damaged or even lead to personal injury. The arrow → of the water tank safety valve shall point toward the water tank. No cut-off valve or check valve is required between the safety valve and the water tank, as the safety valve would fail to work. The safety valve requires the drain hose for installation and should be securely fastened. The drain hose should be led naturally downward into the floor drain without any convex bow, intertwill or fold. Extra length of the drain hose inside the floor drain should be cut away in case of poor drainage or water freeze under low atmospheric temperature. The recommended action pressure for the safety valve is 0.7Mpa, the same as that for the water tank. Do comply with this requirement for section of the safety valve; otherwise the water tank would fail to work normally.

The drain pipe should go downwards and be connected with the floor drain. Its outlet should be lower than the bottom of the water tank. A cutoff valve is required for the drain pipe and should be installed where it is convenient for operation.

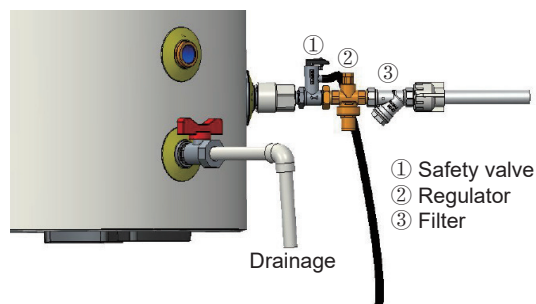


Installation Mode 1 of the Tap Water Safety Valve (Inlet Water Pressure =0.1~0.5MPa)



Installation Mode 2 of the Tap Water Valve (Inlet Water Pressure <0.1MPa)

The safety valve is bypass installed in the installation mode 2. A check valve is required at the tap water pipe and installed horizontally with the valve cap vertically upwards and the arrow direction at the valve body the same as the water flow.



Installation Mode 3 of the Tap Water Safety Valve (Inlet Water Pressure > 0.5MPa)

A pressure maintaining valve is required in the installation mode 3 to make sure the water tank pressure keep within 0.3~0.5MPa. The arrow direction of the pressure maintaining valve should be the same as the water flow.

Note: the filter, safety valve, check valve, pressure maintaining valve, cut-off valve and hose for installation are not delivered with the main unit and should be prepared by the client.

7. Maintenance of the Water Tank

7.1 Water charging and draining

- (1) Operation process for water charging
 - Cut off the power supply and open the cut-off valve at the water inlet of the tap faucet;
 - Open the cut-off valve at the hot water drain outlet and valve in user water use site;
 - Close the valve in user water use site when water is flowing out from user water use site;
 - Complete water input operation and reenergize the unit.
- (2) Operation process for water draining
 - Cut off the power supply and close the cut-off valve at the water outlet of the tap faucet;
 - Open the cut-off valve at the hot water drain outlet and valve in user water use site;
 - Open the cut-off valve on the joint (3-way) pipe;
 - Close the drainage cut-off valve after draining water on the water tank to complete drainage operation.

7.2 Periodic cleaning for water tank

Please clean the water tank periodically to get good-quality water according to the following steps:

- (1) Cut off the power supply.
- (2) Close the cut-off valve at the water inlet of the water tank.
- (3) Open the cut-off valve at the hot water drain outlet and valve in user water use site.
- (4) Open the cut-off valve in joint (3-way) connector, and wait for drainage of water inside water tank.
- (5) Close the cut-off valve in joint (3-way) connector, open the cut-off valve at the water inlet of the water tank, close the cut-off valve at the water inlet when water flows from user water use site, then reopen the cut-off valve in joint (3-way) connector, repeat the drainage operation, close the cut-off valve in joint (3-way) connector when water discharged is clean.
- (6) Conduct water input for the water tank according to water input operation.
- (7) Water tank cleaning completed and energize it.

7.3 Requirements on water quality

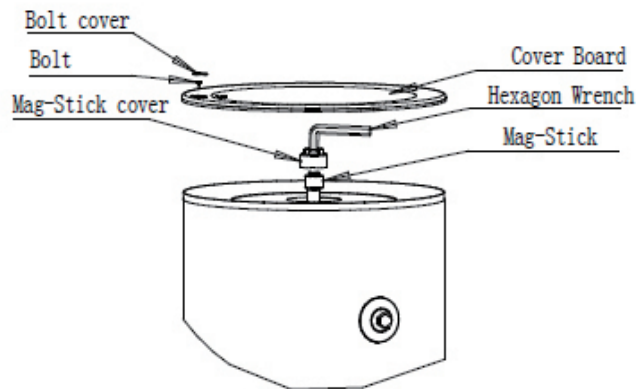
Paramete	Parametric value	Unit
pH(25°C)	6.8~8.0	/
Cloudy	< 1	NTU
Chloride	< 50	mg/L
Fluoride	< 1	mg/L
Iron	< 0.3	mg/L
Sulphate	< 50	mg/L
SiO ₂	< 30	mg/L
Hardness(count CaCO ₃)	< 70	mg/L

Paramete	Parametric value	Unit
Nitrate(count N)	< 10	mg/L
Conductance(25°C)	< 300	µs/cm
Ammonia (count N)	< 0.5	mg/L
Alkalinity(count CaCO ₃)	< 50	mg/L
Sulfid	Cannot be detected	mg/L
Oxygen consumption	< 3	mg/L
Natrium	< 150	mg/L

Note: when circulation water fails to meet requirements listed in the table above, please add anti-scale composition to keep the unit always in normal operation

7.4 Mg-stick replacement

- (1) To improve durability of the water tank, a Mg-Stick is installed inside the water tank. Generally, the Mg-Stick has a lifespan of two to three years. However, if the quality of water used by the water heater is poor, the Mg-Stick lifespan will be shortened. For Mg-Stick replacement, perform the following steps:
- (2) Before removing the Mg-Stick, drain the water tank by following drainage operations.
- (3) Open the cap on the mounting mouth for the Mg-Stick in the water tank.
- (4) Use a hex key to unscrew the Mg-Stick component, and then steadily removed the magnesium to prevent it from falling into the inner container of the water tank.
- (5) Install a new Mg-Stick component into the mounting mouth of the Mg-Stick, and then tighten it using a hex key.
- (6) Close the cap, and replenish water by following water replenishment operations.



Note: the Mg-Stick must be replaced by professional maintenance personnel. Please directly contact your local dealer or authorized service center for service support.

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