



USA LAB EQUIPMENT

INSTRUCTION

- Thank you for using USALAB brand jacketed glass reactor, our motor is good service and good quality. If you have any technical questions,plz contact with our technician
- Mainly describe how install and use for jacketed glass reactor.
- The misunderstanding of operation will result some accident, reduce product life and function of product, so plz read our instruction before use.
- To give final customer for our instruction.
- Plz put instruction in good position so that read it any time.
- Only is reference for our instruction.

ATTENTION ITEMS

Must pay attention to item following, for good operation.

- Plz must read all contents of instruction before install,use,maintain,examine.



- The electrical requirement must be conformance with our instrument requested.
- To prohibit high speed rotation when it is no load.
- Plz keep speed controller and motor drying
- Cut off power inside 5mins,plz pay attention to security by discharge of speed controller and capacity.
- Plz pay attention to hard thing(watch,ring, etc) to prevent from damage of crash
- Must be careful for connecting between water pipe and vacuum valve or deflation valve(rear of lid) to prevent glass crack result in people wound.
- Plz attention to security when use heating circulation system, we suggest use heating oil of small dangerousness(for instance two-A silicon oil).plz first open circulating pump when user is going to get circulation, slowly rising temperature under circulation of heating oil.

一、Summery



The jacketed glass reactor often be used as bio-chemical instrument, it is used in refined chemicals, pharmaceutical, scientific experiment, etc, user can do concentration, distillation, separation, extraction under constant speed, constant temperature.

For your convenience, jacketed glass reactor, the fully assembled reactor head, stirrer shaft or agitator, stirrer shaft coupling, Teflon stirrer bearing, temperature controller and speed controller, s.s inlet/outlet adapters, and motor are shipped assembled on support frame.

Unpack all parts and check against packing slip to make sure you have received all necessary components, if it is possible, plz keep some of packing material so that you can use it continuously, to return us to repair our machine.

Crate1: Reactor Vessel(plz be carefully when move it), Stirring motor, Stirrer Shaft Stainless Teflon agitator, 500ml Elbow receiving flask with bottom valve, all screws, all "O"ring and half"O"ring, Glass Lid, Condenser, Multi-Function Valve, wrench, Constant Pressure Funnel, Bottom discharging valve, s.s.frame. Etc. plz install them carefully to after get equipment.

二、Attribute



- 1、 The Sealing using PTFE materials and special rubber combined sealing ring to endure various kind of different solvents and keep high vacuum.
- 2、 High efficiency condenser to make sure high receiving rate.
- 3、 Standard connection way to unload easily.
- 4、 To install discharging switch, it is quite easy for receiving materials.
- 5、 To install vacuum meter, to choose the best vacuum under materials of low boiled point.
- 6、 The structure is reasonable, main parts were made of high quality stainless,aluminium alloy and other new synthetic material, its priority includes resisting corrosion,dust,and enduring various kind of solvent.
- 7、 Glass parts were made of GG17 silicon glass material, to own good physic and chemical function.
- 8、 Electrical components were adapted of high quality import part.
- 9、 The stepless Adjusting speed, motor no flame, it is reliable and secure, long life(to choose imported frequency-converter speed controller above 30L).

三、 Instrument Installation

- 1、 After open package, check up all parts
- 2、 Install stainless frame to use stainless pipe and metal fixing.



3、 Install speed controller on right-rear supporting rod(plz look at picture),then insert plug; the vacuum gauge will be installed supporting rod of left-rear, then firm it well.

4、 To firm “O”ring on frame(plz look at picture)according to your desired height, and put the jacketed vessel on “O”ring;to firm neck of flask vessel to use half’O”ring,total two half’O”ring, to screw tightly after fold two half’O”ring, plz pay attention to verticality of flask vessel when you install.

5、 Stirrer is firmed on head of “gimbal joint”, then stirrer inserts into hole of Column from center of glass lid

6、 The slipper of rear rod is to adjust different direction,it is a kind of clamp.

7、 The right side of lid is 40#standard joint for condenser, the left side of lid is 40#standard joint with constant pressure funnel, the front of lid for 24#standard joint for thermowell of Temperature meter, the behind of lid for 34standard joint, it is a multi-function joint. Note: the jacketed glass reactor of 20L -100L,we will equip big solid feeding mouth on reactor lid.

8、 Must keep cleaning when user install glass parts, because of every joint with grease oil.



9、 To press gimbal joint to make stirring, if the stir is steady, the adjustment is ok for this stirring rod.

四. Usage

1、 Check up electrical requirement is conformance with machine required.

2、 To switch on, open switch of power on speed controller, then choose desired speed to use speed button.

3、 The Flowing speed of material and the rotating speed of motor could occur(sym pathetic vibration),then plz change speed of motor to avoid it.

4、 Must rotate to use hand after stirring rod is installed, look at if it is vertical, if it is not vertical,plz adjust it to reach good verticality, then open power, increasingly adjust speed from slow to fast.

5、 if you need to adjust stirrer, plz adjust up or down about 5cm.

6、 If user find sealing is not good, plz check up rotary axletree of jacket of stirrer.

7、 All parts are made of GG-17 material,plz make sure glass material is good.

8、 The Outside of jacket glass reactor is with circulation connection joint, user can do heating reaction after infuse into heating oil,and user can do cooling reaction after infuse into cooling liquid, if user want to use



heating of vapor, it is not overcome 0.5K-1K.(note: we suggest to do not heating of vapor)。

9、 The bottom Discharging valve will get fox when user do low temperature reaction, plz unfreeze when user uses discharging valve.

10、 If user find many granules in liquid, they could be accumulated in stopcock of discharging valve.plz must clean it when you are using reactor,again.

五、 Maintenance

1、 Plz carefully check instrument if glass vessel is ok, all joint is ok?before use.

2、 To use soft clothing to erase all joints, then coat a little of vacuum grease.

3、 Don't tightly screw on all joint, plz periodically move to avoid tight connection.

4、 First open switch of power, then operation from slow to fast, plz keep machine stopping after use, close switch.



- 5、 The switch of PTFE, plz don't strongly screw on it in case glass is damaged
- 6、 Plz erase various kinds of oil.dirty,solvent residual after use.
- 7、 Plz loose switch of PTFE after use.
- 8、 Periodically, plz clean some sealing ring. Method: take down sealing ring, check up if it has dirty on axis, then clean it.
- 9、 Electrical components, plz prohibit humidity.
- 10、 Must purchase standard part from our factory, plz don't randomly buy other spare part from other factory.
- 11、 Plz cut off power or water when we check and repair machine.
- 12、 Plz maintain it after use three year(only suggestion)

Note: our reactor is fragile product, plz carefully use it, and we don't repair fragile product(glass), so if some customer need fragile product, need to pay cost.

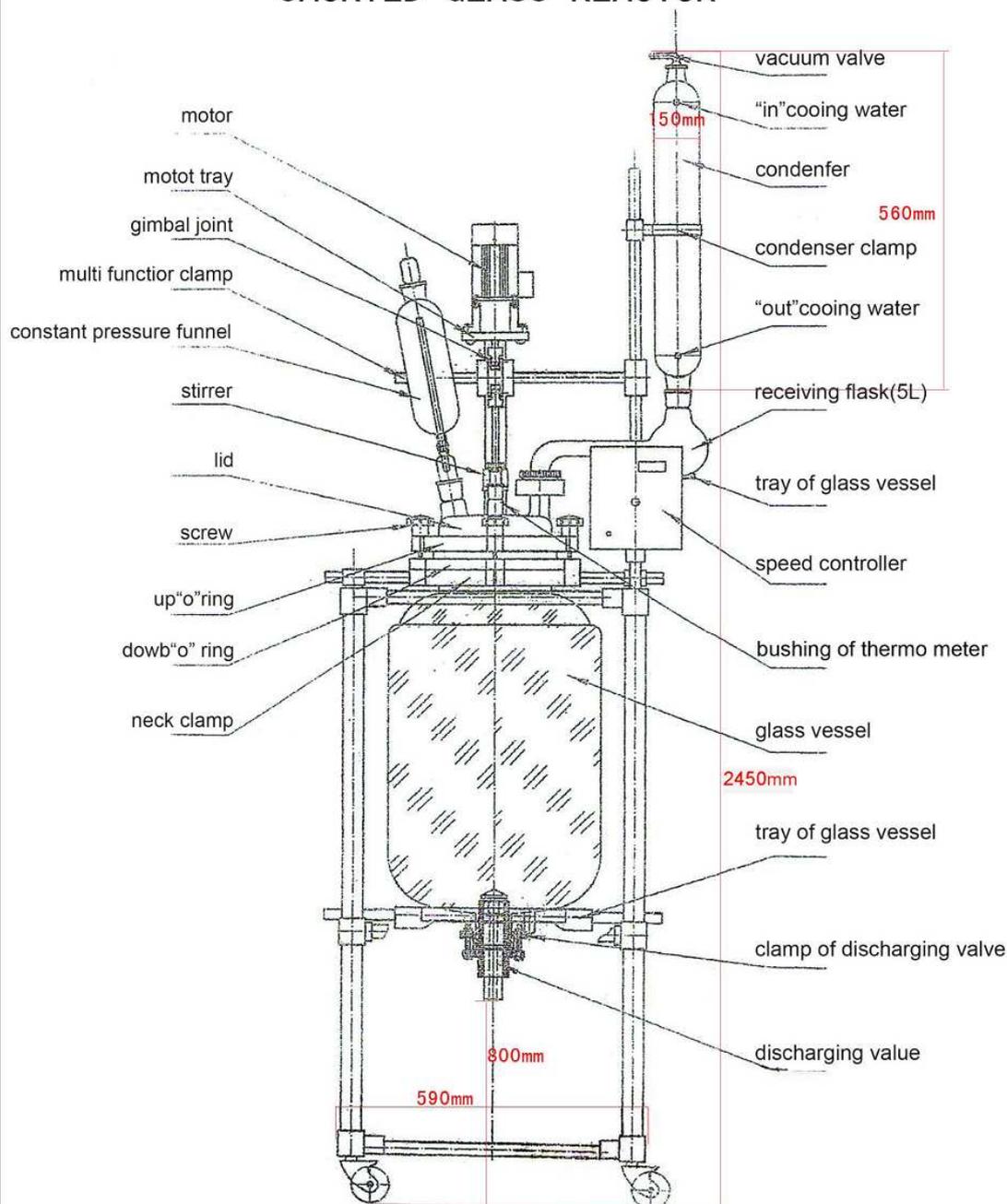
六、Malfunction Removing.

Phenomenon	Reason	Removing
Indicator led is not light when you power on	External source no pass or other	Plz check up power supply and jack
	Short circuit	Plz put switch to OFF, exchange new fuse.
Indicator led is light, but not rotary	rotary axis is rust	Stop to use it, plz contact with supplier.
	Motor, electric box in malfunction.	
	no connection with seven-connector electrical male plug	Reconnect this plug.
Vacuum is leaked	Check up glass is ok? Glass switch is ok?	Plz replace sealing ring and switch
It has vacuum, but vacuum gauge is 0	the seal is damaged	Plz replace new seal.
sometime is in vacuum, sometime is not in vacuum	Axis has dirty, loose connection	plz erase dirty, check up vacuum meter and vacuum pump
	soft pipe aging	plz replace it.

Product's Drawing(10L-50L jacketed glass reactor)

1. Item NO	Part Number	Description
1.	HEB-10	Condenser
2.	HEB-15	Gimbal Joint
3.	HEB-11	Electric Stirrer Motor(Proof-Explosive optional) 50-900rpm Power:370W
4.	HEB 13	Pressure Meter Max pressure 0.098Mpa
5.	HEB-07-12	Receiving Flask(2L-10L Optional)
6.	HEB-99-16	6-Neck Lid diameter for Middle:60,Left:40, Right:50,Back:34mm, Front:29mm and 50mm feeding port
7.	HEB-FC-307	Frequency-Converter for Digital Display(speed controller)
8.	HEB-BP-502	Beaded Pipe Coupling(outlet)
9.	HEB-BP-503	Beaded Pipe Coupling(Inlet)
10.	HEB-JR-111	50L Jacketed Vessel
11.	HEB-ST-101	Stirrer Shaft Stainless, Teflon Agitator
12.	HEB-RH-210	Teflon Support Ring "O"
13.	HEB-DS-158	Discharging Valve Not Existing Materials
14.	HEB-LC-199	Heavy Duty Lockable Casters
15.	HEB-VM-201	Vacuum Mouth(valve)
16.	HEB-SF-08	Support Frame,Stainless
17.	HEB-CP-0	Constant Pressure Funnel
18.	HEB-PTFE	PTFE cover for big mouth (feeding port)
19.	HEB-GV	Glass Valve(Multi-function valve)
20.	HEB-TP	Bushing of temperature meter
21.	HEB-FS	various kind of clamps

JACKED GLASS REACTOR



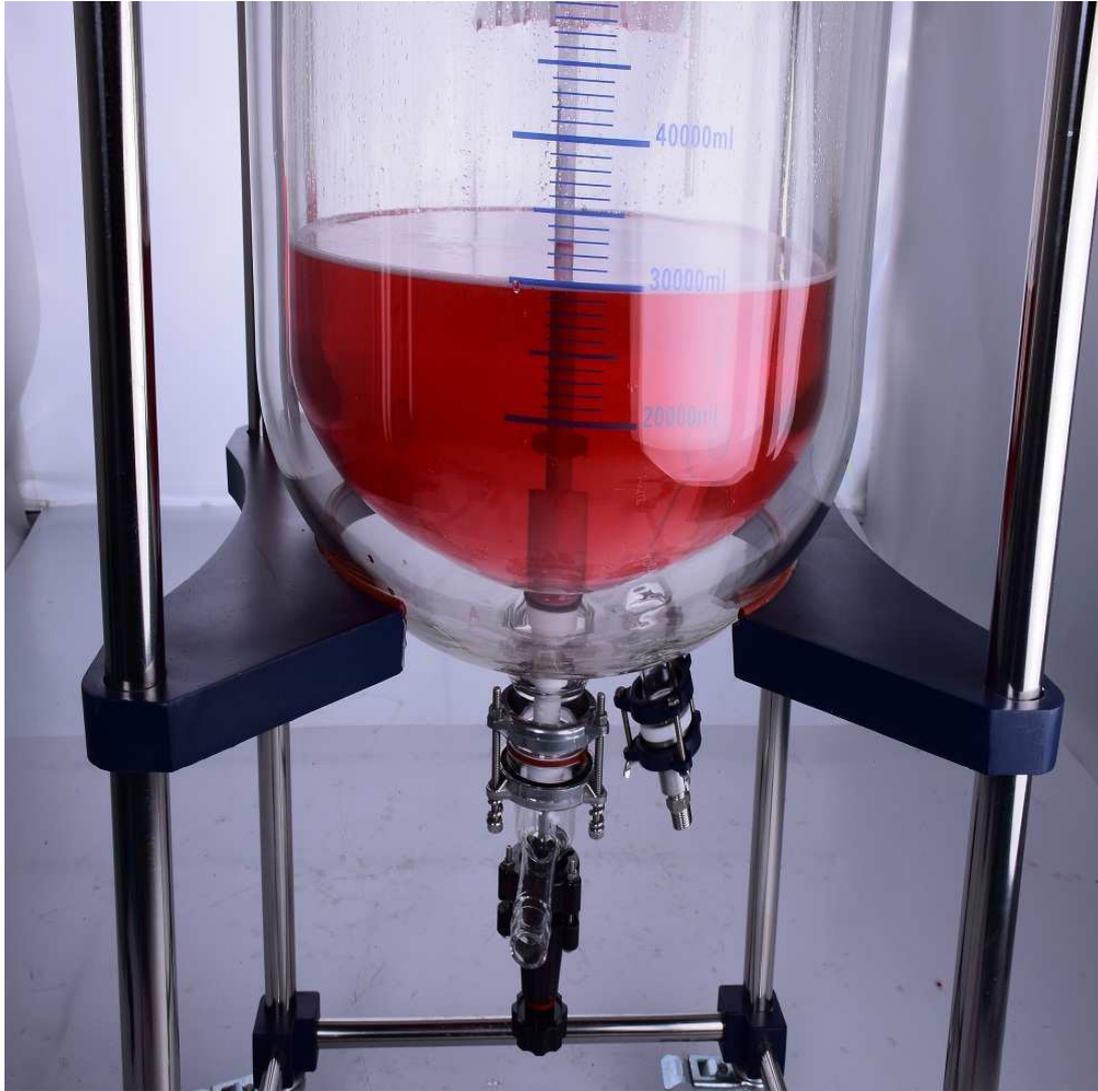
Parameters Model	Inside's/outside's dia of glassvesse	Glass lid with 5 necks				
		Middle	Left	Right	Behind	Ahead
HEB-50	355*400	Φ60	40#	Φ50	34#	29#
HEB-30	310*355	Φ50	40#	40#	34#	24#
HEB-20	310*355	Φ50	40#	40#	34#	19#
HEB-10	245*260	Φ50	40#	40#	34#	19#

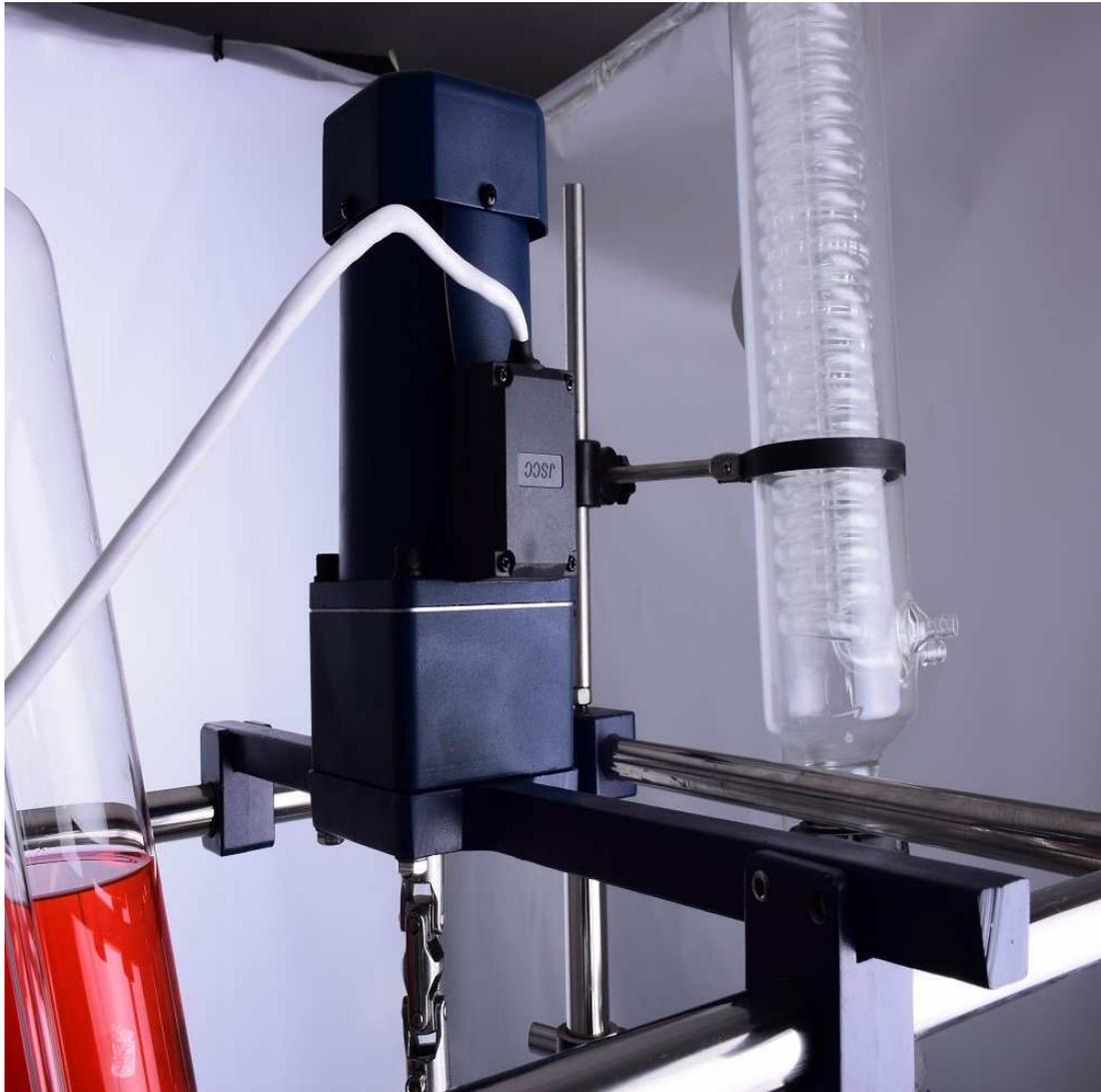


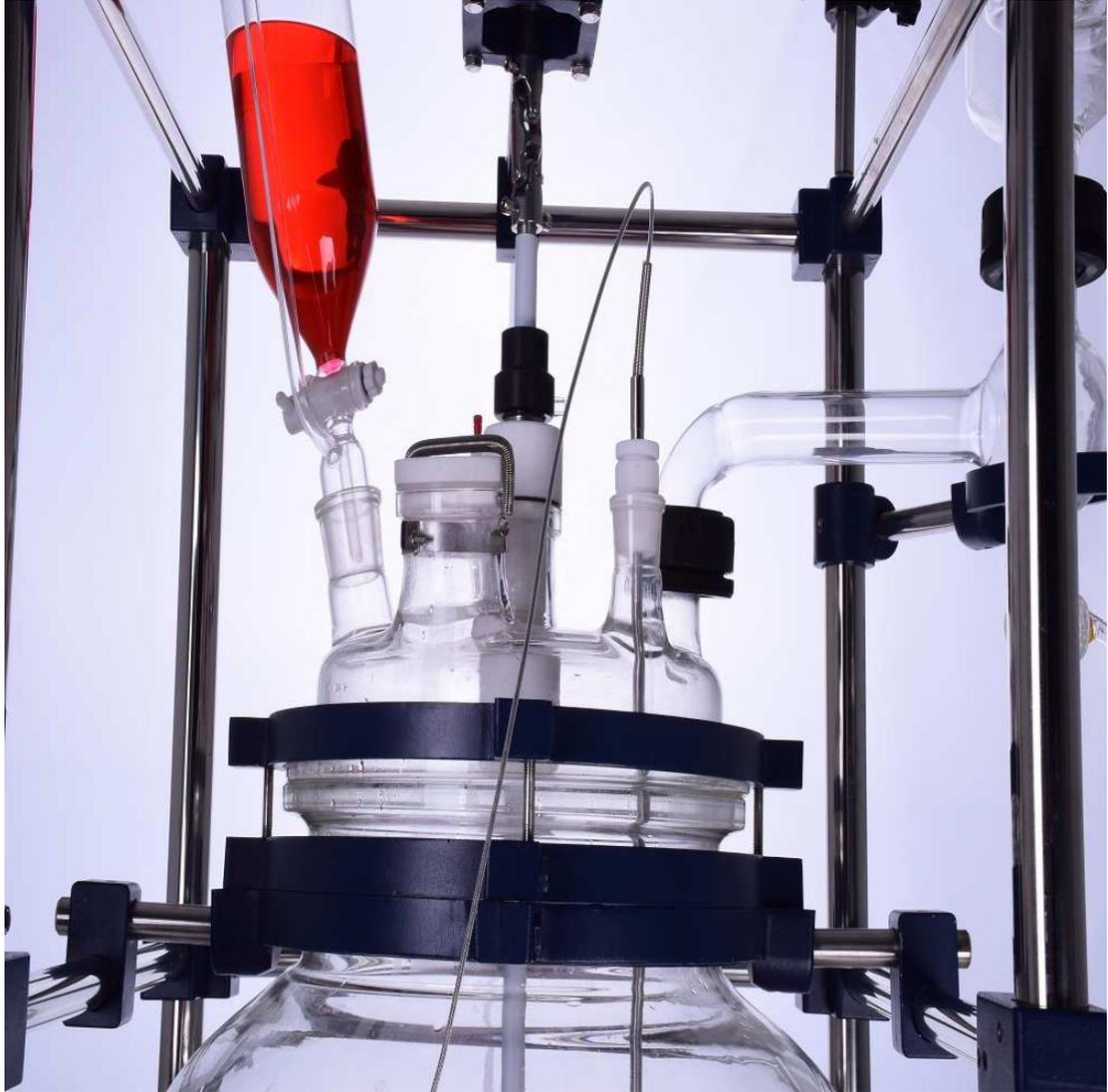


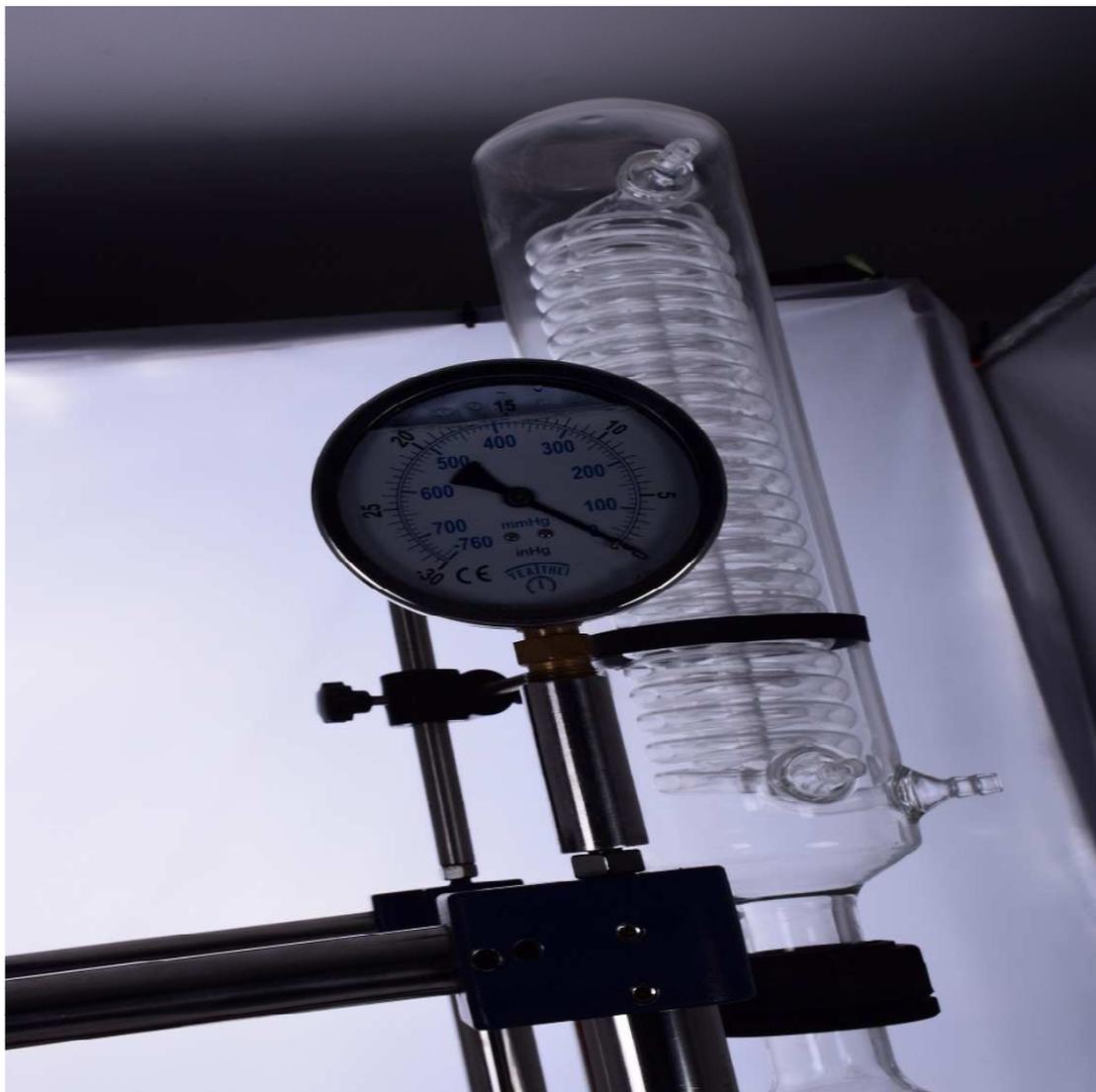








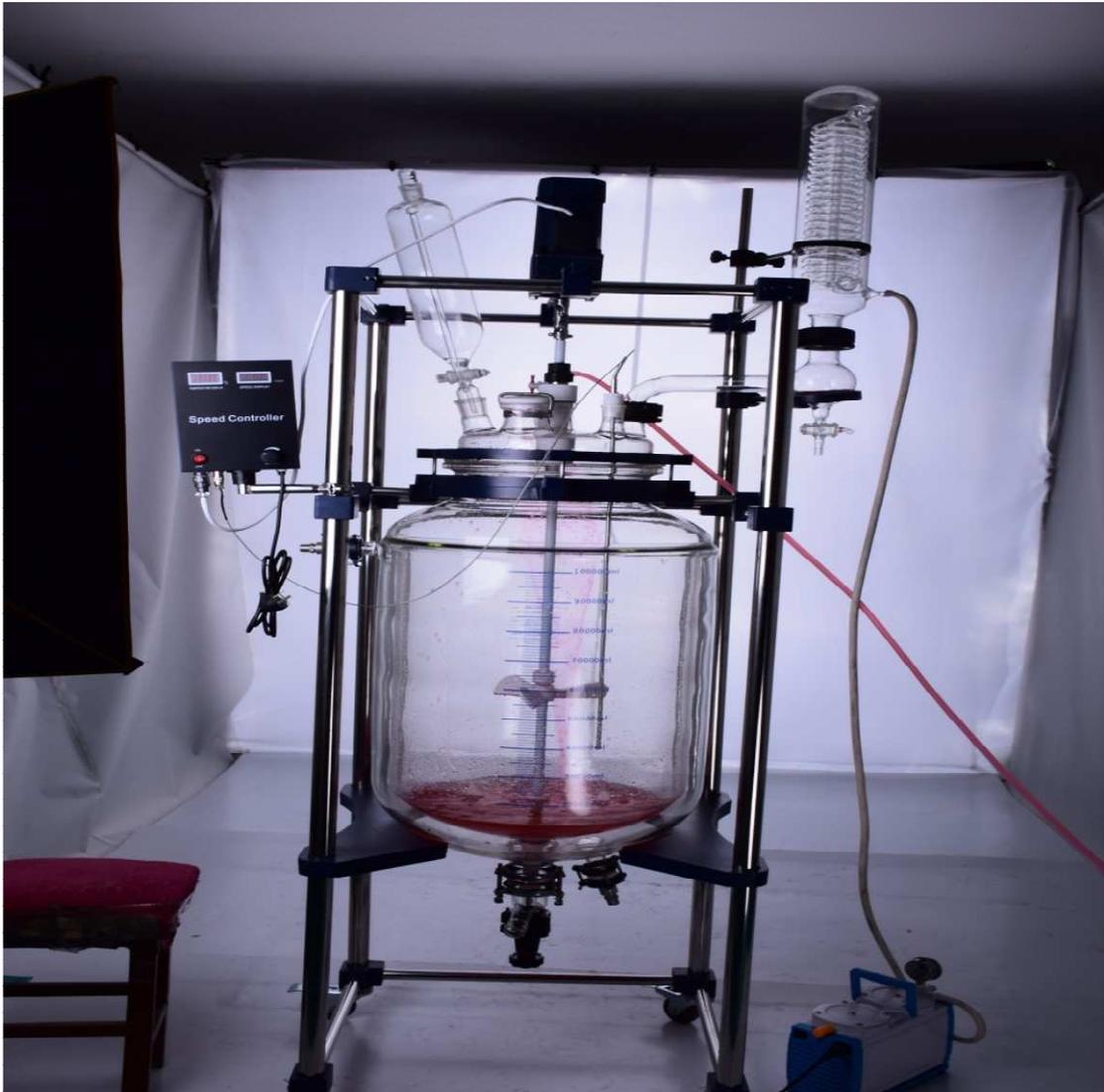












Or





