

# CATALOGUE

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Dear Customer:

Thank you for purchasing instrument, please take your time to read carefully the instructions before starting to use this Electric pressurized steam sterilizer, please also pay **special attention to those letters in bold**, which can be very useful for maximizing the functions of the instruments. Please take good care of this instrument after reading it for future use. **Make sure that the purchase voucher and the Warranty card are well preserved after buying this instrument, and send back the Maintenance receipt to our main office within one month after purchasing our product.**

## I . Security considerations

1. The operator should always be there to observe the running condition of the instrument until the whole process is finished, make sure the pressure has to be released and the power be turned off before leaving.

2. It is strictly prohibited that the instruments working beyond the service pressure, things which are easy to explode when contacts the steam or boost abruptly are also both strictly prohibited.

3. The safety valve and exhausting valve on the instrument should be sent to qualified organization for examination regularly.

4. The instrument must be adequately grounded to prevent having an accident because of the electrified case.

## II . Application of product

series Electric pressurized steam sterilizer is mainly used as medical appliances or sterilize different kinds of wound dressing in medical institutions.

## III . Security classification of product

1. Grouped by the type of electric shock: this instrument belongs to "I"

2. Grouped by the degree of electric-resistance: this instrument belong to "B"

3. Grouped by degree of protection against the noxious liquid substance: this instrument belongs to normal level (enclosed type equipment)

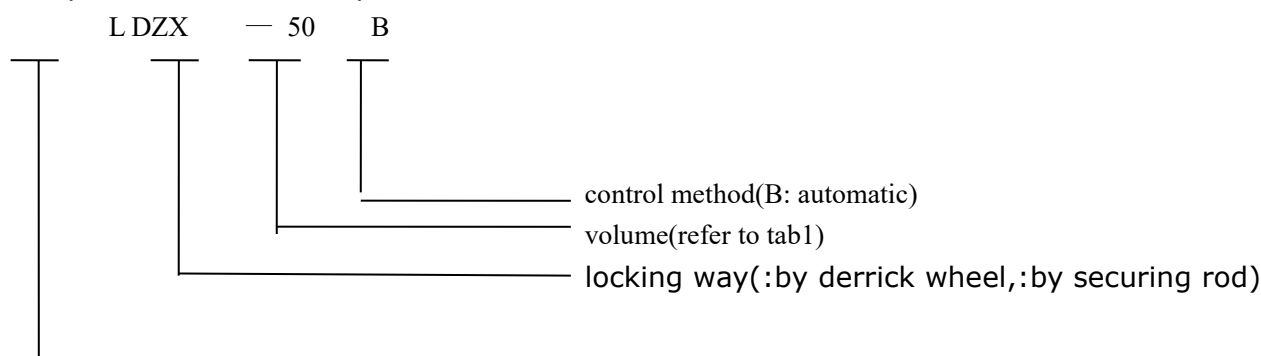
4. Grouped by degree of safety when using this instrument under the circumstances of flammable anesthetic gas mixed with atmosphere or mixed with nitrous oxide: this instrument can not use under the circumstances of flammable anesthetic gas mixed with atmosphere or mixed with nitrous oxide

5. Grouped by working system: it is short-time loading and continuous operation

## IV . Classification and model of the products

1. Classification of the products:

A. product name description



B. Please refer to the above Classification and your model of the products, choose the following different instructions with different degree of automation to operate the instrument. B. Please refer to the above Classification and your model of the products, choose the following different instructions with different degree of automation to operate the instrument.

## 2、The model of the product

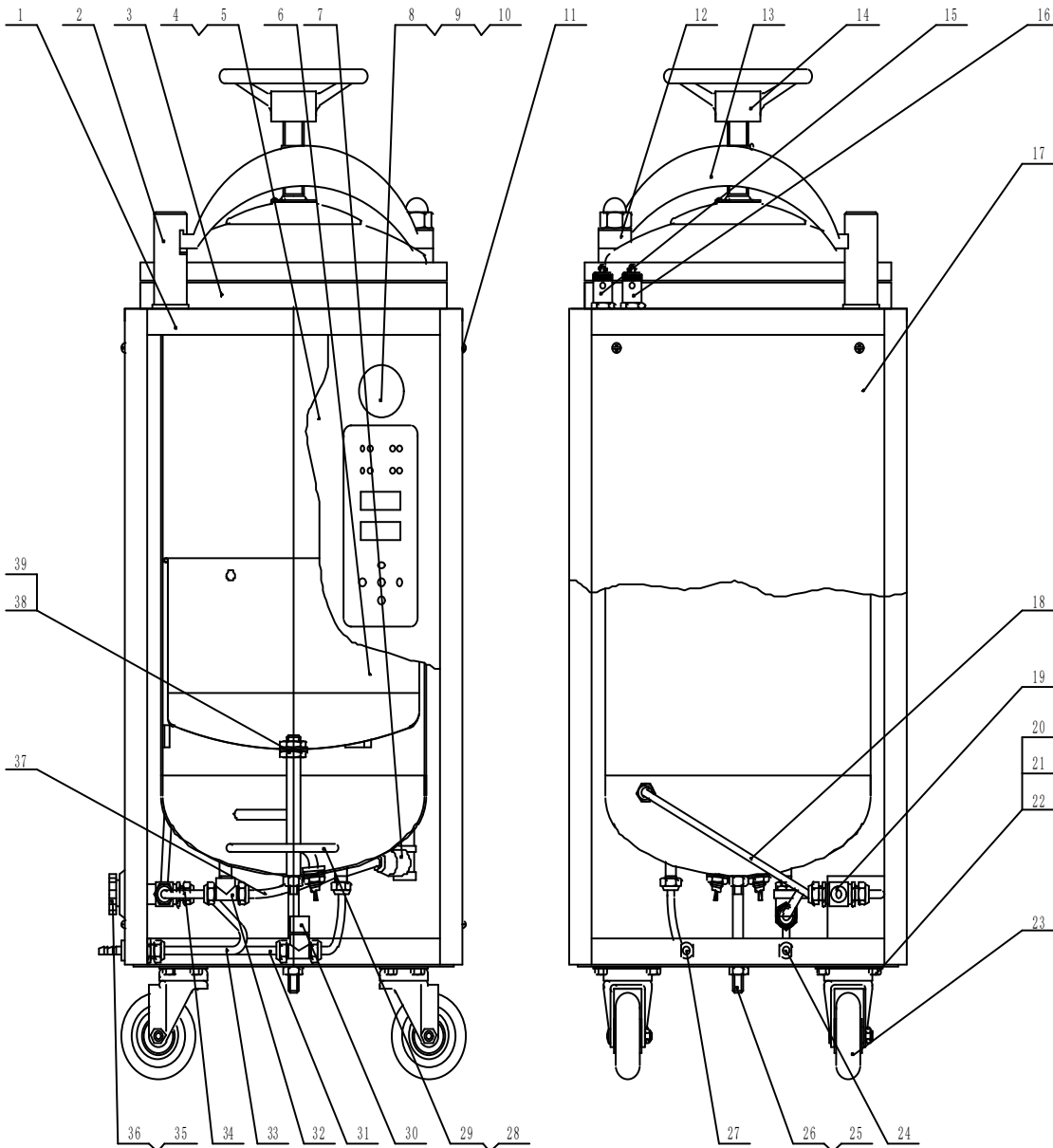
Different type	Product model	Volume	Electric source / frequency	Power	Nominal working pressure	Nominal working temperature
Electric pressurized steam sterilizer	LDZX-30B	30	220V/50Hz	3.5KW	Conventional design: 0 — 0.142MPa	Conventional design: 50—126 degree
	LDZX-40B	40	220V/50Hz	3.5KW		
	LDZX-50B	50	220V/50Hz	3.5KW		
	LDZX-60B	60	380V/50Hz	4.5KW		
	LDZX-75B	75	380V/50Hz	4.5 KW		
	LDZX-100B	100	380V/50Hz	6.0 KW	Custom-designed: 0 — 0.21MPa	Custom-designed: 50—134degree
	LDZX-150B	150	380V/50Hz	8.0 KW		
	LDZX-200B	200	380V/50Hz	12.0 KW		
	LDZX-250B	250	380V/50Hz	12.0KW		
				Conventional design: 0 — 0.142MPa	Conventional design: 50—126 degree	
				Custom-designed: 0 — 0.21MPa	Custom-designed: 50—134degree	

**NOTES:**Based on the model C (automatic) in the list,you can also add the following optional functions:

1. If you choose the working temperature above 126,then the machine should be custom-designed.
2. automatic flooding and exhausting function.
3. can also add dryness function
4. electronic security and interlock device
5. print With the effect of F0 value sterilization

## V. Structure of the products

### 1. locking by derrick wheel (LDZX-) construction drawing

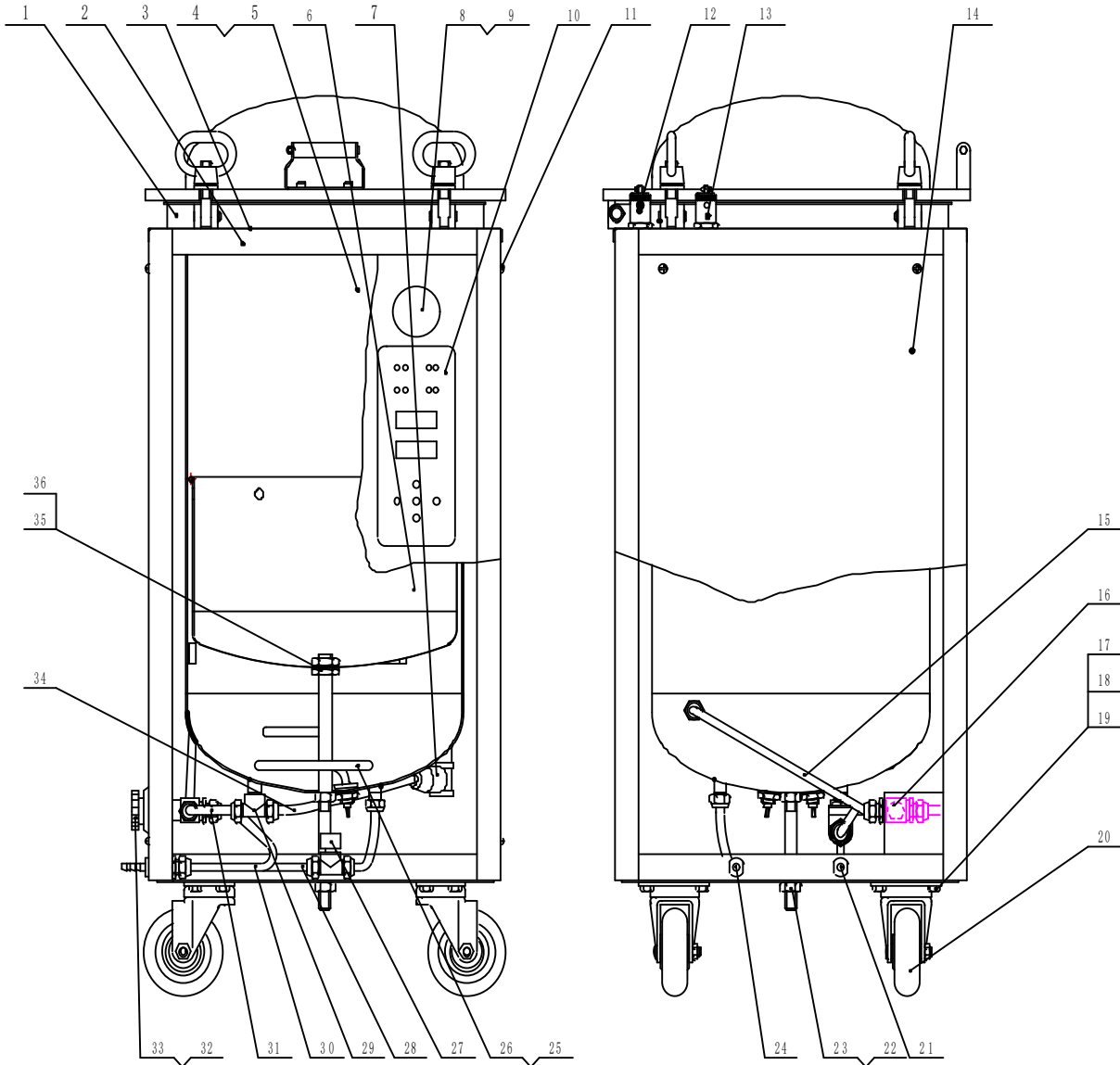


1- Outer frame 2- fixed axis 3-the upper panel 4-the front panel 5-side/back panel 6-tank  
 7- water stage register 8- pressure gage 9-admission components 10-electrical controlling  
 components 11---screws 12- shaft 13-crane 14- derrick wheel 15- steam release valve 16-  
 security valve 17-the left panel 18- cold air escape-pipe 19- four way bale valve 20-bolts  
 21-nuts 22-spacer 23- wheeled walker 24-outer scupper 25-frame 26-nuts 27-outer  
 admission pipe 28- heating tube 29-sealed tap 30(no) 31(no) 32- triple water valve 33-  
 exhaust steam pipe 34- pipe weep 35- exhaust steam turning handle 36-nuts 37- water level  
 regulator adapter 38-internal nuts 39-internal sealed taps

**Notes:** automatic water charging instrument(need to be custom-designed),you can add an admission

pipe in the bottom of the instrument. Please contact us freely when you have this need.

## 2、 Locking by securing rod(LDZX-) construction drawing



1- outer casing 2- Outer frame 3-the upper panel 4-the front panel 5-side/back panel 6-tank 7- water stage register 8- pressure gage 9-admission components 10-electrical controlling components 11---screws 12- steam release valve 13- security valve 14-the left panel 15- cold air escape-pipe 16- four way bale valve 17-bolts 18-nuts 19-spacer 20- wheeled walker 21-outer scupper 22-frame 23-nuts 24-outer admission pipe 25- heating tube 26-sealed tap 27- automatic flooding solenoid valves 28-feed line 29- triple water valve 30- exhaust steam pipe 31- pipe weep 32- exhaust steam turning handle 33-nuts 34- water level regulator adapter 35-inner tank nuts 36-inner tank sealed taps

**Notes:** automatic water charging instrument(need to be custom-designed),you can add an admission pipe in the bottom of the instrument. Please contact us freely when you have this need.

## VI. Technical parameters

1. Working pressure: 0—0.142MPa, working temperature:50-126degree. For self control type,please use the pressure switch to control.For automatic type,you are free to set the working temperature,but please take note that the temperature can not more than 126℃.
2. working voltage: 220V/50Hz (30litres、40litres、50litres) 、380V/50Hz (60litres、75litres、100litres、150litres、200litres、250litres)

## VII. Application procedure

Please refer to your model of the products and above(4. Classification of the products) to confirm the degree of automation, choose the following different instructions to operate the instrument.

### A. self control type(-M)

- 1.Make sure the power supply coincide with the source of your instrument and be adequately grounded before you plugged into electricity.
- 2.open the lid of the instrument,take out the inner cylinder,then you will see electric heating tube.
3. Diverter switch to the position of Exhaust steam on the bottom of the left surface (discharge the cold air out of the sterilizer in the process of temperature rise), turn on a switch of the instrument, power indicator and water indicator will be on and you will hear the buzzer warning,it is a signal that remind the operator should add water now because of water shortage.(Notes:it is better add tapwater,not purified water or distilled water.)
4. Use a plastic tube to connect the water tap to the heating tube(or remove the round covering in the bottom of the inside cylinder and connect the plastic tube), turn on the tap to add the water gradually until the water indicator runout,now the working indicator should be on and the instrument set heating to work.
- 5.Fit the inner tub to the instrument, put the wrapped goods ready for sterilization in sequence into the inner tub(the suitable volume is 200mm×200mm×100mm),make sure that there is still some space left inside of the tub in order to let the steam penetrate well into the goods and increase the effect of sterilization.also please take care that the security valve, exhaust valve and the steam hole in the pressure control switch not be plugged during the process,at last,fasten the lid.(notes: if the locking way is by securing rod,then please tightened it in diagonal form)
6. when the instrument begin to start, the working indicator should be on. Turn off the Exhaust steam/discharging water knob on the bottom of the left surface as soon as the pressure gage reach about 102℃.(If the customer have the high requirement on the uniform temperature in different parts of the inner cylinder,then you can switch the Exhaust steam/discharging water knob towards the leftside a little bit of time to discharge the small amount of steam continuously to ensure the uniform temperature inside. )When the the pressure gage reaches about 0. 142MPa, the pressure control switch will be switched off automatically,and now it is time to start the manual sterilizing timing(when the working pressure inside of the inner cylinder exceed the limits,the security valve will take off to release the pressure automatically ).During the process of manual sterilizing timing,if the working pressure drops within the limits of the pressure control switch,the instrument will continue heating antomatically and keeps such disconnected heating repeatedly until the manual sterilizing timing is up.
- 7.Please turn off the power as soon as the sterilization finishes, Diverter switch to the position of Exhaust steam on the bottom of the left surface to relief the pressure,it is not allowed to take out the sterilized goods from the instrument until the pressure gage reaches 0.
8. This self-control type have the self - protection device, ,it will switch off the heating power automatically when

exceeding the temperature limits, and also the instrument can also switch off the heating power automatically and the user can get a warning light as soon as the water bellows the designed water level.

## B. Automatic type(-C)

1. Make sure the power supply coincide with the source of your instrument and be adequately grounded before you plugged into electricity.
2. open the lid of the instrument, take out the inner cylinder, then you will see electric heating tube.
3. Diverter switch to the position of Exhaust steam on the bottom of the left surface (discharge the cold air out of the sterilizer in the process of temperature rise), turn on a switch of the instrument, power indicator will be on and you can set the temperature of displacement, the temperature of sterilization, the time of sterilization, after finish setting these things, please press the run button to start, then you will hear the buzzer warning and see the water indicator on, it is a signal that remind the operator should add water now because of water shortage. (**Notes:** it is better add tapwater, not purified water or distilled water.)
4. Use a plastic tube to connect the water tap to the heating tube (or remove the round covering in the bottom of the inside cylinder and connect the plastic tube), turn on the tap to add the water gradually until the water indicator is on, and it is in the Temperature - rise period.
5. Fit the inner tub to the instrument, put the wrapped goods ready for sterilization in sequence into the inner tub (the suitable volume is 200mm × 200mm × 100mm), make sure that there is still some space left inside of the tub in order to let the steam penetrate well into the goods and increase the effect of sterilization. also please take care that the security valve, exhaust valve and the steam hole in the pressure control switch not be plugged during the process, at last, fasten the lid. (notes: if the locking way is by securing rod, then please tightened it in diagonal form)
6. when the instrument is in the period of temperature-rise, temperature-rise indicator will be on, and you can hear the buzzer warning as soon as the temperature reaches the required temperature of displacement, it is a signal that remind the operator should switch off the Exhaust steam/discharging water knob on the bottom of the left surface. (If the customer have the high requirement on the uniform temperature in different parts of the inner cylinder, then you can switch the Exhaust steam/discharging water knob towards the left side a little bit of time to discharge the small amount of steam continuously to ensure the uniform temperature inside. ) when the working temperature reaches the designed temperature, the instrument is in the process of sterilization, then the machine will count down to the end of sterilization.
7. Please turn off the power as soon as the sterilization finishes, Diverter switch to the position of Exhaust steam on the bottom of the left surface to relief the pressure, it is not allowed to take out the sterilized goods from the instrument until the pressure gage reaches 0.
8. This self-control type have the self - protection device, it will switch off the heating power automatically when exceeding the temperature limits, and also the instrument can also switch off the heating power automatically and the user can get a warning light as soon as the water bellows the designed water level.
9. parameters functions and setting

Parameter	content	Functions and explanation
P—1	the temperature of displacement: usually around 102℃	when the working temperature reaches the designed temperature of displacement, it reminds the user to switch off Exhaust steam on the bottom of the left surface
P—2	the temperature of sterilization: RT+5~134℃	The suitable temperature for user is 121℃、126℃
P—3	time of sterilization: 0 ~ 9999minutes	The suitable time of sterilization should be within 45 minutes.

P—4	Time of drying:0 minutes	The suitable time of drying should be within 45minutes,it is an optional parameter
P—5	Heating proportional control: 10~10	Please don't adjust this parameter by yourself

Notes: when you want to set these parameters,first press the setting key,it will display P—1 on the temperature measuring screen(on the top side) and display the value of the parameter on the bottom side of the screen,then you are free to use the "+" key or "-" key to adjust the parameter,press the setting key again to switch automatically to the next parameter,it will return to the normal automatically on the screen when you press the setting key for 5 times.

## VIII、Points for attention

1. The shell of the instrument must be adequately grounded and always checked to avoid accidents.
2. The instrument must be kept in an place which is airy and dry and no inflammables & explosives.
- 3.The security valve and the exhaust steam valve should be sent to qualified organization to check regularly to ensure the safety.
- 4.The volume of the inner cylinder can not be more than 4/5 of the total volume of the instrument.
5. Make sure the sealing ring not contact the oil to avoid steam loss because of the broken adhesive tape.
6. Things which are easy to explode when contacts the steam or boost abruptly during the sterilization are both strictly prohibited.
- 7.When you want to sterilize the liquid,it is advisable that use a durus Heat resistant glass wares to put the liquid,and the volume of the liquid can not be more than 3/4 of the wares,it is prohibited to use a wrapped rubber or cork at the mouth of the wares,it is advisable to use a cotton plugs.
- 8.It is prohibited to put sterilized goods(wound-dressing and liquids)with different type and different sterilizing requirement together into one instrument.
- 9.If the pressure indicator shows not right after long time use,you should have it serviced regularly
- 10.The security valve should also be examined regularly to ensure the reliability,if the security valve not take off when the working pressure above 0.17MPa,then this security valve should be examined and replaced,it is easy to arise accident because the security valve can not release the pressure well and make the inside of cylinder too much of the pressure.
11. The fuses should also be examined regularly,you should also replace it after long time use,if the instrument doesn' t supply well when you connected to the power, then you should check if the plug and the socket or the fuses is broken or not.
12. transport and storing environment
  - A. required temperature: -40~55℃
  - B. required relative humidity: <80%
  - C. required atmospheric pressure: 500~1060hPa
13. operating environment
  - A. required temperature: +5~40℃
  - B. required relative humidity: <75%
  - C. required atmospheric pressure: 500~1060hPa

## IX. Maintenance of the product

1. Examine the sealing effectiveness of all pipes and connections regularly.
2. Please check if the instrument be adequately grounded before you start to use the machine again after stop using of the machine more than one month.
3. Examine regularly to ensure the reliability of the sealed ring and flannel not drop out locally, please put the sealed



ring into the water trough promptly to avoid sudden pressure releasing accidents because of sealed ring dropped out during the process of increasing the pressure.

## X. PACKING LIST

1. ONE INSTRUCTION
2. ONE Warranty card
3. ONE CERETIFICATE

## XI. Failure handling

ITEM	Symptom of instrument failure	analysis of causes	solution
1	<ol style="list-style-type: none"> <li>1、 The time of filling into the water level regulator significantly extended</li> <li>2、 The water indicator still show water shortage although the Water spilled from the cyclinder.</li> </ol>	<ol style="list-style-type: none"> <li>1、 The water level regulator is blocked up with some foreign bodies</li> <li>2、 The water level detector is already electrolyzed by some adulterants</li> </ol>	<ol style="list-style-type: none"> <li>3、 Clear the pipes or the detector.</li> <li>4、 Replace promptly.</li> </ol>
2	5、 The instrument doesn't arise temperature or pressure or the shell of the instrument with electricity	<ol style="list-style-type: none"> <li>1、 The power supply don't connect well.</li> <li>2、 electric heating tube is broken.</li> </ol>	<ol style="list-style-type: none"> <li>6、 Examine the power taps.</li> <li>7、 Repalce promptly</li> </ol>
3	There is steam in the pressure gauge.	steam leakage between The connection	Tighten the connections.
4	The security valve take off ahead of the time when the working pressure still not reach the designed pressure.	Steam leakage from the security valve or security valve broken	Repalce promptly
5	The indicator on the pressure gauge not move to arise or to zero.	<ol style="list-style-type: none"> <li>1、 The copper pipe in the tail of the pressure gauge screwed too tight.</li> <li>2、 The pressure gauge is broken.</li> </ol>	<ol style="list-style-type: none"> <li>1、 Screw heavily the connection of the pressure gauge in the tail</li> <li>2、 Replace the pressure gauge.</li> </ol>
6	There is an over pressure alarming when you set up the instrument or even in the normal pressure ranges.	<ol style="list-style-type: none"> <li>1、 The pressure control button not adjust well.</li> <li>2、 The pressure control button is broken.</li> </ol>	<ol style="list-style-type: none"> <li>1、 Adjust the pressure control button a bit: turn up by anticlockwise rotation and turn down by clockwise rotation</li> <li>2、 Replace the pressure control button.</li> </ol>
7			

# Electrically heated vertical sterilizer

operating manual