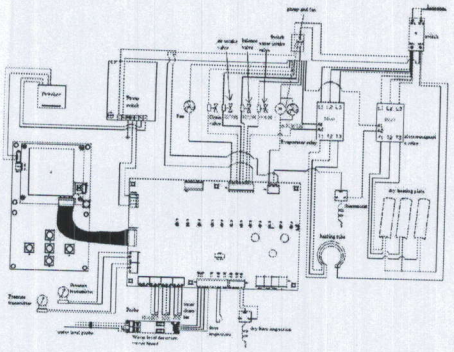
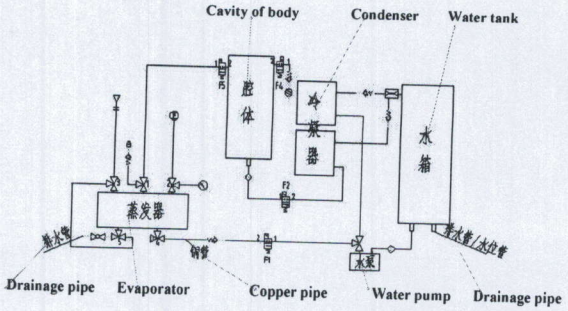
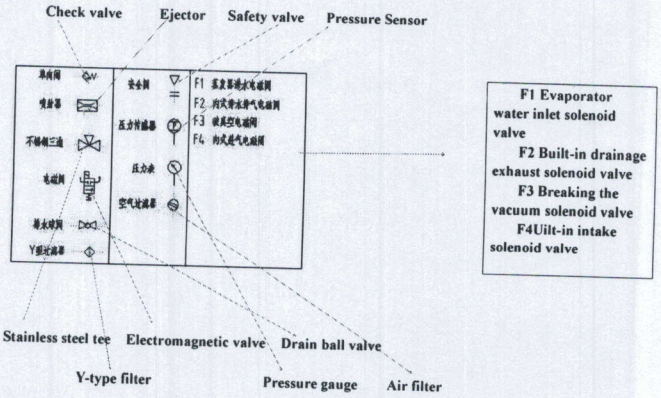
Circuit Schematics



Piping Schematic





Packing list

No.	Name	Quantity	Remarks
1	Equipment	One Set	
2	User's Manual	One Copy	
3	Certificate	One Copy	
4	Basket	One Unit	
5	Dust Cover	One Piece	
6	Tank Lid	One Piece	
7	Sealing Ring	One Piece	
8	Accessories Package	One Package	Corrugated pipe, Printing paper, Filter, Silicone tube (one for each thickness)

BIOBASE GROUP
6th floor, no.2 building, west of gangxingyuan road, and north of gangyuan 7th road, Jinan, China
Tel: +86-531-81219803/01
Fax: +86-531-81219804
Inquiry: export@biobase.com
Complaints: customer_support@biobase.cc
After-sales service: service_sd@biobase.cc; service_ivd@biobase.cc
Web: www.biobase.cc/www.meihuatrade.com / www.biobase.com

2) First remove the equipment cover, then remove the safety valve retainer screw and remove the safety valve from the safety valve seat.

3) Replace it with a qualified safety valve. Test the sterilization process.

8.4 Thermostat

The sterilizer is equipped with two thermostats, one inside the evaporator and one above the pot wall. It can maintain a constant temperature by turning the power on and off during the heating and sterilization phases. Usually used as a temperature alarm device.

If the temperature exceeds the allowable value, the thermostat automatically turns off the heater.

The thermostat switches on automatically when the temperature drops below the permissible

value.

8.5 How to improve the working temperature of thermostat

This operation is limited to professionals using a screwdriver to slightly rotate the center screw clockwise to raise the temperature.

8.6 Replace the flange heating tube steps

Before this operation, turn off the power and ensure that there is no pressure in the steam generator.

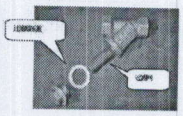
1) Remove the sterilizer housing.
2) Remove the wiring on the flanged heating tube.
3) Loosen the captive screws on the heater.
4) Replace the damaged heater with a new flanged heating tube. The position of the new flanged heating tube should match the position of the flange to be replaced and be connected.
5) Install the sterilizer housing.
6) Test all the work process.

8.7 Door safety interlocks

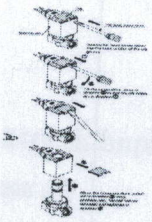
Safety devices that prevent the door from opening when the sterilization container is under pressure.This system is built on the basis of the pressure inside the sterilizer.The pressure inside the sterilizer will push the movable clutch up and the fixed clutch into close contact.It will prevent the operator from opening the door by mistake.When the water vapor is released, the unit returns to its original position so that the door can be opened.

8.8 Filter cleaning

The filter is located in the bottom of the device, it is used to filter impurities, to ensure smooth piping and solenoid valve sealing.Unscrew the filter nut from the chassis of the device, remove the filter cartridge, clean the filter cartridge, and clean it once a month.



8.9 Solenoid valve cleaning steps



1) Disassemble the sterilizer housing.
2) Use a screwdriver to dial the solenoid valve stainless steel tablet.
3) Lift solenoid valve coil.
4) Open the valve body with a wrench.
5) Flush valve with debris on debris.
6) Reinstall the solenoid valve.

9.Common faults and solutions

1. This manual explains how to provide you with the repair method of the known fault as possible. The following is some common fault information.

Phenomenon	Possible Causes	Correction method
The power switch is on, the power light is off	1. The circuit breaker is not closed 2. The main power switch is damaged	1. Close the circuit breaker 2. According to the specific circumstances to replace the power switch
Door detection light is off	1. Do not switch the door in place 2. Door micro switch loose, dislocation	1. Close the door and try again 2. Adjust the door position switch
Heating state, pressure, temperature does not rise or rise slowly	1. The heater's control circuit is short-circuited or burned 2. Pipe joints or safety valve leaks serious	1. Check for damaged parts 2. Check, tighten the pipe joints, safety valves and other places
Drainage conditions, pressure, temperature does not decline or slow down	Drain filter blocked	Remove filter debris on the filter
Can not reach the sterilization temperature	Whether the boiling point of the altitude where the decision? Please check and confirm the setting temperature of boiling point	Non-altitude reasons, please contact us or agents
Safety valve open	1. Is the pressure too high? 2. Safety valve is fault?	1. Adjust the temperature deviation 2. Correction, replacement safety valve
Door leaks	1.Door rubber ring is	1.Door gasket must be

	hardened?	replaced
	2.Does the door strip crack?	2.Door gasket must be replaced
	3.Door rubber ring off?	3.Reinstall the door apron

2. Alarm code:

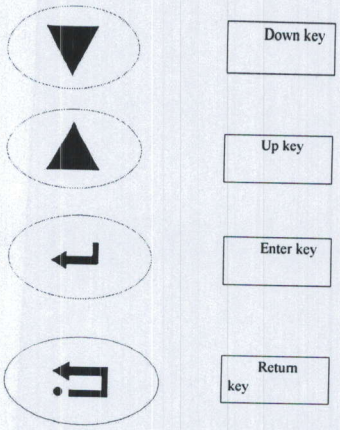
In use, when an error occurs, an error code is displayed and the buzzer sounds a warning, and the sterilizer stops automatically. Find the following conditions and handle them. Please wait for the device to step down before touching the device if something goes wrong.

Alarm information table.

No	Alarm code	Alarm content
1	001	Preheat the boiler wall, the evaporator boosts overtime 20 minutes or internal pressure before the vacuum test did not return to zero (-6 to 5)
2	002	Pot pressure balance timeout (20 minutes did not reach between -6 to 5)
3	005	Pulse pumping, overtime 20 minutes
4	006	Pulse boost timed out 20 minutes
5	007	Temperature overtime 40 minutes
6	008	Balance timeout 25 minutes
7	009	Sterilization stage temperature or pressure fluctuations exceeded
8	010	After the completion of sterilization drainage pressure relief for 20 minutes to -10
9	020	The vacuum test for 20 minutes did not draw -80
10	100	Manually terminate the current program
11	101	Midway open the door fault
12	102	Motherboard and dashboard communication failed
13	105	T1 temperature sensor fault
14	106	T2 temperature sensor failure
15	107	T3 temperature sensor failure
16	108	Pot pressure signal is abnormal
17	109	Evaporator pressure signal is abnormal

7. Operating Instructions

7.1 Button Description



7.1.1 Return Key

Press to return the screen to the previous screen.

7.1.2 Enter Key

- Press to select the icon where the cursor is located.
- Used to move the cursor when setting parameters.

7.1.3 Up Key

- Press to move the cursor up or to the right.
- Used as a minus key when setting parameters.

7.1.4 Down Key

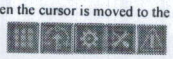
- Press to move the cursor down or left.
- Used as a key when setting parameters.

7.1.5 Cursor

When the cursor is moved to the selected icon or parameter name, this part of the color will be reversed changes:

For example when the cursor is not on the icon

When the cursor is moved to the icon



7.2 Program Parameter Settings

In the program start screen 6, select the parameter setting icon  , set program parameters.

- Select the parameter setting icon, enter the password input interface after confirming, enter the password to set the parameter.
- Select the name of the parameter you want to modify by moving the cursor with the Enter key on the parameter setting screen.
- The cursor stays on the name of the parameter that is required to be modified. Press the up and down keys to modify the value.
- After setting, press the Back key to return.

Program Description:The device is equipped with a total of 11 sets of programs by default, Including bare equipment, packaging equipment, rubber procedures, dressing procedures, liquid procedures, solid DIY, liquid DIY, medium sterilization are sterile procedures, BD & Helix, vacuum test belongs to the test program, medium dissolution belongs to the auxiliary class program.

- The default process parameters of the equipment system are all under the standard load conditions specified in the product standard, is the default parameter set by the test, if the user changes the load or change the loading method, it needs to go through the related process verification before using, (The user must first confirm that the sterilization load can be run on the process flow corresponding to the specified program).
- Bare equipment, packaging equipment, rubber procedures, dressing procedures belong to the pulsating vacuum sterilization procedures, and the same process, only according to the characteristics of different load adjustment of the value of the relevant parameters.

◆ Bare equipment is mainly applied to unpackaged high temperature bare metal sterilization, for example, the standard simulation load is a solid metal screw.

◆ Packaging equipment is mainly suitable for packaging with high temperature sterilization items, for example, standard analog loads are metal-coated metal screws with a cloth-covered fabric load.

◆ Rubber program is mainly applied to the relatively low temperature rubber load.

- BD & Helix program is mainly used to test the exclusion effect of cool air and steam infiltration effect with special equipment, such as the standard BD package, one-time BD package, this program parameter value is set according to the parameters required by the most commonly used BD test strip manufacturers (sterilization at 134 ° C. for 3.5 minutes), if the equipment used by the hospital or test strips are different, you should refer to the use of equipment or test strips to modify the specific parameters. Can also be used with a dedicated tube type PCD test a certain length of the lumen device cold air removal effect and steam penetration effect. The program parameter value is set according to the parameters required by the manufacturers of the most commonly used PCD devices (sterilization at 134 ° C for 3.5 minutes), if different from the hospital, you should refer to the requirements of the equipment to modify the specific parameters.
- The vacuum test procedure is mainly applicable to the sealing condition of some pipelines or devices connected with the internal chamber when the test equipment is under negative pressure.

During commissioning or routine routine testing of equipment, especially after long-distance transport, there may be phenomena such as loose pipes (or when the B-D test fails), at this point, you can choose the program to test. It is mainly used to test the vacuum leak of sterilization equipment, in order to detect the sealing condition of the pipeline. This test is performed on the premise that the sterilizer chamber is empty. After the program is run to the test stage, the vacuum leak test is qualified when the pressure change does not exceed 1.3kPa within 600 seconds. If the test is not normal it must be overhauled. Check the door seal and piping systems connected to the internal part of the room and so on, find the leak, ruled out, re-test until the test is normal. This procedure is for testing purposes only and is not validated as a validated sterilization.

8.Maintenance

Before beginning maintenance, make sure that the equipment is powered off. At the same time, there is no pressure in the sterilization container.

In order to ensure that the sterilizer is in good working order and to minimize the number of malfunctions, therefore, the operations described in this chapter must be followed.

Before beginning maintenance, make sure that the equipment is powered off. At the same time, there is no pressure in the sterilization container.

After the daily work with a soft cloth or a gauze to clean the door rubber ring.

Remove the basket.

Wipe the inner wall of the sterile container with gauze with detergent and water. Do not use steel wool or steel brush, so as not to damage the sterilization chamber wall.

Clean and remove scale from the chamber. Dump off the water in the tank.

Once a week, to the door with molybdenum disulfide grease.

Once a week, wipe the sterilizer cover with a soft cloth.

Once a month, clean the filter spool.

Once a year, check the safety valve, pressure gauge and door hinge.

Once a year, fastening joints and testing off-state, should be completed by a professional electrician.

Once every 5 years, the door lock must be checked due to extreme wear and tear.

Usage notice: Maintenance instructions is for professionals. When the equipment fails, be sure to check the manual, and maintain with instructions required.

8.1 Change the water in water tank

1) Remove the transparent silicone tube to drain until the water in the tank is drained.
2) Put the distilled water into the tank, the water level should reach the mark of the water level.

8.2 Check the safety valve

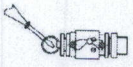
It is located above the rear of the device.

In order to prevent the safety valve is blocked. Under normal use, every two months, release the vapor pressure through it.

8.3 How to replace the safety valve

Usage notice:

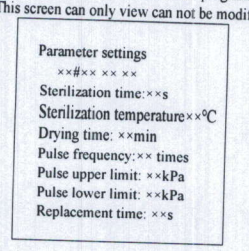
These repairs may only be carried out by qualified personnel. Unless you are a professional talent, otherwise to avoid electric shock, equipment failure, be sure to check the manual, and maintenance instructions required, at the same time, the manual has provided the professional staff with maintenance methods as much as possible.



1) Located above the rear of the unit.

6.4.3 Program Parameter Setting

Select the program parameter setting icon in the program start screen, enter the parameter setting screen, select the program parameter view icon in the program start screen, enter the parameter setting screen 16 (This screen can only view can not be modified).

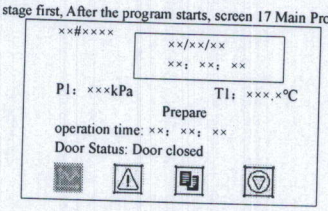


6.5 Program Screen

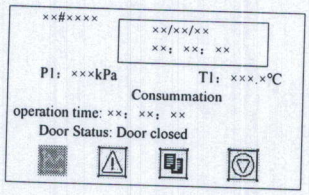
Select the program start icon in the program start screen, into the program flow screen.

6.5.1 Main Process Screen

Enter the preparation stage first, After the program starts, screen 17 Main Process Screen

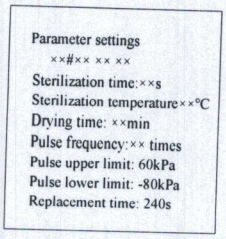


Screen 18 End stage



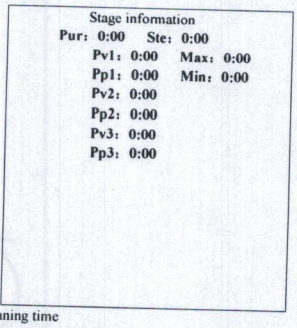
6.5.2 Data View

Select the view icon during the sterilization phase, enter the process information view, screen 19 data view.



6.6 Process Data

In the main process screen, select process data icon, enter the process data screen, Screen 20 Process Data



Pur: Replace the actual running time

Pv1: The actual operation time of the first pulsating pump time from the upper limit to the lower limit.

Pp1: The actual operation time of the first pulsating intake lower limit to the upper limit.

Pv2: The actual operation time of the second pulsating pump time from the upper limit to the lower limit.

Pp2: The actual operation time of the second pulsating intake lower limit to the upper limit.

Pv3: The actual operation time of the third pulsating pump time from the upper limit to the lower limit.

Pp3: The actual running time of the warming up.

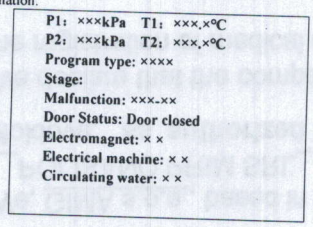
Ste: Sterilization time running value.

Max: Maximum sterilization temperature.

Min: Minimum sterilization temperature.

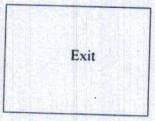
6.7 Alarm Information.

In the main process screen, select alert message icon, enter the alarm information screen. Screen 21 Alarm Information.



6.8 Quit midway.

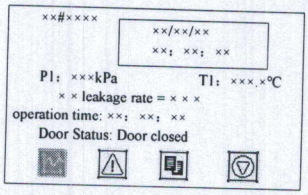
In the main process screen, choose exit icon, enter the exit confirmation screen, Screen 22 Exit confirmation

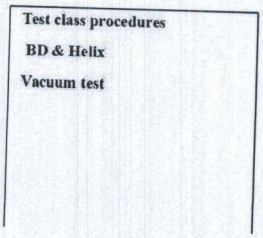


6.9 Other Screens

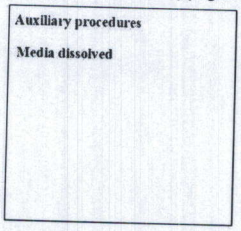
6.9.1 Vacuum Test

The vacuum test screen includes a flow chart and an end screen, the process screen is the same as the main process screen. End Stage Screen 23



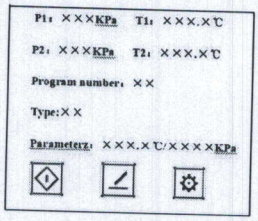


Auxiliary program selection screen 5 is selected when auxiliary program is selected



6.2.2 program start screen

Press the Enter key after selecting the program in the program selection screen 3 to enter the program start screen 6



Icon: Start up icon

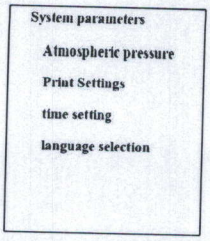
Icon: parameter view icon

Icon: parameter setting icon

6.3 Settings screen

6.3.1 System parameter setting

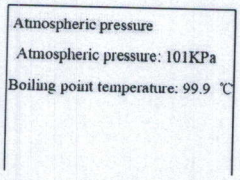
Select the system parameter setting icon on the initial power-on screen to enter the screen 7 system parameters



- Atmospheric pressure: According to the actual use of atmospheric pressure adjustment, the boiling point temperature value based on water boiling point and pressure automatically adjust the correspondence.
- Print Settings: Select whether to print or not.
- Time Settings: Set the current time of the device.
- Language Selection: Select the language type.

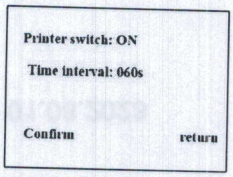
6.3.2 Atmospheric pressure

Press OK to enter the atmospheric pressure setting options. Enter the screen 8 atmospheric pressure parameters



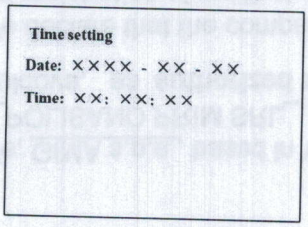
6.3.3 Print Settings

Select the print settings and press the OK button to enter screen 9



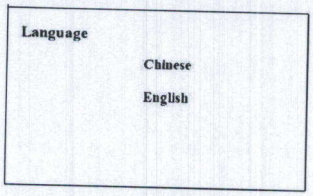
6.3.4 Time Settings

Press OK to enter the time setting options, the screen 10 time setting



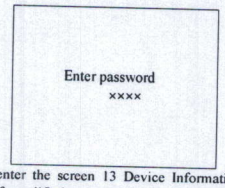
6.3.5 language selection

Screen 11 shows screen operation language selection

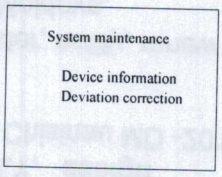


6.4 System Maintenance

Select the system maintenance icon on the power-on initial screen, after selecting, press the Enter key to enter the system maintenance options. Password input in screen 12.

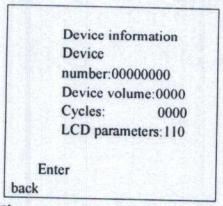


After entering the password, enter the screen 13 Device Information screen, requires equipment operation and maintenance of qualified personnel can have the password to set the system maintenance parameters.



6.4.1 Device Information.

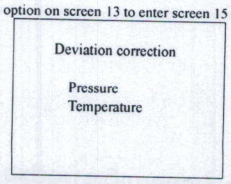
In the screen 13, the device information information option is selected to enter the screen 14 device information.



LCD: Display contrast adjustment.

6.4.2 Deviation Correction

Select the deviation correction option on screen 13 to enter screen 15 deviation correction options.



Introduction to the control panel:

There are four buttons: "↵", "⮌", "▲", "▼", and "digital display window."

Operating procedure:

Plug in, switch on the air switch on the left, and then turn on the rocker switch on the panel. The panel lights on, the autoclave stands by. "Temp. diaplay" shows the word -P1 ,Internal temperature - T1, pot wall temperature - T2, evaporator P - P2, door status: door open.

Different sterilization programs can be selected by "↵", "⮌", "▲", "▼" buttons. For example, when 5 # liquid program is selected, select "↵"to enter the interface of liquid program and select " The program is running.

After the sterilization is complete, the "complete" light is on, and the beeper prompts for buzzing every 10 seconds. After the "complete" light is on, the sterilization is over, and after confirming that the pressure gauge's hand returns to 0, Hand wheel, open the lid, remove the items.

note:

If you want to terminate the sterilization process, you can press the "⮌"button, "exit" two words, then press "↵" button to terminate the sterilization process.

5.4 Operational operation

Sterilizer operation procedures include sterilization preparation, sterilization items loading, sterilization operations, sterile items unloading and other steps.

5.4.1 sterilization preparation

(1) Cleaning: The items should be thoroughly cleaned before sterilization to avoid the bloodstains and other impurities, as these residues will harm the sterilized items and the sterilizer. After items are washed, they should be dried and packed in time.

(2) Packaging: Please use packaging materials that are conducive to the discharge of internal air and the penetration of steam into the packaging materials, strictly abide by the "Technical Specifications for Disinfection" and the relevant national standards. Follow these points may be conducive to your sterilization effect:

Dish, basin, bowl and other containers, as far as a single package, the lid should be opened when packaging.

① Surgical instruments should be placed in the basket or perforated tray supporting package.

② Items must be stacked when stacked, utensils should be used between the absorbent cloth, gauze or medical absorbent paper separated.

③ Should be exposed on all surfaces of items, in order to facilitate sterilization of all items exposed surface contact with a sieve container, the opening should be down or side.

④ Items bundled should not be too tight.

⑤Equipment package weight should not exceed 7 kg, fabric bag weight should not exceed 4 kg. Sterilization package volume should not exceed 30cm × 30cm × 25cm. Fabric bag size should not exceed 30cm × 30cm × 15cm. The liquid should not weigh more than 3 kg.

⚠ Note that packaging materials, including hard containers, disposable medical crepe paper, plastic bags, paper bags, textiles, non-woven fabrics, etc., should meet the requirements of GB / T 1 9633, textiles should meet the following requirements: In addition to the four sides should not have sutures, should not be stitched; the first use should be high temperature washing, degreasing to pulp, to color; should be used to record. Customers can use test kits and other testing tools to monitor the sterilization effect.

5.4.2 Article loading Sterilized items according to the following requirements for loading:

① items loaded, up and down about each other should be spaced at a distance, the items can not be against the door and the walls to prevent inhalation of more condensed water.

② the same type of equipment and appliances and equipment should be placed together sterilization; different materials, textile items placed in the upper, vertical release, metal equipment placed in the lower class.

③ the same type of equipment and appliances and equipment should be placed together sterilization; different materials, textile items placed in the upper, vertical release, metal equipment placed in the lower class.

④ It is recommended to use the special sterilization rack and basket equipped with sterilized items.

⑤ sterilization package should leave gaps between, conducive to sterilization factor penetration.

⑥ difficult to sterilize the large package should be placed in the upper package should be placed in the lower.

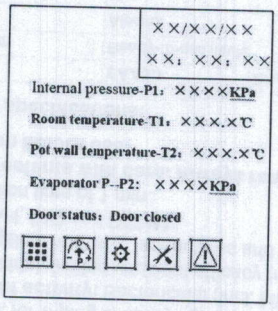
⑦ sterilizer loading capacity of not more than 80% of volume.

⑧ liquid only with heat-resistant glass bottles and test tube loading, loading capacity should not exceed 50% of the container volume

6.Display screen description

6.1 Initial screen

Screen 1 initial screen



Icon: Program selection

Icon: Balance icon

Icon: Parameter setting icon

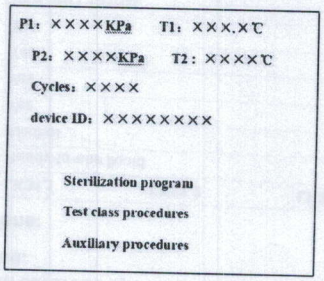
Icon: System maintenance icon

Icon: Alarm icon

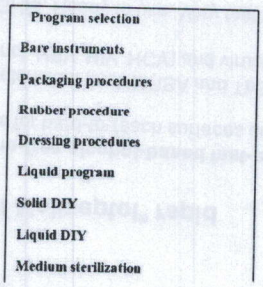
6.2 program selection and start screen

6.2.1 program selection

In the initial screen, select "Program Select" button to enter screen 2 program type selection

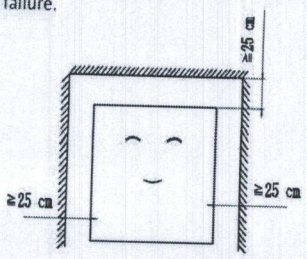


Select the sterilization program into Screen 3 sterilization program selection Program selection



When selecting a test program, enter screen 4 Test program selection

Attention: If the sterilizer is clingy wall, may cause internal heat agglomeration of sterilizer and cause failure.



To ensure the ventilation is well.
In addition to keep a safe distance from other objects, the existence of other objects should not affect the equipment operation. When there is a failure in the equipment operation, you should be able to cut off the power quickly !

Attention: Pls let the equipment grounding for your safety.

4.3.2 Power installation
Please install a dedicated connection for wiring devices at the equipment nearby buildings. The height is about 1 meter. (such as circuit power supply and load capacity of the power line should be greater than the rated load of the equipment. Advice:
Single-phase AC 220 v ± 10% (50 HZ).
Please don't put equipment in a place which hard to disconnect the power supply, make sure that you can disconnect the power supply in case of an emergency. Please make sure that the fixed socket and power plug of power line with same specification.
Equipment use two phase three wire connection mode, please connect line according to equipment configuration connection way.
Please do not arbitrarily change the connection mode. If you need, please contact us.
Fire wire (L), brown or black, zero line (N) - blue, ground wire (PE) - green and yellow.
Please entrust a specialized electrical construction personnel to do construction work.
To ensure your personal safety, please be sure to lay a ground wire.

4.3.3 Water source required
Devices do not need to connect the water, you need to add water to sterilizer water tank or sterilization chamber manually. You are advised to use soft water or pure water,

Because if use water which is not suitable may shorten the service life of equipment, cause unnecessary trouble. Water quality must meet the following requirements:
Electrical conductivity is less than 15μS/cm
The content of bleach is less than 2mg/L.
PH value is 5~7.
Hardness is less than 0.02mmol/L.

4.3.4 Storage Environment
Sterilizer should be stored in a temperature of - 20 ℃ ~ 55 ℃, relative humidity is not more than 80%, indoor or sheltered places which is no corrosive gas and good ventilation.

4.3.5 Working conditions
Sterilizer is required to place in a indoor environment which is clean, dry, avoid light, ventilation, small temperature difference.
The environment temperature 5 ℃ to 40 ℃.
The relative humidity is not more than 85%.
Avoid heavy dust, oil mist, containing conductive particles, corrosive gas, combustible gas environment.
Avoid easily shock or vibration of the occasion.
Avoid high temperature and high humidity or easy to be wet places.
Avoid strong magnetic field environment.

5. Equipment use instructions

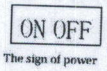
5.1 Use instructions

In strict accordance with the instructions of equipment, installation and operation error would endanger the life and property safety of people, and make the generation of manufacturers of equipment performance guarantee is invalid;
In the equipment usage period kept complete instructions for use;
Ensure that all updates received can be preserved in the specification;
In the device using the site or the use of units of change, we must ensure that the instruction for use as part of the overall transfer or transfer equipment.

5.2 Equipment marking instructions

To show should pay great attention

The sign of opening the door

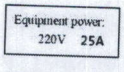


The sign of power

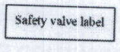
The sign of ground connection

The sign of draining off water

The sign of high temperature



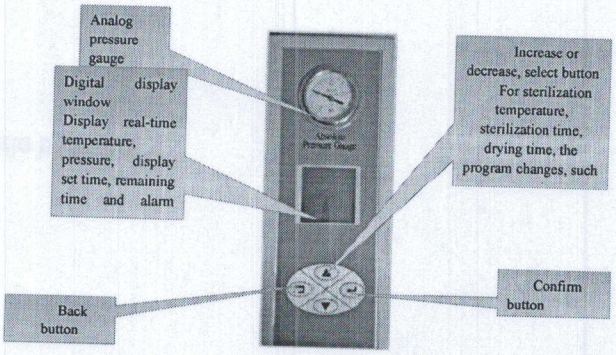
Power grounding label



Safety valve label

Instructions must be carefully preserved, in case of loss or damage, even a slight damage should be avoided.
The operating personnel have the obligation to repair technology, complete specification, damaged or lost is not suitable, the part of the contents of directories and relevant section.
Any person, not under any circumstances will use any content of the specification are torn or out.
If the experience and instruction for use the instructions in the manual does not match or not relates to the situation, please timely contact with the manufacturers, to upgrade or update.
Manual save to keep ventilation drying, avoid high humidity and temperature.

5.3 control panel



Program Description: The device is equipped with a total of 11 sets of default procedures, including bare equipment, packaging equipment, rubber procedures, dressing procedures, liquid procedures, solid DIY, liquid DIY, medium sterilization are sterile procedures, BD & Helix, The vacuum test belongs to the test program, medium dissolution belongs to the auxiliary class program.

Program number	Program type	Sterilization temperature	Sterilization time	Drying time	Vacuum pulsation frequency
1	Bare instruments	134℃	240s	300s	1
2	Packaging equipment	134℃	360s	600s	3
3	Rubber procedure	121℃	1200s	600s	3
4	Dressing procedures	134℃	360s	300s	3
5	Liquid program	121℃	1200s	0	0
6	Solid DIY	121℃	1200s	600s	0
7	Liquid DIY	121℃	1200s	0	0
8	Medium sterilization	121℃	1800s	0	0
9	BD&Helix	134℃	210s	120s	3
10	Vacuum test	Draw the air：300s，test：600s			
11	Media dissolved	80	1800	0	0

3.Precautions

Important tips

1. The product units should be used in the process of regular maintenance and regular self-inspection.

2. The use of the product units should be used in products at least once a month to check and make a record. The use of units in the use of products for self-examination and routine maintenance found abnormalities, it should be promptly processed.

3. Change the product use unit shall be in use safety accessories (safety valves, pressure gauges, etc.), safety protection devices, measurement and control devices and related subsidiary instrumentation for regular inspection, overhaul, and make a record.

4.The operating personnel and related management personnel of the product shall, in accordance with the relevant provisions of the State, pass the examination and verification of the special equipment safety supervision and administration department and obtain the special operating personnel certificate of the unified national format before engaging in corresponding operations or management. The employing unit shall educate and train special equipment safety workers to ensure that special equipment operators possess the necessary special equipment safety knowledge. The product operators in the operation should be strictly enforced special equipment operating procedures and the relevant safety rules and regulations.

⚠ The equipment is Class I pressure vessels, in accordance with the "pressure vessel" design, manufacture,

⚠ Inspection and acceptance, and in line with "fixed pressure vessel safety technology supervision regulations" requirements.

⚠ This device is not suitable for the sterilization of closed liquid articles.

⚠ When using this equipment to sterilize liquid items such as glass bottles or glassware, do not quickly relieve the pressure because the changes in temperature and pressure during operation may cause the liquid bottles to explode, which may endanger people and equipment Security.

⚠ Chloride ion is an important factor that causes corrosion damage of stainless steel. If the sterilizer sterilizes articles containing chloride ions, the inner wall of the sterilizer must be rinsed daily with clean water to prevent the deposition of chloride ions from corroding the internal stainless steel and prolong the service life of the equipment, otherwise additional damage to the equipment and Accelerated aging is not covered by our company.

⚠ This equipment is only suitable for the sterilization of high temperature and high humidity medical equipment and articles. It can not be used for the oil and powder such as vaseline. It contains highly volatile substances such as alcohol and gasoline, and sterilizes the corroded copper and aluminum products.

⚠ This sterilizer shall not be used for cooking food.

⚠ Use the device according to the operation methods and precautions specified in this manual. If you do not use the device according to the specified method, the protection provided by the device may be damaged, resulting in artificial insecurity and hidden danger.

⚠ Keep the user's manual completely within the service life of the equipment, and ensure that all the updates received can be stored in the manual. When the equipment is used or the unit of use is changed, it is necessary to ensure that the manual is transferred or delivered as a part of the equipment.

⚠ Equipment does not allow unauthorized disassembly, if necessary, please contact our company authorized suppliers or agents of professionals to inspect or replace parts.

⚠ Equipment that has been stored under wet conditions may not meet all the safety requirements specified in this manual and must be air-dried for a period of time and then stored under normal conditions.

⚠ Don`t pack sterilized items in containers and bags that can not be penetrated by steam, otherwise sterilization is not possible.

⚠ When opening the sterilizer door, high-temperature steam will be sprayed out of the sterilizer cavity. Please wait for the steam to completely drain and fully open the door. Also, do not put your face close to the sterilizer.

⚠ When equipment sterilization is completed, the sterilization chamber wall still a certain residual temperature, please pay attention to heat insulation, to avoid scalding, burns and burns, the injury can be cooled to prevent the heat caused by deep tissue damage to the skin, ease the pain, Please seek medical attention as soon as possible.

Monitoring method: sterilizer can be used to verify the temperature sterilization, sterilization test strips, biological reagents and other methods to monitor the sterilization effect.

⚠ Avoid rearward safety valve on the person or other equipment to avoid steam burns or interference.

⚠ After the device opens the door of the sterilization chamber, do not rotate the hand wheel again to prevent the guide post from escaping from the guide groove.

⚠ When disposing of the waste, dispose the waste disposal bag openly in the sterilization basket by adding about 500 ml of water and placing the moving probe in the liquid. Select the liquid customization procedure at 121 ° C and Properly extend the sterilization time.

⚠ Safety valves and pressure gauges shall be calibrated annually to the testing agency in accordance with the national inspection standards. The inner cavity of the sterilizer shall be a type I pressure vessel with a testing period of 6 years.

⚠ Do not stay near the house during work, wait for the work to be completed when the light alarm into the house, open the device, remove the items.

4.Installation and Adjustment

4.1 Check whether the parts is complete

When the arrival of the autoclave, please pay special attention to the packing, carefully check whether the model, product name etc in product packaging box is consistent, and keep the packaging materials. Vertical autoclave packing list (see Appendix three).

4.2 Equipment unpacking Installation Preparation

4.2.1 Equipment unloading

Before unloading, please note:

Don't stand at the bottom of the hoisting equipment.

Please use the qualified hoisting equipment.

Adjust the hoisting equipment, find the center of gravity, so that making the equipment hoisting horizontally.

Pay attention to personnel safety.

4.2.2 Equipment inspection

After opening the packing box, please carefully check whether the equipment and parts are in good condition, if there are any damage or loss, please kindly make record and contact our company.

After unpacking the equipment, firstly check the model and product name on the product nameplate whether compliance with the order. (Product nameplate is at the rear cover of the equipment)

Whether the equipment has apparently collision trace, whether it is intact, if you have questions, please make record and contact the shipping company or our company.

4.2.3 Handling and moving

The process of installation should be under the guidance of professionals, responsible by professional construction personnel.

Please do not hand wheel carrying mobile autoclave.

When mobile the autoclave, please put the autoclave and control the power disconnect, loosen the castor and carefully moving.

Due to the drainage device at the back of equipment, so please avoid the wall sockets and appliances.

When carrying this equipment, avoid put the autoclave sidelong and backward.

When Install and carry equipment, it should be conducted by professional personnel, handle and put down gently. It is strictly prohibited to severe fall and collide.

In the process of moving, be careful not to damage or scratch outer cover.

4.3 Installation and Debug

Installation steps:

4.3.1 place of autoclave:

Put the vertical autoclave on the ground of the smooth, clean and spacious, adjust the machine feet, make them parallel to the ground, to ensure stable reliable. The distance between back and sides of the sterilizer and other objects at least 250 mm.

The scope of application

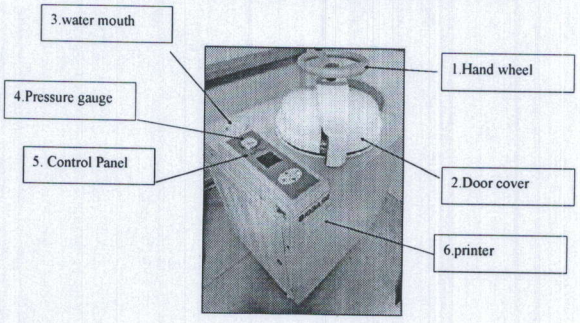
Pressure steam sterilizer for medical equipment, hygrometer sterilization and other health materials.
This device can be used normally under the following conditions:
Ambient temperature: 5 ℃ ~ 40 ℃;
Relative humidity: not more than 85%;
Atmospheric pressure: 70 kPa ~ 106 kPa;
Note: The use of sterilizers by manufacturers and users should consider the effect of local atmospheric pressure on sterilizer parameter settings.
Use of power AC: 220V ± 22V, 50Hz ± 1Hz;
Avoid heavy dust, oil mist, containing conductive particles, corrosive gases, flammable gas environment.
Avoid easily shock or vibration of the occasion.
Avoid high temperature and humidity or easily wet place.
Avoid strong magnetic environment.

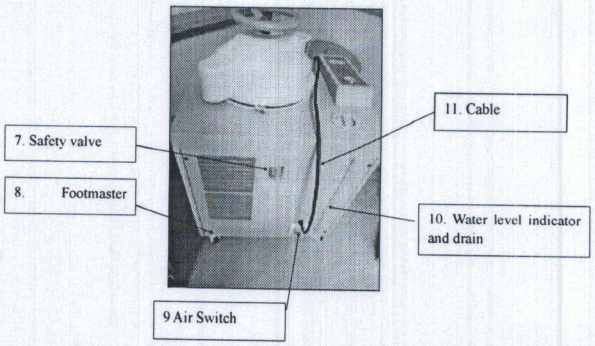
1.Technical parameters and contraindications

Product Name: Pressure Steam Sterilizer
Model: BKQ-B50/75V
Volume: 50L/75L
Design pressure: -0.1MPa ~ 0.28MPa
Rated working pressure: 0.22MPa
Rated working temperature: 134 ℃
Rated voltage: 220V
Sterilizer Dimensions / mm: 610 × 700 × 1110
Sterilizer cavity size / mm: ϕ386 × 695
Equipment net weight: 140kg
Sterilization chamber weight: 40.95kg
Equipment noise: not more than 65dB
Design life: 5 years
Production date: See label
Sterilization chamber material: 304 stainless steel
Product performance:
1. At the same time the difference between the points should not exceed 2 ℃
2. For the sterilization temperature of 121 ℃ and 134 ℃ sterilization cycle, the maintenance time should be not less than 20min and 4min
3. Control system should be sterilized room temperature control in the preset sterilization temperature 0 ℃ ~ 3 ℃ error range.
Contraindications: The product has no absolute contraindications, but can not sterilize items not suitable for moist heat sterilization.

2.Equipment principle and the main structure

Pressure steam sterilizer is the use of thermodynamic factors to kill microorganisms, in a closed container by heating the high temperature and pressure steam and use of its latent heat to achieve sterilization of the instrument equipment. The sterilizer is mainly composed of a container, a gate, a pipe system, a control system and the like. The direction of the door opening is upward, and the material of the internal chamber is pressed by a stainless steel plate of SUS304.





The main function of each device is as follows:

NO.	Components	Features
1	Hand wheel	Used to open or close the sterilizer door
2	Door cover	cover door components, play a role in insulation to protect the operator
3	Water nozzle	Deionized water from the mouth to join the water tank
4	Pressure gauge	equipment work, showing the main cavity pressure
5	Control panel	macro real-time monitoring of the entire sterilization process
6	Printer	used to record the data during the operation of the sterilizer
7	safety valve	through the predetermined working pressure pressure relief valve, to ensure safety
8	Footmaster caster	supports the equipment and enables the equipment to move on a smooth surface
9	Air-switch	A switch that automatically disconnects when the current exceeds the rated current in the circuit.
10	Water level indicator and drain	The water level in the water tank shows and drains the water in the water tank
11	Cable	To the power switch

Sterilizer main components of the role simply as follows:

No.	Component	Function
1	Container	medical equipment, sanitary materials and other objects of sterilization
2	Door	closed container
3	Plumbing system	to connect all kinds of parts, conveying distilled water and steam.
4	Control system	control cvarious types of solenoid valves and testing devices to ensure that the sterilization process can be successfully completed.

BIOBASE

Hand Wheel Vertical Pulse Vacuum Autoclave
BKQ-B50/75V
User Manual

BIOBASE GROUP

Version 2020.08

Content

Introduction

Respected user:

Welcome to buy pressure steam sterilizer, would like to thank you!

Sincerely hope that our products can bring the greatest help to your work.

- The first time using this product, please read this manual carefully!
- Sterilizers should only be handled by trained and authorized personnel.
- Equipment maintenance can only be done by authorized BIOBASE or BIOBASE dealers.
- If the operator encounters problems that are not mentioned in this manual, contact the authorized BIOBASE or BIOBASE dealer and ask for correct handling.
- The pressure steam sterilizer must be inspected and maintained within the specified time.

After reading the manual, in order to facilitate access at any time, please put this manual in a convenient place.

Digitally signed by Zagareanu Tatiana
Date: 2023.08.28 13:41:20 EEST
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