

INSTRUCTION MANUAL V1.0

COUNTERTOP PRESSURE STEAM STERILIZER

AUTOCLAW

MODEL: LFSS03AA (LCD)



**IMPORTER
W POLSCE**

IMPORTER AND AUTHORIZED SERVICE POINT IN POLAND

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CE
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Warning: The device should only be operated by qualified personnel who have the knowledge and proper training to operate this type of equipment. A suitable person should be designated to operate and maintain the device.

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SCOPE OF THE INSTRUCTION

These instructions apply to table top (countertop) pressure steam sterilizers manufactured by Ningbo Haishu Life Medical Technology Co., Ltd.

Model: LFSS03AA (LCD).

Before using the device, read this manual carefully to ensure safe operation of the device and its operator.

Retain the manual throughout the life of the device. If the manufacturer makes any necessary updates, be sure to keep all updates received as appendices to this manual.

In the event of a change in the place of use or the unit using the device, hand over or return this manual as part of the entire device.



Before using the device, please read this manual carefully, be absolutely familiar with the safety information and correct use of the device. Use only the instructions provided by the manufacturer with the device as a basis for reference. Do not use other instructions.

The manufacturer reserves the right to change the design and/or technical specifications, if necessary, without prior notice. The information contained in this manual is current as of the time of publication.

USER MANUAL

To ensure the safe and reliable operation, and use of the device, pay attention to these instructions.

Precautions:

The device is equipped with the necessary protective measures (safety measures) to avoid causing damage. It is forbidden to interrupt or destroy these safety measures.

Important:

- Before using the device, read these instructions carefully.
- The device must be operated and maintained only by qualified personnel who have been trained for this purpose
Sufficiently well-trained.
- To ensure proper working conditions, always keep the device clean. Do not flush
Nor pour water over the device.
- Servicing of the device may be carried out only by personnel authorized by the manufacturer who have received the
appropriate training from the manufacturer.
- Accessories and/or auxiliary equipment for the device can only be obtained from the manufacturer, otherwise
safe and effective operation of the device cannot be guaranteed.

Emergency service:

If an emergency situation is identified, proceed as follows:

- Switch the power button to the "0" position;
- Disconnect the plug from the electrical outlet.

Product Liability:

Without written permission from the manufacturer, do not modify or use the device in any way beyond its intended use and the scope described in this manual. The manufacturer is not responsible for any damage or accidents caused by improper handling or misuse of the device.

DESCRIPTION OF SYMBOLS

Special attention should be paid to understanding the dangers, hazards, warnings and cautions/cautions contained in this manual.

 DANGER	<p>Indicates potential danger/hazard to personnel and equipment, the information next to this symbol must be strictly followed.</p>
 WARNING	<p>Indicates potential danger/hazard to personnel and equipment, the information next to this symbol must be strictly followed.</p>
 CAUTION	<p>Indicates a potential danger to the equipment, which, if not taken seriously, could lead to damage to the device.</p>
	<p>CE mark with the 4-digit number of the Notified Body (symbol indicating the conformity of the device with the requirements of Directive 93/42/EEC).</p>
	<p>The symbol "Environmental Protection", means that used electrical equipment must not be disposed of with other municipal waste. Dispose of the used device at waste electrical and electronic equipment treatment facilities in accordance with local regulations.</p>
	<p>Type B application part.</p>
	<p>Protective grounding - class I device.</p>
	<p>Caution: hot surface.</p>
	<p>See the user's manual. Read the instruction manual before use.</p>
	<p>Top, don't roll over</p>
	<p>Do not turn. Do not move by rolling (do not roll).</p>
	<p>Permissible number of stacking layers. Range of storage heights (stacked maximum 3).</p>
	<p>Acceptable temperature range: +5°C ~ +40°C.</p>
	<p>Humidity range (relative humidity ≤ 80%).</p>
	<p>Store in a dry place.</p>

WARNINGS AND IMPORTANT SAFETY INFORMATION

 WARNING	Use the autoclave only to sterilize medical devices that are resistant to heat and moisture. Do not use oily materials and powders such as petroleum jelly, agar, etc. for sterilization.
 DANGER	Autoclave cannot be used to sterilize liquids or liquids in closed vessels (especially glassware), as this may lead to the bursting of these vessels, thus endangering the safety of people and equipment.
 WARNING	Chloride ions are an important factor in corrosion of stainless steel. If the autoclave will be used to sterilize items containing chloride ions, it is required to rinse the sterilization chamber with clean water after each cycle to prevent corrosion from ion deposition chloride, and to extend the life of the device.
 WARNING	If the symbol  , is visible anywhere on the device, it means that the temperature of this surface is high. Do not touch this surface to avoid burns,
 CAUTION	The device meets the emission and immunity requirements of Class A equipment as specified in the standard GB/T 18268. If the device is used in a domestic or similar environment, it may cause interference with other equipment and appropriate protective measures are required.
 CAUTION	Before using the device, it is recommended to assess the electromagnetic environment. It is forbidden to use this device near strong radiation sources (e.g.: radio frequency equipment, unshielded), as strong electromagnetic fields may interfere with normal operation devices.
 WARNING	If an unexpected situation arises during the operation of the device, or if the device picks up a alarm or other abnormal events occur, immediately unplug the device from the power source and check and troubleshoot the problem as described in Section 8.
 WARNING	Perform the necessary monitoring of the effectiveness of the sterilization process in accordance with relevant national and regional regulations. To do this, place an indicator (e.g., chemical or biological) inside the package, then run the sterilization effectiveness monitoring program and evaluate based on the result. In case of failure, find the cause or contact the manufacturer.
 WARNING	Connect the autoclave only to a triple grounded electrical outlet (AC 220V-240V/16A/50Hz). Always check that the outlet with grounding pin is properly installed and connected. Do not place the autoclave in such a place where access to an electrical outlet will be difficult.
 WARNING	Do not connect to a power source with parameters other than those indicated in this manual and on the unit's nameplate.
 WARNING	Do not touch the socket and plug with wet or damp hands.
 WARNING	Do not damage, modify, pull, bend, coil or twist the power cord. Do not place any objects on the cable.
 DANGER	Do not place the autoclave on an unstable table. Place the unit on a flat, stable surface that is not tilted, subject to vibration and shock.
 CAUTION	Do not block or cover the autoclave door, ventilation and heat dissipation openings.
 CAUTION	Do not remove the nameplate, any labels, warning and information stickers From the device.

 CAUTION	Do not place any objects on the device.
 CAUTION	If the autoclave will not be used for a long time for various reasons, unplug the power cord from the electrical outlet and place the unit in a dry and cool place.

1. BRIEF INTRODUCTION

The LF series high-pressure steam sterilizer is specially designed and manufactured for use in: clinics, hospital wards, laboratories and other facilities requiring frequent sterilization. It is intended for use only by professional users, i.e. doctors, technicians or other specialists. The device is controlled by a microprocessor with an intelligent control system and a user-friendly interface, making it safe, reliable and easy to use. Dynamic display of information such as status and operating parameters is enabled by the built-in LCD display. In the event of over-temperature or over-pressure, the autoclave will automatically perform error diagnostics and initiate protective measures (safeguards) to ensure the effectiveness of the sterilization and disinfection process.

1.1. Product category

The product is classified as a Class I, Type B device according to electrical safety requirements.
 The product is classified as a Type B device according to YY/T 0646 "Small steam sterilizers - automatically controlled".
 The product is classified as a Class A device according to GB/T 18268.
 This product is classified as a Class A device according to the GB/T 18268 standard for electromagnetic compatibility.

1.2. Product design

The device mainly consists of: sterilization chamber, sterilization chamber door and its seal, steam generator, condenser (condenser) and fan, vacuum pump, water pump, safety valve, sensor, heating elements, bacteriological filter, piping system, control and power supply system, and accessories (i.e. tray, tray stand, tray holder).

1.3. Intended use

The device is used to sterilize heat- and moisture-resistant medical instruments.



Do not sterilize liquids! Ensure that the sterilized equipment is resistant to heat and moisture.

1.4. The principle of sterilization, the strength of the main sterilizing agent

1.4.1. The principle of sterilization

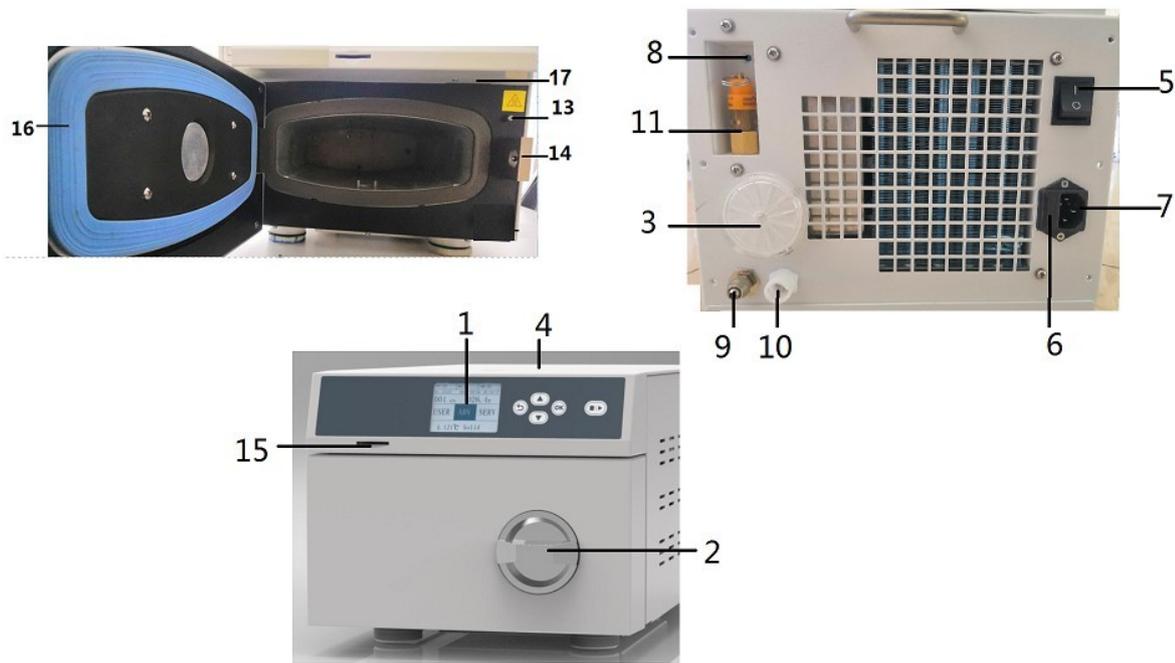
The device is equipped with a vacuum pump that sucks cold air out of the sterilization chamber and accepts saturated steam as a sterilizing agent, using properties such as high latent heat value and high permeability of saturated steam to sterilize objects.

1.4.2. Sterilizing agent and its potency

- 1) The strength of the sterilizing agent in the 134°C sterilization process:
 The saturated steam temperature is between 134°C and 137°C, and the temperature difference between different points in the sterilization chamber, at the same time, does not exceed 2°C, and the holding time is 4 minutes.
- 2) The strength of the sterilizing agent in the 121°C sterilization process:
 The saturated steam temperature is between 121°C and 124°C, and the temperature difference between different points in the sterilization chamber, at the same time, does not exceed 2°C, and the holding time is 20 minutes.

1.5. Construction of the device - general view

No.	Item name	No.	Item name	No.	Item name
1.	LCD display	7.	Power socket	13.	Door opening sensor
2.	Swivel handle	8.	Vent cap	14.	Door lock
3.	Bacteriological filter	9.	Outlet valve drain for the disposal of used water	15.	SD card tray holder
4.	Clean water tank	10.	Outlet valve drain for the discharge of clean water	16.	Door seal
5.	Power button	11.	Safety valve	17.	Battery compartment cover control panel
6.	Fuse holder				

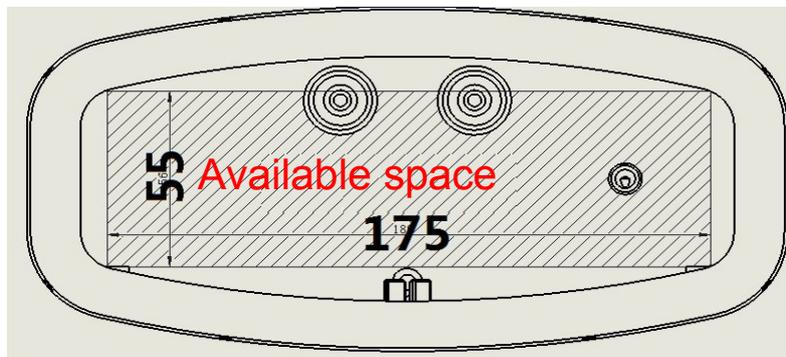


2. SPECIFICATION

2.1. Chamber specifications

Dimensions of available space:

Model:	Dimensions (nominal diameter x depth mm)
LFSS03AA (LCD)	Dep. = 175, H = 55, W = 280



2.2. Chamber parameters

Design pressure: -0.1 / 0.27 MPa Design
 temperature: 140°C

2.3. Device parameters

Maximum working temperature: 137°C

Maximum operating pressure: 0.24 MPa

Safety valve set pressure: 0.24 MPa; Safety valve opening pressure 0.24 MPa ~ 0.26 MPa Clean water tank capacity: 1L

Used water tank capacity: N/A (no built-in waste water tank) Power consumption: 220V - 240V, 50 Hz,

2900W

Lifespan: 5 years

2.4. Work environment

Ambient temperature: +5°C ~ +40°C

Relative humidity: ≤ 85%

Atmospheric pressure: 80 kPa ~ 106 kPa

The following table shows the requirements that the water used for the device must meet:

Residue after evaporation	Silica (SiO ₂)	Iron	Cadmium	Lead	Other metals heavy
≤ 10 mg/L	≤ 1 mg/L	≤ 0.2 mg/L	≤ 0.005 mg/L	≤ 0.05 mg/L	≤ 0.1 mg/L
Chlorides	Phosphates	Degree of conductivity	pH value	Degree of conductivity	Hardness
≤ 2 mg/L	≤ 0.5 mg/L	≤ 15 uS/cm	5 ~ 7,5	Colorless, clear, sediment-free	≤ 0,02 mmol/L

2.5. Transportation and storage

conditions Ambient temperature: +5°C

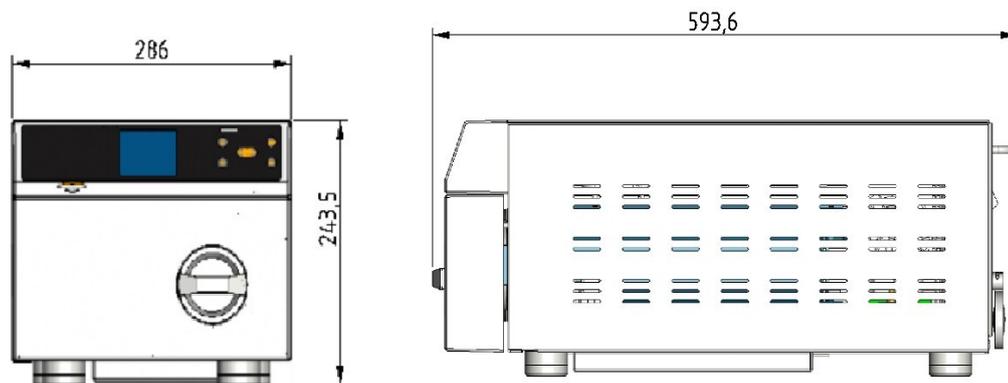
~ +40°C Relative humidity: ≤ 80%.

Under conditions free of corrosive gases.

3. INSTALLATION OF THE DEVICE

3.1. Dimensions and weight of the device

The external dimensions of the autoclave Model: LFFSS03AA (LCD), are as follows (unit: mm):



Model	Gross weight (kg)	Net weight (kg)
LFFSS03AA (LCD)	24	20

3.2. Installation requirements

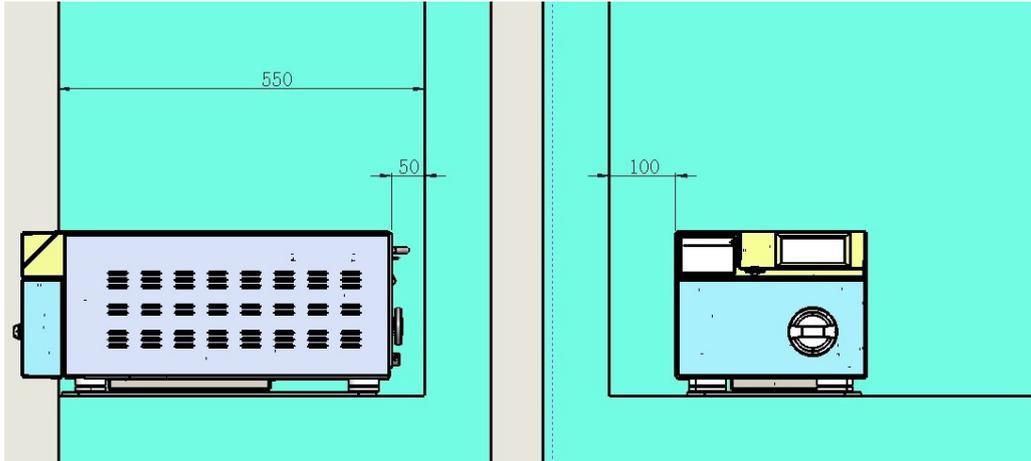
To ensure the safe and reliable operation of the device, check that the following requirements are met, as specified below:

3.2.1. Power supply requirements: Single-ended (DC) 220V - 240V, 50 Hz, 2900W power supply.

- 3.2.2. Installation environment requirements: The unit must be installed in a clean, dry, well-ventilated enclosed room where small temperature differences can be provided. For the temperature, humidity and atmospheric pressure requirements of the operating environment, see Section 2.4.
- 3.2.3. Site requirements:

Minimum table/countertop width	Minimum distance from the left surface side of the device	Minimum height
55 mm	≥ 100 mm	0,7 m

The following figures show the minimum space required for proper installation of the equipment. Position the equipment to provide at least the minimum required distances on each side of the autoclave.



- 3.2.4. Requirements for the mounting table: The structure of the table intended for the location of the autoclave must withstand the load (weight) of the device and its load. The table must withstand pressure, at least 40 kPa.



Do not place the unit in a closed cabinet; make sure that the countertop or table on which the unit is placed is strong and solid enough; do not block the ventilation holes of the autoclave.

3.3. Handling of the packaged device

In order to ensure proper handling of the packaged equipment, only a cart and/or other similar equipment should be used to handle or move it. In situations where a cart and/or other similar equipment cannot be used, at least two people are required to lift or move it by hand. Always carry the crate by holding it from the front and back.



When lifting or transferring by hand, use extreme caution to avoid danger.

3.4. Unpacking

Cut the packing tape, if used with knives or scissors. Then open the closures and remove the packaging lid, and finally remove the protective film.



3.5. Positioning the device on the mounting surface

The device can be placed on the work table by one person. Lift the device, for this purpose, put your hands in the space between the front and rear feet and then place the autoclave on the table. When lifting or moving, pay special attention to the following aspects:



CAUTION

To avoid damage, it is strictly forbidden to hold the device by the door when moving or transporting it.



WARNING

To avoid personal injury, do not lift and/or carry the device while keeping your hands on its feet.



CAUTION

When transporting the device, do not move it by rolling, tilting, placing it horizontally (on its side) or turning it upside down.

When lifting or moving the device, keep it in the place indicated below:



3.6. Adjustable feet

The height of the feet has been adjusted at the factory. If the mounting surface is flat, no adjustment is necessary; if the surface is uneven, adjust the feet accordingly, so that the front of the unit is 1cm ~ 2cm lower than the rear.

3.7. Connection to the drain

Connect the drain line/hose to the drain valve for draining used water (see Section 1.5) to the sewer or tank.

3.8. Plug the plug of the power cord into an electrical outlet.



WARNING

Ensure that the device has an effective and reliable grounding.

3.9. Other aspects



CAUTION

If the autoclave has been transported or stored at a temperature lower than 2°C, the unit should be allowed to stabilize in its operating environment (at a temperature not lower than 5°C) for at least 2 hours before use.

Usually such a situation can occur in winter, and water in the pipes

The unit's piping can freeze and may cause equipment failure.

4. CUSTOMIZATION

Before use, it is required to successfully configure the device to ensure its proper operation. For this purpose, the following steps must be performed:

4.1. Setting the atmospheric pressure

Before the first use or after each transfer of the device, set the atmospheric pressure value, otherwise, you will not be able to open the door (error code: E10, E11) or other problems may occur.

The way to regulate atmospheric pressure:

Open the door, turn off the power, wait about 20 seconds, turn on the power and wait 1 minute.

4.2. Date and time setting

Check whether the correct date and time have been set. If it is not, set their respective values according to Section 6.1.4.2. The date and time have been set at the factory, there is usually no need to set them.

4.3. Leakage test

A leak test should be carried out with sufficient frequency to ensure that the sterilization chamber, including its piping, is airtight, and to ensure that cold air is removed from inside the chamber. The device is supplied with a factory-programmed "Vacuum Test" leak test program. This program, can only be run when the chamber is cold. When the test is completed, the device will display the result. The device can only be used after successful completion of the test.



Test results may be incorrect if the sterilization chamber is hot. Conduct the leak test only when the chamber is cold.

4.4. Confirmation of the correctness of the sterilization process

A chemical indicator should be used for the test, aimed at initial confirmation of sterilization parameters to ensure proper sterilization.

The use of a B-D test package (Bowie Dick type) or a process test instrument - PCD - is required to control the sterilization process.

Place the B-D test package or the PCD process test instrument in the lower part of the chamber, by the autoclave door. Start the "B&D Test" program. When the program is completed, remove the test package and observe the color change of the indicator paper. The indicator paper will change color evenly (uniformly) to the color required for process qualification.

5. PROGRAMMED PROGRAMS - INTRODUCTION

5.1. Parameters of programmed programs

Program	Sterilization temperature (°C)	Time maintenance (min)	Vacuum rate	Time drying (min)	Comment
134°C Quick (134°C Quick)	134	4	3	4	The parameters were initially set up
134°C Universal (134°C Universal)	134	4	3	6	The parameters were initially set up
134°C Solid (134°C Lite)	134	4	1	2	The parameters were initially set up
121°C Universal (121°C Universal)	121	20	3	8	The parameters were initially set up
B&D/Helix Test	134	3.5	3	4	Test program
Vacuum Test	Vacuum: -80 kPa, holding time: 15 min				Test program
Dry (Drying)				5	The parameters have been preset

5.2. Sterilization load types for each program

5.2.1. Batch type suitable for each program

Program	Type of cargo
134°C Quick (134°C Quick)	Unwrapped or wrapped solid batches, batches composed of textile materials and hollow batches, in paper-foil or two-ply packaging, which, if not well dried, are destined to For immediate use after sterilization.
121°C/134°C Universal (121°C/134°C Universal)	Unpackaged or packaged solid batches, batches made up of textile materials and batches that are indented.
134°C Solid (134°C Lite)	Solid batches, unwrapped, intended for immediate use after sterilization.
B&D/Helix Test	B-D test package or PCD process test instrument.
Vacuum Test	Without any input.
Drying (Drying)	Drying the load if it is not dry after sterilization.

5.2.2. Table indicating the maximum weight of the cargo/load.

Model	Maximum load weight - solid batches (instruments/tools)	Maximum load weight - batches porous (fabrics)
LFSS03AA (LCD)	2.2 kg	0.5 kg individually wrapped

5.3. Maximum operating time and maximum water consumption

Maximum operating time, maximum water consumption for each program at maximum load:

Model:	Program	Weight load	Longest time	Minimum consumption waters
LFSS03AA (LCD)	134°C Quick (134°C Quick)	2.2 kg	20 min	280 ml
	134°C Universal (134°C Universal).	2.2 kg	24 min	300 ml
	121°C Universal (121°C Universal).	2.2 kg	38 min	380 ml
	134°C Solid (134°C Lite)	2.2 kg	18 min	240 ml

6. DESCRIPTION OF THE USER INTERFACE

In this device, human interaction with the computer is carried out through a 4.3" LCD display with a touch panel.

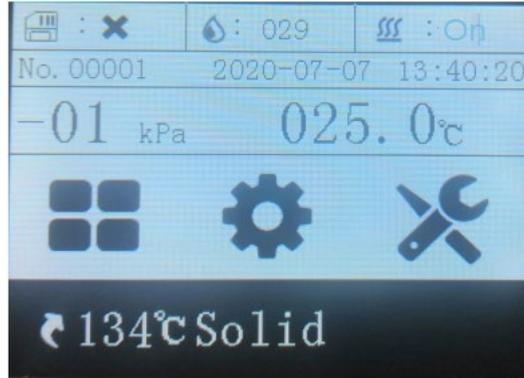
6.1. Menu - Introduction

Input is done using the following buttons:



	Button "Up Arrow" - Press, to scroll to the top of the page or increase the value by 1.
	Button "Arrow w Down" - Press, to scroll to the bottom of the page or to reduce the value by 1.
	"OK" button - Press to select or enter value.
	" Back" button: Press the button once, to return to the previous page;
	"Start/Stop" button: Press to start Or stop the program.

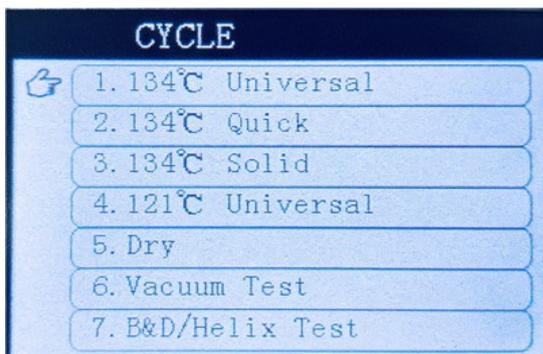
6.1.1. Home page



	Displays the status of the SD memory card. Symbol: x - indicates that the card is not connected; Symbol √ - indicates that the card is connected.
	Displays the current water quality. The number 29 indicates that water quality has been used 29 uS/cm.
	Displays whether the preheat function is enabled. On/Off - means, That the function is enabled; Off/Off. - the function is disabled.
	Counter. The 00001 designation means that the device has been used 1 time.
	Displays the current date and time.
	Displays the current pressure in the sterilization chamber.
	Displays the current temperature in the sterilization chamber.
	Main menu - is intended for the operator, contains all programmed programs.
	Settings - the menu is intended for the operator. The settings menu contains all the items that the user can configure.
	Service menu - is intended only for the manufacturer or authorized service. A password is required to use this menu. The user cannot use From this menu.
	Program shortcut - by default this is the last running program. The user can select this shortcut and press the "OK" button to start the last program in progress.

6.1.2. Menu - Programs

On the home page, select the Programs menu and press the "OK" button to enter. When pressed, the menu containing the following items will be displayed:



: Cursor

Press the "Up Arrow" or "Down Arrow" button to move the cursor to the desired program, and then press the "OK" button to start the selected program.

6.1.3. Programs

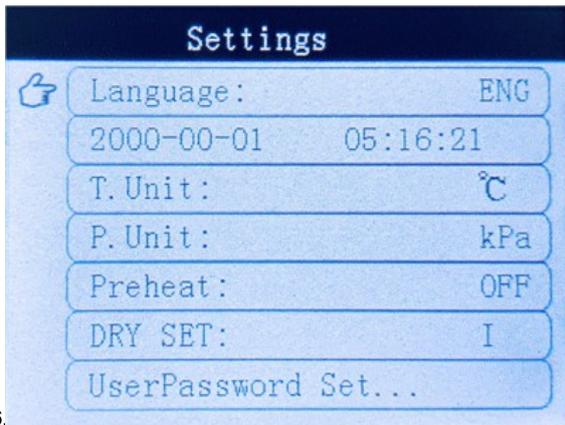
There are a total of 7 programs in the Programs menu, such as:

- 4 sterilization programs: 134°C Universal (134°C Universal); 134°C Quick (134°C Quick); 134°C Solid (134°C Lite); 121°C Universal (121°C Universal);
- 1 drying program: Dry (Drying);
- 2 test programs: Vacuum Test, a vacuum test performed to check the leakage of the device; B&D/Helix test, performed to check the effectiveness of the sterilization process.

Notes: For the set parameters of each program, relevant maximum load information and other information, see Section 5 of this manual.

6.1.4. Settings

On the home page, select the Settings menu and press the "OK" button to enter. When pressed, the menu containing the following items will be displayed:



: Cursor

A total of 7 items can be set, such as language version, date and time, temperature unit, pressure unit, preheat, drying level and user password.

6. (Language)

If the cursor is at the height of this option, press the "OK" button to set the appropriate display language. A total of 3 display languages are available:



- 中文 - displaying pages in Chinese,
- ENG - displaying pages in English,
- POL - displaying pages in Polish.

6.1.4.2. Date and time

Date and time setting:

Format: Year - Month - Day Hour : Minute : Second.

If the cursor is at the height of this option, press the "OK" button to set the appropriate values:



At this time, the year value will flash, using the button

"Up Arrow" or "Down Arrow" set the corresponding value, then press the "Start/Stop" button to move to the month setting. In the same way as setting the year, set the corresponding month, day, hour, minute and second. After setting the appropriate date and time, press "OK" to save, and exit the setting.

6.1.4.3. Temperature unit

Set the temperature display unit:



If the cursor is at the height of this option, press the "OK" button to set the appropriate temperature display unit. You can set the temperature expressed in degrees Celsius (°C) or degrees Fahrenheit (°F).

6.1.4.4. Pressure unit

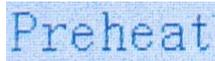


Pressure unit setting:

If the cursor is at the height of this option, press the "OK" button to set the appropriate pressure display unit.

You can set 3 units of pressure: kPa, bar, psi.

6.1.4.5. Preheating



The user can set to enable or disable the preheating function. If the cursor is at the height of this option, press the "OK" button, and then select:

- ON/OFF to enable this function. This means that when the power is turned on, the device will start heating and keeping warm to reduce the sterilization cycle time.
- OFF/ON to disable this function. This means that when the power is turned on, the device will not start heating. Only when the cycle is started, the preheating will start and the entire sterilization cycle will be 5 - 7 minutes longer than when the preheating function is enabled.

It is recommended to set this setting to ON/OFF (enable this function).



DANGER

If the preheat function is enabled, take special care not to touch the sterilization chamber when the door is open to avoid burns.

6.1.4.6. Drying level

If after the sterilization cycle is completed, the set drying level is insufficient, this level should be increased accordingly to solve this problem.

If the cursor is at the height of this option, press the "OK" button to set the appropriate drying level: I/II/III.

The drying time suitable for each level is as follows:

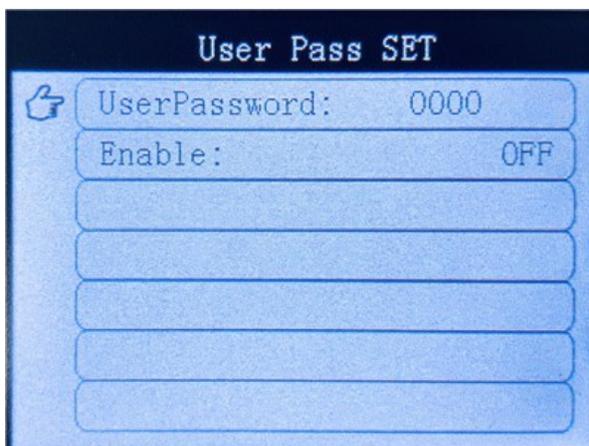
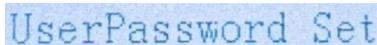


Level	134°C Universal 134°C Universal	134°C Quick 134°C Quick	134°C Solid 134°C Lite	121°C Universal 121°C Universal
I	6	4	2	8
II	10	6	2	12
III	14	8	2	16

6.1.4.7. User password

Set user password:

You can set the password required to be entered when starting the device. If the cursor is at the height of this option, press the "OK" button to set the password as shown in the interface below.

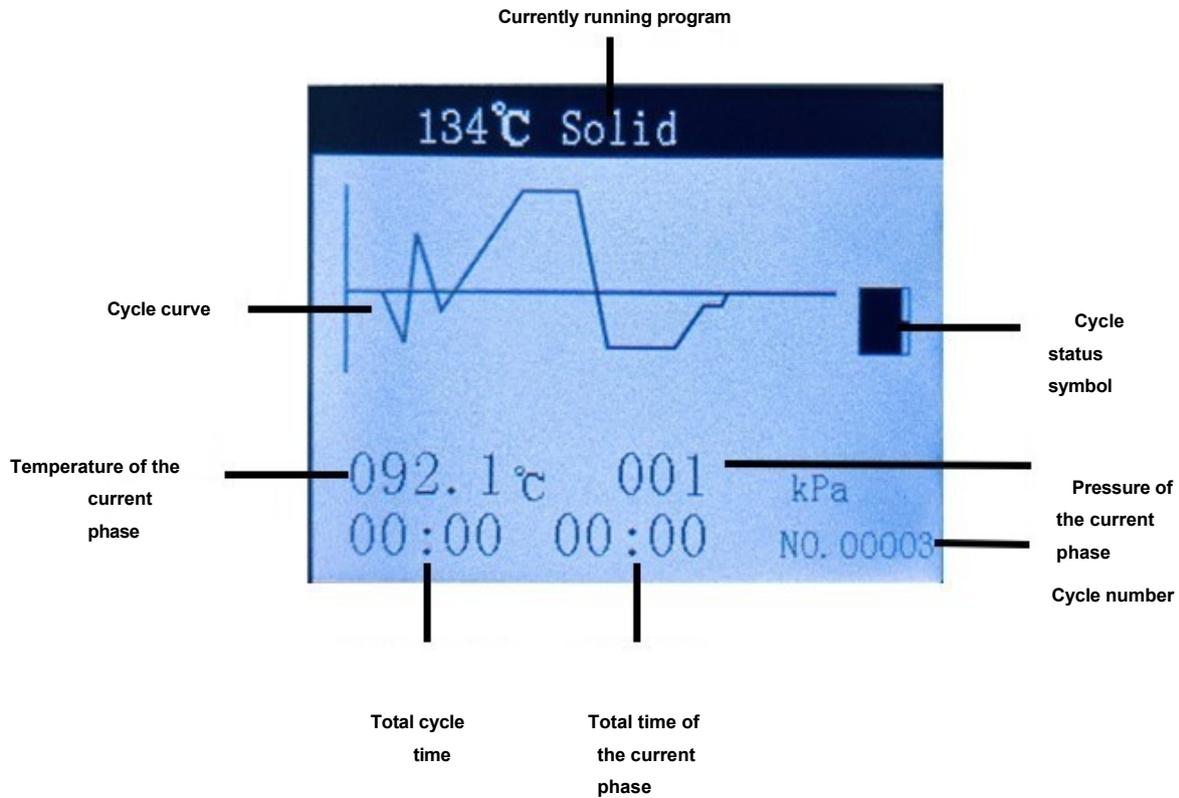


Move the cursor to the height of the UserPassword item, and then press the "OK" button to enter the password setting:

- Press the "Up Arrow" button 1 time to increase the digit by 1;
- Press the "Down Arrow" button 1 time to reduce the digit by 1;
- Press the "Start/Stop" button 1 time to change the highlighted digit;
- After setting the password, press "OK" to confirm;
- Move the cursor to the "Enable" position ("Enable") and press "OK" to set ON/OFF or OFF/OFF password.

6.1.5. Launching the site and the graphical module of the running interface

6.1.5.1. After selecting the appropriate program, the interface of the program to be run will be displayed, for example, the interface of the 134°C Solid (134°C Lite) program will be presented as follows:



6.1.5.2. The selected program will start when you press the "Start/Stop" button, the cycle curve will start flashing and the counting of the total cycle time will begin.

The line on the process flow chart will flash to indicate the cycle stage in progress. See Appendix 2 for a description of each stage.

6.1.6. The way messages are presented and explained

No.	Method of presentation messages	Description
1.		Insufficient water to run the cycle. Refill the tank for clean water.
2.		Necessarily close the door before starting the program.
3.		The door is closed.
4.		The door is locked to prevent it from opening during operation.
5.	Bad water quality. Inadequate water quality.	Inadequate water quality in clean water tank - replace For distilled or deionized water of suitable quality.
6.	Plese open the door, wait machine to cool down then try again. Open door, wait until the chamber has cooled down and try to again.	The sterilization chamber is too hot because immediately after the 134°C program ended, the 121°C program was started. Open the door to cool the chamber to the right temperature, this may take about 5 - 7 minutes.

7.	Please replace the bacterial filter.	Worn bacteriological filter. Replace the filter with a new one.
	Replace the bacteriological filter.	
8.	Please replace door seal.	Worn door seal. Replace the gasket with a new one.
	Replace the door seal.	
9.	Need maintenance.	The deadline for periodic inspection and maintenance performed by the manufacturer or an authorized service center has passed.
	Required maintenance.	
10.	Last cycle ended improperly.	The last cycle was carried out incorrectly, for example, due to a stoppage by the user, power failure or equipment failure. In such situations, the batch must be considered non-sterile. It is required to repetition of the cycle.
	Last cycle incorrectly completed.	
11.	Please clear error.	Do not use the equipment if there is a malfunction. Qualified technical personnel are required to confirm whether the equipment is operational, complete or intact. If a problem or malfunction occurs, it is imperative that the problem be solved or the malfunction repaired first, before the equipment will continue to be used.
	Explain the error message.	

7. PREPARATION FOR USE

7.1. Preparation for use

Before use, check the following items:

1. If recording of sterilization results is required, make sure an SD memory card is connected.
2. Make sure that the door gasket and the surface in contact with the gasket on the chamber side are clean. If they are not, clean them. Excessive dirt can cause leaks.

Only after visual confirmation of efficiency can the device be turned on.

7.2. Connection of the pipe for the discharge of used water

Used water can be discharged through:

1. Connecting directly to the sewer system or,
2. Connection to an external waste water tank.

Connect the drain line/hose connector to the drain valve for draining used water in the unit, and bring the other end to the sewer system or connect to the tank.



CAUTION

If a waste water tank is used, check its fill level daily. If it is full or close to full, it should be emptied.

7.3. Emptying the used water tank

If the waste water tank is full, it must be emptied before running the program. Do not run the program if the tank is full.

Always empty the tank completely.

7.4. Filling the clean water tank

If there is insufficient water in the clean water tank, the machine will not run the program. If the tank is empty or the water level is too low, refill the water by pouring at least 300 ml of water into the tank.

7.5. Placing the charge in the chamber

Use a handle/grip to place the load to avoid the risk of burns caused by touching the chamber.

 WARNING	Do not touch any wall of the sterilization chamber to avoid the risk of burns.
--------------------	--

Place the sterilization load in the chamber according to the following guidelines:

1. Contact of items to be sterilized with the walls of the chamber is prohibited. It is also required to provide free space between packages to ensure free penetration of steam.
2. It is forbidden to distort or bend objects with a tubular structure intended for sterilization. If objects with such structure are sterilized, they must be kept in a straight line.
3. If the sterilized items have holes, slots or recesses, in such situations they must always be arranged in such a way that their holes or channels are in an open position and pointing downward to avoid water collecting in them and thus leading to improper drying.
4. Distribute items evenly, at appropriate intervals, in such a way that they do not touch each other, do not stack, otherwise it may cause ineffective sterilization and drying.
5. It is advisable that the items to be sterilized at the same time should be made of the same material. If the materials are differentiated, then metal instruments/instruments should be placed at the bottom of the chamber, and fabric products at the top.
6. When sterilizing instruments in paper and foil packages, place packages on top for To facilitate their drying.
7. It is forbidden to place the tray with packaged items directly on textile or soft goods to avoid condensation of water on lower items;
8. The objects to be sterilized must meet the conditions described in section 5.2.2, and the placed charge must not be more than 70% of the volume of the chamber.

7.6. Closing the door

Push the door all the way down by hand, then turn the rotary handle clockwise as far as it will go until the door is locked.

The rotary handle in the closed position of the door looks as follows:



7.7. Program selection

Select a sterilization program suitable for the type of load. Information on selecting a program for the type of load is presented in section 5.2.1. There are no significant differences between the 134 °C sterilization process and the 121 °C process. It is recommended to use the former method (at 134 °C) whenever possible, as the process is faster. However, this program is only for solid, unwrapped items intended for immediate use after sterilization.



WARNING

The autoclave is designed exclusively to sterilize medical devices that are resistant to moisture and heat. It cannot be used to sterilize oily materials and powders, such as petroleum jelly, agar.

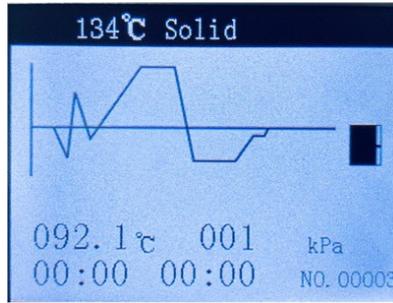


DANGER

Autoclave cannot be used to sterilize liquids or liquids in closed vessels (especially glassware), as this leads to the bursting of these vessels, thus endangering the safety of people and equipment.

7.8. Launching the program

When you select the appropriate program in the Program menu or when you directly select the program shortcut on the home page, the interface of the selected program will be displayed:



The device will automatically start the program, after pressing the "Start/Stop" button.

7.9. Interruption of the program by the user

If you need to stop the unit during the cycle, press and hold the "Start/Stop" button for 5 seconds. The device will automatically begin to lower the pressure to a safe level and end the program, only then will you be able to open the door.

7.10. Opening the door and unloading the chamber

7.10.1. Opening the door

When the program is finished, turn the rotary handle to the left to open the door.

7.10.2. Discharge of the chamber

When the cycle is complete, you can open the door and remove the sterilized items. To remove them, absolutely use a special handle (handle) for removing trays or special insulated gloves or other means of protection from high temperatures.



WARNING

Always use a special tray removal handle (handle) or special insulated gloves or other protective equipment to remove the sterilization load to avoid the risk of burns.



CAUTION

If the sterilization load is removed from the device immediately after the program ends, there may be a small amount of moisture on the sterilized items, it is recommended to open the door and wait 5 minutes before starting to empty the chamber.

7.11. Reading and archiving results

7.11.1. Reading cycle data

The method of reading the data is shown in Appendix 3.

7.11.2. Archiving cycle data

It is recommended to regularly back up the data ripped to the SD card, and then delete them from the card, every 3 months. Too much data stored on the SD card, will fill up the entire card, and once the card is full, older records will be automatically overwritten with new ones.

7.12. Emergency door opening

If the door cannot be opened due to an equipment malfunction (such as one signaled by an E05 alarm), and the load must be removed from the unit, follow the steps below:

The condition for safety is to turn off the power to the device and equalize the pressure in the chamber With atmospheric pressure.

1. Open the safety valve with a tool to completely lower the internal pressure. It is absolutely necessary to be very careful not to get burned by the steam coming out of the device. Always use special insulated protective gloves for this purpose.
2. Turn on the power.
3. Open the door.



DANGER

During the emergency opening of the door, the autoclave must be turned off and disconnected from the power source, and the pressure in the chamber must be equal to atmospheric.

7.13. Preparing for an extended break in use

If the device will not be used for an extended period of time (4 days or longer), the device should be properly prepared for downtime, ie:

1. Completely empty the clean water tank, as well as the external waste water tank, if used.
2. Disconnect the device from the power source.
3. Store the device in a place where it will not be exposed to high temperature and high humidity.

8. LIST OF ERROR MESSAGES

If a malfunction or any situation abnormal to the proper operation of the unit occurs during operation, the autoclave will automatically raise an alarm, stop the program and lower the pressure to ensure operator safety. In such a situation, the corresponding error code number will be displayed on the screen.

Immediately after the alarm occurs, record the error code information and disconnect the power supply. If it is not possible to solve the problem yourself, according to the information in the table below, as soon as possible contact the manufacturer or an authorized service center to solve the problem.



CAUTION

If an error code is displayed, it is advisable to run the program once again and see if the error code displays again. If the error code appears again, contact the manufacturer or With an authorized service center to resolve the problem.

List of error codes and possible ways to resolve them

L.p.	Code error	Current status	Cause	Possible solutions
1.	E31	The temperature in the sterilization chamber is > 150°C.	Defective temperature sensor in the sterilization chamber.	Check the temperature sensor in the sterilization chamber.
2.	E32	Temperature of the heating ring in the chamber is > 220°C.	Defective heating jacket temperature sensor.	Check the heating jacket temperature sensor.
3.	E33	Heating pipe temperature The steam generator is ≥ 230°C.	Defective temperature sensor steam generator.	Check the temperature sensor steam generator.
4.	E51	The temperature in the sterilization chamber is ≤ 0°C.	1. Short-circuit of the temperature sensor in the sterilization chamber. 2. Ambient temperature is too low.	1. Check the temperature sensor in the sterilization chamber. 2. Check the temperature In the room whether it is < 0°C.
5.	E52	The temperature of the heating jacket is ≤ 0°C.	1. Short circuit of the heating ring temperature sensor. 2. Ambient temperature is too low.	1. Check the heating jacket temperature sensor. 2. Check the temperature In the room whether it is < 0°C.

6.	E53	The temperature of the steam generator heating pipe is $\leq 0^{\circ}\text{C}$.	<ol style="list-style-type: none"> 1. Short-circuit of the steam generator temperature sensor. 2. Ambient temperature is too low. 	<ol style="list-style-type: none"> 1. Check the temperature sensor of the steam generator. 2. Check the temperature in the room whether it is $< 0^{\circ}\text{C}$.
7.	E61	Program 134°C : chamber temperature is $>140^{\circ}\text{C}$ and $\leq 150^{\circ}\text{C}$.	<ol style="list-style-type: none"> 1. Too weak contact of the chamber temperature sensor connector. 2. Damaged control board. 	<ol style="list-style-type: none"> 1. Repair/replace the chamber temperature sensor connector. 2. Replace the control board.
		Program 121°C : chamber temperature is $> 127^{\circ}\text{C}$ and $\leq 150^{\circ}\text{C}$.		
8.	E62	Heating jacket temperature is $> 190^{\circ}\text{C}$ and $\leq 220^{\circ}\text{C}$.	<ol style="list-style-type: none"> 1. Sensor connector contact too weak heating jacket temperature. 2. Damaged control board. 	<ol style="list-style-type: none"> 1. Repair/replace the heating jacket temperature sensor connector. 2. Replace the control board.
9.	E63	The temperature of the heating jacket is $> 160^{\circ}\text{C}$ and $\leq 230^{\circ}\text{C}$.	<ol style="list-style-type: none"> 1. Too weak contact of the heating jacket temperature sensor connector. 2. Damaged control board. 3. Defective water pump. 	<ol style="list-style-type: none"> 1. Repair/replace the heating jacket temperature sensor connector. 2. Replace the control board. 3. Replace the water pump.
10.	E2	Too high pressure during sterilization: 134°C program: pressure > 235 kPa; 121°C program: The pressure is > 135 kPa.	Insufficient vacuum, more cold air remains.	Check the vacuum pump and valve For vacuum.
11.	E41	After 8 minutes of the preheating phase, the temperature of the heating jacket is $< 100^{\circ}\text{C}$.	Heating jacket failure.	Check the heating jacket thermostat and the mating thermostat.
12.	E42	After 8 minutes of the warm-up phase The initial temperature of the steam generator is $< 110^{\circ}\text{C}$.	Failure of the heating rod of the steam generator.	Check the heating rod thermostat and a mating thermostat.
13.	E5	After 10 minutes of the sterilization phase, pressure release has not reached < 20 kPa.	Clogged duct For water drainage.	<ol style="list-style-type: none"> 1. Clean and sterilize the internal filters. 2. Check the drain solenoid valve and vacuum valve
14.	E6	Door safety switch contact opened during the run Program.	Offset safety switch sensor, microswitch does not work properly.	Replace the door safety switch.
15.	E7	Atmospheric pressure is <70 kPa.	<ol style="list-style-type: none"> 1. Incorrect value of stored pressure. 2. Too low atmospheric pressure. 	<ol style="list-style-type: none"> 1. Adjust the pressure. 2. Use the device at height < 2500 m above sea level.
16.	E8	During the heating process, the pressure increase in 1 min is < 3 kPa.	<ol style="list-style-type: none"> 1. Water cannot be drawn. 2. Steam generator heating rod damaged. 3. Damaged door seal. 	<ol style="list-style-type: none"> 1. Check, water level in the clean water tank and a water level sensor. 2. Check the pump and inlet solenoid valve. 3. Check the door seal.
17.	E9	Too low pressure during sterilization: 134°C program: pressure < 100 kPa; 121°C program: pressure < 200 kPa.	<ol style="list-style-type: none"> 1. Excessive chamber loading. 2. The pump cannot draw water. 	<ol style="list-style-type: none"> 1. Reduce the load. 2. Check, water level in the clean water tank and a water level sensor. 3. Check the water pump and inlet solenoid valve.
18.	E10	Unlocked door during cycle launched.	Defective door lock.	Check the door solenoid and control board.

19.	E11	The door does not open when the program ends. The door opens while Program.	1. A damaged or jammed electric door lock. 2. Damaged control board.	Check the electric lock and control board.
20.	E12	When running a program where there is a 2-fold vacuum generation, level cannot be reached < -70kPa.	1. Incorrect loading of the chamber. 2. Defective vacuum pump. 3. The door seal is leaking.	1. Run the program with an empty chamber (no charge). 2. Check the vacuum pump. 3. Check that the door is closed enough that they cannot be moved.
21.	E16	In the sterilization chamber still there is a high vacuum at the end of the program.	1. Clogged or worn air filter. 2. Defective inlet solenoid valve.	1. Replace the air filter. 2. Check the inlet solenoid valve and control board.

9. CONSERVATION

A prerequisite for the safe and reliable operation of the autoclave is regular periodic inspection, cleaning and maintenance processes.

9.1. Safety rules when maintaining the device

1. Sufficient lighting is required to carry out any maintenance of the device, i.e. the illumination should be at least 100 lux.
2. Any maintenance work, perform only when the device is disconnected from the power source, and when the device is completely cooled down.
3. Use only original consumables and accessories. Use of other substitutes not provided by the device manufacturer, can lead to unpredictable damage.
4. The performance of activities beyond the routine maintenance scheduled to be carried out by the user can only be performed by the manufacturer or an authorized service center.
5. The user can independently replace the following consumables and/or accessories: air filter, door seal, safety valve, power cord and others directly internal components available.



9.2. Maintenance plan

9.2.1. Cleaning plan

L.p.	Required action	Frequency	Target status	Note
1.	Cleaning the sterilization chamber	Once a week	Clean, free From pollution and water.	See 9.3.1
2.	Cleaning the clean tank water	Once a month	No contamination.	See 9.3.2
3.	Cleaning the drain filter	Once a month	Transparent filter area.	See 9.3.3
4.	Cleaning the door seal	Once a week	No contamination.	See 9.3.4
5.	Cleaning filter w tank for pure water	Once a month	Transparent filter area.	See 9.3.5

9.2.2. Check plan

L.p.	Required action	Frequency	Target status	Note
1.	Inspection of the safety valve protecting the chamber	1 time every six months	You can check whether the valve is working properly. Absolutely do not do this while cycle launched.	See 9.3.6

2.	Checking the level sensor water in the clean water tank	1 time every six months	Alarm triggering In case of water shortage.	See 9.3.7
3.	Checking the water quality sensor	1 time every six months	Alarm triggering In case of inadequate water quality.	See 9.3.8
4.	Check cable power-jing	1 time every six months	No damage to insulation External.	See 9.3.9
5.	Check battery panel push-button control	1 time every six months	Display of correct date and time values.	See 9.3.10
6.	Checking for leaks (performing a leakage test)	Every day as first activity	Successful test result.	See 9.3.11
7.	Checking the fuse	1 time a year	No blackout.	See 9.3.12
8.	Checking the waste water tank (if used)	Every day before start of the program	Empty the tank, if it is filled, which At least halfway through.	See 9.3.13

9.2.3. Maintenance plan

L.p.	Required action	Frequency	Target status	Note
1.	Replacement of the bacteriological filter	1 time, every 150 cycles	Well, permanently embedded.	See 9.3.14
2.	Door seal replacement	1 time every 2 years	The wide side of the seal facing outward. Adjacent gasket flat to the ground.	See 9.3.15
3.	Replacement of the button control panel battery	1 time every 2 years	Display of correct date and time values (even after 5 minutes have elapsed from the shutdown).	See 9.3.16

9.3. Detailed information

9.3.1. Cleaning the sterilization chamber: wipe the wall of the sterilization chamber and the sealing surface of the chamber with a clean, dust-free cloth soaked in water.



CAUTION

Do not use acidic or alkaline pH cleaners to clean the sterilization chamber.



WARNING

Before cleaning the chamber, wait until the chamber has cooled completely to avoid the risk of burning yourself.

9.3.2. Cleaning the clean water tank

Empty the tank, remove sediment and other debris, and then wipe the inner surfaces with a clean, dust-free cloth.



CAUTION

Do not remove the filter from the tank to prevent debris from entering the pipeline, which can cause the pump to fail and trigger an alarm.



WARNING

Only clean water may be used to clean the tank. Do not use other liquids or agents, such as: based on chlorine, methyl alcohol, sodium hypochlorite or acetone, etc., they may cause damage to the tank.

9.3.3. Cleaning the drain filter

There is a drain filter at the front of the sterilization chamber:

1. Turn clockwise to remove the filter from the chamber.
2. Unscrew the inner pressure ring of the filter.
3. Clean the 2 internal filter elements.

4. Reassemble the filter: take care to insert the coarse mesh filter element first, followed by the fine mesh element, and only then screw on the pressure ring.
5. Screw the drain filter into place.



Before cleaning the filter, wait until the chamber has cooled completely to avoid the risk of burning yourself.

WARNING

9.3.4. Cleaning the door seal:

Check whether there is any dirt on the sealing surface, if there is, it must be removed. Then wipe the entire sealing surface with a clean, dust-free cloth soaked in clean water.

9.3.5. Cleaning the clean water tank filter

The clean water tank filter is the same structure as the used water drain filter and is installed in the clean water tank. Before removing the filter, first empty and clean the tank. Clean the filter analogously to how to clean the drain filter described in section 9.3.3.

9.3.6. Checking the safety valve

Regularly, every 6 months, check that the valve opens properly and steam is completely released, to prevent failure of the safety valve. Check the valve as follows:

- 1) Run the program at 134°C.
- 2) Wait until the pressure rises to about 100 kPa. Then pull the ring on the safety valve to move the valve to the open position and wait for about 1 second, if the air and steam are completely released this indicates that the safety valve has been opened. If the valve does not open, stop the program and immediately contact an authorized service center to have the safety valve replaced.
- 3) If the test was successful, let go of the ring and wait for the program run to finish.
- 4) Observe whether steam escapes from the safety valve during the remaining phases of the running program. If it does, contact an authorized service center to have the safety valve replaced. If no steam is escaping, it means that the valve is working properly.



Ring

Safety valve

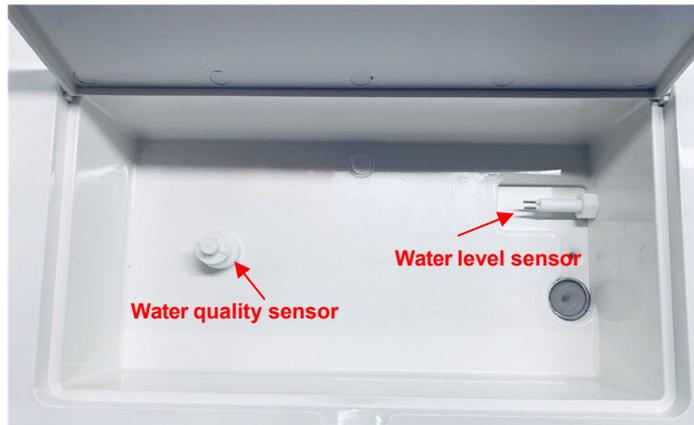


WARNING

When the ring is pulled, steam will be ejected. Pull the ring with a suitable tool, such as a flathead screwdriver or other tool. Absolutely do not do this directly with your hand. The operator must stand as far back as possible and always wear special insulated protective gloves, To avoid the risk of getting burned.

9.3.7. Checking the water level sensor in the clean water tank

With the power on, press the program shortcut button to enter the program interface. Completely drain the water from the tank. If a message about no water is displayed, it means that the sensor is operational. If there is no such message, report the malfunction to the manufacturer or authorized service center.



9.3.8. Checking the water quality sensor

With the power on and the tank filled, short-circuit and hold the two electrodes of the sensor by using a metal object (such as tweezers, scissors, etc.) and wait a few seconds. If a message about inadequate water quality is displayed, report the fault to the manufacturer or authorized service center.

9.3.9. Checking the power cord

Check the outer surface of the power cord for any damage. If the cable is damaged, contact the manufacturer or an authorized service center for replacement.

9.3.10. Checking the button control panel battery

Check the date and time on the display when the device is turned on. If these values are incorrect, the battery may be dead and should be replaced.

9.3.11. Checking for leaks

To check for leaks, perform the vacuum test "Vacuum Test". Carry out the test with an empty chamber (no charge). After the test is completed, the device will display the result. The device can only be used after successful completion of the test. In case of failure, contact the manufacturer or authorized service center.



Test results may be incorrect if the sterilization chamber is hot or not dry. Conduct the leak test only when the chamber is dry and cold.

9.3.12. Checking the fuse



Turn off the device and disconnect the power cord. Lift the fuse holder cover with a flat screwdriver. Remove the fuse and check if any blackout is visible. If there is, replace the fuse immediately.

When replacing the fuse, make sure that the new fuse is of the same type. Use a fuse with the designation: F15AL250V.



Make sure that the new fuse is in accordance with the specifications, otherwise it may cause the failure of functional safety components and thus damage the device or endanger the operator. Checking or replacing the fuse can only be done with the unit turned off and with the power cord disconnected from the unit and from the electrical outlet.

9.3.13. Checking the waste water tank (if used)

If an external waste water tank is used, check every day before starting work, Whether it is not full or close to full. If it is filled, at least half full, empty the tank.

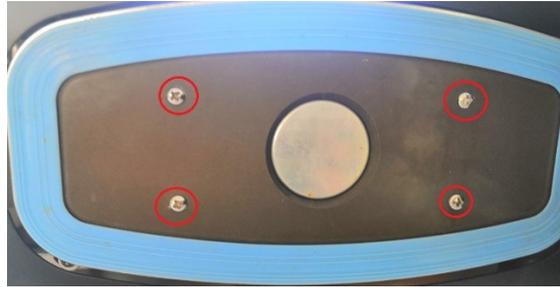
9.3.14. Replacement of the bacteriological filter

The position of the bacteriological filter is shown in section 1.5. Turn the filter to the left, remove it and install a new one.

9.3.15. Door seal replacement

After removing the 4 screws shown in the photo opposite, first separate a certain part of the gasket, and then remove the entire gasket.

Insert the new gasket by carefully pushing the gasket into each of the 4 grooves. Then push the remaining sections of the gasket all the way in, put the cover on and screw it on.



Before replacing the seal, make sure the door cover is completely cooled to avoid the risk of burning yourself.

WARNING

9.3.16. Replacement of button control panel batteries

The push-button control panel is powered by a battery (1 x CR2032). If the battery runs out, the user must independently replace the used battery with a new one of the same type.

Replacement method: Unscrew the 2 screws at the bottom of the panel, remove the chamber cover, lever the battery with a flat screwdriver and remove. Insert the new battery and fix the compartment cover.



10. SERVICE AND WARRANTY TERMS AND CONDITIONS

10.1. Service

Servicing is necessary for the device to function properly. An annual (every 12 months) inspection of the device is required. Service may be performed only by qualified personnel of the warranty and post-warranty service company designated by the manufacturer.

10.2. Warranty

The expected life of the device is 5 years. The device is covered by a 2-year warranty, which begins on the date of the invoice. Any failure or damage caused by proper installation, use and service of the device in accordance with the provisions of this manual, under the warranty is covered by free replacement or repair of faulty components. The warranty does not cover consumables. Servicing by unauthorized parties excludes any claim under the warranty and any other claims.

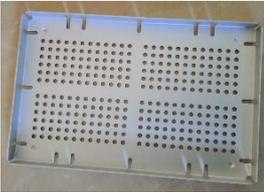
The warranty is void, even during the warranty period in the following cases:

- Damage or defects caused by improper installation and operation,
- damage or malfunctions caused by damage to the device, such as from a fall or impact,

- damage or malfunctions caused by the installation and repair of the device by entities not authorized by the manufacturer,
- lack of proof of purchase and warranty card,
- damage or malfunction due to a fortuitous event (e.g., surge or fire),
- Use of non-original consumables and accessories,
- normal wear and tear of consumable materials and accessories,
- to blur, modify, damage or remove any markings, labels/tags, including warning and information stickers from the device/product,
- if the serial/partial number of the device has been removed, altered, or is illegible, or the authenticity of the device/product cannot be confirmed.

In cases not covered by the warranty, including after the warranty period has expired, repairs are made against payment. Detailed warranty conditions are presented in the warranty card.

11. ACCESSORIES

Lp.	Item name	Photo	Comment
1.	Instrument tray (1 unit is standard, 2 units are optionally available).		It is used to place objects or instruments. It is used to place on a stand on trays.
2.	Tray rack (optional).		The lower part is used to arrange items for sterilization. The upper part is used to accommodate instrument trays.
3.	External tank for used water (optional).		It is used to collect used water discharged during the cycle.
4.	Handle (handle) for removing trays.		Always use a handle (grip) to remove trays from the chamber to avoid the risk of burning yourself.
5.	Cable/hose drain (2 pcs.)		It is used to drain water.
6.	Power cord (1 piece).		

12. ANNOUNCEMENTS**Appendix 1 Items and results of the audit**

Subject of the test	Method of compliance	Result
Dynamic pressure control	Type testing	Compatible
Air leakage	Inspection of the finished product	Compatible
Empty chamber test	Inspection of the finished product	Compatible
Solid input	Type testing	Compatible
Small porous objects	Type testing	Compatible
Small porous batches	Type testing	Compatible
Full porous charge	Type testing	Compatible
Type B hollow charge	Type testing	Compatible
Type A recessed charge	Inspection of the finished product	Compatible
Multilayer packaging	Type testing	Compatible
Drying solid batches	Type testing	Compatible
Drying porous batches	Type testing	Compatible

Appendix 2 Explanation of each step in the process

Lp.	Method displays	Explanation
1.	Standby	The device is in sleep mode, after exiting the mode it is ready for operation.
2.	Warm up	Preheating phase.
3.	vacuum	Air discharge phase.
4.	Raise	Saturated steam is injected into the sterilization chamber: temperature rise and pressure in the chamber.
5.	drain	Emptying (draining water and releasing steam) the sterilization chamber.
6.	Sterilization	Sterilization: maintaining the sterilization pressure and temperature.
7.	dry	Vacuum drying.
8.	equilibrium	Air is drawn inside the sterilization chamber through a bacteriological filter to equalize the pressure in the chamber to atmospheric pressure.
9.	End	Termination of the running program.

Attachment No. 3 Sample printout of the result of the completed program

SERIAL NO.:300012345

OPERATER:

---CLASS B---

COUNT:00001

B.W. WATER COUNT

DATE: 01-07-2020

TIME: 15:46:25

PROGRAM: 134 / QUICK

HH:MM:SS KPA °C

START

15:51:43 000 072.6 05:18

VACUUM

15:52:45 -080 079.1 01: 02

RAISE

15:53:00 021 089.2 00:15

VACUUM

15:53:50 -080 095.2 00:50

RAISE

15:54:05 010 103.9 00:14

VACUUM

15:55:09 -080 105.7 01:05

RAISE

15:56:24 221 133.7 01:15

STER-START:

15:56:24 221 133.7 01:15

MAX TEMP: 136.1

MIN TEMP: 133.7

MAX PRESS: 227

MIN PRESS: 207

STER-END

16:00: 24213 134.6 04:00

DRY-END

16:04:58 -017 118.8 04:34

CYCLE COMPLETE

16:04: 59000 119.1 00:01



Duration of the entire cycle (18 m : 34 s)

During the sterilization phase

SERIAL NO.:	SERIAL NO.:
OPERATOR:	OPERATOR:
CLASS B	CLASS B
COUNT:	CYCLE NUMBER:
B.W. WATER COUNT	QUANTITY/QUALITY
DATE:	OF WATER DATE:
TIME:	TIME:
PROGRAM: 134 / QUICK	PROGRAM: 134 / PROMPT
HH:MM:SS	HG:MM:SS
START	START
VACUUM	PHASE GENERATION
	OF VACUUM
RAISE	PHASE INCREASE
	IN TEMPERATURE AND
	PRESSURE IN THE
	CHAMBER
RUDDER-START: MAX	STERILIZATION
TEMP: MIN	START MAX.
TEMP: MAX	TEMPERATURE MIN.
PRESS: MIN	TEMPERATURE MAX.
PRESS:	PRESSURE
RUDDER-END	MIN. PRESSURE END
DRY-END	OF STERILIZATION
CYCLE COMPLETE	END OF DRYING
	COMPLETE CYCLE

13.CONTACT INFORMATION**PRODUCER****Ningbo Haishu Life Medical Technology Co., Ltd.**

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Number and date of issuance of instructions:
GC-JS-22 01/00 2020-07-22 GB | 09.11.2020 EN