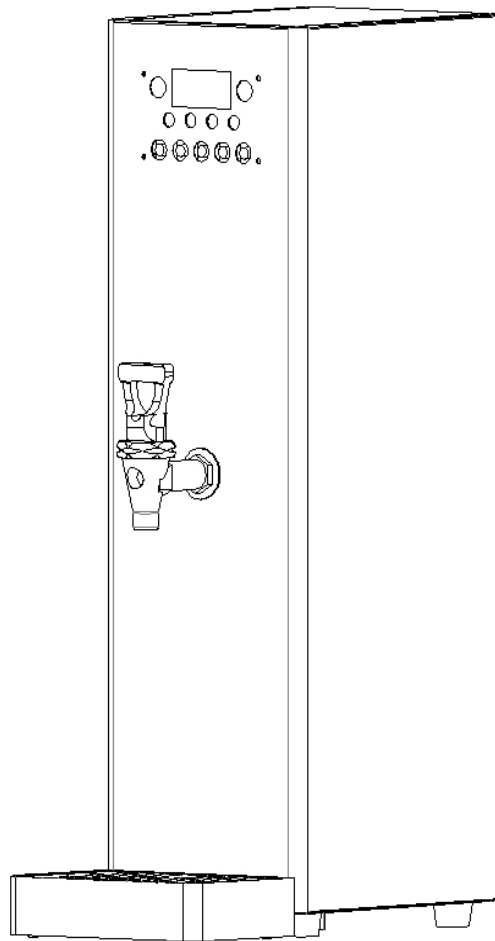


Blizzard Auto-Fill Water Boiler

User Manuals

Thanks for your using of our company product, in order to ensure the product performance give full play to the role, please have a read of this manual to avoid unnecessary loss and damage, and get a further study of our product characteristic installation and operation. Also please keep the manual for further reference.



Using conditions:

Applicable water source: applicable for municipal water or other potable water,

PH between 6.5~8.5, from a **filtered Soft water supply**

Enter water pressure: 0.2~0.4Mpa (Rate of flow \geq 4L/min)

Enter water temperature: 0~40°C

Input voltage: ~220-240V \pm 10%

Humidity: 10~60% (non condensing)

Ambient temperature: 5~40°C

Applicable Models:

AF10

Index

- I. Safety instruction**
- II. Structure**
- III. Indicator display board description**
- IV. Working principle**
- V. Installation instruction**
- VI. Operation instruction**
- VII. Periodic inspection**
- VIII. Maintenance**
- IX. Specification**
- X. Error code and trouble shooting**
- XI. Electrical schematic diagram**

I .Safety instruction



Warning:

1. Make sure the power supply coincide with the power transmission and distribution. And the parameters of the power point should meet the requirements of power line.
2. The enter water pressure should be between 0.2-0.4Mpa (Rate of flow \geq 4L/min). If the pressure is below the range, the water maybe not inflow normally; If the pressure is above the range, it may damage the water inlet value.
3. Never alter the machine in any way, only the manufacturer specified spare parts can be used for repairs
4. Keep the machine away from gas supply or any other flammable and explosive objects.
5. Make sure the machine surface isn't contact with any flammable and explosive objects and used in a fire safety environment. Also the water boiler should have at least 50cm distance from any other machine.
6. Don't do any dismounting which isn't mention in manuals, and confirm whether the ground wire has been connected fixed.
7. Don't touch the water faucets with your hands and be careful not to be scalded.
8. The water boiler should be used indoor. Don't set it up outdoor or used in humid environment.
9. Don't use damaged power line for connecting. Before using the water boiler, please first replace the damaged spare parts to avoid leakage fault.
10. Before repairmen or maintenance, please first cut off the power and water.
11. Share ground wire with other machine is forbidden, so as to avoid being influenced by other machines' leakage fault.
12. Please confirm the silicone tube has connected to the air outlet fixed and unimpeded, if it is blocked or curved, the steam would not be exhausted and the chamber pressure would be increased.
13. If the enter water pressure is higher than limit, or the water scale is too much, it may give rise to overflow problem, Install filter and pressure regulator as required.
14. The water boiler must be installed and maintained by qualified electrician.
15. The water quality should reach the requirement as manual mention. If it isn't applicable for drinking, please set up a water filter.

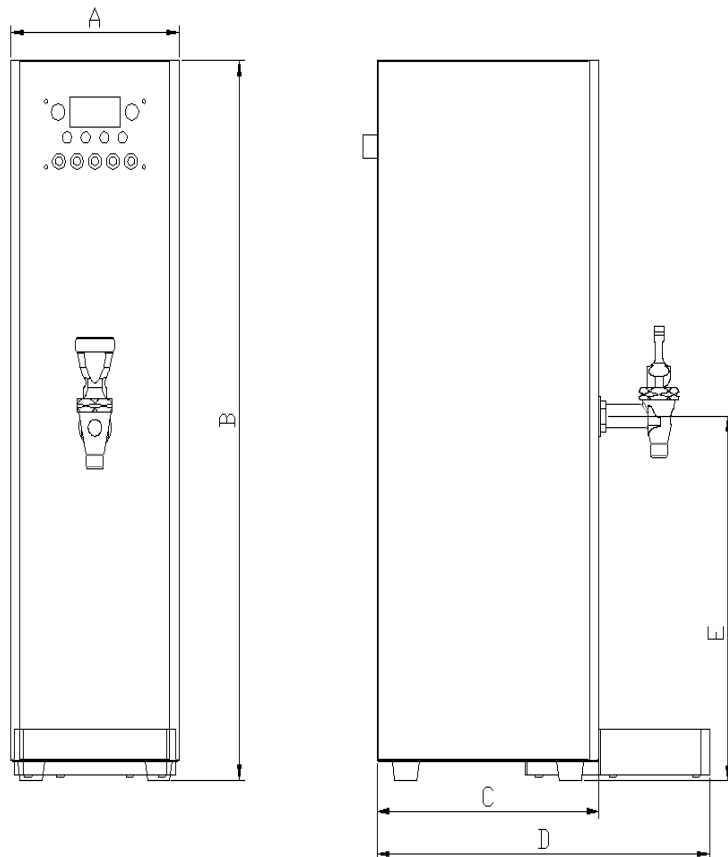
Attention:

1. The silicone tube should be connected to the water outlet fixed to avoid overflow problem.
2. Please don't allow children to use the water boiler alone, in case they get scald.
3. Please use applicable municipal water through a water filter/softener.
4. Please avoid direct solar radiation which would highly increase machine temperature and influence the electronic control circuit, or even damage it. So please keep the humidity between 10~60%, and the ambient temperature should be between 5~40°C.
5. The enter water temperature should be above 5°C, not freezing. If it is need to use

in a really cold area, to discuss with manufacturer is necessary. If the chamber get frozen, it would be cracked and the parts would be damaged.

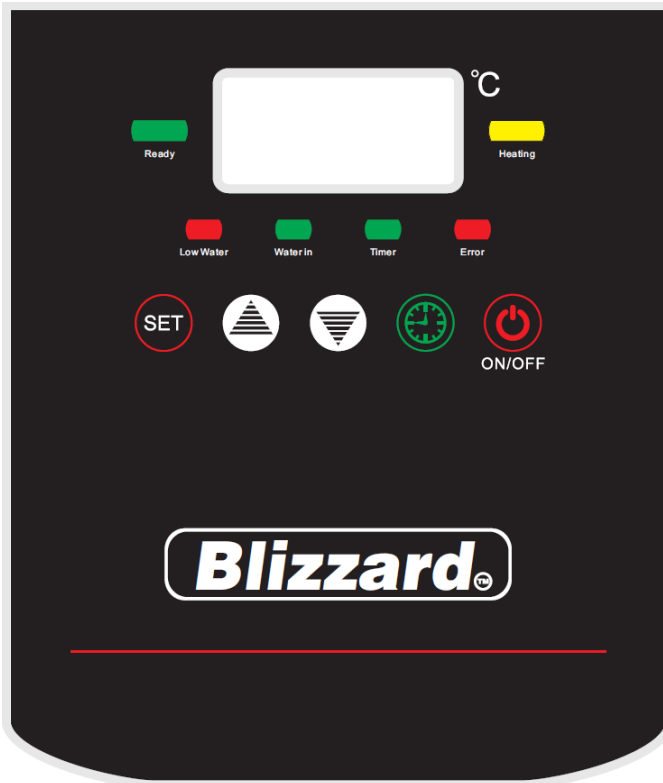
6. Please don't use corrosive cleanser to wipe the water boiler, or use hard objects to strike or scratch it. Use only mild detergent, dry and apply stainless steel cleaner.
7. When not using for a long time, before restarting it, please first empty the chamber and clean it, also have a check of the parts.
8. When water supply is cut off, don't use the water boiler, when water supply resume, please first empty and clean the chamber before using.
9. Do not soak the external surfaces of the water boiler, wipe down the exterior with a damp cloth with mild detergent, wipe clean and dry.
10. Lime-scale can affect and damage internal components, it is imperative the water supply is from a soft water supply or via a suitable water filter/softener. Failure of the unit due to problems associated with water quality / pressure / installation / incorrect use are not covered by the manufacturer's warranty.



II . Structure



Model	A (MM)	B (MM)	C (MM)	D (MM)	E (MM)
AF10	190	630	240	360	300



III. Indicator display board description

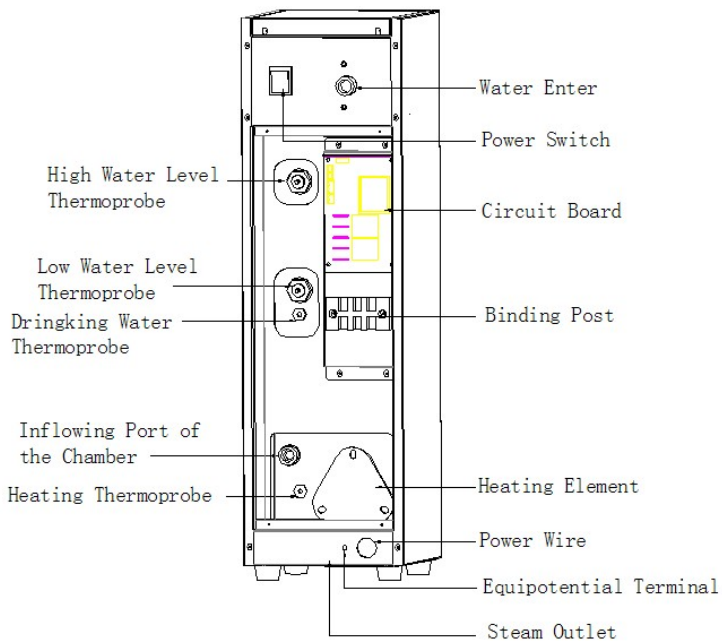
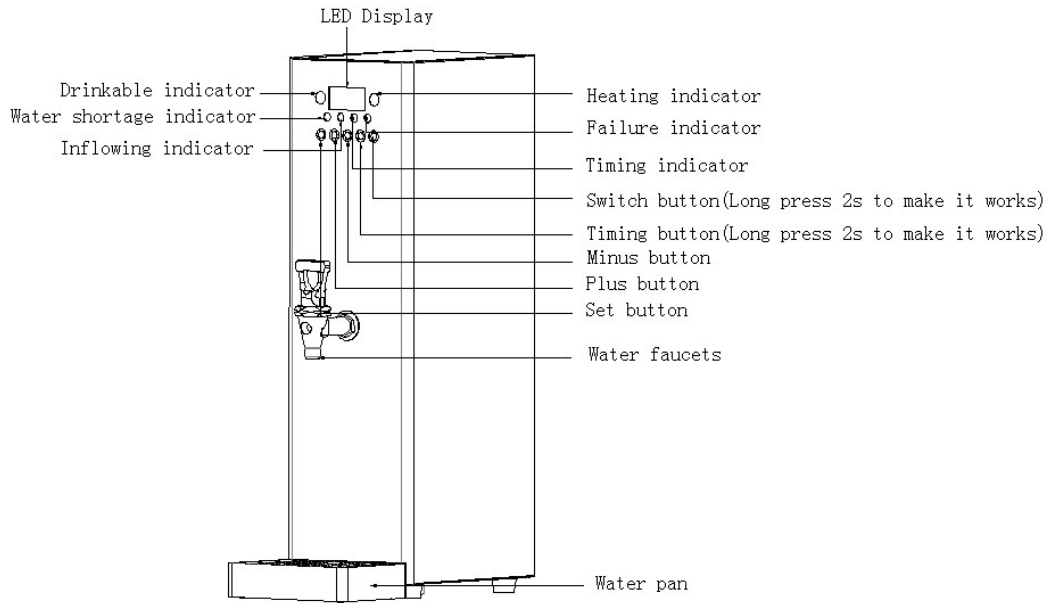


1. Power switch (button)--to electrify the circuit board and display the “ELL” and temperature.
2. Timing switch (button)--for using the timing function (programmable when in the standby/off mode).
3. Set (button)--for setting the parameters.
4.  and  (button)—to plus or minus the parameters.
5. Yellow light on—it means the machine is working and the heating elements start heating or reheating. When the light off, the heating elements stop.
6. Red light on—it means the chamber is lack of water and the machine automatically starts filling water in. when the light off, the water stop filling.
7. Green light on—it means the magnetic value start to fill in the chamber. When the light off, the magnetic value stop working, also the water stop filling in.

8. Timing function--green light on, now you can set up your needed time. When the green light off, the setting operation finish, and the memory of the setting remains.
9. Error—when the red light on, it means there is something failure in the machine, and the letter “Er” would be displayed on the display board. Please stop using the machine and check what the failure is according to the error code.
10. Drinkable—when the green light on, it means the water have reached the preset temperature and available to drink, when the green light off, the water is undrinkable.
11. The button of power supply and timer should be pressed for two seconds to make it work.

Attention:

1. When the water boiler isn’t heating, the display board would show the current temperature; “ELL” would be displayed when it is the first time filling water in or it is lack of water.
2. Inflowing failure (the water fill in more than 45 minutes) display 
3. Heating failure (heating over 35min but still less than 60°C) display 



IV. Working principle

The technique of stepwise heating is used in this water boiler. The electrodes of each water level and the accurate thermistor send their digital signal to the microcomputer, then the computer control the heating element and the magnetic valve by calculating the signals, also coordinate the water temperature and the water inflow, to make it only heat up one layer of water, boil it, then heat up another layer of water, form in a stepwise heating cycle. Take advantage of this technique, the repeated heating problem is eradicated, the productivity is highly increased but shorten the time to boil the water.

--The LED display the current temperature, also the working condition of the machine would be displayed on it.

--The PCB control the water temperature and water inflow, also it can keep the water warm for a long time.

--Under fully automatic working, all the outlet water must have been boiled only once, healthy to drink and safe to use.

--Safety alarm would be on if it has the danger of dry burning or if the temperature is too high.

--Under PCB control, the failure condition would be displayed automatically.

--The top cap is of simple design, it is convenient for the user to clean the chamber regularly.

--The back of the machine is easy to open, it need only 15 minutes to replace all the parts, easy to maintain.

--The structure is all in stainless steel, make of beautiful and easy to clean.

V. Installation instruction

1. The machine must be installed by qualified electrician, please have a complete inspection of the machine and have a read of this manual, and check whether the guarantee card and certification is within, keep them well in case of the maintenance during the warranty.
2. The water boiler should be place on a solid and flat surface, and ensure the environment around is ventilated, the temperature is less than 40 °C and the humidity is less than 85%. To check whether the drain pipe is block or not, and keep the machine away from inflammable and corrosive gas and liquid.
3. Please check whether the water source conform to the national drinking water requirements. If the hardness of the local water is more than 300mg/L or the incrustation is serious after heating, please install a water filter, or it will influence the PCB control. If the tap water have a strong smell of chlorine, please install an activated carbon water filter, or the chlorine would be heated and gasified, then attach to the top cover and become rusty.
4. When installing new water pipe and water valve, please choose the product which is make of heat-resisting material and is according to the health standard of drinking water. Also please have a check of the pipe to see if it has strange smell which may influence the quality of the boiled water. The water pressure should be within 0.2-0.4Mpa (Rate of flow \geq 4L/min), if it is more than 0.4Mpa, it need to add a reducing

value (please first clean up all the sundries in the new pipe before connecting to the machine, in case that it would block the inflowing and influence the magnetic value control.

5. The water boiler must have its dedicated power supply. Also the fuse and leakage protector must be installed according to the product specification (the action current of the leakage protector is 30mA).
6. This product belongs to Type “I” appliance, the yellow and green double color line in the power line is the “ground lead”, and it should be connected sturdy to the grounding device which is live up to electricity regulations of the state.

Warning: never connect the ground lead to water pipe and gas pipe.

VI Operation instruction

1. First using the machine, please check if it is conform to the installation requirements. Then open the water switch, and check if all the joint of the machine are fixed and have no leakage.
2. Switch on the main power, and turn on the power switch behind the machine, then press the “Switch” button on the display board, “ELL” display on the LED and the dry burning protection automatically launch, the magnetic value start to inflow the water. (to turn off the display board need to long press the “Switch” button for 5 seconds, by now the machine stop working but still on)
3. The yellow (heating) indicator light on, means the machine start heating: light off, the heating stops. For the first time using, we suggest to open the faucets to have one or two cycle pouring water to see if the inlet and outlet of water is working normally.
4. When the yellow (heating) indicator light off, the green (drinkable) indicator light on, it means that it have completed one rapid heating cycle. Before the chamber is full, the yellow and green indicators would mutually light on, and the machine would automatically process the “inflowing-heating” cycle. During the cycle, if the green indicator light on and the LED display 100°C, it means the water have reached the needed temperature and drinkable.
5. The steam would be gathered、 cool down and outflow through the “Steam outlet” which is set at the bottom of the machine. Please place in the wet pan which is combined with the water boiler before using.
6. Machine data adjustment:
 - 1) Long press the “Switch” button, to make the machine remain OFF, by now you can set the data.
 - 2) Machine remain OFF, long press the “Set” button for 3 seconds to display the data, then use the “Plus” and “Minus” button to adjust the data, then press “Set” button to switch or exit, and the data is automatically saved.

3) Display code representative function:

HP	Heating element(40℃~99℃)-95℃ by default
dP	Drinking Temperature(40℃~98℃)-93℃ by default
HY	Return difference temperature(1℃~30℃)-2℃ by default
HoH	Timer On-Hour(0~23)
HoM	Timer On-Minute(0~59)
HoF	Timer Off-Hour(0~23)
HoM	Timer Off-Minute(0~59)
Ht	Current Time-Hour
it	Current Time-Minute
St	Current Time-Second

Remark:

- The heating temperature、drinking temperature and return difference temperature have been set up well in factory, user cannot change the default temperature.
- The set time of the “Timer On” means the start working time of the machine.
- The set time of the “Timer Off” means the stop working time of the machine.
- Please set up the “Current Time” according to the local standard time.

7. The presets in factory:

- 1) Temperature: the green (drinkable) indicator light on when it reach 93℃ (heat up to 100℃ right along), the outlet water temperature is 93~100℃. The outlet water temperature is the same as the displayed temperature.
- 2) Elevation: for adapting different regional pressure, user can contact the local sales agent for help. By using the switch “Plateau area heating mode” in the circuit board in the machine, user need not to have further adjustment generally.

8. Timer:

- 1) Machine remains OFF, first set up the “Current Time”, the display code can contrast with the sheet above, and please set the time according to the local standard time. Setting procedure: 1.press the “Set” button to switch “Hour”/”Minute”/”Second” code; 2.press “Plus” or “Minus” button to set your needed time, then exit to save the data; 3.repeat the procedure to set up other two data.
- 2) Setting “Timer On”, you can contrast with the sheet above when operating. Procedure: 1.press “Set” button to switch between “Hour”/”Minute”; 2.press “Plus”

or “Minus” button to set your needed time, then exit to save the data; repeat the procedure to set up another data.

- 3) Setting “Timer Off”, you can contrast with the sheet above when operating. Procedure: 1.press “Set” button to switch between “Hour”/”Minute”; 2.press “Plus” or “Minus” button to set your needed time, then exit to save the data; repeat the procedure to set up another data.
- 4) After finishing these three procedure before, press “Set” button to switch to OFF status, long press the “Switch” button for 2 seconds, the machine start working, then press the “Timing” button, the timing indicator light on, means the timing function is effective.

VII. Periodic inspection

Inspection item	Content	Standard
Connection	To check whether the plug or power line are hot or loosen.	Once a day
Drain outlet	To check whether the outlet is block	Once a month
Chamber cleaning	At least once a season, both chamber and surface should be cleaned, can use a nylon bundle to clean off the scale on the thermo probe and heating element and loosen the nut of the drain outlet to drain out the waste water.	Once a season

VIII Maintenance

1. The machine should have regular checking, if not using during holiday and a long time, please turn off the power and water, and drain out all the water in the chamber to avoid the burn-in of the parts and extend their service life.
2. Pay attention on cleaning the thermo probes and heating element, to avoid scaling influence the working system. Also the cleanser which sales in market can be used for cleaning, please combine with the actual circumstances to choose it. We suggest to clean the machine once a season. (Recommend to be done by a skilled technician).
3. Open the top cover of the chamber, after cleaning or maintenance, it need to check whether the seal ring is damaged and fixed, then fasten it again, replace the top cover and try one or two heating cycle to ensure there is no steam leakage, or it may influence the using safety and damage the machine. (Recommend to be done by a skilled technician).
4. There is a drain outlet at the back on the machine, please drain out the water regularly according to actual circumstances. All the power and water should be cut off when operating, and please wait for a minute to cool down the water before drain then out. Don't knocking the machine or using sharp metal tools to clean

chamber.

5. When the cool water flowing out through the overflow tube or the machine doesn't heating, please immediately stop using it and check whether the magnetic value is block or the heating element is damaged, then clean it or replace it.
6. The waterproofing grade of this machine is "IPXO", when cleaning its case, please first cut off the power, then wipe it with cloth. Corrosive cleanser can't be used, and don't flush it directly or soak it.
7. If the power wire is damaged and need to replace, please first cut off the main power, and replace with YZW Type、 heat-resistant and anti-corrosion power wire, any other power wire are forbidden.

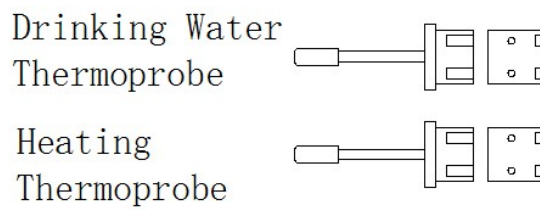
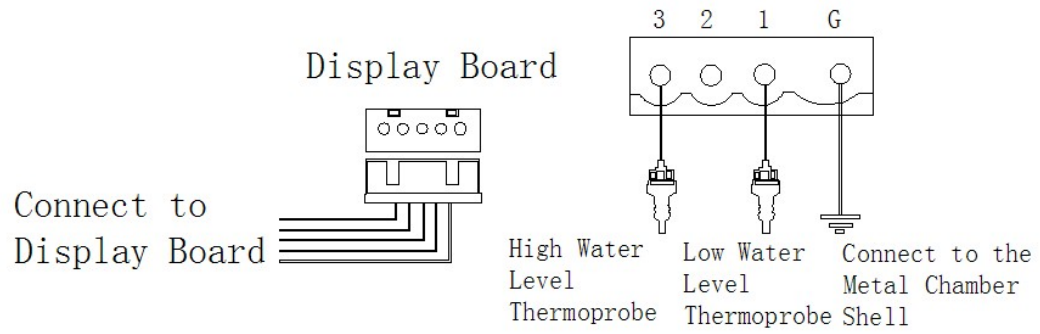
IX. Specification

Model	Water Pressure	Power	Voltage	Frequency	Capacity	Productivity	Faucet
BC110-	0. 2-	2500W	~220-	50Hz	10L	35L/h	1

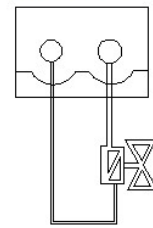
X. Error code and trouble shooting

Display code	Failure	Solution
<i>Er d</i>	Drinking water thermoprobe failure	To check if its connection is loosen
<i>Er H</i>	Heating thermoprobe failure	To clean up the scail attach on it and check if its connection is loosen
<i>Er 1</i>	Inflowing failure (the water fill in more than 45 minutes)	1. To check whether the water resource is under normal supply. 2. To check the magnetic value.
<i>Er 2</i>	Heating Failure	Replace the heating element
<i>ELL</i>	Water leakage	1. To check whether the water resource is under normal supply. 2. To check the magnetic value, replace it if needed. 3. To check whether the connection of every thermo probes is fixed.
The timing indicator flashing	If there are some circuit failure appear in the timer, the timing function would be invalid	To replace a new display board or circuit board.

XI. Electrical schematic diagram



Magnetic Value



12Vdc/350mA