



TORONTECH



LIFTING JACKETED GLASS REACTOR

Lifting Jacketed Glass Reactor is designed for experiments such as material synthesis, distillation, and concentration. It features a dual-layer structure, with inner and outer layers, allowing precise temperature control by circulating a liquid through the jacket.

APPLICATIONS

The Torontech Lifting Jacketed Glass Reactor is engineered to provide maximum operational flexibility and ergonomic efficiency for laboratory and pilot-scale chemical processes. Its unique lifting and rotating capabilities are designed to simplify and accelerate critical tasks like product harvesting, cleaning, and reactor change-out. This makes it an ideal solution for multi-product, multi-process environments where minimizing downtime and ensuring operator safety are primary concerns.

This enhanced operational flexibility is a significant advantage for R&D in:

- **Pharmaceutical & Chemical Process Development:** For laboratories that conduct a wide variety of syntheses and workups, the lifting and rotating features dramatically simplify the recovery of solid products and the cleaning of the reactor between different campaigns, maximizing asset utilization.
- **Contract Research & Manufacturing (CRO/CDMO):** As a highly versatile workhorse for developing and optimizing diverse client processes, allowing for rapid and safe changeovers between different projects and chemistries with minimal manual handling.
- **Polymer & Specialty Materials Synthesis:** To facilitate the handling and recovery of high-viscosity polymers and materials that are difficult to discharge from a standard bottom-outlet valve, ensuring maximum product yield.
- **Academia & Teaching Laboratories:** As an advanced, user-friendly system for teaching reaction engineering principles, where the enhanced ergonomics and safety features provide a superior learning environment for students and researchers.

FEATURES

1. **High-Quality Material:** Made from 3.3 borosilicate glass with excellent physical and chemical resistance.
2. **Wide Temperature Range:** Operates efficiently between -80°C and 200°C.
3. **Superior Sealing:** Achieves a vacuum level of up to 0.095 MPa.
4. **Pressure Tolerance:** Handles pressure from -0.1 MPa to normal atmospheric levels.
5. **Reliable Components:** Includes a PTFE plug and discharge valve for smooth operation.
6. **Protective Design:** Supplied with insulated hoses to minimize potential damage during external pipe connections.
7. **Customizable Options:** Structures and configurations can be tailored to specific process requirements.
8. **Filter Reactor Options:** Customizable based on individual preferences.
9. **Convenient Receiving Tray:** A bottom tray can be added to collect drippings during use.
10. **Enhanced Flexibility:** The glass vessel is adjustable, capable of lifting, lowering, and rotating 120 degrees.

TECHNICAL SPECIFICATIONS

Model	GRL-10	GRL-10Ex	GRL-20	GRL-20Ex	GRL-30	GRL-30Ex	GRL-50	GRL-50Ex
Glass material	3.3 borosilicate glass							
Glass vessel volume	10L		20L		30L		50L	
Glass vessel flange	Φ215mm							
OD of glass vessel opening	Φ265mm							
ID of bottom valve	Φ21mm							
Jacket interface	35#						45#	
Allowable pressure of jacket interface	<=0.03MPa							
Liquid inlet/outlet circulation hose interface	Rc3/4							

Model	GRL-10	GRL-10Ex	GRL-20	GRL-20Ex	GRL-30	GRL-30Ex	GRL-50	GRL-50Ex
No. of glass vessel lid openings	6							
Center opening of glass vessel lid	50#							
Side openings of glass vessel lid	35#*2, 50#, 24/29							
Solid charging port	80#							
Sealing gasket of glass vessel lid	Φ264*Φ220*6							
Stirring speed	50-500rpm							
Motor power	90W	180W	90W	180W	90W	180W	140W	180W
Support parts for stirrer	PTFE							
Dripping funnel volume	1000ml							
Interface of dripping funnel	35#							
Condensation area of condenser	0.245m ²						0.42m ²	
Interface of condenser	50#							
Receiving bottle	Optional							
Liquid collection tray	Optional							
Drain port ground clearance	About 580mm		About 530mm		About 620mm		About 570mm	
Dimensions	850W*1100D*2050H mm				860W*1100D*2500H mm			



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