



OPERATION MANUAL FOR
UTFB/UTFBS/UTKB/UTKBS
30LV/50LV/75LV
Vertical Pressure Autoclave



The Autoclave Cover, shown/drown as a Hand wheel type of quick-open door structure, just for an example case. The instructions are for all autoclave models.

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VERTICAL PRESSURE AUTOCLAVE

- Computer control auto recycle sterilization
- LCD screen indicate working state
- Temp. scope 50–126°C
- Time scope 0–99h
- Overpressure auto-discharging 0.145–0.165MPa
- Automatic shut down with beep reminding after sterilization



UTFB

**Stainless steel
sterilizing chamber**



UTFBS

Full stainless steel



UTKBS

Full stainless steel

- Hand wheel type of quick-open door structure.
- Pressure safety lock

Specifications:

MODEL	UTxxx*-30LV	UTxxx*-50LV	UTKB-75LV	UTKBS-100LV	UTKBS-150LV	UTKBS-200LV
VOLUME	30L	50L	75L	100L	150L	200L
POWER SOURCE	220V	220V	220/380V	380V	380V	380V
CONSUMED POWER	3kw	3.5kw	3.5/4.5kw	4.5kw	6.0kw	6.0kw
DIMENSION OF STERILIZING CHAMBER (mm)	Ø350x330	Ø350x520	Ø388x650	Ø500x550	Ø500x760	Ø500x1000
WEIGHT	60kg	80kg	90kg	100kg	120kg	140kg
DIMENSION (mm)	580x580x1000	600x580x1250	600x600x1400	630x630x1300	630x630x1450	630x630x1690

*xxx=FBS,FB,KB,KBS

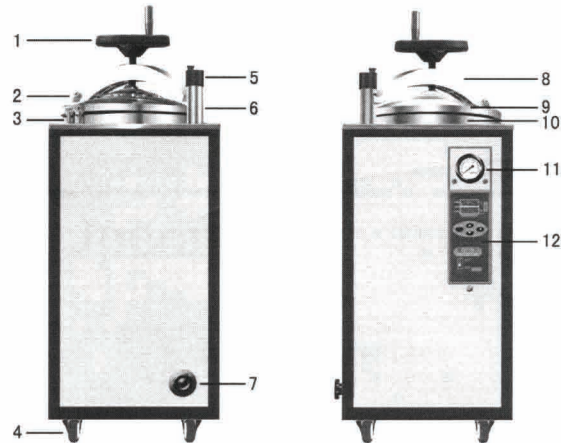
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Automatic Stainless-steel Vertical Pressure Steam Sterilizer

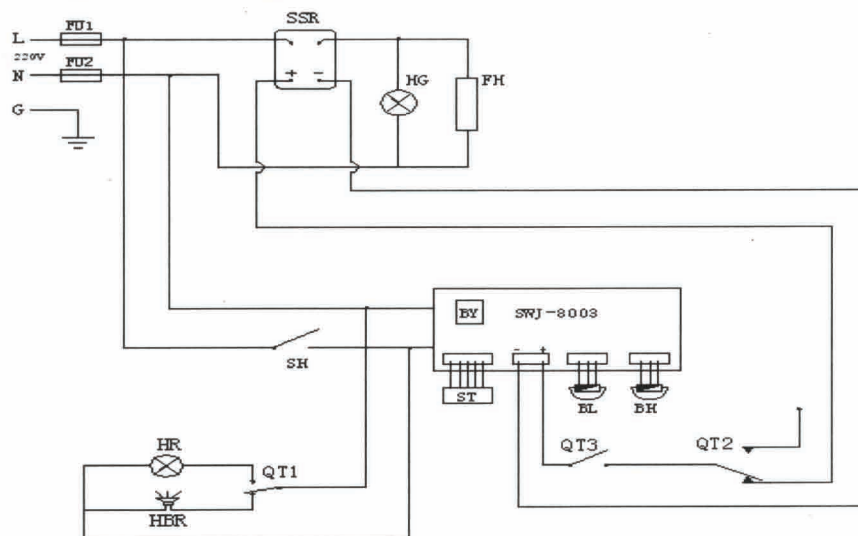
I. Main Structure



Notes:

- | | |
|--------------------------------------|--|
| 1. Manual handle | 7. The control valve for release steam and water |
| 2. Right pole | 8. Upper beam |
| 3. Safety valve, steam release valve | 9. Cover |
| 4. Feet wheel | 10. Body of the machine |
| 5. Safety lock | 11. Pressure meter |
| 6. Left pole | 12. Control panel |

II. Wiring drawing



III. Product Brief Introduction

It is widely used that the saturated steam under the pressure sterilizes devices, dressing, food, glassware, drug liquid, culture medium etc, the sterilizer is designed and manufactured according to the above principle by our company. This machine is made of high quality 304 stainless steel, the technology is advanced, the capability is reliable, the function is complete, it is recognized to a new generation of product. Especially on the safety system, equip with pressure rising self-lock on the handle, prevent rising pressure wrongly; assure the safety and reliability of the product, has the advantage of easy operation, saving time, good effect of sealing, sterilizing completely, is the ideal sterilizing equipment for pharmaceutical, sanitary, biological and scientific industry.

IV. Feature of structure

1. The machine is square; the main body of the machine is made of stainless steel sus304.
2. The machine is equipped with safety valve, steam release valve. When the pressure is above 0.170MPa, the safety valve can skip automatically. Release the over-pressure to make system security. The steam release valve can release cold air before sterilizing and after the procedure it can exhaust hot steam.
3. The stainless steel sterilizing basket is suitable for stacking instrument, cabinet, culture medium and so on.
4. The tank is equipped with pressure controller, when the pressure of the tank is above "0.190Mpa", the controller cut off the heating power supply automatically, assuring the safe.
5. The bottom is equipped with lower steam release valve, which can make the sterilized material dry completely.
6. The pressure meter which is equipped on the top of the machine is double scale, can show the pressure and temperature clearly.
7. The temperature and time can be set up on the control panel, indicator light can display the working condition.

V. Parameter

1. The power pressure is 220V /380v, the fluctuating is $\pm 10\%$
2. The machine should be connected with reliable ground wire, fuse 32A
3. The power plug has L (red) is phase wire, N is zero wire, the power plug should be connected according to the requirement of this machine, (380V should connect middle wire), otherwise the machine won't work.

Model	Volume (Size)	Electric supply	Power	Affirm
UTKB-30	$\phi 350 \times 330$ 30L	220V	3 kw	()
UTKBS-30	$\phi 350 \times 330$ 30L	220V	3 kw	()
UTKB-50	$\phi 350 \times 520$ 75L	220V	3.5 kw	()
UTKBS-50	$\phi 350 \times 520$ 40L	220V	3.5 kw	()
UTKB-75	$\phi 388 \times 650$ 50L	220V/380V	3.5 kw	(/)
UTKBS-75	$\phi 388 \times 650$ 75L	220V/380V	3.5 kw	(/)

VI. Usage

(This machine is pressure machine, should be operated and maintained by expert)

Part one. Open the cover

Rotating the manual handle to the left (picture 1), lift the cover, push the beam to the right, and remove the cover (2).



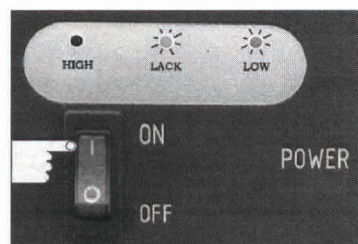
picture 1



picture 2

Part two. Connecting power

Connect the power, which is the same with the nameplate on this machine, press the button on the control panel to ON (3) the water empty and low light will be on. LOW light (red) is on, the steam tank is on the condition of empty water. LACK light (yellow) is on, showing that the power is input to the machine normally.

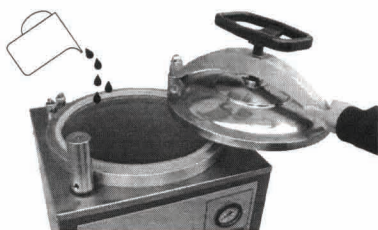


Picture 3

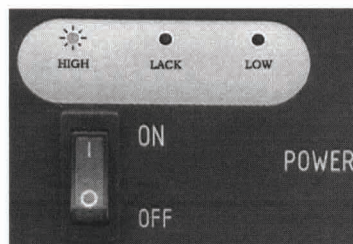
Part three. Adding water

Open the cover (4), input the pure water in the body of the machine about 5L, and observe water level light on the control panel (5), adding water until the LOW and LACK is off, and the HIGH is on. Close the water valve. (Supply the water as above before using every time)

For new type, use hose connect water to put into tank directly until the HIGH is on.



Picture 4

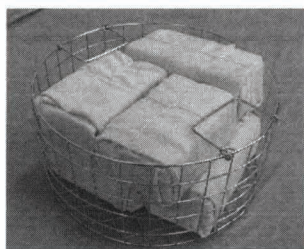


Picture 5

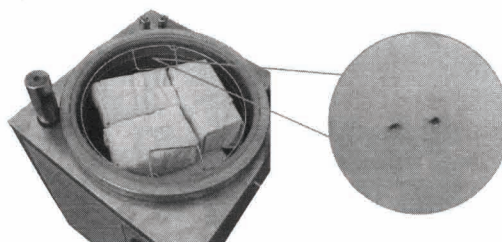
Part four. Stack

Stack the packed material in the sterilizing basket(6), left gap between the package, (the volume doesn't be more than $200 \times 200 \times 100$ mm), it is benefit for the steam penetrating, improving the effect of sterilizing. The

position of the steam release hole of the safety valve (7) must leave space, assure release steam unblocked, otherwise the tank will be flame because the steam hole is blocked.



Picture 6



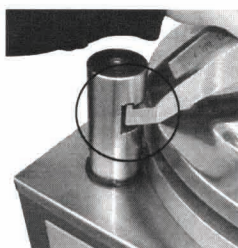
Picture 7

Part five Sealing

Push the beam to left pole (8), the beam must be pushed into the pole completely (9), rotate the manual handle to the right, make the cover press the tank tightly (10), press to seal tightly.



Picture 8



Picture 9

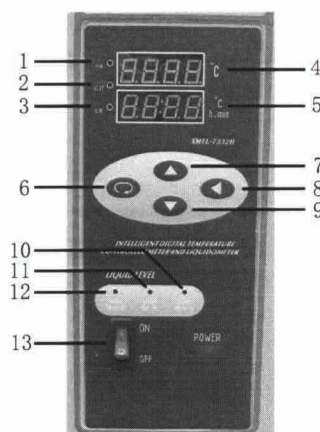


Picture 10

Part six. Setting Temperature and time.

Attention on the name on the control panel (11)

1. High temperature light
2. Working heating light
3. Low temperature light
4. work status display window (red)
5. Temperature and time set window (green)
6. confirm key
7. Increasing key
8. Removing key
9. Reducing key
10. Low water level light
11. Empty water light
12. High water level light
13. Power switch

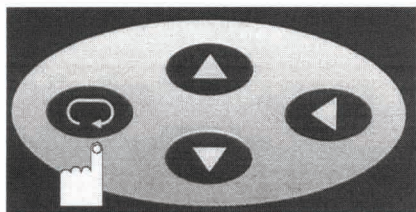


Picture 11

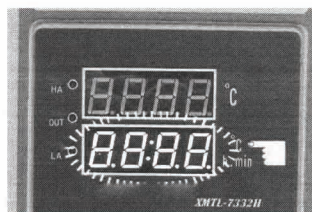
The indicator light (11) is on when the control panel is connected with power, the red light displays the temperature and working condition, the green light displays time of setting temperature, the range of temperature adjusting is 50°C~132°C, when the temperature is beyond the range, the pressure release and temperature retain in the sterilizer is controlled by safety valve. The time adjusting range is 0~99 hours (the real effective time can be set according to the water level in the evaporating tank), the time counts backwards, the temperature in the sterilizing tank reach the setting temperature, the counter begins to count down.

The operating progress of temperature setting

- ① Press the confirm key (12) to start the digital display block, observe the green digital displayer (13), glitter means can start set.

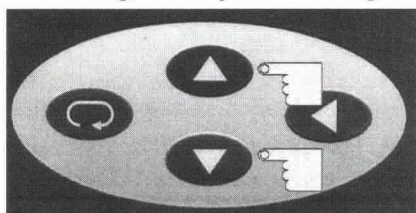


Picture 12

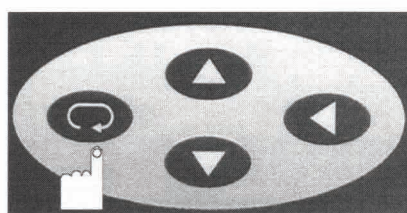


Picture 13

- ② Press the increasing key (14), high the temperature, or press the reducing key to low the temperature. When setting the needed temperature, should press the confirm key second times (15), start the digital confirm. After confirming, the temperature setting is finished.



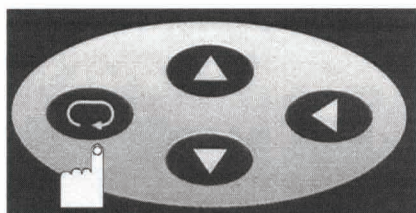
Picture 14



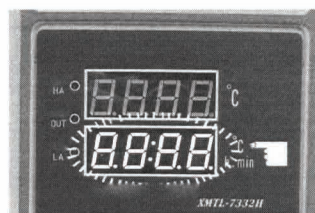
Picture 15

The operating progress of time setting

- ① Press the confirm key again after setting the temperature (16), change the temperature display to time display. When the green window glitters, at this time, is time displaying situation, the front two digit is hour, the back two digit is minute.

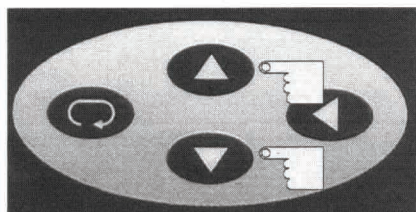


Picture 16

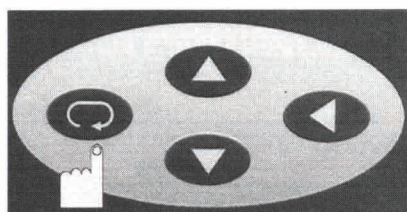


Picture 17

- ② Press the increasing key (17), can adjust the time up, or press the reducing key(18) can adjust the time down.
- ③ When adjust to the needed time, should press the confirm key second times(19) to confirm the new set time. The time set is finished after confirming.



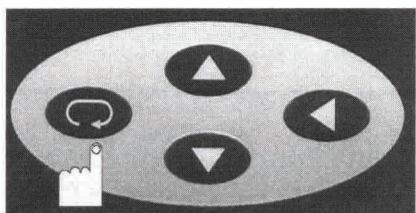
Picture 18



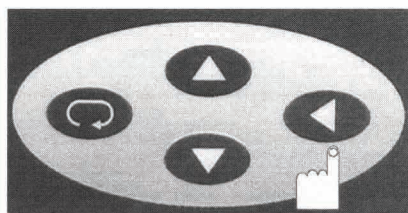
Picture 19

Clue: If it is fail to set the temperature or time or operate wrongly, need to adjust again, only to press the confirm key (20), choose the time and temperature. When the green window is glittering, can start to set again.

The removing key (21) can remove the glittering digit only, convenient to adjust the digit easily.



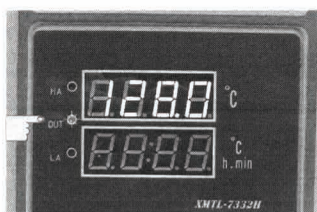
Picture 20



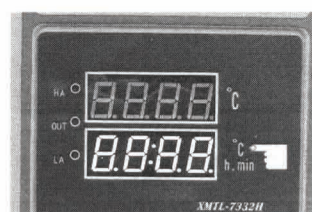
Picture 21

Part seven. Sterilization

- ① This machine goes into the procedure of auto-cycle sterilizing after setting the needed temperature and time, the heating light (green) on the control panel is on (22), displaying the sterilizing tank is heating and rising temperature normally. When the sterilizing tank reach to the set temperature, the heating light (green) is off, display the condition of temperature retaining, at the same time, the auto-control system begins to sterilize with counting backwards, and display the sterilizing time in the window on the control panel.



Picture 22



Picture 23

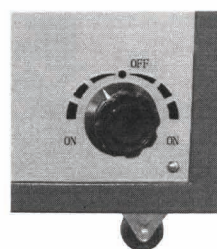
- ② Different sterilizing material can be chosen according to the form as follow.

Different material reference form

Sterilizing material	Time (min)	Steam temperature (°C)	Steam pressure (Mpa)
Rubber	15	~121	0.1-0.105
Dressing	30-45	121-126	0.105~0.14
glassware	15	121-126	0.105~0.14
Instrument	10	121-126	0.105~0.14
Liquid	20-40	121-126	0.105~0.14
Table ware	20	121-126	0.105~0.14

- ③ The sterilizing material which has high requirement to the temperature on the top, middle and down of the sterilizing tank, can rotate the steam and water release valve to the left (24), open a little, release a little steam, can reach to the requirement to the uniform of temperature in the sterilizing tank.

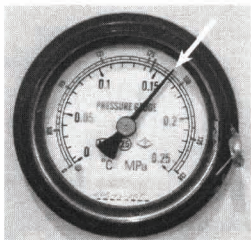
Attention: left is steam release, right is water release.



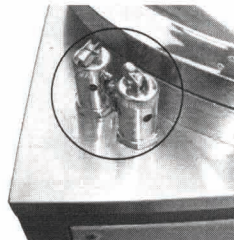
Picture 24

- ④ If choose the normal sterilizing way, but not the electric automatic control sterilizing procedure, the temperature can be set as 132°C, at this time, the pressure temperature in the sterilizing tank is controlled to pressure release or temperature retain by safety valve, can start to count the sterilizing time by human. The pressure is set between 0.145Mpa to 0.165Mpa, the temperature is 126°C~128°C, see the picture(25), the

position that the arrowhead point at, anyone cannot change the setting parameter of safety valve. The flexibility and reliability of the safety valve should be checked frequently (26), when the pressure is beyond the maximum “0.190Mpa”, should be stopped immediately, change the qualified safety valve, or the safety valve won’t work normally, can’t leak the pressure, resulting in the pressure in the tank is too big, the pressure vessel will be flame.

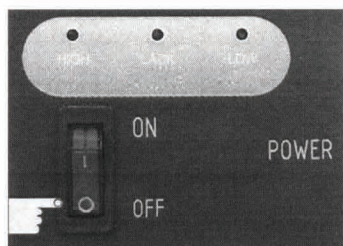


Picture 25

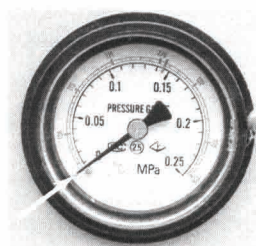


Picture 26

- ⑤ The control panel will close the heating system automatically when the sterilization is finished, the buzzer will alarm; change the temperature retain time to END, at this time, the power switch is pressed to off (27); close the power. When the index goes back to zero, observe (25) the position of the index, open the safety valve or the water and steam control valve, and release all the steam in the sterilizing tankt. (Human should stop the machine).



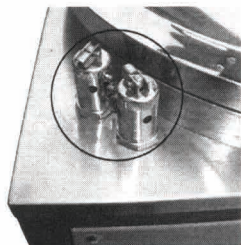
Picture 27



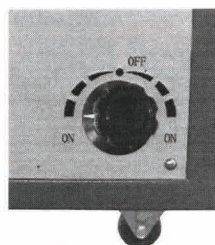
Picture 28

Part eight. Dry

The machine should be dried after the material is sterilized, the safety should be opened (29), or rotate the water and steam valve to left to the “open” position (30), making the steam in the sterilizing tank release immediately, and the steam on the material evaporate immediately. The sterilizing liquid prohibits to be used this drying way.



Picture 29



Picture 30

Part nine. Open the cover

Rotate the handle to the left (31), lift the cover, and push the beam to the right to remove the cover. (32)



Picture 31



Picture 32

VII. Attention item

1. When stacking the sterilizing materials, the steam outlet of the safety valve and steam release valve can be blocked, assuring the steam go out smoothly, otherwise it will result in the accident because the safety valve and steam release valve doesn't work.
2. When the sterilizing material is liquid, the liquid should be filled in the hard heat-resistant glass bottle, won't be more than 3/4 of the bottle, the nozzle of bottle uses cotton plug, prohibit using the rubber plug without hole, or soft wood plug.
Special attention: don't exhaust the steam immediately after the liquid is sterilized, must wait the index of the pressure meter points to zero.
3. Don't put different materials which having different sterilizing requirement together, such as dressing and liquid, prevent the losing.
4. When the sterilization is over, the index of pressure meter points to zero, but the cover isn't easy to open, then can push the steam release valve to air exhausting position, making the air in, eliminating the vacuum, then can open the cover.
5. When the pressure meter is used for a long time, it can't return the zero position, it should be repaired, or change a new one as soon as possible.
6. Keeping clean and dry of the machine, can prolong the using time, the rubber sealing will be aged, should be changed periodically.
7. The changing instruction of fuse and other parts. Check the fuse periodically; change it if it is used for long time, assuring the normal usage. When the wire of the equipment is connected to the power, if the indicator is off, check the if the power plug and socket, the connecting wire is well, if it is well, then check if the fuse is damaged, if it is damaged, should change immediately, make the machine run normally.
8. Check the reliability of the safety valve, when the working pressure is more than 0.190Mpa, should change a qualified safety valve, don't continue to use, or the safety valve can't work, will flame the tank.

VIII. Errors analysis and remove.

No	Error	Reason	Removing way
1	The real temperature of the pressure meter is different from the digital display	There is cold air in the tank	Open the water and steam release control valve.
2	The water level is above the high level, the high level indicator is off (green)	The water lever device is blocked.	clean pipes
3	The high water level light is on, displaying the temperature don't rise.	a. Temperature retaining time isn't set. b. The solid relay is damaged. c. The electrical pipes are damaged.	Set the temperature retain time. Change Change
4	When working, the cover has power	a. The electric heating pipes are damaged. b. The power isn't connected with the ground wire.	Change Install the ground wire
5	Red digital display window is ----	a. The temperature sensor is damaged. b. The computer panel is damaged.	Change Change
6	Digital display window is-000	The computer panel is damaged.	Change
7	There is no water in the tank; heating light is on (green).	The index of water level connects the copper cover	a. Turn off power immediately b. Revise the index
8	There is steam in the pressure meter.	The joint leaks	Make Tight
9	Press the removing key, on glitter.	Control panel is damaged	Change