

# Rotary Evaporator



# About us



**Innova Bio-Meditech** is one of the professional solution provider of laboratory and medical devices. Firmly committed to our mission of "sharing innovative bio-meditech solutions with the world", we are dedicated to innovation in the fields of Biology Project, Life Science, Pharmacy Industry and Medical Treatment.

**Innova Bio-Meditech** possesses a sound distribution and service network with business partners in North and Latin America, Europe, Africa and Asia-Pacific etc. We have built up a well established R&D, manufacture network with 3 centers in Qingdao, Shanghai and Suzhou. Inspired by the needs of our customers, we adopt advanced technologies and transform them into accessible innovation. This means constant effort and research, in order to more fully understand the developments of the market, INNOVA produce constantly upgraded product ranges by adding new products year after year.

*The passion for science*

# IRE-2000 series Rotary Evaporator (Lab-scale)



IRE-2000A



IRE-2000B



IRE-2000E

## Introduction

IRE-2000 rotary evaporator is a new generation of intelligent rotary evaporator. The liquid crystal display serves as the human-machine interface of the device. The main control chip adopts a high-performance single-chip microcomputer and a dedicated control program. Beautiful and elegant, stable performance. An upgrade interface is reserved. According to different customer needs, user requirements can be met by upgrading several pieces.

## Advantages

- Power supply: AC220V;1kW.
- Temperature range: room temperature-90 °C (not less than 0 °C) temperature difference 2C.
- Speed: 5-200rpm; speed difference: earth 2rpm; electronic stepless speed regulation, 5-200rpm, power: 40W.
- Mainframe contact button, fast automatic rise and fall, up and down distance 0-150mm.
- Heating tank: Tetronium compound pot, fully enclosed heater.
- The main component is made of rust-proof aluminum alloy and special engineering plastics, with compact structure, beautiful appearance and durability.

## Technical parameters

| Model                          | IRE-2000A                                                          | IRE-2000B                                                | IRE-2000E   |
|--------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|-------------|
| Glass material                 |                                                                    | GG-17                                                    |             |
| Stand material                 |                                                                    | Aluminum alloy                                           |             |
| Rotational power               |                                                                    | 40W                                                      |             |
| Speed of rotation              |                                                                    | 0-200rpm/min                                             |             |
| Heating power                  |                                                                    | 1.2kW                                                    |             |
| Temperature control accuracy   |                                                                    | ±1°C                                                     |             |
| Lifting power                  |                                                                    | 15W                                                      |             |
| Lifting stroke                 |                                                                    | 0-140mm                                                  |             |
| Overall dimension(L×W×H)mm     |                                                                    | 625x440x600                                              |             |
| Packing size(L×W×H)mm          |                                                                    | 675x545x655                                              |             |
| Packing Weight(KG)             |                                                                    | 23KG                                                     |             |
| Speed regulation mode          |                                                                    | Electronic stepless speed regulation                     |             |
| Speed display mode             | /                                                                  | Digital display                                          | LCD display |
| Temperature display mode       |                                                                    | Digital display                                          | LCD display |
| Sealing method                 |                                                                    | Teflon sealed                                            |             |
| Lifting method                 |                                                                    | Main engine automatic rise and fall                      |             |
| Condenser                      |                                                                    | Vertical condenser 85*375                                |             |
| Continuous dosing              |                                                                    | 19# standard port feeding valve                          |             |
| Vacuum degree                  |                                                                    | 0.098Mpa                                                 |             |
| Glass temperature range        |                                                                    | -80—250°C                                                |             |
| Pot shell size                 |                                                                    | 285x260x210H(mm)                                         |             |
| Temperature control mode       |                                                                    | PT100 sensor LCD display intelligent temperature control |             |
| Pot bladder material           |                                                                    | Teflon composite pot fully enclosed heating 285x140      |             |
| Collect bottle volume          |                                                                    | 1000ml φ131mm/35# ball mill mouth                        |             |
| Rotate bottle volume           |                                                                    | 1000ml φ131mm/29# maker                                  |             |
| Voltage/Frequency(V/Hz)        |                                                                    | 220V/50Hz(110V/60Hz can be customized)                   |             |
| Bath temperature control range |                                                                    | 0-90°C (0-400°C can be customized)                       |             |
| Bath pot capacity              | φ 285×140H(mm)5.6L(can be equipped with organic transparent cover) |                                                          |             |

# IRE-3000 series Rotary Evaporator (Lab-scale)



IRE-3000A



IRE-3000B



IRE-3000E

## Advantages

- PTFE and rubber composite seal, maintain high vacuum.
- Aluminum alloy + Teflon water bath liner, aluminum alloy heating plate constant temperature control, PT100 sensor, fast and accurate temperature transmission, optional plexiglass transparent cover.
- The mechanical structure is made of stainless steel and aluminum alloy, and the glass is made of high temperature resistant and high boron glass.
- Piston-type feeding valve is connected to the PTFE extension tube to feed the material to the evaporation bottle under vacuum continuously, convenient to use.
- Electric lifting host, easy to operate.
- Vertical double-layer serpentine coil condenser with high collection rate.
- Electronic speed regulation, knob fine-tuning. Independent control of heating and rotating switch.

## Technical parameters

| Model                          | IRE-3000A                                                          | IRE-3000B                                                | IRE-3000E   |
|--------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|-------------|
| Glass material                 |                                                                    | GG-17                                                    |             |
| Stand material                 |                                                                    | Aluminum alloy                                           |             |
| Rotational power               |                                                                    | 40W                                                      |             |
| Speed of rotation              |                                                                    | 0-200rpm/min                                             |             |
| Heating power                  |                                                                    | 1.2kW                                                    |             |
| Temperature control accuracy   |                                                                    | ±1°C                                                     |             |
| Lifting power                  |                                                                    | 15W                                                      |             |
| Lifting stroke                 |                                                                    | 0-140mm                                                  |             |
| Overall dimension(L×W×H)mm     |                                                                    | 625x440x600                                              |             |
| Packing size(L×W×H)mm          |                                                                    | 675x545x655                                              |             |
| Packing Weight(KG)             |                                                                    | 23KG                                                     |             |
| Speed regulation mode          |                                                                    | Electronic stepless speed regulation                     |             |
| Speed display mode             | /                                                                  | Digital display                                          | LCD display |
| Temperature display mode       |                                                                    | Digital display                                          | LCD display |
| Sealing method                 |                                                                    | Teflon sealed                                            |             |
| Lifting method                 |                                                                    | Main engine automatic rise and fall                      |             |
| Condenser                      |                                                                    | Vertical condenser 85*375                                |             |
| Continuous dosing              |                                                                    | 19# standard port feeding valve                          |             |
| Vacuum degree                  |                                                                    | 0.098Mpa                                                 |             |
| Glass temperature range        |                                                                    | -80—250°C                                                |             |
| Pot shell size                 |                                                                    | 285x260x210H(mm)                                         |             |
| Temperature control mode       |                                                                    | PT100 sensor LCD display intelligent temperature control |             |
| Pot bladder material           |                                                                    | Teflon composite pot fully enclosed heating 285x140      |             |
| Collect bottle volume          |                                                                    | 1000ml φ131mm/35# ball mill mouth                        |             |
| Rotate bottle volume           |                                                                    | 1000ml φ131mm/29# maker                                  |             |
| Voltage/Frequency(VHz)         |                                                                    | 220V/50Hz(110V/60Hz can be customized)                   |             |
| Bath temperature control range |                                                                    | 0-90°C (0-400°C can be customized)                       |             |
| Bath pot capacity              | φ 285×140H(mm)5.6L(can be equipped with organic transparent cover) |                                                          |             |

# IRE-5000 series Rotary Evaporator (Lab-scale )



IRE-5000A



IRE-5000B



IRE-5000E

## Advantages

- Main components: rust aluminum alloy, special engineering plastics, high temperature resistant high-quality glass. It has compact structure, beautiful appearance and durability.
- Host transmission: precision reduction motor, electronic speed regulation, gear and rack transmission device. The aperture of the drive shaft tube is increased, and the evaporation pipe is 1.5 times that of ordinary instruments, resulting in high evaporation efficiency.
- Lifting mechanism: point-contact mechanical retracting and retracting principle, hydraulic auxiliary push to achieve rapid rise and steady speed descent functions to improve efficiency.
- Evaporation pipe: Made of high-quality high-temperature resistant glass and fluorine plastic composite. Both ends are sleeved with "silicone and fluorine sealing rings" for good vacuum sealing. It has a long service life and can be disassembled for cleaning or replacement.
- Heating tank: Use Teflon aluminum alloy composite pot. The jacket is made of special engineering plastic for protection. The fully enclosed electric heating is installed on a rust-proof aluminum alloy base, which is stable, reliable and removable.

## Technical parameters

| Model                          | IRE-5000A                                                    | IRE-5000B                                        | IRE-5000E   |
|--------------------------------|--------------------------------------------------------------|--------------------------------------------------|-------------|
| Glass material                 |                                                              | GG-17                                            |             |
| Stand material                 |                                                              | Aluminum alloy                                   |             |
| Rotational power               |                                                              | 40W                                              |             |
| Speed of rotation              |                                                              | 0-200rpm/min                                     |             |
| Heating power                  |                                                              | 1.5kW                                            |             |
| Temperature control accuracy   |                                                              | ±1°C                                             |             |
| Lifting power                  |                                                              | 15W                                              |             |
| Lifting stroke                 |                                                              | 0-180mm                                          |             |
| Speed regulation mode          |                                                              | Electronic stepless speed regulation             |             |
| Speed display mode             | /                                                            | Digital display                                  | LCD display |
| Temperature display mode       |                                                              | Digital display                                  | LCD display |
| Sealing method                 |                                                              | Teflon sealed                                    |             |
| Lifting method                 |                                                              | Main engine automatic rise and fall              |             |
| Condenser                      |                                                              | Vertical condenser 85*375                        |             |
| Continuous dosing              |                                                              | 19# standard port feeding valve                  |             |
| Vacuum degree                  |                                                              | 0.098Mpa                                         |             |
| Glass temperature range        |                                                              | —80—250°C                                        |             |
| Pot shell size                 |                                                              | 285x260x210H(mm)                                 |             |
| Temperature control mode       | 0.09PT100 sensor LCD display intelligent temperature control | 8Mpa                                             |             |
| Pot bladder material           | Teflon composite pot fully enclosed heating                  | 285x140                                          |             |
| Collect bottle volume          | 3000m                                                        | φ230mm/35# ball grinding mouth                   |             |
| Rotate bottle volume           | 5000ml                                                       | φ230mm/φ50mm# flange mouth                       |             |
| Voltage/Frequency(V/Hz)        | 220V/50Hz(110V/60Hz can be customized)                       |                                                  |             |
| Bath temperature control range | 0-90°C                                                       | (dual use of water and oil)                      |             |
| Bath pot capacity              | Φ250×140H(mm)8.6L                                            | (can be equipped with organic transparent cover) |             |
| Overall dimension(L×W×H)mm     |                                                              | 790L×400W×640H                                   |             |
| Packing size(L×W×H)mm          |                                                              | 710L×635W×735H                                   |             |
| Packing Weight(KG)             |                                                              | 43KG                                             |             |

# IRE-2011/2012 Desktop Rotary Evaporator (Lab-scale)



IRE-2011



IRE-2012

## Application

Rotary evaporation apparatus is mainly used for continuous distillation under reduced pressure a number of easily volatile solvent. In particular, receive the extract concentration and separation liquid distillation, separation and purification of the reaction product can be.

## Technical parameters

| Model                       |                      | IRE-2011                                                  | IRE-2012                                        |
|-----------------------------|----------------------|-----------------------------------------------------------|-------------------------------------------------|
| Performance                 | String speed         | 0-120rmp                                                  | 0-300rpm                                        |
|                             | Evaporation capacity | Max 25ml/min(Evaporation capacity of water)               | Max 20ml/min(Evaporation capacity of water)     |
|                             | Attainable vacuum    | 399.9Pa(3mm Hg)following                                  |                                                 |
| Fuction                     | Speed setter         | Knob setting:digital display                              |                                                 |
|                             | Safety function      | Fuse, motor overload protection circuit                   |                                                 |
|                             | Lifting function     | Manual lifting                                            | Electric lifting+manual auxiliary lifting       |
| Constitute                  | Rotating motor       | Alternating current dynamo                                | Stepping motor                                  |
|                             | Rotating motor power | 40W                                                       | 45W                                             |
|                             | Condenser tube       | Longitudinal triple coil cooling area 0.24 m <sup>2</sup> |                                                 |
|                             | Sample bottle        | Spherical flask 1L TS29/38                                | Pear flask 1L TS29/38                           |
|                             | Rotate bottle        | Spherical flask 1L ball milling port S35/20               |                                                 |
|                             | Vacuum sealing ring  | Teflon + Teflon fluorinated rubber double sealing ring    |                                                 |
| Specifications              | Interface diameter   | The nozzle diameter 10mm (tower connection)               |                                                 |
|                             | The base             | T-frame                                                   |                                                 |
|                             | Lifting range        | 100mm +150mm (sliding lifting + manual lifting)           | 100mm +115mm (sliding lifting + manual lifting) |
| Use environment temperature |                      | 5~35°C                                                    | 5~30°C                                          |
| Overall dimension(mm)       |                      | 530W×320D×780H                                            | 620W×430D×680 (780) H                           |
| Weight                      |                      | 8.2kg                                                     | 26kg                                            |
| Power input power           |                      | 2A/200VA                                                  | 2A/220VA                                        |
| Power supply                |                      | AC220V/50Hz                                               | AC220V/50Hz                                     |

# IRE-52 series Classic Desktop Rotary Evaporator (1L)



IRE-52A/52C/5299

## Introduction

IRE-5299 , IRE-52C motor have 10-120rpm infinite speed adjustment and automatic lifting function.Rotatino body compesed a group reliable micro motor speed measuring motor and integrated circuit control decive.Under the effect of ectronic speed, steady rotaion within 10-120 rpm.Rotating body move up and down system use screwhoist hand wheel which connect the screwpole, it can be make rotator, flask, condenser, receving flask raised and lowered at the same time.Distance range: 0-150mm.

## Advantages

- PTFE and rubber composite seal, high vacuum degree.
- Constant temperature control of water bath pot, bottom PT100 sensor, stainless steel probe rod, fast and accurate temperature transfer.
- Mechanical structure is made of stainless steel and aluminum alloy parts,the glass parts are high temperature resistant and high boron glass.
- The piston-type feeding valve is connected to the PTFE extension tube, and the material is continuously fed to the evaporation bottle under vacuum, convenient to use.
- Vertical double-layer serpentine coil condenser ensures high collection rate.

## Technical parameters

| Model                          | IRE-52A                           | IRE-52C            | IRE-5299                |  |  |
|--------------------------------|-----------------------------------|--------------------|-------------------------|--|--|
| Supply voltage                 | 220V/50Hz(customizable 110V/60Hz) |                    |                         |  |  |
| Motor power                    | 30W                               | 30W                | 30W                     |  |  |
| Lift motor power               | /                                 | 15W                |                         |  |  |
| Heating power                  | 1200W                             |                    |                         |  |  |
| Attainable vacuum              | 0.098Mpa                          |                    |                         |  |  |
| Evaporation capacity           | 20ml/min                          |                    |                         |  |  |
| Rotate bottle volume           | 1000mlφ131mm/29# standard port    |                    |                         |  |  |
| Collect bottle volume          | 1000ml35# ball grinding mouth     |                    |                         |  |  |
| Pot shell size                 | 300L×300W×200H(mm)                | 300L×300W×200H(mm) | 300L×300W×260H(mm)      |  |  |
| Condenser size                 | φ85×375H (mm)                     |                    |                         |  |  |
| Bath pot size                  | φ250×130H(mm) about 8.6L          |                    |                         |  |  |
| Rotation speed                 | 0-120rpm/min 0-120pm/min          |                    |                         |  |  |
| Bath temperature control range | 0-400 °C                          | 0-400 °C           | room temperature -99 °C |  |  |
| Bath pot capacity              | ±1 °C                             | ±1 °C              | ±1 °C                   |  |  |
| Glass temperature range        | -80-250 °C                        | -80-250 °C         | -80-250 °C              |  |  |
| Lifting range                  | 0-150mm(manual)                   | 0-150mm(electric)  |                         |  |  |
| Feeding valve                  | 19# standard port                 |                    |                         |  |  |
| Condenser size                 | φ85×375H(mm)                      |                    |                         |  |  |
| External dimension             | 700L×450W×750H(mm)                |                    |                         |  |  |
| Packing size.                  | 580L×550W×660H(mm)                |                    |                         |  |  |
| Packing weight                 | 24KG                              | 25KG               | 14.5KG                  |  |  |

# IRE-D series Classic Desktop Rotary Evaporator (2-5L)

## Introduction

INNOVA rotary evaporator is mainly used in pharmaceutical, chemical and biological pharmaceutical industry concentration, crystallization, separation, drying and solvent recovery. The principle is that under vacuum conditions, constant temperature heating causes the rotating bottle to rotate at a constant speed. The material forms a large area film on the bottle wall and evaporates efficiently. The solvent vapor is cooled by a high-efficiency glass condenser and recovered in the collection bottle, which greatly improves the evaporation efficiency. It is especially suitable for the concentration and purification of biological products that are easily decomposed and denatured at high temperatures.

IRE-501DEX equipped with explosion-proof control speed box, explosion-proof speed motor, explosion-proof water bath control box. Explosion-proof grade ExdIIBT4, independent operation display of speed and temperature.



IRE-201D



IRE-301D



IRE-501D



IRE-501DEX

## Technical parameters

| Model                | IRE-201D                           | IRE-301D                          | IRE-501D                          | IRE-501DEX                        |
|----------------------|------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Supply voltage       | 220V/50Hz(customizable 110V/60Hz)  |                                   |                                   |                                   |
| Motor power          | 30W                                | 40W                               | 40W                               | 40W                               |
| Heating power        | 1200W                              | 1500W                             | 1500W                             | 1500W                             |
| Attainable vacuum    | 0.098Mpa                           |                                   |                                   |                                   |
| Evaporation capacity | 20ml/min                           | 30ml/min                          | 30ml/min                          | 30ml/min                          |
| Rotate bottle volume | 1000mlφ131mm/<br>29# standard port | 3000mlφ195mm/<br>50φ flange sport | 5000mlφ230mm/<br>50φ flange sport | 5000mlφ230mm/<br>50φ flange sport |

## Technical parameters

| Model                           | IRE-201D                     | IRE-301D                                | IRE-501D                                 | IRE-501DEX                               |
|---------------------------------|------------------------------|-----------------------------------------|------------------------------------------|------------------------------------------|
| Collect bottle volume           | 1000ml 35# ball milling port | 2000ml 35# ball milling port            | 3000ml 35# ball milling port             | 3000ml 35# ball milling port             |
| Pot shell size                  | 360L×330W×260H(mm)           | 390L×360W×260H(mm)                      | Φ280×160H(mm)                            | Φ280×160H(mm)                            |
| Condenser size                  | Φ85×375H(mm)                 | Φ85×375H(mm)<br>about 0.2m <sup>2</sup> | 360L×330W×260H(mm)                       | 360L×330W×260H(mm)                       |
| Bath pot size                   | Φ250×160H(mm)<br>about 8.6L  | Φ280*160(H)<br>about 8.6L               | Φ85×480H(mm)<br>about 0.25m <sup>2</sup> | Φ85×480H(mm)<br>about 0.25m <sup>2</sup> |
| Rotation speed                  | 0-90 rpm/min                 |                                         |                                          |                                          |
| Bath temperature control range  | Room temperature-99 °C       |                                         |                                          |                                          |
| Temperature control accuracy    | ±1 °C                        |                                         |                                          |                                          |
| Glass temperature range         | -80-250 °C                   |                                         |                                          |                                          |
| Lifting range                   | 0-150mm(manual)              |                                         |                                          |                                          |
| Feeding valve                   | 19# standard port            |                                         |                                          |                                          |
| Condenser circulation interface | Tower connection 12mm        |                                         |                                          |                                          |
| External dimension              | 760L×410W×800H(mm)           | 760L×380W×970H(mm)                      | 790L×380W×1180H(mm)                      | 790L×380W×1180H(mm)                      |
| Packing size                    | 900L×500W×450H(mm)           | 1000L×630W×420H(mm)                     | 1002L×600W×450H(mm)                      | 1002L×600W×450H(mm)                      |
| Packing weight                  | 24Kg                         | 47Kg                                    | 33Kg                                     | 33Kg                                     |

# IR-202A Desktop Rotary Evaporator(1L)

## Advantages

- PTFE and rubber composite seal, high vacuum.
- Water bath constant temperature control, PT100 sensor and stainless steel probe, transmit temperature quickly and accurately.
- Large number of stainless steel and aluminum alloy parts, glass parts resistant to high temperature and high boron glass.
- Vacuum gauge (standard) be able to adjust the best vacuum of low boiling point materials.
- Piston-type feeding valve, connected to the PTFE extension tube. Continuously feed the material to the evaporation bottle under vacuum, making it easy to use.
- Manual pressure bar up and down, with self-locking ability, easy to operate.
- Vertical double-layer serpentine coil condenser with high collection rate.
- Electronic speed regulation, knob fine-tuning. Heating and rotating switch are controlled independently.

## Technical parameters

| Model                           | IRE-202A                          |
|---------------------------------|-----------------------------------|
| Supply voltage                  | 220V/50Hz(customizable 110V/60Hz) |
| Motor power                     | 40W                               |
| Heating power                   | 1500W                             |
| Attainable vacuum               | 0.098Mpa                          |
| Evaporation capacity            | 20ml/min                          |
| Rotate bottle volume            | 1000mlφ131mm/29# standard port    |
| Collect bottle volume           | 1000ml 35# ball grinding mouth    |
| Condenser size                  | φ85×375H (mm)                     |
| Bath pot size                   | φ250×140H(mm)about 8.6L           |
| Rotation speed                  | 0-120pm/min                       |
| Bath temperature control range  | Room temperature-99 °C            |
| Temperature control accuracy    | ±1 °C                             |
| Glass temperature range         | -80-250 °C                        |
| Lifting range                   | 0-150mm (electric)                |
| Feeding valve                   | 19# standard port                 |
| Condenser circulation interface | Tower connection 12mm             |
| External dimension              | 700Lx450Wx750H (mm)               |
| Packing size                    | 580Lx540Wx660H (mm)               |
| Packing weight                  | 21KG                              |



IRE-202A

# IRE-series Rotary Evaporator ( Pilot-scale )

## Introduction

Large capacity and large opening of evaporating flask give larger evaporation surface. The evaporating flask keeps rotating when it is constantly heated by water bath, and solvent evaporates more efficiently under vacuum condition. It can be used for pilot-scale production in biology engineering, pharmaceutical industry, chemical industry and food processing. It usually works with water circulating vacuum pump, diaphragm vacuum pump, recirculating chiller, constant temperature circulator, low temperature circulating pump, etc.

IRE-2010A/2020A/2030A/2050A all can be equipped with explosion-proof devices.

## Application

International advanced EL air tight system, high vacuum degree. Gas-liquid separation, no reflux.

Primary and secondary efficient double condenser, high recovery.

Rotary bottle with nut connection for easy loading and unloading.

Drain valve at the bottom of the collection bottle, quick solution recovery

The collection bottle is equipped with a vacuum check valve between the secondary condenser, and the evaporation vacuum can be continuously fed without affecting the liquid discharge.

Vacuum meter, low boiling point material can adjust the best vacuum degree.

Water bath electronic thermostat control, up and down adjustable.

Mechanical structure adopts stainless steel and aluminum alloy parts. All parts are made of high temperature resistant borosilicate glass. Electrical key parts import, user-friendly to purchase and replace.



IRE-2010A/2020A/2030A/2050A



IRE-2010AEX/2020AEX/2030AEX/2050AEX

## Technical parameters

| Model                          | IRE-2010A(EX)                                                                               | IRE-2020A(EX)                                                                               | IRE-2030A(EX)                                                                               | IRE-2050A(EX)                                                                               |  |  |
|--------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--|--|
| Supply voltage                 | 220V/50Hz(customizable 110V/60Hz)                                                           |                                                                                             |                                                                                             |                                                                                             |  |  |
| Motor power                    | 90W                                                                                         | 120W                                                                                        | 180W                                                                                        | 180W                                                                                        |  |  |
| Heating power                  | 3000W                                                                                       | 5000W                                                                                       | 8000W                                                                                       | 8000W                                                                                       |  |  |
| Attainable vacuum              | 0.098Mpa                                                                                    | 0.098Mpa                                                                                    | 0.098Mpa                                                                                    | 0.098Mpa                                                                                    |  |  |
| Rotate bottle volume           | 10Lφ290mm/<br>φ95mm flange mouth                                                            | 20Lφ360mm/<br>φ95mm flange mouth                                                            | 30Lφ125mmφ125mm<br>flange mouthh                                                            | 50Lφ470mmφ25mm<br>flange mouth                                                              |  |  |
| Collect bottle volume          | 5000mlφ235mm/<br>φ50mm flange mouth                                                         | 10000mlφ290mm/<br>φ60mm flange mouth                                                        | 20000mlφ60mm<br>flange mouth                                                                | 20000mlφ360mm<br>φ60mm flange mouth                                                         |  |  |
| Bath size capecity             | 500L×600W×680H(mm)                                                                          | 600L×650W×680H(mm)                                                                          | 650L×570W×800H(mm)                                                                          | 700L×750W×800H(mm)                                                                          |  |  |
| Base plate size                | 450L×500W(mm)                                                                               | 500L×530W(mm)                                                                               | 600L×800W(mm)                                                                               | 600L×800W(mm)                                                                               |  |  |
| Condenser size                 | Main coolingφ<br>120×600H(mm)<br>Subcooledφ<br>135×470H(mm)                                 | Main coolingφ<br>130×680H(mm)<br>Subcooledφ<br>160×550H(mm)                                 | Main coolingφ<br>160×750H(mm)<br>Subcooledφ<br>160×550H(mm)                                 | Main coolingφ<br>130×750H(mm)<br>Subcooledφ<br>160×550H(mm)                                 |  |  |
| Temperature measuring port     | Φ19 mark                                                                                    | Φ19 mark                                                                                    | Φ19 mark                                                                                    | Φ19 mark                                                                                    |  |  |
| Rotation speed                 | 0-120rpm/min                                                                                | 0-120rpm/min                                                                                | 0-120rpm/min                                                                                | 0-120rpm/min                                                                                |  |  |
| Evaporation capacity           | 6L/h                                                                                        | 6.5L/h                                                                                      | 7L/h                                                                                        | 8L/h                                                                                        |  |  |
| Bath temperature control range | Room temperature -99 °C                                                                     |                                                                                             |                                                                                             |                                                                                             |  |  |
| Temperature control accuracy   | ±1 °C                                                                                       |                                                                                             |                                                                                             |                                                                                             |  |  |
| Glass temperature range        | -80-250 °C                                                                                  |                                                                                             |                                                                                             |                                                                                             |  |  |
| Lifting range                  | 0-170mm (manual)                                                                            |                                                                                             |                                                                                             |                                                                                             |  |  |
| Feeding valve                  | 34# standard port                                                                           |                                                                                             | 40# standard port                                                                           |                                                                                             |  |  |
| Bleed valve                    | Φ 50 flange mouth teflon discharge valve                                                    |                                                                                             |                                                                                             |                                                                                             |  |  |
| Discharge valve                | Discharge valve                                                                             |                                                                                             |                                                                                             |                                                                                             |  |  |
| External dimension             | 1100L×500W×1900H(mm)                                                                        | 1100L×500W×1900H(mm)                                                                        | 1200L×650W×2200H(mm)                                                                        | 1200L×650W×2200H(mm)                                                                        |  |  |
| Packing size                   | Pot:<br>700L×610W×700H(mm)<br>Glass:<br>700L×550W×550H(mm)<br>Shelf:<br>1250L×350W×390H(mm) | Pot:<br>700L×610W×700H(mm)<br>Glass:<br>700L×550W×550H(mm)<br>Shelf:<br>1250L×350W×390H(mm) | Pot:<br>920L×860W×840H(mm)<br>Glass:<br>970L×840W×610H(mm)<br>Shelf:<br>1570L×460W×400H(mm) | Pot:<br>920L×860W×840H(mm)<br>Glass:<br>970L×840W×610H(mm)<br>Shelf:<br>1570L×460W×400H(mm) |  |  |
| Packing weight                 | Glass:33Kg<br>Shelf:46.5Kg<br>Pot:42Kg                                                      | Glass:36Kg<br>Shelf:46.5Kg<br>Pot:45Kg                                                      | Glass:45Kg<br>Shelf:57Kg<br>Pot:96Kg                                                        | Glass:49Kg<br>Shelf:57Kg<br>Pot:100Kg                                                       |  |  |

# IR-series Rotary Evaporator ( Pilot-scale )

## Introduction



IR-1005 (EX)

IR-series rotary evaporator heats the water bath of the rotating bottle, presets the rotating speed of the bottle, evaporates the solvent. And then cools, separates or distilles the material through a vacuum cooling unit composed of a condenser and a vacuum acquisition device. It can be combined with circulating water multi-purpose vacuum pump and circulating cooler to meet the requirements of production or experiment.

IR-1010/1020/1050 can be equipped with explosion-proof devices.

## Application

PTFE and rubber composite seal, high vacuum.

Constant temperature control of water bath pot, PT100 sensor, stainless steel probe rod, fast and accurate temperature transfer, water discharge valve is arranged at the bottom of the pot to facilitate the discharge of liquid.

Main support cold plate anti-corrosion spray and aluminum alloy material, strong anti-corrosion, anti-oxidation.

Pot gallbladder is made of 304 stainless steel once stamping molding material, which is durable.

Glass parts are made of high boron glass with high temperature expansion coefficient of 3.3.

Vacuum meter, the pointer shows the vacuum.

The piston-type feeding valve is connected to the PTFE extension tube to continuously feed the material to the evaporation bottle under vacuum.

LCD displays the temperature and rotation speed, and the buttons control the up and down movements, operate easily.

Main unit is fixed, and the water bath is lifted and lowered electrically, with stable speed, no impact, and simple operation.

Equipped with silicone gel cover, heat insulation and anti-scalding, safe operation.

Silicone gel cover, heat insulation and anti-scalding.

Vertical double-layer serpentine coil condenser ensures high collection rate.

Brushless deceleration power-increasing motor, no spark, low noise.



IR-1010/20/50 (EX)

## Technical parameters

| Model                          | IR-1005                                                                                     | IR-1010(EX)                                                                                 | IR-1020(EX)                                                                                 | IR-1050(EX)                                                                                 |  |  |
|--------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--|--|
| Supply voltage                 | 220V/50Hz(customizable 110V/60Hz)                                                           |                                                                                             |                                                                                             |                                                                                             |  |  |
| Motor power                    | 150W                                                                                        | 250W                                                                                        | 250W                                                                                        | 400W                                                                                        |  |  |
| Bath voltage                   | 220V/50HZ                                                                                   | 220V/50HZ                                                                                   | 220V/50HZ                                                                                   | 380V/50HZ                                                                                   |  |  |
| Heating power                  | 1.5KW                                                                                       | 5KW                                                                                         | 5KW                                                                                         | 7.5KW                                                                                       |  |  |
| Total Power                    | 1.8KW                                                                                       | 5.3KW                                                                                       | 5.3KW                                                                                       | 8KW                                                                                         |  |  |
| Collect bottle volume          | 5000mlφ235mm/<br>φ50mm flange mouth                                                         | 10000mlφ290mm/<br>φ60mm flange mouth                                                        | 20000mlφ60mm<br>flange mouth                                                                | 20000mlφ360mm<br>φ60mm flange mouth                                                         |  |  |
| Bath size capacity             | 500L×600W×680H(mm)                                                                          | 600L×650W×680H(mm)                                                                          | 650L×570W×800H(mm)                                                                          | 700L×750W×800H(mm)                                                                          |  |  |
| Base plate size                | 450L×500W(mm)                                                                               | 500L×530W(mm)                                                                               | 600L×800W(mm)                                                                               | 600L×800W(mm)                                                                               |  |  |
| Condenser size                 | Main coolingφ<br>120×600H(mm)<br>Subcooledφ<br>135×470H(mm)                                 | Main coolingφ<br>130×680H(mm)<br>Subcooledφ<br>160×550H(mm)                                 | Main coolingφ<br>160×750H(mm)<br>Subcooledφ<br>160×550H(mm)                                 | Main coolingφ<br>130×750H(mm)<br>Subcooledφ<br>160×550H(mm)                                 |  |  |
| Temperature measuring port     | Φ19 mark                                                                                    | Φ19 mark                                                                                    | Φ19 mark                                                                                    | Φ19 mark                                                                                    |  |  |
| Rotation speed                 | 0-120rpm/min                                                                                | 0-120rpm/min                                                                                | 0-120rpm/min                                                                                | 0-120rpm/min                                                                                |  |  |
| Evaporation capacity           | 6L/h                                                                                        | 6.5L/h                                                                                      | 7L/h                                                                                        | 8L/h                                                                                        |  |  |
| Bath temperature control range | Room temperature -99 °C                                                                     |                                                                                             |                                                                                             |                                                                                             |  |  |
| Temperature control accuracy   | ±1 °C                                                                                       |                                                                                             |                                                                                             |                                                                                             |  |  |
| Glass temperature range        | -80-250 °C                                                                                  |                                                                                             |                                                                                             |                                                                                             |  |  |
| Lifting range                  | 0-170mm (manual)                                                                            |                                                                                             |                                                                                             |                                                                                             |  |  |
| Feeding valve                  | 34# standard port                                                                           |                                                                                             | 40# standard port                                                                           |                                                                                             |  |  |
| Bleed valve                    | Φ 50 flange mouth teflon discharge valve                                                    |                                                                                             |                                                                                             |                                                                                             |  |  |
| Discharge valve                | Discharge valve                                                                             |                                                                                             |                                                                                             |                                                                                             |  |  |
| External dimension             | 1100L×500W×1900H(mm)                                                                        | 1100L×500W×1900H(mm)                                                                        | 1200L×650W×2200H(mm)                                                                        | 1200L×650W×2200H(mm)                                                                        |  |  |
| Packing size                   | Pot:<br>700L×610W×700H(mm)<br>Glass:<br>700L×550W×550H(mm)<br>Shelf:<br>1250L×350W×390H(mm) | Pot:<br>700L×610W×700H(mm)<br>Glass:<br>700L×550W×550H(mm)<br>Shelf:<br>1250L×350W×390H(mm) | Pot:<br>920L×860W×840H(mm)<br>Glass:<br>970L×840W×610H(mm)<br>Shelf:<br>1570L×460W×400H(mm) | Pot:<br>920L×860W×840H(mm)<br>Glass:<br>970L×840W×610H(mm)<br>Shelf:<br>1570L×460W×400H(mm) |  |  |
| Packing weight                 | Glass:33Kg<br>Shelf:46.5Kg<br>Pot:42Kg                                                      | Glass:36Kg<br>Shelf:46.5Kg<br>Pot:45Kg                                                      | Glass:45Kg<br>Shelf:57Kg<br>Pot:96Kg                                                        | Glass:49Kg<br>Shelf:57Kg<br>Pot:100Kg                                                       |  |  |

# IRE-Z series Rotary Evaporator ( Pilot-scale )



IRE-2010Z/2020Z



IRE-2050Z

## Introduction

IRE-Z series of novel floor-standing rotary evaporators adopt large-capacity and large-diameter rotary evaporation bottles. Increase the evaporation area, place it in a water bath under reduced pressure, and heat it while rotating to make the solution diffuse and evaporate efficiently. Widely used in large-scale concentration, drying, extraction, and recovery of samples. It is an ideal equipment for mass production in chemical industry, medicine, food, environmental protection, colleges and universities, scientific research laboratories, industrial and mining units, etc.

## Technical parameters

| Model                | IRE-2010Z                         | IRE-2020Z                     | IRE-2050Z                     |
|----------------------|-----------------------------------|-------------------------------|-------------------------------|
| Supply voltage       | 220V/50Hz(customizable 110V/60Hz) |                               |                               |
| Motor power          | 120W                              | 120W                          | 370W                          |
| Bath voltage         | 220V/50Hz or 380V/50Hz            |                               |                               |
| Heating power        | 5000W                             | 5000W                         | 5000W                         |
| Thermometer port     | Φ19 mark                          |                               |                               |
| Attainable vacuum    | 0.098Mpa                          |                               |                               |
| Evaporation capacity | 6L/h                              | 6.5L/h                        | 8L/h                          |
| Rotate bottle volume | 10L φ290mm/φ125mm flange port     | 20L φ360mm/φ125mm flange port | 50L φ470mm/φ125mm flange port |

## Technical parameters

| Model                          | IRE-2010Z                                                                   | IRE-2020Z                                                               | IRE-2050Z                                                                                                    |
|--------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Collect bottle volume          | 5000ml φ235mm/<br>φ50mm flange port                                         | 10000ml φ290mm/<br>φ60mm flange port                                    | 20000ml φ360mm/<br>φ60mm flange port                                                                         |
| Bath size capacity             | Φ420×250H (mm)                                                              | Φ420×250H (mm)                                                          | Φ540×320H (mm)                                                                                               |
| Condenser size                 | Vertical high-efficiency<br>three-reflux condensation<br>Φ130×700H (mm)     | Vertical high-efficiency<br>three-reflux condensation<br>Φ160×800H (mm) | Vertical high-efficiency<br>three-reflux condensation<br>Main coolingΦ160×750H(mm)<br>SubcooledΦ160×550H(mm) |
| Rotation speed                 | 0-120rpm/min                                                                | 0-120rpm/min                                                            | 0-120rpm/min                                                                                                 |
| Bath temperature control range | Room temperature -99 °C                                                     |                                                                         |                                                                                                              |
| Temperature control accuracy   | ±1 °C                                                                       | ±1 °C                                                                   | ±1 °C                                                                                                        |
| Protect                        | Overcurrent protection, ground fault protection, overtemperature protection |                                                                         |                                                                                                              |
| Glass temperature range        | -80-250 °C                                                                  |                                                                         |                                                                                                              |
| Lifting range                  | 0-180mm(maual)                                                              | 0-180mm(electric)                                                       | 0-180mm(electric)                                                                                            |
| Feeding valve                  | 34# standard port                                                           |                                                                         | 40# standard port                                                                                            |
| Bleed valve                    | Φ50Flanged tetrafluorotop discharge valve                                   |                                                                         |                                                                                                              |
| Discharge valve                | Discharge valve                                                             |                                                                         |                                                                                                              |
| Vacuum air outlet              | Vacuum air outlet                                                           |                                                                         |                                                                                                              |
| External dimension             | 1100L×600W×1720H(mm)                                                        | 1100L×600W×1720H(mm)                                                    | 1300L×700W×2350H(mm)                                                                                         |
| Packing size                   | Glass<br>850L×700W×550H(mm)<br>Host<br>950L×610W×1250H(mm)                  | Glass<br>850L×700W×550H(mm)<br>Host<br>950L×610W×1250H(mm)              | Glass<br>970L×840W×610H(mm)<br>Host<br>1220L×760W×1560H(mm)                                                  |
| Packing weight                 | Glass 30KG Host 110KG                                                       | Glass 30KG Host 110KG                                                   | Glass 50KG Host 175KG                                                                                        |

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