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5L Jacketed Glass Reactor – JR-S5



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Jacketed Glass Reactor – Model: JR-S5



Overview

Benchtop jacketed glass reactor for lab scale reaction. Excellent resistance to thermal shock and chemicals corrosion, vacuum tight, constant stirring speed and user friendly.

- Capacity: 5L;
- Mechanical sealing, resist to chemicals and durable, max vacuum <2 mbar;
- PTFE lid, durable and resist to chemicals;
- Stirring speed range: 50 – 1200 rpm, LED display of speed;
- Quality borosilicate glass 3.3 (BORO 3.3);
- Temperature range: -90°C - 250°C;
- PTFE flush drain valve, no dead space and no leakage, clean discharge;
- SUS304 stirring shaft covered with PTFE.

Model

Capacity (L)

JR - S

5

Technical Specification & Configuration

Parameter	
Model	JR-S5
Capacity (L)	5L
Diameter of Vessel (mm)	180 mm
Bottom Valve Diameter (mm)	10 mm
Nozzle Size & No. on Lid	5 (NS19×2+NS24+NS29+DN30)
Temp. Range (°C)	-90 - 250°C
Max Vacuum Level(mbar)	< 2 mbar
Stirring Power (W)	90W
Rotary Speed (rpm)	50 – 1200
Diameter of Stirrer Shaft (mm)	10 mm
Glass Material	Borosilicate Glass 3.3 (BORO 3.3)
Frame Material	SUS304
Stirring Shaft Material	SUS304 Covered with PTFE
Agitator	Anchor, PTFE
Dimension (cm)	35×42×110H
Power Supply	220V/50Hz

Configuration	
Model	JR-S5
Seal	Mechanical Sealing
Stirring Speed Controller	Stepless Electronic
Reactor Lid	PTFE Lid with 5 Nozzles
Agitator Type	Anchor
Drain Valve	PTFE Flush Valve, Drift Diameter: 10mm
Thermowell	Yes
Digital Display	Stirring Speed
Reflux Condenser	0.14 sqm condensing area
Liquid Feeding Valve	NS19
Pressure Equalizing Funnel	250ml
High Viscosity Agitator	Optional
Distillation Separation Receiving	Optional (1L)
Digital Display Thermometer	Optional

Features

PTFE Lid, SiC+PTFE Mechanical Sealing, Durable and Vacuum Tight

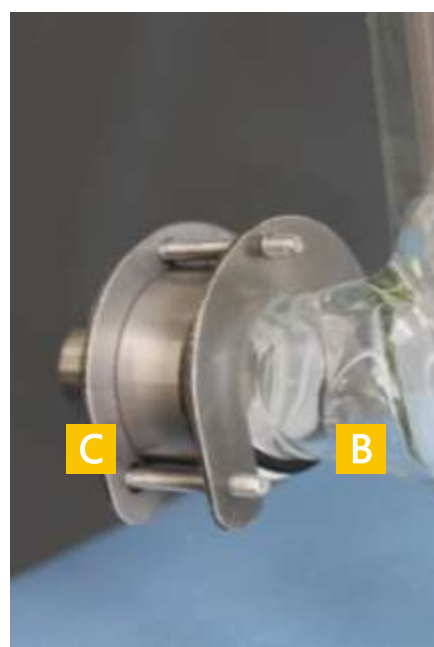


PTFE Lid with Lifespan >10years, Vacuum Tight up to <2mbar and Excellent Stirring Stability

SiC+PTFE Mechanical Seal
Ensures max vacuum level of <2mbar. Resist to chemicals and durable with lifespan >5 years.

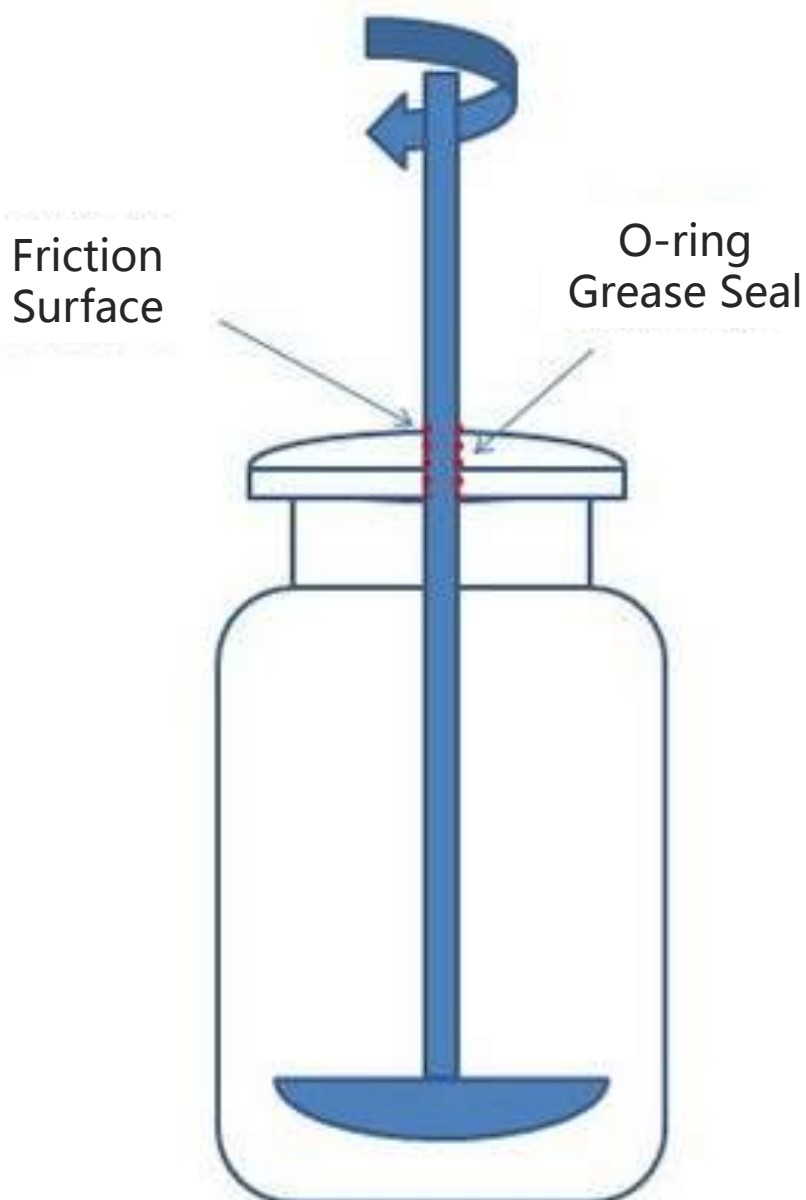
Lid Configuration
Quick-open Clamp for Easy Operation
NS29 Reflux Condenser
NS24 Pressure Equalizing Funnel
NS19 Liquid Feeding Valve
NS19 Thermowell (Optional Digital Thermometer)

Bottom Drain Valve and Jacketed Inlet/Outlet



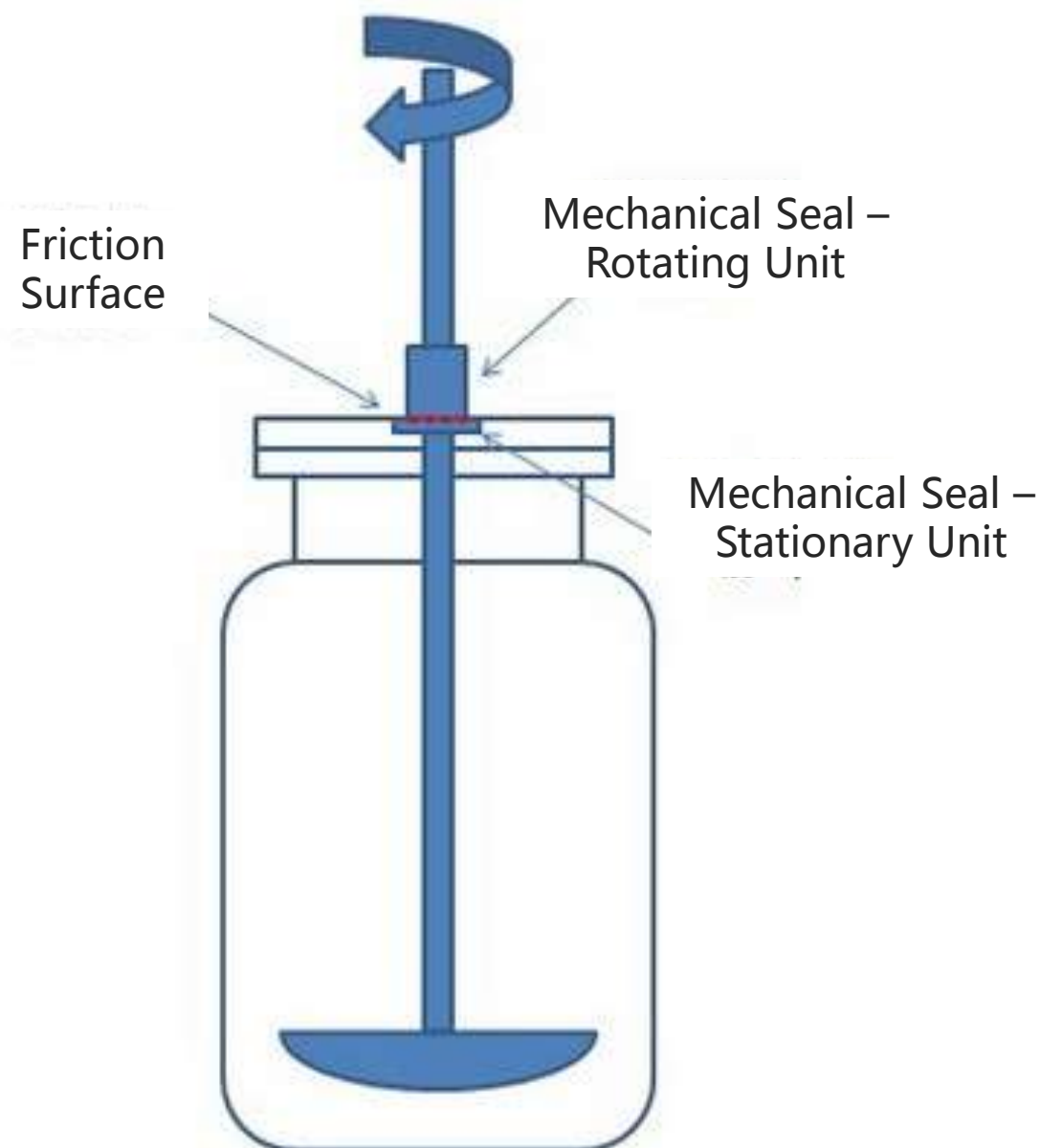
- A** PTFE Bottom Flush Drain Valve
No dead space, no leakage. Easy to operate and durable. Clean discharge.
- B** Tangent style jacket inlet/outlet to enhance circulation flow and heat exchange.
- C** Jacket inlet/outlet adaptor for heating and cooling circulator. Durable and easy to operate.

Mechanical Seal VS Traditional Seal



Traditional Seal – Seal on Axis

O-ring or Grease Seal is known as seal on axis to be used between stirring shaft and vessel lid, but is heavily prone to be worn out by friction, especially under corrosion of solvent and high temperature, which requires regular operation stop, disassemble and O-ring change.

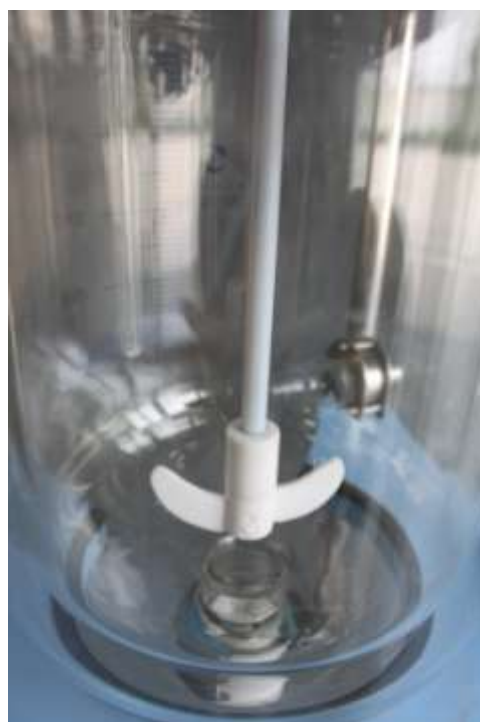


Mechanical Seal - Seal on Surface

Mechanical Seal is the seal on surface between its rotating part and stationary part. It is made of SiC and reinforced PTFE, which is vacuum tight, durable, long lasting and great for 24/7 operation.

With PTFE vessel lid, stirring can be very stable so that mechanical seal can ensure <2mbar vacuum level.

Quality Borosilicate Glass Reactor Vessel (BG3.3)



The quality of glassware is critical! The time and efforts you spent in the reaction is far more valuable than the jacketed glass reactor itself, let alone the cost of the solvents. The loss of glass broken is huge. So we provide Quality Borosilicate Glassware and give individual quality control to every unit.

Quality borosilicate glass 3.3 (BORO 3.3), having very low coefficients of thermal expansion (3×10^{-6} at 20°C), is well resistant to thermal shock and less subject to thermal stress. Complying with ISO3585, the glassware have excellent performance against chemicals and water.

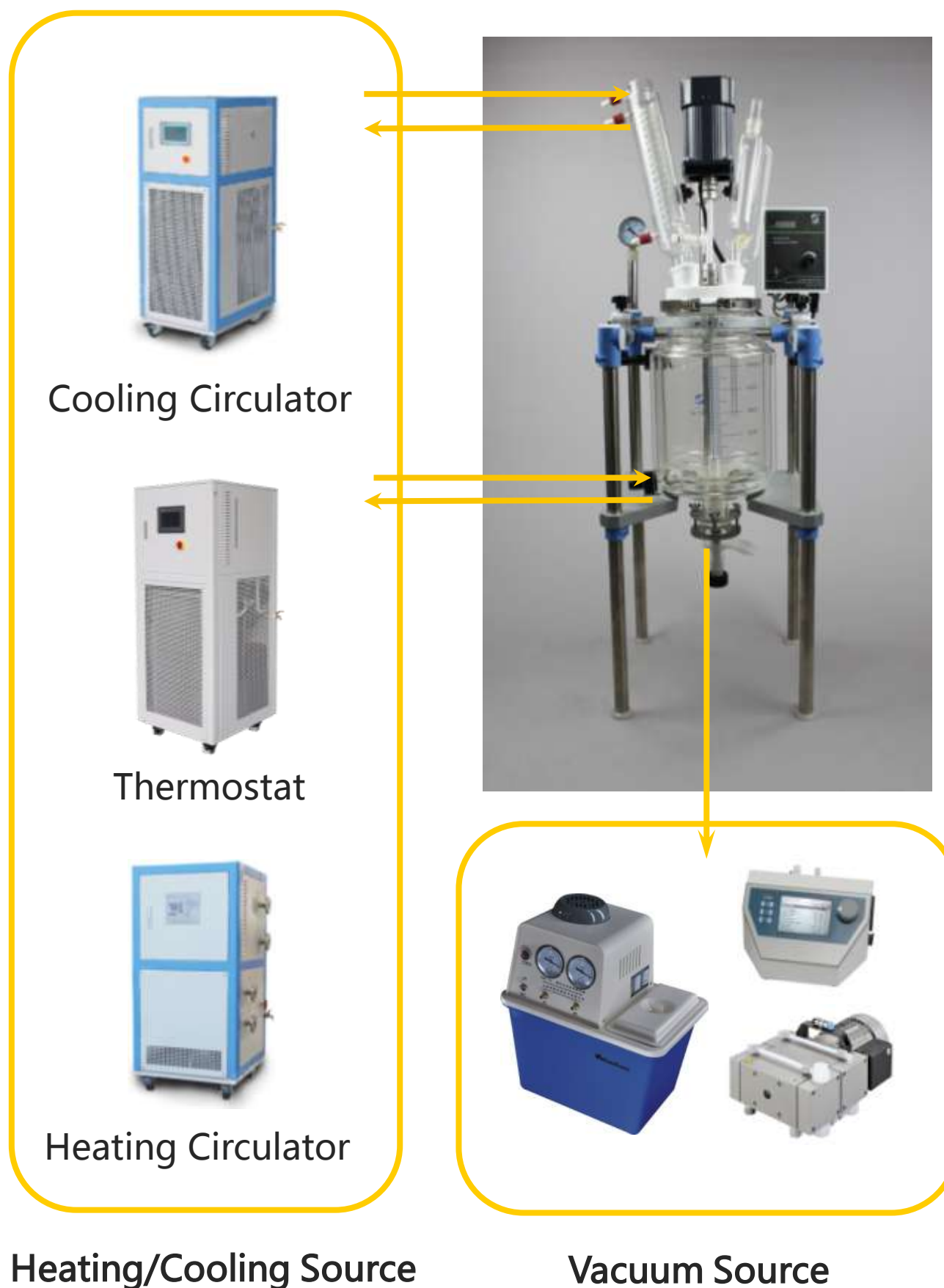
PTFE Agitators for Desired Stirring Effect



To ensure stirring effect, blade shape of agitator, anchor, turbine, propeller... can be chosen or customized according to solution nature, viscosity, capacity, stirring speed, vessel shape, etc.

Jacketed Glass Reactor Set – Lab Scale

Along with Jacketed Glass Reactor, Shanghai Shensheng provides Heating & Cooling Circulator and Vacuum Pump which are designed for optimal use with Jacketed Glass Reactor.



Heating & Cooling Circulator



Provide both heating and cooling sources for Jacketed Glass Reactor.

Wide temperature range from -25 °C to 200 °C.

Safety features including self-diagnosis, high pressure protection, overload relay, compressor over-temp protect.

Parameters

Model		HR-25
Temp. Control Range (°C)		-25 - 200°C
Temp. Control Accuracy (°C)		1°C
Flow Rate (L/min, bar)		25 L/min 2.0 bar
Heating Power (kW)		2.5
Cooling Power (kW)	200°C	2.5
	100°C	2.5
	20°C	2.5
	-5°C	2
	-20°C	1
Coolant		R404A
Temperature Display		Digital
Circulation Type		Close Circulation, No Oil Mist, No Oxidization to Thermal Oil
Dimension (cm)		50×60×115
Power Supply		220V/50Hz

Safety Features

Model	HR - 25
Compressor Over-temp. Protection	●
Error Alarm	●
Overload Protection	●
High Pressure Protection	●

Symbol Instruction: / - None , ● - Equipped , ○ - Optional

Vacuum Pump



- Safe and reliable water circulation vacuum pump.
- Equipped with two independent suction nozzles for vacuum supply.
- Can be water supply for condenser.
- Oil free and water saving.

Parameter

Model	SHB – 3A
Type	Water Circulation
Max Vacuum (mbar)	20 mbar
Rate (L/min)	10L/min×2
Power	180 W
Dimensions (cm)	39×28×42
Power Supply	220V/50Hz

Factory Show - Shanghai Shensheng Biotech Co., Ltd.



Manufacture Plant in Shanghai



Quality Mechanical Parts



Glassware Fabrication



Fine Processing



Individual quality control for every unit



Pilot Scale Jacketed Glass Reactor



Pilot Scale Rotary Evaporator

Our Customer



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