



# Multifunctional Jacketed Reactor

Stainless Steel Type

Laboratory and Processing Equipment



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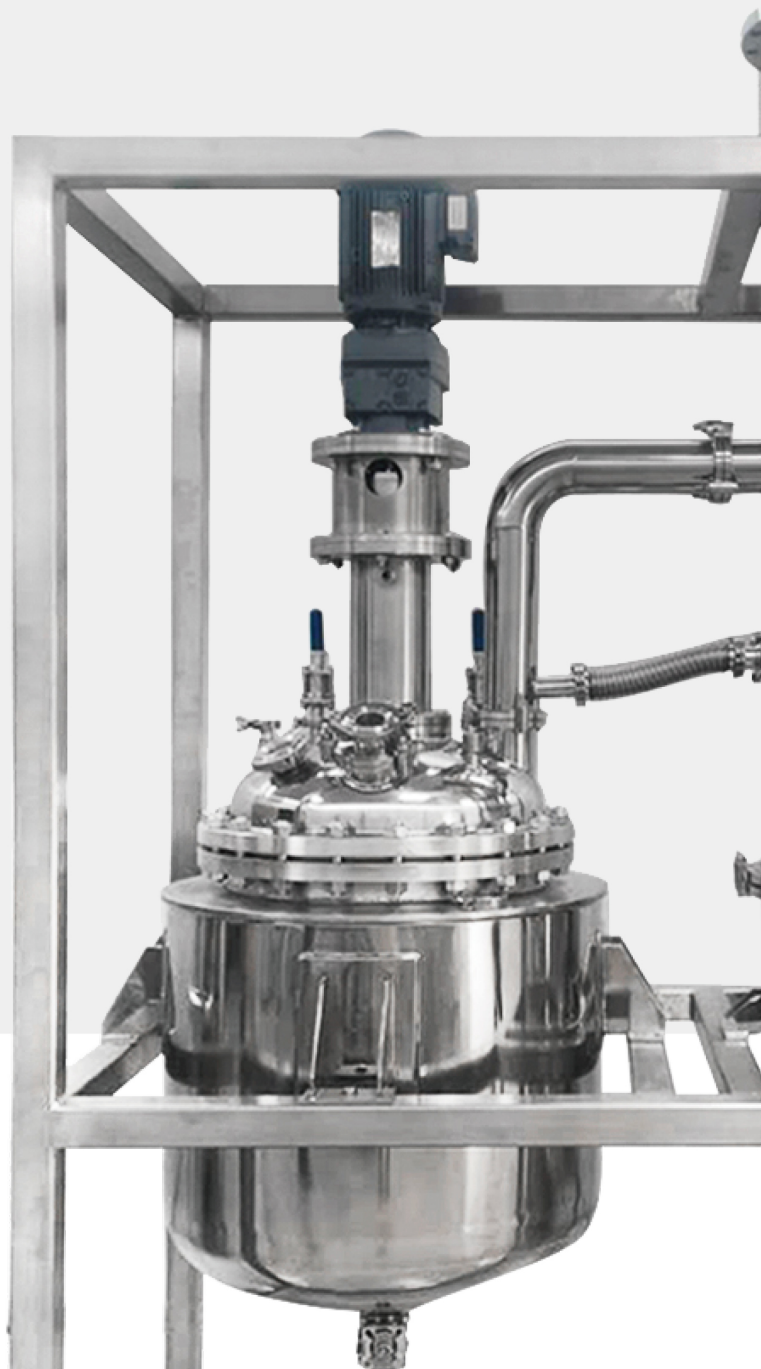
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## STAINLESS STEEL TYPE

Lab1st JSR-EVP series jacketed stainless steel reactors are designed as a multi-purpose reaction platform with controlled temperature and pressure environment. Each stainless steel jacketed reactor consists of SUS30408 stainless steel reaction vessel, magnetic seal, single layer paddle agitation, temperature probe and digital display, and other accessories like coiled condenser, bottom discharge valve and other accessories.

We offer 50L to 300L standard stainless steel jacketed multi-function reactors. Furthermore, this reactor can be customized according to different requirements, such as larger volume receiving tank, pneumatic motor, etc.

There are two different structure for JSR-EVP series reactor. One is with single collection tank and another one comes with 2pcs parallel collection tanks.



# PRODUCT DISPLAY



Structure 1



Structure 2

01.

Jacketed Vessel



02.

Motor

03.

Discharging Valve



04.

Condenser

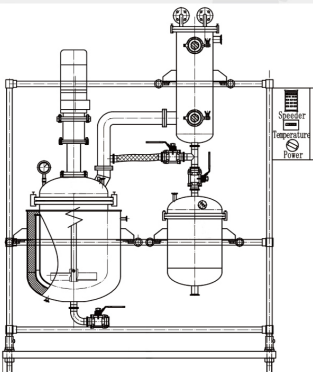
05.

Electric Cabinet

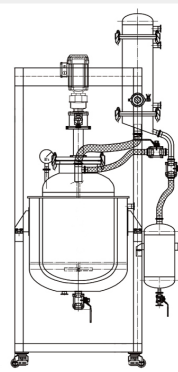


06.

Collection Vessel



Structure 1



Structure 2

## FEATURES

Stainless steel material, capacity **50L to 300L**.



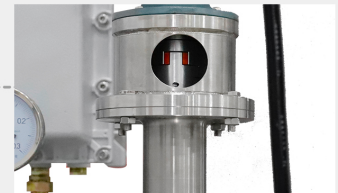
Equipped with super large condenser and liquid collection tank.



Standard with Explosion-proof motor, pneumatic type available.



Magnetic sealing guarantees the inner vessel's vacuum.



Rugged **SUS304** stainless steel, corrosion resistant, customizable **316L**.



Customizable vessel cover with adjustable and multifunctional ports.





## FEATURES

Easily visual operation with digital speed and temperature displays.



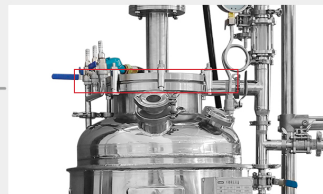
Equipped with sight glasses for easy observation.



High torque motor, suitable for a variety of solvents.



Larger vessel opening design, easier to clean.



Standard with single layer paddle agitation, optional multi-layer stirring blades for optimal reaction results.



Can be customized according to different requirements.





## TECHNICAL DATA

Mode	JSR-50L-EVP	JSR-100L-EVP	JSR-200L-EVP
<b>Technical Data</b>			
Temperature Range	RT~200°C	RT~200°C	RT~200°C
Heating Method	Jacket Circulation Heating	Jacket Circulation Heating	Jacket Circulation Heating
Material	SUS316, SUS304	SUS316, SUS304	SUS316, SUS304
Vacuum Sealing	Magnetic Sealing	Magnetic Sealing	Magnetic Sealing
<b>Electrical Requirement</b>			
Voltage [V]	220   380	220   380	220   380
Phase [P]	1[220V]   3[380V]	1[220V]   3[380V]	1[220V]   3[380V]
Frequency [HZ]	50/60	50/60	50/60
Total Power [W]	750	1500	1500
Electric Cabinet	Explosion-proof Electric Cabinet	Explosion-proof Electric Cabinet	Explosion-proof Electric Cabinet
<b>Agitation</b>			
Drive Type	Magnetic Drive	Magnetic Drive	Magnetic Drive
Agitation Type	Single Layer Paddle Agitation	Single Layer Paddle Agitation	Single Layer Paddle Agitation
Rotation Speed 50Hz [rpm]	80~270	80~270	80~270
Rotation Speed 60Hz [rpm]	100~350	100~350	100~350
<b>Vessel</b>			
Vessel Volume [L]	50	100	200
Inner Vessel Diameter [mm]	400	500	600
Inner Vessel Height [mm]	400	475	600
Vessel Pressure [Mpa]	-0.1~Atm	-0.1~Atm	-0.1~Atm
Jacket Volume [L]	20	30	45
Outer Vessel Diameter [mm]	450	550	650
Jacket Pressure [Mpa]	0.1...0.3	0.1...0.3	0.1...0.3
Drain Valve Port	KF40	KF40	KF40
Jacket Port	DN25[ISO2852]	DN25[ISO2852]	DN25[ISO2852]
<b>Condenser</b>			
Heat Exchange Area [m <sup>2</sup> ]	1	2	3
Material	SUS316L	SUS316L	SUS316L
Condenser Liquid Inlet & Outlet Port	DN15	DN15	DN15
<b>Collection Tank</b>			
Tank Volume [L]	30	50	100
Sight Glass	2	2	2
<b>Weight   Dimension</b>			
Unit Dimension [mm]	1850×980×2200	1900×920×2850	2100×1020×3100
Unit Weight [Kg]	380	780	900

## AUXILIARY EQUIPMENTS

### Vacuum Pump

#### Water-jet Vacuum Pump

Chemical duty and easy to maintain vacuum pumps with up to 50L/min air-taking speed and 20 mbar end vacuum. Vacuum is generated by forced water circulation, making it the ideal vacuum pump for chemical applications.



#### 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).



#### Rotary Vane Oil Pump

Strong and relatively low cost, with different choices based on your requirement. They are available in single-stage or dual-stage, from 2.5 CFM to 45 CFM. Some of them are suitable for 24x7 continuous operation. Note: a cold trap is needed for rotary vane oil pumps in chemical applications.



### Heating & Cooling Circulator

#### HR-Series

These are integrated heating & cooling circulators for customers requiring a high dynamic temperature range. They come with a hermetic design and are available in different models. The starting temperature range is from  $-25\text{ }^{\circ}\text{C}$  to  $200\text{ }^{\circ}\text{C}$ . On advanced models, the lowest temperature can be as low as  $-80\text{C}$ , and the highest temperature can be up to  $250^{\circ}\text{C}$ .



## AUXILIARY EQUIPMENTS

### Heating Circulator

#### OBC-Series

The most cost-effective heating circulator, with a concise but efficient design. Standard versions can heat up to 180C and advanced versions can reach 300C. These circulators comes with an open reservoir (from 10L to 100L), which can also be used as a heating bath. The heating power and voltage of the circulators are totally customizable.



#### UC-Series

Advanced heating circulator with a hermetic design, for minimized oxidation of heating oil at high temperature. These circulators are available with 200C or 300C max temperature. They come with air or water cooling, making them suitable for applications requiring a quick drop from high temperature to room temperature.



### Cooling Circulator

#### DL-Series

The most cost-effective cooling circulator, which comes with an open reservoir (from 5L to 100L), 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.



#### DLH-Series

High-end cooling circulators with a hermetic design, for extended life of both the circulator and the cooling fluid (preventing frost and ice flake in the circulator). They come with a variety of models with chilling power as low as 2.5kW and with lowest temperature from -15C to -120C.

