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Commercial Water Boiler

Installation and Operation Guide

Content

Main Technical Parameter	01
Malfunctions and Reasons	01
Warning Illustrations And Operational Safety Instructions	02
Safe Operation And Preventive Measures	02
Installation	04
Working Principle	04
Product Introduction	04
Operation Instructions	05
Installation Instructions	06
Cleaning And Maintenance	07
Circuit Diagram	07

Main Technical Parameter

Product Name	Commercial Water Boiler				
Product Category	Heat storage type water boiler(step type) series				
Product Model	50L	30L	20L	45L	60L
Inlet Pressure	100-400(kPa)				
Rated Voltage	200V				
Rated Frequency	50Hz				
Rated Power	3000W	2000W	1500W	2000W	3000W
Rated Current	13.6A	9.1A	6.8A	9.1A	13.6A
Volume	30L	10L	8L	20L	35L
Water Production	50L	30L	20L	45L	60L

Implement standards: GB4706.1-2005 GB4706.36.2014

Note: If there is a technical change, without prior notice, please refer to the nameplate on the product.

Malfunctions and Reasons

Code	Malfunction's Reason	Exclude or Resolve
<i>EL</i>	The water tank is water shortage, the inlet is slow or the water pressure is low.	When the power is on, the water in the tank will show E1, which is the normal situation. If E1 is frequently shown in use, please open the water source and check to see if the inlet pressure is sufficient.
<i>HHH</i>	Temperature sensor disconnect, or malfunction	Check to see if the sensor line is disconnected or if the motherboard is faulty.
<i>LLL</i>	Temperature sensor short circuit, or fault.	Check to see if the sensor line is short, or if the motherboard is faulty.
<i>ERI</i>	Inlet water time, inlet valve not open.	The water pressure is low, or high, or the inlet valve has sundries causing the plug can not be opened. Please keep proper water pressure and clean the scale regularly.
<i>ER2</i>	Heating time is too long.	After a long period of heating, the water temperature does not rise, resulting in hearing timeout. Heating pipe does not work, or the water tank dirty too much, causing heating slow, please check the renewal heat pipe and remove scale.
No Display	Line failure or motherboard failure.	Please check if the power can be heated after the boot, check whether the cable screen is loose or disconnected, and the motherboard is faulty.

Warning Illustrations And Operational Safety



Prohibit Tag
A prohibited act that may cause fatal injury or serious injury.



Warning Mark
Indicate the items that may cause personal injury or damage to the item.



Don't Get Burnt
The indicated part may be hot, do not touch it casually.



Beware Of Electric Shock
Electrical equipment and circuitry that may be at risk of electric shock. Like distribution room and switches etc.



Equipotential
A prohibited act that may cause fatal injury or serious injury.

Please Keep This manual easy to get! 

Safe Operation And Preventive Measures

WARNING

-  This instruction does not apply to persons (including children) who have physical, sensory or intellectual deficiencies, or lack of experience or knowledge.
 -  The inlet water temperature and room temperature remain above 5 degrees Celsius and will not freeze. To use in very cold areas, customers and manufacturers to discuss. The internal freezing will cause the boiling water trough rupture, the part breakage. When the product damage caused by freezing, should immediately cut off the power supply and cut off into the water, discharge the excess water in the machine, or communicate with the manufacturers to return to plant repair or please have the relevant professional qualifications of the maintenance.
 -  Please regularly clean the dirt of the heating pipe, otherwise dirt will quickly shorten the service life of the machine, leading to the failure of the tube.
 -  This apparatus shall not use jet flow cleaning to avoid leakage and other accidents.
 -  If the power cord is damaged, in order to avoid danger, it must be replaced by a manufacturer's maintenance department or a similar department professional. The use of YZW type, High temperature resistance and oil-resistant corrosion sets of flexible cords, is strictly prohibited by the use of wire and cable does not meet the requirements.
 -  A hose assembly that is connected to a water source can be removed and a new hose attached to the appliance is used. Old hose assemblies cannot be reused.
- After a long time, put the water in the sink, keep the machine inside without water. When used again, must wash the water trough and check the electrical components.

-  The installation of boiling water machine must have professional electrical installation personnel. Please use the voltage distribution identified on the nameplate and meet the following two requirements:
1.Safety Ground: The boiling machine shall not share a line with other machines and shall ensure that the electrical connection is correct and reliable. The ground wire of the boiling water machine must be connected with the grounding conductor in line with the national standard, do not refit or add long power cord.
2.Leakage protection: Each water machine must have a corresponding leakage protector (16A with plug, 32A leakage switch without plug) for the power configuration of the machine, the electrical box away from the water tank position is less than 1 meters.

-  The water outlet of the boiling machine should be connected well with the silicone tube to avoid overflow.2

-  Check whether the sewage screw leakage water situation, the new machine and after the maintenance of the reuse after the use of water, please check whether there are condition of leakage, if there is leakage of the situation please immediately cut off the power, strengthening the sewage screw. 3 Please do not use chemical bleaching agents, corrosive cleaners and hard cutlery, scraping the shell of the boiling machine.4

-  No flooding, please do not let the product's fuselage and graphic panels touch the water, so as not to damage the machine.5

-  Please regularly clean the water level sensor and temperature sensor of the water machine, otherwise it will affect the operation of the machine.6

-  Water boiler should be used indoors, do not install used in outdoor and wet environments.7

-  New machine installation and maintenance, reboot must be done first through water and then power.

-  Boiling water should be placed in the indoor drying ventilation, do not install the boiling water machine in the humid environment, otherwise humid air and steam into the electrical box, easy to condensation on the surface of the insulating medium, will reduce its insulation performance, resulting in leakage of the accident. Do not place high pressure, flammable, explosive items near the boiling water, and avoid the interference of magnetic (electric) field. Installation and placement shall conform to the requirements of this note.

-  Please do not let the child use the water boiler alone, so as not to burn.

-  Avoid mounting with direct solar range. Because in the case of direct sunlight, the overall temperature of the machine will rise linearly, causing the internal electronic control system to not work properly resulting in damage.

-  Please use water which conforms to water quality standard, do not put into tea etc. Do not use when water is not available. The water in the sink becomes muddy when it is used again, and the water in the sink should be replaced in time.

-  Water connection: Water selection to the best pure water, tap water recommended installation of Ro-Class pure water filter. The water inlet used in this machine is a standard internal tooth interface, please check whether the waterproof rubber ring is missing in the joint when installing. Attach the water hose to the inlet and reinforce it to prevent leakage. After connecting the water source, open the water to check the interface for leakage.

-  Power connection: The power outlet must choose 16A Socket, the outlet needs to have the good grounding system. If necessary, please install leakage protection Switch to ensure safe use.

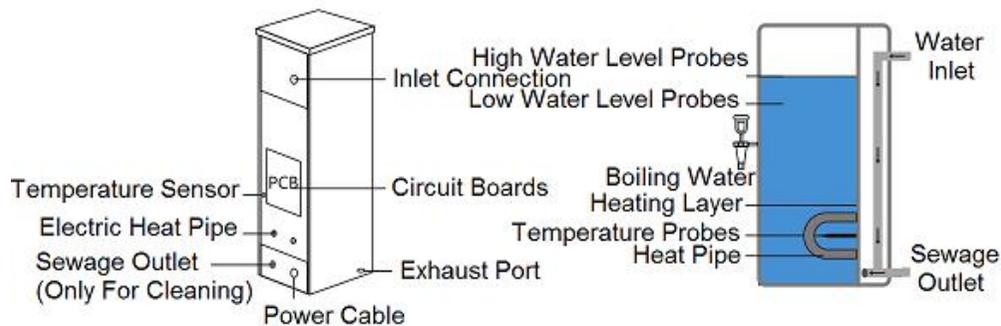
Security Considerations

- 1.This product is designed for indoor, installation location can not be directly irradiated by the sun, away from flammable, explosive materials. The proposal chooses to close to the water source, the power supply, and has the good drainage and the easy maintenance maintenance place, indoor temperature approximately 5 degrees Celsius ~ 40 degrees Celsius.
- 2.This product belongs to the heating products, the product should be surrounded with wall and near the minimum 30cm distance.
- 3.Products placed on a solid platform and maintain ventilation and drying, the product must be stable after installation.
- 4.Do not connect other electrical appliances in the same socket.
- 5.If there is a power cord damage, must have professional replacement.
- 6.The power line of the boiling water machine must be equipped with the breaker switch.

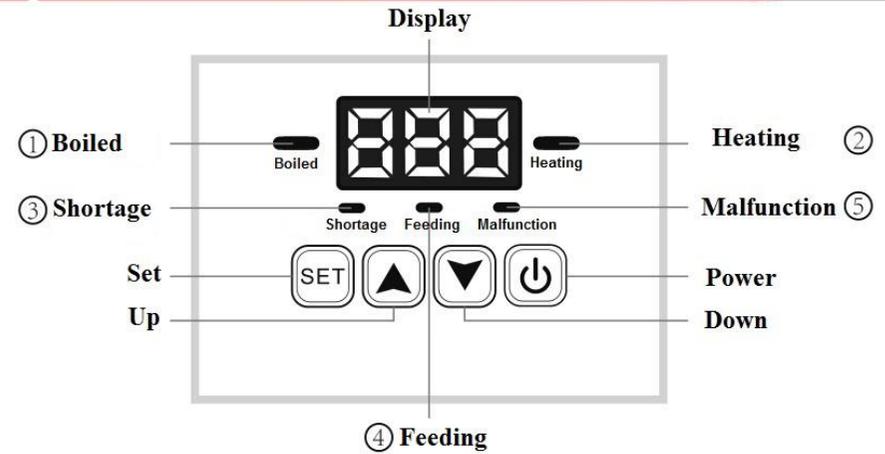
Working Principle

Step-type boiling water machine is starting from the bottom layer by step into the heating, gradually heating until the water is burned open energy-saving equipment. Step-type boiling machine can improve the separation of hot and cold water and ensure a boiling health of the boiling water machine, to ease the "half of the half water boiling" the degree of production. The power control ensures that only one boiling is avoided, thus avoiding repeated heating altogether. When it into a part of the water heating, and then from the bottom into another part of the water heating, until the water tank full, step-type boiling water machine can be continuously out of boiling water, to avoid the traditional boiling machine after the whole box to boil the waiting time for water. The traditional boiling machine is by steam expansion from the heating box to the incubator water, the equivalent of countless times boiling. but stepping type of boiling water machine depends on the electrode temperature measurement, accurate temperature control, the effluent temperature can be set, electronic temperature control can prevent to boil water when this machine without water in it.

Production Introduction



Operation Instructions



- ① Boiled
 - ② Heating
 - ③ Shortage
 - ④ Feeding
 - ⑤ Malfunction
 - ⑥ Set
 - ⑦ Up
 - ⑧ Down
 - ⑨ Power
- Power--Long press 2 seconds off, short press the power on.
 UP--In the System setup state, adjust "up" to increase the parameters.
 Down--In the System setup state, adjust "down" to increase the parameters.
 SET--Press 3 seconds in the shutdown state to display the code. Press the UP and DOWN key to adjust the parameters, and then press the "" key to switch the code or exit and save the data.

Boiled--When the lamp is on, it indicates that the water has reached the set heating temperature and can drink water.

Heating--When the light is on, it means the machine is heating up.

Shortage--When the lamp is on, it means that the machine is short of water, the water is not open, or the pressure is low, or the amount of the inflow is low.

Feeding--When the light is on, that the machine is the input of water

Malfunction--When the light is on, it indicates that there is a problem with the machine, please troubleshoot it according to the fault code shown (see Appendix for code)

Temperature Parameter

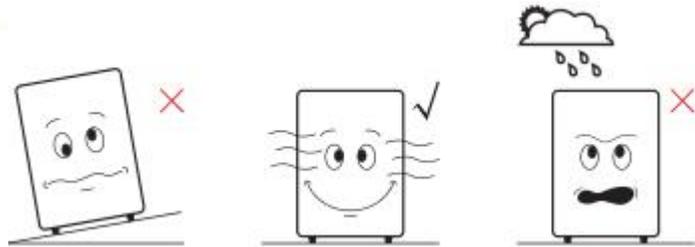
Code	Function		
HP	Heating temperature	96°C	84°C
HY	Return differential temperature	3°C	3°C
DP	Temperature of drinking lamp	93°C	81°C
D1	Single time of input water at high temperature(10=0.5s)	10	10
D2	The full water time of the machine below the high water level(1=10s)	10	10

Timing Parameter

UP	The sensitivity of the water
HoN	Timing, turn on 1 minute
noN	Timing, turn on 1 minute
HoF	Timing, turn off 1 minute
noF	Timing, turn off 1 minute
HE	System time is 1 hour
NE	System time is 1 minute
SE	System time is 1 second

Installation Introduction

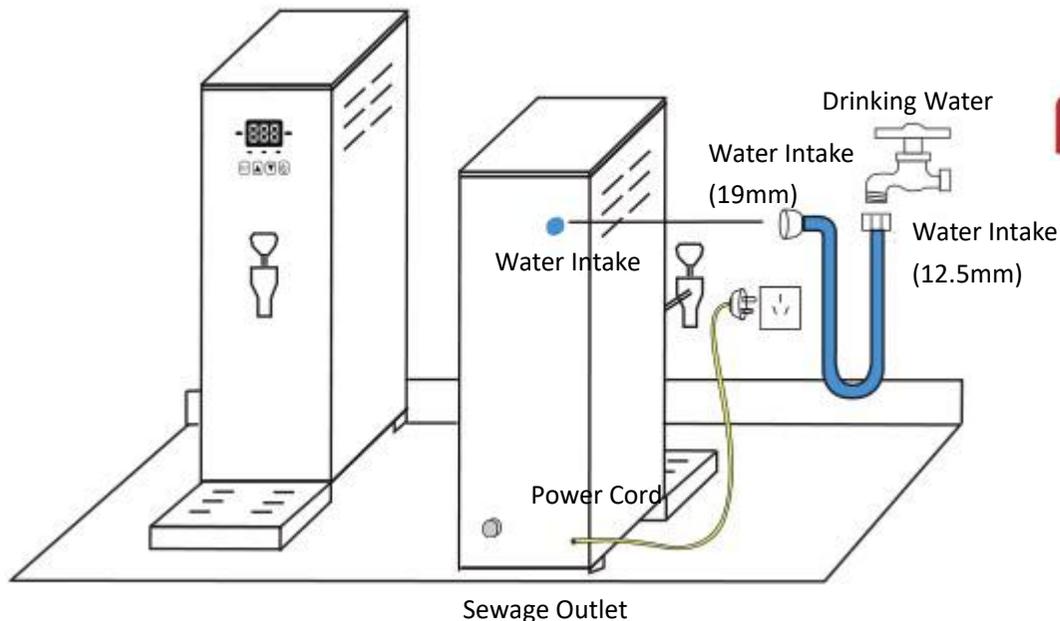
1. Put the boiling water machine on a flat table, overflow box, please place the boiling water machine in front of the bottom. The position of the boiling water machine should be kept away from the children's touch, so as to avoid scalding.
2. One end of a pipe with a diameter of 19mm, screwed in the water inlet of the machine behind.
3. One end of a pipe with a diameter of 12.5mm, Screw at the corner valve where the drinking water is supplied, or on a faucet with a threaded mouth.
4. Open the water switch.
5. Plug the power supply into the 220V~/16A special outlet.



Placement should be smooth

Good ventilation

Avoid sun and rain



Cleaning And Maintenance

1. Please cut off the power and water before cleaning and maintenance.
2. The machine should be managed by someone in the process of use, and be inspected regularly. When not in use during holidays or a longer period of time, the power and water should be turned off and the water in the tank should be removed, Prevent internal components from aging, ensure safe use and prolong life.
3. Attention to clean the sensor to prevent scale impact machine automatic operation mechanism. The market has a dedicated descaling agent pin, users see packaging guidelines and the actual situation. It is recommended to clean up every quarter.
4. Machine with sewage devices, should be based on the actual situation of regular sewage cleaning up dirt, operation should be cut off all the power supply, to the water tank inside the temperature will start to discharge. No tapping or cleaning of the inner bile with sharp metal tools is prohibited.
5. When the overflow pipe appears cold water outflow or not heating work, should immediately stop using, overhaul whether the inlet valve is contaminated with dirt or electric heating pipe damage, and timely cleaning or replacement.
6. When cleaning the outer box, remember to cut off the power supply, wipe with a rag, do not use corrosive liquid to wipe, forbid water to spray or immersed in water to clean. After cleaning, the power plug must be wiped dry.
7. If you need to take apart the water pipe cleaning, the water pipe and outlet should be dried before reuse.
8. Due to the impact of water quality, in the heating process will naturally produce calcium carbonate oxide accumulation must be processed on a regular basis, depending on the local environment, every 1-2 months must be cleaned once. Methods: Water and Vinegar (the best high-purity white vinegar), according to the proportion of 2:1 put into the intake of heat, boil after the placing of a evening, the next day the solution is poured out, and then used to boil open clean water.

Circuit Diagram

