



TORONTECH



PILOT-SCALE ROTARY EVAPORATOR R-1005 / R-1050 / R-2020EX / R- 2050EX

Pilot-scale Rotary Evaporator is ideal for preliminary experiments in biology, medicine, chemical processing, food production, and related fields. Compatible with equipment like vacuum pumps and recirculating chillers.

APPLICATIONS

The Torontech Pilot-scale Rotary Evaporator is engineered to bridge the critical gap between laboratory R&D and full-scale production. Its primary application is to efficiently concentrate and purify kilogram-scale batches of material, enabling process scale-up, optimization, and the production of quantities sufficient for clinical trials, application testing, or small-scale commercial runs. This provides the essential data and material needed to validate a process's commercial viability before committing to major capital investment.

This essential scale-up capability is a cornerstone of process development in:

- **Pharmaceutical & Chemical Manufacturing:** For the pilot-scale production of Active Pharmaceutical Ingredients (APIs) and specialty chemicals, allowing for the generation of the larger material quantities required for advanced testing, formulation studies, and pre-clinical trials.
- **Contract Development & Manufacturing (CDMO):** As an essential workhorse for scaling up client processes, providing the capacity to move from gram-scale validation to kilogram-scale pre-commercial production runs.
- **Food, Flavor & Botanical Extraction:** To scale up the production of high-value botanical extracts, flavors, and concentrates, enabling the creation of market-test samples and the optimization of the distillation process for maximum yield and quality.
- **Cannabis & Hemp Processing:** For scaling up the post-extraction refinement process, efficiently removing solvents from crude oil to produce high-purity distillates and concentrates on a small-batch commercial scale.

FEATURES

- Advanced sealing design with a system pressure increase rate of less than 2 KPa/h, without the need for vacuum silicone grease.
- Automatic switching valve ensures uninterrupted distillation and easy transfer of materials from the receiving flask.
- Durable PTFE discharge valve for reliable performance.
- Quick-flange connections for glass components simplify operation and maintenance.
- Select models include protective rubber covers to minimize the risk of burns.
- Explosion-proof design: Motor, heater, and electrical controls meet explosion-proof standards, certified with Ex d IIB T4 Gb.
- **R-2020Ex / R-2050Ex Models:** Feature electric lifting, RS485 interface, and support the standard Modbus RTU communication protocol.

THEORY & METHOD

Pilot-scale Rotary Evaporator

R-1005

Pilot-scale Rotary Evaporator

R-1050

Pilot-scale Rotary Evaporator

R-2020Ex / R-2050Ex

Model	R-1005	R-1005Ex	R-1010	R-1020	R-2020Ex	R-1050	R-2050Ex
Dimensions (with glass parts)	840W*520D*1140H mm	1490W*670D*1140H mm	104W*580D*1760H	1120W*680D*1900H	1210W*740D*2040H	1345W*770D*2230H	1360W*770D*2250H
Weight (with glass parts)	35kg	118kg	61kg	90kg	190kg	140kg	270kg
Voltage	110V~,60Hz or 220-240V~,50Hz	220-240V~,50/60Hz		3~,380V,50Hz			
Overall power	2300W	3100W	3800W	6300W	4500W	6300W	6500W
Protection grade	IP20						
Overvoltage category	I						
Rotation speed	20~140rpm		20~130rpm			20~110rpm	
Temperature range of bath	RT~95℃ (water bath) RT~180℃ (oil bath)						
Nominal adjustment accuracy	±1.5℃						
Heat resource	Deionized water						

Model	R-1005	R-1005Ex	R-1010	R-1020	R-2020Ex	R-1050	R-2050Ex
Bath cover	Optional						
Rotary flask carrier	-		Optional				
Rotation flask	5L		10L	20L		50L	
Receiving flask	3L		5L	10L		20L	



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