

EN

Process Scale-Up Systems

Featuring Reactors from Micro to Batch Scale

Energy | Petrochemical | Life Sciences | Cosmetics | Pharmaceutical | Environmental



About WIGGENS

What Does Wiggins Stand for?

Wide Product Range
International Orientation
Great Quality
Great Service
Energetic Team
New Technology
Solutions

WIGGENS
THE MAGIC MOTION

Wiggins was established in 2005 with the goal of delivering the best laboratory equipment and service for reliable results. Since then Wiggins has been producing top-quality general laboratory equipment, analysis apparatus and chemical reaction solutions. Our brand Wiggins stands for high quality, durability and remarkable performance.

Wiggins is your reliable laboratory companion and provides products that can be used in different kinds of laboratory environments. The Wiggins product range includes:

- * Rotary Evaporator
- * Pump
- * Vacuum Filtration Apparatus
- * Heating & Mixing unit
- * Incubator & Oven
- * Analysis Apparatus
- * Gas Generator
- * Chemical Reactor

ChemVak, the product brand of Wiggins, is specialized in vacuum technology offering an extensive range of vacuum pumps for all applications, including chemical-resistant diaphragm pumps, oil-free pumps and rotary vane vacuum pumps, complemented by vacuum filtration equipment for a wide range of different applications. In addition, solvent recovery systems and bio-suction systems are part of the product range.

ChemTron is our product brand focusing on analysis apparatus, gas generators and chemical reaction solutions, as well as efficient chemical separation tools-rotary evaporator.





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Auto Reaction Controller

Wiggins auto reaction controller integrates equipped with multiple function expansion interfaces to meet the requirement of customer. it is controlled by a large touch screen, which can expand the control and monitoring the following parameters:

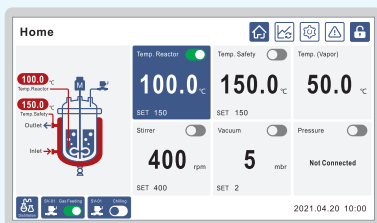
- > internal temperature
- > external temperature
- > steam temperature (monitoring only)
- > stirring speed
- > vacuum
- > pH measurement

Realize process monitoring, process control, visual archiving, data recording, alarm output and emergency stop. Scientists can use it to perform various reaction processes such as synthesis, distillation, extraction, and crystallization.

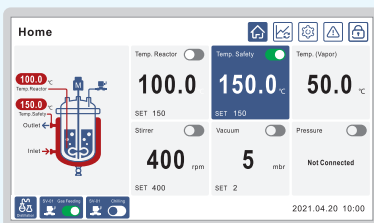
Compact design, flexible in configuration and different functional unit, which is very suitable for scientific research and teaching and enterprise R&D laboratories.



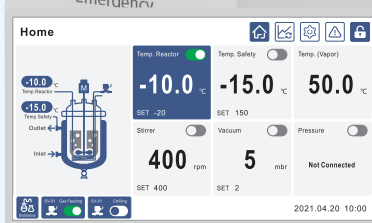
Display and Operation



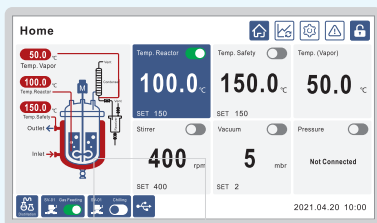
Main interface (Home)



Heating mode



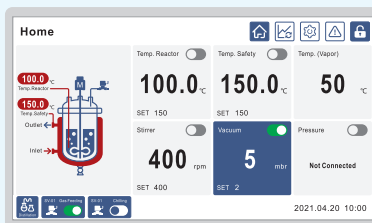
Cooling mode



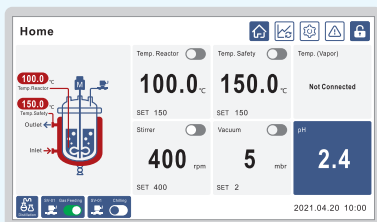
Distillation mode



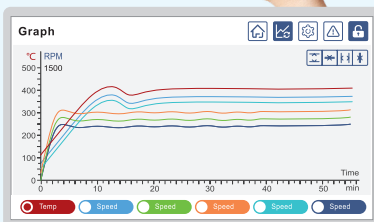
Set speed



Set vacuum



pH measurement

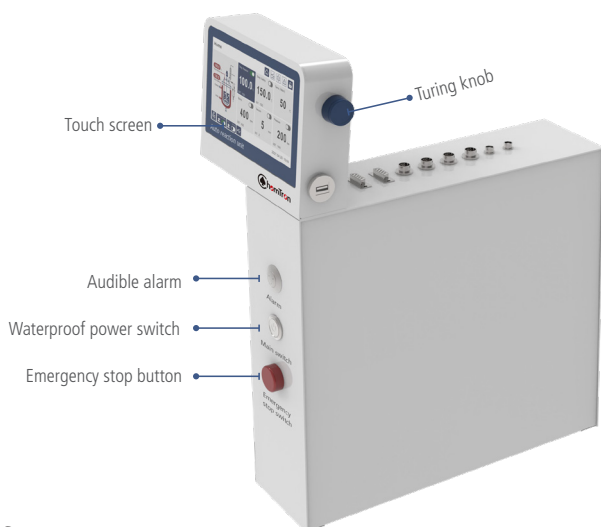


Monitoring interface (Graph)



Alarm

Auto Reaction Controller



AddOns

Item	Function and interfaces	Description
1	Stirring	Integrated stirring control system, but the stirring motor need to be ordered separately
2	Temperature control	Julabo models: CF31,CF41,DD,MS,Forte HT, Presto Bath fluid temperature measurement, Reaction temperature measurement
3	Vacuum control and display	Integrated vacuum controller and sensor, the vacuum pump, gas inlet adapter and tubing need to be ordered separately
4	Vapor temperature measurement	Temperature sensor needs to be ordered separately (LEMO)
5	pH measurement	pH electrode needs to be ordered separately (BNC)

Communication Interface

Temperature control
> bath fluid temperature
> temperature inside the reactor

Vapor temperature measurement

Stirring motor

Vacuum control and display

pH measurement

Experimental data export

PC communication
RS-485, Modbus RTU

Order information

Order No.	Part	Suitable for
JCRS-50	Auto reaction stand	Bench top glass reactor 250ml, 500ml and 1000ml
JCRS-51	Auto reaction unit	Bench top glass reactor 2000ml and 5000ml EZChemtron Pilot and PlusChemtron Pilot reaction system



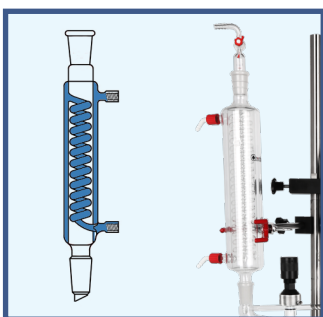
Bench Top Reactors

All-in-one



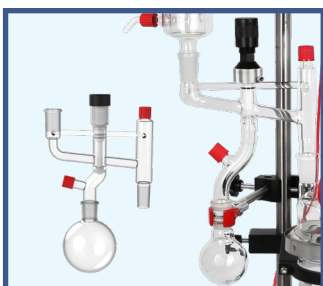
Reaction Lid

5-opening lid is standard, optional for PTFE lid (low temperature) or stainless steel lid (homogeneous or high stirring speed)



High Efficiency Condenser

Serpentine pipe and double jacket design ensure high condensation efficiency



Switchable Distillation Head

The distillation head can be used between condensing reflux and distillation experiment, just adjust the valve to switch the working mode.



Stainless Steel Stand

Unique design allows easy installation and removal of glassware, All parts are made of high quality stainless steel, corrosion resistant. Standard with removable spill tray.



Dead Volume Free Bottom Valve

The industrial valve is a dead volume free PTFE spindle valve with sloped outlet. The spindle shall be pressed in without turning. In the valve housing is an additional spring mounted in. So the spring pressure of the spindle to the valve seat can be increased spring- loaded and the spindle regulates itself. This guarantees a good tightness at large variations of temperature. The industrial valve is available with a 10 mm bore hole (standard) and as desired with a 20mm bore hole.





Wide Application Range

The optimization of chemical reactions is enabled by having access to a broad and seamless range of reaction conditions: stirring and temperature control.



Jacketed Reaction Vessel

Volume from 250ml to 5000ml are optional, if lower temperature requirement, Heatable reaction vessels with vacuum jacket is recommended



High Torque Overhead Stirrer

OHS.2 is used for general application, and OHS.4 is recommended when the volume of sample is increased or the viscosity of the sample is high, both of these two models can be remote controlled



Universal Stirring Bearing

for use with standard taper ground glass joints can be used with PTFE, glass and metal shaft stirrers. Unique features of the design are a permanently loaded Composite PTFE/PEEK Seal and a Glass Ball-Bearing for rigidity and smoothness of operation.



Pressure Relief Manifold inlet/outlet

help protect the glass vessel from breakage due to an excessive pressure differential exerted by the thermal transfer fluid while the vessel is isolated or disconnected from the circulator. Available as a set, individual inlet or outlet, and sized with either a M16x1



Auto Reaction Software (Optional)

Stirring speed, temperature and other parameters can be remote control and data recording



Bench Top Reactors

JRS-1501-02 Bench top reactor, all-in-one, jacketed, 250ml

NEW Bench top reactors are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve. The unique design of the Bench top reactors support stand and clamping system allows for quick and easy installation/removal of glassware and fits into most fume hood. System is supplied complete with the components listed below and numbered on the image below.

250ml complete bench top reactors

Part number	Description
JRS-1501-021	Complete with Glassware & Stand, and Digital Overhead Stirrer OHS.2 (Part 1-Part 8)
JRS-1501-022	Complete with Glassware, Stand, and High Torque Overhead Stirrer OHS.4 (Part 1-Part 8)
JRS-1501-021M	Complete with Glassware & Stand, Multi channel regulating valve and Digital Overhead Stirrer OHS.2 (Part 1-Part 9)
JRS-1501-022M	Complete with Glassware, Stand, Multi channel regulating valve and High Torque Overhead Stirrer OHS.4 (Part 1-Part 9)

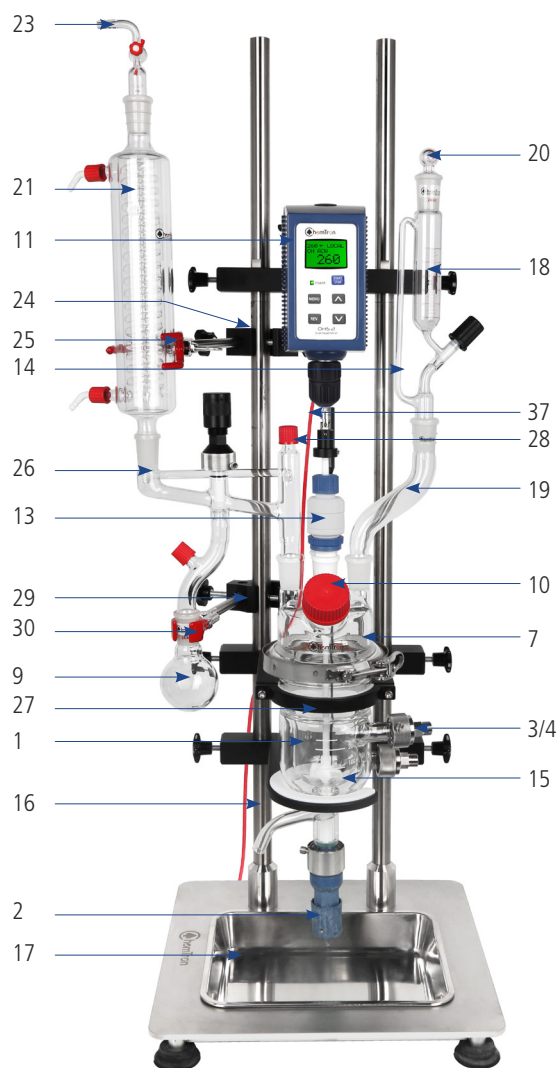


High Torque Overhead Stirrer OHS.4

Approx. Stand Dimensions (W x D x H): 440x 420x1200mm

Specification

Max. reaction volume recommendation	350mL
Total volume	650mL
Flange	DN100
Bore diameter of bottom valve	0-10mm
Reactor lid	CN:24/40, SN:24/40(3), 45° -GL45
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	suitable for atmospheric and vacuum reaction
Jacket pressure	up to 0.5bar
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN15
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation If high-speed mixing applications are required, please consult your Wiggins
Diameter/length of stirring Rod	Ø8mm / 500mm
Blade diameter	40mm (4 blade angled type stir paddle)
Length of condenser	300mm
Volume of collection flask	125mL
Volume of liquid funnel	60mL
Distance between discharge and liquid plate height	130
Weight	28.5kg



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part1 Reaction Vessel				
1	CRS-0839-47	250mL Jacketed reaction vessel	250mL Flask, Cylindrical, Jacketed, 100mm Flange, Without Drain Valve, DN15 inlet and outlet of jacket	1
2	CRS-4153B-S	Bottom outlet valve	Bottom outlet valve type "J", 10mm, approx.95mm	1
3	4200	Metal adapter with clamp	Metal adapter for thermostat hoses (DN15 to M16x1)	2
4	4201	Silicone sealant DN15	Silicone sealant DN15, -60°C to +200°C	2
5*	JRS-11081-21	Clamp Holder	Clamp Holder, Pilot Plant (Condenser Clamp, Flask Clamp)	2
6*	JRS-11065-16	3 Prong	3 Prong, Extended, Large	2
Part2 Reactor lid				
7	JRS-2904-01	Reactor lid	Lid, 100mm, 5 Neck, 24/40 CN, (3) 24/40 SN, (1) GL45 SN	1
8	JRS-1701-02	O-Ring	100mm PFA Encapsulated O-Ring	1
9	JRS-2401-02	Clamp	Clamp, Flange, 100mm	1
10	JRS-2301-01	Cap	Cap, Solid, GL45	1
Part3 Stirring unit				
11	CR3090-02	OHS.2 Stirrer	Digital Overhead Stirrer OHS.2	1
12	CR3091-02	OHS.4 Stirrer	Digital Overhead Stirrer OHS.4	1
13	5-104-7	Stirring bearing	8mm PTFE/PEEK Stirring bearing	1
14	JRS-8126-05N	Shaft Coupling	8mm Shaft Coupling	1
15	5-250-8-2	Screw Propeller	Screw Propeller, 4-Bladed (PTFE Coated), Shaft Ø8mm, L=500mm, Rotor Ø40mm	1
Part4 Reactor stand				
16	CRS-2602-02	Reactor stand	Smart Supporting Structure	1
17	CR-13221	Spill tray	For bench top reactor supporting structure, Stainless steel	1
Part5 Liquid funnel				
18	JRS-2803-01	Funnel	Funnel, Addition, 60mL, 0-4mm Metering Valve, 24/40 Joints	1
19	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
20	JRS-2103-01	Glass stopper	Glass stopper, 24/40	1
Part6 Condenser				
21	JRS-2506-09	Condenser	Jacketed, 300mm, 24/40	1
22	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
23	JRS-2012-02	Vacuum Adapter	Vacuum Adapter, 24/40	1
24	JRS-11081-21	Clamp Holder	Clamp Holder, Pilot Plant (Condenser Clamp, Flask Clamp)	1
25	JRS-11065-16	3 Prong	3 Prong, Extended, Large	1
Part7 Distillation unit				
26	JRS-2619-01	Distillation Reflux / Divider Head	Distillation Reflux / Divider Head Claisen Style	1
27	JRS-6887-232	125mL Flask	125mL Flask, Single Neck, 24/40	1
28	JRS-2302-05	Cap	Cap, Solid, GL18	1
29	JRS-11081-21	Clamp Holder	Clamp Holder, Pilot Plant (Condenser Clamp, Flask Clamp)	1
30	JRS-11073-20	2 Prong	2 Prong, Extended, Large	1
Part8 Adapters and clamps				
31	JRS-5028-31	Temperature Sensor Adapter	Temperature Sensor Adapter, O.D.=6.5mm, 24/40	1
32	JRS-7643-08	PTFE Sleeves	PTFE Sleeves, 24/40	1
33	JRS-7598-24	Keck Clip	Keck Clip, 24/40	1
Part9 Multi channel regulating valve				
34	JRS-12194-02	Multi channel regulating valve	Multi channel regulating valve outlet	1
35	JRS-12194-06	Multi channel regulating valve	Multi channel regulating valve inlet	1
36	8930220	Metal tubing	0.5 m Metal tubing, insulated, 2 fittings M16x1 female (-50...+200 °C)	2
Optional				
37	8981015	Temperature Sensor	300x6mm, SS/PTFE, 3m cable	1

*Not included in JRS-1501-021M and JRS-1501-022M

Bench Top Reactors

JRS-1501-03 Bench top reactor, all-in-one, jacketed, 500ml

NEW Bench top reactors are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve. The unique design of the Bench top reactors support stand and clamping system allows for quick and easy installation/removal of glassware and fits into most fume hood. System is supplied complete with the components listed below and numbered on the image below.

500ml complete bench top reactors

Part number	Description
JRS-1501-031	Complete with Glassware & Stand, and Digital Overhead Stirrer OHS.2 (Part 1-Part 8)
JRS-1501-032	Complete with Glassware, Stand, and High Torque Overhead Stirrer OHS.4 (Part 1-Part 8)
JRS-1501-031M	Complete with Glassware & Stand, Multi channel regulating valve and Digital Overhead Stirrer OHS.2 (Part 1-Part 9)
JRS-1501-032M	Complete with Glassware, Stand, Multi channel regulating valve and High Torque Overhead Stirrer OHS.4 (Part 1-Part 9)

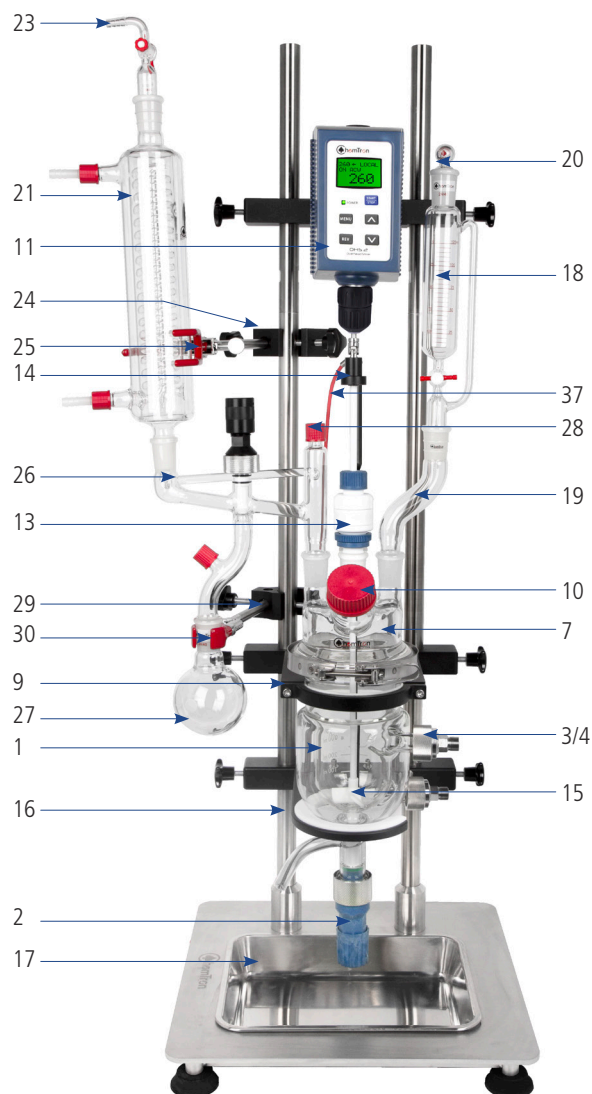


High Torque Overhead Stirrer OHS.4

Approx. Stand Dimensions (W x D x H): 440x 420x1200mm

Specification

Max. reaction volume recommendation	500mL
Total volume	850mL
Flange	DN100
Bore diameter of bottom valve	0-10mm
Reactor lid	CN:24/40, SN:24/40(3), 45° -GL45
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	suitable for atmospheric and vacuum reaction
Jacket pressure	up to 0.5bar
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN15
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation If high-speed mixing applications are required, please consult your Wiggins
Diameter/length of stirring Rod	Ø8mm / 500mm
Blade diameter	40mm(4 blade angled type stir paddle)
Length of condenser	300mm
Volume of collection flask	250mL
Volume of liquid funnel	125mL
Distance between discharge and liquid plate height	130
Weight	28.9kg



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part1 Reaction Vessel				
1	CRS-0839-48	500mL Jacketed reaction vessel	500mL Flask, Cylindrical, Jacketed, 100mm Flange, Without Drain Valve, DN15 inlet and outlet of jacket	1
2	CRS-4153B-S	Bottom outlet valve	Bottom outlet valve type "J", 10mm, approx. 95mm	1
3	4200	Metal adapter with clamp	Metal adapter for thermostat hoses (DN15 to M16x1)	2
4	4201	Silicone sealant DN15	Silicone sealant DN15, -60°C to +200°C	2
5*	JRS-11081-21	Clamp Holder	Clamp Holder, Pilot Plant (Condenser Clamp, Flask Clamp)	2
6*	JRS-11065-16	3 Prong	3 Prong, Extended, Large	2
Part2 Reactor lid				
7	JRS-2904-01	Reactor lid	Lid, 100mm, 5 Neck, 24/40 CN, (3) 24/40 SN, (1) GL45 SN	1
8	JRS-1701-02	O-Ring	100mm PFA Encapsulated O-Ring	1
9	JRS-2401-02	Clamp	Clamp, Flange, 100mm	1
10	JRS-2301-01	Cap	Cap, Solid, GL45	1
Part3 Stirring unit				
11	CR3090-02	OHS.2 Stirrer	Digital Overhead Stirrer OHS.2	1
12	CR3091-02	OHS.4 Stirrer	Digital Overhead Stirrer OHS.4	1
13	5-104-7	Stirring bearing	8mm PTFE/PEEK Stirring bearing	1
14	JRS-8126-05N	Shaft Coupling	8mm Shaft Coupling	1
15	5-250-8-2	Screw Propeller	Screw Propeller, 4-Bladed (PTFE Coated), Shaft Ø8mm, L=500mm, Rotor Ø40mm	1
Part4 Reactor stand				
16	CRS-2602-02	Reactor stand	Smart Supporting Structure	1
17	CR-13221	Spill tray	For bench top reactor supporting structure, Stainless steel	1
Part5 Liquid funnel				
18	JRS-2803-02	Funnel	Funnel, Addition, 125mL, 0-4mm Metering Valve, 24/40 Joints	1
19	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
20	JRS-2103-01	Glass stopper	Glass stopper, 24/40	1
Part6 Condenser				
21	JRS-2506-09	Condenser	Jacketed, 300mm, 24/40	1
22	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
23	JRS-2012-02	Vacuum Adapter	Vacuum Adapter, 24/40	1
24	JRS-11081-21	Clamp Holder	Clamp Holder, Pilot Plant (Condenser Clamp, Flask Clamp)	1
25	JRS-11065-16	3 Prong	3 Prong, Extended, Large	1
Part7 Distillation unit				
26	JRS-2619-01	Distillation Reflux / Divider Head	Distillation Reflux / Divider Head Claisen Style	1
27	JRS-6887-224	250mL Flask	250mL FLASK, Single Neck	1
28	JRS-2302-05	Cap	Cap, Solid, GL18	1
29	JRS-11081-21	Clamp Holder	Clamp Holder, Pilot Plant (Condenser Clamp, Flask Clamp)	1
30	JRS-11073-20	2 Prong	2 Prong, Extended, Large	1
Part8 Adapters and clamps				
31	JRS-5028-31	Temperature Sensor Adapter	Temperature Sensor Adapter, O.D.=6.5mm, 24/40	1
32	JRS-7643-08	PTFE Sleeves	PTFE Sleeves, 24/40	1
33	JRS-7598-24	Keck Clip	Keck Clip, 24/40	1
Part9 Multi channel regulating valve				
34	JRS-12194-02	Multi channel regulating valve	Multi channel regulating valve outlet	1
35	JRS-12194-06	Multi channel regulating valve	Multi channel regulating valve inlet	1
36	8930220	Metal tubing	0.5 m Metal tubing, insulated, 2 fittings M16x1 female (-50...+200 °C)	2
Optional				
37	8981015	Temperature Sensor	300x6mm, SS/PTFE, 3m cable	1

*Not included in JRS-1501-021M and JRS-1501-022M

Bench Top Reactors

JRS-1501-04 Bench top reactor, all-in-one, jacketed, 1000ml

NEW Bench top reactors are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve. The unique design of the Bench top reactors support stand and clamping system allows for quick and easy installation/removal of glassware and fits into most fume hood. System is supplied complete with the components listed below and numbered on the image below.

1000ml complete bench top reactors

Part number	Description
JRS-1501-041	Complete with Glassware & Stand, and Digital Overhead Stirrer OHS.2 (Part 1-Part 8)
JRS-1501-042	Complete with Glassware, Stand, and High Torque Overhead Stirrer OHS.4 (Part 1-Part 8)
JRS-1501-041M	Complete with Glassware & Stand, Multi channel regulating valve and Digital Overhead Stirrer OHS.2 (Part 1-Part 9)
JRS-1501-042M	Complete with Glassware, Stand, Multi channel regulating valve and High Torque Overhead Stirrer OHS.4 (Part 1-Part 9)

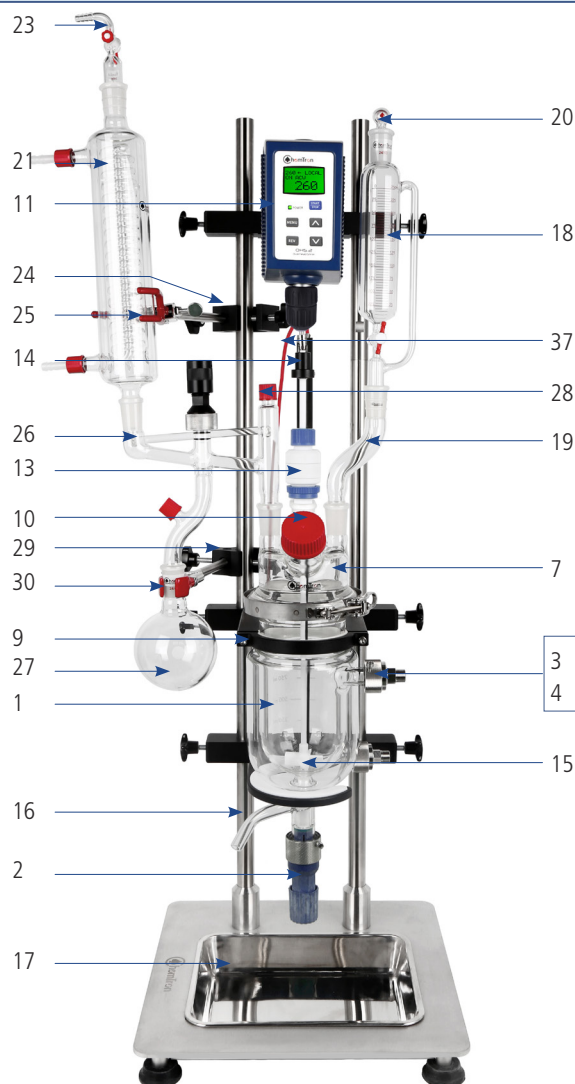


High Torque Overhead Stirrer OHS.4

Specification

Max. reaction volume recommendation	1050mL
Total volume	1450mL
Flange	DN100
Bore diameter of bottom valve	0-10mm
Reactor lid	CN:24/40, SN:24/40(3), 45° -GL45
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	suitable for atmospheric and vacuum reaction
Jacket pressure	up to 0.5bar
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN15
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation If high-speed mixing applications are required, please consult your Wiggins
Diameter/length of stirring Rod	Ø10mm / 550mm
Blade diameter	70mm (4 blade angled type stir paddle)
Length of condenser	300mm
Volume of collection flask	500mL
Volume of liquid funnel	250mL
Distance between discharge and liquid plate height	140
Weight	29.2kg

Approx. Stand Dimensions (W x D x H): 440x 420x1200mm



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part1 Reaction Vessel				
1	CRS-0841-10	1000mL Jacketed reaction vessel	1000mL Flask, Cylindrical, Jacketed, 100mm Flange, Without Drain Valve, DN15 inlet and outlet of jacket	1
2	CRS-4153B-S	Bottom outlet valve	Bottom outlet valve type "J", 10mm, approx. 95mm	1
3	4200	Metal adapter with clamp	Metal adapter for thermostat hoses (DN15 to M16x1)	2
4	4201	Silicone sealant DN15	Silicone sealant DN15, -60°C to +200°C	2
5*	JRS-11081-21	Clamp Holder	Clamp Holder, Pilot Plant (Condenser Clamp, Flask Clamp)	2
6*	JRS-11065-16	3 Prong	3 Prong, Extended, Large	2
Part2 Reactor lid				
7	JRS-2904-01	Reactor Lid	Lid, 100mm, 5 Neck, 24/40 CN, (3) 24/40 SN, (1) GL45 SN	1
8	JRS-1701-02	O-Ring	100mm PFA Encapsulated O-Ring	1
9	JRS-2401-02	Clamp	Clamp, Flange, 100mm	1
10	JRS-2301-01	Cap	Cap, Solid, GL45	1
Part3 Stirring unit				
11	CR3090-02	OHS.2 Stirrer	Digital Overhead Stirrer OHS.2	1
12	CR3091-02	OHS.4 Stirrer	Digital Overhead Stirrer OHS.4	1
13	5-105-7	Stirring bearing	10mm PTFE/PEEK Stirring bearing	1
14	JRS-8126-06N	Shaft Coupling	10mm Shaft Coupling	1
15	5-255-10-2	Screw Propeller	Screw Propeller, 4-Bladed (PTFE Coated), Shaft Ø10mm, L=550mm, Rotor Ø70mm	1
Part4 Reactor stand				
16	CRS-2602-02	Reactor stand	Smart Supporting Structure	1
17	CR-13221	Spill tray	For bench top reactor supporting structure, Stainless steel	1
Part5 Liquid funnel				
18	JRS-2803-03	Funnel	Funnel, Addition, 250mL, 0-4mm Metering Valve, 24/40 Joints	1
19	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
20	JRS-2103-01	Glass stopper	Glass stopper, 24/40	1
Part6 Condenser				
21	JRS-2506-09	Condenser	Jacketed, 300mm, 24/40	1
22	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
23	JRS-2012-02	Vacuum Adapter	Vacuum Adapter, 24/40	1
24	JRS-11081-21	Clamp Holder	Clamp Holder, Pilot Plant (Condenser Clamp, Flask Clamp)	1
25	JRS-11065-16	3 Prong	3 Prong, Extended, Large	1
Part7 Distillation unit				
26	JRS-2619-01	Distillation Reflux / Divider Head	Distillation Reflux / Divider Head Claisen Style	1
27	JRS-6887-226	500mL Flask	500mL FLASK, Single Neck	1
28	JRS-11081-21	Clamp Holder	Clamp Holder, Pilot Plant (Condenser Clamp, Flask Clamp)	1
29	JRS-11073-20	2 Prong	2 Prong, Extended, Large	1
30	JRS-2302-05	Cap	Cap, Solid, GL18	1
Part8 Adapters and clamps				
31	JRS-5028-31	Temperature Sensor Adapter	Temperature Sensor Adapter, O.D.=6.5mm, 24/40	1
32	JRS-7643-08	PTFE Sleeves	PTFE Sleeves, 24/40	1
33	JRS-7598-24	Keck Clip	Keck Clip, 24/40	1
Part9 Multi channel regulating valve				
34	JRS-12194-02	Multi channel regulating valve	Multi channel regulating valve outlet	1
35	JRS-12194-06	Multi channel regulating valve	Multi channel regulating valve inlet	1
36	8930220	Metal tubing	0.5 m Metal tubing, insulated, 2 fittings M16x1 female (-50...+200 °C)	2
Optional				
37	89810154	Temperature Sensor	400x6mm, SS/PTFE, 3m cable	1

*Not included in JRS-1501-021M and JRS-1501-022M

Bench Top Reactors

JRS-1501-05 Bench top reactor, all-in-one, jacketed, 2000ml

NEW Bench top reactors are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve. The unique design of the Bench top reactors support stand and clamping system allows for quick and easy installation/removal of glassware and fits into most fume hood. System is supplied complete with the components listed below and numbered on the image below.

2000ml complete bench top reactors

Part number	Description
JRS-1501-051	Complete with Glassware & Stand, and Digital Overhead Stirrer OHS.2 (Part 1-Part 8)
JRS-1501-052	Complete with Glassware, Stand, and High Torque Overhead Stirrer OHS.4 (Part 1-Part 8)
JRS-1501-051M	Complete with Glassware & Stand, Multi channel regulating valve and Digital Overhead Stirrer OHS.2 (Part 1-Part 9)
JRS-1501-052M	Complete with Glassware, Stand, Multi channel regulating valve and High Torque Overhead Stirrer OHS.4 (Part 1-Part 9)

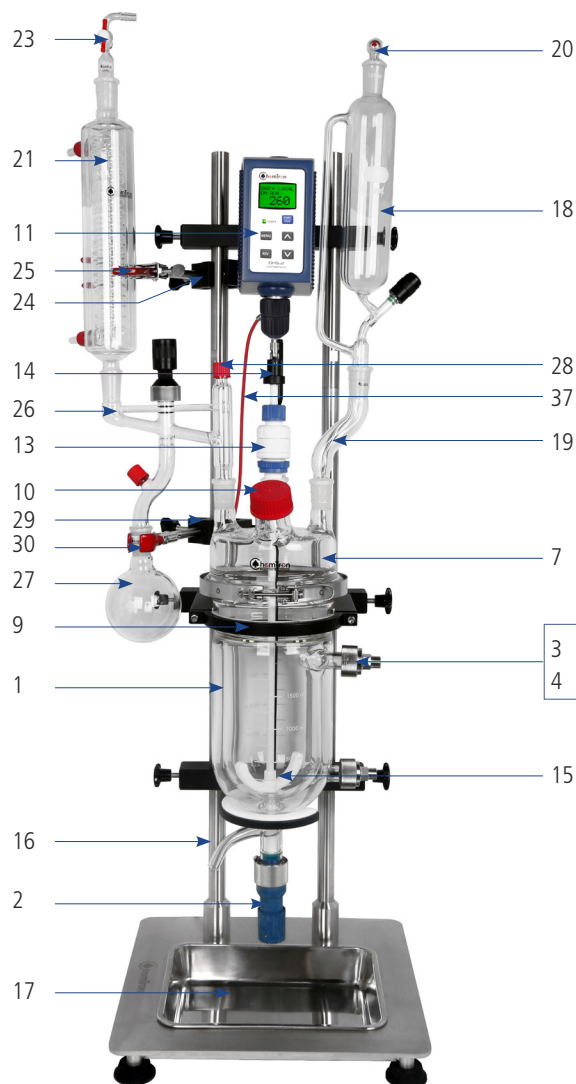


High Torque Overhead Stirrer OHS.4

Approx. Stand Dimensions (W x D x H): 470x 440x1330mm

Specification

Max. reaction volume recommendation	2350mL
Total volume	3000mL
Flange	DN150
Bore diameter of bottom valve	0-10mm
Reactor lid	CN:24/40, SN:24/40(3), 45° -GL45
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	suitable for atmospheric and vacuum reaction
Jacket pressure	up to 0.5bar
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN15
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation If high-speed mixing applications are required, please consult your Wiggins
Diameter/length of stirring Rod	Ø10mm / 550mm
Blade diameter	100mm (Anchor style stir paddle)
Length of condenser	300mm
Volume of collection flask	1000mL
Volume of liquid funnel	500mL
Distance between discharge and liquid plate height	140
Weight	33kg



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part1 Reaction Vessel				
1	CRS-0829-95	2000mL Jacketed reaction vessel	2000mL Flask, Cylindrical, Jacketed,150mm Flange,Without Drain Valve, DN15 inlet and outlet of jacket	1
2	CRS-4153B-L	Bottom outlet valve	Bottom outlet valve type "J", 10mm, approx.115mm	1
3	4200	Metal adapter with clamp	Metal adapter for thermostat hoses (DN15 to M16x1)	2
4	4201	Silicone sealant DN15	Silicone sealant DN15,-60°C to +200°C	2
5*	JRS-11081-21	Clamp Holder	Clamp Holder, Pilot Plant (Condenser Clamp, Flask Clamp)	2
6*	JRS-11065-16	3 Prong	3 Prong, Extended, Large	2
Part2 Reactor lid				
7	JRS-2904-03	Reactor Lid	Lid, 150mm, 5 Neck, 24/40 CN, (3) 24/40 SN, 45° Angled GL45 SN	1
8	JRS-1701-03	O-Ring	150mm PFA Encapsulated O-Ring	1
9	JRS-2401-03	Clamp	Clamp, Flange, 150mm	1
10	JRS-2301-01	Cap	Cap, Solid, GL45	1
Part3 Stirring unit				
11	CR3090-02	OHS.2 Stirrer	Digital Overhead Stirrer OHS.2	1
12	CR3091-02	OHS.4 Stirrer	Digital Overhead Stirrer OHS.4	1
13	5-105-7	Stirring bearing	10mm PTFE/PEEK Stirring bearing	1
14	JRS-8126-06N	Shaft Coupling	10mm Shaft Coupling	1
15	5-0355-10-2	Anchor Impeller	Anchor Impeller (PTFE Coated), Shaft Ø10mm, L=650mm, Rotor Ø100mm	1
Part4 Reactor stand				
16	CRS-2602-03	Reactor stand	Smart Supporting Structure	1
17	CR-13221	Spill tray	For bench top reactor supporting structure, Stainless steel	1
Part5 Liquid funnel				
18	JRS-2803-04	Funnel	Funnel, Addition, 500mL, 0-4mm Metering Valve, 24/40 Joints	1
19	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
20	JRS-2103-01	Glass stopper	Glass stopper,24/40	1
Part6 Condenser				
21	JRS-2506-09	Condenser	Jacketed, 300mm,24/40	1
22	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
23	JRS-2012-02	Vacuum Adapter	Vacuum Adapter, 24/40	1
24	JRS-11081-21	Clamp Holder	Clamp Holder, Pilot Plant (Condenser Clamp, Flask Clamp)	1
25	JRS-11065-16	3 Prong	3 Prong, Extended, Large	1
Part7 Distillation unit				
26	JRS-2619-01	Distillation Reflux / Divider Head	Distillation Reflux / Divider Head Claisen Style	1
27	JRS-6887-226	500mL Flask	500mL FLASK, Single Neck	1
28	JRS-2302-05	Cap	Cap, Solid, GL18	1
29	JRS-11081-21	Clamp Holder	Clamp Holder, Pilot Plant (Condenser Clamp, Flask Clamp)	1
30	JRS-11073-20	2 Prong	2 Prong, Extended, Large	1
Part8 Adapters and clamps				
31	JRS-5028-31	Temperature Sensor Adapter	Temperature Sensor Adapter, O.D.=6.5mm, 24/40	1
32	JRS-7643-08	PTFE Sleeves	PTFE Sleeves,24/40	1
33	JRS-7598-24	Keck Clip	Keck Clip, 24/40	1
Part9 Multi channel regulating valve				
34	JRS-12194-02	Multi channel regulating valve	Multi channel regulating valve outlet	1
35	JRS-12194-06	Multi channel regulating valve	Multi channel regulating valve inlet	1
36	8930220	Metal tubing	0.5 m Metal tubing, insulated, 2 fittings M16x1 female (-50...+200 °C)	2
Optional				
37	89810154	Temperature Sensor	400x6mm, SS/PTFE, 3m cable	1

*Not included in JRS-1501-021M and JRS-1501-022M

Bench Top Reactors

JRS-1501-06 Bench top reactor, all-in-one, jacketed, 500ml

NEW Bench top reactors are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve. The unique design of the Bench top reactors support stand and clamping system allows for quick and easy installation/removal of glassware and fits into most fume hood. System is supplied complete with the components listed below and numbered on the image below.

5000ml complete bench top reactors

Part number	Description
JRS-1501-061	Complete with Glassware & Stand, and Digital Overhead Stirrer OHS.2 (Part 1-Part 8)
JRS-1501-062	Complete with Glassware, Stand, and High Torque Overhead Stirrer OHS.4 (Part 1-Part 8)
JRS-1501-061M	Complete with Glassware & Stand, Multi channel regulating valve and Digital Overhead Stirrer OHS.2 (Part 1-Part 9)
JRS-1501-062M	Complete with Glassware, Stand, Multi channel regulating valve and High Torque Overhead Stirrer OHS.4 (Part 1-Part 9)

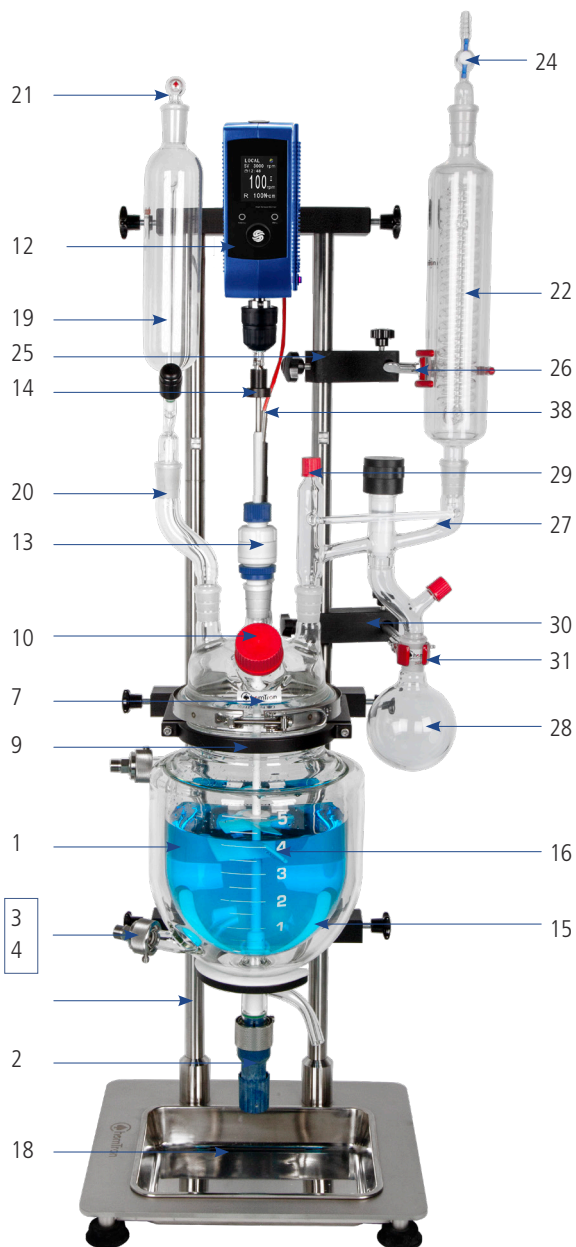
Approx. Stand Dimensions (W x D x H):
530x 440x1520mm



High Torque Overhead Stirrer OHS.2

Specification

Max. reaction volume recommendation	5500mL
Total volume	7000mL
Flange	DN150
Bore diameter of bottom valve	0-10mm
Reactor lid	CN:24/40, SN:24/40(3), 45° -GL45
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	suitable for atmospheric and vacuum reaction
Jacket pressure	up to 0.5bar
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN15
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation If high-speed mixing applications are required, please consult your Wiggins
Diameter/length of stirring Rod	Ø10mm / 650mm
Blade diameter	Low position: 140mm(Anchor Style Stir Paddle) High position: 70mm(4 blade angled type stir paddle)
Length of condenser	300mm
Volume of collection flask	2000mL
Volume of liquid funnel	1000mL
Distance between discharge and liquid plate height	150
Weight	37kg



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part1 Reaction Vessel				
1	CRS-0841-11	5000mL Jacketed reaction vessel	5000mL Flask, Cylindrical, Jacketed, 150mm Flange, Without Drain Valve, DN15 inlet and outlet of jacket	1
2	CRS-4153B-L	Bottom outlet valve	Bottom outlet valve type "J", 10mm, approx. 115mm	1
3	4200	Metal adapter with clamp	Metal adapter for thermostat hoses (DN15 to M16x1)	2
4	4201	Silicone sealant DN15	Silicone sealant DN15, -60°C to +200°C	2
5*	JRS-11081-21	Clamp Holder	Clamp Holder, Pilot Plant (Condenser Clamp, Flask Clamp)	2
6*	JRS-11065-16	3 Prong	3 Prong, Extended, Large	2
Part2 Reactor lid				
7	JRS-2904-03	Reactor Lid	Lid, 150mm, 5 Neck, 24/40 CN, (3) 24/40 SN, 45° Angled GL45 SN	1
8	JRS-1701-03	O-Ring	150mm PFA Encapsulated O-Ring	1
9	JRS-2401-03	Clamp	Clamp, Flange, 150mm	1
10	JRS-2301-01	Cap	Cap, Solid, GL45	1
Part3 Stirring unit				
11	CR3090-02	OHS.2 Stirrer	Digital Overhead Stirrer OHS.2	1
12	CR3091-02	OHS.4 Stirrer	Digital Overhead Stirrer OHS.4	1
13	5-105-7	Stirring bearing	10mm PTFE/PEEK Stirring bearing	1
14	JRS-8126-06N	Shaft Coupling	10mm Shaft Coupling	1
15	5-0365-10-2	Anchor Impeller	Anchor Impeller (PTFE Coated), Shaft Ø10mm, L=650mm, Rotor Ø140mm	1
16	5-610090	Adjustable Turbine	Adjustable Turbine, Shaft Ø10mm, 90mm	1
Part4 Reactor stand				
17	CRS-2602-03	Reactor stand	Smart Supporting Structure	1
18	CR-13221	Spill tray	For bench top reactor supporting structure, Stainless steel	1
Part5 Liquid funnel				
19	JRS-2803-05	Funnel	Funnel, Addition, 1000mL, 0-4mm Metering Valve, 24/40 Joints	1
20	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
21	JRS-2103-01	Glass stopper	Glass stopper, 24/40	1
Part6 Condenser				
22	JRS-2506-09	Condenser	Jacketed, 300mm, 24/40	1
23	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
24	JRS-2012-02	Vacuum Adapter	Vacuum Adapter, 24/40	1
25	JRS-11081-21	Clamp Holder	Clamp Holder, Pilot Plant (Condenser Clamp, Flask Clamp)	1
26	JRS-11065-16	3 Prong	3 Prong, Extended, Large	1
Part7 Distillation unit				
27	JRS-2619-01	Distillation Reflux / Divider Head	Distillation Reflux / Divider Head Claisen Style	1
28	JRS-6887-227	1000mL Flask	1000mL FLASK, Single Neck	1
29	JRS-2302-05	Cap	Cap, Solid, GL18	1
30	JRS-11081-21	Clamp Holder	Clamp Holder, Pilot Plant (Condenser Clamp, Flask Clamp)	1
31	JRS-11073-20	2 Prong	2 Prong, Extended, Large	1
Part8 Adapters and clamps				
32	JRS-5028-31	Temperature Sensor Adapter	Temperature Sensor Adapter, O.D.=6.5mm, 24/40	1
33	JRS-7643-08	PTFE Sleeves	PTFE Sleeves, 24/40	1
34	JRS-7598-24	Keck Clip	Keck Clip, 24/40	1
Part9 Multi channel regulating valve				
35	JRS-12194-02	Multi channel regulating valve	Multi channel regulating valve outlet	1
36	JRS-12194-06	Multi channel regulating valve	Multi channel regulating valve inlet	1
37	8930220	Metal tubing	0.5 m Metal tubing, insulated, 2 fittings M16x1 female (-50...+200 °C)	2
Optional				
38	89810154	Temperature Sensor	400x6mm, SS/PTFE, 3m cable	1
39	CRS-2602-13	Reactor stand, installed on the ground	Smart Supporting Structure	1

*Not included in JRS-1501-021M and JRS-1501-022M

EZChem Pilot Plant Reactor

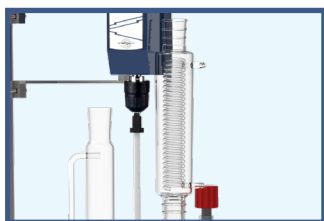
10L, 20L, 30L, 50L and 100L EZChem reactor. Designed for maximum diversity and ease of use, we have developed a simple base system building platform which allows any reactor system to be customized using catalog or custom designed parts. Each base system comes with the basic starting components required. Simply select the motor and accessories needed to complete the design. For customized components or application design, contact our technical department for further assistance.

1. Select the base system dependent on desired working volume.
2. Select the motor that best suits your application.
3. Select the components and accessories which best fit your application.



Reaction Lid

The standard Grinding opening on the cauldron cap is similar to Bench top series, It allows customer to scale up from lab to pilot scale



High Efficiency Condenser

Serpentine pipe and double jacket design ensure high condensation efficiency



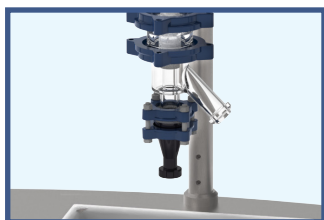
Switchable Distillation Head

The distillation head can be used between condensing reflux and distillation experiment, just adjust the valve to switch the working mode.



Stainless Steel Stand

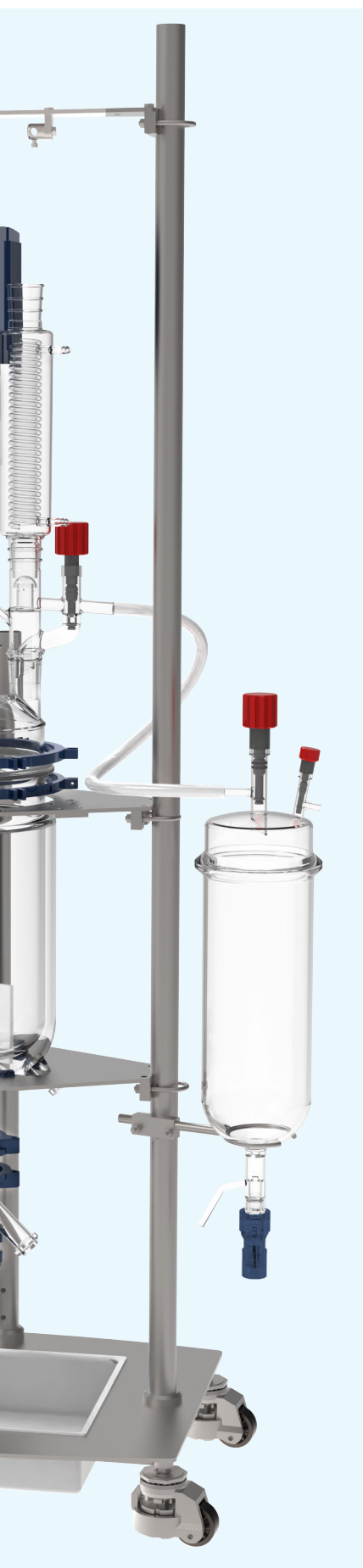
Unique design allows easy installation and removal of glassware, All parts are made of high quality stainless steel, corrosion resistant. Standard with removable spill tray. The stand can be moved when casters fall and more stable when they are lifted



Dead Volume Free Bottom Valve

The industrial valve is a dead volume free PTFE spindle valve with sloped outlet. The spindle shall be pressed in without turning. In the valve housing is an additional spring mounted in. So the spring pressure of the spindle to the valve seat can be increased spring- loaded and the spindle regulates itself. This guarantees a good tightness at large variations of temperature. The industrial valve is available with a 25 mm bore hole





Wide Application Range

The optimization of chemical reactions is enabled by having access to a broad and seamless range of reaction conditions: stirring and temperature control.



Jacketed Reaction Vessel

Volume from 10L to 100L are optional, two kinds of height-diameter ratio for 50L reaction vessel



Remote-controlled Stirrer

Strong stirring motor with low-position control unit, friendly design allows users to control more easily, two-stage stirring mode can be automatically switched



Universal Stirring Bearing

for use with standard taper ground glass joints can be used with PTFE, glass and metal shaft stirrers. Unique features of the design are a permanently loaded Composite PTFE/PEEK Seal and a Glass Ball-Bearing for rigidity and smoothness of operation.



Pressure Relief Manifold inlet/outlet

help protect the glass vessel from breakage due to an excessive pressure differential exerted by the thermal transfer fluid while the vessel is isolated or disconnected from the circulator. Available as a set, individual inlet or outlet, and sized with either a M16x1



Auto Reaction Software (Optional)

Stirring speed, temperature and other parameters can be remote control and data recording



EZChem Pilot Plant Reactor

10L Process reactor, cylindrical, jacketed

EZChem pilot plant reactor are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve and distillation unit. The unique design of the smart supporting structure and clamping system allows for quick and easy installation/removal of glassware. System is supplied complete with the components listed below and numbered on the image below.

1. Select the base system dependent on desired working volume.
2. Select the motor that best suits your application.
3. Select the components and accessories which best fit your application.

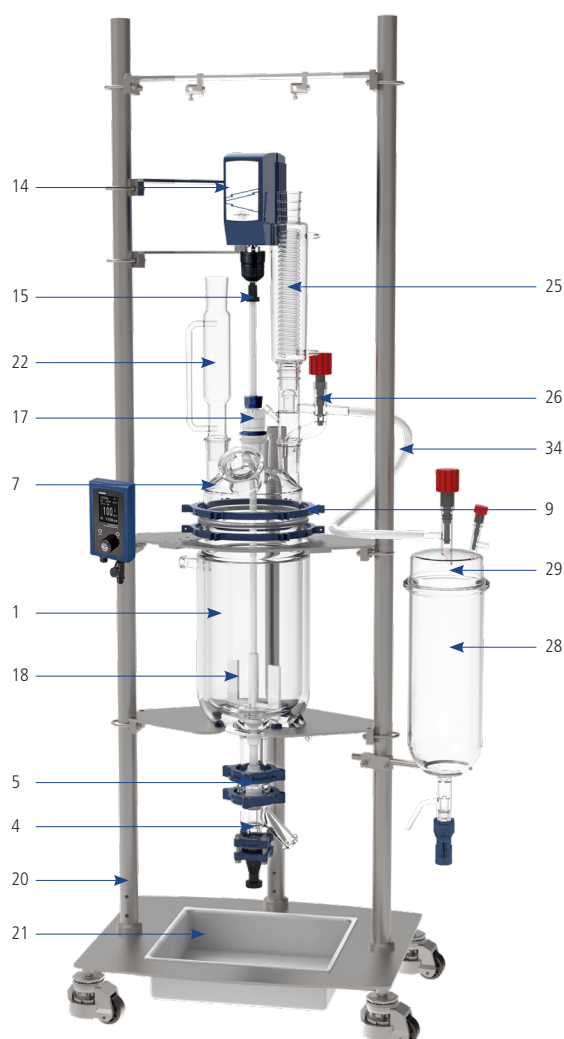
10L complete standard pilot reactor

Part Number	Description	Motor Type
JRS-1503-011	10L Process System	Complete with reaction system, Stand, High Torque Overhead Stirrer OHS.4DF
JRS-1503-011M	10L Process System	Complete with reaction system, Stand, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF
JRS-1503-012	10L Process System with distillation unit	Complete with reaction system, Stand, 5L Distillation unit, High Torque Overhead Stirrer OHS.4DF
JRS-1503-012M	10L Process System with distillation unit	Complete with reaction system, Stand, 5L Distillation unit, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF

Approx. Stand Dimensions:
720 W x 600D x 2080H (mm)

Specification

Reaction volume	10L
Flange of vessel	DN200
Bore diameter of bottom valve	0-25mm
Reactor lid	DN200, 1×45/40(CN), 3×45/40(SN), 1×DN60(SN-45°)
Total openings on the lid	5
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	Atmospheric pressure and vacuum
Jacket pressure	up to 0.5bar
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN15
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation, if high-speed mixing applications are required, please consult your Wiggins
Diameter/length of stirring Rod	Ø16mm / 1000mm
Blade	Anchor style stir paddle
Length of condenser	300mm
Volume of collection flask	5L
Volume of liquid funnel	2L
Temperature sensor	Ø6mm×600mm



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part1 Reaction vessel				
1	SQEG069269	10L Jacketed Vessel	Jacketed Vessel DN200, 10L / Discharge DN50	1
2	SQS0038985	Adapter	Adapter, DN15 to M16*1 male	2
3	GQQI007895	Flange	DN15 Flange with bolt/nut and insert	2
4	SQTK032037	Glass bottom valve	Glass bottom valve 0~25mm, DN50 with no dead volume	1
5	GQQI007879	Flange	DN50 Flange with bolt/nut and insert	1
6	VAJQ068914	Gasket	PTFE Gasket DN50	1
Part2 Reactor lid				
7	SQEG079136	DN200 Reactor Lid	COVER DN200, 6 Necks, 2xNS45/40 3x29/32,45° DN60	1
8	JRS-1701-04	O-Ring	200mm CAPFE O-Ring	1
9	JRS-4067-01	Flange Clamp	200mm Flange Clamp	1
10	JRS-2909-01	Cap	60mm PTFE Cap	1
11	JRS-1701-01	O-Ring	60mm PTFE Encapsulated O-Ring	1
12	JRS-2401-01	Clamp	Clamp, Flange, 60mm	1
13	JRS-9016-131	Temperature sensor adapter	Temperature sensor adapter,45/50 joint	1
Part3 Stirring unit				
14	CR3091-02F	Stirrer Motor with remote controller OHS.4DF	Remotely Controllable Ultra High Torque / High Speed Stirrers,Speed Range:12~1800rpm, Maximum Torque :565 N-cm,Output Power:150 W	1
15	JRS-8126-16	Shaft coupling	8.6mm shaft coupling	1
16	JRS-8127-16	Shaft Collar	16mm Shaft Collar	1
17	005-112-7	Universal stirrer guide	Universal stirrer guide, for 16mm shaft, 45/50 joints	1
18	005-03100-16-2	Anchor shaft	16mm PTFE coated stirring shaft, anchor,1000mm length	1
19	005-616100	Adajusted rotor	Adajusted rotor, 4-blade angle type,shaft ϕ16mm	1
Part4 Reactor stand				
20	JRS-3602-01	Lift Stand	Smart Supporting Structure AISI 316	1
21	CR13231	Spill tray	Spill tray, stainless steel, for DN200 reactor supporting sturcture	1
Part5 Liquid funnel				
22	JRS-2803-06	Funnel	Funnel Graduated, Pressure Equalizing, PTFE Stopcock, 2000ml	1
23	JRS-2002-17	Adapter	Adapter, bushing, 45/50 inner,24/40 outer	1
24	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
24	JRS-2103-01	Glass stopper	Glass stopper,24/40	1
Part6 Condenser				
25	JRS-2506-13	Condenser	Jacketed Coil 300mm Jacket Length,45/50	1
Distillation unit				
26	JRS-2620-02	Distillation Reflux / Divider Head	Distillation, Head, Reflux/Divider, 45/50	1
27	JRS-2017-02	Adapter	Adapter, inlet or outlet, 90°, 3/8" hose barb	1
28	JRS-2715-05	5L Receiving Vessel	5L Receiving Vessel	1
29	JRS-2910-10	Receiving lid	Receiving lid, 150mm	1
30	JRS-1701-03	O-Ring	150mm PTFE Encapsulated O-Ring	1
31	JRS-2401-03	Clamp	Clamp, Flange, 150mm	1
32	JRS-2036-03	Adapter	Adapter, compression, union, PTFE, 1/2"	1
33	JRS-2040-03	Adapter	Adapter, compression, union, PTFE,1/2" to 3/4"	1
34	JRS-3201-03	PFA tubing	PFA tubing,OD:1/2in, ID:3/8in, 1 meter	2
Optional				
35	JRS-2103-02	Stopper	Stopper, 45/50	2
36	8981013	External Pt100 sensor	External Pt100 sensor 600 x 6 mm dia., stainless steel, PTFE coated	1

EZChem Pilot Plant Reactor

20L Process reactor, cylindrical, jacketed

EZChem pilot plant reactor are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve and distillation unit. The unique design of the smart supporting structure and clamping system allows for quick and easy installation/removal of glassware. System is supplied complete with the components listed below and numbered on the image below.

1. Select the base system dependent on desired working volume.
2. Select the motor that best suits your application.
3. Select the components and accessories which best fit your application.

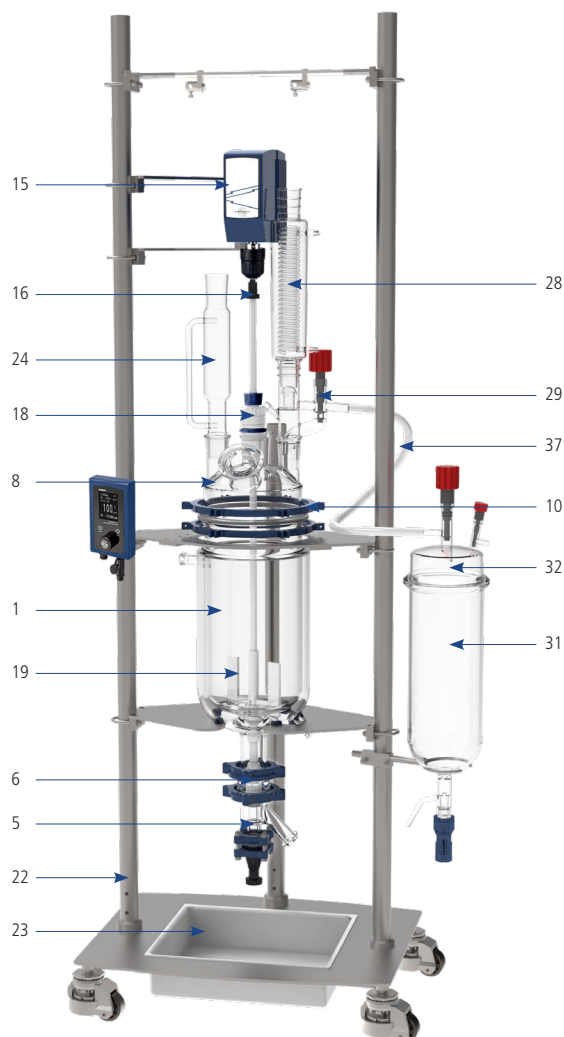
20L complete standard pilot reactor

Part Number	Description	Motor Type
JRS-1503-021	20L Process System	Complete with reaction system, Stand, High Torque Overhead Stirrer OHS.4DF
JRS-1503-021M	20L Process System	Complete with reaction system, Stand, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF
JRS-1503-022	20L Process System with distillation unit	Complete with reaction system, Stand, 5L Distillation unit, High Torque Overhead Stirrer OHS.4DF
JRS-1503-022M	20L Process System with distillation unit	Complete with reaction system, Stand, 5L Distillation unit, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF

Approx. Stand Dimensions:
800 W x 660D x 2380H (mm)

Specification

Reaction volume	20L
Flange of vessel	DN300
Bore diameter of bottom valve	0-25mm
Reactor lid	DN300, 1×45/40(CN), 4×45/40(SN), 2×29/32(SN), 1×DN100(SN-45°)
Total openings on the lid	8
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	Atmospheric pressure and vacuum
Jacket pressure	up to 0.5bar
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN25
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation, if high-speed mixing applications are required, please consult your Wiggins
Diameter/length of stirring Rod	Ø16mm / 1000mm
Blade	Anchor style stir paddle
Length of condenser	300mm
Volume of collection flask	5L
Volume of liquid funnel	2L
Temperature sensor	Ø6mm×600mm



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part1 Reaction vessel				
1	SQEG075940	20L Jacketed Vessel	Jacketed Vessel DN300, 20L / Discharge DN50	1
2	SQS0038987	Adapter	Adapter, DN25 to M24*1.5 male	2
3	SQI007877	Flange	DN25 Flange with bolt/nut and insert	2
4	VAJQ068912	Gasket	PTFE Gasket DN25	2
5	SQTK032037	Glass bottom valve	Glass bottom valve 0~25mm, DN50 with no dead volume	1
6	GQQI007879	Flange	DN50 Flange with bolt/nut and insert	1
7	VAJQ068914	Gasket	PTFE Gasket DN50	1
Part2 Reactor lid				
8	SQEG075961	DN300 Reactor Lid	Reactor Lid, DN 300 flange,Center Joint: 45/50,Side Joints: (4) 45/50, Side Joints: (2) 29/32, Addition Port 100 mm.	1
9	JRS-2405-02	Gasket	Gasket, DN300, PTFE	1
10	JRS-2402-01	Coupling Flange	Coupling Flange, DN300	1
11	JRS-2909-02	Cap	100mm PTFE Cap	1
12	JRS-1701-02	O-Ring	100mm PTFE Encapsulated O-Ring	1
13	JRS-2401-02	Clamp	Clamp, Flange, 100mm	1
14	JRS-9016-131	Temperature sensor adapter	Temperature sensor adapter,45/50 joint	1
Part3 Stirring unit				
15	CR3091-02F	Stirrer Motor with remote controller OHS.4DF	Remotely Controllable Ultra High Torque / High Speed Stirrers,Speed Range:12~1800rpm, Maximum Torque :565 N-cm,Output Power:150 W	1
16	JRS-8126-16	Shaft coupling	8.6mm shaft coupling	1
17	JRS-8127-16	Shaft Collar	16mm Shaft Collar	1
18	005-112-7	Universal stirrer guide	Universal stirrer guide, for 16mm shaft, 45/50 joints	1
19	005-03100-16-2	Anchor shaft	16mm PTFE coated stirring shaft, anchor,1000mm length	1
20	005-616100	Adajusted rotor	Adajusted rotor, 4-blade angle type,shaft ϕ 16mm	1
Part4 Reactor stand				
22	JRS-3602-02	Lift Stand	Smart Supporting Structure AISI 316	1
23	CR13232	Spill tray	Spill tray, stainless steel, for DN200 reactor supporting sturcture	1
Part5 Liquid funnel				
24	JRS-2803-06	Funnel	Funnel Graduated, Pressure Equalizing, PTFE Stopcock, 2000ml	1
25	JRS-2002-17	Adapter	Adapter, bushing, 45/50 inner,24/40 outer	1
26	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
27	JRS-2103-01	Glass stopper	Glass stopper,24/40	1
Part6 Condenser				
28	JRS-2506-13	Condenser	Jacketed Coil 300mm Jacket Length,45/50	1
Distillation unit				
29	JRS-2620-02	Distillation Reflux / Divider Head	Distillation, Head, Reflux/Divider, 45/50	1
30	JRS-2017-02	Adapter	Adapter, inlet or outlet, 90°, 3/8" hose barb	1
31	JRS-2715-05	5L Receiving Vessel	5L Receiving Vessel	1
32	JRS-2910-10	Receiving lid	Receiving lid, 150mm	1
33	JRS-1701-03	O-Ring	150mm PTFE Encapsulated O-Ring	1
34	JRS-2401-03	Clamp	Clamp, Flange, 150mm	1
35	JRS-2036-03	Adapter	Adapter, compression, union, PTFE, 1/2"	1
36	JRS-2040-03	Adapter	Adapter, compression, union, PTFE,1/2" to 3/4"	1
37	JRS-3201-03	PFA tubing	PFA tubing,OD:1/2in, ID:3/8in, 1 meter	2
Optional				
38	JRS-2103-02	Stopper	Stopper, 45/50	2
39	JRS-8250-14	Stopper	Stopper, 29/42	2
40	8981013	External Pt100 sensor	External Pt100 sensor 600 x 6 mm dia., stainless steel, PTFE coated	1

EZChem Pilot Plant Reactor

30L Process reactor, cylindrical, jacketed

EZChem pilot plant reactor are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve and distillation unit. The unique design of the smart supporting structure and clamping system allows for quick and easy installation/removal of glassware. System is supplied complete with the components listed below and numbered on the image below.

1. Select the base system dependent on desired working volume.
2. Select the motor that best suits your application.
3. Select the components and accessories which best fit your application.

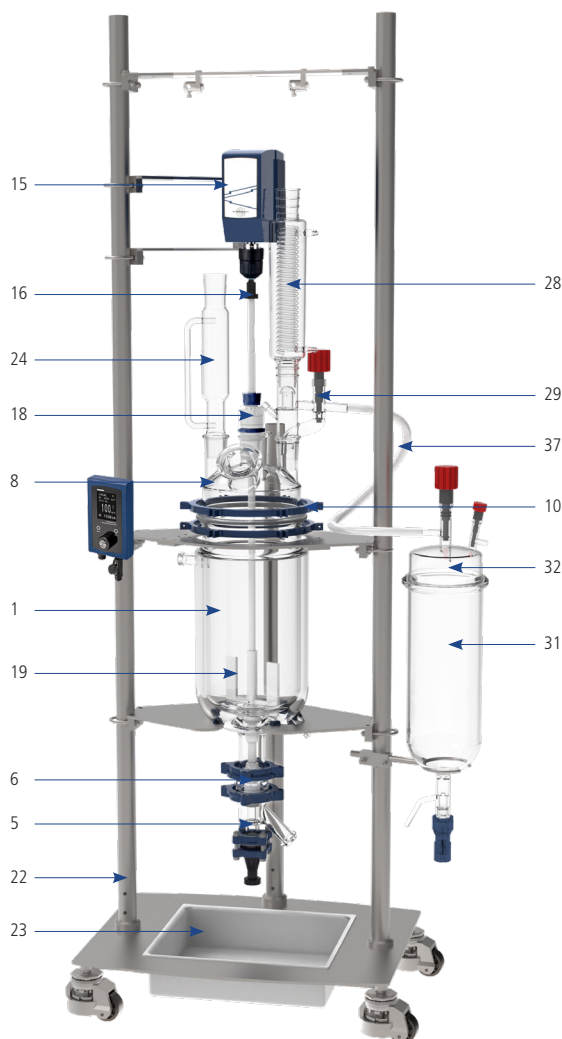
30L complete standard pilot reactor

Part Number	Description	Motor Type
JRS-1503-031	30L Process System	Complete with reaction system, Stand, High Torque Overhead Stirrer OHS.4DF
JRS-1503-031M	30L Process System	Complete with reaction system, Stand, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF
JRS-1503-032	30L Process System with distillation unit	Complete with reaction system, Stand, 5L Distillation unit, High Torque Overhead Stirrer OHS.4DF
JRS-1503-032M	30L Process System with distillation unit	Complete with reaction system, Stand, 5L Distillation unit, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF

Approx. Stand Dimensions:
800 W x 660D x 2650H (mm)

Specification

Reaction volume	30L
Flange of vessel	DN300
Bore diameter of bottom valve	0-25mm
Reactor lid	DN300, 1×45/40(CN), 4×45/40(SN), 2×29/32(SN), 1×DN100(SN-45°)
Total openings on the lid	8
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	Atmospheric pressure and vacuum
Jacket pressure	up to 0.5bar
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN25
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation, if high-speed mixing applications are required, please consult your Wiggins
Diameter/length of stirring Rod	Ø16mm / 1000mm
Blade	Anchor style stir paddle
Length of condenser	300mm
Volume of collection flask	5L
Volume of liquid funnel	2L
Temperature sensor	Ø6mm×900mm



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part1 Reaction vessel				
1	SQEG066063	30L Jacketed Vessel	Jacketed Vessel DN300, 30L / Discharge DN50	1
2	SQS0038987	Adapter	Adapter, DN25 to M24*1.5 male	2
3	SQI007877	Flange	DN25 Flange with bolt/nut and insert	2
4	VAJQ068912	Gasket	PTFE Gasket DN25	2
5	SQTK032037	Glass bottom valve	Glass bottom valve 0~25mm, DN50 with no dead volume	1
6	GQQI007879	Flange	DN50 Flange with bolt/nut and insert	1
7	VAJQ068914	Gasket	PTFE Gasket DN50	1
Part2 Reactor lid				
8	SQEG075961	DN300 Reactor Lid	Reactor Lid, DN 300 flange,Center Joint: 45/50,Side Joints: (4) 45/50, Side Joints: (2) 29/32, Addition Port 100 mm.	1
9	JRS-2405-02	Gasket	Gasket, DN300, PTFE	1
10	JRS-2402-01	Coupling Flange	Coupling Flange, DN300	1
11	JRS-2909-02	Cap	100mm PTFE Cap	1
12	JRS-1701-02	O-Ring	100mm PTFE Encapsulated O-Ring	1
13	JRS-2401-02	Clamp	Clamp, Flange, 100mm	1
14	JRS-9016-131	Temperature sensor adapter	Temperature sensor adapter,45/50 joint	1
Part3 Stirring unit				
15	CR3091-02F	Stirrer Motor with remote controller OHS.4DF	Remotely Controllable Ultra High Torque / High Speed Stirrers,Speed Range:12~1800rpm, Maximum Torque :565 N-cm,Output Power:150 W	1
16	JRS-8126-28	Shaft coupling	28mm Stir Shaft Swivel Coupling, 3/8" Stir Motor Shaft	1
17	JRS-8127-28	Shaft Collar	28mm Shaft Collar	1
18	JRS-8067-105	Ace-Thred Bearing	28mm PTFE Ace-Thred Bearing	1
19	JRS-8080-14	Glass Stirring Shaft	28mm Glass Stirring Shaft, 1140mm length	1
20	JRS-8091-36	Anchor Style Agitator	Shaft Size,28mm; Blade Length,178mm	1
21	JRS-8093-35	Agitator	Shaft Size,28mm; Blade Length,150mm; Blade Angle,45	1
Part4 Reactor stand				
22	JRS-3602-02	Lift Stand	Smart Supporting Structure AISI 316	1
23	CR13232	Spill tray	Spill tray, stainless steel, for DN200 reactor supporting sturcture	1
Part5 Liquid funnel				
24	JRS-7297-45	Funnel	Funnel Graduated, Pressure Equalizing, PTFE Stopcock, 5000ml,45/50	1
25	JRS-2002-17	Adapter	Adapter, bushing, 45/50 inner,24/40 outer	1
26	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
27	JRS-2103-01	Glass stopper	Glass stopper,24/40	1
Part6 Condenser				
28	JRS-2506-13	Condenser	Jacketed Coil 300mm Jacket Length,45/50	1
Distillation unit				
29	JRS-2620-02	Distillation Reflux / Divider Head	Distillation, Head, Reflux/Divider, 45/50	1
30	JRS-2017-02	Adapter	Adapter, inlet or outlet, 90°, 3/8" hose barb	1
31	JRS-2715-10	10L Receiving Vessel	10L Receiving Vessel	1
32	JRS-2910-10	Receiving lid	Receiving lid, 150mm	1
33	JRS-1701-03	O-Ring	150mm PTFE Encapsulated O-Ring	1
34	JRS-2401-03	Clamp	Clamp, Flange, 150mm	1
35	JRS-2036-03	Adapter	Adapter, compression, union, PTFE, 1/2"	1
36	JRS-2040-03	Adapter	Adapter, compression, union, PTFE,1/2" to 3/4"	1
37	JRS-3201-03	PFA tubing	PFA tubing,OD:1/2in, ID:3/8in, 1 meter	2
Optional				
38	JRS-2103-02	Stopper	Stopper, 45/50	2
39	JRS-8250-14	Stopper	Stopper, 29/42	2
40	8981013	External Pt100 sensor	External Pt100 sensor 600 x 6 mm dia., stainless steel, PTFE coated	1

EZChem Pilot Plant Reactor

50L Process reactor, cylindrical, jacketed

EZChem pilot plant reactor are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve and distillation unit. The unique design of the smart supporting structure and clamping system allows for quick and easy installation/removal of glassware. System is supplied complete with the components listed below and numbered on the image below.

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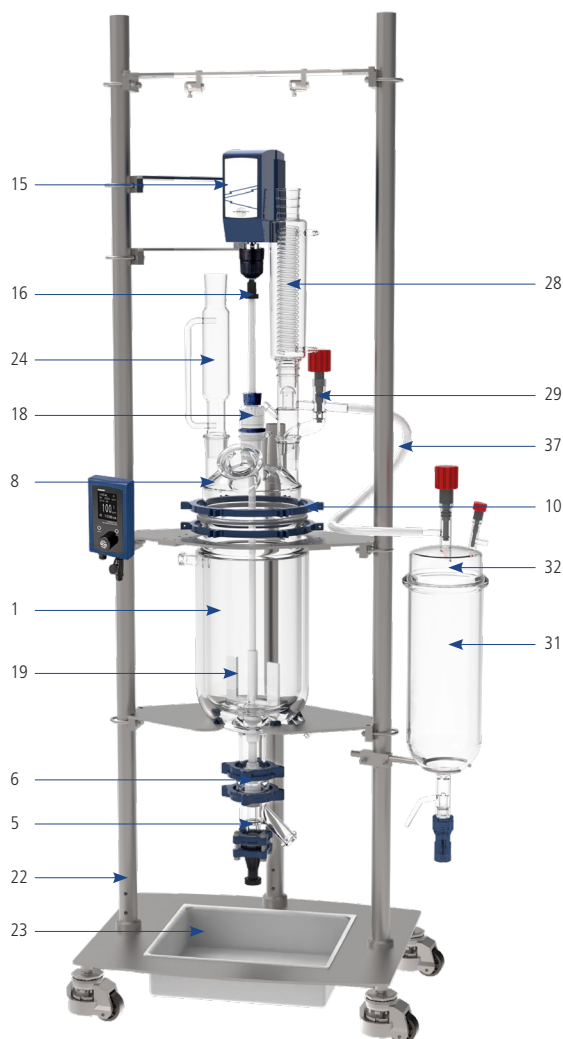
50L complete standard pilot reactor

Part Number	Description	Motor Type
JRS-1503-041	50L Process System	Complete with reaction system, Stand, High Torque Overhead Stirrer OHS.4DF
JRS-1503-041M	50L Process System	Complete with reaction system, Stand, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF
JRS-1503-042	50L Process System with distillation unit	Complete with reaction system, Stand, 5L Distillation unit, High Torque Overhead Stirrer OHS.4DF
JRS-1503-042M	50L Process System with distillation unit	Complete with reaction system, Stand, 5L Distillation unit, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF

Approx. Stand Dimensions:
800 W x 660D x 2650H (mm)

Specification

Reaction volume	50L
Flange of vessel	DN300
Bore diameter of bottom valve	0-25mm
Reactor lid	DN300, 1×45/40(CN), 4×45/40(SN), 2×29/32(SN), 1×DN100(SN-45°)
Total openings on the lid	8
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	Atmospheric pressure and vacuum
Jacket pressure	up to 0.5bar
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN25
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation, if high-speed mixing applications are required, please consult your Wiggins
Diameter/length of stirring Rod	Ø28mm / 1600mm
Blade	Anchor style stir paddle
Length of condenser	400mm
Volume of collection flask	10L
Volume of liquid funnel	5L
Temperature sensor	Ø6mm×1200mm



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part1 Reaction vessel				
1	SQEG062749	50L Jacketed Vessel	Jacketed Vessel DN300, 50L / Discharge DN50	1
2	SQS0038987	Adapter	Adapter, DN25 to M24*1.5 male	2
3	SQI007877	Flange	DN25 Flange with bolt/nut and insert	2
4	VAJQ068912	Gasket	PTFE Gasket DN25	2
5	SQTK032037	Glass bottom valve	Glass bottom valve 0~25mm, DN50 with no dead volume	1
6	GQQI007879	Flange	DN50 Flange with bolt/nut and insert	1
7	VAJQ068914	Gasket	PTFE Gasket DN50	1
Part2 Reactor lid				
8	SQEG075961	DN300 Reactor Lid	Reactor Lid, DN 300 flange,Center Joint: 45/50,Side Joints: (4) 45/50, Side Joints: (2) 29/32, Addition Port 100 mm.	1
9	JRS-2405-02	Gasket	Gasket, DN300, PTFE	1
10	JRS-2402-01	Coupling Flange	Coupling Flange, DN300	1
11	JRS-2909-02	Cap	100mm PTFE Cap	1
12	JRS-1701-02	O-Ring	100mm PTFE Encapsulated O-Ring	1
13	JRS-2401-02	Clamp	Clamp, Flange, 100mm	1
14	JRS-9016-131	Temperature sensor adapter	Temperature sensor adapter,45/50 joint	1
Part3 Stirring unit				
15	CR3091-02F	Stirrer Motor with remote controller OHS.4DF	Remotely Controllable Ultra High Torque / High Speed Stirrers,Speed Range:12~1800rpm, Maximum Torque :565 N-cm,Output Power:150 W	1
16	JRS-8126-28	Shaft coupling	28mm Stir Shaft Swivel Coupling, 3/8" Stir Motor Shaft	1
17	JRS-8127-28	Shaft Collar	28mm Shaft Collar	1
18	JRS-8067-105	Ace-Thred Bearing	28mm PTFE Ace-Thred Bearing	1
19	JRS-8080-24	Glass Stirring Shaft	28mm Glass Stirring Shaft, 1470mm Length	1
20	JRS-8091-36	Anchor Style Agitator	Shaft Size,28mm; Blade Length,178mm	1
21	JRS-8093-35	Agitator	Shaft Size,28mm; Blade Length,150mm; Blade Angle,45	1
Part4 Reactor stand				
22	JRS-3602-03	Universal Support Stand	Smart Supporting Structure AISI 316	1
23	CR13232	Spill tray	Spill tray, stainless steel, for DN300 reactor supporting sturcture	1
Part5 Liquid funnel				
24	JRS-7297-45	Funnel	Funnel Graduated, Pressure Equalizing, PTFE Stopcock, 5000ml,45/50	1
25	JRS-2002-17	Adapter	Adapter, bushing, 45/50 inner,24/40 outer	1
26	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
27	JRS-2103-01	Glass stopper	Glass stopper,24/40	1
Part6 Condenser				
28	JRS-2506-14	Condenser	Condenser, Jacketed Coil 400mm Jacket Length,45/50 With detachable hose barbs	1
Distillation unit				
29	JRS-2620-02	Distillation Reflux / Divider Head	Distillation, Head, Reflux/Divider, 45/50	1
30	JRS-2017-02	Adapter	Adapter, inlet or outlet, 90°, 3/8" hose barb	1
31	TRGN 7000-20	20L Receiving Vessel	20L Receiving Vessel,200mm,0-10mm Valve	1
32	JRS-6530-40	Receiving lid	Receiving lid, 200mm,(3) 45/50	1
33	JRS-1701-04	O-Ring	CAPFE O-ing ,200mm	1
34	JRS-2401-04	Quick-release Clamp	200mm Quick-release Clamp	1
35	JRS-2036-03	Adapter	Adapter, compression, union, PTFE, 1/2"	1
36	JRS-2040-03	Adapter	Adapter, compression, union, PTFE,1/2" to 3/4"	1
37	JRS-3201-03	PFA tubing	PFA tubing,OD:1/2in, ID:3/8in, 1 meter	2
Optional				
38	JRS-2103-02	Stopper	Stopper, 45/50	2
39	JRS-8250-14	Stopper	Stopper, 29/42	2
40	8981016	External Pt100 sensor	External Pt100 sensor 900 x 6 mm dia., stainless steel, PTFE coated	1

EZChem Pilot Plant Reactor

50L Process reactor, cylindrical, jacketed

EZChem pilot plant reactor are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve and distillation unit. The unique design of the smart supporting structure and clamping system allows for quick and easy installation/removal of glassware. System is supplied complete with the components listed below and numbered on the image below.

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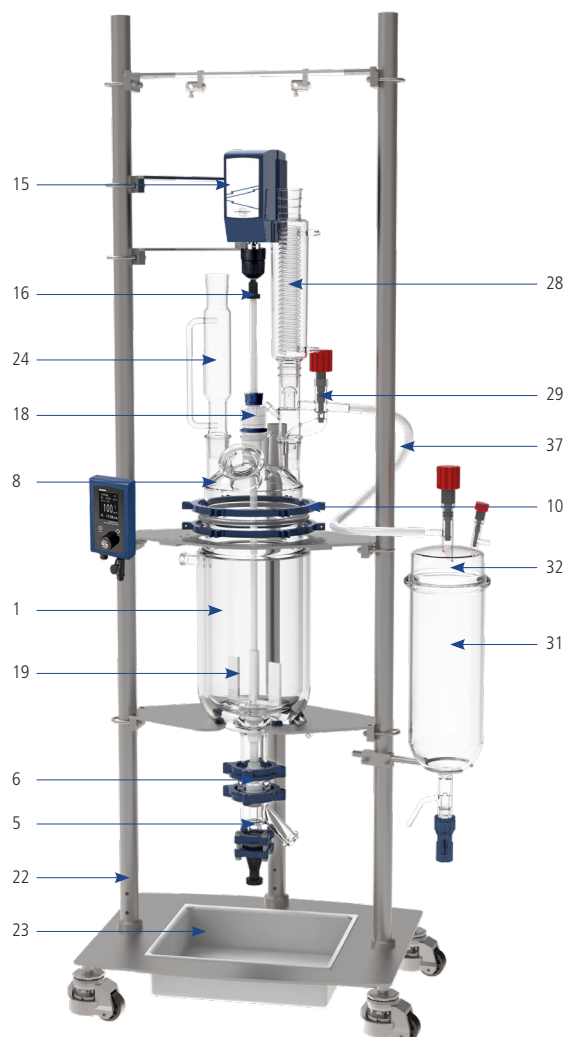
50L complete standard pilot reactor

Part Number	Description	Motor Type
JRS-1503-051	50L Process System	Complete with reaction system, Stand, High Torque Overhead Stirrer OHS.4DF
JRS-1503-051M	50L Process System	Complete with reaction system, Stand, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF
JRS-1503-052	50L Process System with distillation unit	Complete with reaction system, Stand, 5L Distillation unit, High Torque Overhead Stirrer OHS.4DF
JRS-1503-052M	50L Process System with distillation unit	Complete with reaction system, Stand, 5L Distillation unit, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF

Approx. Stand Dimensions:
890 W x 716D x 2650H (mm)

Specification

Reaction volume	50L
Flange of vessel	DN400
Bore diameter of bottom valve	0-25mm
Reactor lid	DN400, 1×45/40(CN), 4×45/40(SN), 2×29/32(SN), 1×DN100(SN-45°)
Total openings on the lid	8
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	Atmospheric pressure and vacuum
Jacket pressure	up to 0.5bar
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN25
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation, if high-speed mixing applications are required, please consult your Wiggins
Diameter/length of stirring Rod	Ø28mm / 1320mm
Blade	Anchor style stir paddle
Length of condenser	400mm
Volume of collection flask	10L
Volume of liquid funnel	5L
Temperature sensor	Ø6mm×900mm



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part1 Reaction vessel				
1	SQEG075094	50L Jacketed Vessel	Jacketed Vessel DN400, 50L / Discharge DN50	1
2	SQS0038987	Adapter	Adapter, DN25 to M24*1.5 male	2
3	SQI007877	Flange	DN25 Flange with bolt/nut and insert	2
4	VAJQ068912	Gasket	PTFE Gasket DN25	2
5	SQTK032037	Glass bottom valve	Glass bottom valve 0~25mm, DN50 with no dead volume	1
6	GQQI007879	Flange	DN50 Flange with bolt/nut and insert	1
7	VAJQ068914	Gasket	PTFE Gasket DN50	1
Part2 Reactor lid				
8	SQEG079137	DN400 Reactor Lid	Reactor Lid, DN 400 flange,Center Joint: 45/50,Side Joints: (4) 45/50, Side Joints: (2) 29/32, Addition Port 100 mm	1
9	JRS-6525-53	Gasket	Gasket, DN400, PTFE	1
10	JRS-6525-33	Coupling Flange	Coupling Flange, DN400	1
11	JRS-2909-02	Cap	100mm PTFE Cap	1
12	JRS-1701-02	O-Ring	100mm PTFE Encapsulated O-Ring	1
13	JRS-2401-02	Clamp	Clamp, Flange, 100mm	1
14	JRS-9016-131	Temperature sensor adapter	Temperature sensor adapter,45/50 joint	1
Part3 Stirring unit				
15	CR3091-02F	Stirrer Motor with remote controller OHS.4DF	Remotely Controllable Ultra High Torque / High Speed Stirrers,Speed Range:12~1800rpm, Maximum Torque :565 N-cm,Output Power:150 W	1
16	JRS-8126-28	Shaft coupling	28mm Stir Shaft Swivel Coupling, 3/8" Stir Motor Shaft	1
17	JRS-8127-28	Shaft Collar	28mm Shaft Collar	1
18	JRS-8067-105	Ace-Thred Bearing	28mm PTFE Ace-Thred Bearing	1
19	JRS-8080-24	Glass Stirring Shaft	28mm Glass Stirring Shaft, 1470mm Length	1
20	JRS-8091-36	Anchor Style Agitator	Shaft Size,28mm; Blade Length,178mm	1
21	JRS-8093-35	Agitator	Shaft Size,28mm; Blade Length,150mm; Blade Angle,45	1
Part4 Reactor stand				
22	JRS-3602-04	Universal Support Stand	Smart Supporting Structure AISI 316	1
23	CR13233	Spill tray	Spill tray, stainless steel, for DN400 reactor supporting sturcture	1
Part5 Liquid funnel				
24	JRS-7297-45	Funnel	Funnel Graduated, Pressure Equalizing, PTFE Stopcock, 5000ml,45/50	1
25	JRS-2002-17	Adapter	Adapter, bushing, 45/50 inner,24/40 outer	1
26	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
27	JRS-2103-01	Glass stopper	Glass stopper,24/40	1
Part6 Condenser				
28	JRS-2506-14	Condenser	Condenser, Jacketed Coil 400mm Jacket Length,45/50 With detachable hose barbs	1
Distillation unit				
29	JRS-2620-02	Distillation Reflux / Divider Head	Distillation, Head, Reflux/Divider, 45/50	1
30	JRS-2017-02	Adapter	Adapter, inlet or outlet, 90°, 3/8" hose barb	1
31	TRGN 7000-20	20L Receiving Vessel	20L Receiving Vessel,200mm,0-10mm Valve	1
32	JRS-6530-40	Receiving lid	Receiving lid, 200mm,(3) 45/50	1
33	JRS-1701-04	O-Ring	CAPFE O-ing ,200mm	1
34	JRS-2401-04	Quick-release Clamp	200mm Quick-release Clamp	1
35	JRS-2036-03	Adapter	Adapter, compression, union, PTFE, 1/2"	1
36	JRS-2040-03	Adapter	Adapter, compression, union, PTFE,1/2" to 3/4"	1
37	JRS-3201-03	PFA tubing	PFA tubing,OD:1/2in, ID:3/8in, 1 meter	2
Optional				
38	JRS-2103-02	Stopper	Stopper, 45/50	2
39	JRS-8250-14	Stopper	Stopper, 29/42	2
40	8981016	External Pt100 sensor	External Pt100 sensor 900 x 6 mm dia., stainless steel, PTFE coated	1

EZChem Pilot Plant Reactor

100L Process reactor, cylindrical, jacketed

EZChem pilot plant reactor are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve and distillation unit. The unique design of the smart supporting structure and clamping system allows for quick and easy installation/removal of glassware. System is supplied complete with the components listed below and numbered on the image below.

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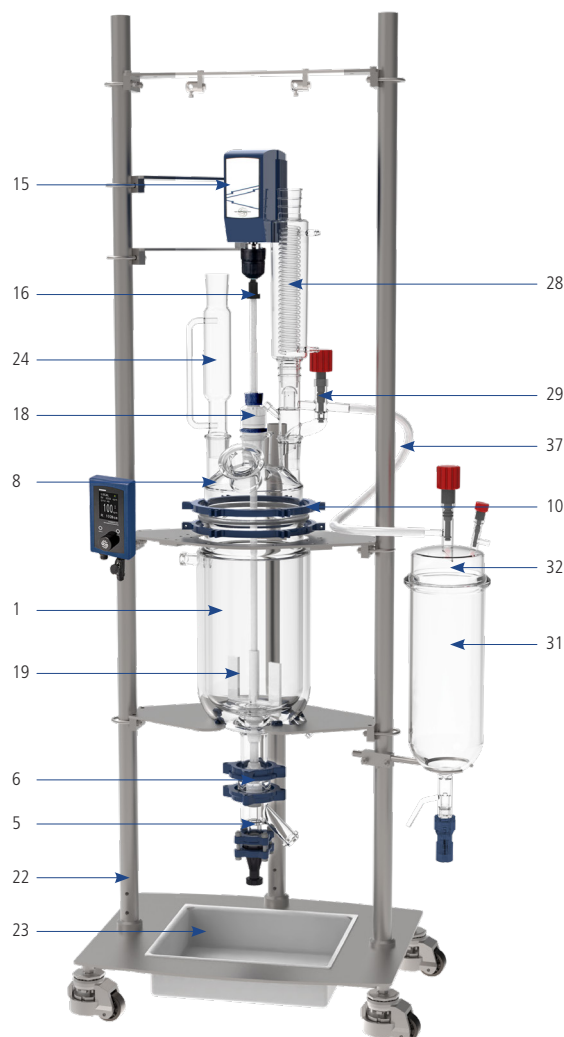
100L complete standard pilot reactor

Part Number	Description	Motor Type
JRS-1503-061	100L Process System	Complete with reaction system, Stand, High Torque Overhead Stirrer OHS.4DF
JRS-1503-061M	100L Process System	Complete with reaction system, Stand, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF
JRS-1503-062	100L Process System with distillation unit	Complete with reaction system, Stand, 5L Distillation unit, High Torque Overhead Stirrer OHS.4DF
JRS-1503-062M	100L Process System with distillation unit	Complete with reaction system, Stand, 5L Distillation unit, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF

Approx. Stand Dimensions:
890 W x 716D x 2980H (mm)

Specification

Reaction volume	100L
Flange of vessel	DN400
Bore diameter of bottom valve	0-25mm
Reactor lid	DN400, 1×45/40(CN), 4×45/40(SN), 2×29/32(SN), 1×DN100(SN-45°)
Total openings on the lid	8
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	Atmospheric pressure and vacuum
Jacket pressure	up to 0.5bar
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN25
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation, if high-speed mixing applications are required, please consult your Wiggins
Diameter/length of stirring Rod	Ø28mm / 1600mm
Blade	Anchor style stir paddle
Length of condenser	400mm
Volume of collection flask	20L
Volume of liquid funnel	5L
Temperature sensor	Ø6mm×1200mm



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part1 Reaction vessel				
1	SQEG075095	100L Jacketed Vessel	Jacketed Vessel DN400, 100L / Discharge DN50	1
2	SQS0038987	Adapter	Adapter, DN25 to M24*1.5 male	2
3	SQI007877	Flange	DN25 Flange with bolt/nut and insert	2
4	VAJQ068912	Gasket	PTFE Gasket DN25	2
5	SQTK032037	Glass bottom valve	Glass bottom valve 0~25mm, DN50 with no dead volume	1
6	GQQI007879	Flange	DN50 Flange with bolt/nut and insert	1
7	VAJQ068914	Gasket	PTFE Gasket DN50	1
Part2 Reactor lid				
8	SQEG079137	DN400 Reactor Lid	Reactor Lid, DN 400 flange,Center Joint: 45/50,Side Joints: (4) 45/50, Side Joints: (2) 29/32, Addition Port 100 mm	1
9	JRS-6525-53	Gasket	Gasket, DN400, PTFE	1
10	JRS-6525-33	Coupling Flange	Coupling Flange, DN400	1
11	JRS-2909-02	Cap	100mm PTFE Cap	1
12	JRS-1701-02	O-Ring	100mm PTFE Encapsulated O-Ring	1
13	JRS-2401-02	Clamp	Clamp, Flange, 100mm	1
14	JRS-9016-131	Temperature sensor adapter	Temperature sensor adapter,45/50 joint	1
Part3 Stirring unit				
15	CR3091-02F	Stirrer Motor with remote controller OHS.4DF	Remotely Controllable Ultra High Torque / High Speed Stirrers,Speed Range:12~1800rpm, Maximum Torque :565 N-cm,Output Power:150 W	1
16	JRS-8126-28	Shaft coupling	28mm Stir Shaft Swivel Coupling, 3/8" Stir Motor Shaft	1
17	JRS-8127-28	Shaft Collar	28mm Shaft Collar	1
18	JRS-8067-105	Ace-Thred Bearing	28mm PTFE Ace-Thred Bearing	1
19	JRS-8080-24	Glass Stirring Shaft	28mm Glass Stirring Shaft, 1470mm Length	1
20	JRS-8091-36	Anchor Style Agitator	Shaft Size,28mm; Blade Length,178mm	1
21	JRS-8093-35	Agitator	Shaft Size,28mm; Blade Length,150mm; Blade Angle,45	1
Part4 Reactor stand				
22	JRS-3602-05	Universal Support Stand	Smart Supporting Structure AISI 316	1
23	CR13233	Spill tray	Spill tray, stainless steel, for DN400 reactor supporting sturcture	1
Part5 Liquid funnel				
24	JRS-7297-45	Funnel	Funnel Graduated, Pressure Equalizing, PTFE Stopcock, 5000ml,45/50	1
25	JRS-2002-17	Adapter	Adapter, bushing, 45/50 inner,24/40 outer	1
26	JRS-2020-01	Offset Adapter	Offset Adapter, 24/40	1
27	JRS-2103-01	Glass stopper	Glass stopper,24/40	1
Part6 Condenser				
28	JRS-2506-14	Condenser	Condenser, Jacketed Coil 400mm Jacket Length,45/50 With detachable hose barbs	1
Distillation unit				
29	JRS-2620-02	Distillation Reflux / Divider Head	Distillation, Head, Reflux/Divider, 45/50	1
30	JRS-2017-02	Adapter	Adapter, inlet or outlet, 90°, 3/8" hose barb	1
31	TRGN 7000-20	20L Receiving Vessel	20L Receiving Vessel,200mm,0-10mm Valve	1
32	JRS-6530-40	Receiving lid	Receiving lid, 200mm,(3) 45/50	1
33	JRS-1701-04	O-Ring	CAPFE O-ing ,200mm	1
34	JRS-2401-04	Quick-release Clamp	200mm Quick-release Clamp	1
35	JRS-2036-03	Adapter	Adapter, compression, union, PTFE, 1/2"	1
36	JRS-2040-03	Adapter	Adapter, compression, union, PTFE,1/2" to 3/4"	1
37	JRS-3201-03	PFA tubing	PFA tubing,OD:1/2in, ID:3/8in, 1 meter	2
Optional				
38	JRS-2103-02	Stopper	Stopper, 45/50	2
39	JRS-8250-14	Stopper	Stopper, 29/42	2
40	8981014	External Pt100 sensor	External Pt100 sensor 1200 x 6 mm dia., stainless steel, PTFE coated, -75...+250 °C, 3 m cable	1

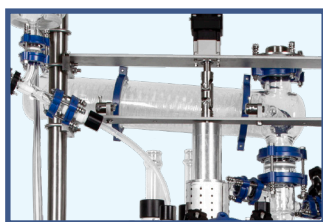
PlusChem Pilot Plant Reactor

- > The flange of EZChem series up to DN400, and PlusChem up to DN450
- > Glass connection is the grinding joint for EZChem series, Flange connection for PlusChem
- > Better heat transfer, mass transfer effect for Plus series
- > Grinding joint connection between two glass part for EZChem series, flange connection for PlusChem
- > Compared with EZChem, PlusChem with better expansibility, vertical condenser, horizontal condenser, more interface, Combined application of multiple reactors and other complex experiments;
- > With mechanical seal, PlusChem suitable for higher speed mixing application;
- > PlusChem can choose GMP bottom valve, smaller sizes allow the entire unit to be pushed into a fume hood to meet GMP standards, and temperature sensors can be fixed to the bottom valve;
- > Compared with EZChem, PlusChem comes standard with pressure Rupture disc, can be sealed for short periods of time, nitrogen protection;
- > Standard software more for EZChem, but PlusChem will have more linkage.



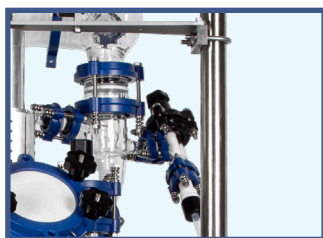
Reaction Lid

A variety of standard flange openings on the reaction lid meet different application, Compared to EZChem series, it has more extensibility



High Efficiency Condenser

Both vertical and horizontal condensers are available



Switchable Distillation Head

The distillation head can be used between condensing reflux and distillation experiment, just adjust the valve to switch the working mode.



Dead Volume Free Bottom Valve

The industrial valve is a dead volume free PTFE spindle valve with sloped outlet. The spindle shall be pressed in without turning. In the valve housing is an additional spring mounted in. So the spring pressure of the spindle to the valve seat can be increased spring-loaded and the spindle regulates itself. This guarantees a good tightness at large variations of temperature. The industrial valve is available with a 10 mm bore hole (standard) and as desired with a 20mm bore hole.



Stainless Steel Stand

Unique design allows easy installation and removal of glassware, All parts are made of high quality stainless steel, corrosion resistant. Standard with removable spill tray. The stand can be moved when casters fall and more stable when they are lifted





Wide Application Range

The optimization of chemical reactions is enabled by having access to a broad and seamless range of reaction conditions: stirring and temperature control.



Jacketed Reaction Vessel

Volume from 10L to 100L are optional, 50L and 100L vessels with different ratio of height to diameter are available



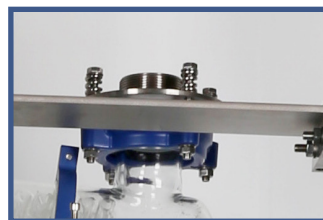
Remote-controlled Stirrer

Strong stirring motor with low-position control unit, friendly design allows users to control more easily, two-stage stirring mode can be automatically switched



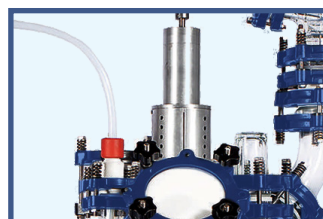
Over pressure safety device

The whole reaction system is designed to withstand a slightly positive pressure of 0.5 bar. When the pressure exceeds, the pressure is released automatically by the rupture disc



Mechanical Sealing system

With this seal structure, it can simultaneously meet the requirements of sealing and power transmission



Auto Reaction Software (Optional)

Stirring speed, temperature and other parameters can be remote control and data recording



Pressure Relief Manifold inlet/outlet

help protect the glass vessel from breakage due to an excessive pressure differential exerted by the thermal transfer fluid while the vessel is isolated or disconnected from the circulator. Available as a set, individual inlet or outlet, and sized with either a M16x1



PlusChem Pilot Plant Reactor Horizontal Condenser

10L Pilot plant for high performance applications

PlusChem pilot plant reactor are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve. The unique design of the smart supporting structure and clamping system allows for quick and easy installation/removal of glassware. System is supplied complete with the components listed below and numbered on the image below.

- > The flange of vessel for PlusChem up to DN450
- > Better heat transfer, mass transfer effect for PlusChem
- > Flange connection for PlusChem between two glass part
- > Compared with Easychem, PlusChem with better expansibility
- > With mechanical seal, PlusChem suitable for higher speed mixing application
- > Compared with EZChem, PlusChem comes standard with pressure Rupture disc, can be sealed for short periods of time, nitrogen protection

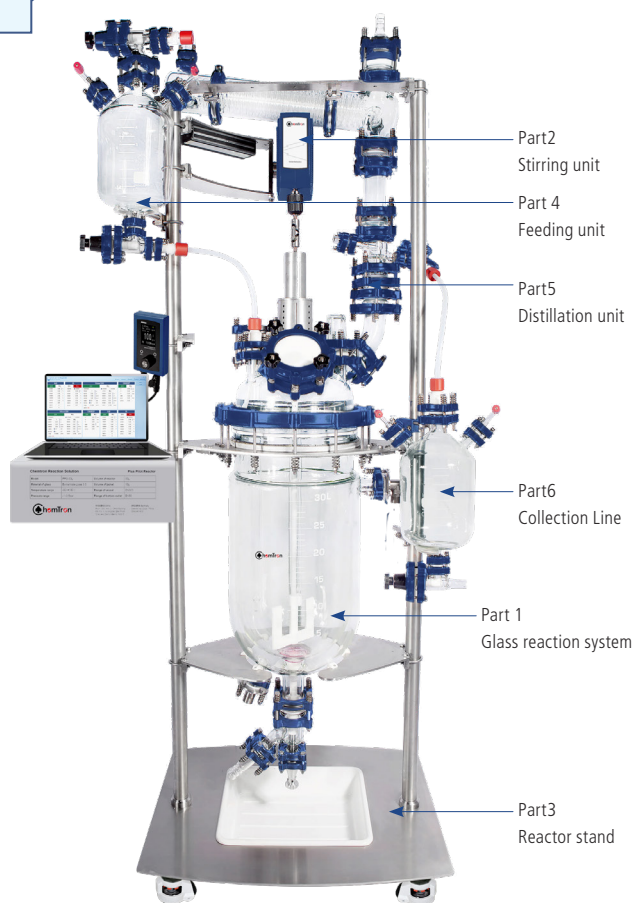
10L complete PlusChem Pilot Plant reactor

Part Number	Part	Description
KC1-PLUS-CH10L	10L complete PlusChem Pilot Plant reactor-DN300, Horizontal Condenser	Complete with reaction system, Stand, 5L Distillation unit, High Torque Overhead Stirrer OHS.4DF
KC2-PLUS-CH10L	10L complete PlusChem Pilot Plant reactor-DN300, Horizontal Condenser	Complete with reaction system, Stand, 5L Distillation unit, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF

Approx. Stand Dimensions:
720 W x 600D x 2080H (mm)

Specification

Reaction volume	10L
Flange of vessel	DN300
Bore diameter of bottom valve	0-25mm
Reactor lid	"DN300, 1xDN25(CN) , 1xDN80,3xDN40, 1xDN25, 1xDN50"
Total openings on the lid	7
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	-1~0.5bar, Standard with rupture disc
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN25
Type of stirring bearing	Mechanical Seal
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation, if high-speed mixing applications are required, please consult your Wiggins
Diameter of stirring Rod	Ø16mm
Blade	Anchor style stir paddle
Condensation area	DN50 / 0.6m ²
Volume of collection flask	5L
Volume of liquid funnel	5L
Temperature sensor	Ø6mm×600mm



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part 1 Glass reaction system				
1	SQHK077051	Glass reaction system	Included: 10L jacketed vessel, Bottom valve, Reactor lid, Stirring unit (without motor), Adapters, Gaskets, Clamps	1
Included				
1-1	SQEG070921	10L Jacketed Vessel	Jacketed Vessel DN300, 10L / Discharge DN50	1
1-2	SQSO038987	Adapter	Adapter, DN25 to M30*1.5 MALE	2
1-3	SQQI007877	Flange	DN25 Flange with bolt/nut and insert	2
1-4	VAJQ068912	Gasket	PTFE Gasket DN25	2
1-5	SQTK032037	Glass bottom valve	Glass bottom valve 0~25mm, DN50 with no dead volume	1
1-6	GQQI007879	Flange	DN50 Flange with bolt/nut and insert	1
1-7	VAJQ068914	Gasket	PTFE Gasket DN50	1
1-8	SQEG073335	DN300 Reactor Lid	Lid, DN300 7 Nozzles with :Central DN25 For Stirring, DN80 PTFE Nozzle For Solids, DN40 with Glass Thermometer Pocket For Pt100, DN40 with Well For pH, DN40 Free Nozzle, DN25 with Dip Pipe And Adapter For Liquids, DN50 For Vapours	1
1-9	JRS-2405-02	Gasket	Gasket, DN300, PTFE	1
1-10	JRS-2402-01	Coupling Flange	Coupling Flange, DN300	1
1-11	GZRI300080	Cap	PTFE Blank Cap DN80	1
1-12	SQQI007880	Flange	DN80 Flange with bolt/nut and insert	1
1-13	VAJQ068917	Gasket	PTFE Gasket DN80	1
1-14	VAJQ901613	Temperature sensor adapter	Temperature sensor adapter	1
1-15	SQQI007878	Flange	DN40 Flange with bolt/nut and insert	1
1-16	VAJQ068913	Gasket	PTFE Gasket DN40	1
1-17	GZRI040032	Adapter Compression	Adapter Compression, Union, DN40 To 32mm, for install pH probe	2
1-18	JRS-3006-01	Shaft coupling	10mm shaft coupling	1
1-19	SQA0077263	Stirring and sealing unit	Stirring and sealing unit ATSA25/16 for 10L reactor, included mechanical seal graphite/PTFE, stirring shaft and impeller	1
1-20	JRS-3006-11	Mechanical seal holder	Mechanical seal holder	1
Part2 Stirring unit				
2-1	CR3091-02F	Stirrer Motor with remote controller OHS.4DF	Remotely Controllable Ultra High Torque / High Speed Stirrers, Speed Range:12~1800rpm, Maximum Torque :565 N-cm, Output Power:150 W	1
Part3 Reactor stand				
3-1	JRS-4062-01	Lift Stand	Stainless Steel Frame For Reactor with Lid, DN300	1
3-2	CR13232	Spill tray	Spill tray, stainless steel, for DN300 reactor supporting sturcture	1
Part 4 Feeding unit				
4	SQHK077054	Feeding Line	Feeding Line 5L with valves and adapter	1
Part5 Distillation unit				
5	SQHK077053	Distillation unit	Included Distillation head, condenser, rupture disc and adapters	1
Part6 Collection Line				
6	SQHK077055	Collection Line	Collection Line 5L with valves and adapter	1
Multi channel regulating valve				
7	JRS-6101-001	Multi channel regulating valve	Multi channel regulating valve outlet with M24 circulator fittings	1
8	JRS-6102-001	Multi channel regulating valve	Multi channel regulating valve inlet with M24 circulator fittings	1
9	8930261	Metal tubing	1 m Metal tubing, insulated, 2 fittings M24x1.5 female (-100...+350 °C)	2
Optional				
10	8981013	External Pt100 sensor	External Pt100 sensor 600 x 6 mm dia., stainless steel, PTFE coated, -75...+250 °C, 3 m cable	1
11	MLFM069215	Datalogger pH meter M300	Datalogger pH meter M300, pH range from -1 to +15, Auto/0.001/0.01/0.1 are optional, Precision ±0.03pH	1
12	MLFM042649	Inpro 4800	Inpro 4800, Length 425mm, with pt1000	1
13	MLMF067082	3 meter cable	3 meter cable, connect the electrode to the meter	1

PlusChem Pilot Plant Reactor Horizontal Condenser

20L Pilot plant for high performance applications

PlusChem pilot plant reactor are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve. The unique design of the smart supporting structure and clamping system allows for quick and easy installation/removal of glassware. System is supplied complete with the components listed below and numbered on the image below.

- > The flange of vessel for PlusChem up to DN450
- > Better heat transfer, mass transfer effect for PlusChem
- > Flange connection for PlusChem between two glass part
- > Compared with Easychem, PlusChem with better expansibility
- > With mechanical seal, PlusChem suitable for higher speed mixing application
- > Compared with EZChem, PlusChem comes standard with pressure Rupture disc, can be sealed for short periods of time, nitrogen protection

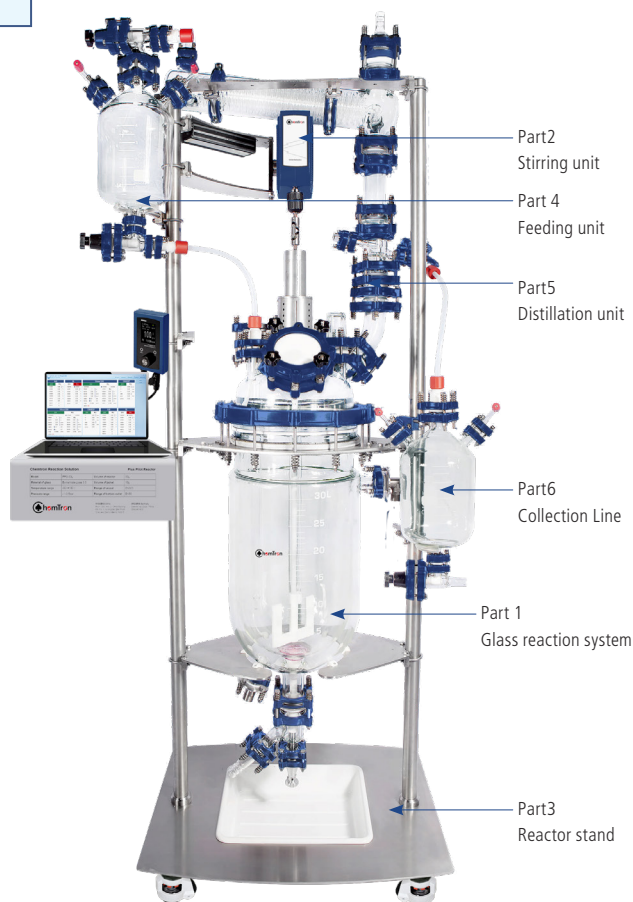
20L complete PlusChem Pilot Plant reactor

Part Number	Part	Description
KC1-PLUS-CH20L	20L complete PlusChem Pilot Plant reactor-DN300, Complete with reaction system, Stand, 5L Distillation unit, High Torque Overhead Stirrer OHS.4DF Horizontal Condenser	
KC2-PLUS-CH20L	20L complete PlusChem Pilot Plant reactor-DN300, Complete with reaction system, Stand, 5L Distillation unit, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF Horizontal Condenser	

Approx. Stand Dimensions:
720 W x 600D x 2080H (mm)

Specification

Reaction volume	20L
Flange of vessel	DN300
Bore diameter of bottom valve	0-25mm
Reactor lid	"DN300, 1xDN25(CN) , 1xDN80,3xDN40, 1xDN25, 1xDN50"
Total openings on the lid	7
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	-1~0.5bar, Standard with rupture disc
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN25
Type of stirring bearing	Mechanical Seal
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation, if high-speed mixing applications are required, please consult your Wiggins
Diameter of stirring Rod	Ø16mm
Blade	Anchor style stir paddle
Condensation area	DN50 / 0.6m2
Volume of collection flask	5L
Volume of liquid funnel	5L
Temperature sensor	Ø6mm×600mm



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part 1 Glass reaction system				
1	SQHK077052	Glass reaction system	Included: 20L jacketed vessel, Bottom valve, Reactor lid, Stirring unit (without motor), Adapters, Gaskets, Clamps	1
Included				
1-1	SQEG075940	20L Jacketed Vessel	Jacketed Vessel DN300, 20L / Discharge DN50	1
1-2	SQSO038987	Adapter	Adapter, DN25 to M30*1.5 MALE	2
1-3	SQQI007877	Flange	DN25 Flange with bolt/nut and insert	2
1-4	VAJQ068912	Gasket	PTFE Gasket DN25	2
1-5	SQTK032037	Glass bottom valve	Glass bottom valve 0~25mm, DN50 with no dead volume	1
1-6	GQQI007879	Flange	DN50 Flange with bolt/nut and insert	1
1-7	VAJQ068914	Gasket	PTFE Gasket DN50	1
1-8	SQEG073335	DN300 Reactor Lid	Lid, DN300 7 Nozzles with :Central DN25 For Stirring, DN80 PTFE Nozzle For Solids, DN40 with Glass Thermometer Pocket For Pt100, DN40 with Well For pH, DN40 Free Nozzle, DN25 with Dip Pipe And Adapter For Liquids, DN50 For Vapours	1
1-9	JRS-2405-02	Gasket	Gasket, DN300, PTFE	1
1-10	JRS-2402-01	Coupling Flange	Coupling Flange, DN300	1
1-11	GZRI300080	Cap	PTFE Blank Cap DN80	1
1-12	SQQI007880	Flange	DN80 Flange with bolt/nut and insert	1
1-13	VAJQ068917	Gasket	PTFE Gasket DN80	1
1-14	VAJQ901613	Temperature sensor adapter	Temperature sensor adapter	1
1-15	SQQI007878	Flange	DN40 Flange with bolt/nut and insert	1
1-16	VAJQ068913	Gasket	PTFE Gasket DN40	1
1-17	GZRI040032	Adapter Compression	Adapter Compression, Union, DN40 To 32mm, for install temperature and pH probe	2
1-18	JRS-3006-01	Shaft coupling	10mm shaft coupling	1
1-19	SQA0077264	Stirring and sealing unit	Stirring and sealing unit ATSA25/16 for 20L reactor, included mechanical seal graphite/PTFE, stirring shaft and impeller	1
1-20	JRS-3006-11	Mechanical seal holder	Mechanical seal holder	1
Part2 Stirring unit				
2-1	CR3091-02F	Stirrer Motor with remote controller OHS.4DF	Remotely Controllable Ultra High Torque / High Speed Stirrers, Speed Range:12~1800rpm, Maximum Torque :565 N-cm, Output Power:150 W	1
Part3 Reactor stand				
3-1	JRS-4062-01	Lift Stand	Stainless Steel Frame For Reactor with Lid, DN300	1
3-2	CR13232	Spill tray	Spill tray, stainless steel, for DN300 reactor supporting structure	1
Part 4 Feeding unit				
4	SQHK077054	Feeding Line	Feeding Line 5L with valves and adapter	1
Part5 Distillation unit				
5	SQHK077053	Distillation unit	Included Distillation head, condenser, rupture disc and adapters	1
Part6 Collection Line				
6	SQHK077055	Collection Line	Collection Line 5L with valves and adapter	1
Multi channel regulating valve				
7	JRS-6101-001	Multi channel regulating valve	Multi channel regulating valve outlet with M24 circulator fittings	1
8	JRS-6102-001	Multi channel regulating valve	Multi channel regulating valve inlet with M24 circulator fittings	1
9	8930261	Metal tubing	1 m Metal tubing, insulated, 2 fittings M24x1.5 female (-100...+350 °C)	2
Optional				
10	8981013	External Pt100 sensor	External Pt100 sensor 600 x 6 mm dia., stainless steel, PTFE coated, -75...+250 °C, 3 m cable	1
11	MLFM069215	Datalogger pH meter M300	Datalogger pH meter M300, pH range from -1 to +15, Auto/0.001/0.01/0.1 are optional, Precision ±0.03pH	1
12	MLFM042649	Inpro 4800	Inpro 4800, Length 425mm, with pt1000	1
13	MLMF067082	3 meter cable	3 meter cable, connect the electrode to the meter	1

PlusChem Pilot Plant Reactor Horizontal Condenser

30L Pilot plant for high performance applications

PlusChem pilot plant reactor are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve. The unique design of the smart supporting structure and clamping system allows for quick and easy installation/removal of glassware. System is supplied complete with the components listed below and numbered on the image below.

- > The flange of vessel for PlusChem up to DN450
- > Better heat transfer, mass transfer effect for PlusChem
- > Flange connection for PlusChem between two glass part
- > Compared with Easychem, PlusChem with better expansibility
- > With mechanical seal, PlusChem suitable for higher speed mixing application
- > Compared with EZChem, PlusChem comes standard with pressure Rupture disc, can be sealed for short periods of time, nitrogen protection

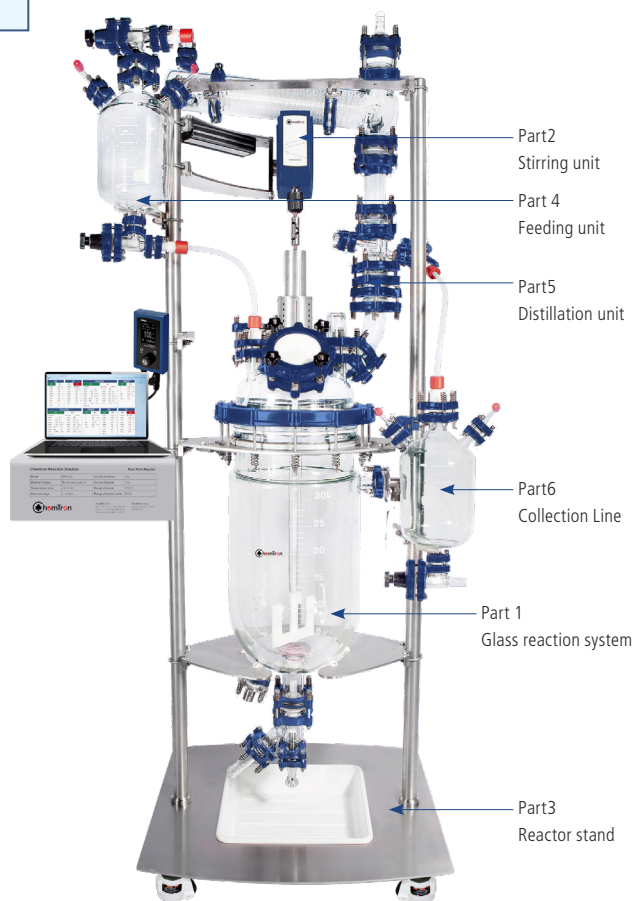
30L complete PlusChem Pilot Plant reactor

Part Number	Part	Description
KC1-PLUS-CH30L	30L complete PlusChem Pilot Plant reactor-DN300, Complete with reaction system, Stand, 5L Distillation unit, High Torque Overhead Stirrer OHS.4DF Horizontal Condenser	
KC2-PLUS-CH30L	30L complete PlusChem Pilot Plant reactor-DN300, Horizontal Condenser	Complete with reaction system, Stand, 5L Distillation unit, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF

Approx. Stand Dimensions:
720 W x 600D x 2080H (mm)

Specification

Reaction volume	30L
Flange of vessel	DN300
Bore diameter of bottom valve	0-25mm
Reactor lid	"DN300, 1xDN25(CN) , 1xDN80,3xDN40, 1xDN25, 1xDN50"
Total openings on the lid	7
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	-1~0.5bar, Standard with rupture disc
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN25
Type of stirring bearing	Mechanical Seal
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation, if high-speed mixing applications are required, please consult your Wiggins
Diameter of stirring Rod	Ø16mm
Blade	Anchor style stir paddle
Condensation area	DN50 / 0.6m ²
Volume of collection flask	5L
Volume of liquid funnel	5L
Temperature sensor	Ø6mm×900mm



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part 1 Glass reaction system				
1	SQHK077056	Glass reaction system	Included: 30L jacketed vessel, Bottom valve, Reactor lid, Stirring unit (without motor), Adapters, Gaskets, Clamps	1
Included				
1-1	SQEG066063	30L Jacketed Vessel	Jacketed Vessel DN300, 30L / Discharge DN50	1
1-2	SQSO038987	Adapter	Adapter, DN25 to M30*1.5 MALE	2
1-3	SQQI007877	Flange	DN25 Flange with bolt/nut and insert	2
1-4	VAJQ068912	Gasket	PTFE Gasket DN25	2
1-5	SQTK032037	Glass bottom valve	Glass bottom valve 0~25mm, DN50 with no dead volume	1
1-6	GQQI007879	Flange	DN50 Flange with bolt/nut and insert	1
1-7	VAJQ068914	Gasket	PTFE Gasket DN50	1
1-8	SQEG073335	DN300 Reactor Lid	Lid, DN300 7 Nozzles with :Central DN25 For Stirring, DN80 PTFE Nozzle For Solids, DN40 with Glass Thermometer Pocket For Pt100, DN40 with Well For pH, DN40 Free Nozzle, DN25 with Dip Pipe And Adapter For Liquids, DN50 For Vapours	1
1-9	JRS-2405-02	Gasket	Gasket, DN300, PTFE	1
1-10	JRS-2402-01	Coupling Flange	Coupling Flange, DN300	1
1-11	GZRI300080	Cap	PTFE Blank Cap DN80	1
1-12	SQQI007880	Flange	DN80 Flange with bolt/nut and insert	1
1-13	VAJQ068917	Gasket	PTFE Gasket DN80	1
1-14	VAJQ901613	Temperature sensor adapter	Temperature sensor adapter	1
1-15	SQQI007878	Flange	DN40 Flange with bolt/nut and insert	1
1-16	VAJQ068913	Gasket	PTFE Gasket DN40	1
1-17	GZRI040032	Adapter Compression	Adapter Compression, Union, DN40 To 32mm, for install temperature and pH probe	2
1-18	JRS-3006-01	Shaft coupling	10mm shaft coupling	1
1-19	SQAO077265	Stirring and sealing unit	Stirring and sealing unit ATSA25/16 for 30L reactor, included mechanical seal graphite/PTFE, stirring shaft and impeller	1
1-20	JRS-3006-11	Mechanical seal holder	Mechanical seal holder	1
Part2 Stirring unit				
2-1	CR3091-02F	Stirrer Motor with remote controller OHS.4DF	Remotely Controllable Ultra High Torque / High Speed Stirrers, Speed Range:12~1800rpm, Maximum Torque :565 N-cm, Output Power:150 W	1
Part3 Reactor stand				
3-1	JRS-4062-01	Lift Stand	Stainless Steel Frame For Reactor with Lid, DN300	1
3-2	CR13232	Spill tray	Spill tray, stainless steel, for DN300 reactor supporting structure	1
Part 4 Feeding unit				
4	SQHK077054	Feeding Line	Feeding Line 5L with valves and adapter	1
Part5 Distillation unit				
5	SQHK077053	Distillation unit	Included Distillation head, condenser, rupture disc and adapters	1
Part6 Collection Line				
6	SQHK075997	Collection Line	Collection Line 10L with valves and adapter	1
Multi channel regulating valve				
7	JRS-6101-001	Multi channel regulating valve	Multi channel regulating valve outlet with M24 circulator fittings	1
8	JRS-6102-001	Multi channel regulating valve	Multi channel regulating valve inlet with M24 circulator fittings	1
9	8930261	Metal tubing	1 m Metal tubing, insulated, 2 fittings M24x1.5 female (-100...+350 °C)	2
Optional				
10	8981013	External Pt100 sensor	External Pt100 sensor 600 x 6 mm dia., stainless steel, PTFE coated, -75...+250 °C, 3 m cable	1
11	MLFM069215	Datalogger pH meter M300	Datalogger pH meter M300, pH range from -1 to +15, Auto/0.001/0.01/0.1 are optional, Precision ±0.03pH	1
12	MLFM042649	Inpro 4800	Inpro 4800, Length 425mm, with pt1000	1
13	MLMF067082	3 meter cable	3 meter cable, connect the electrode to the meter	1

PlusChem Pilot Plant Reactor Horizontal Condenser, DN300

50L Pilot plant for high performance applications

PlusChem pilot plant reactor are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve. The unique design of the smart supporting structure and clamping system allows for quick and easy installation/removal of glassware. System is supplied complete with the components listed below and numbered on the image below.

- > The flange of vessel for PlusChem up to DN450
- > Better heat transfer, mass transfer effect for PlusChem
- > Flange connection for PlusChem between two glass part
- > Compared with Easychem, PlusChem with better expansibility
- > With mechanical seal, PlusChem suitable for higher speed mixing application
- > Compared with EZChem, PlusChem comes standard with pressure Rupture disc, can be sealed for short periods of time, nitrogen protection

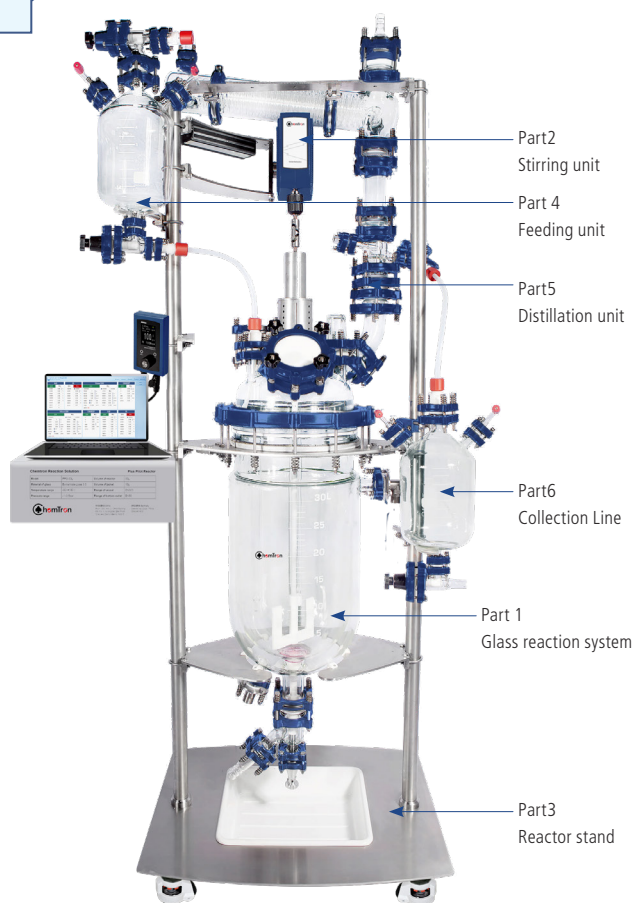
50L complete PlusChem Pilot Plant reactor

Part Number	Part	Description
KC1-PLUS-CH50LDN300	50L complete PlusChem Pilot Plant reactor-DN300, Horizontal Condenser	Complete with reaction system, Stand, 10L Distillation unit, High Torque Overhead Stirrer OHS.4DF
KC2-PLUS-CH50LDN300	50L complete PlusChem Pilot Plant reactor-DN300, Horizontal Condenser	Complete with reaction system, Stand, 10L Distillation unit, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF

Approx. Stand Dimensions:
800W x 660D x 2380H (mm)

Specification

Reaction volume	50L
Flange of vessel	DN300
Bore diameter of bottom valve	0-25mm
Reactor lid	"DN300, 1xDN25(CN) , 1xDN80,3xDN40, 1xDN25, 1xDN50"
Total openings on the lid	7
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	-1~0.5bar, Standard with rupture disc
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN25
Type of stirring bearing	Mechanical Seal
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation, if high-speed mixing applications are required, please consult your Wiggins
Diameter of stirring Rod	Ø28mm
Blade	Anchor style stir paddle
Condensation area	DN50 / 0.6m ²
Volume of collection flask	10L
Volume of liquid funnel	10L
Temperature sensor	Ø6mm×1200mm



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part 1 Glass reaction system				
1	SQHK077050	Glass reaction system	Included: 50L jacketed vessel, Bottom valve, Reactor lid, Stirring unit (without motor), Adapters, Gaskets, Clamps	1
Included				
1-1	SQEG062749	50L Jacketed Vessel	Jacketed Vessel DN300, 50L / Discharge DN50	1
1-2	SQSO038987	Adapter	Adapter, DN25 to M30*1.5 MALE	2
1-3	SQOI007877	Flange	DN25 Flange with bolt/nut and insert	2
1-4	VAJQ068912	Gasket	PTFE Gasket DN25	2
1-5	SQTK032037	Glass bottom valve	Glass bottom valve 0~25mm, DN50 with no dead volume	1
1-6	GQQI007879	Flange	DN50 Flange with bolt/nut and insert	1
1-7	VAJQ068914	Gasket	PTFE Gasket DN50	1
1-8	SQEG073335	DN300 Reactor Lid	Lid, DN300 7 Nozzles with :Central DN25 For Stirring, DN80 PTFE Nozzle For Solids, DN40 with Glass Thermometer Pocket For Pt100, DN40 with Well For pH, DN40 Free Nozzle, DN25 with Dip Pipe And Adapter For Liquids, DN50 For Vapours	1
1-9	JRS-2405-02	Gasket	Gasket, DN300, PTFE	1
1-10	JRS-2402-01	Coupling Flange	Coupling Flange, DN300	1
1-11	GZRI300080	Cap	PTFE Blank Cap DN80	1
1-12	SQOI007880	Flange	DN80 Flange with bolt/nut and insert	1
1-13	VAJQ068917	Gasket	PTFE Gasket DN80	1
1-14	VAJQ901613	Temperature sensor adapter	Temperature sensor adapter	1
1-15	SQOI007878	Flange	DN40 Flange with bolt/nut and insert	1
1-16	VAJQ068913	Gasket	PTFE Gasket DN40	1
1-17	GZRI040032	Adapter Compression	Adapter Compression, Union, DN40 To 32mm, for install temperature and pH probe	2
1-18	JRS-3006-01	Shaft coupling	10mm shaft coupling	1
1-19	SQA0077266	Stirring and sealing unit	Stirring and sealing unit ATSA25/16 for 50L reactor, included mechanical seal graphite/PTFE, stirring shaft and impeller	1
1-20	JRS-3006-11	Mechanical seal holder	Mechanical seal holder	1
Part2 Stirring unit				
2-1	CR3091-02F	Stirrer Motor with remote controller OHS.4DF	Remotely Controllable Ultra High Torque / High Speed Stirrers, Speed Range:12~1800rpm, Maximum Torque :565 N-cm, Output Power:150 W	1
Part3 Reactor stand				
3-1	JRS-4062-02	Lift Stand	Stainless steel frame for reactor with lid, DN300	1
3-2	CR13232	Spill tray	Spill tray, stainless steel, for DN300 reactor supporting structure	1
Part 4 Feeding unit				
4	SQHK075996	Feeding Line	Feeding Line 10L with valves and adapter	1
Part5 Distillation unit				
5	SQHK075995	Distillation unit	Included Distillation head, condenser, rupture disc and adapters	1
Part6 Collection Line				
6	SQHK075997	Collection Line	Collection Line 10L with valves and adapter	1
Multi channel regulating valve				
7	JRS-6101-001	Multi channel regulating valve	Multi channel regulating valve outlet with M24 circulator fittings	1
8	JRS-6102-001	Multi channel regulating valve	Multi channel regulating valve inlet with M24 circulator fittings	1
9	8930261	Metal tubing	1 m Metal tubing, insulated, 2 fittings M24x1.5 female (-100...+350 °C)	2
Optional				
10	8981016	External Pt100 sensor	External Pt100 sensor 900 x 6 mm dia., stainless steel, PTFE coated, -75...+250 °C, 3 m cable	1
11	MLFM069215	Datalogger pH meter M300	Datalogger pH meter M300, pH range from -1 to +15, Au-to/0.001/0.01/0.1 are optional, Precision ±0.03pH	1
12	MLFM042649	Inpro 4800	Inpro 4800, Length 425mm, with pt1000	1
13	MLMF067082	3 meter cable	3 meter cable, connect the electrode to the meter	1

PlusChem Pilot Plant Reactor Horizontal Condenser, DN400

50L Pilot plant for high performance applications

PlusChem pilot plant reactor are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve. The unique design of the smart supporting structure and clamping system allows for quick and easy installation/removal of glassware. System is supplied complete with the components listed below and numbered on the image below.

- > The flange of vessel for PlusChem up to DN450
- > Better heat transfer, mass transfer effect for PlusChem
- > Flange connection for PlusChem between two glass part
- > Compared with Easychem, PlusChem with better expansibility
- > With mechanical seal, PlusChem suitable for higher speed mixing application
- > Compared with EZChem, PlusChem comes standard with pressure Rupture disc, can be sealed for short periods of time, nitrogen protection

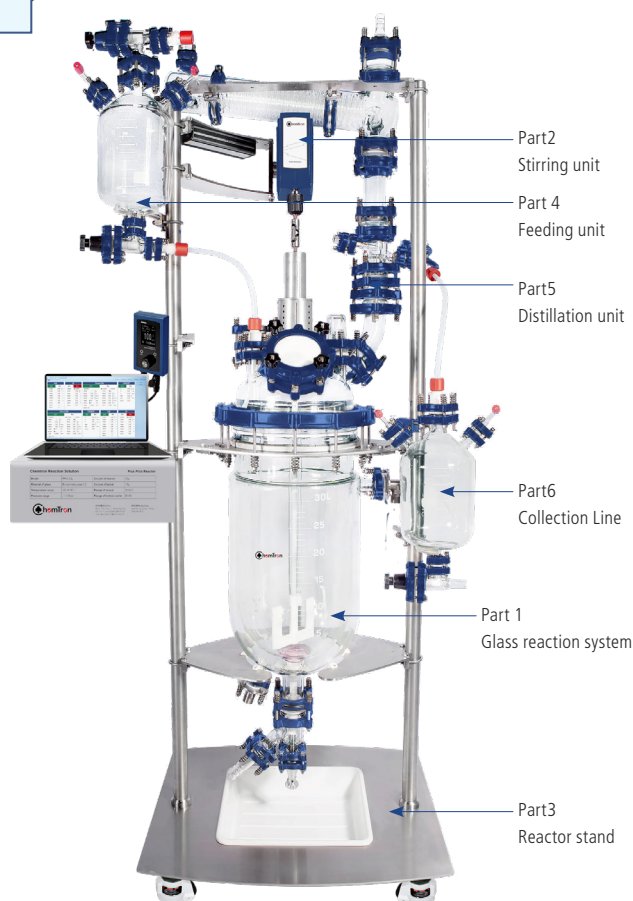
50L complete PlusChem Pilot Plant reactor

Part Number	Part	Description
KC1-PLUS-CH50LDN400	50L complete PlusChem Pilot Plant reactor-DN400, Horizontal Condenser	Complete with reaction system, Stand, 10L Distillation unit, High Torque Overhead Stirrer OHS.4DF
KC2-PLUS-CH50LDN400	50L complete PlusChem Pilot Plant reactor-DN400, Horizontal Condenser	Complete with reaction system, Stand, 10L Distillation unit, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF

Approx. Stand Dimensions:
800W x 660D x 2650H (mm)

Specification

Reaction volume	50L
Flange of vessel	DN400
Bore diameter of bottom valve	0-25mm
Reactor lid	DN400, 1xDN50(CN), 1xDN80, 3xDN40, 1xDN25, 1xDN80
Total openings on the lid	7
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	-1~0.5bar, Standard with rupture disc
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN25
Type of stirring bearing	Mechanical Seal
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation, if high-speed mixing applications are required, please consult your Wiggins
Diameter of stirring Rod	Ø28mm
Blade	Anchor style stir paddle
Condensation area	DN80 / 1.5m ²
Volume of collection flask	10L
Volume of liquid funnel	10L
Temperature sensor	Ø6mm×900mm



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part 1 Glass reaction system				
1	SQHK077057	Glass reaction system	Included: 50L jacketed vessel, Bottom valve, Reactor lid, Stirring unit (without motor), Adapters, Gaskets, Clamps	1
Included				
1-1	SQEG075094	50L Jacketed Vessel	Jacketed Vessel DN400, 50L / Discharge DN50	1
1-2	SQSO038987	Adapter	Adapter, DN25 to M30*1.5 MALE	2
1-3	SQQI007877	Flange	DN25 Flange with bolt/nut and insert	2
1-4	VAJQ068912	Gasket	PTFE Gasket DN25	2
1-5	SQTK032037	Glass bottom valve	Glass bottom valve 0~25mm, DN50 with no dead volume	1
1-6	GQQI007879	Flange	DN50 Flange with bolt/nut and insert	1
1-7	VAJQ068914	Gasket	PTFE Gasket DN50	1
1-8	SQEG077508	DN400 Reactor Lid	Lid, DN400 7 Nozzles with : Central DN50 For Stirring, DN100 PTFE Nozzle For Solids, DN40 with Glass Thermometer Pocket For Pt100, DN40 with Well For pH, DN40 Free Nozzle, DN25 with Dip Pipe And Adapter For Liquids, DN80 For Vapours	1
1-9	JRS-2405-03	Gasket	Gasket, DN400, PTFE	1
1-10	JRS-2402-02	Coupling Flange	Coupling Flange, DN400	1
1-11	GZRI400100	Cap	PTFE Blank Cap DN100	1
1-12	SQQI007881	Flange	DN100 Flange with bolt/nut and insert	1
1-13	VAJQ068918	Gasket	PTFE Gasket DN100	1
1-14	VAJQ901613	Temperature sensor adapter	Temperature sensor adapter	1
1-15	SQQI007878	Flange	DN40 Flange with bolt/nut and insert	1
1-16	VAJQ068913	Gasket	PTFE Gasket DN40	1
1-17	GZRI040032	Adapter Compression	Adapter Compression, Union, DN40 To 32mm, for install temperature and pH probe	2
1-18	JRS-3006-01	Shaft coupling	10mm shaft coupling	1
1-19	SQAO078030	Stirring and sealing unit	Stirring and sealing unit ATSA50/25 for 50L reactor-DN400, included mechanical seal graphite/PTFE, stirring shaft and impeller	1
1-20	JRS-3006-11	Mechanical seal holder	Mechanical seal holder	1
Part2 Stirring unit				
2-1	CR3091-02F	Stirrer Motor with remote controller OHS.4DF	Remotely Controllable Ultra High Torque / High Speed Stirrers, Speed Range:12~1800rpm, Maximum Torque :565 N-cm, Output Power:150 W	1
Part3 Reactor stand				
3-1	JRS-4062-03	Lift Stand	Stainless Steel Frame For Reactor with Lid, DN400	1
3-2	CR13233	Spill tray	Spill tray, stainless steel, for DN400 reactor supporting structure	1
Part 4 Feeding unit				
4	SQHK075996	Feeding Line	Feeding Line 10L with valves and adapter	1
Part5 Distillation unit				
5	SQHK075995	Distillation unit	Included Distillation head, condenser, rupture disc and adapters	1
Part6 Collection Line				
6	SQHK075997	Collection Line	Collection Line 10L with valves and adapter	1
Multi channel regulating valve				
7	JRS-6101-001	Multi channel regulating valve	Multi channel regulating valve outlet with M24 circulator fittings	1
8	JRS-6102-001	Multi channel regulating valve	Multi channel regulating valve inlet with M24 circulator fittings	1
9	8930261	Metal tubing	1 m Metal tubing, insulated, 2 fittings M24x1.5 female (-100...+350 °C)	2
Optional				
10	8981016	External Pt100 sensor	External Pt100 sensor 900 x 6 mm dia., stainless steel, PTFE coated, -75...+250 °C, 3 m cable	1
11	MLFM069215	Datalogger pH meter M300	Datalogger pH meter M300, pH range from -1 to +15, Auto/0.001/0.01/0.1 are optional, Precision ±0.03pH	1
12	MLFM042649	Inpro 4800	Inpro 4800, Length 425mm, with pt1000	1
13	MLMF067082	3 meter cable	3 meter cable, connect the electrode to the meter	1

PlusChem Pilot Plant Reactor Horizontal Condenser, DN450

50L Pilot plant for high performance applications

PlusChem pilot plant reactor are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve. The unique design of the smart supporting structure and clamping system allows for quick and easy installation/removal of glassware. System is supplied complete with the components listed below and numbered on the image below.

- > The flange of vessel for PlusChem up to DN450
- > Better heat transfer, mass transfer effect for PlusChem
- > Flange connection for PlusChem between two glass part
- > Compared with Easychem, PlusChem with better expansibility
- > With mechanical seal, PlusChem suitable for higher speed mixing application
- > Compared with EZChem, PlusChem comes standard with pressure Rupture disc, can be sealed for short periods of time, nitrogen protection

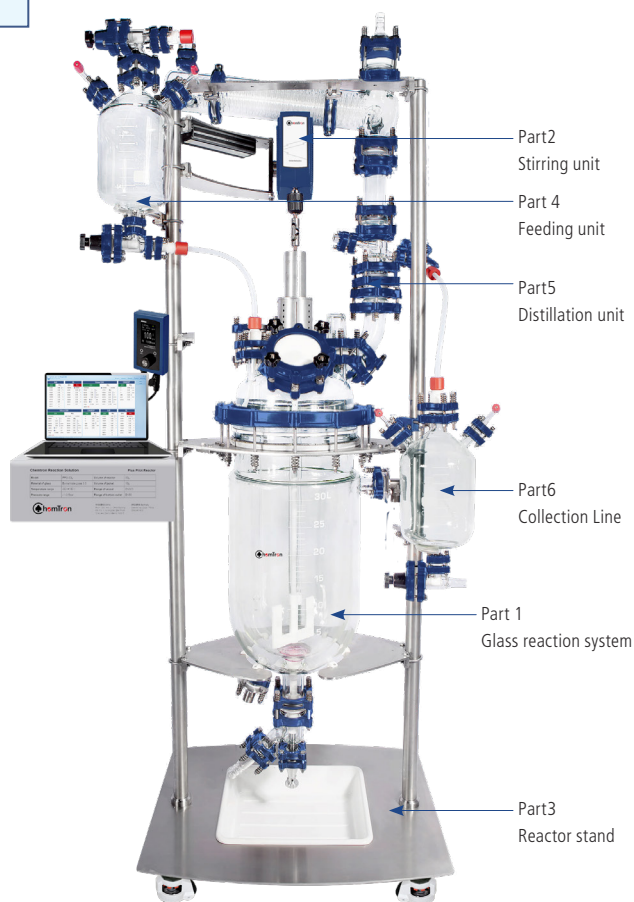
50L complete PlusChem Pilot Plant reactor

Part Number	Part	Description
KC1-PLUS-CH50LDN450	50L complete PlusChem Pilot Plant reactor-DN450, Horizontal Condenser	Complete with reaction system, Stand, 10L Distillation unit, High Torque Overhead Stirrer OHS.4DF
KC2-PLUS-CH50LDN450	50L complete PlusChem Pilot Plant reactor-DN450, Horizontal Condenser	Complete with reaction system, Stand, 10L Distillation unit, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF

Approx. Stand Dimensions:
800W x660D x 2650H (mm)

Specification

Reaction volume	50L
Flange of vessel	DN450
Bore diameter of bottom valve	0-25mm
Reactor lid	DN450, 1×45/40(CN), 4×45/40(SN), 2×29/32(SN), 1×DN100(SN-45°)
Total openings on the lid	7
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	-1~0.5bar, Standard with rupture disc
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN25
Type of stirring bearing	Mechanical Seal
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation, if high-speed mixing applications are required, please consult your Wiggins
Diameter of stirring Rod	Ø28mm
Blade	Anchor style stir paddle
Condensation area	DN80 / 1.5m ²
Volume of collection flask	10L
Volume of liquid funnel	10L
Temperature sensor	Ø6mm×900mm



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part 1 Glass reaction system				
1	SQHK077058	Glass reaction system	Included: 50L jacketed vessel, Bottom valve, Reactor lid, Stirring unit (without motor), Adapters, Gaskets, Clamps	1
Included				
1-1	SQEG081337	50L Jacketed Vessel	Jacketed Vessel DN450, 50L / Discharge DN50	1
1-2	SQSO038987	Adapter	Adapter, DN25 to M30*1.5 MALE	2
1-3	SQQI007877	Flange	DN25 Flange with bolt/nut and insert	2
1-4	VAJQ068912	Gasket	PTFE Gasket DN25	2
1-5	SQTK032037	Glass bottom valve	Glass bottom valve 0~25mm, DN50 with no dead volume	1
1-6	GQQI007879	Flange	DN50 Flange with bolt/nut and insert	1
1-7	VAJQ068914	Gasket	PTFE Gasket DN50	1
1-8	SQEG081338	DN450 Reactor Lid	Lid, DN450 7 Nozzles with : Central DN50 For Stirring, DN100 PTFE Nozzle For Solids, DN40 with Glass Thermometer Pocket For Pt100, DN40 with Well For pH, DN40 Free Nozzle, DN25 with Dip Pipe And Adapter For Liquids, DN80 For Vapours	1
1-9	JRS-2405-04	Gasket	Gasket, DN450, PTFE	1
1-10	JRS-2402-03	Coupling Flange	Coupling Flange, DN450	1
1-11	GZRI400100	Cap	PTFE Blank Cap DN100	1
1-12	SQQI007881	Flange	DN100 Flange with bolt/nut and insert	1
1-13	VAJQ068918	Gasket	PTFE Gasket DN100	1
1-14	VAJQ901613	Temperature sensor adapter	Temperature sensor adapter	1
1-15	SQQI007878	Flange	DN40 Flange with bolt/nut and insert	1
1-16	VAJQ068913	Gasket	PTFE Gasket DN40	1
1-17	GZRI040032	Adapter Compression	Adapter Compression, Union, DN40 To 32mm, for install temperature and pH probe	2
1-18	JRS-3006-01	Shaft coupling	10mm shaft coupling	1
1-19	SQAO078031	Stirring and sealing unit	Stirring and sealing unit ATSA50/25 for 50L reactor-DN450, included mechanical seal graphite/PTFE, stirring shaft and impeller	1
1-20	JRS-3006-11	Mechanical seal holder	Mechanical seal holder	1
Part2 Stirring unit				
2-1	CR3091-02F	Stirrer Motor with remote controller OHS.4DF	Remotely Controllable Ultra High Torque / High Speed Stirrers, Speed Range:12~1800rpm, Maximum Torque :565 N-cm, Output Power:150 W	1
Part3 Reactor stand				
3-1	JRS-4062-05	Lift Stand	Stainless Steel Frame For Reactor with Lid, DN450	1
3-2	CR13234	Spill tray	Spill tray, stainless steel, for DN450 reactor supporting structure	1
Part 4 Feeding unit				
4	SQHK075996	Feeding Line	Feeding Line 10L with valves and adapter	1
Part5 Distillation unit				
5	SQHK075995	Distillation unit	Included Distillation head, condenser, rupture disc and adapters	1
Part6 Collection Line				
6	SQHK075997	Collection Line	Collection Line 10L with valves and adapter	1
Multi channel regulating valve				
7	JRS-6101-001	Multi channel regulating valve	Multi channel regulating valve outlet with M24 circulator fittings	1
8	JRS-6102-001	Multi channel regulating valve	Multi channel regulating valve inlet with M24 circulator fittings	1
9	8930261	Metal tubing	1 m Metal tubing, insulated, 2 fittings M24x1.5 female (-100...+350 °C)	2
Optional				
10	8981016	External Pt100 sensor	External Pt100 sensor 900 x 6 mm dia., stainless steel, PTFE coated, -75...+250 °C, 3 m cable	1
11	MLFM069215	Datalogger pH meter M300	Datalogger pH meter M300, pH range from -1 to +15, Auto/0.001/0.01/0.1 are optional, Precision ±0.03pH	1
12	MLFM042649	Inpro 4800	Inpro 4800, Length 425mm, with pt1000	1
13	MLMF067082	3 meter cable	3 meter cable, connect the electrode to the meter	1

PlusChem Pilot Plant Reactor Horizontal Condenser, DN400

100L Pilot plant for high performance applications

PlusChem pilot plant reactor are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve. The unique design of the smart supporting structure and clamping system allows for quick and easy installation/removal of glassware. System is supplied complete with the components listed below and numbered on the image below.

- > The flange of vessel for PlusChem up to DN450
- > Better heat transfer, mass transfer effect for PlusChem
- > Flange connection for PlusChem between two glass part
- > Compared with Easychem, PlusChem with better expansibility
- > With mechanical seal, PlusChem suitable for higher speed mixing application
- > Compared with EZChem, PlusChem comes standard with pressure Rupture disc, can be sealed for short periods of time, nitrogen protection

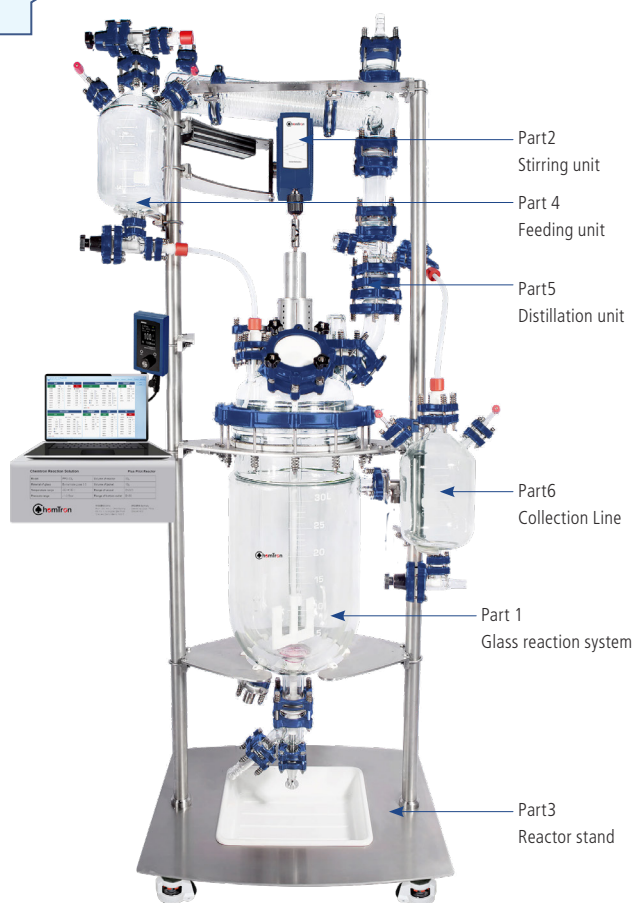
100L complete PlusChem Pilot Plant reactor

Part Number	Part	Description
KC1-PLUS-CH100LDN400	100L complete PlusChem Pilot Plant reactor-DN400, Horizontal Condenser	Complete with reaction system, Stand, 25L Distillation unit, High Torque Overhead Stirrer OHS.4DF
KC2-PLUS-CH100LDN400	100L complete PlusChem Pilot Plant reactor-DN400, Horizontal Condenser	Complete with reaction system, Stand, 25L Distillation unit, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF

Approx. Stand Dimensions:
890W x 716D x 2980H (mm)

Specification

Reaction volume	100L
Flange of vessel	DN400
Bore diameter of bottom valve	0-25mm
Reactor lid	DN400, 1×45/40(CN), 4×45/40(SN), 2×29/32(SN), 1×DN100(SN-45°)
Total openings on the lid	7
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	-1~0.5bar, Standard with rupture disc
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN25
Type of stirring bearing	Mechanical Seal
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation, if high-speed mixing applications are required, please consult your Wiggins
Diameter of stirring Rod	Ø28mm
Blade	Anchor style stir paddle
Condensation area	DN80 / 1.5m ²
Volume of collection flask	25L
Volume of liquid funnel	25L
Temperature sensor	Ø6mm×900mm



Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part 1 Glass reaction system				
1	SQHK077388	Glass reaction system	Included: 100L jacketed vessel, Bottom valve, Reactor lid, Stirring unit (without motor), Adapters, Gaskets, Clamps	1
Included				
1-1	SQEG075095	100L Jacketed Vessel	Jacketed Vessel DN400, 100L / Discharge DN50	1
1-2	SQSO038987	Adapter	Adapter, DN25 to M30*1.5 MALE	2
1-3	SQQI007877	Flange	DN25 Flange with bolt/nut and insert	2
1-4	VAJQ068912	Gasket	PTFE Gasket DN25	2
1-5	SQTK032037	Glass bottom valve	Glass bottom valve 0~25mm, DN50 with no dead volume	1
1-6	GQQI007879	Flange	DN50 Flange with bolt/nut and insert	1
1-7	VAJQ068914	Gasket	PTFE Gasket DN50	1
1-8	SQEG077508	DN400 Reactor Lid	Lid, DN400 7 Nozzles with : Central DN50 For Stirring, DN100 PTFE Nozzle For Solids, DN40 with Glass Thermometer Pocket For Pt100, DN40 with Well For pH, DN40 Free Nozzle, DN25 with Dip Pipe And Adapter For Liquids, DN80 For Vapours	1
1-9	JRS-2405-03	Gasket	Gasket, DN400, PTFE	1
1-10	JRS-2402-02	Coupling Flange	Coupling Flange, DN400	1
1-11	GZRI400100	Cap	PTFE Blank Cap DN100	1
1-12	SQQI007881	Flange	DN100 Flange with bolt/nut and insert	1
1-13	VAJQ068918	Gasket	PTFE Gasket DN100	1
1-14	VAJQ901613	Temperature sensor adapter	Temperature sensor adapter	1
1-15	SQQI007878	Flange	DN40 Flange with bolt/nut and insert	1
1-16	VAJQ068913	Gasket	PTFE Gasket DN40	1
1-17	GZRI040032	Adapter Compression	Adapter Compression, Union, DN40 To 32mm, for install temperature and pH probe	2
1-18	JRS-3006-01	Shaft coupling	10mm shaft coupling	1
1-19	SQAO078032	Stirring and sealing unit	Stirring and sealing unit ATSA50/25 for 100L reactor-DN400, included mechanical seal graphite/PTFE, stirring shaft and impeller	1
1-20	JRS-3006-11	Mechanical seal holder	Mechanical seal holder	1
Part2 Stirring unit				
2-1	CR3091-02F	Stirrer Motor with remote controller OHS.4DF	Remotely Controllable Ultra High Torque / High Speed Stirrers, Speed Range:12~1800rpm, Maximum Torque :565 N-cm, Output Power:150 W	1
Part3 Reactor stand				
3-1	JRS-4062-04	Lift Stand	Stainless Steel Frame For Reactor with Lid, DN400	1
3-2	CR13233	Spill tray	Spill tray, stainless steel, for DN400 reactor supporting structure	1
Part 4 Feeding unit				
4	SQHK079086	Feeding Line	Feeding Line 25L with valves and adapter	1
Part5 Distillation unit				
5	SQHK075995	Distillation unit	Included Distillation head, condenser, rupture disc and adapters	1
Part6 Collection Line				
6	SQHK079087	Collection Line	Collection Line 25L with valves and adapter	1
Multi channel regulating valve				
7	JRS-6101-001	Multi channel regulating valve	Multi channel regulating valve outlet with M24 circulator fittings	1
8	JRS-6102-001	Multi channel regulating valve	Multi channel regulating valve inlet with M24 circulator fittings	1
9	8930261	Metal tubing	1 m Metal tubing, insulated, 2 fittings M24x1.5 female (-100...+350 °C)	2
Optional				
10	8981014	External Pt100 sensor	External Pt100 sensor 1200 x 6 mm dia., stainless steel, PTFE coated, -75...+250 °C, 3 m cable	1
11	MLFM069215	Datalogger pH meter M300	Datalogger pH meter M300, pH range from -1 to +15, Auto/0.001/0.01/0.1 are optional, Precision ±0.03pH	1
12	MLFM042649	Inpro 4800	Inpro 4800, Length 425mm, with pt1000	1
13	MLMF067082	3 meter cable	3 meter cable, connect the electrode to the meter	1

PlusChem Pilot Plant Reactor Horizontal Condenser, DN450

100L Pilot plant for high performance applications

PlusChem pilot plant reactor are complete with support stand, overhead stirrer and glassware. Available with the optional multi channel regulating valve. The unique design of the smart supporting structure and clamping system allows for quick and easy installation/removal of glassware. System is supplied complete with the components listed below and numbered on the image below.

- > The flange of vessel for PlusChem up to DN450
- > Better heat transfer, mass transfer effect for PlusChem
- > Flange connection for PlusChem between two glass part
- > Compared with Easychem, PlusChem with better expansibility
- > With mechanical seal, PlusChem suitable for higher speed mixing application
- > Compared with EZChem, PlusChem comes standard with pressure Rupture disc, can be sealed for short periods of time, nitrogen protection

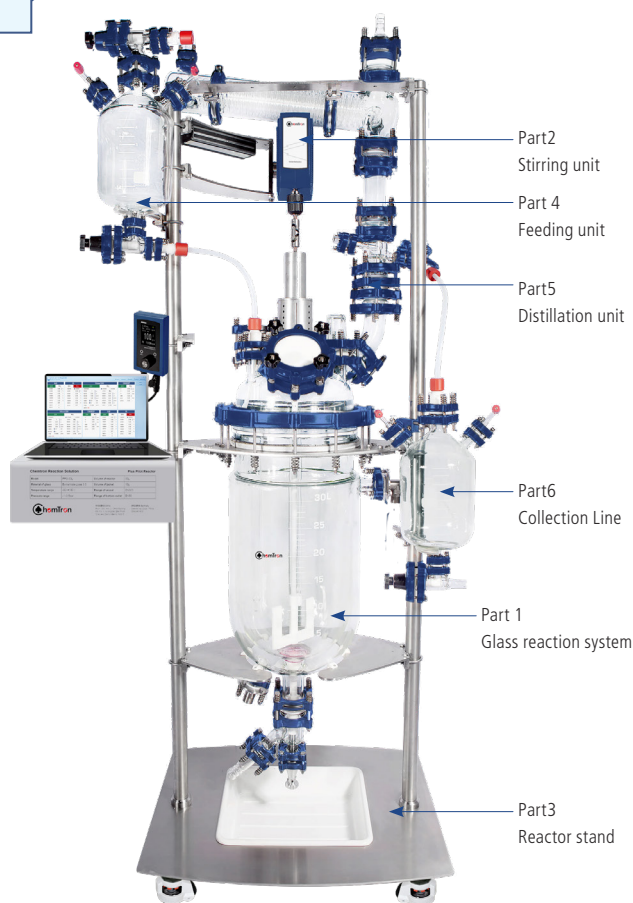
100L complete PlusChem Pilot Plant reactor

Part Number	Part	Description
KC1-PLUS-CH100LDN450	100L complete PlusChem Pilot Plant reactor-DN450, Horizontal Condenser	Complete with reaction system, Stand, 25L Distillation unit, High Torque Overhead Stirrer OHS.4DF
KC2-PLUS-CH100LDN450	100L complete PlusChem Pilot Plant reactor-DN450, Horizontal Condenser	Complete with reaction system, Stand, 25L Distillation unit, Manifold / Drain System and High Torque Overhead Stirrer OHS.4DF

Approx. Stand Dimensions:
890W x716D x 2980H (mm)

Specification

Reaction volume	100L
Flange of vessel	DN450
Bore diameter of bottom valve	0-25mm
Reactor lid	DN450, 1×45/40(CN), 4×45/40(SN), 2×29/32(SN), 1×DN100(SN-45°)
Total openings on the lid	7
Material of reaction vessel and lid	High quality borosilicate glass
Temperature range	-60~200°C
Vessel pressure	-1~0.5bar, Standard with rupture disc
Material of wet part	Borosilicate glass / PTFE / PFA
Inlet and outlet of jacket	DN25
Type of stirring bearing	Mechanical Seal
Rotation speed	Available at 500 RPM for long-term operation, 800 RPM for short-term operation, if high-speed mixing applications are required, please consult your Wiggins
Diameter of stirring Rod	Ø28mm
Blade	Anchor style stir paddle
Condensation area	DN80 / 1.5m ²
Volume of collection flask	25L
Volume of liquid funnel	25L
Temperature sensor	Ø6mm×1200mm



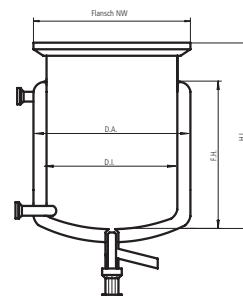
Part List

Item.	Order No. / Part	Name	Product Description	Qty
Part 1 Glass reaction system				
1	SQHK077389	Glass reaction system	Included: 100L jacketed vessel, Bottom valve, Reactor lid, Stirring unit (without motor), Adapters, Gaskets, Clamps	1
Included				
1-1	SQEG078142	100L Jacketed Vessel	Jacketed Vessel DN450, 100L / Discharge DN50	1
1-2	SQSO038987	Adapter	Adapter, DN25 to M30*1.5 MALE	2
1-3	SQQI007877	Flange	DN25 Flange with bolt/nut and insert	2
1-4	VAJQ068912	Gasket	PTFE Gasket DN25	2
1-5	SQTK032037	Glass bottom valve	Glass bottom valve 0~25mm, DN50 with no dead volume	1
1-6	GQQI007879	Flange	DN50 Flange with bolt/nut and insert	1
1-7	VAJQ068914	Gasket	PTFE Gasket DN50	1
1-8	SQEG081338	DN450 Reactor Lid	Lid, DN450 7 Nozzles with : Central DN50 For Stirring, DN100 PTFE Nozzle For Solids, DN40 with Glass Thermometer Pocket For Pt100, DN40 with Well For pH, DN40 Free Nozzle, DN25 with Dip Pipe And Adapter For Liquids, DN80 For Vapours	1
1-9	JRS-2405-04	Gasket	Gasket, DN450, PTFE	1
1-10	JRS-2402-03	Coupling Flange	Coupling Flange, DN450	1
1-11	GZRI400100	Cap	PTFE Blank Cap DN100	1
1-12	SQQI007881	Flange	DN100 Flange with bolt/nut and insert	1
1-13	VAJQ068918	Gasket	PTFE Gasket DN100	1
1-14	VAJQ901613	Temperature sensor adapter	Temperature sensor adapter	1
1-15	SQQI007878	Flange	DN40 Flange with bolt/nut and insert	1
1-16	VAJQ068913	Gasket	PTFE Gasket DN40	1
1-17	GZRI040032	Adapter Compression	Adapter Compression, Union, DN40 To 32mm, for install temperature and pH probe	2
1-18	JRS-3006-01	Shaft coupling	10mm shaft coupling	1
1-19	SQA0078033	Stirring and sealing unit	Stirring and sealing unit ATSA50/25 for 100L reactor-DN450, included mechanical seal graphite/PTFE, stirring shaft and impeller	1
1-20	JRS-3006-11	Mechanical seal holder	Mechanical seal holder	1
Part2 Stirring unit				
2-1	CR3091-02F	Stirrer Motor with remote controller OHS.4DF	Remotely Controllable Ultra High Torque / High Speed Stirrers, Speed Range:12~1800rpm, Maximum Torque :565 N-cm, Output Power:150 W	1
Part3 Reactor stand				
3-1	JRS-4062-05	Support stand	Stainless Steel Frame For Reactor with Lid, DN450	1
3-2	CR13234	Spill tray	Spill tray, stainless steel, for DN450 reactor supporting structure	1
Part 4 Feeding unit				
4	SQHK079086	Feeding Line	Feeding Line 25L with valves and adapter	1
Part5 Distillation unit				
5	SQHK075995	Distillation unit	Included Distillation head, condenser, rupture disc and adapters	1
Part6 Collection Line				
6	SQHK079087	Collection Line	Collection Line 25L with valves and adapter	1
Multi channel regulating valve				
7	JRS-6101-001	Multi channel regulating valve	Multi channel regulating valve outlet with M24 circulator fittings	1
8	JRS-6102-001	Multi channel regulating valve	Multi channel regulating valve inlet with M24 circulator fittings	1
9	8930261	Metal tubing	1 m Metal tubing, insulated, 2 fittings M24x1.5 female (-100...+350 °C)	2
Optional				
10	8981014	External Pt100 sensor	External Pt100 sensor 1200 x 6 mm dia., stainless steel, PTFE coated, -75...+250 °C, 3 m cable	1
11	MLFM069215	Datalogger pH meter M300	Datalogger pH meter M300, pH range from -1 to +15, Auto/0.001/0.01/0.1 are optional, Precision ±0.03pH	1
12	MLFM042649	Inpro 4800	Inpro 4800, Length 425mm, with pt1000	1
13	MLMF067082	3 meter cable	3 meter cable, connect the electrode to the meter	1

Components and Accessories

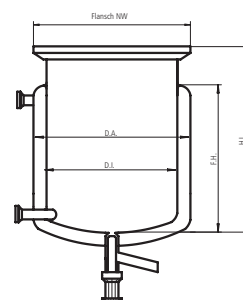
Heatable reaction vessels with thermal jacket joint DN15 flange and bottom valve

Order No.	Volume	NW	D.A.	D.I.	F.H.	H.I.	Bottom valve
CRS-0839-47	250mL	100	-	-	-	-	0-10mm
CRS-0839-48	500mL	100	130	90	112	176	0-10mm
CRS-0841-10	1000mL	100	140	110	157	210	0-10mm
CRS-0829-95	2000mL	150	160	130	218	280	0-10mm
CRS-0841-11	5000mL	150	250	215	222	299	0-10mm



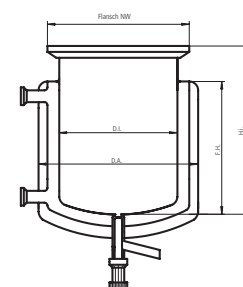
Heatable reaction vessels with thermal jacket joint DN15 flange and bottom valve

Order No.	Volume	NW	D.A.	D.I.	F.H.	H.I.	Bottom valve
TRGN 7166	250mL	60	100	60	100	150	0-10mm
TRGN 7172	500mL	100	140	100	80	140	0-10mm
TRGN 7173	1000mL	100	140	100	150	210	0-10mm
TRGN 7174	2000mL	100	140	100	270	330	0-10mm
TRGN 7180	5000mL	150	200	150	290	365	0-10mm
TRGN 7166-V2	250mL	60	100	60	100	150	0-20mm
TRGN 7172-V2	500mL	100	140	100	80	140	0-20mm
TRGN 7173-V2	1000mL	100	140	100	150	210	0-20mm
TRGN 7174-V2	2000mL	100	140	100	270	330	0-20mm
TRGN 7180V-2	5000mL	150	200	150	290	365	0-20mm



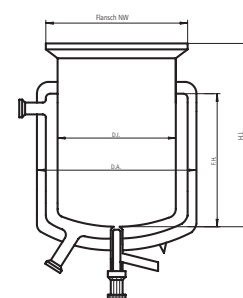
Heatable reaction vessels with vacuum jacket, with thermal jacket joint DN15 flange and bottom valve

Order No.	Volume	NW	D.A.	D.I.	F.H.	H.I.	Bottom valve
TRGN 7550	250	60	130	60	100	150	0-10mm
TRGN 7561	500	100	150	100	75	135	0-10mm
TRGN 7562	1000	100	150	100	140	200	0-10mm



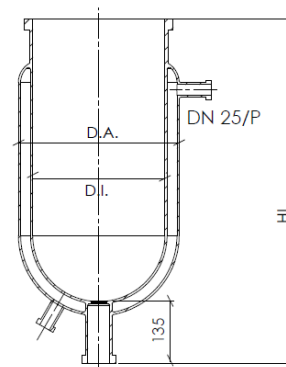
Heatable reaction vessels with vacuum jacket, with thermal jacket joint DN15 flange and bottom valve

Order No.	Volume	NW	D.A.	D.I.	F.H.	H.I.	Bottom valve
TRGN 7575	2000	150	225	150	130	245	0-10mm
TRGN 7577	5000	150	225	150	190	305	0-10mm
TRGN 7575-V2	2000	150	225	150	130	245	0-20mm
TRGN 7577-V2	5000	150	225	150	190	305	0-20mm



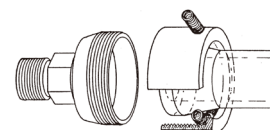
Heatable reaction vessels with thermal jacket and bottom outlet

Order No.	Volume	NW	D.A.	D.I.	H.I.	Bottom outlet	jacket joint flange
SQEG069269	10L	200	240	200	594	DN50	DN15
SQEG070921	10L	300	365	300	495	DN50	DN25
SQEG075940	20L	300	365	300	600	DN50	DN25
SQEG066063	30L	300	365	300	780	DN50	DN25
SQEG080101	50L	300	365	300	1070	DN50	DN25
SQEG075094	50L	400	488	400	850	DN50	DN25
SQEG081337	50L	450	519	450	750	DN50	DN25
SQEG075095	100L	400	488	400	1260	DN50	DN25
SQEG078142	100L	450	519	450	1100	DN50	DN25

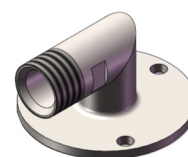


Thermal jacket connection

Order No.	Description
4200	Metal adapter for thermostat hoses (DN15 to M16x1)
4201	Silicone sealant DN15
4202	PTFE sealant DN15



Order No.	Description
SQSO038987	Metal adapter for thermostat hoses (DN25 to M24x1.5)
SQQI007877	DN25 Flange with bolt/nut and insert
VAJQ068912	PTFE sealant DN25



Bottom valve

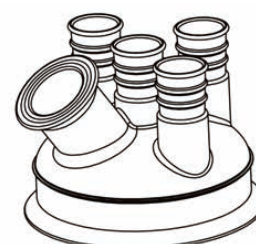
PTFE spindle valve with sloped outlet. The spindle shall be pressed in without turning. In the valve housing is an additional spring mounted in. So the spring pressure of the spindle to the valve seat can be increased spring- loaded and the spindle regulates itself. This guarantees a good tightness at large variations of temperature. The industrial valve is available with a 10 mm bore hole (standard) and as desired with a 20 mm bore hole.

Order No.	Description	Suitable for
CRS-4153B-S	10 mm bore hole, Length 95mm	250-1000ml reactor
CRS-4153B-L	10 mm bore hole, Length 115mm	2000 & 5000ml reactor
CRS-4153B-V	20 mm bore hole, Length 140mm	250-5000ml reactor
SQTK032037	0-25 mm, DN50	EZChem, PlusChem



Lid for EZChem series

Order No.	Flange NW	Centre socket	Side sockets	Solid feeding socket	Gasket	Clamp	Side cover(PTFE)
JRS-2904-12	DN200	45/50(1)	45/50(3)	60mm(1)	JRS-1701-04	JRS-4067-01	JRS-2909-01
SQEG075961	DN300	45/50(1)	45/50(4)29/32(2)	100mm(1)	VAJQ068919	SQQI007884	JRS-2909-02
SQEG079137	DN400	45/50(1)	45/50(4)29/32(2)	100mm(1)	VAJQ068920	SQQI007885	JRS-2909-02



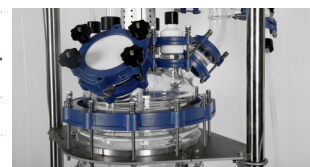
Lid for PlusChem series

Order No.	Flange NW	Centre socket	Side sockets	Solid feeding socket	Gasket	Coupling Flange
SQEG073335	DN300	DN25	DN25(1), DN40(3), DN50(1)	DN80	JRS-2405-02	2402-01
SQEG077508	DN400	DN50	DN25(1), DN40(3), DN80(1)	DN100	JRS-2405-03	2402-02
SQEG081338	DN450	DN50	DN25(1), DN40(3), DN80(1)	DN100	JRS-2405-04	2402-03

Side cover, PTFE

GZRI300080	Cap	PTFE Blank Cap DN80
SQI007880	Flange	DN80 Flange with bolt/nut and insert
VAJQ068917	Gasket	PTFE Gasket DN80

GZRI400100	Cap	PTFE Blank Cap DN100
SQI007881	Flange	DN100 Flange with bolt/nut and insert
VAJQ068918	Gasket	PTFE Gasket DN100



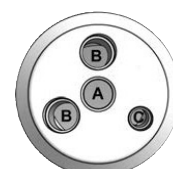
Lid for reaction vessels, Glass

Order No.	Flange NW	Centre socket	Side sockets	Solid feeding socket	O-Ring	Quick release clamp	Side cover
JRS-6443-02	DN60	24/40(1)	14/20(3)	24/40(1)	JRS-1701-01	JRS-2401-01	JRS-2103-01
JRS-2904-01	DN100	24/40(1)	24/40(3)	GL45(1)	JRS-1701-02	JRS-2401-02	JRS-2301-01
JRS-2904-03	DN150	24/40(1)	24/40(3)	GL45(1)	JRS-1701-03	JRS-2401-03	JRS-2301-01



Lid for reaction vessels, PTFE, DN60

Order No.	Flange NW	A/B	C	O-Ring
JRS-12858-10	DN60	1/2 " NPT	1/4 " NPT	JRS-1701-01
JRS-12858-15	DN60	1/2 " NPT	-	JRS-1701-01



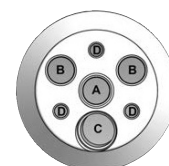
JRS-12858-10



JRS-12858-15

Lid for reaction vessels, PTFE, DN100

Order No.	Flange NW	A/B/E	C	D	O-Ring	Quick release clamp
JRS-12860-12	DN100	3/4 " NPT	1 " NPT	1/4 " NPT	JRS-1701-02	JRS-2401-02
JRS-12860-25	DN100	3/4 " NPT	1 " NPT	1/4 " NPT	JRS-1701-02	JRS-2401-02



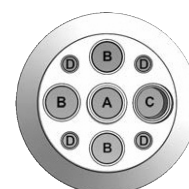
JRS-12860-25



JRS-12860-12

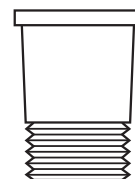
Lid for reaction vessels, PTFE, DN150

Order No.	Flange NW	A/B/C	D	O-Ring	Quick release clamp
JRS-12862-16	DN150	1 " NPT	1/2 " NPT	JRS-1701-03	JRS-2401-03



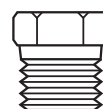
PTFE Inserts for PTFE reaction vessel lids

Order No.	Description	NPT
JRS-12866-05	19/38 PTFE Standard taper adapter, outer	1/2"
JRS-12866-08	19/38 PTFE Standard taper adapter, outer	3/4"
JRS-12866-14	24/40 PTFE Standard taper adapter, outer	1/2"
JRS-12866-16	24/40 PTFE Standard taper adapter, outer	3/4"
JRS-12866-18	24/40 PTFE Standard taper adapter, outer	1"
JRS-12866-21	29/42 PTFE Standard taper adapter, outer	1/2"
JRS-12866-23	29/42 PTFE Standard taper adapter, outer	3/4"
JRS-12866-25	29/42 PTFE Standard taper adapter, outer	1"
JRS-12866-33	45/50 PTFE Standard taper adapter, outer	3/4"
JRS-12866-35	45/50 PTFE Standard taper adapter, outer	1"



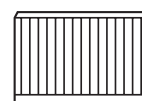
PTFE Plug

Order No.	Description	NPT
JRS-12867-04	PTFE Plug	1/4"
JRS-12867-12	PTFE Plug	1/2"
JRS-12867-18	PTFE Plug	3/4"
JRS-12867-24	PTFE Plug	1"



Screw thread compression fittings

Order No.	Description	NPT
JRS-12869-08	PTFE 8mm bore compression fitting	1/2"
JRS-12869-12	PTFE 14mm bore compression fitting	3/4"
JRS-12869-25	PTFE 14mm bore compression fitting	3/4"
JRS-12869-27	PTFE 16mm bore compression fitting	3/4"
JRS-12869-29	PTFE 19mm bore compression fitting	3/4"
JRS-12869-33	PTFE 14mm bore compression fitting	1"
JRS-12869-35	PTFE 16mm bore compression fitting	1"
JRS-12869-37	PTFE 19mm bore compression fitting	1"
JRS-12869-39	PTFE 25mm bore compression fitting	1"



Screw thread compression fittings

Order No.	Description	NPT
JRS-12871-03	PTFE Screw thread #7-NPT	1/4"
JRS-12871-07	PTFE Screw thread #7-NPT	1/2"
JRS-12871-11	PTFE Screw thread #11-NPT	1/2"
JRS-12871-14	PTFE Screw thread #15-NPT	3/4"
JRS-12871-18	PTFE Screw thread #18-NPT	3/4"
JRS-12871-25	PTFE Screw thread #25-NPT	1"



Stirring motor

Model	Speed range	Maximum Torque	远程控制	Display
WB2000-C	20~2000rpm	70N-cm	yes	LCD
WB1800-D	20~1800rpm	565N-cm	yes	TFT
WB1800-DF	20~1800rpm	565N-cm	yes	TFT
WB201-C*	20~2000rpm	70N-cm	yes	-
WB181-D*	20~1800rpm	565N-cm	yes	-

* Suitable for auto reaction controller



Shaft Coupling

Order No.	Description	Suitable for
JRS-8126-05N	8mm Shaft Coupling	250/500ml
JRS-8126-06N	10mm Shaft Coupling	1000/2000/5000ml
JRS-8126-16	16mm Shaft Coupling	EZChem 10/20/30L
JRS-8126-28	28mm Shaft Coupling	EZChem 50/100L



Stirring bearing

Order No.	Description	Suitable for
5-104-7	8mm PTFE/PEEK Stirring bearing	250/500ml
5-105-7	10mm PTFE/PEEK Stirring bearing	1000/2000/5000ml
5-112-7	16mm PTFE/PEEK Stirring bearing	EZChem 10/20/30L
JRS-8067-105	28mm Glass stirring bearing	EZChem 50/100L
JRS-8127-28	28mm Shaft Collar	EZChem 50/100L



Stirring shaft and impeller

Order No.	Description	Suitable for
5-250-8-2	Screw Propeller, 4-Bladed (PTFE Coated), Shaft Ø8mm, L=500mm, Rotor Ø40mm	250/500ml
5-255-10-2	Screw Propeller, 4-Bladed (PTFE Coated), Shaft Ø10mm, L=550mm, Rotor Ø70mm	1000ml
5-0355-10-2	Anchor Impeller (PTFE Coated), Shaft Ø10mm, L=650mm, Rotor Ø100mm	2000ml
5-0365-10-2	Anchor Impeller (PTFE Coated), Shaft Ø10mm, L=650mm, Rotor Ø140mm	5000ml
5-610090	Adjustable Turbine, Shaft Ø10mm, 90mm	5000ml
5-03100-16-2	16mm PTFE coated stirring shaft, anchor, 1000mm length	EZChem 10L
5-616100	Adjusted rotor, 4-blade angle type, shaft Ø16mm	EZChem 10/20L
JRS-8080-14	28mm Glass Stirring Shaft, 1140mm length	EZChem 30L
JRS-8080-24	28mm Glass Stirring Shaft, 1470mm length	EZChem 50/100L
JRS-8091-36	Shaft Size, 28mm; Blade Length, 178mm	EZChem 30/50/100L
JRS-8091-36N	Shaft Size, 28mm; Blade Length, 178mm	EZChem 50/100L
JRS-8093-35	Shaft Size, 28mm; Blade Length, 150mm; Blade Angle, 45	EZChem 30/50/100L



Temperature sensor adapter, PTFE Sleeves, Keck clip

Order No.	Description
JRS-5028-31	Temperature sensor adapter, O.D.=6.5mm, 24/40
JRS-7643-08	PTFE Sleeves ,24/40
JRS-7598-24	Keck clip, 24/40



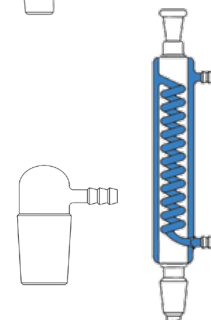
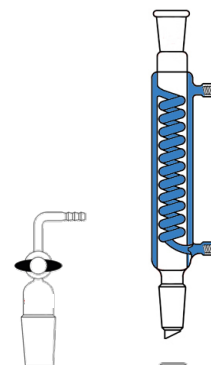
Funnel

Order No.	Description	Suitable for
JRS-2803-02	Funnel, Addition, 125mL, 0-4mm Metering Valve, 24/40 Joints	250/500ml
JRS-2803-03	Funnel, Addition, 250mL, 0-4mm Metering Valve, 24/40 Joints	1000ml
JRS-2803-04	Funnel, Addition, 500mL, 0-4mm Metering Valve, 24/40 Joints	2000ml
JRS-2803-05	Funnel, Addition, 1000mL, 0-4mm Metering Valve, 24/40 Joints	5000ml
JRS-2803-06	Funnel, Addition, 2000mL, 0-4mm Metering Valve, 24/40 Joints	EZChem 10/20/30L
JRS-2803-07	Funnel, Addition, 5000mL, 0-4mm Metering Valve, 45/50 Joints	EZChem 50/100L
JRS-2103-01	Glass stopper,24/40	
JRS-8250-20	Glass stopper,45/50	
JRS-2020-01	Offset Adapter, 24/40	
JRS-2020-02	Offset Adapter, 45/50	



Condenser

Order No.	Description	Suitable for
JRS-2501-09	Condenser with jacket and cooling coil, 300mm,24/40	250-5000ml
JRS-2501-10	Condenser with jacket and cooling coil, 400mm,24/40	5000ml
JRS-2012-02	Vacuum Adapter, 24/40, for 10mm tubing	
JRS-11081-21	Clamp holder	
JRS-11065-16	3 Prong, Extended, Large	



Order No.	Description	Suitable for
JRS-2506-13	Condenser with jacket and cooling coil, 300mm,45/50	EZChem 10/20/30L
JRS-2506-14	Condenser with jacket and cooling coil, 400mm,45/50	EZChem 50/100L
JRS-2017-02	Adapter, inlet or outlet, 90 ° , 3/8" hose barb	

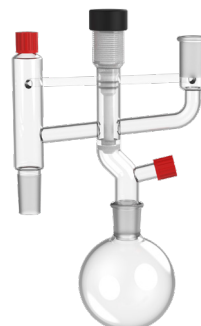
pH measurement

Order No.	Description
MLFM069215	Datalogger pH meter M300, pH range from -1 to +15, Auto/0.001/0.01/0.1 are optional, Precision ± 0.03pH
MLFM042649	Inpro 4800, Length 425mm, with pt1000
MLMF067082	3 meter cable, connect the electrode to the meter



Distillation Reflux / Divider Head, Collection flask

Order No.	Description	Suitable for
JRS-11065-16	Distillation Reflux / Divider Head Claisen Style, 24/40	All-in-one series
JRS-2302-05	Cap, Solid, GL18	All-in-one series
JRS-11081-21	Clamp holder	All-in-one series
JRS-11073-20	2 Prong, Extended, Large	All-in-one series
JRS-6887-232	250mL collection flask, Single neck, 24/40	250ml
JRS-6887-224	250mL collection flask, Single neck, 24/40	500ml
JRS-6887-226	500mL collection flask, Single neck, 24/40	1000/2000ml
JRS-6887-227	1000mL collection flask, Single neck, 24/40	5000ml

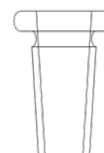


Order No.	Description	Suitable for
JRS-2620-02	Distillation Reflux / Divider Head Claisen Style, 45/50	EZChem series
JRS-2910-10	Lid for collection flask, DN150	EZChem 10/20/30/50L
JRS-2910-11	Lid for collection flask, DN200	EZChem 100L
JRS-2715-05	5L collection flask, DN150, bottom valve 0-10mm	EZChem 10/20/30L
JRS-2715-10	10L collection flask, DN150, bottom valve 0-10mm	EZChem 50L
JRS-2715-20	20L collection flask, DN200, bottom valve 0-10mm	EZChem 100L



Adapter, bushing

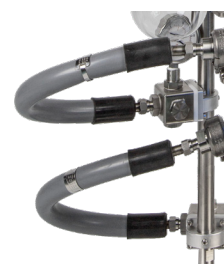
Order No.	Description	Suitable for
JRS-2002-17	Adapter, bushing, 45/50 inner, 24/40 outer	EZChem 10/20/30L



Multi channel regulating valve

Order No.	Description	Suitable for
JRS-12194-02	Multi channel regulating valve, Outlet of the reactor jacket, M16x1	All-in-one series / EZChem 10L
JRS-12194-06	Multi channel regulating valve, Inlet of the reactor jacket, M16x1	All-in-one series / EZChem 10L
8930220	0.5 m Metal tubing, 2 fittings M16x1 female	All-in-one series / EZChem 10L

Order No.	Description	Suitable for
JRS-12194-12	Multi channel regulating valve, Outlet of the reactor jacket, M30x1.5	EZChem 20L/30L/50L/100L
JRS-12194-16	Multi channel regulating valve, Inlet of the reactor jacket, M30x1.5	EZChem 20L/30L/50L/100L
8930271	1.0 m Metal tubing, 2 fittings M30x1.5 female	EZChem 20L/30L/50L/100L



Temperature sensor

Order No.	Description	Suitable for
8981015	300x6mm, SS/PTFE, 3m cable	250ml-500ml
89810154	400x6mm, SS/PTFE, 3m cable	1000ml-5000ml
8981013	600x6mm, SS/PTFE, 3m cable	EZChem 10/20/30L
8981016	900x6mm, SS/PTFE, 3m cable	EZChem 50L
8981014	1200x6mm, SS/PTFE, 3m cable	EZChem100L



Smart supporting sturcture for All-in-one series

Order No.	Description	Suitable for
CRS-2602-01	Smart supporting sturcture with DN60 flange, 400 × 400 × 1200mm	All-in-one series
CRS-2602-02	Smart supporting sturcture with DN100 flange, 400 × 400 × 1200mm	All-in-one series
CRS-2602-03	Smart supporting sturcture with DN150 flange, 400 × 400 × 1200mm	All-in-one series



QWK Reaction stand

Order No.	Description	Suitable for
CRS-2603-01	QWK Reaction stand, DN60	All-in-one series
CRS-2603-02	QWK Reaction stand, DN100	All-in-one series
CRS-2603-03	QWK Reaction stand, DN150	All-in-one series



Smart supporting sturcture for parallel reactors

Order No.	Description	Suitable for
CRS-2605-01	Smart supporting sturcture for two parallel reactors	All-in-one series
CRS-2605-02	Smart supporting sturcture for three parallel reactors	All-in-one series
CRS-2605-03	Smart supporting sturcture for four parallel reactors	All-in-one series



Smart supporting sturcture

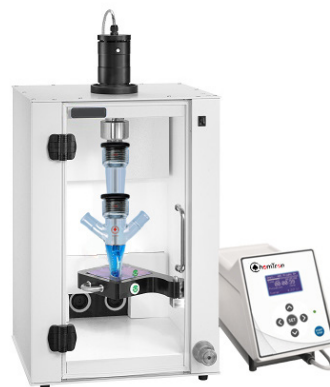
Order No.	Description	Suitable for
CRS-2602-13	For 5L Glass reaction system with DN150 flange	5000mL
JRS-3602-01	For 10L standard pilot reactor with DN200 flange, 720 × 600 × 2080mm	EZChem 10L
JRS-3602-02	For 20L and 30L standard pilot reactors with DN300 flange, 800 × 660 × 2380mm	EZChem 20L/30L
JRS-3602-03	For 50L standard pilot reactor with DN300 flange, 800 × 660 × 2650mm	EZChem 50L
JRS-3602-04	For 50L standard pilot reactor with DN400 flange, 890 × 716 × 2650mm	EZChem 50L
JRS-3602-05	For 100L standard pilot reactor with DN400 flange, 890 × 716 × 2980mm	EZChem 100L



More glass reactor for special application



Photochemical Reactors



Ultrasonic Reactors



Hydrogenation Reactors



Glass Pressure Reactors



Filter Reactors

Parallel Reaction Station

Parallel synthesizers can heat, stir, and reflux multiple samples simultaneously.

How to explore the best reaction conditions in the shortest possible time and shorten the research and development time of the subject as much as possible requires a parallel reactor that can carry out multiple experiments at the same time to accelerate the experimental research and development process.

ChemTron laboratory parallel reactors mainly include PRS-6 and PRS-12 parallel reaction station.

Parallel synthesizer is a new type of reaction synthesis scientific research instrument that combines the basic principles of synthetic chemistry and the concept of combinatorial chemistry. The so-called parallel synthesizer usually refers to the parallel reactor, and other such as parallel reaction stations, organic synthesis devices, flat reaction workstations, etc. are other titles for such instruments, which is the necessary equipment for reaction route exploration, condition optimization and efficient synthesis in modern synthetic chemistry research and development.

Parallel synthesizers can do high temperature, low temperature or normal temperature reaction. They feature high speed and efficiency, high reliability, and good repeatability. A reasonable vacuum/inert gas circulation system allows the reaction to take place in the desired environment. The main vents in the center of the parallel reactor can be connected to each reaction flask individually, and each reactor has a separate, corrosion-resistant PTFE gas path control valve to prevent cross-contamination.

The PTFE control valve is easy to operate, guarantees that the reaction takes place in a sealed state, and easily connects or disconnects the reaction tube from the vacuum/inert gas circulation system.

Heated directly by the stirring hotplate with optional digital control and Pt100 temperature sensor

Chemical-resistant Easy-On PTFE caps feature a quick-thread for fast attachment to the glass tubes and push-on connections to the stainless steel gas outlets

Aluminium inserts allow easy removal of flasks and good temperature transfer for refluxing

Round aluminium base transmits heating evenly to all positions. Compact size has small bench-top footprint. Easy to store

Central inlet/outlet for vacuum and gas, combined with a radial gas distribution system and gas-tight PTFE caps, allow reactions under an inert atmosphere

Round design makes all reaction flasks visible, with no need to lean into the fume hood

Water-cooled aluminium reflux head provides efficient refluxing within individual glass reaction flasks. Quick-release couplings prevent water loss during set-up/breakdown

Range of glass vessels: 50 ml, 100 ml and 250 ml round bottom flasks, as well as vessels with one or two sidearms

Utilises the single rotating magnetic field of the hotplate stirrer to stir all the positions evenly and powerfully

Rare earth elliptical PTFE stirring bar provides powerful stirring and a deep vortex

Carousel Stirring Hotplate offers higher temperature, powerful stirring and digital control



PRS-6 parallel reaction station

function

- > Up to 6 experiments can be performed individually or simultaneously, and Three capacities of the reaction flask are optional: 50ml, 100ml, 250ml.
- > The selection of different thermal conductive components can realize various functions such as heating, stirring, synthesis, and digestion;
- > Using PT100 temperature probe, the temperature control accuracy $\pm 0.5^{\circ}\text{C}$;
- > Ring design, easy to observe the experimental operation of the reaction, built-in time controller, automatic end of heating and stirring, can achieve unmanned operation;
- > The overall layout saves space, the operation is simple, and the modular design is convenient for operation and maintenance;
- > The new central air inlet and outlet can be separately connected to each reaction vessel, and the chemically resistant separate PTFE control valve is sealed to prevent cross-infection and ensures that the reaction reacts in a closed inert environment;
- > The same heating magnetic stirrer is used to heat and stir the reactor at different positions, so that the reaction stirring force of different positions is consistent;
- > Heating modules of various different specifications can be tailored to the needs of customers.

security

- > Built-in time controller, automatic end of heating and stirring, can achieve unmanned operation;
- > Independent safety temperature circuit, safety temperature adjustable;
- > Movable aluminum alloy heating base, highly compatible with the reaction bottle, better heating effect.

Operability

- > Easy to install and use, circuitless design. No movable parts, maintenance-free use;
- > Magnetic stirring heating discs provide high temperatures, more powerful agitation as well as digital control;
- > The use of a heating plate to heat and stir the reaction of different positions, and the reaction stirring force of different positions is consistent;
- > CPC quick coupling connection, quick release valve connector with shut-off valve for easy external or cut-off condensate.

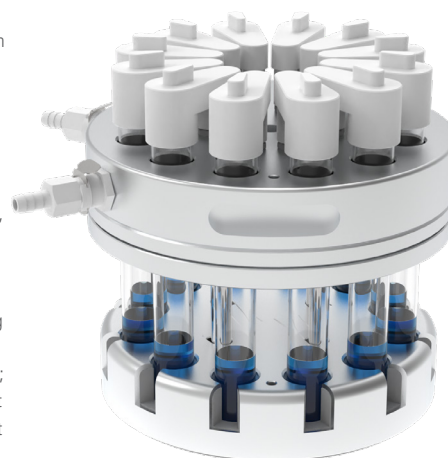
Space optimization

- > The compact design of the ring design has a small footprint and saves space in the laboratory;
- > Visual structure for easy observation of reactions, circular design, easy access to each reaction bottle, no need to perform in a fume hood.



PRS-12 parallel reaction station

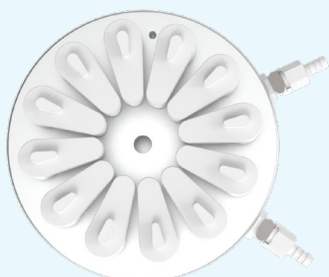
- > With 12 experimental bits, it is possible to perform a single experiment or multiple experiments at the same time
- > Separate glass reaction tube with a volume of 20 ml;
- > The selection of different thermal conductive components can realize various functions such as heating, stirring, synthesis, and digestion;
- > Suitable for standard ChemTron heating magnetic stirrers
- > Using PT100 temperature probe, the temperature control accuracy $\pm 0.5^{\circ}\text{C}$;
- > Ring design, easy to observe the experimental operation of the reaction, built-in time controller, automatic end of heating and stirring, can achieve unmanned operation;
- > The overall layout saves space, the operation is simple, and the modular design is convenient for operation and maintenance;
- > The new central air inlet and outlet can be separately connected to each reaction vessel, and the chemically resistant separate PTFE control valve is sealed to prevent cross-infection and ensures that the reaction reacts in a closed inert environment;
- > The same heating magnetic stirrer is used to heat and stir the reactor at different positions, so that the reaction stirring force of different positions is consistent;
- > Heating modules of various different specifications can be tailored to the needs of customers.



Technical information

Model	PRS-6	PRS-12
Working volume	50ml / 100ml / 250ml switchable	20mL
Number of digits	6	12
Minimum vacuum	20mbar	20mbar
Stirring speed	0-600rpm	0-600rpm
Temperature range	RT+5 ~ 180	RT+5 ~ 180
Wetted material	Borosilicate glass 3.3 / PTFE	Borosilicate glass 3.3 / PTFE
reflux	yes	yes
Inert gas protection	yes	yes

* Cylindrical type stirrer, water medium as a reference, different media, different stirrers will be different.



Samples in each reaction tube can be easily observed during the experiment, eliminating the need for a traditional glass condenser, and the top aluminum cooling block provides efficient reflux condensation.

The machine top has a built-in radial central gas path, which can simultaneously vacuum /fill in the inert gas of 12 tubular reactors, and in an inert gas environment, the reactor has a built-in cooling water coil on the top, and no external condensing tube is required to be used at the same time and uniform condensation reflux is allowed through 12 tubular reactors.

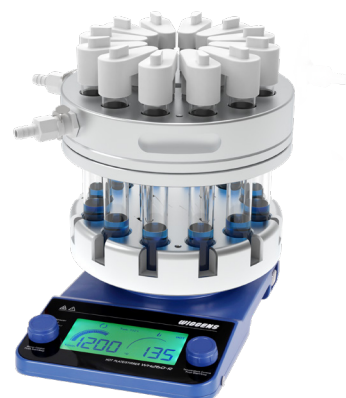
The main component of the PRS-6

Model	PRS-6	Type	Parallel reactors
Infrared Hot Plate / Stirrer	WH260-R	reactor	6 high borosilicate glass spherical flasks
condenser	6 straight condensing rephrasers	module	6-hole heating
sensor	PT100 imported from Germany	Circulating nozzles	2 PC Push Connectors
Heating block	Aluminum alloy 6-hole stabilizing tray	Gas diverter	6 stainless steel hose fittings
power	800(in)	valve	6 x PTFE control valves
Stirring speed	100~700* (rpm/min).	capacity	6* 250ml(100ml/50ml)
Temperature range	RT-180	Dimensions without stirring	Ø315x290 (mm)



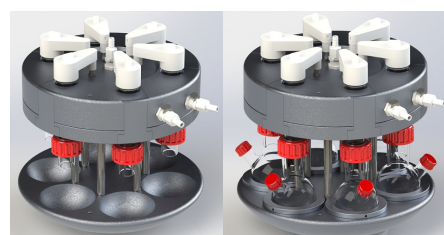
The main component of the PRS-12

Model	PRS-12	Type	Parallel reactors
Infrared Hot Plate / Stirrer	WH260-R	reactor	12 x 20mL reaction tubes
reactor	12 reaction tubes	module	12-well heating block
sensor	PT100 imported from Germany	Circulating nozzles	2 PC Push Connectors
Heating block	Aluminum alloy 12-hole stabilizing tray	Gas diverter	12 stainless steel hose fittings
power	800(in)	valve	12 x PTFE control valves
Stirring speed	100~700* (rpm/min).	capacity	12* 20ml
Temperature range	RT-180	Dimensions without stirring	Ø185x190 (mm)



Ordering information

Order number	description
PR202110	PRS-6 Parallel Reaction Module
PR202110-250	PRS-6 Parallel Reaction Module,250ml Glass Reaction Kit
PR202110-100	PRS-6 Parallel Reaction Module,100ml Glass Reaction Kit
PR202110-50	PRS-6 Parallel Reaction Module,50ml Glass Reaction Kit
PR202111-20	PRS-12 Parallel Reaction Module,20ml Glass Reaction Kit



Temperature control unit for reactors

Heating Circulators

working temperatures range: RT+5~200°C

DYNEO DD heating circulators for internal and external applications are equipped with closed bath tanks. The tanks are well insulated and include a coil for counter-cooling. An integrated drain tap makes emptying the tank safe and clean. The multilingual 3.5-inch color display and unique rotary knob provide for straightforward and intuitive operation.

Your advantages

- > Suitable for internal and external applications
- > Powerful and infinitely adjustable pressure pump
- > Flow rate 22 l/min, pressure 0.6 bar
- > Easy switching between internal and external circulation
- > Large color TFT display, multilingual interface
- > Central rotary knob (controller) simplifies operation
- > Integrated programmer
- > Integrated external Pt100 connection
- > USB port
- > RS232 interface or analog interfaces
- > Bath cover included with delivery
- > Integrated drain makes emptying liquid easy and safe.
- > High-quality thermal insulation of the bath tank

DYNEO™



| DD-BC4

| DD-BC12

| DD-BC26

Technical Data

Model	Working temperature range	Temperature stability	Heating capacity	Pump		Bath opening/bath depth	Filling volume liters	Dimensions	Weight
	°C	°C	kW	L/min	bar	W x L / D cm	L	W x L x H cm	kg
DD-BC4	RT+5~200	±0.01	2	8 ... 23	0.1 ... 0.6	13x15/15	3 ... 4.5	23 x 41 x 42	8.5
DD-BC12	RT+5~200	±0.01	2	8 ... 23	0.1 ... 0.6	22x15/20	8.5...12	33 x 49 x 47	11.9
DD-BC26	RT+5~200	±0.01	2	8 ... 23	0.1 ... 0.6	22x30/20	19...26	39 x 62 x 48	18.7

Refrigerated - Heating Circulators

working temperatures range: -50~200°C

DYNEO DD refrigerated circulators have a wide working temperature range. Refrigerated circulators are suitable for both internal and external applications. The multilingual 3.5-inch color display and unique rotary knob provide for straightforward and intuitive operation. Pump capacity is 22 l/min with pressure of 0.6 bar. The cooling machines operate precisely and reliably even at elevated ambient temperatures up to +40 °C.

Your advantages

- > Powerful cooling machines
- > Suitable for internal and external applications
- > Optimized cooling coil design saves space in the bath tank
- > Powerful and infinitely adjustable pressure pump
- > Flow rate 22 l/min, pressure 0.6 bar
- > Easy switching between internal and external circulation
- > Large color TFT display, multilingual interface
- > Central rotary knob (controller) simplifies operation
- > Integrated programmer
- > Integrated external Pt100 connection
- > USB port
- > RS232 interface or analog interfaces (optional)
- > Bath cover included with delivery
- > Integrated drain makes emptying liquid easy and safe.

DYNEO™



| DD-200F

| DD-300F

| DD-600F

| DD-1000F

Technical Data

Model	Working temperature range	Temperature stability	Heating capacity	Cooling capacity								Pump		Bath opening/ bath depth	Filling volume liters	Dimensions
	°C	°C	kW	200°C	20°C	10°C	0°C	-10°C	-20°C	-30°C	-40°C	L/min	bar	W x L /D cm	L	W x L x H cm
DD-200F	-20 ... +200	±0.01	2	0.2	0.2	0.17	0.15	0.1	0.02	-	-	8 ... 23	0.1 ... 0.6	13x15/15	3 ... 4	23 x39 x 65
DD-300F	-30 ... +200	±0.01	2	-	0.3	0.3	0.27	0.19	0.08	-	-	8 ... 23	0.1 ... 0.6	13x15/15	3 ... 4	24 x42 x 66
DD-600F	-35 ... +200	±0.01	2	0.6	0.6	0.54	0.5	0.33	0.19	-	-	8 ... 23	0.1 ... 0.6	22x15/15	5 ... 7.5	33 x47 x 69
DD-1000F	-50 ... +200	±0.01	2	-	1	1	0.9	0.73	0.5	0.3	0.13	8 ... 23	0.1 ... 0.6	22x15/15	5 ... 7.5	42 x49 x 70

Cryo-Compact Circulators

for working temperatures from -40 °C to +200 °C

The new CF series offers compact refrigerated/heating circulators. With small overall dimensions the units can even be placed on a very small surface or within a complex installation. All models offer a heating capacity of 2 kW and safety class 3 according to DIN12876-1. The maximum ambient temperature of +40 °C as well as a ventilation air cooling allow installing the units very closely side by side with other units or directly under a fume hood. Furthermore all the models feature pump connections for external temperature applications and a bath opening for temperature control of small objects directly in the circulator bath. Wetted parts are made of high quality stainless steel or plastic. The instruments provide a reliable Microprocessor electronics with high temperature stability as well as warning and safety functions.



Technical Data

Order No.	Model	Working temperature range	Temperature stability	Cooling capacity at 20	Heating capacity	Pump capacity flow rate	Pump pressure
				kW	kW		
9400330	CF30	-30 ... +150	± 0.03	0.32	2	15	0.35
9400340	CF40	-40 ... +150	± 0.03	0.47	2	15	0.35
9400331	CF31	-30 ... +200	± 0.02	0.32	2	22-26	0.4-0.7
9400341	CF41	-40 ... +200	± 0.02	0.47	2	22-26	0.4-0.7

High Temperature Circulators Forte HT

for working temperature range +40 °C to +400 °C

JULABO High Temperature Circulators can be used for temperature applications up to +400 °C. The units provide Powerful heating capacities for shortest heat-up times and rapid compensation of exothermic and endothermic reactions. The closed construction prevents oil fumes even at high temperatures. The units provide automatic heat-up and cracking protection to ensure long life-time of the bath fluid. The filling system automatically purges the fluid system of air. Units with model designation ,C.U.' are equipped with a Powerful cooling unit for tap water connection. This allows for temperature applications already at +20 °C and for rapid cooling. Typical applications: Reactors, autoclaves, distillation Distillation Columns, miniplant installations, pilot plants and production facilities.



Technical Data

Order No.	Model	Working temperature range	Temperature stability	Cooling capacity at 20	Heating capacity	Pump capacity flow rate	Pump pressure
				kW	kW		
9800031	HT30-M1	+70 ... +400	± 0.01-0.1		3	14-18	0.8-1.2
9800035	HT30-M1-CU	+40 ... +400	± 0.01-0.1	15	3	14-18	0.8-1.2
9800062	HT60-M2	+70 ... +400	± 0.01-0.1		7	14-18	0.8-1.2
9800065	HT60-M2-CU	+40 ... +400	± 0.01-0.1	15	7	14-18	0.8-1.2
9800063	HT60-M3	+70 ... +400	± 0.01-0.1		6	14-18	0.8-1.2
9800066	HT60-M3-CU	+40 ... +400	± 0.01-0.1	15	6	14-18	0.8-1.2

PRESTO®

Highly Dynamic Temperature Control Systems

JULABO Highly Dynamic Temperature Control Systems are designed specifically for extremely fast heat-up and cool-down times in external applications. These units deliver extraordinary Power and cover wide temperature ranges without the need to change the bath fluid. These characteristics make Highly Dynamic Temperature Control Systems ideal for controlling the temperature of jacketed reaction vessels.

The pinnacle of temperature technology: Advanced control technology and a small bath fluid reservoir enable highly dynamic temperature control systems to achieve rapid heat-up and cool-down. This gives you the ability to handle difficult temperature challenges quickly.

- > Ideal for precise control of external temperature applications
- > Wide working temperature ranges using one bath fluid
- > Designed for temperature control of jacketed reaction vessels or other demanding applications
- > Rapid cool-down and heat-up
- > Designed to quickly compensate exothermic and endothermic reactions
- > Highly dynamic ICC temperature control, stability to $\pm 0.01^\circ\text{C}$
- > Powerful circulating pumps, select a stage or a specific pressure
- > Extended shelf life of the bath fluid
- > Hydraulically sealed to prevent unpleasant vapors and odors
- > No condensation or ice build-up



The perfect temperature control solution.



Comfort

- Side panels without ventilation slits
- Important interfaces directly accessible from the front
- Easy to transport
- Hydraulically sealed to prevent unpleasant vapors and odors



Safety

- Actively cooled expansion vessel compensates for temperature-induced volume changes in the heat exchanger
- Simple and safe filling procedure
- Hot or cold thermal bath fluid does not come into contact with oxygen
- Three user levels with password protection



Performance

- Rapid heating and cooling
- Heating capacity up to 36 kW
- Cooling capacity up to 31 kW
- Wide temperature ranges covered with only one thermal fluid
- Powerful, magnetically coupled pumps (free of seals and leak free)



Process Safety

- Fully automated degassing procedure
- Reproducible test results
- Maximum uptime
- Electronically adjustable pumps (in stages or by setting the pressure value) (except A30)

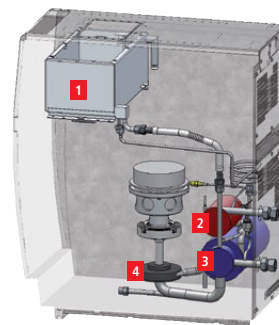


Cost Efficiency

- Less thermal bath fluid needed compared to circulators
- Smaller footprint

The PRESTO® principle

- > Expansion vessel (1)
- > Heat exchanger:
- > Heating section (2)
- > Refrigeration section (3)
- > Circulation pump (4)



Flexible set up



Space saving design

JULABO PRESTO® are the only highly dynamic temperature control systems with closed side panels without ventilation slits. Save space by placing PRESTO® units directly next to each other or your application.

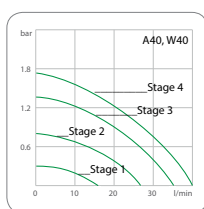
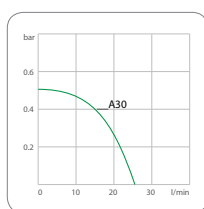
PRESTO® for extremely wide temperature ranges

PRESTO® is the perfect solution if you need to cover wide working temperature ranges. The new PRESTO® are designed to work in wide temperature ranges with one and the same thermal fluid. Forget about frequently changing the bath fluid and reduce your stock. Filling is made easy: The filling funnel can be easily accessed from the top of the PRESTO® allowing safe and easy filling.



PRESTO® with maximum performance

Providing strong cooling and heating capacities, the PRESTO® systems cover a working temperature range of -92 to +250. Highly efficient components compensate exothermic and endothermic reactions in no time (extremely fast). The smaller active heat exchange volume ensures faster heat-up and cool-down times.



PRESTO® pump Power

The new PRESTO® units generate the desired pressure at any time to protect your applications and investments. The pumps even dynamically compensate for viscosity changes in the heat transfer fluid (except A30). Permanent internal monitoring and magnetically coupled pumps (without seals and leak free) provide best performance and maximum uptime.



PRESTO® systems are closed

The closed system design of the PRESTO® prevents the hot or cold thermal fluid from getting in contact with ambient air. This lowers oxidation of the fluid at high temperatures to a minimum and prevents crystallization of humidity at low temperatures. In addition, the built-in expansion vessel is actively cooled.

Your benefit: Increased user safety and an extended life expectancy of the thermal fluid.

The absolute asset: Thanks to the closed design, the new PRESTO® prevents unpleasant oil vapor.



PRESTO® Order Information

No.	Model	Working temperature range °C	Temperature stability °C	Cooling capacity at 20 °C	Heating capacity kW	Pump capacity flow rate l/min	Pump pressure bar
9420300	PRESTO A30	-30 ... +250	±0.01 ... ±0.05	0.5	2.7	25	0.5
9420401	PRESTO A40	-40 ... +250	±0.01 ... ±0.05	1.2	2.7	16 ... 40	0.3 ... 1.7
9420452	PRESTO A45	-45 ... +250	±0.05 ... ±0.1	3.5	6	35 ... 76	0.48 ... 3.2
9420452.T	PRESTO A45t	-45 ... +250	±0.05 ... ±0.1	3.5	12	35 ... 76	0.48 ... 3.2
9420801	PRESTO A80	-80 ... +250	±0.01 ... ±0.05	1.2	1.8	16 ... 40	0.3 ... 1.7
9420801.T	PRESTO A80t	-80 ... +250	±0.01 ... ±0.05	1.2	3.4	16 ... 40	0.3 ... 1.7
9420852	PRESTO A85	-85 ... +250	±0.05 ... ±0.1	2.5	6	35 ... 80	0.48 ... 3.2
9420852.T	PRESTO A85t	-85 ... +250	±0.05 ... ±0.1	2.5	15	35 ... 80	0.48 ... 3.2
9421401	PRESTO W40	-40 ... +250	±0.01 ... ±0.05	1.2	2.7	16 ... 40	0.3 ... 1.7
9421502	PRESTO W50	-50 ... +250	±0.05 ... ±0.1	7.5	6	35 ... 76	0.48 ... 3.2
9421502.T	PRESTO W50t	-50 ... +250	±0.05 ... ±0.1	7.5	12	35 ... 76	0.48 ... 3.2
9421552	PRESTO W55	-55 ... +250	±0.05 ... ±0.2	15	15	35 ... 80	0.48 ... 3.2
9421801	PRESTO W80	-80 ... +250	±0.01 ... ±0.05	1.2	1.8	16 ... 40	0.3 ... 1.7
9421801.T	PRESTO W80t	-80 ... +250	±0.01 ... ±0.05	1.2	3.4	16 ... 40	0.3 ... 1.7
9421852	PRESTO W85	-85 ... +250	±0.05 ... ±0.1	2.5	6	35 ... 80	0.48 ... 3.2
9421852.T	PRESTO W85t	-85 ... +250	±0.05 ... ±0.1	2.5	15	35 ... 80	0.48 ... 3.2
9421912	PRESTO W91	-91 ... +250	±0.05 ... ±0.2	11	18	26 ... 80	0.5 ... 3.0
9421912.TT	PRESTO W91tt	-91 ... +250	±0.05 ... ±0.2	11	36	26 ... 80	0.5 ... 3.0
9421913.TT	PRESTO W91ttx	-91 ... +250	±0.05 ... ±0.2	11	36	18 ... 70	0.8 ... 5.5
9421913	PRESTO W91x	-91 ... +250	±0.05 ... ±0.2	11	18	18 ... 70	0.8 ... 5.5
9421922	PRESTO W92	-92 ... +250	±0.05 ... ±0.2	27	18	26 ... 80	0.5 ... 3.0
9421922.TT	PRESTO W92tt	-92 ... +250	±0.05 ... ±0.2	27	36	26 ... 80	0.5 ... 3.0
9421923.TT	PRESTO W92ttx	-92 ... +250	±0.05 ... ±0.2	27	36	18 ... 70	0.8 ... 5.5
9421923	PRESTO W92x	-92 ... +250	±0.05 ... ±0.2	27	18	18 ... 70	0.8 ... 5.5

Pump

Chemical Resistant Diaphragm Pump

All wetted parts of Chemvak C series pump is made of PTFE material which is ideal for extremely aggressive / corrosive gases and vapors.

Order No.	Model	Max. vacuum (mbar)	Max. Flow Rate (L/min)	Outlet (mm)
169420	C420	13	25	10
169520	C520	8	50	10
169610	C610	2-4	37	10
169960	C960T	2	60	10
W1031203	C1200T	2	70	DN25*
W1032002	C2000T	2	180	DN25*

* Included with Vacuum pump: 2 barbed fittings for tubing 16 mm inner dia.



C2000T

Chemical Resistant Vacuum Controller

All parts that come into contact with gases are made of PTFE or highly durable ceramic to ensure the resistance to various acid, base, or organic solvent gases.

Order No.	Model	Controllable Range	Measurement Accuracy	Displayed Vacuum Accuracy
900414-1	DVR480	0.1...1000 mbar	0.25 level	0.1 mbar
900414-2	DVR480Pro	0.1...1000 mbar	0.1 level	0.1 mbar



Solvent Recovery Systems

The waste vapor condenser at the outlet is highly efficient and compact. The condenser enables efficient recycling of solvents and active protection of the environment outstanding chemical resistance and superior vapor tolerance

Order No.	Model	Max. vacuum (mbar)	Max. Flow Rate (L/min)	Outlet (mm)	Vacuum Controller
900515	CSH520	8	50	10	without
900524	CSC610	2-4	37	10	with
900534	CSC960T	2	60	10	with



Vdose Syringe Pump

The standard syringe pump includes injection element and controller, and the injection element can be single-channel or dual-channel. Vdose serial syringe pump can carry out accurate liquid transmission automatically. The system is also programmable with a PC to realize more complicated liquid dosing operations.

Order No.	Model	Number of dosing channel	Flow Rate	Syringe Size	Dispense Resolution
V900705	Vdose4200	Single Position	1.25 µl/min~375 ml/min	50µl~25 ml	1/6000
V900704	Vdose4400	Dual Position	1.25 µl/min~375 ml/min	50µl~25 ml	1/6000



Auto-Reactor AR1.8

WIGGENS Introduces the newest addition to our reactor family "Auto reaction system AR1.8"

WIGGENS combine more than 20 years of reactor temperature controlling technology. Along with our key equipment partners, such as JULABO, Chemtron, Stroglass, ACE glass, KGW, METTLER, we assemble process auto-reactors to fit today's tough reaction requirements.

WIGGENS introduces our new systems for totally automated reactions. Systems are available in bench scale from 250mL up to 5000mL glass reaction system and kilo-scale from 10L up to 100L glass jacketed reactors. It is also suitable for 25mL to 100L stainless steel reaction systems. The standard systems can control and data log two main parameters, including jacket temperature, motor speed. The display shows both the set and actual parameters.

You can also build your own custom system using other equipment (after certified by WIGGENS), with many other accessory combinations, such as a "clean-in-place" system, "constant pH reaction" system...

AR1.8 also supports touch screens. The software can control, data log, and graph reactions as they occur in real time. The time parameter can establish a delayed start time and set the reaction run time, thus setting the actual end time. Numerous safety parameters can also be set.

AR1.8 can interact with new or existing components, such as Julabo temperature control units, Wiggins stir motors, vacuum system, liquid dosing pump, Mettler balance, and also glassware from Steroglass, ACE glass and KGW



30L Glass reaction system

"Quality reactions Require quality controller Technology systems"



Interface

Equipment monitoring, Curve monitoring, Data query, programming control and system settings

User Management

Support Multi-user login entry and password settings, as well as user logs;

Available Equipment

- > There is no limit to the number of devices that can be connected
- > Support communication ports settings, device settings, and parameter settings
- > Support digital signal communication
- > Support analog signal acquisition and output, used to connect all devices with analog communication interfaces, such as pH, conductivity, pressure sensors, flow meters, liquid pump...
- > Support switch signal control, such as solenoid valve, relay...

Software features

Main Screen

All access devices are visible and can be monitored and set up remotely

Graph Monitoring

Multi-y axis curve display, customizable curve attributes, and with curve scaling, cursor display, history curve query;

Data Management

Query real-time data and history data, and can be exported in Excel mode;
Programming Control: One parameter, or groups of parameters can be programmed in two modes: ladder mode, slope mode

Association control

Any parameter can be associated with another one or a different set of parameters
Data Upload: Upload data to the host computer or information center, The host computer or information center can also set up and monitor the equipment through the system. External communication interface supports MODBUS-RUT (RS485) , MODBUS TCP/PI (RJ45)

Log Management

User log, Running log, Programming log and Associated log, and can be queried and exported.



JULABO Presto A85

20L stainless steel distillation system

Rotary evaporator

Laboratory Rotary Evaporator
Up to 2L



STRIKE²⁸⁵
Rotary Evaporator



STRIKE³⁸⁵
Rotary Evaporator

Large Rotary Evaporator
6L, 10L, 20L



ST20



Continuous Distillation Rotary Evaporator ST20 CRE
Reliable PLC controlling system



Explosion-Proof Type - ST20 ATEX



ROTARY EVAPORATOR STRIKE A GENERATION AHEAD





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