

# BSF-212 double-layer glass reactor user's manual

Precautions	<ul style="list-style-type: none"><li>◇ Please read the manual carefully, the manual should be kept in the hands of the actual user, and no unmanned operation is strictly prohibited.</li><li>◇ The power connection must have a reliable ground wire to ensure that the shell is safely grounded.</li><li>◇ Avoid impact when disassembling, cleaning and using glass instruments to prevent damage.</li><li>◇ It is strictly forbidden to use electric stove or open flame to heat directly. When evaporating flammable, explosive, toxic, corrosive or valuable solutions, the user must take corresponding safety protection measures and comply with relevant safety operation regulations.</li><li>◇ For precious solutions, a simulated process experiment should be done first, and the equipment can be converted to normal use when it is confirmed that the equipment can meet the process requirements.</li><li>◇ Materials must be added to the container before power is turned on, and the power is cut off after use.</li></ul>
-------------	--

## **Product introduction**

This series of reactors is a new type of variable frequency speed-regulated double-layer glass reactor produced by our company according to the actual use standards and requirements of customers. It absorbs the advantages of similar international and domestic products, and at the same time, it is bold and innovative. It is not only convenient to use (it can be easily moved by one person). , Operation, cleaning, disassembly), novel and practical structure, beautiful and generous appearance, leading domestically, it has become an ideal equipment for experiments and production of modern chemistry, fine chemicals, biopharmaceuticals, and new material synthesis.

The working principle of this series of reactors: The inner layer of this series of double-layer glass reactors contains reaction materials, and can also be vacuumed for stirring reaction. The interlayer can be connected to heat sources (refrigerated liquid, water and hot oil) for circulating heating or cooling, which can be controlled Evaporation and reflux of the reaction solution.

## **Product features**

Using high borosilicate glass (GG17 material), it has excellent physical and chemical properties.

Frequency conversion speed control stirring, stable and reliable operation, large torque, no sparks.

The PTFE components are sealed to maintain the best vacuum of similar products in the market (about -0.095mpa).

The overall national standard stainless steel new frame structure is compact, sturdy and durable.

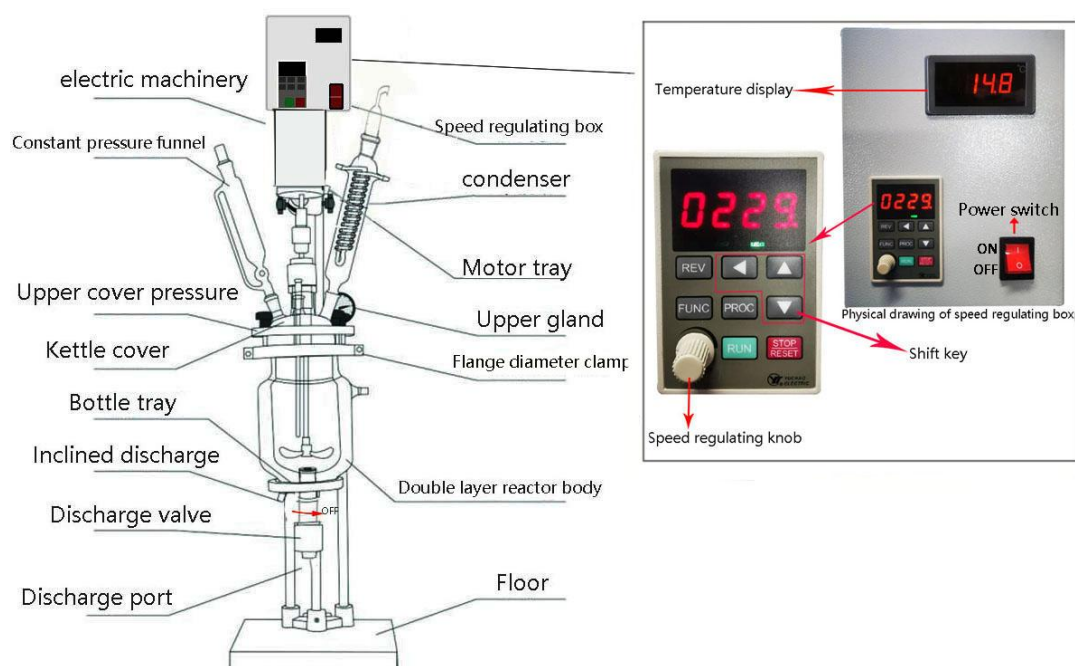
No dead angle discharge valve, kettle body and lid can be customized according to customer requirements.

Regardless of cooling or heating, the matching products can be produced according to customer requirements.

The refrigerating or heating solution of the glass interlayer of the reaction kettle can be completely removed after the reaction is completed, and there is no accumulation of liquid.

Under normal use, users will be repaired free of charge for one year. The glass part is not within the scope of the three guarantees!

## Installation instructions



## Precautions for use

1. Check whether the power supply voltage is consistent with the specifications provided on the nameplate of the machine.
2. Plug in the power plug, turn on the power switch on the inverter, use the speed control knob to select the appropriate speed, and then press the green button (RUN), the motor starts to work. When stopping, press the red button (STOP), the motor will stop working.
3. The water flow and the power of the motor speed may resonate at a certain point. Please change the motor speed to avoid resonance.
4. After the stirring rod is installed, you must turn it by hand to pay attention to whether the concentricity is good. If the concentricity is not good, loosen the heavy clamp, turn on the power after the clamp is correct, and gradually adjust from slow to fast.
5. Using the stirring rod regulator, the upper and lower pressures of the mechanical seal can be equalized as required, but it should not be too tight, so as not to affect the torque.
6. If it is found that the sealing performance of the reactor has decreased, please check the loss of the seal in the agitator sleeve.
7. The glass instruments of this reaction device are all made of GG17 borosilicate glass. When preparing glass instruments such as reaction flasks, please confirm the

quasi-glass material to ensure safe use.

8. The outer circulation interface of the interlayer on the glass reactor can be heated by hot oil, and low temperature can be reacted by coolant. If steam heating is used, it should not exceed 0.5-1K.

Note: The oil pipe leading to the mezzanine must be the oil inlet pipe connected to the oil inlet nozzle at the bottom of the double-layer kettle, and the oil return nozzle connected to the oil outlet nozzle at the upper part of the double-layer kettle.

9. When using negative temperature, the discharge valve at the bottom must be partially thawed first.

10. If there are particles in the solution during use, there may be leftovers on the PTFE piston of the valve during discharging, and the air tightness will be affected when it is used again. Be sure to clean it after each feeding and use it again.

### Product parameter

<b>Basic parameters</b>	<b>model</b>	<b>BSF-212-5L</b>
	<b>Glass material</b>	<b>GG-17</b>
	<b>Floor type main body bracket</b>	<b>Stainless steel</b>
	<b>Reaction flask volume</b>	<b>5L</b>
	<b>Mezzanine capacity</b>	<b>0.8L</b>
	<b>Plug-in oil circulation port</b>	<b>Low in, high out</b>
	<b>Number of bottle caps</b>	<b>Five mouths</b>
	<b>The discharge port is off the ground</b>	<b>300mm</b>
	<b>Reaction temperature of kettle body</b>	<b>-80--250 °C</b>
	<b>Vacuum</b>	<b>0.098Mpa</b>
	<b>Stirring speed</b>	<b>0-500pm</b>
	<b>Stirring shaft diameter</b>	<b>8mm</b>
	<b>Stirring power</b>	<b>120W</b>
	<b>Voltage/frequency (V/Hz)</b>	<b>110V/60Hz</b>
	<b>Dimensions (mm*mm*mm)</b>	<b>320*420*1520</b>
	<b>Floor size (mm*mm)</b>	<b>420*320</b>
	<b>Packing size (mm*mm*mm)</b>	<b>1270*400*470</b>
<b>Packing weight (kg)</b>	<b>38</b>	
<b>Function</b>	<b>Speed mode</b>	<b>Frequency</b>
	<b>Speed display mode</b>	<b>Digital Display</b>
	<b>Sealing method</b>	<b>Teflon component seal, ∅ 50 flange mixing port</b>
	<b>Condenser</b>	<b>Vertical 40*400mm, 24# standard port</b>
	<b>Low pressure device</b>	<b>250ml constant pressure funnel 24# standard mouth</b>

configuration	Pressure reducing device	24# standard port pressure reducing valve
	Temperature measuring tube	24# standard mouth
	Feeding method	Inclined discharge type PTFE discharge valve
	Stirring connection method	Drill chuck connection
	Stirring rod	Anchor stainless steel rod, outsourcing PTFE

### Packing List

category	Serial number	name	quantity
Bracket part	1	Stainless steel pole $\phi$ 38mm	1 branch
	2	Stainless steel pole $\phi$ 19mm	2 pieces
	3	Bracket bottom plate	1 piece
	4	Plastic cross clamp	2 pcs
	5	Metal cross clip	1 piece
	6	Metal double hole clamp	2 pcs
	7	Metal three-hole clamp	2 pcs
Host part	8	Stirring motor	1 set
	9	Frequency converter	1 set
Glass parts	10	Glass kettle body (double layer)	1 item
	11	Glass kettle cover (five mouths)	1 piece
	12	Glass condenser	1 piece
	13	Glass constant pressure funnel	1 piece
	14	Glass funnel stopper	1 piece
	15	Glass reflux elbow	1 piece
	16	Glass thermometer casing	1 branch
	17	Glass bleed valve	1 piece
Appendix	18	Stirring port PTFE seal	1 set
	19	PTFE stirring rod	1 branch
	20	Flange clamp	1 set
	21	Bottle ring	1 set
	22	Motor support	1 set
	23	Universal clip	2 pcs
	24	Temperature Sensor	1 branch
	25	M8 Allen key	1 piece
	26	screw	1 package