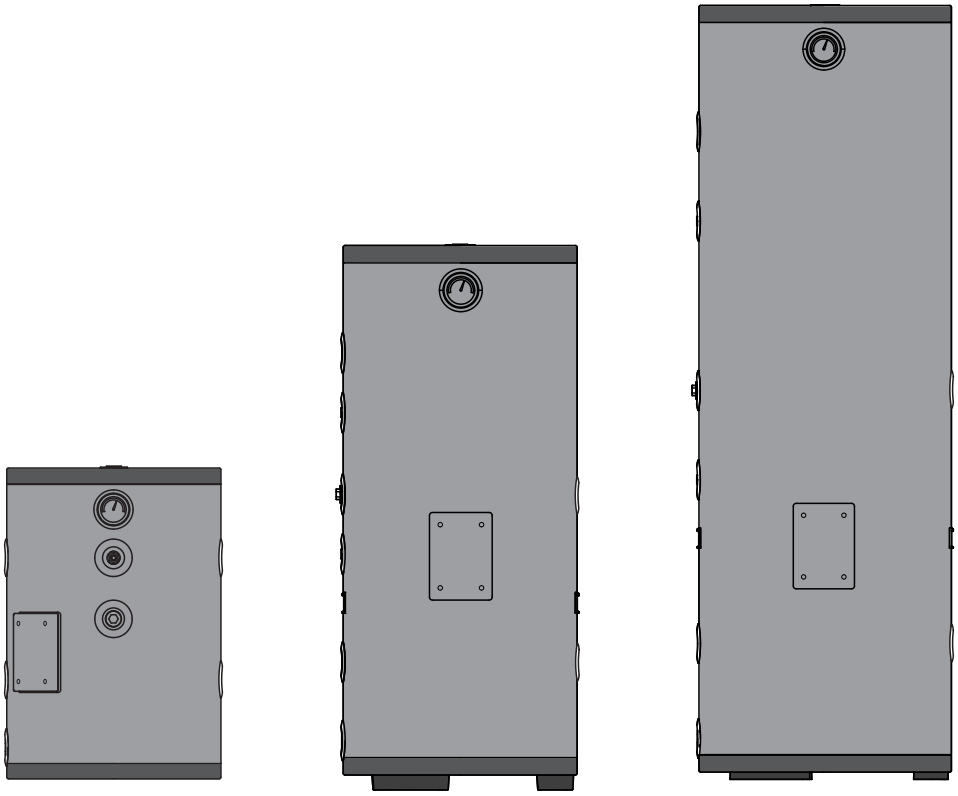
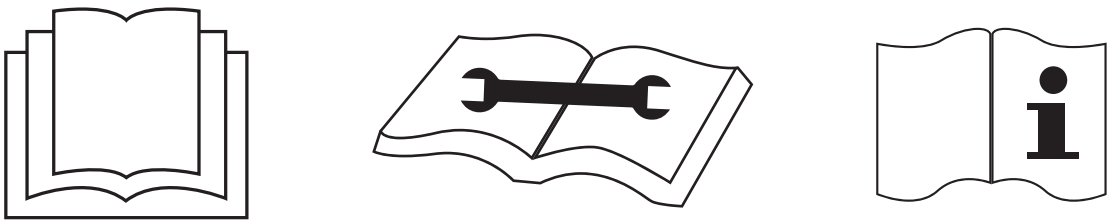
MULTI FUNCTIONAL STAINLESS STEEL WATER TANK



INSTALLATION AND OPERATION MANUAL



Dear user:

Welcome to the comprehensive user manual for stainless-steel domestic water tanks and buffer tanks. This manual is designed to provide you with all the necessary information to ensure the proper installation, operation, maintenance, and safety of your water storage system. Our goal is to help you achieve optimal performance and longevity from your equipment. Please read this manual thoroughly before proceeding with any installation or maintenance activities.

CONTENTS

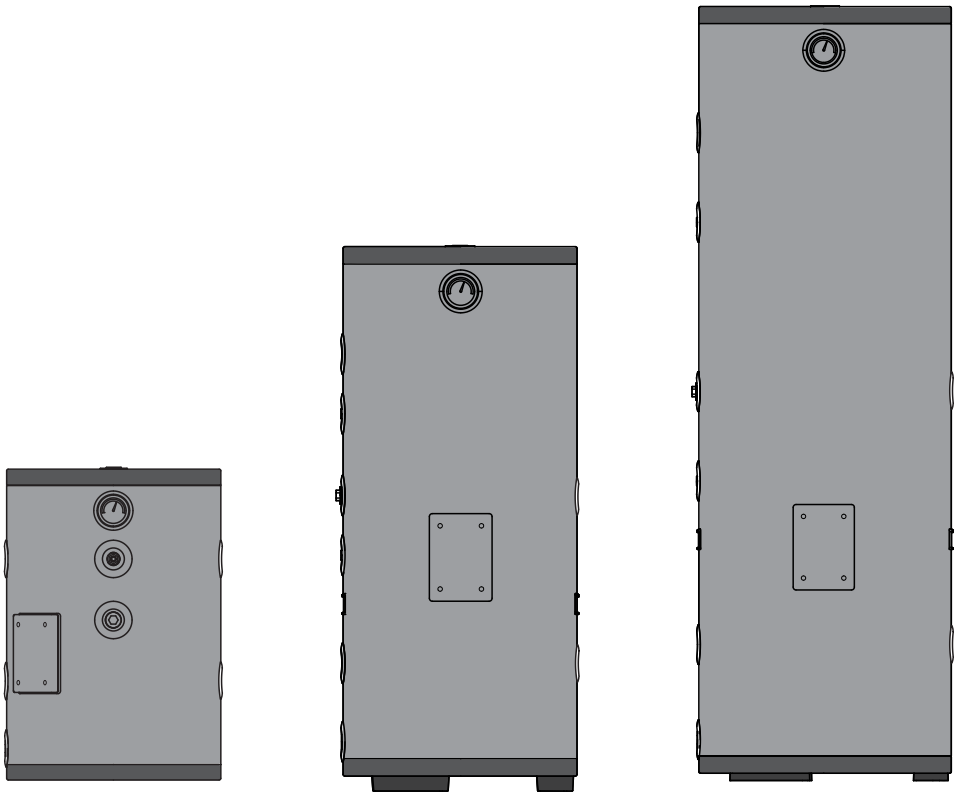
SAFETY INSTRUCTIONS

To ensure your safety, please read the following instructions carefully before installation of the water tank.

If the product is not used following the method, personal injury or product damage may occur.

Make sure that keep the relevent documentations in a safe place for future reference.

The manufacturer assumes that the end user complies with the safety, operating and maintenance instructions provided. The installer, on the other hand, complies with the installation manual and the relevant standards and regulations in force at the date of installation.



1. Important Safety Information

1.1 General Safety

1) Always comply with local and national building codes, electrical codes, and safety standards.
2) Installation, maintenance, and repair work should only be carried out by qualified professionals.
3) Ensure that the installation site is suitable for the weight and dimensions of the tank and that it has a solid, level foundation.

1.2 Installation Safety

1) Use appropriate lifting techniques and equipment to move and position the tank to avoid injury.

Handling Instructions for Water Tanks

a) Packaging
Packaging Type: The water tanks are packaged in cardboard boxes.

b) Recommended Handling Method
It is recommended that two people handle the water tank during transportation.

c) Handling Technique:
Step 1: Position one person at each end of the water tank.
Step 2: Place hands under the edges of the cardboard box.
Step 3: Lift the water tank together, using the edges of the cardboard box to maintain grip.

d) Avoid Using Ropes or Tools: It is advised not to use ropes or other tools to lift the cardboard box to prevent damage.

e) Use of Handling Equipment: If using handling equipment, ensure it is secure to prevent slipping and to protect the cardboard box from damage.

2) Verify that all plumbing connections are secure and leak-free before filling the tank with water.
3) Ensure proper ventilation around the tank, especially if installed indoors.

Do not install the tank near sources of extreme heat or direct sunlight unless adequately protected.

1.3 Operational Safety

1) Do not use the tank if it is damaged or has missing components.
2) Regularly inspect the tank and its components for signs of wear, corrosion, or leaks.
3) Use only manufacturer-recommended accessories and replacement parts.
4) Do not tamper with safety devices such as pressure relief valves.

1.4 Electrical Safety (for tanks with electric heaters)

1) Ensure all electrical connections comply with local standards and are performed by a licensed electrician.
2) The tank's electric heater should be connected to a dedicated circuit.
3) Install a ground fault circuit interrupter (GFCI) for added safety.
4) Never touch electrical components with wet hands or when standing on a wet surface.

1.5 Maintenance Safety

1) Disconnect power before performing any maintenance work on the tank.
2) Use personal protective equipment (PPE), such as gloves and safety glasses, during maintenance.
3) Keep detailed records of all maintenance activities for future reference.

2. Precautions

2.1 Water Quality

1) Ensure that the water supply is clean and free from contaminants.
2) Install appropriate water filters or magnetic filter if the incoming water quality is poor.
3) Regularly test the water quality to ensure it meets safety standards.

2.2 Temperature Control

1) Set the water temperature within the recommended range to prevent scalding and reduce energy consumption.
2) Use thermostats to monitor and control the water temperature accurately.
3) Avoid sudden temperature changes that can stress the tank material.

2.3 Pressure Control

1) Maintain water pressure within the specified limits to prevent damage to the tank.
2) Install pressure relief valves to protect against overpressure situations.
3) Regularly check the operation of pressure relief valves to ensure they are functioning correctly.

2.4 Storage and Handling

1) Store the tank in a cool, dry place when not in use.
2) Protect the tank from extreme weather conditions.
3) Handle the tank with care to prevent physical damage such as dents and scratches.

2.5 Installing electric heaters in domestic hot water or buffer water tanks

When installing electric heaters provided by the water tank manufacturer into domestic hot water or buffer water tanks, consider the following:

1) Sealing: Ensure the connection between the electric heater and the tank port is tightly sealed to prevent leaks or loosening.
2) Electrical Safety: Verify that the electrical connection of the electric heater complies with local electrical safety standards and regulations.
3) Regular Inspection: Periodically inspect the operation and condition of the electric heater to ensure safe and efficient performance.

3. Tips for Optimal Performance

3.1 Routine Inspections

1) Conduct regular inspections to detect and address issues early.
2) Look for signs of wear, corrosion, leaks, or other damage.
3) Ensure all connections are tight and secure.

3.2 Proper Insulation

1) Insulate the tank to reduce heat loss and improve energy efficiency.
2) Use high-quality insulation materials that are moisture-resistant and mold-proof.

3.3 Efficient Operation

1) Optimize water usage to prevent wastage and conserve energy.
2) Use timers and thermostats to control heating cycles effectively.
3) Consider installing a recirculation pump to ensure hot water is always available.

3.4 Regular Maintenance

1) Follow a regular maintenance schedule as recommended by the manufacturer/installer.
2) Clean and sanitize the tank periodically to prevent bacterial growth.
3) Replace any worn or damaged components promptly to maintain performance and safety.

By adhering to the guidelines and precautions outlined in this manual, you can ensure the safe and efficient operation of your stainless-steel domestic water tank and buffer tank. Proper installation, regular maintenance, and careful operation will extend the life of your tank and provide reliable service for many years.

If you require further assistance or have any questions, please contact our customer support team. Thank you for choosing our products, and we are committed to ensuring your satisfaction and the performance of our equipment.

3.5 Installation space requirements

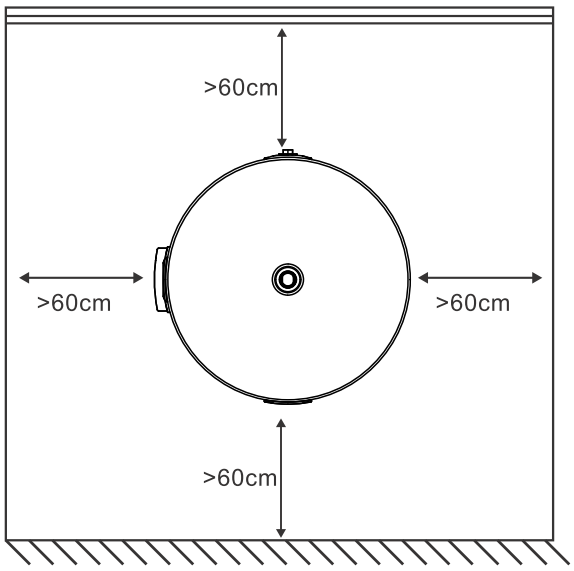
The installation is as follows. During installation, please reserve enough installation space to avoid affecting the performance of the unit. At the same time, it is convenient for later maintenance.

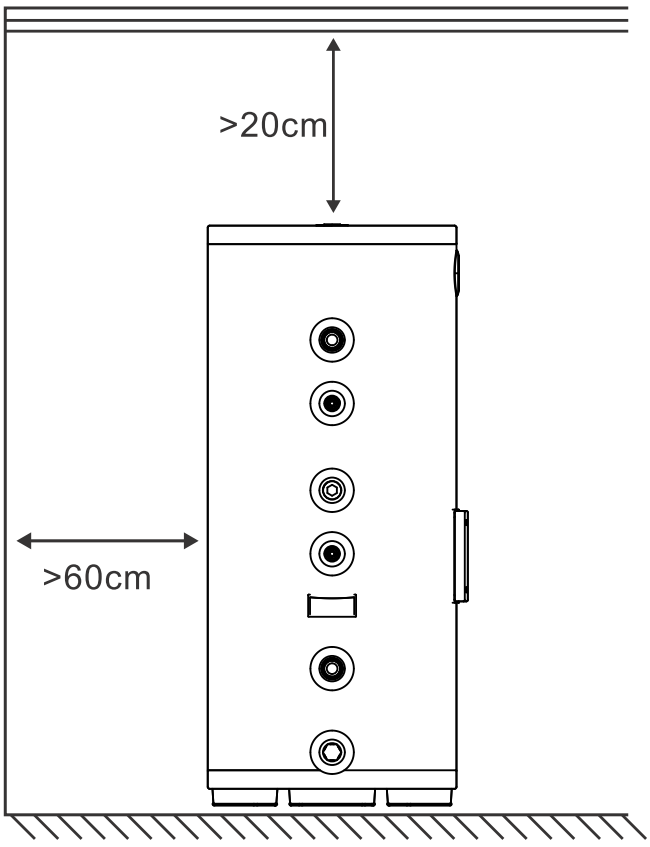
1) Adequate Space: Ensure that there is enough space around the tank for maint

2) Ventilation: The installation area should be well-ventilated to prevent condensation and to maintain optimal operating conditions.

3) Load-Bearing Capacity: The floor or platform where the tank will be installed must have the load-bearing capacity to support the tank's weight when is full.

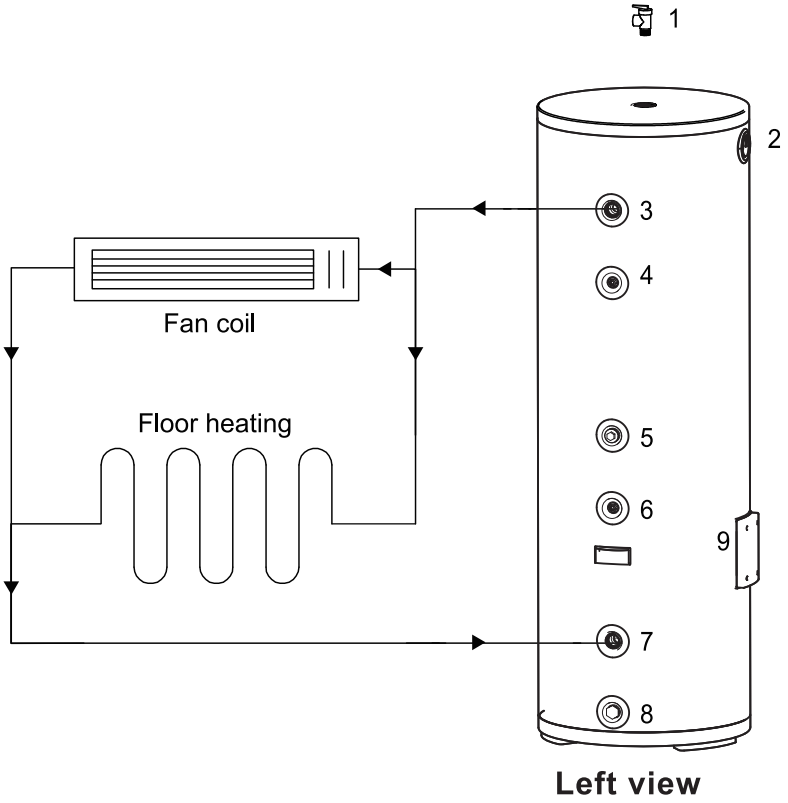
4) The product should be placed in a room with a floor drain. The manufacturer cannot be held liable for failure to comply with this rule.





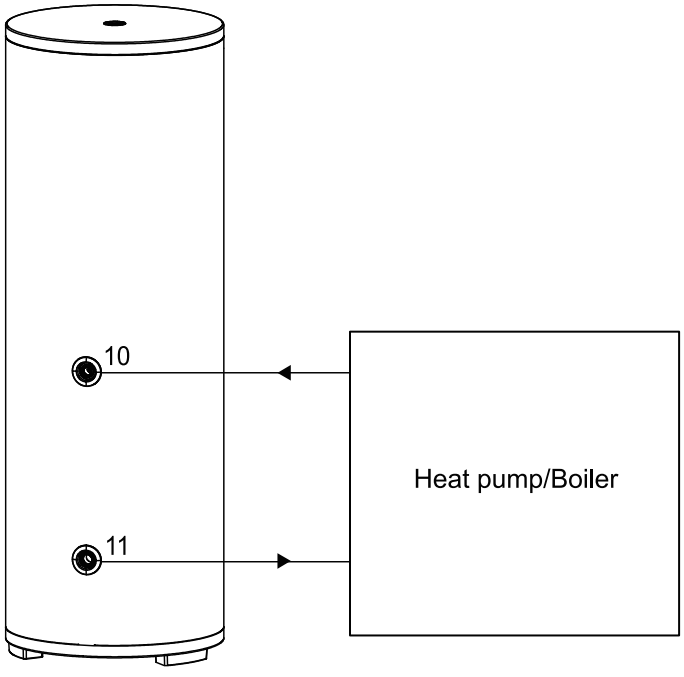
4. Water tank installation diagrams

4.1 Buffer tank installation diagrams



Left view

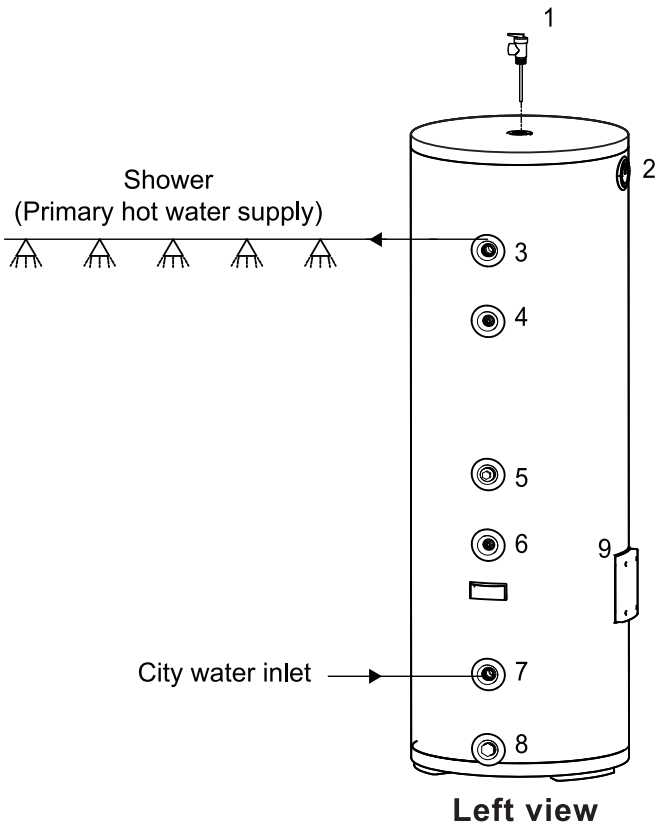
NO.	Name
1	Exhaust valve
2	Pressure gage
3	Water outlet
4	Temperature sensor
5	Magnesium rod
6	Temperature sensor
7	Water inlet
8	Drain Outlet
9	Electrical heater
10	Water inlet
11	Water outlet



Right view

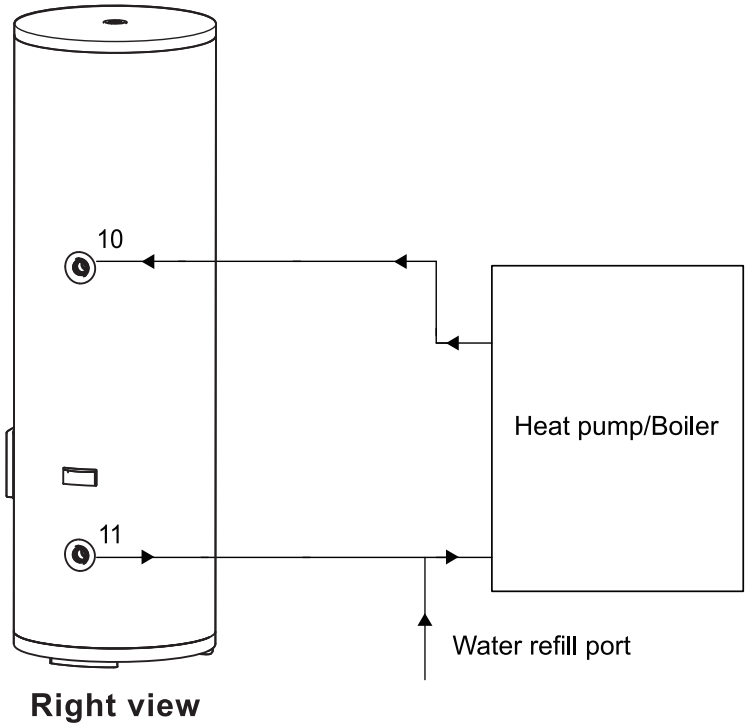
4. Water tank installation diagrams

4.2 DHW tank installations diagrams



Left view

NO.	Name
1	T/P Valve
2	Pressure gage
3	Water outlet
4	Temperature sensor
5	Magnesium rod
6	Temperature sensor
7	City water inlet
8	Drain Outlet
9	Electrical heater
10	Coil water inlet
11	Coil water outlet

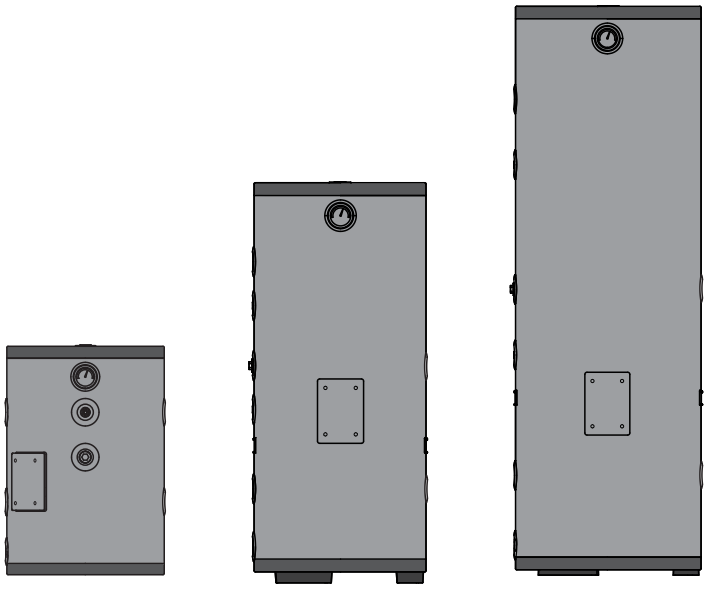


Right view

5. Water Tank Specifications

5.1 Range

- Buffer Tank: 50L, 80L, 100L, 200L, 300L, 400L, 500L.
- Domestic Water Tank: 100L, 200L, 300L, 500L.



5.2 Default Configuration of Water Tank

1) All water tank specifications are equipped with pressure gauges.
   Electric heater (3KW), magnesium rod, T/P valve, or pressure relief valve can be selected.
2) The 50L buffer water tank is single-circuit, single-inlet and single-outlet, equipped with a drainage outlet, an exhaust port, a single temperature drainage port, a magnesium rod port, and an electric heater port. (Double circuits can be customized, with optional hanging feet.)
3) Water tanks of 80L and above are double-circuit, with double inlets and double outlets. They are equipped with a drainage outlet, an exhaust port, double temperature sensing ports, a magnesium rod port, and an electric heater port.
4) The water tank is packed in cartons and foam.

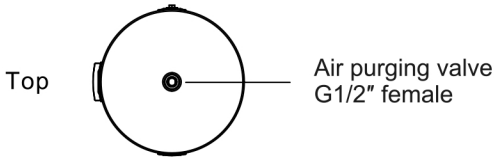
6. Technical Parameters (Buffer tank)

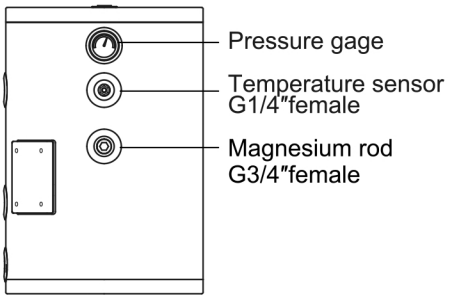
Model		FW-BF50L	FW-BF80L	FW-BF100L	FW-BF200L
Power Requirements					
Voltage			230V		
Rated power input			Optional		
If the heating element can be replaceable.			Yes		
Heating element material			Incoloy		
Parameter					
Net volume		52L	75L	93L	191L
Working pressure			0.66Mpa(6.6bar)		
Max. working water temperature			90°C		
Min. working water temperature			5°C		
Energy efficiency class			B		
Heat losses	W/hr	38.8	42.3	46.3	57.9
Insulation material			PU		
Insulation thickness			50mm		
Water tank material			SUS304		
Connections					
Connector material			SUS304		
Inlet/outlet		G1"Female		G1-1/4"Female	
Air purging valve			G1/2"Female		
Drainage outlet			G3/4"Female		
Immersion heater(optional)			G1"Female		
Magnesium rod(optional)			G3/4"Female		
Temperature sensor			G1/4"Female		
Pressure gage			G1/4"Female		
Compliance					
CE			EU812/2013		
Packaging					
Dimension(mm)		Φ470*682	Φ470*911	Φ470*1091	Φ520*1595
Package Dimensions (HxWxD)(mm)		540*540*776	540*540*976	540*540*1156	590*590*1675
Warranty			5years		

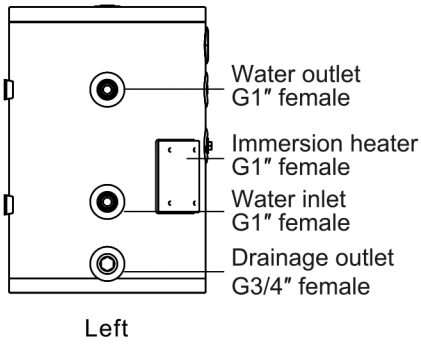
* The specifications and configurations mentioned above are subject to customization based on specific requirements.

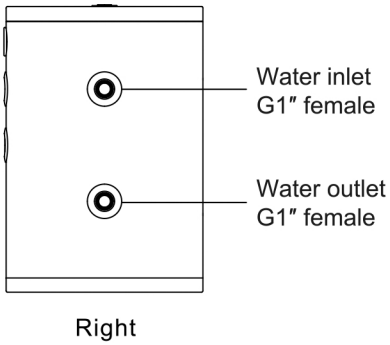
The above data is for reference only. For more specific data, please refer to the product nameplate.

1) 50L (BFT)

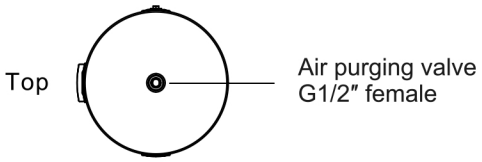


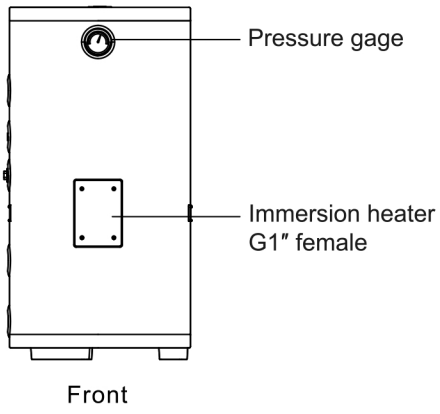


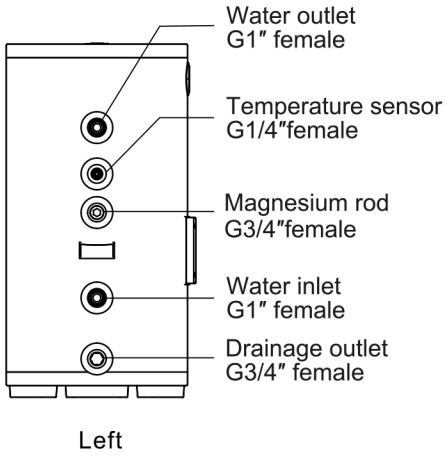


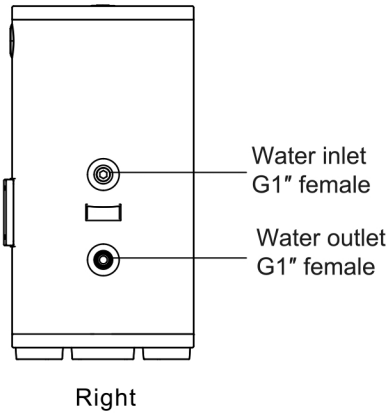


2) 80L (BFT)

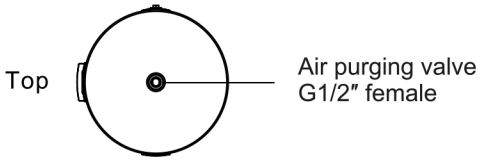


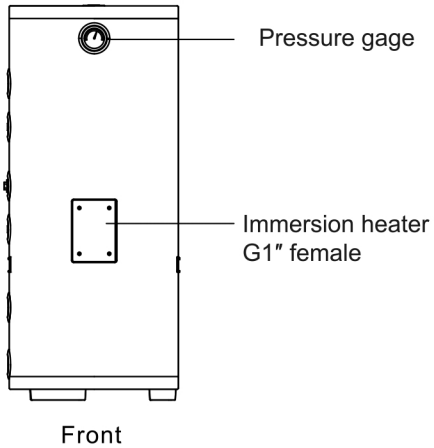


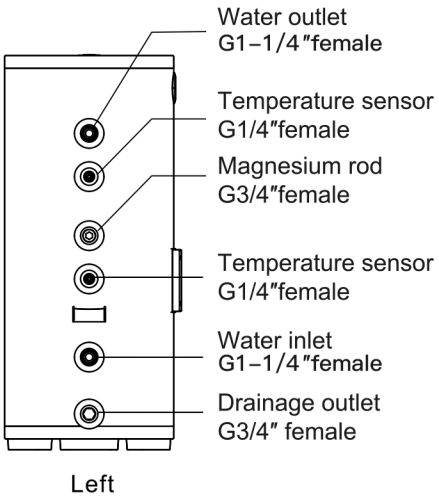


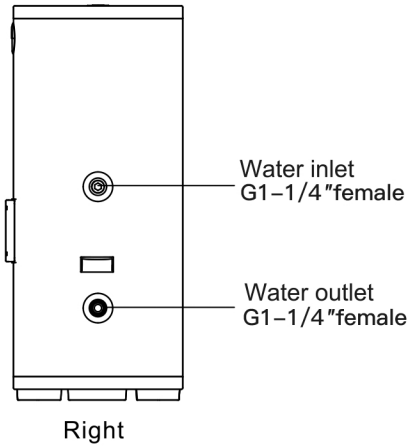


3) 100L / 200L (BFT)





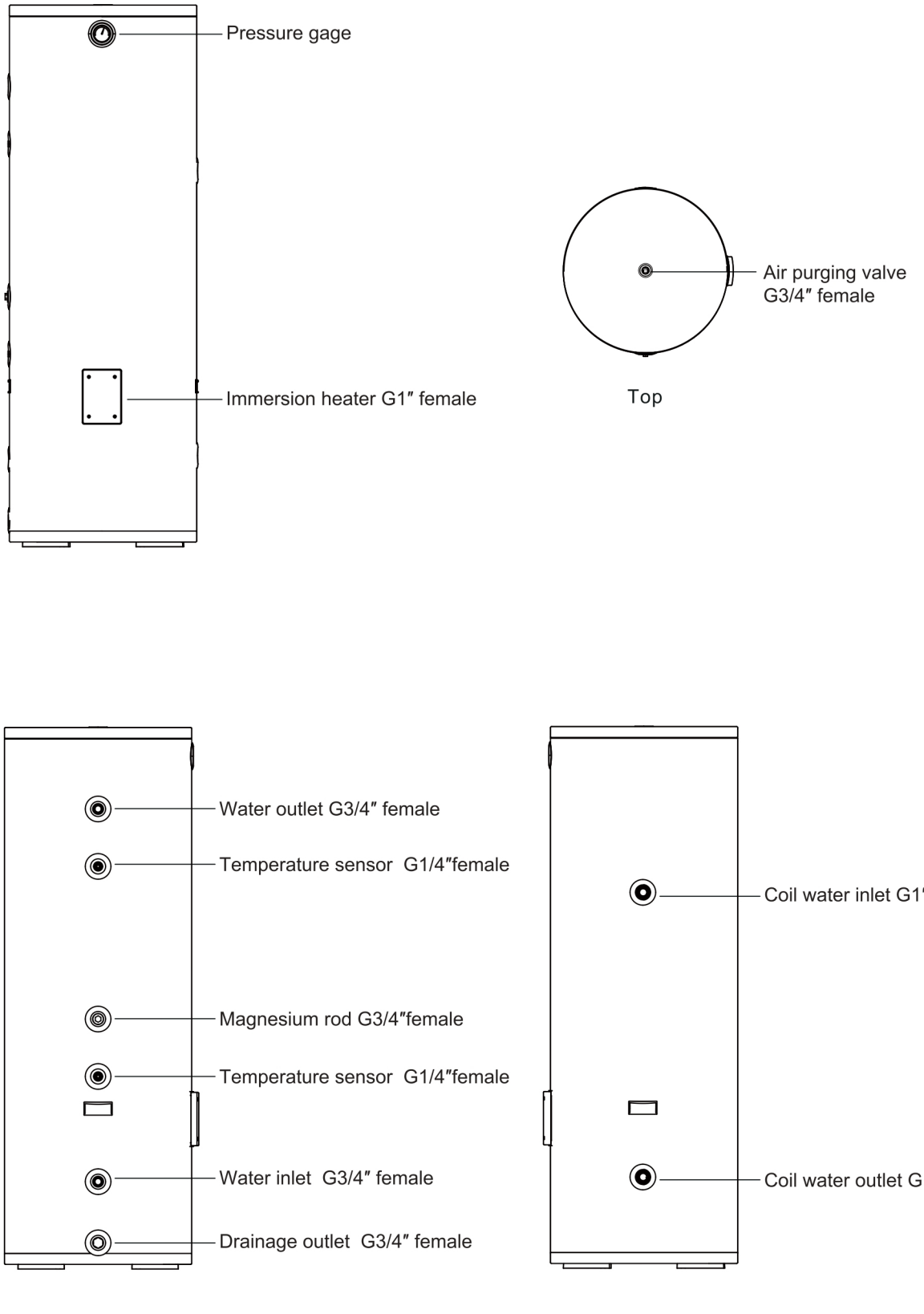




7. Technical Parameters (DHW tank)

Model	FW-BL100L	FW-BL200L	FW-BL300L	FW-BL500L
Power Requirements				
Voltage	230V			
Rated power input	Optional			
If the heating element can be replaceable.	Yes			
Heating element material	Incoloy			
Parameter				
Net volume	93L	187L	275L	458L
Working pressure	0.66Mpa(6.6bar)			
Max. working water temperature	90℃			
Min. working water temperature	5℃			
Energy efficiency class	B	B	B	C
Heat losses/hr W/hr	46.3	55.4	64.6	87.9
Coil quantity	1			
Coil material	SUS304			
#1 Coil heat exchange surface	1.2m²	1.8m²	3.2m²	4.0m²
#2 Coil heat exchange surface	N/A	N/A	N/A	N/A
#1 Coil heat exchange volume	4.6L	7.2L	7.2L	9.5L
#2 Coil heat exchange volume	N/A	N/A	N/A	N/A
Coil max working pressure	2(20)	2(20)	2(20)	2(20)
Coil max working temperature	90℃	90℃	90℃	90℃
Insulation material	PU	PU	PU	PU
Insulation thickness	50mm	50mm	50mm	50mm
Water tank material	SUS304			
Connections				
Connector material	SUS304			
Inlet/outlet	G3/4"Female			
Air purging valve	G3/4"Female			
Drainage outlet	G3/4"Female			
Immersion heater(optional)	G1"Female			
Magnesium rod(optional)	G3/4"Female			
Temperature sensor	G1/4"Female			
Pressure gage	G1/4"Female			
Compliance				
CE	EU812/2013			
Packaging				
Dimension(mm)	Φ470*1141	Φ520*1645	Φ600*1735	Φ700*1975
Package Dimensions (HxWxD)(mm)	540*540*1206	590*590*1725	670*670*1815	770*770*2055
Warranty	5years			

1) 100L / 200L / 300L / 500L (DHW)



8. Warranty

Thank you for purchasing our water tank . To be announced by local agent/distributor
For detailed warranty policy please contact local agent/distributor directly.

NOTE:

NOTE: