



# Heat Pump Buffer Tank

## Operation & Installation Manual

Please keep this Manual properly and read it carefully before operating this product.

**CAIROX**

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# Necessary Information for Users

**Thank you for using CAIROX Energy Storage Buffer Tank (hereinafter referred to as “Water tank”). Please read this Manual carefully in advance and install and operate the water tank in strict compliance with instructions herein.**

**Please keep this Manual properly for reference by you as well as installation and maintenance personnel.**

## Notes

Make sure that the appropriate drain is provided at the installation location without jamming to protect other equipment from damage caused by drainage of this product or its piping.

All electrical circuits and power distribution devices must be selected and installed in accordance with current specifications and relevant safety rules.

The product is equipped with the blow-down valve. Regularly remove the scale in the product. Please empty the product to prevent against the freezing damage before it runs at a temperature below 0°C or stops for a long time in winter.

The outdoor installation is allowed. However, the outdoor air temperature must be above -25°C.

Replace the anode rod timely according to the water quality, which will extend the service life of the product.

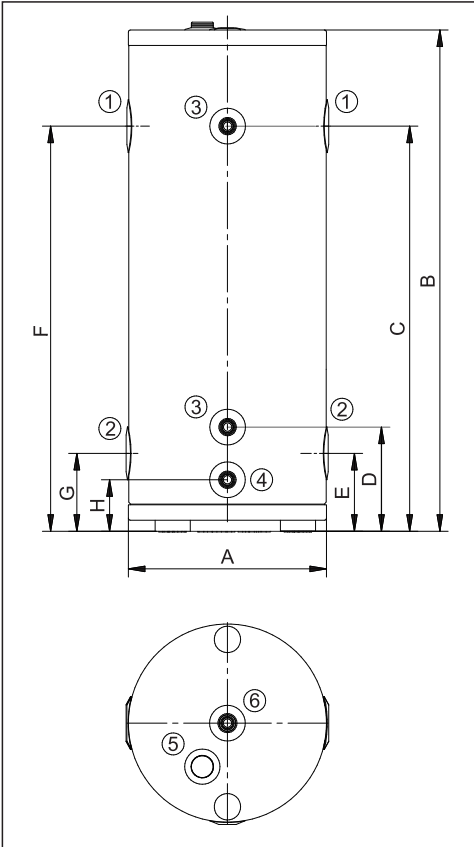
## Application

- Store the thermal energy, stabilize the temperature change in the product, reduce the starting frequency and extend the service life of the product. And the automatic venting is available.
- Provide the easy and complete cleaning and prevent the product from jamming.
- Enable the convenience of integration and commissioning.
- Balance the distribution of hydraulic pressure better.

## Features

- Enamelled super-protection cylinder. Adopt the advanced anti-corrosion technology. The special scilide coating is applied and adhered to the inner cylinder of the product through high-temperature treatment, forming the enamelled cylinder. Such cylinder can withstand a high pressure, resist corrosion and generate less scale. At present, it is one of the best cylinder of water heaters, providing the superior resistance against corrosion and scale. The safe service life reaches 5 years.
- The extended high-efficiency anode rod can resist against corrosion and scale and thus prolong the service life of the product.
- The thick non-CFC polyurethane foam provides the excellent thermal insulation and minimize the heat loss.
- The product housing is made of galvanized plate and painted electrostatically in an oven. Therefore, it is anti-corrosive, UV resistant and long-last colorfast.

## Outline



- ① Circulating inlet
- ② Circulating outlet
- ③ Temperature sensor socket
- ④ Drain port
- ⑤ Magnesium rod
- ⑥ Vent

MODEL	BTE60	BTE100
A (mm)	Φ468	Φ468
B (mm)	787	1152
C (mm)	546	912
D (mm)	213	214
E (mm)	168	169
F (mm)	546	912
G (mm)	168	169
H (mm)	113	114

## Determining the installation location

- The product must be installed at a place with clearance to the surrounding equipment for dismantling it easily for repair or replacement, if required.
- For floor-mounted type, the building must withstand the total weight of the product filled with water. For wall-mounted type, the product must be installed on the main wall with adequate load capacity.
- For floor-mounted type, the product must be placed on a 50mm-height or higher fireproof base near a smooth and heat-resistant drain. Such arrangement aims to prevent the product or its piping from damaging other equipment.
- For wall-mounted type, the product must also be located near a smooth and heat-resistant drain for the same reason.

## Connecting with other facilities

### Connecting with a heat pump or a boiler

- Connect the product with a heat pump or a boiler through the circulating inlet and the circulating outlet. The connected facility must be equipped with the automatic venting and expansion features.
- Pressure components in the connected system must withstand at least 0.3MPa and minimum 99°C, including the pump stations and valves.
- The circulating inlet, the circulating outlet and the vent are covered with an unsealed cap respectively before delivery. If the product is not connected to other facilities, please seal them with appropriate plugs to avoid leakage.

## Water filling and running

If the product is connected to a facility, fill the water in accordance with the specific type and requirements of such facility. The following procedure is only applicable for the product and the hot water pipe.

- Fill the circulating pipe with water.
- Check the leakage at all pipe connections.

## Emptying the tank

Empty the tank only when the maintenance is required or the product stops at an ambient temperature below 0°C.

## Technical Parameters

MODEL	BTE60	BTE100
Type of connection	Side outlet	
Type of protection	Metallic anode rod	
Size of the anode rod	Φ18x500	Φ21.3x600
Rated volume of the water tank (L)	60	100
Max. working pressure (bar)	8	
Circulating pipe	G1-1/4, female screw	
Drain port	NPT3/4, female screw (standard version with drain valve)	
Vent	G3/4, female screw	
Water tank OD (mm)	Φ468	Φ468
Height (mm)	805	1150
Material of the housing	Color paint+ galvanized plate	
Material of the cylinder	Baosteel special steel plate for enameling	
Type of the cylinder	Enamel coating	
Type of thermal insulation	Polyurethane foam	
Thickness of the thermal insulation(mm)	50	
Cylinder ID (mm)	368	368
Pacakage size(mm)	545x565x895	545x565x1260
Gross weight (kg)	30	45



## Cleaning the housing

To keep the fine appearance of the water tank, it is recommended to clean the housing at a regular interval in accordance with the following procedure:

- Dip a cloth into the soap or detergent solution and wipe the housing gently. Do not use gasoline or other corrosive chemicals.
- Wipe dry the housing with another cloth and keep the tank dry.

## Anode rod

The anode rod must be inspected or replaced every two years by professional technicians. If the softened water is used, the maintenance interval must be reduced to one year. When the diameter of anode rod is less than 15mm, it is necessary to replace it. Our warranty will be invalid if the anode rod is not maintained as scheduled.

## Troubleshooting

<b>Symptom</b>	<b>Possible cause</b>	<b>Remedy</b>
Leakage	Corrosive cylinder	Contact our Customer Service
	Loose connection	Tighten nuts. If the connection still leaks, contact our Customer Service.

# Aftersales Service and Warranty

## Aftersales service

**Please purchase the product from an authorized CAIROX dealer.**

If you have any doubt about installation or operation, please call the local Service Center to consult the professional technicians.

## Warranty

The warranty is available under following conditions:

1. The product must be installed by the professional personnel in compliance with all relevant and effective standards and specifications.
2. The product must be supplied by an authorized **CAIROX** dealer.
3. The product must be used at the place where it is purchased. If it is used in different places, it may not work normally because the installation and operation requirements for water systems may vary with places.
4. Only **CAIROX** Aftersales Service has the right to repair and/or modify the product during the warranty period. **CAIROX** will be released from warranty obligations if the product uses any part without our authorization.

Our Aftersales Service will resolve any defect of the product, regardless of material or workmanship, for free during the warranty period. Except for them, **CAIROX** is not liable for defects caused by improper installation or operation, violation of current standards or specifications relating to installation, installation location or ventilation of the product, overload, freezing at a low temperature, normal wear or external force. Our warranty excludes claims beyond our free maintenance scope. To guarantee that the product functions properly for long and remains its sequence state, it is mandatory to use our original spare parts for repair and maintenance.