

# Water Distilling Apparatus

## Operation Manual



Model: J-WD / J-WD-1 / J-WD-2

Please read this Operation Manual carefully before use.

## **Use of Operation Manual**

Please read through and understand this Operation Manual before operating the product. After reading, always keep the manual nearby so that you may refer to it as needed. When moving the product to another location, be sure to bring the manual as well. If you find any incorrectly arranged or missing pages in this manual, they will be replaced.

If the manual gets lost or soiled, a new Operation Manual can be purchased. In either case, please contact your LABORATORY EQUIPMENT PTY LIMITED agent, and provide the "Model No." given on cover. This manual has been prepared with the utmost care; however, if you have any questions, or note any errors or omissions, please contact your LABORATORY EQUIPMENT PTY LIMITED distributor or agent. Reproduction and reprinting of this operation manual, whole or partially, without our permission is prohibited.

Both unit specifications and manual contents are subject to change without notice.

# **NOTE** SAFETY SYMBOLS

This operation manual and this product use the following safety symbols. Please keep in mind the meaning of each of the symbols to ensure safe use of the product and to prevent any damages, accidents, or problems resulting from negligence of these safety symbols. (As using symbols may depend on the product, not all of the symbols may be used.)

## SAFETY SYMBOLS

### SAFETY SYMBOLS



Indicates the possibility of personal injury or death. Never fail to follow the operating procedure.



Do not proceed beyond a WARNING sign until the noted conditions are fully met to satisfactory and understood.



Indicates the existence of possibility of damage to the product or to the operator in operation.



Never fail to follow the operating procedure.



Indicates the existence of possibility of damage to the product or to the operator in operation when cautions are not observed and followed properly.



Indicates additional information such as general warning, caution, risk of danger, and operating procedure.



When this mark is indicated on the product, refer to the relevant section of the Operation Manual.

## **Safety Precautions**

The following safety precautions must be observed and followed to avoid fire hazard, electrical shock, accidents, and other failures. Keep them in mind and make sure that all the precautions are observed and followed properly. Laboratory Equipment Pty Limited assumes no liability or any responsibility for any damages, accidents, or problems resulting from negligence of the precautions.

## **Users**

This product must be used only by qualified personnel, who understand the contents of this operation manual. If it is handled by unqualified personnel, personal injury may result. Be sure to handle it under supervision of qualified personnel.

## **Purpose of use**

If the product is to be used for purposes not described in this manual, contact your LABORATORY EQUIPMENT PTY LIMITED agent in advance.

## **Input Power**

Use the product with the specified input power voltage. For applying power, use the AC power cable provided. The shape of the plug differs according to the power voltage and areas. Use the cable which is suitable for the line voltage used.

## **Cover**

There are parts inside the product which may cause physical hazards. Do not remove the external cover. If the cover must be removed, contact your LABORATORY EQUIPMENT PTY LIMITED agent in advance.

## **Installation**

When installing products be sure to observe Installation Precaution described in this manual.

To avoid electrical shock, connect the protective ground terminal to electrical ground (safety ground).

When applying power to the products from a switchboard, be sure work is performed by a qualified and licensed electrician or is conducted under the direction of such a person. Be sure to use the AC power cable provided.

## **Relocation**

Turn off the power switch and then disconnect all cables when relocating the product. Use two or more persons when relocating the product which weighs more than 20 kg. The weight of the products can be found on the rear panel of the product and/or in this operation manual. Use extra precautions such as using more people when relocating into or out of present locations including inclines or steps. Also handle carefully when relocating tall products as they can fall over easily. Be sure the operation manual be included when the product is relocate

**Maintenance**

To avoid electrical shock, be absolutely sure to unplug the AC power cable or stop applying power before performing maintenance or checking. Do not remove the cover when performing maintenance or checking. If the cover must be removed, contact your LABORATORY EQUIPMENT PTY LIMITED agent in advance. To maintain performance and safe operation of the product, it is recommended that periodic maintenance, checking, cleaning (every 3-4 months, more frequently if supply water is hard) and calibration be performed.

**SERVICE**

Internal service is to be done by LABORATORY EQUIPMENT PTY LIMITED service engineers. If the product must be adjusted or repaired, contact your LABORATORY EQUIPMENT PTY LIMITED agent.

## 1. **Intended use of the apparatus.**

Distilled Water Generator is an apparatus which generates pure distilled water by distillation. The definition of Distillation is "the process of heating a mixture and condensing the resulting vapour to produce a more nearly pure substance". Distillation is generally recognized as an effective broad spectrum water treatment method and removes many different kinds of contaminants including biological contaminants such as bacteria and viruses.

Distilled water is also used when pure water is needed for such things as Photo Processing, Pharmaceuticals, Perfumes, Facial Products, Cosmetic Products, Laboratories, Plant Water, Rinse Water, etc...

## 2. **Feature of product.**

Refills evaporated water automatically, and maintains the same water level in the boiler piping.

In case of water supply shortage, it automatically cuts power supply to stop operation. Classic stills consist of a double-walled evaporator. Removable cover for easy cleaning. External constant-level device to maintain proper water level.

## **Installation**

### **3.1 Precautions for Installation**

This equipment is designed and manufactured to operate properly only in use of rated voltage.

Refer to the specification section of this manual for rated voltage before installation. Use the AC power cable that comes with (or installed to) the product.

- Inlet water should be potable, drinking water quality - less than 200 mg/L hardness level.
- Do not touch the Power Cord wet handed.
- Avoid locations where the equipment is exposed to direct sunshine.
- Do not place the equipment in a corrosive atmosphere.
- Do not use the equipment in a flammable atmosphere.
- Do not use the equipment where ventilation is poor.
- Do not locate the equipment in a dusty location.
- Do not use in an unstable place that is subject to vibrations.
- Avoid locations of high humidity.
- Avoid locations where the equipment is exposed to high temperatures.
- Recommended temperature range : 20°C to 30°C
- Use the equipment indoors only.
- Secure adequate space around the power plug.

### 3.2 How to install

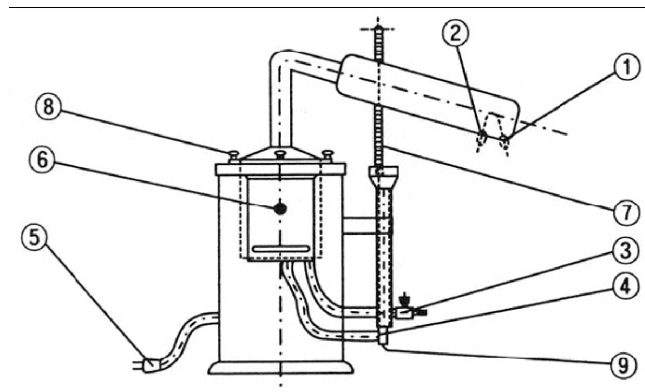
- Use with a minimum distance all around of 20cm from walls of other items.
- Locate in a flat place.
- Connect the power cord to an outlet with an earthing point.
- In case of connecting to an outlet without earthing point, connect lead wire to the earth after connecting the grounding adapter.

### 3.3 How to ground Earth wire

- Earth wire must be grounded to prevent any electrical accidents.
- Improper or no grounding may cause electrical shock.
- Grounding terminal is included in the power plug.
- Therefore, there is no need to earth if plug in connected to a consent with grounding terminal.
- If a grounding terminal with consent is not available, install an adapter to plug ground earth wire from the green terminal or install earth wire to the grounding terminal of the equipment.

## 4. Appearance, names & how to operate.

### 4.1 Appearance and names



1. Distilled Water Outlet
2. Cooling Water Inlet Port
3. Drain Valve for Boiler Tank
4. Cooling Water Drain Port)
5. Power Plug
6. Operation Display Lamp
7. Cooling Water Drain
8. Fastening Bolt
9. Overflow Pipe

## 4.2 How to operate

- Check rated voltage of the apparatus as well as check the specification
- Close '3' drain valve.
- Connect the cooling water supply hose to "2" and supply cooling water.
- Make sure water is running from "4".
- Water starts running from "4" only after the inner tank is filled with water.
- Control the water pressure adequately so that water flows little from "7".
- If water flow is big, then it might result in overflow of water leveller.
- Connect the power cord to the power outlet.
- Do not plug in the power plug when water is not running from "4" and it may lead to physical heater damage.
- Confirm that the '6' lamp is turned on.
- After 10 minutes, water starts to boil and distilled water runs from '1' Distilled Water Outlet. When you use this device for the first time, the distilled water is not pure, so let it run for 1 hour, then collect the water that comes after 1 hour
- If the temperature of installation location goes below freezing point of water, disconnect the hose connected '2' Cooling Water Inlet Port, discharge all the water inside the by opening '3' drain valve after operation is done.

## 5. Maintenance and service.

### 5.1 In case of cleaning the apparatus.

Ensure that the apparatus has cooled down to a safe temperature to touch.

- Remove the power plug from the power outlet.
- Ensure that the apparatus has cooled down to a safe temperature to touch.
- Clean the inside part of the tank carefully and remove residues.
- Clean the casing with sponge or soft clothes getting wet by water.
- Clean with dry clothes.
- Do not use organic solvent.
- Do not use flammable or volatile chemicals such as benzene alcohol to clean.

Do not use flammable or volatile chemicals such as benzene alcohol to clean the equipment. This equipment is not designed nor manufactured Explosion-proof, so never place highly flammable material or explosive material inside the apparatus which may cause an explosion or a fire.

### 5.2 When the equipment is not used for a long time.

- Remove the power plug from the power outlet.
- Clean with soft clothes.
- Pack the equipment in an appropriate way and store it in a safe place for storage.



## **6. Troubleshooting.**

1. In case apparatus fails to work at all:-

- Control unit switched off:-  
=> Ensure the unit is on.
- Power supply shortage:-  
=> Refer to specifications and check whether sufficient power is being supplied.  
=> Is the breaker on the side of the outer part open?
- Check if the lamp is turned down.  
=> Check the unit in a power outlet that is known to work.

If it still does not work, contact your local LABORATORY EQUIPMENT PTY LIMITED agent/distributor & have it repaired.

2. Is the machine inclined?

Install the machine horizontally all the time.

- In case general failure:-  
=> Check the unit in a power outlet that is known to work.

If it still does not work, contact your local LABORATORY EQUIPMENT PTY LIMITED agent/distributor & have it repaired.

## **7. After-sales service.**

### **7.1 Free repair**

Faults which are responsible for manufacture in normal condition can be repaired for free for 1 year from purchase date (pressure vessel is not covered), and it is desirable to check following items when requesting A/S.

Part and condition generated fault

(It is necessary to explain in detail within limit of possibility)

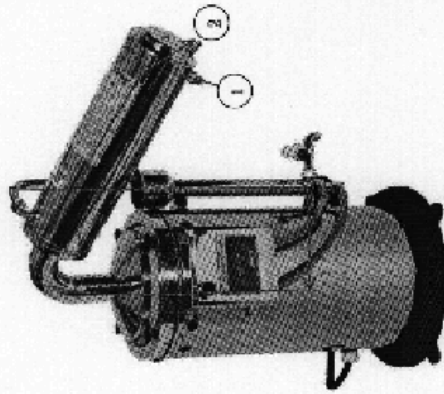
- . Model name
- . Serial Number
- . Purchase date (year, month, date)

### **7.2 Chargeable repair**

In the following cases, the customer will be required to pay for the following repairs:

- Fault by user mistake, unsuitable repair or modification
- Fault by negligence for carrying and handling during use
- Fault due to natural disasters such as fire, flood disaster and abnormal voltage
- Fault by using against direction for use.

### Water distilling apparatus



Please find the below picture.  
No check the part names.

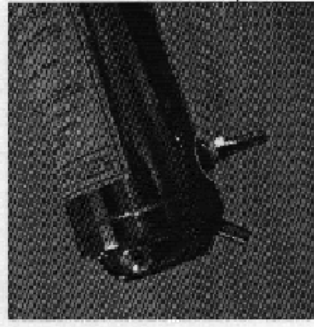
- 1) Water inlet → ① picture 2)
- 2) Water outlet → ② picture 5)
- 3) Heater → picture 6)
- 3) It does NOT have the reservoir for distilled water.

1) Close the drain valve.



Drain valve

2) Connect the cooling water supply hose to water inlet.



Water inlet