

# **Crystallization Reactor**

Laboratory and Processing Equipment





LAB15T / Laboratory and Processing Equipment

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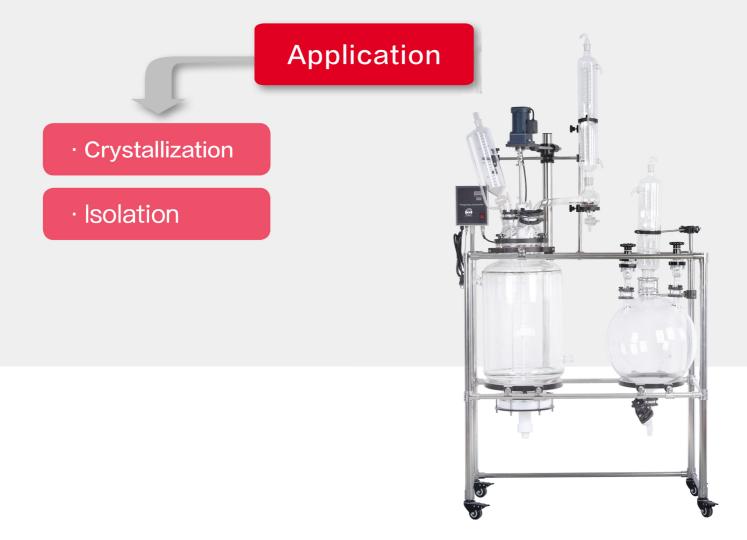
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# **CRYSTALLIZATION REACTOR**

The crystallization reactor is a commonly used glass reactor for biochemical refinement that combines the functions of the reactor and the filter. It is mainly used in modern fine chemicals, biopharmaceuticals, scientific research experiments, especially in the hemp industry. The Lab1st crystallization reactor can crystallize concentrate, distill, reflux, separation and purification. This makes it the ideal instrument for CBD oil processing.

Lab1st specializes in botanical refinement equipment. We are an industry leader in the sales and manufacturing of hemp processing and laboratory equipment. Our mission is to offer innovative and high quality equipment along with the best customer support in the hemp industry.



# **FEATURES**

## Integrated Design

· Integrated design with crystallization, filtration and mother liquid collection functions for easy operation.



# Corrosion Resistance

· Glass / PTFE wetted components for outstanding corrosion resistance.



### Optional Filter Plate

• The material of filter plate is glass sand core, which is more corrosion resistant; no filter paper required.



# **More Details**

- · Wide range of temperature operations, from  $-80^{\circ}$  to  $200^{\circ}$  .
- · Jacket interface can be matched with different heater and chiller.
- · Stainless steel supporting framework with lockable casters for mobility and stability.
- · High quality thermo insulation jacket available (Optional).
- · Explosion-proof or pneumatic options are available.









# **TECHNICAL DATA**

General Specification							
Model	JGR-5FK	JGR-10FK	JGR-20FK	JGR-30FK	JGR-50FK	JGR-80FK	JGR-100FK
Electrical Requirements	110/220V,60Hz 1 phase	110/220V, 50/60Hz 1 phase	110/220V, 50/60Hz 1 phase	110/220V, 50/60Hz 1 phase	110/220V, 50/60Hz 1 phase	110/220V, 50/60Hz 1 phase	110/220V, 50/60Hz 1 phase
Standard Stirring Motor Power	120W	120W	120W	120W	120W	200W	200W
Rotation Controller	Digital controller with variable frequency drive, 600 rpm						
Agitator Type	Anchor Design, 304 Stainless Steel Reinforced with PTFE Coating						
Filter Plate	Glass Sand Core Filter						
Reaction Vessel Capacity	5L	10L	20L	30L	50L	80L	100L
Liquid Collection Vessel	5L	10L	20L	30L	50L	80L	100L
Jacket Capacity	2L	3L	6L	10L	16L	24L	30L
Filter Pore Size	20~40 μ m	40~80 μ m	40~80 μ m	40~80 μ m	40~80 μ m	40~80 μ m	40~80 μ m
Glass Vessel Temperature Range				-120 ~250			
Jacket Pressure	Under 0.05Mpa						
Inner Vessel Pressure	Under 0.098Mpa						
Glass Material	High Borosilicate Glass 3.3						
Vacuum Sealing	PTFE to increase durability and longevity						
Installation Dimension (W*D*H mm)	800*400*1400	1000*600*2030	1150*650*2150	1150*650*2450	1150*650*2450	1250*700*2550	1250*700*2550
Connection Sizes							
Port 1 on the Lid (Thermometer)	24mm Joint	DN25 Flange					
Port 2 on the Lid (Vacuum Suction)	24mm Joint	34mm Joint	34mm Joint	34mm Joint	34mm Joint	34mm Joint	34mm Joint
Port 3 on the Lid (Solid Inlet)		80mm Flange					
Port 4 on the Lid (Constant Pressure Funnel)	29mm	40mm Joint					
Port 5 on the Lid (Reflux)	35mm Ball Joint	50mm Ball Joint	50mm Ball Joint	50mm Ball Joint	50mm Ball Joint	50mm Ball Joint	50mm Ball Joint
Port 6 on the Lid (Stirring)	50mm Flange	50mm Flange	50mm Flange	50mm Flange	50mm Flange	60mm Flange	60mm Flange
Vacuum Port on the Condenser	12mm Barb	12mm Barb	12mm Barb	12mm Barb	12mm Barb	12mm Barb	12mm Barb
Liquid Inlet and Outlet on the Condenser	12mm Barb	12mm Barb	12mm Barb	12mm Barb	15mm Barb	15mm Barb	15mm Barb
Reflux Drain Port	12mm Barb	12mm Barb	12mm Barb	12mm Barb	12mm Barb	12mm Barb	12mm Barb
Drain Port Below the Filter Plate	12mm Barb	12mm Barb	12mm Barb	12mm Barb	12mm Barb	12mm Barb	12mm Barb
Fluid Connection	G 1/2 Male Thread	G 1/2 Male Thread	G 1/2 Male Thread	G 1/2 Male Thread	G 3/4 Male Thread	G 3/4 Male Thread	G 3/4 Male Threa
Liquid Collection Vessel Sizes							
Inlet and Outlet on the Collection Vessel	12mm Barb	12mm Barb	12mm Barb	12mm Barb	12mm Barb	12mm Barb	12mm Barb
Vacuum Port on the Collection Vessel	12mm Barb	12mm Barb	12mm Barb	12mm Barb	12mm Barb	12mm Barb	12mm Barb
Connection Port on Condenser	50mm Flange	60mm Flange	60mm Flange	60mm Flange	60mm Flange	60mm Flange	60mm Flange
Vacuum Port on the Condenser	50mm Flange	50mm Flange	50mm Flange	50mm Flange	50mm Flange	50mm Flange	50mm Flange
Liquid Inlet and Outlet on the Condenser	16mm Barb	16mm Barb	16mm Barb	16mm Barb	16mm Barb	16mm Barb	16mm Barb

# **AUXILIARY EQUIPMENTS**

### Vacuum Pump

### PTFE Diaphragm Vacuum Pump

Light-weight and low noise. The PTFE diaphragm design makes them suitable for even the most corrosive solvents. Available in different capabilities (Up to 120L/min air-taking speed and 50 mbar end vacuum).



### **Heating & Cooling Circulator**

#### **HRV-Series**

These are integrated heating & cooling circulators for customers requiring a high dynamic temperature range. They come with a hermatic design and are available in different models. The temperature range is from – 40C to 200C.



### **Cooling Circulator**

#### **DL-Series**

The most cost-effective cooling circulator, which comes with an open reservoir, making them suitable to be also used as a cooling bath. They come with a variety of models with reservoirs from 5L to 100L and with lowest temperature from -20C to -120C.





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