



Automated Shut-off Water Distiller **LB-12AWD**

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1. Introduction

Automated shut-off water distiller LB-12AWD is a laboratory grade electrical distillation unit configured to meet high quality water standards with a water output value of 20 L/hr. Copper heating tube yields high efficiency heating rates for optimum distillation of impurities. Stainless steel composition facilitates high tensile strength, durability, corrosion and heat resistance.

2. Features

1. High water capacity output
2. High heating efficiency rate
3. High cooling capacity (stainless steel condenser)
4. Cooled water storage (vaporizing drum)
5. Prevents bilge collection
6. Corrosion resistant

3. Specifications

Model No.	LB-12AWD
Water output capacity	20 L / hr
Power consumption	15 kW
Power supply	380 V / 50 Hz
Product dimensions	510 x 360 x 800 mm
Product material	Stainless steel

4. Applications

Used in commercial, medical and research based set-ups for its high quality water production, in dental products, vaporizers, humidifiers, plant nurseries, autoclaves, laboratory media preparations and CPAP machines.

5. Instrument Introduction

LB-12AWD is composed of an evaporating boiler, a condenser, and an electric control panel.

- **Evaporating boiler:** made of fine 1Cr₁₈Ni₉Ti stainless-steel thin plate.
- **Process:** rolling, elongation, & advanced welding.
- Water (in the boiler) over the level limit would spill out itself.
- Rubber sealing ring available between the boiler & the lid.
- Inside the lid, there is a water fender, which can effectively defend against water drops coming with steam to injure, distilled water quality.

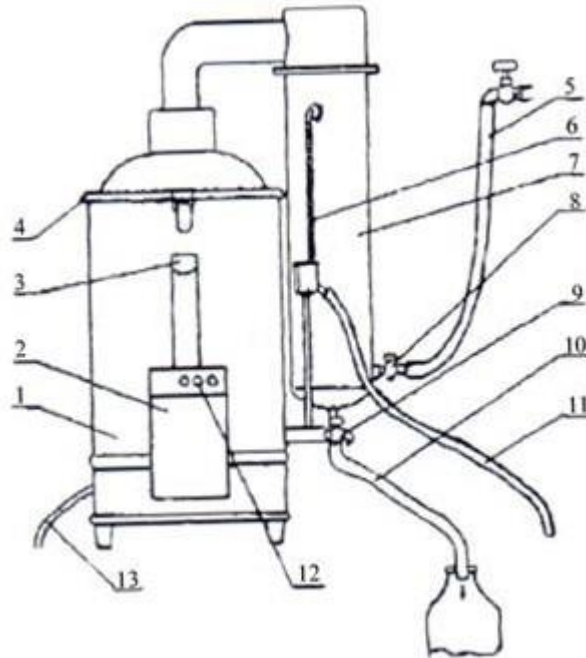


Figure-1

- | | |
|---|--|
| 1. Evaporate drum | 8. Intake control valve |
| 2. Electric control panel | 9. Draw-off valve |
| 3. Liquid-level sensor | 10. Distilled water hose |
| 4. Lid & sealing ring | 11. Hose for spill water (users to
arrange by themselves) |
| 5. Water-source valve & intake hose
(users to arrange by themselves) | 12. Indicator lamp |
| 6. Return the water pipe | 13. Cable |
| 7. Condenser | |

6. Operations

- Connect the cable to the power distributor, ensuring that the local voltage matches the apparatus requirements
- Each phase of the input wire must handle at least the load of the corresponding single phase of the apparatus.
- Ensure the power distributor has a switch, which should remain in the “off” position for now.
- **Attach a grounding wire to the apparatus grounding terminal to the tap water pipe.**
- Establish the water supply as indicated in the diagram.
- Close the draw-off valve.

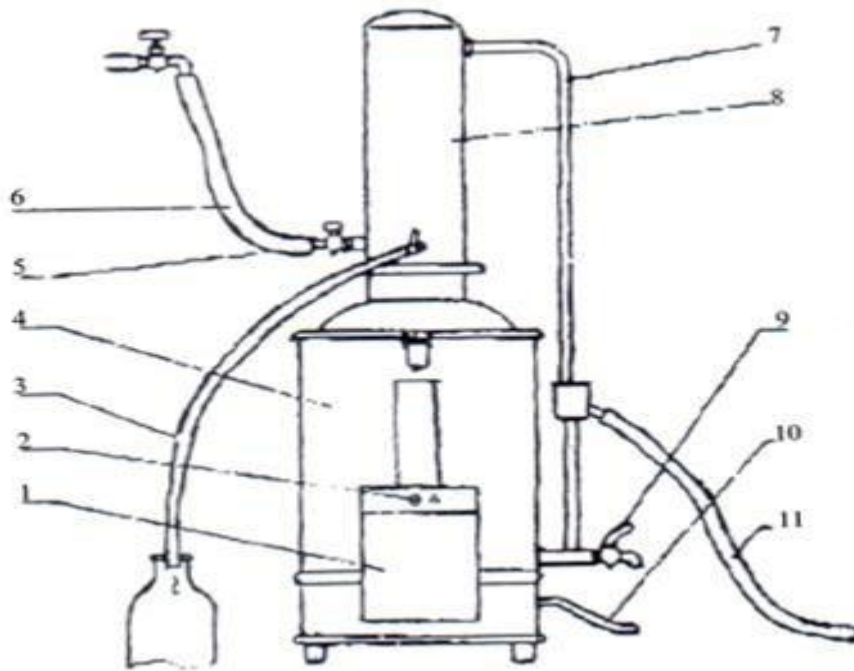


Figure-2

- | | |
|---|--|
| 1. Electric control panel | 7. Return the water hose |
| 2. Indicator lamp | 8. Condenser |
| 3. Hose for distilled water | 9. Draw-off valve |
| 4. Evaporate drum | 10. Cable |
| 5. Intake control valve | 11. Hose for spill water (users to
arrange by themselves) |
| 6. Water-source valve & intake hose
(users to arrange by themselves) | |

Automated Shut-off Water Distiller LB-12AWD

- Release (open)the water source valves.
- The tap water enters the condenser through the control valve, then returns to the funnel, & pour into the evaporating boiler.
- When water flows out of the mouth of the funnel, then you can push the switch on the power distributor board.
- Now the indicators of “**power**” & “**heating**” are on which means the evaporating boiler is heating.
- When the water level is not up to the set requirements, the less-water indicators are on as well as the power indicator, & buzzer sounds at the same time.
- When the water in the boiler is boiling, you can adjust the intake control valve or the water source valve to adjust the intake volume of the cooling water.
- Meanwhile, watch the production of the distilled water & the valves released much or less, which are to produce more possible distilled water.
- The hose for distilled water cannot be too long, the proper length of which is it just can be put into the mouth of the ware.
- The hose should be washed clean with distilled water before use, it should be unblocked.

7. Maintenance

7.1 Pre-Use Cleaning:

- Thoroughly wash and clean the inner body of the apparatus before each use.
- Drain the existing water and refill it with fresh water to prevent scale buildup affecting water quality and performance.

7.2 Understanding Scale Deposits:

- Water evaporation causes substances in the water to deposit.
- Poor-quality tap water accelerates scale formation.

7.3 Areas Prone to Scale Build-up:

- Boiler walls.
- Surface of the heating pipes.
- Inner and outer walls of the condenser.

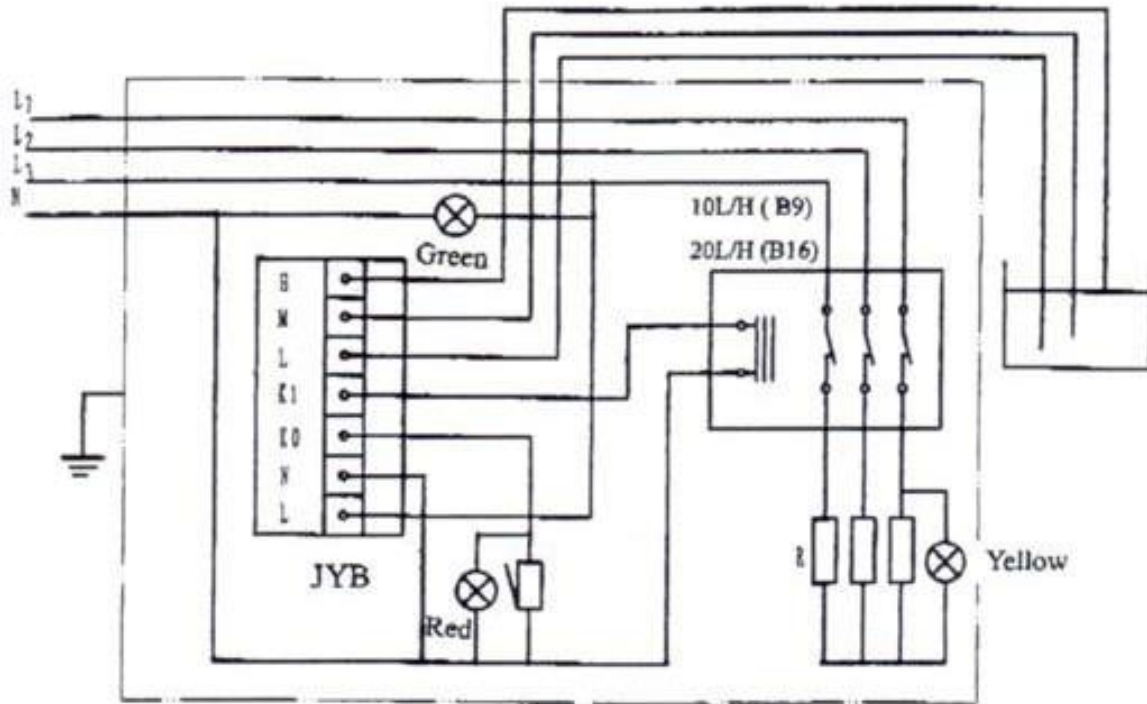
7.4 Consequences of Scale Build-up:

- Obstructed water flow and poor condensation.
- Reduced water production.
- Shortened heating element life due to heat concentration

7.5 Regular Maintenance:

- Frequently clear the deposited scales from all affected parts to ensure efficient operation and extend the life of the heating element.
- To ensure safety, avoid getting water into the electric control panel during cleaning and use.
- When replacing heating elements for maintenance, ensure there is no leakage at the connecting joints.
- Water droplets on the electrified end of the heating pipe can puncture the insulating material.
- Tighten all wire connections with nuts to prevent sparks that could damage the heating pipe.
- New apparatus should be thoroughly cleaned and then powered on for 2 hours to evaporate any moisture before being put into regular use.
- Follow the previously mentioned cleaning instructions for this process.

8. Circuit Diagram



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