



Laboratory Equipment Manufacturer
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10Liter Pressure Autoclave

STE-10L

Operation manual



**PLEASE READ THIS MANUAL CAREFULLY BEFORE
OPERATION**

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Summary

This autoclave used electric heating water, in seal condition, will produce saturated steam which humidify, heat and permeate the sterilized object. Then hold temperature and press for a period of time to kill the microorganism for the purpose of sterilization.

Portable, beautiful appearances, simple usage, reliable sterilizing effect, good safety, all of these are the advantages of this autoclave.

The products are usually used to kill microorganism on some surgical instruments, surgical dressing, glassware, liquid medicine, culture media in medical institution and labs.

Parameters

Power : $\sim 220V \pm 10\%$ 50Hz ± 1 Hz

Consumption: 1.2KVA

Working temperature: MAX 126C

ambient temperature: 5~ 40C

relative humidity: $\leq 80\%$

atmospheric pressure: 70kPa-106kPa

Characteristics

- Good grounding function
- Clearance work
- Use stainless steel of high quality which has several characteristic of high density, good cry sterilization performance, high mechanical strength
- Safety valve: with maximum working pressure of 0.165MPa
- Equipped with safety valve, release valve and double-scale pressure gauge
- Concave spherical shape design
- Immersive heating element of good safety
- Anti-dry burning

Usage

Feeding

Switch on the power for water shortage alarm for the galvanothermy tube to be off. Take out the liner and fill about 2 kilograms of domestic water into the pot with the water keeping level with the upper end of one liner rack (the water level shall be over the galvanothermy tube by about 2cm, and it shall not be too much). By this time, the water shortage alarm stops and the service indicator is on, and the sterilizer enters the heating state. If it has to work continuously, the water must be supplemented to the above-stated level before operating each time to avoid burning of the galvanothermy tube or any accidents.

Piling

The items to be sterilized shall be piled in packages instead of in bulk. They shall be piled on the sieve plate one by one with clearance left between packages for easy inflow of the steam and for better sterilizing effect. It shall be cautious that a space shall be left for the steam vent on the safety valve for smooth release of the steam (no granular or linear items or items subject to inflation after heating are allowed to be sterilized in the sterilizer), or the vent of the safety valve may be blocked to make pressure release impossible, which may cause cracking of the pot.

Sealing

Place the sterilizing drum with properly-piled items into the pot with the positioning mark on the pot lid to be aligned to the center of the lower handle. Press the lid gently by hand and turn it clockwise for the upper and lower handles to close completely and the safety lock to remain in open position, and the safety lock will lock the upper and lower handles automatically when the pressure in pot rises.

Heating

Don't pull off plug when using because contact capacity between plug and plug base will be reduced. If use the plug of bad contact capacity again, the plug base will heat even burn plug and itself by passing a large current through the plug

When heating, put the small handle of release valve on the vertical position for the purpose of exhausting air from the chamber. Until the stronger steam spraying, put the handle to the last position. At that time the pressure gauge pointer will gradually rise. For liquid sterilization, some water will spray from release valve. Please instantly dry it by using absorbent cloth

keeping temperature

When pressure arises to the controlling range of safety valve, the autoclave will keep temperature by releasing stream intermittently from safety valve.

。 When arrive the 126C, the autoclave will keep temperature and pressure by safety valve. If need sterilization below the temperature mentioned above, apply a 3kVA/220V AC voltage regulator before power line. Once arrive the need temperature range, turn down the voltage to keep the temperature.

Drying

For medical apparatus, surgical dressing and glassware sterilization cut off the power after timing and exhaust the stream from release valve until the pressure gauge shows zero.

Then wait for 1-2mins, open the cover and heat for extra 10-15mins.

For liquid sterilization, don't exhaust the stream, otherwise, because high temperature of liquid and pressure releasing, the liquid will boil, which will lead to effusion or explosion.

Sterilizing Parameters

Item to be sterilized	Necessary heat preservation time	Relative steam temperature (°C)	Relative steam pressure(MPa)
Rubber	15	121	0.1-0.105
Dressings	30-45	121-126	0.105-0.14
Utensils	15	121-126	0.105-0.14
Apparatus	10	121-126	0.105-0.14
Liquor	20-40	121-126	0.105-0.14
Dishware	20	121-126	0.105-0.14

Precautions

1. When placing the items to be sterilized, it is forbidden to block the safety valve and the vent of the steam exhausting valve, and a clearance must be left to ensure free flowing of the air, or the safety valve and the steam exhausting valve may stop work because the vent is blocked.

2. When liquor is sterilized, it shall be placed in a Pyrex bulb without exceeding 3/4 of the volume. The bulb mouth shall be blocked with cotton yarn, and imperforated rubber or cork plug shall not be used.

Special Attention: After sterilizing of the liquor completes, it is not allowed to release the steam at once, which may only be done when the hand on pressure gauge points zero.

3. The different types of items or items with different sterilizing requirements, such dressings and liquors, etc. shall not be placed together when they are sterilized to avoid loss.

4. If sterilizing has finished and the hand of pressure gauge has returned zero but the lid is hard to open, the of the steam exhausting valve may be placed at the releasing position for outer air able to enter the sterilizer, and the lid will be opened after the vacuum is removed.

5. If the pressure gauge cannot indicate correctly or return to zero for a long time of service, it shall be repaired as soon as possible. It shall be checked periodically by comparing with a standard pressure gauge and be replaced if it fails to work normally.

6. The equipment shall always kept clean and dry in order to extend its service life, and the rubber seal shall be replaced periodically for it may be aged after being used for a long time.

7. Replacing of the fuse and other components: if the power lamp cannot work though the power is switched on, the plug, socket and connecting wire shall be examined for soundness. If no problem is found in the plug, socket and connecting wire, the fuse shall be checked, and the damaged fuse shall be replaced to keep normal operation of the equipment.

8. The safety valve shall be checked periodically for its reliability. If it fails to function when the working pressure exceeds 0.142MPa (0.165 MPa at maximum), it shall be replaced by a qualified safety valve.

9. If, within 12 months from the date of purchase, the product is found unable to work properly though the user fully observes the regulations stated in Operation Manual and, in no cases, any internal structure is altered without approval, the manufacturer will be responsible for replacing or repairing it free of charge.

10. The external power supply for the equipment shall be equipped with leakage protection air-break switch with its current over 16A.

11. The power plug of the equipment may only be plugged or unplugged after the power is off.

12. The equipment shall be cleaned daily after the work is over. When cleaning, the power plug shall be unplugged, and then pour the remaining water and use a brush or a piece of cloth to remove the scales or residues that are attached to inner wall of the sterilizer, and clean it with fresh water. It shall be cautious that the equipment shall be kept away from moisture.

13. The input power supply for the equipment shall be 220V 15A, and the fuse model shall be P3.15AL.250V 15A, $\phi 6\text{mm} \times 30\text{mm}$.

14. The necessary electric fittings shall be purchased from us or use qualified products that are purchased from the market and have safety certificates.

15. The service life of the product is 10,000 hours (about 5 years).