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MODEL LS-HD

VERTICAL PRESSURE STEAM STERILIZER



USER'S MANUAL



Alarm: In order to ensure the safety use of the device, please read the users' manual carefully before starting, each operating procedure should follow the step which the manual said as below, or the damages and danger would be caused by the disoperation.

0.1 PREMISES

THANK YOU FOR YOU CHOOSING OUR VERTICAL PRESSURE STEAM STERILIZER !

*The manual introduces the operation steps for using, please read the MANUAL carefully before the operation to ensure the safety.

*Any question or problem, please call or inquiry to us, we would offer you the service as good as we can.

*The necessary spare parts and the repair information will be offered to you on time.

0.2 SAFETY INSTRUCTIONS

- 1) Please read this manual carefully and understand the requirements of all warnings and cautions before using. The users MUST check the safety performance of the sterilizer and check if the sterilizer is in good working condition before using.
- 2) The sterilizer should be used according to the scope of application, use method, and precautions specified as the manual said. Otherwise, the unit might be damaged or the sterilization may fail.
- 3) There are some safety protection features equipped with the unit to prevent operators from injury and protect equipment from the damages. The operators should understand each step before starting using.
- 4) Requirements for the operator: The operator must be trained be aware of the equipment's performance characteristics, working principles, and on-site operation, has a certain knowledge of the sterilization process. Before the operation, this manual must has been carefully read and understood.
- 5) Requirements for the maintenance person: the maintenance person should have corresponding qualifications, professional repair capabilities and familiar experience.
- 6) This equipment is classified as type I pressure vessel. During the using, the relevant provisions of the National Pressure Vessel Regulations should be observed. The responsible person should be identified to ensure the safe and correct use of the equipment.
- 7) In the process of designing and manufacturing, we have fully considered the safety use of the product, but the operator still have to check and observe the working status constantly while the equipment is running.
- 8)The connection between the user's network power supply and the power supply should meet the relevant requirements of the national electrical safety standards.
- 9) If the voltage fluctuation exceeds 10%, the equipment can not work properly.
- 10) The sterilizer complies with "GB/T18268.1-2010 Electromagnetic Compatibility Requirements of Measurement and controlling for Laboratory Use Electrical Equipment , Part 1: General Requirements." Please ensure an EMC environment for the normal running of the equipment.
The sterilizer meets the design and test of Class A equipment in GB4824-2013. Do not use this sterilizer next to a strong radiation source (eg. unshielded RF) as which may affect the normal working.
It is suggest that the user evaluate the electromagnetic environment primarily to ensure the sterilizer working normally.
- 11) In accordance with the relevant provisions of national and industrial laws and regulations, this equipment

is designed and manufactured in accordance with the relevant requirements of GB4793.1-2007, and this equipment meets the relevant safety requirements of GB4793.1-2007.

12) The replacement of the door gasket is determined according to the frequency of using, the rate of natural aging, and the conditions of cleaning, disinfection, and sterilization. If no damage occurs, the door seals can continue to be used, or they should be replaced in time.

13) The equipment and accessories should be used within the specified service life, the overdue use may bring certain safety risks. Due to the aging of the equipment and accessories, there might be some safety risk and hidden dangers at the tail of the service life. Therefore, the equipment safety should be checked every time before using, and the broken spares should be replaced if necessary.

14) The disposal of the accessories of this equipment and equipment itself after the service life shall be conducted in accordance with the relevant regulations of the national and regional environmental protection, and it shall be avoided to pollute the environment or create safety hazards.

15) The quality of the water source should meet the requirements of Appendix A of YY 1007-2010.

16) The Safety valves should be regularly tested according to the relevant national regulations.

17) MUST disconnect the device before installing a fuse or performing electrical repairs. The fuse for replacement should be with a suitable current value. The model, specifications, and current values should comply with the specifications of this manual.












18) Confirm the device circuit switch status before operating on which . If malfunction happens, the device's main power switch should be immediately disconnected.

19) To ensure the safety and avoid electric shock, ensure that the equipment is properly grounded. Do not modify the grounding protection wire inside or outside the equipment or remove the wiring of the grounding protection terminal. Or the protection function of the equipment is failed, and cause a shock hazard.

20) MUST pay attention and stay away from the area with hot-proof mark, and exhaust port of the device to avoid burns.

0.3 Explanation of symbols

Some symbols and codes are used on the sterilizer's shell or in this manual or on the outer carton instead of the text description. The explanation is as followed:

symbols	instruction
	Fragile items (the transport package containing fragile items, handling with care)
	Keep Up (the transport package should be straight up during transport)
	Avoid wet (the transport packages should be kept in dry)
	Temperature limit (the temperature range during the transport package should be maintained)
	Alternating current
	Protective grounding/ (Protection conductor terminal)
	Disconnect (the main power supply) / (cut (power))
	Switch on (main power) / (connect (power))
	Caution, shock hazard / (electricity danger)
	Caution scalds
	Be careful, Dangerous / (NOTE! See random file)
PT/TT	Pressure/temperature test

Vertical pressure steam sterilizer manual

1. Introduction

The vertical pressure steam sterilizer is consists of the shell, the sterilizing drum, the steam generator, the control system, and the power supply system.

The Vertical pressure steam sterilizers (hereinafter referred to as sterilizers in short) are equipments that sterilize articles through saturated steam.

The sterilization chamber is a single-layer structure and equipped with immersed heating tube to create the steam itself. It discharges the steam at the lower side of the unit for the air exchange of the chamber, cross beam structure seals the cover, and digital controlled the whole cycle. Additionally, the drying and printing function is optional to add if required.

2. Scope of application

For the clinical institutions using to sterilize the medical devices, dressings, glassware, and solution media throughout saturated steam.

3. Disable

This sterilizer cannot be used to sterilize items that cannot bear the high temperature, high pressure or wet.

4 Normal working conditions

- a) Ambient temperature $+5^{\circ}\text{C}\sim+40^{\circ}\text{C}$
- b) Relative humidity $\leq 85\%RH$
- c) Atmospheric pressure $70\text{kPa}\sim 106\text{ kPa}$

Note: By using the sterilizer, the operator should consider the impact of the local atmospheric pressure on the parameter settings.

- d) Power supply AC $220\text{V}\pm 22\text{V}$, $50\text{Hz}\pm 1\text{Hz}$.

Note: The water supply should not affect the sterilization process and does not damage the sterilizer or sterilized items. The quality of water supply should comply with the provisions of YY 1007-2010 Appendix A.

5 Basic parameters

Table 1. Basic parameter

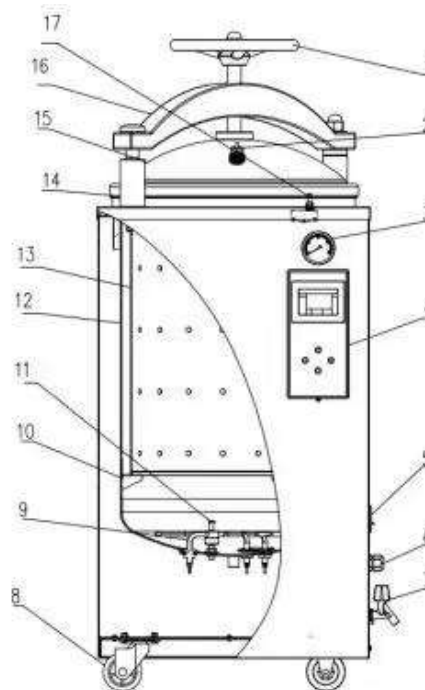
Model	Capacity (L)	Rating working pressure (MPa)	Rating working temperature (°C)	Consumption (kW)	Timer range (min)	pressure/temperature Control range (MPa/°C)	Overall size L×W×H (cm)	G.W/ N.W (kg)
LS-35HD	35	0.22	134	1×2.5	0~99	0.07~0.22/ 115~134	47×45×102	83/65
LS-50HD	50			2×1.5			51×49×115	96/78
LS-75HD	75			3×1.5			54×52×118	117/97
LS-100HD	100			58×56×127			131/109	

6 CHARACTERISTICS

- ★ Equipped with a pressure/temperature controller, the pressure setting range is 0.07 to 0.22MPa (corresponding to a saturated steam temperature of 115 to 134° C).
- ★ Equipped with a timer to automatically control the sterilization time.
- ★ Equipped with a safety valve and pressure gauge, the relief valve would automatically releases the pressure when the sterilization pressure exceeds the maximum allowable value.
- ★ The immersed type electric heating tube, which is with anti-dry function. When the water level is lower than the specified water level line, the sterilizer automatically cuts off the heating power and alarms at the same time.
- ★ If the door cover doesn't closed tightly , the machine cannot be started .

7 CONSTRUCTION

- 1.hand wheel
2. self locking device
3. pressure gauge
- 4.control board
- 5 .circuit breaker
- 6..power cord
7. water tap
- 8.pulley
- 9.heater
- 10.probe
- 11.low water level protector
- 12.container
- 13.inner pot
- 14.gasket
- 15.screw rod
- 16.cross arm
- 17.cover controller



Pic.1 Outline structure

8. The preparation

8.1 The installation

Equipment placement

- a) The equipment should be placed on a flat surface.
- b) The equipment should be kept at a certain distance from the wall, 30 cm from the left wall, 20 cm from the back wall, and 80 cm from the right wall.
- c) DO NOT place the steam vent of the safety valve too close to the power outlet, and DO NOT be blocked by anything.

Power connection

- a) Power requirements: single-phase AC 220V \pm 10%, 50Hz
- b) The equipment MUST be reliably grounded. If the outlet does not have a ground end, the equipment must be grounded with a separate grounding conductor before connecting the power.

Warning:

- 1) *The power supply circuit of the sterilizer should be equipped with a suitable external switch or circuit breaker and over current protection device (for buildings), and these switches or circuit breakers should be set close to the equipment.*
- 2) *The working location of the sterilizer should facilitate to disconnect electrical connections, it should not be placed in a location where it is difficult to operate or disconnect the electrical connections.*
- 3) *The equipment must be grounded reliably.*

8.2 The preparation before using

- a) Check if the power supply parameters are consistent with product requirements.
- b) After piling the items, place them on a sieve plate sequentially, and leave some appropriate gaps between the packages. We suggest to make the packages into 20cm x 20cm x 10cm. The dressing and the textile should not be tightly packed.
- d) Prepare a sterilizing indicator (chemical indicator card or biological indicator for moist heat sterilization use).

9. The operation instruction

9.1 The control board instruction

The operation panel is shown in Pic.
Other instruction 2.



Pic. 2 Control board

Break switch

At the lower side of the sterilizer, which is used during the equipment is under standby status.

Drain knob

At the lower part of the sterilizer, which is used for the discharge of water from the container (see Pic.1).

9.2 Number setting and query operation

User Login (Password: 6666)

1. Manufacturer Parameter C.01:

1. If set to **0** (no login password required), the device will directly jump to the standby screen 1 second after power-on.
2. If set to **1** (login password required), a password input dialog will pop up 1 second after power-on. Use the "▲" and "▼" keys to enter each digit of the password. After entering a digit, press "ENT" to proceed to the next digit displayed as *0** for the second digit . Repeat until all digits are entered. Press "ENT" again. If the password is correct, the device enters the standby screen; if incorrect, no response occurs.

Operation Mode Selection (Password: 0001)

1. Manufacturer Parameter C.02:

1. If set to **0** (no password required), press the "SET" key in standby mode to open a pop-up window. The left side displays the parameter number, and the right side shows the parameter value. Use the "▲" and "▼" keys to modify values. Press "ENT" to save changes and exit, or wait 15 seconds for automatic exit (changes will be saved).
2. If set to **1** (password required), press the "SET" key in standby mode to open the password input window. Enter the password **0001** using the same method as the login password (via "▲"/"▼" keys and press "ENT" after each digit). After correct entry, proceed to modify the operation mode.

3. Operation modes are defined as follows:

Parameter serial Number	parameter value	Parameter name	Remarks/Notes
P.	001	Custom	
	002	Instruments	
	003	Textiles	
	004	Liquids	
	005	Rubber	
	006	Drying	
	007	Back pressure	
	008	Heat preservation	

	009	Melt	
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User Parameter Setting Method (Password: 1234)

1. In standby mode, press the "▼" key **four times consecutively or long-press the "▼" key** to enter the password (Password: 1234, input method is the same as the login password entry). If the password is correct, access to user parameters is granted.
2. User parameter list

Parameter ID	Parameter name	Min	Max	Default	Remarks/Notes
P001.1	Sterilization Temperature	0	139°C	132°C	
P001.2	Sterilization time	0	9999min	30min	
P001.3	Drying time	0	9999min	30min	
P001.4	Drying temperature	0	130	110°C	
P001.5	Drying type	0	1	1	0 : close the door drying 1 : open the door drying
P001.6	Exhaust After Sterilization	0	1	1	0: No exhaust, 1: Enable exhaust
P001.7	Exhaust Method	0	2	0	0: No exhaust 1: slow exhaust 2: Fast exhaust
P001.8	Exhaust time	1	10	1sec	
P001.9	Exhaust cycle	5	99	15 sec	
P002.1	Sterilization Temperature	0	139°C	134°C	
P002.2	Sterilization time	0	9999min	30min	
P002.3	Drying time	0	9999min	20min	
P002.4	Drying Temperature	0	130	110°C	
P002.5	Drying type	0	1	1	0 : closed the door drying 1: open the door drying
P002.6	Exhaust After Sterilization	0	1	1	0: No exhaust, 1: exhaust
P002.7	Exhaust Method	0	2	0	0: No exhaust 1: slow exhaust 2: Fast exhaust
P002.8	Exhaust time	1	10	1sec	
P002.9	Exhaust cycle	5	99	15sec	
P003.1	Sterilization Temperature	0	139°C	126°C	

P003.2	Sterilization time	0	9999min	40min	
P003.3	Drying time	0	9999min	25min	
P003.4	Drying Temperature	0	130	110°C	
P003.5	Drying type	0	1	1	0 : closed the door drying 1: open the door drying
P003.6	Exhaust After Sterilization	0	1	1	0: No exhaust, 1: exhaust
P003.7	Exhaust Method	0	2	0	0: No exhaust 1: slow exhaust 2: Fast exhaust
P003.8	Exhaust time	1	10	1sec	
P003.9	Exhaust cycle	5	99	15sec	
P004.1	Sterilization Temperature	0	139°C	121°C	
P004.2	Sterilization time	0	9999min	30min	
P004.3	Drying time	0	9999min	0min	
P004.4	Drying Temperature	0	130	110°C	
P004.5	Drying type	0	1	1	0 : closed the door drying 1: open the door drying
P004.6	Exhaust After Sterilization	0	1	1	0: No exhaust, 1: exhaust
P004.7	Exhaust Method	0	2	0	0: No exhaust 1: slow exhaust 2: Fast exhaust
P004.8	Exhaust time	1	10	1sec	
P004.9	Exhaust cycle	5	99	15sec	
P005.1	Sterilization Temperature	0	139°C	121°C	
P005.2	Sterilization time	0	9999min	30min	
P005.3	Drying time	0	9999min	15min	
P005.4	Drying Temperature	0	130	110°C	
P005.5	Drying type	0	1	1	0 : closed the door drying 1: open the door drying
P005.6	Exhaust After Sterilization	0	1	1	0: No exhaust, 1: exhaust
P005.7	Exhaust Method	0	2	0	0: No exhaust 1: slow exhaust 2: Fast exhaust
P005.8	Exhaust time	1	10	1sec	
P005.9	Exhaust cycle	5	99	15sec	
P006.1	Sterilization	0	0°C	0°C	Setting invalid

	Temperature				
P006.2	Sterilization time	0	0min	0min	Setting invalid
P006.3	Drying time	0	9999min	30min	
P006.4	Drying Temperature	0	130	110°C	
P006.5	Drying type	0	0	0	Setting invalid
P006.6	Exhaust After Sterilization	0	0	0	Setting invalid
P006.7	Exhaust Method	0	0	0	Setting invalid
P006.8	Exhaust time	0	0	0sec	Setting invalid
P006.9	Exhaust cycle	0	0	0sec	Setting invalid
P007.1	Sterilization Temperature	0	139°C	132°C	
P007.2	Sterilization time	0	9999min	30min	
P007.3	Drying time	0	9999S	30S	
P007.4	Drying Temperature	0	130	110°C	Setting invalid
P007.5	Drying type	0	1	1	Setting invalid
P007.6	Exhaust After Sterilization	0	1	1	Setting invalid
P007.7	Exhaust Method	0	2	0	Setting invalid
P007.8	Exhaust time	1	10	1sec	Setting invalid
P007.9	Exhaust cycle	5	99	15sec	Setting invalid
P008.1	Holding temperature	0	139°C	132°C	
P008.2	Heat Preservation Time	0	9999min	30min	
P008.3					Setting invalid
P008.4					Setting invalid
P008.5					Setting invalid
P008.6					Setting invalid
P008.7					Setting invalid
P008.8					Setting invalid
P008.9					Setting invalid、
P009.1	Melting Temperature	0	139°C	132°C	
P009.2	Melting Time	0	9999min	30min	
P009.3					Setting invalid
P009.4					Setting invalid
P009.5					Setting invalid
P009.6					Setting invalid
P009.7					Setting invalid
P009.8					Setting invalid

P009.9					Setting invalid

Maintenance Parameter Setting Method:

2. In standby mode, press the "▼" key four times consecutively or long-press the "▼" key to enter the password (Password: 0699, input method is the same as for user parameters). If the password is correct, access to maintenance parameters is granted.

3. Maintenance parameter list

Item	Name of Parameter	Min	Max	Default	Remarks/Notes
b.01	Water Intake Delay	0	999	5sec	
b.02	Drain Temperature	100	110	103°C	
b.03	Drain Time	0	5	1sec	
b.04	Drain Cycle	0	180	60sec	
b.05	Secondary Air Purge Time	0	2000	120sec	
b.06	Secondary Air Purge Interval	0	600	120sec	
b.07	Exhaust Valve Opening Temperature	90	105	102°C	
b.08	Water Intake Timeout Duration	1	100	10min	
b.09	Printing Interval Time	0	600	60sec	
b.10	Drainage at Cycle End (Yes/No)	0	0	1	0: No exhaust, 1: exhaust
b.11	Pressure Compensation	-99.9	99.9	0kPa	
b.12	Chamber Temperature Compensation	-99.9	99.9	0°C	
b.13	#2 Temperature Compensation	-99.9	99.9	0°C	

Set the time:

Press ▲ button to pop up a small window that displays the RTC clock. At this time, press the SET button, the background color of the year will turn red, indicating that it can be revised, please press ▲ and ▼ button to set the required value. Then press the SET button again, the background of the month will turn red and revise it in the same way. After the modification is completed, press the ENT button to save and exit.

Manufacturer parameter setting method:


In the standby state, press ▼ button four times continuously or long-press the ▼ button, then enter the password (the password is 3698, and the input method is the same as that for user parameters). If the password is correct, press the ENT button to enter the manufacturer parameters, press SET button to scroll and choose the parameter need to be revised. .

Manufacturer parameters list

No.	Name	Minimum value	Maximum value	Default	Remarks
C.01	If the password required	0	1	0	0-no password 1-With password
C.02	If password required for user parameters	0	1	0	0-no password 1-With password
C.03	Door switch	0	1	1	0-no 1-yes
C.04	Printing language	0	3	0	0-Chinese 1-English 2-Spanish 3-Russian
C.05	Cycle times	0	9999	0	The effective sterilizing cycles the unit provides.

9.3 Sterilization Work Process Description

9.3.1 Preparation

- 1) Turn on the power and turn on the power break switch.
- 2) Open the lid of the container, take out the drums and **add water manually till it reach the high level.**
 **Use distilled water or pure water.**
- 3) Standby indicator light is on. The high water level indicator lights up.
- 4) After piling the items, place them on a sieve plate sequentially, and leave some appropriate gaps between the packages to facilitate the steam penetration. We suggest to make the packages into 20cm x 20cm x 10cm. The dressing and the textile should not be tightly packed. And don't forget to place the sterilizing indicator.
- 5) After placing the drum into the chamber, close and turn clock-wisely the hand wheel till the lid is closed. Don't close too tight as that might bring damage to the rubber gasket.
- 6) Set sterilization parameters (see parameter settings for details).

The Sterilizing time can be set by the followed table 2, please set the sterilizing time and temperature according to different item required.

Table 2 Sterilizing time setting

Items	Sterilizing time (min)	Pressure (MPa)	Temperature (°C)
Rubber	30	0.1	121
Textile	30	0.1	121
	20	0.22	134
Utensils	30	0.1	121
Instrument	30	0.1	121
	20	0.22	134
Bottled liquid	30	0.1	121

ATTN : There are fixed modes available for instruments, fabrics, and liquids. These modes have preset

parameters that cannot be altered. However, if the parameter setting is required, the custom mode is provided.

9.3.2 Heating

Press the START key, the equipment starts to heat.

9.3.3 Sterilizing

By the value of the temperature reach the setting parameter, It start to clock wisely timing .

9.3.4 Drying

After finish the sterilizing, the temperature is lower than 100° , the pointer of the pressure gauge turns to zero, then the machine starts drying with the door opens.

9.3.5 End

After the drying, the sterilized items can be taken in 20~30 mins.

Note: When sterilizing the fluid or the fluid in the glass container, do not exhaust the steam immediately after the sterilization is finished. The rapid exhaustion will cause the liquid boil and over flow, even cause the glass into burst.

9.4. Common faults and troubleshooting

Error	Explanation of the error	Remarks
01	the temperature sensor is damaged	
02	No	Retained
03	water lack occured in the chamber(over-load protection)	
04	door open in the cycle	
05	temperaure and pressure raise failure	Fixed in 2 hours
06	No	Retained
07	Water inlet over time	

10 safety features

This sterilizer has the following safety features.

10.1 Water lack overheat protection

Water shortage or no water is in the container, which would lead to the heating tube is under over heat, the sterilizer would automatically cut off the power supply by then. At this point, Please cut off the power directly. **The cover can not be open till the pressure inside the chamber is back to zero.** Then open the cover, add the water into the container, close it and screw the hand wheel tightly. Turn on the power break switch until the high level is displayed, the sterilizing can be proceed.

10.2 Over voltage Protection

When the inlet line supply voltage >AC280V, the sterilizer will automatically cut off the heating power. At this point, turn off the power and check that the power supply is normal (AC220V) before restarting.

*Caution : Due to certain reasons (such as: too long heating-up time, over-temperature in the inner chamber, low water level, etc.), **this sterilizer will issue corresponding prompts and automatically interrupt***

the operation cycle. At this time, please address the malfunction according to the prompt information, check and ensure the safety of the machine before continuing the operation.

11 Precautions and maintenance

Alarm: the operator should observe the relevant provision of The Regulation On Safety Inspection Of Special Equipment and Inspection Procedure For Pressure Vessel In use.

11.1 The operator should read carefully this manual before using, who should have the operation knowledge and intensify the sense of responsibility, strictly operate the unit according to the step of the manual said the is required to do the maintenance as below, to ensure the unit is in good condition and normally running, to prevent the accident from happening.

11.2 Ensure there is enough water in the container, keep the water is at the high level and the corresponding lamp is always on. NOTE: Over much water would affect the drying of the textile.

11.3 Before the heating, MUST strictly follow the provision to eliminate the cold air from the container, or the sterilizing result would be affected.

11.4 Don't sterilize the different kinds of items at the same time, such as textile and solutions, rubber and instrument. Otherwise, the sterilizing result would be affected.

11.5 For sterilizing the solution, which should be filled into a glass bottle (or vessel) that is resistant to the high temperature. Caution the overfill, generally, it is advisable to fill the glass bottle (or vessel) with a volume of 1/2 to 3/4. And the bottle mouth should be tightly filled with the gauze. Do not use a stopper (such as a rubber stopper or cork stopper) which is without a through hole to fill the bottle mouth. The glass bottle (or vessel) should be placed in a protective container and put into the sterilization chamber, that is important to prevent the glass bottle from the burst or damage.

11.6 Every day after sterilizing, drain the water from the container. Dry the sterilizer and scrub the water stain frequently to ensure the sterilizing result and prolong the service life.

11.7 if there is much water incrustation that cannot be clean, the followed solution is suggested to use: add 0.75 kg of caustic soda and 0.25kg of kerosene into 10L clean water and mix them. Pour the solution into the container and let it soak for 10-12hours, then the water incrustation can be cleared and then finally rinse with clean water.

11.8 Test the sterilizing temperature, sterilizing time and sterilizing result by the stationary point thermometer, sterilizing indicator or other biological method, to ensure the reliable and best sterilizing result.

11.9 Calibrate the safety valve and pressure gauge periodically to follow the the related regulation.

Caution: It is necessary to prepare a suitable universal wrench for replacement or calibration of safety valves and pressure gauges. That is important to ensure good sealing at the connection during installation.



11.10 The equipment is a kind of pressure vessel, Must avoid the impact during working, and forbidden to use over pressure. If the pressure displayed is exceed the maximum allowable value but the safety valve doesn't open to release, the unit should immediately pause to use. The safety valve might has been failed, please check and exchange it. Don't start to use the unit again until the safety valve is qualified. The safety valve and pressure gauge should have to be verified every year at the local Technical Supervision Bureau.

11.11 The gasket is wearing part, which should have to check frequently. If the feature is changed or deformed or aging hardening, the spares should be changed immediately.

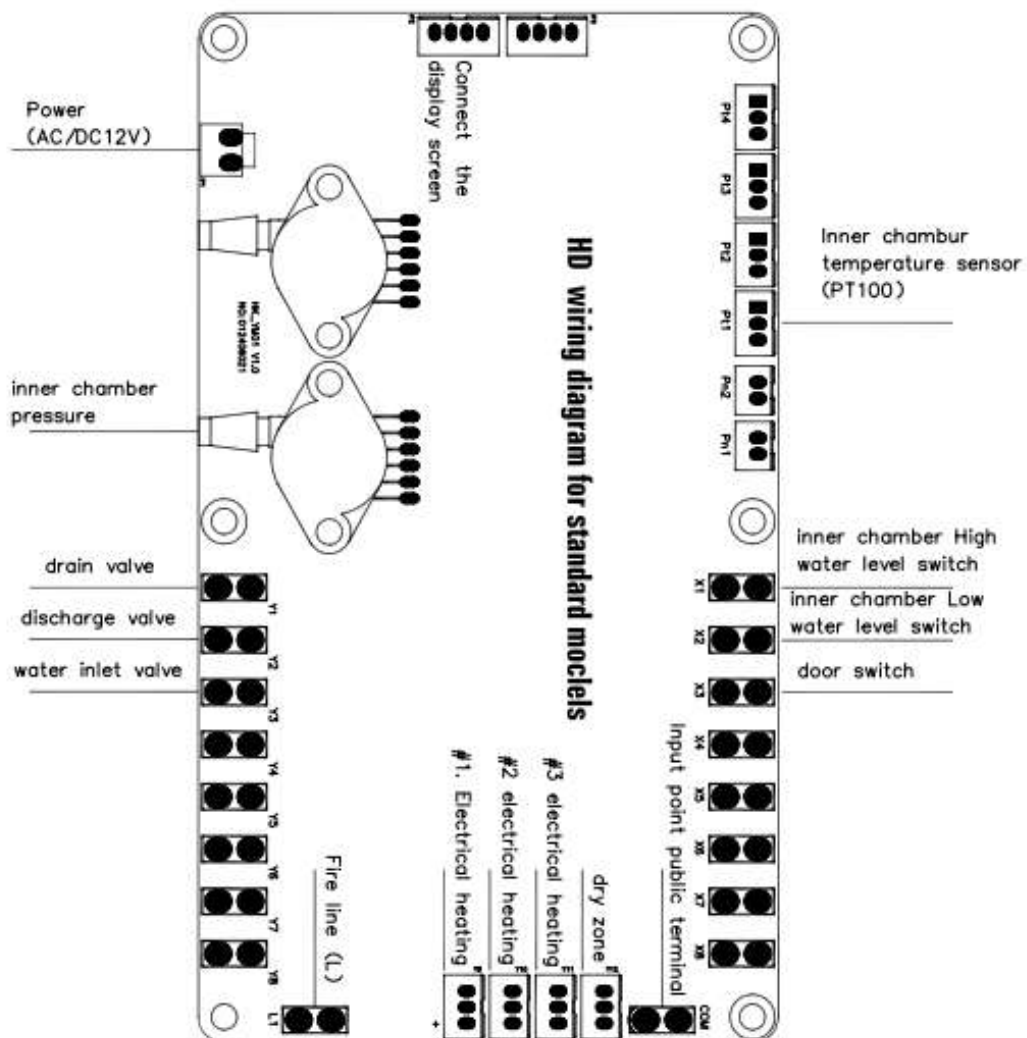
11.12 The replaced fuse should be comply with the provision as the manual said, the model and the specification should be same as the old one.

11.13 Ensure the safety grounding of the unit, Ensure the power socket grounding well.

11.14 Keep clean of the unit.

11.15 No special requirement for the transportation and storage. If long time no using, which should have to store in a shady , dry and ventilated place, and make the necessary dust proof work.

12. Electric scheme



There is 1 heating element inside of LS-35HD

There are 2 heating elements inside of LS-50HD

There is 3 heating elements inside of LS-75HD, LS-100HD

13 The breaker and the fuse capacity

- a) Breaker rating current: 16A/LS-35HD、LS-50HD
40A/LS-75HD、LS-100HD

14 Durable years

Under the normal using and maintenance, the recommended service life of the unit is 7 years.

15 Producing date

See the nameplate

16 Accessories and the package list

NO.	Name	Quantity	Marks
1	Main body	1	
2	Sterilizing baskets	2	
3	Sieve board	1	
4	Chamber handle	1	
5	Inner lid	1	
6	Exhausting tube	1	With one fix hoop
7	User's manual	1	

Appendix 1: Brief Operation Guide

1.Connect the hose included in the package to the exhaust port, and connect the other end to the sewer or outside.

2.Turn on the power (220V), then add the water, please ensure the level exceeds the top of the water

level indicator.

3. In the standby state, press the SET button. A small window will pop up. Left side of the window display the serial number, and on the right side, it displays the value. Press the ▲ and ▼ buttons to revise the corresponding parameter value. Press the SET button again to revise the next parameter, and so on. After all the parameters are set, press the ENT button to save the parameters and exit. Or press the SET button until exit, the revised parameters will also be saved.

Parameter list

NO.	Name	Minimum value	Maximum value	The default	Remarks
A.01	Sterilization mode	0	3	0	0-custom 1-instrument 2-fabric 3-liquid
A.02	Sterilizing temperature	105°C	134°C	132°C	
A.03	Sterilizing time	0	32000min	30min	
A.04	Drying time	0	32000min	30min	
A.05	Exhausting method	0	1	1	0-Exhaust the steam but no water. 1-Drain the water but no steam

4. Press the ENT button to start. (If it is not necessary to revise the parameter, the operator only needs to finish the first two steps before pressing the ENT button to start. The unit defaults to the previous mode..)

5. After the sterilization is completed, the unit will automatically exhaust the steam. Don't open the door until the temperature is lower than 100°C. Then remove the inner lid, and return the outer lid to its original position, don't lock it, just leave a certain gap for drying (the handwheel must be rotated to the uppermost point before the lid can be opened by translation). After drying is finished, turn off the power.

6. Precautions:

6.1 Both ends of the exhausting hose must be firmly fixed.

6.2 It is recommended to use distilled water. Keep the unit dry and clean if it is not in use.

6.3 Please read the instruction manual carefully before using the unit