
User Manual

Rotary Evaporator

(DW-52A/52AA/5203)

DRAWWELL
A r t i s t o f S c i e n c e

Please read operating manual before installation and operation.

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DRAWELL pursues extraordinary quality and focuses on good after-sales service!

This manual specially illustrates the usage of Rotary Evaporator!

Wrong operation can cause accidents, shorten the life of the device and reduce its performance.

Therefore, please be sure to carefully read the manual before using!

The manual will be submitted to end-users!

Please keep this manual to prepare for inspection when required!

The manual is used for only reference, the specific shape design is subject to the real object.

Manual for Rotary Evaporator

I. Introduction of usage

Rotary evaporator is a kind of device with the operation principle as follows: put the rotary evaporation bottle (flask used to increase the evaporation area) in water bath under the condition of reduced pressure, and make it rotate while heating it, so as to make the solution in the bottle diffuse and evaporate. It is a relatively ideal basic instrument necessary for the concentration, drying and recycling relied on by the production and experimental analysis which is conducted by the chemical industry, pharmaceutical industry, universities and colleges, and research laboratories and so on.

II. Structural features

1. Rotation of principal machine

The principal machine consists of a group of reliable micro-motors, speed motors and integrated circuits. Under the action of electronic speed control, it can realize the stepless speed regulation within the range of 0-150 r / min.

2. Elevation of principal machine

RE-52AA-type principal machine adopting the method of micro-motor speed change can be automatically ascended and descended only by pressing the switch with hand. The elevation is

3. Tilt of principal machine

The principal machine can be tilted at random within the range of 0-45 ° by loosening plum blossom screws. The condensate system made of heat-resistant high-quality glass is connected to the head of principal machine with sockets, thus making it able to tilt therewith and continuously feed.

4. Heating water tank

Heating water tank is equipped with a closed heating tube with heating wire, and connected to digital display of temperature, which can automatically connect or disconnect the power so as to automatically control the water temperature inside the tank.

5. Evaporation pipe

Evaporation pipe uses PTFE, which is corrosion-resistant and can maintain a high vacuum.

6. Cooler (made of high-quality glass of thermostability, and refined)

RE-52AA Vertical, Dual-reflux.

7. Main metal components are made of corrosion-resistant high-quality stainless steel, thus extending the service life.

III. Matters needing attention for use

1. Please read the Manual and Brief Introduction of Installing Rotary Evaporator first, and focus on the part of installation preparation, installation procedures and operation.

2. As for the expensive solution, a simulation technology experiment should be conducted first. Then, the solution can be normally used after confirming the equipment can meet the experimental requirements.

3. Water temperature inside the water tank will be automatically controlled by the digital display of temperature. Accurate water temperature will be measured directly through the mercury thermometer.

4. In case of needing to replace the fuse, the power should be cut off first, followed by the opening of cover to replace the fuse.

5. When heating the water tank, do not touch with hand to prevent the scald.

6. Can not be used under the environment full of flammable, explosive and narcotic gas.

7. In general, this product does not have specific requirements for disinfection.

IV. Main technical parameters

Name	Capacity of rotation	Rotation speed	Elevation of principal	Temperature inside water tank	Power	Power supply
RE-52AA	50~2000ml	0-150r/min	Power-drive	RT-100°C Digital display	1000W	220v/50Hz

V. Maintenance

1. Glass component: in case of serious dirt, clean it with the dilute sulfuric acid.

2. PTFE connection tube: in general, it needs to be removed and washed only under serious dirt.

3. The clear water inside the water tank pot should be frequently replaced, with the pot cleaned.

VI. Failure analysis and exclusion methods

Phenomena	Check (causes)	Handling method
No power supply	1. Check whether the power plug is loose 2. Check whether the fuse is disconnected	1. Insert the power plug tight
Rotation bottle shakes or gives out noise	Check whether the glass interface of rotation bottle is installed smoothly and in place	Reinstall the glass interface and rotation bottle, and screw and lock the nut tightly
Insufficient vacuum	1. Check the performance of vacuum pump, and whether each connector is tightened (block the air outlet of vacuum pump to observe the indicators on vacuum table) 2. Check whether the glass appliances are defected or cracked for coldness 3. Check whether the interface of glass appliance is	1. Screw the connectors tightly or replace the vacuum pump 2. Replace the damaged appliances 3. Recoat with vacuum grease
Water tank can not be heated	1. Check the 10A fuse 2. Check whether the heating plug is loose	1. Replace the 10A fuse 2. Insert the heating plug tightly

In case of being unable to troubleshoot according to the above methods, contact us by calling

VII. Storage and transportation

Instruments packed should be stored inside the room, with the temperature within the range of -10 ~ 40 °C, relative temperature not exceeding 90%, non-corrosive gases and well-ventilated condition. In the process of transportation, they should be free of moisture, and handled with care.

VIII. Accessories

DW-RE-52AA should be equipped with a 24-port / 250ml rotation bottle and a 500ml ball-milling port collection bottle.

In case of needing flasks of other specification, the customer should purchase otherwise.

IX. Packing List

Serial	Names	Qty	Serial	Names	Qty
1	Principal machine (including: control box, the head, lifting column, base of	1 set	7	Stainless steel bracket	1 PC
2	Water bath tank (connected to the	1 set	8	Stainless steel bracket circle	1 PC
3	Condensation pipe	1 PC	9	Plastic flask clip	1 PC
4	Collection bottle 250ml	1 PC	10	Stainless steel ball-milling	1 PC
5	Rotation bottle 250ml	1 PC	11	Warranty Card	1 PC
6	Charging pipe with valves	1 PC	12	Certificate	1 PC

Installation:

1. After unpacking, check according to the packing list, clean and dry pieces of glass and put them in place according to the position of pictures. On the left side should be the body of principal machine, with the water tank container on the right side.

2. 1 As for RE52CS, RE52A and RE52AA types of rotary evaporators, insert the Embossed-grinding mouth of four-way ball into the PTFE connection tube on the left side of head of principal machine, and turn a little after inserting tightly to make it to fit well.
2. 2 As for RE5203 type, insert the Embossed-grinding mouth on the side of condensation pipe into the PTFE connection tube on the left side of head of principal machine, and turn back and forth after inserting tightly to make it to fit well.
3. As for , RE52A and RE52AA types, realize the interconnection among the condensation pipe, four-way ball and collection bottle, and joints should be coated with vacuum grease to strengthen the tightness.
4. Unscrew the black lock nut on the right side of head of principal machine, encase from the flange of threaded glass joints (see the figure below), and then screw the black lock nut into the head of principal machine smoothly and tightly.
5. Connect the rotation bottle to the other end of threaded glass joint (Embossed-grinding mouth), screw on the nut with square rings, and make square rings button the flask rim closely. In case of needing to back off the rotation bottle, screw off the nut with square rings to make the bottle exit the Embossed-grinding mouth.
6. Encase DW – RE5203 collection bottle on the ball-milling mouth of condensation pipe, and clamp with the clip.
7. Water outlets are connected with rubber tubes for discharge.
8. Vacuum port is connected to the vacuum pump through the vacuum tube.
9. After injecting water into the water tank, the heating plug behind the water tank will be connected to the power line.



Operation:

1. Power: 220V 50HZ
2. Press the power switch to make it switch on (-), and turn the speed control knob, when the principal machine will begin to rotate.
3. Press (▲ / ▼) keys, the head of principal machine will ascend or descend automatically.
4. After injecting water into the water tank, press the heating key (-) and set the temperature, which can automatically control the heating process. Heating without water is prohibited.
5. The process of aligning the head angle is as follows: first, loosen the plum blossom knob on the right side of stand pillar, turn the head of principal machine, and then screw it tightly after reaching the appropriate angle.
6. After completion of commissioning, power and heating switches will switched to the state of **Off** (0), followed by the unplugging of power plug.

Warranty card of DRAWELL INSTRUMENT CO., LTD

Warranty instructions of DRAWELL Instrument Co., Ltd.

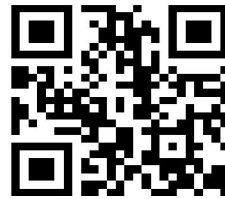
1. Each product of the company is attached with a warranty card only as warranty certificate, it is properly kept by the user; if lost, without supplement.
2. This product, from the date of purchase, is not overhauled and can not be normally used within one year, it can be carried on with free repair or replacement of parts with this card. If it is caused the fault as improper use and custody, it should not belong to the warranty scope.
3. The product of the company, after the expiration of warranty period or beyond the warranty period scope, is gained the free repair, but the cost of the spare parts is paid by the user.
4. Please provide the valuable advices to our products' quality, use effect or service quality, etc., and use "Feedback Card" to back them to my company or my designated dealers.

Product quality feedback card

Purchase date:

Product model	DW-RE-52AA	Production lot number	
Date of use		Date of failure	
Quality conditions:			
Signature of user		Zip code	
Contact address		Contact tel number	
Views of the relevant departments of the company:			
Signature of person in charge: Date:			

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