



PILOT-SCALE SINGLE-LAYER GLASS REACTOR

Single-layer glass reactor bath efficiently heats materials in the reactor while enhancing evaporation performance under vacuum conditions (requires connection to a vacuum device).

APPLICATIONS

The Torontech Single-layer Glass Reactor is a foundational tool for straightforward thermal processing in a laboratory setting. Its primary application is the direct heating of solutions, often under vacuum, to perform essential tasks such as solvent evaporation, sample concentration, and simple distillation. This makes it an indispensable workhorse for a wide range of basic chemical and material processing tasks where external temperature control via a jacket is not required.

This fundamental thermal processing is essential for efficiency in:

- **Academia & Education:** As a core piece of equipment for teaching labs, perfectly suited for demonstrating fundamental principles of distillation, evaporation, and solvent removal in a clear, observable manner.
- **Herbal Extraction & Food Science:** For the production of botanical extracts and food concentrates by efficiently boiling off solvents (e.g., ethanol) from tinctures or concentrating flavor and aroma compounds.
- **Chemical R&D & Synthesis:** Used for basic, direct-heat chemical reactions and, more commonly, for the post-reaction workup phase to concentrate a product solution by removing the reaction solvent prior to isolation.
- **Quality Control & Sample Preparation:** In analytical laboratories for the preparation of samples, such as concentrating a dilute solution to bring the analyte within the detection range of an instrument or for solvent exchange procedures.

FEATURES

- **High-quality materials:** Contact parts are made of durable borosilicate glass and PTFE, ensuring resistance to chemical reactions.

- Robust design: Stainless steel bath with a vacuum pressure gauge for precision.
- Advanced motor: Copper brushless motor offering high torque, variable speed control, and quiet operation.
- Reliable sealing: Dual-layer PTFE and fluororubber seal for maintaining vacuum integrity.
- Enhanced durability: Ceramic bearings and mechanical seals provide excellent heat resistance, wear resistance, and effective sealing.

TECHNICAL SPECIFICATIONS

Model	SR-10L (ExSR-10L)	SR-20L (ExSR-20L)	SR-30L (ExSR-30L)	SR-50L (ExSR-50L)	SR-100L (ExSR-100L)
Glass vessel volume	10L	20L	30L	50L	100L Ball shape
Voltage	220V/50Hz		220V/50Hz (Stirrer), 380V/50Hz (Heating bath)		
Stirring motor power	120W1/3 (Ex: 180W)				200W1/3 (Ex: 370W)
Heating power	3kW	5kW	8kW	8kW	15kW
Stirring speed	0~450rpm				
Temperature range of glass vessel	-80℃~+250℃				
Temperature measurement accuracy	+/-1℃				
Vacuum degree	0.098MPa				
Glass vessel diameter	Φ280mm	Φ355mm	Φ420mm	Φ470mm	Φ610mm
Dropping funnel	1L		2L		
Dimensions	710W*440D*1900H mm	810W*540D*1960H mm	860W*590D*2080H mm	910W*640D*2130H mm	880W*800D*1850H mm

Model	SR-10L (ExSR-10L)	SR-20L (ExSR-20L)	SR-30L (ExSR-30L)	SR-50L (ExSR-50L)	SR-100L (ExSR-100L)
Weight	42kg (Ex: 48kg)	48kg (Ex: 54kg)	56kg (Ex: 63kg)	58kg (Ex: 65kg)	108kg (Ex: 120kg)

Model	SR-100L (ExSR-100L)	SR-200L (ExSR-200L)
Glass vessel volume	100L Cylindrical	200L Cylindrical
Voltage	220V/50Hz (Stirrer), 380V/50Hz (Heating bath)	
Stirring motor power	200W1/3 (Ex: 370W)	750W1/5
Heating power	8kW	21kW
Stirring speed	0~450rpm (Ex: 0~1400rpm)	0~280rpm
Temperature range of glass vessel	-80℃~+250℃	
Bath temperature control range	RT~180℃	
Temperature measurement accuracy	+/-1℃	
Vacuum degree	0.098MPa	
Dropping funnel	5L	
Receiving bottle	-	10L
Dimensions	900W*770D*2550H mm	880W*800D*1850H mm
Weight	110kg (Ex: 120kg)	178kg



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