GR-10 Features and Technical Parameters

Description:

Jacketed Glass Reactor (Double layer Glass Reactor) When the material is heated and reacted, the evaporation efficiency can be improved under vacuum condition (need to connect the vacuum device), and the solvent vapor can be cooled into liquid when it is cooled through the glass condensation coil (need to connect the cooling device), which can be refluxed back to kettle, and can also be recovered through the valve under the reflux elbow. When the reaction is finished, the material can be discharged from the side outlet at the bottom of the kettle.Reaction vessels also operate under vacuum making them ideal for any atmospheric sensitive applications. They can be made out of glass and range in volume from 1L to 200L.

Working principle:

This Jacketed Glass Reactor (Double layer Glass Reactor) has electric constant speed stirring system, condensation and dropping system. The interlayer of kettle body needs to be connected with heating or cooling circulation equipment. When the material is stirred, the circulating hot solution or cooling liquid is injected through the interlayer to make the materials in the kettle are heated or cooled at a constant temperature. When the material is heated and reacted, the evaporation efficiency can be improved under vacuum conditions (a vacuum device need to be connected). The solvent vapor is cooled into liquid when passing through the glass condensing coil (a cooling device need to be connected), which can be refluxed into the kettle. It can also be recycled through the lower valve of the dean-stark. When the reaction is completed, the material can be discharged from the side outlet at the bottom of the kettle.

This series of products need to be equipped with a vacuum device, a high-temperature or low-temperature circulation device to form system devices.

Feature:

1. All parts in contact with materials are made of high borosilicate glass (expansion coefficient 3.3) and PTFE, which have stable performance and are not easy to react with materials, so it is easy and safe to use.

2. Frame-type main body, made of aluminum alloy + stainless steel, highly efficient and stable, beautiful and durable.3.Glass + PTFE discharge valve, no liquid accumulation side discharge, very fast recovery of solution.

3. Low-speed force-increasing motor, electronic infinitely adjustable speed, fine adjustment by twisting, double-display speed box can digitally display the rotational speed and the temperature of materials in the kettle, with stable performance, clear display of the control and data plane, and easy to operate.

4. Stirring system adopts ceramic bearing and mechanical sealing to prevent the stirring rod from wearing and dropping chips, high temperature resistance, wear resistance and good sealing effect.

5. Adopt PT100 temperature sensor, 304 stainless steel material, coat transparent PTFE tube, double anti-corrosion.

6. Vacuum pressure gauge shows real-time vacuum, pointer display.

7. Crescent type stirring paddle, 304 stainless steel + PTFE stirring blade; stirring rod made of 304 stainless steel, jacketed PTFE tube, high strength and corrosion resistance.

8. The bottom of the machine is equipped with universal wheels with brakes, can be moved as a whole, easy to operate.

9. Fuse safety protection, to ensure the safe operation of the circuit.

Product Picture

Pictures are for reference only, subject to actual availability.

Main Technical Parameters

Model	GR-10
Kettle volume	10L， inner diameter 230mm,outer diameter 290mm,inner length 354mm
Jacketed volume	about 8L
Voltage/frequency	220V/50HZ
Stirring power	90W 1/3
Stirring speed	0-450r/min

Temperature range vessel can bear		-80 ℃ to 250 ℃
Temperature accuracy		±1℃
Vacuum degree		0.098Mpa
Cover diameter		Φ265mm
6ports of cover	Stirring port	Φ50mm flange port
	Condenser port	50# ball mill port
	Constant pressure funnel port	40# standard port
	Relief port	34# standard port
	Temperature measure port	Φ45mm flange port
	Solid feeding port	Φ80mm flange port，inner diameter Φ60mm matched with PTFE cover
Stirring paddle		Φ17*700H(mm), leafing 150mm
Condenser size		Φ100*600H(mm), down with Φ60mm flange port
Condensation area		0.4 ㎡
Reflux elbow		upper with Φ60mm flange port ,left with 50# ball mill plug
Constant pressure funnel		1L, upper with 29# standard port matched with glass plug, down with 40# standard plug
Relief valve		34# standard plug valve ,vent nozzle (pagoda connector), outer diameter 12mm
In and out circulation port of the sandwich		Φ45 flange port matched with ring flange, 4 points outside the wire adapter
Baiting port		Φ75mm flange port，Φ33mm baiting port，inclined discharging port, (pagoda connector)Φ34mm，from floor 350mm
Vacuum suction nozzle		Pagoda joint,outer diameter 12mm
In and out circulation nozzle of condenser coil		Pagoda joint,outer diameter 15mm
Overall dimension (W*L*H)		780*550*1870

Net weight	49kg
Packing dimension	1390*530*810mm，0.6m³
Packing weight	83kg