

LDR-0. 004-0. 4 ELECTRIC STEAM BOILER

INSTRUCTION MANUAL

Reading the manual carefully before operating

Shanghai Weishi Machinery Co., Ltd

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I. Functions:

LDR-0.004-0.4 electric steam boilers are mini boilers that can automatically and consistently generate saturation steam. They can provide the dry steam that is necessary for the steam irons and steam pressing machines of the garment industry as well as offering the steam source for hospitals, restaurants, and sauna industries.

II. Characteristics:

- 1. Compact structure, beautiful appearance, small volume, light weight, flexible in movement, and easy installation.
- 2. Water-level controlling technology comes from Germany.
- 3. Quick in pressure rising, the time needed for attaining a certain steam pressure from the cold status is less than 30 minutes.
- 4. Steam-pressure fluctuates little and the steam keeps dry to improve the ironing quality.
- 5. Imported electrothermal, electronic components and pump.

III · Specifications:

| Model No. | LDR-0.004-0.4 |
|------------------------|---------------|
| Steam generation: kg/h | 4 |
| Working pressure: Mpa | 0.4 |
| Water tank volume: L | 8 |
| Power: kw | 3 |
| Voltage: | 1P/220V |
| Temperature rising: < | 15 minutes |
| Type of water adding: | Automatically |
| Dimension: (cm) | 38X50X84.5 |

IV. Main structure and working principle:

LDR-0.004-0.4 electric steam boiler is composed by boiler hearth, electric-element, water-level controller, water level gauge, safety valve, pressure gauge, pressure controller, electric-controlling system, steam supplying valve. Steam pressure is controlled and regulated by pressure controller. During the process of steam discharging, the water level descending corresponding in the boiler, when the water descends to a certain level, the pump will automatically supply water for the boiler.

V Installation

- 1. The boiler must be grounded in the flat and solid foundation, keep horizontal.
- 2. LDR0.004-0.4 uses the power of 220V/1-phase and must be connected by a ground

wire.

- 3. The ambient of the boiler shall have sufficient vacant space for daily operation and maintenance.
- 4. Connect blow-down valve to drain outlet.

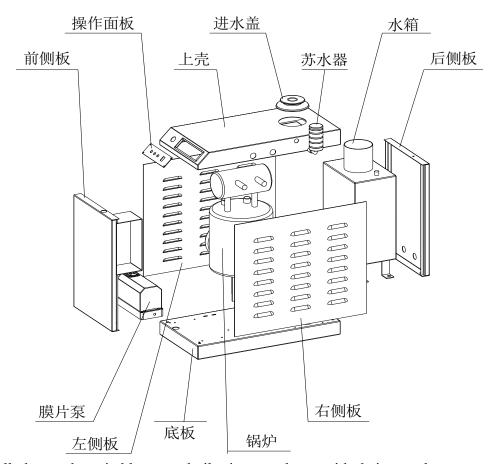
VI. Operation

- 1. Procedure of starting:
- (1). Close blow-down valve. Open water-supplying valve to full the boiler with the water. Please watch the water level gauge. Close water-supplying valve when the water level gauge shows MAX.
- (2). Turn on the power switch. The boiler water inlet lamp will turn on (Green lamp). The pump begins to supply water. The water level in the tank will descend quickly. If the water level doesn't descend, it means the pump doesn't supply water. You shall check the motor to see if it is running reverse and you shall see if there is air in the pump. The water inlet lamp will turn off quickly, and the heating lamp will turn on (red lamp). The electric heater begins to heat, and you can close the steam supplying valve. When the steam pressure in the boiler reaches to the rated working pressure, the heating lamp power off, and the heating tubes stop heating. You can open the steam supplying valve to provide steam.
 - 2. Method of steam output
- (1). Electric heating element stops heating while the pressure reaches the set pressure. At this time, the boiler can directly supply steam when opening steam-supply valve. Simultaneously when you open the steam valve, the steam pressure will go down quickly, it is a normal phenomenon. After a while, the steam pressure will go up. If the steam consumption of the iron exceeds the steam generated by the boiler, the steam pressure will decline.
- (2). The steam pressure will go up and heating will stop at 0.4Mpa when the consumption of steam is little. But the pressure will continue to go up because the heating elements fever the rest heat. When the pressure exceeds set pressure, the safety valve will open to let out steam.
- (3). When the pressure decline to $0.2\sim0.25$ Mpa, the heating-element automatically begin to heat.
 - 3. To water in mid way

The water level inside standingly descends as the consumption of steam. Cut the power when the water level approaches to min-level in water-level gauge. The open the safety valve to discharge the steam from boiler. Only when the pressure descend to 0Mpa, supply the water. Please operate according to PROCEDURE OF STARTING from (1). It is normal phenomenal that a little steam come out.

4. Procedure of stopping the boiler

- (1). Switch off the power
- (2). Open the steam valve of the iron and boiler to exhaust the steam
- (3). When the pressure is less than 0.05Mpa, open the blow-down valve slowly to completely exhaust the water in the tank. Attention, when the machine is just stopped, don't exhaust the hot water in the tank immediately, but exhaust some of the hot water, and add some cold water to reduce the temperature of the tank to exclude the possibility of damage of heating tubes.



- 5. Customers shall choose the suitable steam boiler in accordance with their actual steam consumption. Otherwise, it may cause the wastage by using a big boiler while consuming little steam or providing deficient steam pressure by using a small boiler.
- 6. We suggest you that you had better use softened water or distilled water, or equip with a water softer in the inlet of the water tank to prolong the using life of the boiler.

Please note: the service life of this type is not more than 8 years.

VII Maintenance

- 1. If the machine being stopped for over 10 hours, you shall completely exhaust the water remained in water tank by opening the blow-down valve. But when the pressure in the boiler is too high, please don't open the dirty discharging valve to avoid any danger.
 - 2. please exhaust the water in water tank if the machine will be stop for long time.
- 3.After being operated for three months, the heating tubes, water level detection rods and the scale in the bottom of the boiler must be cleaned to guarantee the normal operation of the boiler.

IX, Protection device

- 1. Protection of pressure-controller: the pressure-controller will cut the power to stop heating when the pressure is up to the set pressure.
- 2. Water-level controller: when the water-level descend close to electric heating-element, the temperature of the water-level controller rises up as the element heating standingly. The water-level controller will cut the heating-power and start the buzzer to alert when the temperature reaches the set one. Operator should watch the water level and add water.
- 3. Safety valve: it will automatically open to drain the steam when the pressure reaches the set one and it will automatically close when pressure is less than set one.

VIII、Fault diagnosis

| Phenomenon of fault | Possible reason(s) | Remedy | |
|--|---|---|--|
| When starting the machine, the power lamp is not on and | 1. The outer power hasn't been connected. | Check the outer power. | |
| the boiler doesn't work | 2. The wire connecting the plug is loose or the plug can't function properly.3. Fuse burn out | Make sure that the plug or wire is good. Chang the fuse. | |
| After being heated, the pressure gauge shows no pressure | 1. Open the steam output valve and if there is steam being discharged out, it indicates that the pressure gauge is damaged or the pipe of the pressure gauge has been blocked 2. Open the steam output valve and if there is no steam being discharged out, and if the heating lamp is not on, | Check the pipe-line or change pressure gauge, check water level controlling panel, heating tubes, pressure controller and alternating current contactor (JZ). | |
| Steam pressure can't reach to the rated pressure. | The precision of the pressure controller declines or the | | |
| the rated pressure. | setting of pressure is incorrect | Change the pressure controller | |
| Steam pressure exceeds the rated pressure. | Pressure controller malfunctions or the setting of pressure is incorrect | Regulate the pressure | |
| The pipe-line leaks steam | The connections of the pipe-line have not been tightly connected, or there are cracks in the pipe-line connectors | Tightly connect the pipe-line or change the connectors. | |

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PACKING LIST

| Item No. | Name of commodity | Quantity | |
|----------|----------------------------------|----------|--|
| 1 | LDR series electric steam boiler | 1 No. | |
| 2 | Operation manual | 1 piece | |
| 3 | Certificate of quality | 1 piece | |
| 4 | | | |
| 5 | | | |

SPARE PARTS LIST

| Item No. | Name of commodities | Quantity | | |
|----------|---------------------|----------|--|--|
| | | | | |
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| Inspector: | Packer: | Packing date |
|------------|---------|--------------|
| | | |

CERTIFICATE OF QUALITY质 量 证 明

Model No. <u>LDR-0.004-0.4</u>

产品型号._____

| | Name_ | | | | |
|--|----------|----------------|------------|----------|-----|
| | 产品名 | 称 | | | |
| | Serial N | No | | | |
| | 产品序 | 号 | | | |
| This machine has been successfully inspected and is allowed to sell 该产品已检验合格并准予出售 | | | | | |
| Inspec | etor: | Dean: | | Principa | al: |
| 检验员 | t: | 质检科负责 / | ا : | 厂长: _ | |
| | Date: | Year | Month | Day | |
| | 检验日期: | 年 | 月 | 日 | |
| | | | | | |