

Rotary Evaporator

Efficient vacuum distillation, solvent recovery, and sample concentration for pharmaceutical, chemical, food, and materials laboratories.

RE SERIES

ZFY SERIES



Configure the right evaporator for your process →

UltraPurMat Group Co., Ltd.
High-purity materials & laboratory equipment

PRODUCT OVERVIEW

What is a Rotary Evaporator?

A rotary evaporator is laboratory equipment used for the continuous distillation of volatile solvents under reduced pressure. The system rotates a glass flask containing the sample while a heated bath provides uniform temperature control. By lowering the boiling point under vacuum, the solvent forms a thin film and evaporates efficiently, then is recovered through the condenser and collection flask.

This makes rotary evaporation ideal for concentrating solutions, recovering solvents, separating chemicals, extracting essential oils, and removing residual solvents from samples — especially where heat-sensitive materials are involved.



Typical Applications

- **Solution concentration** — gently reduce sample volume without thermal degradation.
- **Solvent recovery** — reclaim organic solvents for reuse and cost savings.
- **Chemical separation** — separate components with different boiling points.
- **Essential oil extraction** — isolate aromatic and active compounds.
- **Residual solvent removal** — prepare clean samples for analysis or formulation.
- **Crystallization** — concentrate extracts and promote controlled crystal growth.

Widely used in pharmaceutical, chemical, food, materials science, and chromatographic sample preparation workflows.

KEY ADVANTAGES

Built for Reliable, Reproducible Evaporation

G

Borosilicate Glass 3.3

All glass components use GG-17 borosilicate glass for excellent thermal shock, chemical, and mechanical resistance.

C

High-Efficiency Condenser

Serpentine coil design with large condensing area delivers high recovery efficiency and minimal solvent loss.

T

PID Temperature Control

Advanced PID heating bath provides precise temperature regulation (± 1 °C water / ± 2 °C oil) and stable operation.

S

Variable Speed Drive

Electronic or frequency-conversion speed control with digital display ensures smooth, spark-free rotation.

V

High-Vacuum Sealing

PTFE + Viton double-seal dynamic seal design maintains reliable vacuum integrity across the speed range.

L

Ergonomic Bath Lift

Manual, motorized, or weight-balanced lifting makes it easy to adjust heating area and remove flasks safely.

Standard Configurations

Standard models offer proven mechanical reliability with manual bath lift, electronic speed control, and digital temperature display — a cost-effective choice for routine R&D and QA labs.

Technical Configurations

Technical models add motorized lifting, extended lift stroke, and frequency-conversion speed control for process development and higher-throughput environments.

Custom Power & Accessories

Voltage options include 220V/50Hz standard and 110V/60Hz export configurations. Optional cooling circulators and vacuum pumps can be integrated to improve efficiency and reduce setup time.

FEATURED MODELS

Small-sized Rotary Evaporator

Small-sized Rotary Evaporator (Tech.)

Models: ZFY-1L · ZFY-3L · DZFY-1L · DZFY-3L · DZFY-5L

Parameter	ZFY-1L	ZFY-3L	DZFY-1L	DZFY-3L	DZFY-5L
Glass Material	(GG17) Borosilicate Glass 3.3				
Rotary Flask	Pear-Shaped 1L	Pear-Shaped 3L	Pear-Shaped 1L	Pear-Shaped 3L	Ball-Shaped 5L
Collection Flask	Ball-Shaped 1L	Ball-Shaped 2L	Ball-Shaped 1L	Ball-Shaped 2L	Ball-Shaped 3L
Condenser	Double Vertical				Triple Vertical
Speed Control	Electronic Speed Control				
Rotation Speed	20–120 rpm (digital)		10–310 rpm	20–160 rpm	
Bath Power	1.3 kW				2 kW
Temp. Range	Room Temp +5 ~ 180 °C				
Temp. Accuracy	Water ±1 °C / Oil ±2 °C				
Lift Method	Weight-balanced lift (100mm) + auxiliary extension (150mm)		Motorized lift (100mm) + manual extension (130mm)		
Dimensions (mm)	510×380×750	510×380×750	500×380×720	500×400×720	760×465×865
Power Supply	AC 220V, 50Hz				

Small-sized Rotary Evaporator (Std.)

Models: RE-201 · RE-301 · RE-501

Parameter	RE-201	RE-301	RE-501
Glass Material	(GG17) Borosilicate Glass 3.3		
Rotary Flask	Eggplant-shaped 1L φ131mm / No.24 standard joint	3L φ50 flange port	5L φ50 flange port
Collection Flask	Ball-shaped 1L φ131mm / No.35 ball-ground joint	2L No.35 ball-ground joint	3L φ195mm, upper No.35 ball-ground joint & lower No.35 flange opening
Condenser	Double Vertical		
Speed Control	Electronic Speed Control		
Rotation Speed	0–120 rpm (digital display of rotational speed)		
Bath Power	1.5 kW	2 kW	2 kW
Temp. Range	Room Temp ~ 180 °C		
Temp. Accuracy	±1 °C		
Lift Method	Manual Lifting & Lowering of the Bath		
Dimensions (mm)	700×330×785	760×330×1030	760×330×1030
Gross Weight	25 kg	35 kg	40 kg
Packaging (mm)	750×500×450	830×520×600	830×520×600
Power Supply	220V / 50Hz		

FEATURED MODELS

Large-sized Rotary Evaporator

Large-sized Rotary Evaporator (Tech.)

Models: R1005 · R1010 · R1020 · R1050

Parameter	R1005	R1010	R1020	R1050
Glass Material	Borosilicate Glass 3.3 (GG17)			
Rotary Flask	5L with φ50 flange	10L with φ125 flange	20L with φ125 flange	50L with φ125 flange
Collection Flask	3L with No.50 flange	5L with No.60 flange	10L with No.60 flange	20L with No.60 flange
Condenser	Double Vertical			
Speed Control	DC Stepless Speed Regulation			
Rotation Speed	20–150 rpm	20–140 rpm	20–140 rpm	20–120 rpm
Bath Power	2 kW	3 kW	4 kW	6 kW
Temp. Range	Room Temp +5 ~ 95 °C			
Temp. Accuracy	±1 °C			
Lift Method	Electric Lifting of the Bath			
Dimensions (mm)	800×420×1100	1050×580×1750	1150×650×1900	1280×700×2200
Gross Weight	48 kg	91 kg	120 kg	149 kg
Packaging (mm)	900×420×870	1010×520×1080	1220×570×1190	1330×650×1380
Power Supply	220V / 50Hz			

Large-sized Rotary Evaporator (Std.)

Models: RE-1002 · RE-2002 · RE-3002 · RE-5002

Parameter	RE-1002	RE-2002	RE-3002	RE-5002
Glass Material	(GG17) Borosilicate Glass 3.3			
Rotary Flask	10 flange opening	20 flange opening	30 flange opening	50 flange opening
Collection Flask	5 (discharge)	10 (discharge)	20 (discharge)	20 (discharge)
Condenser	Vertical, main cooling + sub-cooling, high-efficiency triple reflux condenser tube			
Speed Control	Digital-display variable-frequency speed regulation			
Rotation Speed	0–120 rpm (digital display of rotational speed)			
Bath Power	3 kW	5 kW	6 kW	6 kW
Temp. Range	Room Temp ~ 99 °C			
Temp. Accuracy	±1 °C			
Lift Method	Manual Lift			
Dimensions (mm)	950×600×1810	1030×475×2040	1300×640×2200	1300×640×2200
Net Weight	65 kg	80 kg	119 kg	119 kg
Gross Weight	87 kg	103 kg	149 kg	149 kg
Packaging (mm)	1340×640×690	1350×670×820	1580×890×780	1580×890×780
Power Supply Requirements (Customer-provided)	220V/50Hz; One 10A three-hole socket; One 16A three-hole socket	220V/50Hz; One 10A three-hole socket; One ≥25A air switch	220V/50Hz; One 10A three-hole socket; One ≥32A air switch	220V/50Hz; One 10A three-hole socket; One ≥32A air switch

APPLICATIONS

Where ULPMAT Rotary Evaporators Deliver Value

Pharmaceutical

API concentration, solvent recovery during synthesis, and prep of heat-sensitive formulations.

Chemical Synthesis

Purification of reaction mixtures and separation of solvents from products.

Food & Flavor

Essential oil extraction and concentration of aromatic compounds.

Materials Science

Recovery of solvents from coatings, polymers, and nanomaterial suspensions.

Environmental

Sample preparation for residue analysis and extraction of pollutants.

Education & R&D

Teaching labs and research groups requiring reproducible, easy-to-use evaporation.

WHY ULPMAT

Quality & Partnership You Can Rely On

Our R&D team includes PhD and Master's level scientists with deep expertise in materials science, thin-film technology, and inorganic compounds. We work closely with clients to match equipment and material solutions to real process requirements.

Every product is supported by rigorous quality control — from incoming raw materials and in-process monitoring to final inspection and batch documentation.

- **Traceability** — unique batch numbers link raw materials through to final test reports.
- **Certificate of Analysis** — comprehensive COA and test reports supplied with products.
- **Customization** — voltage, flask size, and accessory packages tailored to your lab.
- **Integrated Support** — compatible vacuum pumps, chillers, and after-sales service available.

GET STARTED

Ready to configure your Rotary Evaporator?

Contact ULPMAT to discuss your solvent type, batch size, temperature requirements, and accessory needs. We will recommend the right model and help you build a complete evaporation system.

UltraPurMat Group Co., Ltd.

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