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Greatwall

OVERVIEW CATALOG

Zhengzhou Greatwall Scientific Industrial and Trade Co., Ltd

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version:20210601

30+
Years Manufacturing Experience

3
Main Series of Product Lines

100+
National Patents

Company Profile

Since 1988, Zhengzhou Greatwall Scientific Industrial and Trade Co., Ltd.(GWSI) has grown to be a technological innovative enterprise integrated with researching,manufacturing and modern management.

We foucus on manufacturing three main series of products: Temperature Control, Vacuum Control, Distillation and Reaction System, including Rotary Evaporator, Glass Reactor, Water Circulating Vacuum Pump, Diaphragm Vacuum Pump, Dynamic Temperature Control System, Recirculating Chiller, Stirring Reaction Bath, High Temperature Circulator and Magnetic Stirrer, etc.

"GWSI" products can be used in fields like chemical, biological, pharmaceutical industries, new materials, new energy, electronics, metallurgy, petroleum, mechanics,etc., which have been exported to Asia, Europe, America, Australia and covered many universities, scientific research institutes and laboratories worldwide.

Our advantages:
ISO and CE certificates, over 30 years experience, innovative R&D team, professional service from pre-sale to after-sale.


Temperature Control Unit Assembly Lines


Fine Parts Processing


Machining Workshop


Glass Reactor Workshop


Vacuum Control Unit Workshop

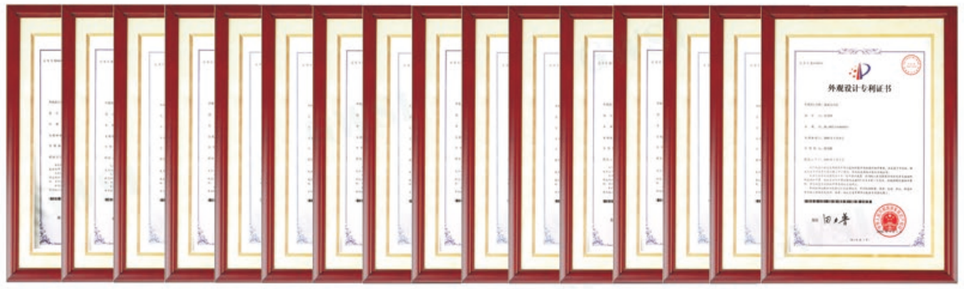

Rotary Evaporator Workshop


Temperature Control Unit Testing Lines

Patents (Over 100)

Invention Patents & Utility Model Patents

Design Patents



CE / ISO Certificates

ISO 9001

ISO 14001

ISO 45001

Lab Scale Rotary Evaporator Solution

DL-400CE R-3001 MP-201Z SHB-IIIG

Recommended Solution

Chiller	Rotary Evaporator	Vacuum Pump
DL-400CE	R-1001VN	SHB-IIIG or MP-201Z
	R-3001	

Pilot Scale Rotary Evaporator Solution

DL30-1000CE R-1020CE MP-401 SHB-B95

Recommended Solution

Chiller	Rotary Evaporator	Vacuum Pump
DL30-300CE	R-1005CE	SHB-B95
DL30-700CE	R-1010CE	SHB-B95 or MP-401
DL30-1000CE	R-1020CE	
DL30-2500CE	R-1050CE	

Lab Scale Glass Reactor Solution

ZT-5-200-30H　GR-2CE　MP-201Z　SHB-III

Recommended Solution

Temperature Control System	Glass Reactor	Vacuum Pump
DL-400CE ZT-5-200-30H	GR-1CE	SHB-III Series or MP-201Z
	GR-2CE	
	GR-3CE	
DL30-300CE ZT-5-200-30H	GR-5CE	

Pilot Scale Glass Reactor Solution

SHB-B95　MP-401　GR-20CE　ZT-20-200-30H　SY-20-250

Recommended Solution

Temperature Control System	Glass Reactor	Vacuum Pump
SY-20-250	GR-20CE	SHB-B95 or MP-401
LT-20-80		
ZT-20-200-30/40/80H		
SY-50-250	GR-50CE	
LT-50-80		
ZT-50-200-30/40/80H		
SY-100-250	GR-100CE	
LT-100-80		
ZT-100-200-30/40/80H		

Contents » » »

R-series Rotary Evaporator (Lab-scale)

Advantages

- Patented technology of double sealing of Teflon(PTFE) and FV rubber can ensure the negative pressure level.
- Wide power supply range 100V to 240V～, 50/60Hz.
- Patented structure, the tilt angle of the evaporating flask is adjustable.
- Quick lock button on rotation axis makes it easier to be installed or removed.
- Motorized lift, Belt drive mechanism makes it running more smoothly, with lower noise during rotation process.
- Individual main machine and water bath design for easy future upgrades.

Technical Specifications

Model		R-3001
Rotation Speed		10~280 rpm
Vacuum Leakage		≤0.33kPa/min
Temperature Range		Room temp +5℃~95℃
Temperature Stability		±1.5℃
Temperature Control		Keypad input, Digital display
Speed Control		Knob setting, Digital display
Protection		Over-current protection, ground fault protection, over-temperature protection
Lifting		Electric Lifting
Rotary Motor Power		40W
Heating Power		1300W
Condenser Type		Vertical
Condensing Area		0.126㎡
Evaporating Flask		500ml /1000ml
Receiving Flask		1000ml
Vacuum Sealing		Double sealing rings made of Teflon+ Viton
Water Bath Size · Capacity		ϕ254×130mm · Max.5L
Evaporating Speed	Water	23.5ml/min
Lifting Distance		150mm
Lifting Speed		10mm/s
Ambient Temperature		5~35℃
Overall Dimensions		620W×400D×700 (850) H mm
Net Weight		13.5kg
Power Supply		110V~, 60Hz or 220-240V~, 50/60Hz

R-3001

Rotary Evaporator

R-series Rotary Evaporator (Lab-scale)

Applications

It is suitable for experiment of evaporation, distillation or separation of chemicals.It usually works with vacuum pump and chiller as a whole system to meet the production and experimental requirements.

Advantages

- Patented technology of double sealing of Teflon (PTFE) and FV rubber can ensure the negative pressure level.
- The tilt angle of the evaporating flask is adjustable.
- Evaporating flask can be lifted manually by the handle.
- Specialized motor and reasonable structure design ensures the evaporating flask running smoothly and steadily.
- PID controller ensures precise temperature control.
- Digital display of rotation speed and bath temperature.
- Individual main machine and water bath design for easy future upgrades.

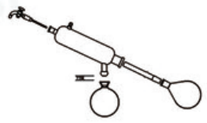
Technical Specifications

Model		R-1001VN
Rotation Speed		20~180rpm
Evaporating Speed		20ml/min
Vacuum Leakage		≤0.33kPa/min
Temperature Range		Room temp +5℃~95℃
Temperature Stability		±1.5℃
Temperature Control		Keypad input, Digital display
Speed Control		Knob setting, Digital display
Safety Functions		Over-current protection, ground fault protection, over-temperature protection
Lifting		Weight balancing Gliding elevating+ manual lifting
Rotary Motor Power		25W
Heating Power		1050W
Condensing Area		0.126㎡
Evaporating Flask		500ml /1000ml
Receiving Flask		1000ml
Vacuum Sealing		Double sealing rings made of Teflon+ Viton
Water Bath Size · Capacity		ϕ254×130mm · Max.5L
Evaporating Speed	Water	15ml/min
	Ethanol	20ml/min
Lifting Distance		100+150mm
Ambient Temperature		5~35℃
Overall Dimensions		640W×400D×670 (920) H mm
Net Weight		13kg
Power Supply		110V~, 60Hz or 220-240V~, 50/60Hz

R-1001VN

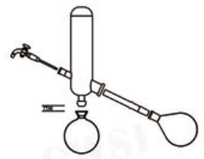
Glass Components

Three types of condenser available.



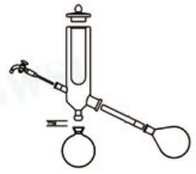
LN type

Lean condenser with higher cooling efficiency.



VN type

Vertical condenser with smaller foot print.



JN type

Jacketed condenser with lower temperature by dry ice cooling.

Accessories

Evaporating flask 500ml

Evaporating flask 1000ml

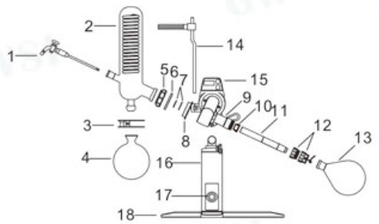
Receiving flask 1000ml

Sealing ring

Receiving flask clamp

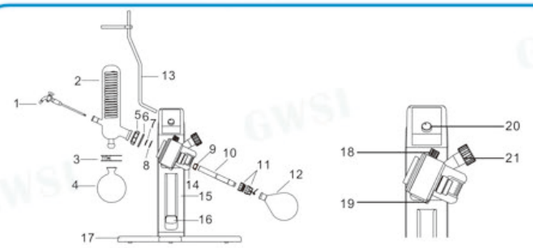
Configuration

R-1001VN



1. Glass feeding valve
2. Glass condenser
3. Receiving flask clamp
4. Receiving flask
5. Condenser locknut
6. Spring ring
7. Vacuum sealing ring
8. Bearing end cap
9. Stainless steel rotation axis
10. Tapered sleeve
11. Glass rotation axis
12. Evaporating flask quick-release nut
13. Evaporating flask
14. Condenser support +Rubber bracket
15. Motor shield
16. Lifting column
17. Lifting handle
18. Base

R-3001



1. Glass feeding valve
2. Glass condenser
3. Receiving flask clamp
4. Receiving flask
5. Condenser locknut
6. Spring ring
7. Deputy vacuum seal
8. Main vacuum seal
9. Tapered sleeve
10. Glass rotation axis
11. Evaporating flask quick-release nut
12. Evaporating flask
13. Condenser support
14. Motor shield
15. Lifting column
16. Lifting handle
17. Base
18. Locking knob
19. Quick locking knob
20. Rotation speed adjusting knob
21. Angle adjusting knob

R-series Rotary Evaporator (Pilot-scale)

Applications

Large capacity and large opening of evaporating flask give larger evaporation surface.The evaporating flask keeps rotating when it is constantly heated by water bath, and solvent evaporates more efficiently under vacuum condition. It can be used for pilot-scale production in biology engineering, pharmaceutical industry, chemical industry and food processing.It usually works with water circulating vacuum pump, diaphragm vacuum pump, recirculating chiller, constant-temperature circulator, low temperature circulating pump, etc.

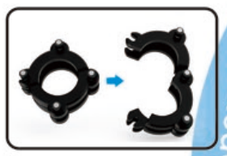
Advantages

- Patented technology of double sealing of Teflon (PTFE) and FV rubber ensures the negative pressure level.
- Automatic switch valve makes continuous collection possible without affecting vacuum degree and without stopping distillation.
- Teflon discharge valve is corrosion resistant and contamination free.
- Water bath jacket protecting operator from scalding by hot liquid.

Large LCD display screen, one-touch setting mode

National Patent

Rubber insulation jacket can protect operator from scalding by hot liquid.



Fast-assembly flange: For quick and easy installation

Evaporating flask cap spanner, easy to remove evaporating flask

Note: This picture is a regular type

Sealing gasket

Auxiliary sealing part

Main sealing part

Patented structure in sealing ensuring leakage ≤ 2000Pa/h

Technical Specifications

Model		R-1005CE	R-1005Ex	R-1010CE	R-1010Ex	R-1020CE	R-1020Ex	R-1050CE	R-1050Ex
Evaporating flask (mm)		5L, ϕ50		10L, ϕ125		20L, ϕ125		50L, ϕ125	
Receiving flask (L)		3		5		10		20	
Speed-regulation		Continuously variable							
Power supply		220-240V~, 50/60Hz		220-240V~, 50/60Hz		3~380V, 50Hz or 220V, 60Hz		3~380V, 50Hz or 220V, 60Hz	
Heating power (kW)		2	3	3.5	4.5	6		6	
Overall power (kW)		2.3	3.1	3.8	4.8	6.3		6.3	
Rotation speed (rpm)		20 ~ 140	20 ~ 140	20 ~ 130	20 ~ 130	20 ~ 130	20 ~ 130	20 ~ 110	20~110
Power of motor (W)		250	60	250	180	250	180	250	370
Condenser		Vertical type dual-cooling coils		Vertical type, Main + auxiliary dual-cooling cold traps		Vertical type, Main + auxiliary triple-cooling cold traps			
Condensation area (m²)	Main	0.278		0.39		0.948		1.15	
	Auxiliary	–		0.253		0.358		0.4	
Bath material (mm)		Stainless steel 304 Φ300*170		Stainless steel 304 Φ370*220		Stainless steel 304 Φ450*260		Stainless steel 304 Φ550*320	
Temperature range		RT~95℃							
Temperature display		LCD	Digital display	LCD	Digital display	LCD	Digital display	LCD	Digital display
Vacuum Leakage		≤2kPa/h							
Evaporating speed (L/h)	Water	2.0		3.2		5.0		9.0	
	Ethanol	5.4		8.6		14.3		24.5	
Lifting function		Motorized lift	Manual lift	Motorized lift	Manual lift	Motorized lift	Manual lift	Motorized lift + Manual lift	Manual lift
Elevating stroke (mm)		0 ~ 150		0 ~ 160		0 ~ 190		0 ~ 180	
Dimensions (mm)		840W × 520D × 1140H	840W × 520D × 1140H	1040W × 580D × 1760H	1040W × 580D × 1800H	1120W×680D×1900H	1195W×740D×2040H	1345W × 770D × 2230H	1345W × 770D × 2230H
Explosion-proof control box dimensions (mm)		–	500W×455D×985H	–	500W×455D×985H	–	500W×455D×985H	–	500W×455D×985H
Net weight (kg)	Main machine	35	60	61	85	90	115	140	200
	Explosion-proof control box	–	58	–	58	–	58	–	58

Optional Accessories

Water bath cover

①

②

Flask carrier

③

R-1005CE Solution

DL30-300CE

R-1005CE

SHB-IIIG

R-1050CE Solution

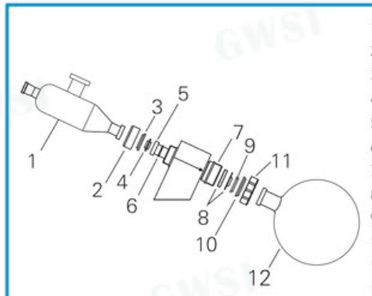
DL30-2500CE

R-1050CE

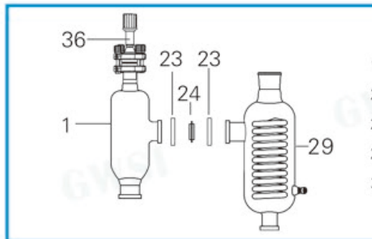
SHB-B95

R-1020CE

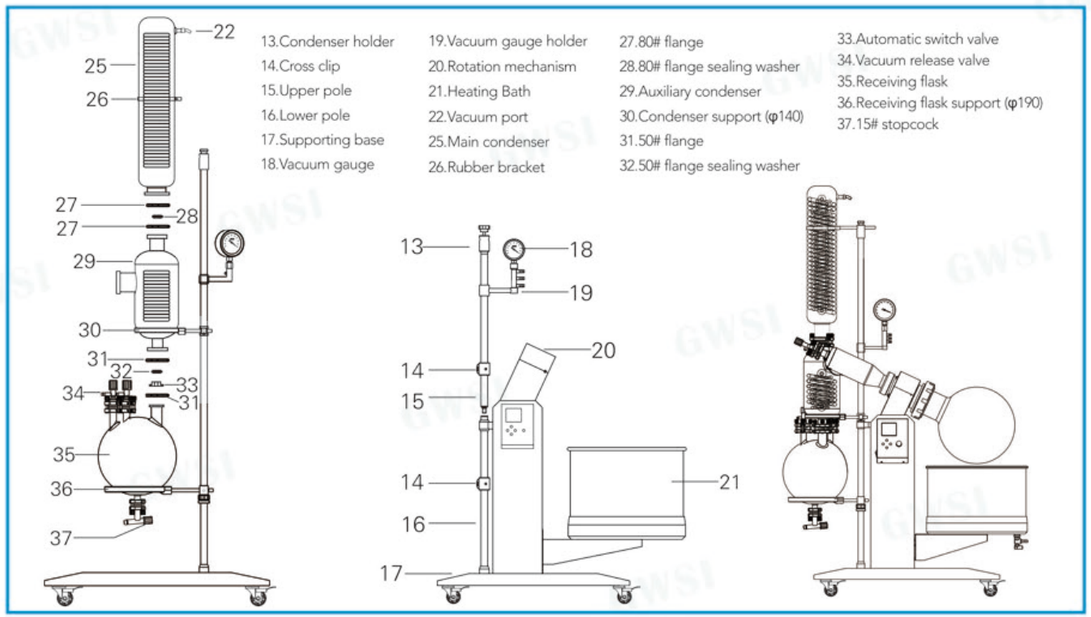
R-1020CE



1.Three-way flask
2.Three-way flask locknut
3.Three-way flask locknut ring
4.70# Flange sealing ring
5.Glass rotation axis
6.Sleeve
7.Coupling
8.Vacuum sealing ring
9.Taper ring
10.Evaporating flask locknut ring
11.Evaporating flask locknut
12.Evaporating flask



1.Three-way flask
23.60# flange
24.60# flange sealing washer
29.Auxiliary condenser
36.40# feeding valve



13.Condenser holder
14.Cross clip
15.Upper pole
16.Lower pole
17.Supporting base
18.Vacuum gauge

19.Vacuum gauge holder
20.Rotation mechanism
21.Heating Bath
22.Vacuum port
25.Main condenser
26.Rubber bracket

27.80# flange
28.80# flange sealing washer
29.Auxiliary condenser
30.Condenser support (φ140)
31.50# flange
32.50# flange sealing washer

33.Automatic switch valve
34.Vacuum release valve
35.Receiving flask
36.Receiving flask support (φ190)
37.15# stopcock

Explosion-Proof Rotary Evaporator

Features

- High borosilicate 3.3 glass has good physical and chemical properties.
- Main and auxiliary condensers, high efficiency triple-circulating condensing tube has bigger condensing area.
- High borosilicate glass three-way flask can prevent flushing and bumping to ensure safe operation.
- Patented technology of double sealing of Teflon (PTFE) and FV rubber ensures negative pressure level.
- Auto switch valve makes continuous collecting possible without affecting vacuum degree and without stopping distillation.
- The motor, heater, electric control box and low liquid level protector are all explosion proof type. Explosion-proof grade: Exd II BT4, all explosion-proof parts have related certificates .
- Motorized stainless steel water bath, has liquid level protection and dry- run protection .
- Quick-clamp for easy installation and removal of glass components.
- PTFE discharge valve is corrosion resistant and contamination free.
- Lockable casters, easy to move and lock.
- LCD control panel.

Technical Specifications

Model		R-2020Ex	R-2050Ex
Temperature range (℃)		RT+5~95	
Ambient temperature (℃)		5~35	
Relative humidity		≤ 70%	
Display		LCD display	
Heating power (W)		4000	6000
Overall power (W)		4500	6500
Pressure rise rate of vacuum system (Pa/h)		2k	
Rotary motor power (W)		370	
Speed-regulation		Frequency control	
Rotation speed (rpm)		20~130	20~110
Condenser type		Vertical, main + auxiliary condensers, high efficient triple coil	
Condensing area (㎡)		Main condenser:0.948 Auxiliary condenser:0.358	Main condenser:1.15 Auxiliary condenser:0.4
Evaporating flask (L-mm)		20, ϕ125	50, ϕ125
Receiving flask (L)		10	20
Water bath size (mm)		SUS304,450×260	SUS304,560×340
Water bath temperature stability (℃)		±1.5	
Lifting method		Motorized lift	
Lifting distance (mm)		0~160	0~170
Vacuum sealing (patent technology)		PTFE + PTFE Viton rubber	
Discharge valve (valve plug)		PTFE	
Evaporating speed (L/h)	Water	5.0	9.0
	Ethanol	14.3	24.5
Protection functions		Over-current, ground-fault, over temperature,dry- run protection	
Communication		Rs485 interface standard Modbus communication protocol	
Ex-grade		ExdIIBT4	
Protection rating		IP65	
Mobility		Lockable casters	
Power supply		3~,380V,50Hz or 1~,220V,60Hz	
Dimensions (mm)		1210W×740D×2040H	1360W×770D×2250H

NEW

R-2020Ex

Glass Reactor

Stirring shaft sealing

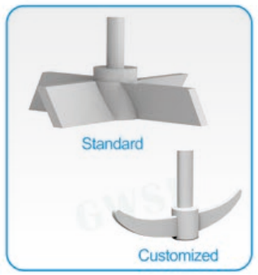
Excellent sealing,
Durable and corrosion resistant, abrasion resistant, corrosion resistant,
long service life

Thermal insulation stainless steel hose

Temperature range: -100 - 250℃, can be used for both high and low temperature circulating fluid pipeline

Thermal Insulation Jacket (Optional)

For thermal insulation;
Designed with window for observation.



Propeller stirrer

Stirring shaft is PTFE rainforced stainless steel, strong and durable

Explosion-proof motor

Ex grade is dⅡBT4

For ⅡB explosive atmospheres, we use dⅡBT4 explosion-proof electrical parts for safety concern.

Explosion-proof control box

Greatwall

Glass Reactor

- 1L, 2L, 3L, 5L volume available.
- Designed with vacuum gauge and temperature display unit.
- Imported motor for stable stirring performance.
- Imported stirrer and sealing guide with high level of chemical resistance, anti-whip and reduced vibration, no shedding.

GR-2CE (desktop)

GR-5CE (floor type)

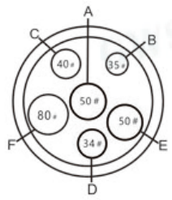
GR-5Ex (floor type)

Technical Specifications

Model	Jacket capacity (L)	Vessel capacity (L)	Funnel size (L)	Stirring speed (rpm)	Power supply	Operating pressure (Mpa)	Condensing surface (㎡)	Dimensions (mm)	Net weight (kg)
GR-1CE	1.2	1	0.2	40~500	110V~60Hz or220-240V~, 50/60Hz	Ordinary pressure or negative pressure	0.025	480Wx420Dx1110H	28
GR-2CE	1.7	2	0.2					480Wx480Dx1200H	29
GR-3CE	2	3	0.2						30
GR-5CE	3	5	0.5	20~500	110V-240V~,50/60Hz	Ordinary pressure or negative pressure	0.045	600Wx520Dx1600H	34
GR-5Ex				50~500	220-240V~,50/60Hz				50

Glass Reactor

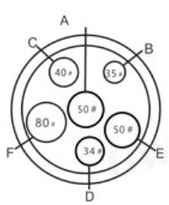
GR-10CE



A) 50# flange, stirring shaft
B) 35# flange, connected to temperature sensor
C) 40/38 tapered frosted mouth, connected to constant-pressure funnel
D) 34/35 tapered frosted mouth, liquid charging port
E) 50# ball milling port, connected to condenser
F) 80# flange, solid feeding port

10L reactor lid layout

GR-20CE



A) 50# flange, stirring shaft
B) 35# flange, connected to temperature sensor
C) 40/38 tapered frosted mouth, connected to constant-pressure funnel
D) 34/35 tapered frosted mouth, liquid charging port
E) 50# ball milling port, connected to condenser
F) 80# flange, solid feeding port

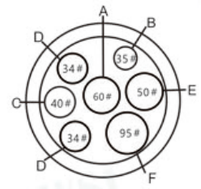
20L~50L reactor lid layout

Technical Specifications

Model	Jacket capacity (L)	vessel capacity (L)	Funnel size (L)	Stirring speed (rpm)	Power supply	Operating pressure	Condensing surface (m²)	Power (reduction ratio:3) (w)	Drain port ground clearance (mm)	Dimensions (mm)	Net weight (kg)
GR-10CE	8	10	1	CE: 20~500 Ex: 50~500	110V-240V~, 50/60Hz	Ordinary pressure or negative pressure	0.234	370	320	845Wx640Dx1780H	48
GR-10Ex					220-240V~, 50/60Hz			180			61
GR-20CE	9	20	2		110V-240V~, 50/60Hz	Ordinary pressure or negative pressure	0.341	370		845Wx640Dx1910H	67
GR-20Ex					220-240V~, 50/60Hz			180			80
GR-30CE	10	30			110V-240V~, 50/60Hz			370		845Wx640Dx2030H	72
GR-30Ex					220-240V~, 50/60Hz			180			83
GR-50CE	13	50			110V-240V~, 50/60Hz		0.429	370		900Wx690Dx2100H	82
GR-50Ex					220-240V~, 50/60Hz			180			95

Glass Reactor (80L~100L)

GR-100CE



A) 60# flange, stirring shaft
B) 35# flange, connected to temperature sensor
C) 40/38 tapered frosted mouth, connected to feeding bottle
D) 34/35 tapered frosted mouth, liquid charging port
E) 50# ball milling port, connected to condenser
F) 95# flange mouth, solid feeding port

80L~100L reactor lid (Φ290) layout

Recommended Solution:

Glass reactor	Temperature control device		Vacuum pump
	Model	Temperature range (℃)	
GR-80CE	SY-100-250	RT+5~250	MP-401 SHB-B95
GR-80Ex	ZT-100-200-30H	-30~200	
GR-100CE	SY-100-250	RT+5~250	
GR-100Ex	ZT-100-200-30H	-30~200	

Technical Specifications

Model	Jacket capacity (L)	Vessel capacity (L)	Funnel size (L)	Collection flask (L)	Stirring speed (rpm)	Power supply	Operating pressure (Mpa)	Condensing surface (m²)	Power (reduction ratio:3) (w)	Drain port ground clearance (mm)	Dimensions (mm)	Net weight (kg)
GR-80CE	25	80	10	20	CE: 20~500 Ex: 50~500	110V-240V~, 50/60Hz	Ordinary pressure or negative pressure	0.954	370	340	1270Wx810Dx2360H	110
GR-80Ex												124
GR-100CE	25	100				220-240V~, 50/60Hz						119
GR-100Ex												132

Lifting Glass Reactor (GRL)

- The reaction vessel and the lid can be separated, the glass vessel can be lifted up, and can be angled 120 degree both sides, which makes it more convenient to operate and clean.
- Openings are sealed with flanges, ensuring higher vacuum degree, easy to disassemble.

National Patent

CE

GRL-20CE

Lifting

Rotating

Technical Specifications

Model	GRL-10CE	GRL-10Ex	GRL-20CE	GRL-20Ex	GRL-30CE	GRL-30Ex	GRL-50CE	GRL-50Ex
Glass material	High borosilicate glass							
Sensor material	Stainless steel coated by fluorine, double anti-corrosion							
Temperature range (℃)	-80~200℃							
Bearable temperature difference (℃)	60℃ (Triple wall), 80℃ (Double wall)							
Condensing surface (m²)	0.245						0.42	
Max. jacket pressure (MPa)	≤0.03							
Diameter of circulating fluid inlet and outlet	Rc3/4"							
Power supply	CE:110-240V~, 50/60Hz Ex:220-240V~, 50/60Hz							
Stirring motor power (W)	370	180	370	180	370	180	370	180
Max. drain port ground clearance (mm)	580		530		620		570	
Lifting distance (mm)	400							
Dimensions (mm)	850Wx1100Dx2050H				860Wx1100Dx2500H			

Lifting Filter Glass Reactor

- High borosilicate glass 3.3 has good physical and chemical properties. Wide working temperature range: -80 ~ 200℃.
- The glass vessel can be lifted up, and can be angled 120° both sides, which makes it more convenient to operate and clean.
- The inlet/outlet of the jacket connected with stainless steel hose to decrease the stress of the liquid inlet/outlet.
- Lockable casters with adjustable foot structure for easy moving and locating.
- Equipped with a lift truck, making it easier to disassemble the filter part for cleaning or replacing of filter paper or filter cloth.
- BLDC (brushless DC) stirring motor, stepless speed regulation, LED digital display of torque, set stirring speed, measured speed, temperature and running time.
- The data can be copied through RS485 communication interface on the operation box.
- Patent technology of stirrer sealing guide comes along with good sealing performance and long service life.
- PT100 temperature sensor has high temperature accuracy, SUS304 material coated with PTFE tube, double anti-corrosion.
- Propeller-type shaft stirrer, PTFE stirring rotor, PTFE jacketed stainless steel (SUS304) stirring shaft, highly corrosion resistant.

Technical Specifications

Model			GRL-50CEf
Vessel volume			50L
Jacket volume			About 16L
Interface size of liquid outlet/inlet			R^c3/4"
Power supply			110V~, 60Hz or 220-240V~, 50/60Hz
Condenser heat exchanging area			0.42m²
Constant pressure funnel volume			2000ml
Material of glass parts			High borosilicate glass 3.3
Reactor lid openings	Stirring port		50 # flange port
	Temperature sensor port		35 # flange port
	Condenser connection port Vacuum gauge installation port		50 # flange port 35 # flange port
	Constant pressure funnel elbow port		35 # flange port 80 # flange port
Filter parts	Material		PTFE sand core (filter paper/cloth to be prepared by users)
			1~250μm available
	Filtration accuracy	Perforated filter plate hole size	30~50μm 16~30μm 7~16μm 4~7μm
Filtration area			About 0.16 m²
Material of filtration base plate			PTFE
Mobility			Lockable casters + adjustable foot
Working temperature range			-80~200℃ ※Please pay attention to the Max. tolerable temperature of filter cloth
Maxtemperature difference inside/outside the vessel			ΔT≤80℃
Operating pressure			Ordinary pressure
Max. jacket pressure			≤+0.03 MPa
Max. filtration pressure difference			0.1 MPa
Stirring motor power			370 W
Max. torque			5.4N·m
Stirring speed range			20~500rpm

Lifting filter glass reactor

Customized Filter Glass Reactor*

Applications

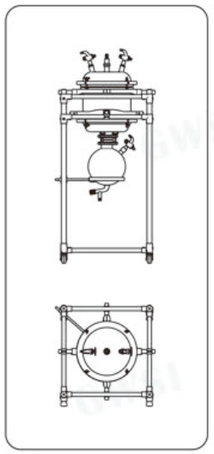
Pilot-scale solid-liquid separation process.

Advantages

- Stainless steel supporting framework with beautiful appearance and strong corrosion resistance;
- High borosilicate glass vessel with strong corrosion resistance and wide range of application, the filtering process is visible.
- Various options of filter plate.
- The filter plate is convenient to remove and easy to clean and maintain.

Technical Specifications

Name		Filter Glass Reactor		
Model		CLZZ - 20	CLZZ - 30	CLZZ - 50
Filter Vessel	Capacity (L)	20	30	50
	Vessel Diameter (mm)	ϕ300		ϕ365
Receiving Flask Capacity (L)		10	20	30
Glass Material		High Borosilicate 3.3		
Material of Frame and Connection Parts		SUS304		
Glass Vessel Bearable Temperature Range		-80~200℃		
Operating Pressure (MPa)		Ordinary pressure or negative pressure		
Reactor Lid Openings	Liquid Charging Port	40# Flange		
	Vacuum Port	24# standard ground		
	Exhaust Vent	24# standard ground		
Sand Core	Material	PTFE		
	Specification	Optional		
Material of Filter Plate		PTFE		
Dimensions (mm)		650W×650D×1500H	650W×650D×1600H	650W×650D×1800H



*Customized products

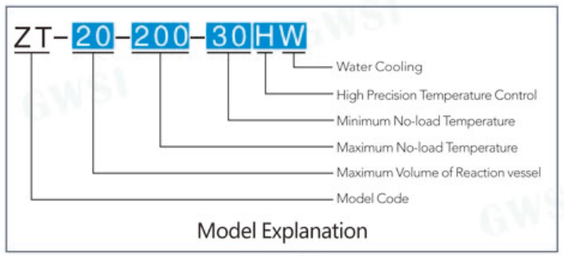
Dynamic Temperature Control System

Applications

Dynamic temperature control system is a hermetic refrigerated heating circulator which is designed for fast heat-up and cool-down times in external applications. It is widely used to provide cold source and heat source to jacketed reaction vessel, tanks or other demanding applications in fields like pharmaceutical, chemical and biological industries etc.

Features

- Wide working temperature ranges using one bath fluid: -80℃~200℃.
- Refrigeration system, Heating system and Pre-cooling system can work independently or work together continuously.
- Rapid heat-up or cool-down.
- Cool down directly from high temperature.
- The bath fluid runs in a closed loop.It is not likely to volatilize and oxidize under high temperature, or absorb water from ambient air under low temperature, which increased bath fluid life.
- Maintenance-free heat exchanger provides powerful heat exchanging.
- Designed with bath fluid monitoring window, avoid shortage of liquid.
- Multi safety protections: Over temperature cut-off, electrical leakage protection, over-current protection etc.
- It is available with air cooling and water cooling.



Patents

Temperature control

Advantages

12 Multi-way of control
Two ways of control: Set value and segmented program control.
Program code range: 1~120
Segment code range: 0~99

11 Rapid Heat Transfer
Powerful circulating pumps and a large hose cross section ensure maximized flow rates and optimum heat transfer.

10 Space Saving Design
Compact design requiring little space.

9 Safety Protections
Over-temperature protection, electricity leakage protection, over-current protection etc.

8 Pre-cooling Function
Specially designed pre-cooling function for rapid cool-down with less power consumption, which is very efficient and energy saving.

7 Reservation Function
Set the start time and related parameters in advance, the machine will start running automatically when time is due.

1 Process Safety
Pre-cooling system and powerful circulating pump ensure safe cooling down, which extends the service life of the machine.

2 De-Gassing Design
This design helps exhaust the air in the tubing and jacket easily after application set up, which makes the bath fluid flow fast and smoothly into the jacket.

3 Completely Closed Circulating Loop
The bath fluid runs in a closed loop, which increased its service life.

4 Touchscreen Color Display
5.7 Touchscreen for easy operation and shows the working process.Graphic curve of material temperature and time are always in view.

5 Precise Temperature Control
PID intelligent temperature control stability ±0.5 .

6 Convenient Data-Communication
Designed with Rs485, USB interface and external temperature sensor interface.

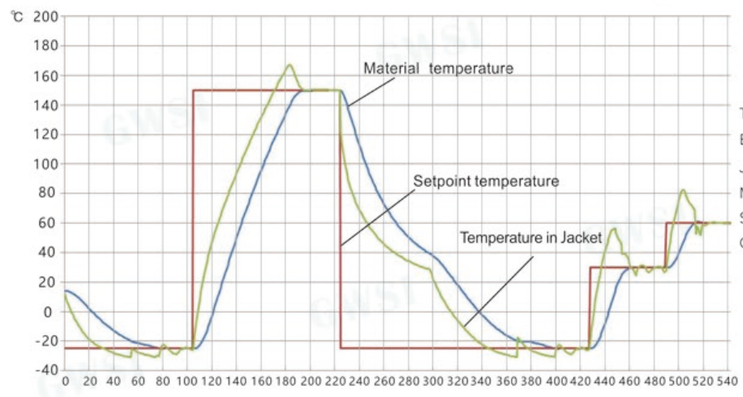
Technical Specifications

Model	Working Temperature Range (℃)	Temperature Stability (℃)	Power Supply	Overall Power (kW)	Cooling Capacity (W) 200℃	10℃	-10℃	℃	-30℃	-35 ℃	-60℃	-78 ℃	Refrigerant	Bath Fluid Filling Volume (L)	Heating Power (kW)	Pump Capacity Flow Rate (L/min)	Pump Capacity Pressure (bar)	Dimensions (mm)	Net Weight (kg)
ZT-5-200-30H	-30~200	±0.5	220-240V~, 50Hz	3	0.6	0.6	0.4	0.3	0.2	–	–	–	R404A	3.5	2	25	1.5	420W×640D×850H	106
ZT-20-200-30H	-30~200			4.7	1.7	2.6	1.1	0.7	0.3	–	–	–	R410A	10	3	30	1	550W×820D×1370H	177
ZT-20-200-40H	-40~200			5.7	1.7	4.3	3.1	2.3	1.2	0.3	–	–	R404A					730W×840D×1470H	223
ZT-20-200-80H	-80~200			7.9	1.7	4.3	3.1	2.3	1.2	2	1.4	0.45	R404A /R23	12				885W×1315D×1565H	393
ZT-50-200-30H	-30~200		3~, 380V, 50Hz	9.2	3	7.5	4.6	2.5	1.0	–	–	–	R404A	13	6			813W×1092D×1445H	251
ZT-50-200-40H	-40~200			11.2	3	8.2	6.2	4.5	2.5	1.0	–	–	R404A					750W×1200D×1585H	347
ZT-50-200-80H	-80~200			15	3	8.2	6.2	4.5	2.5	5.0	3.0	1.0	R404A /R23	17				885W×1340D×1580H	465
ZT-100-200-30H	-30~200			18	3	8.2	6.2	4.5	2.5	–	–	–	R404A	20	12	45	1.4	875W×1375D×1687H	385
ZT-100-200-40H	-40~200			24.1	3	18	12	7.3	4.0	1.7	–	–	R404A			40	1.2	910W×1465D×1820H	461
ZT-100-200-80H	-80~200			35.1	3	18	12	7.3	4.0	10	6.0	2.5	R404A /R23	25				960W×1860D×1720H	714
ZT-100-200-80AH	-80~200			21	3	8.2	6.2	4.5	2.5	5.0	3.0	1	R404A /R23	22		30	1	950W×1355D×1730H	504

Note: The interface size of ZT circulation pipeline is 3/4". Outer circulation hose is triple insulation stainless steel, hose connection size 3/4", hose length is 2.6m.
The interface size of ZT-5-200-30H circulation pipeline is 1/2", connected circulation hose interface is 1/2".

Typical Applications

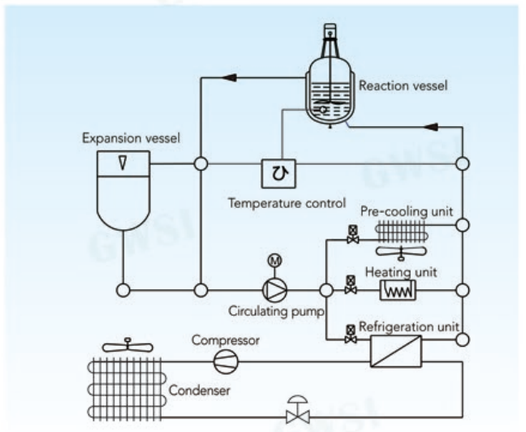
- Temperature control of jacketed or double jacketed reactors used in Chemical, Pharmaceutical and Biological industries.
- Temperature control of material testing.
- Temperature control during distillation process.
- Analog control of temperature changes during a certain process.
- Thermostatic control system.
- Temperature control of semiconductor device.
- Temperature control of thermal testing platform.
- Temperature control of vacuum chambers.



Temperature control system: ZT-20-200-30H
Bath fluid: Therminol D12
Jacketed glass reactor : GR-20CE (20L)
Material in the reactor : Therminol D12,16L
Stirring Speed: 100rpm
Control Mode: Control the internal temperature of reactor

Case Study of ZT-20-200-30H & GR-20CE jacketed glass reactor (20L)

Working Theory



The bath fluid is cooled down by compressor, and heated up by electrical heating, and it is transferred by circulating pump. The temperature of whole system is controlled by electronic control parts.

DL Series Recirculating Chiller

Applications

Chiller is usually used to provide constant low temperature condition for inspections,chemical, biological and physical experiments which need to be carried on under low temperature, mainly used for medicine and health care, food process, chemical industry and teaching in colleges and research institutes.

Advantages

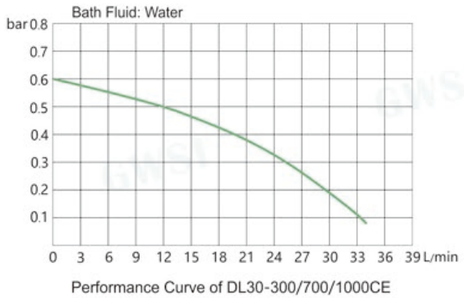
- Applications in Chemistry and Biology, like biological fermenter, chemical synthetic vessel etc.
- Equipped with world famous brand compressor, ensure low noise, high reliability, stable performance and long life span.
- Completely closed circulation system prevents bath fluid from evaporation or contamination.
- Built-in filters in circulation hose avoids possible blockage.
- Environmental friendly CFC-free refrigerant meets international standards.
- Compact design with good-looking appearance.
- Designed with liquid level monitor, which make it easier to check the bath fluid left in the tank.
- Pressure of bath fluid can be measured by the pressure gauge which is fixed near the fluid outlet.
- Variable models to meet customer's different requirements.
- Removable side panels for quick and easy cleaning and maintenance.

- Eco-friendly refrigerant meets international environmental protection standard;
- Intelligent control system will prevent compressor from overloading which will extend its service life;
- Closed circulation system reduced evaporation of refrigerant.

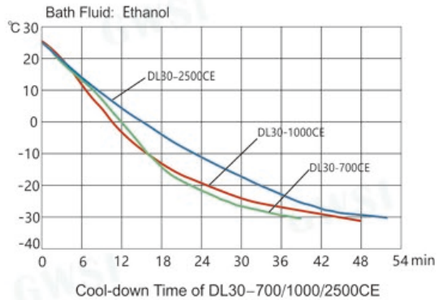
Typical Application Sample

DL30-1000CE | R-1020CE | MP-401

Pump Capacity



Performance Curve of DL30-300/700/1000CE



Cool-down Time of DL30-700/1000/2500CE

Technical Specifications

Model		DL20-900CE	DL30-300CE	DL30-700CE
Working Temperature Range*		-20 ~ 25℃	-30 ~ 5℃	
Temperature Stability		± 2℃		
Power supply		220-240V~, 50/60Hz		
Rated power (W)		1275	1070	1475
Cooling Capacity (W)	0℃	1650	1250	1750
	-10℃	950	800	1100
	-20℃	500	300	700
	-25℃	-	150	300
Refrigerant		R410A		
Bath Fluid Filling Volume (L)		10		17
Circulating Pump Flow Rate (L/min)		20		
Pressure (bar)		0.4		
Hose Connection Size		1 / 2"		
Dimensions (mm)		435W × 690D × 720H		465W × 690D × 820H
Net weight (kg)		70		80

Model		DL30-1000CE	DL30-1800CE	DL30-2500CE
Working Temperature Range*		-30 ~ 5℃		
Temperature Stability		± 2℃		
Power supply		220-240V~, 50/60Hz	220-240V~, 60Hz	3~, 380V, 50Hz
Rated power (W)		1935	1070	2820
Cooling Capacity (W)	0℃	2800	500	6000
	-10℃	1800	300	4000
	-20℃	1000	1800	2500
	-25℃	500	1000	1100
Refrigerant		R410A	R404A	
Bath Fluid Filling Volume (L)		30	40	
Circulating Pump Flow Rate (L/min)		20	30	
Pressure (bar)		0.4	1	
Hose Connection Size		1 / 2"	3 / 4"	
Dimensions (mm)		495W × 760D × 860H	635W × 1105D × 1066H	650W × 1055D × 1070H
Net weight (kg)		100	180	195

*Working Temperature ≤ Room Temp-5℃

DL Series Recirculating Chiller

Applications

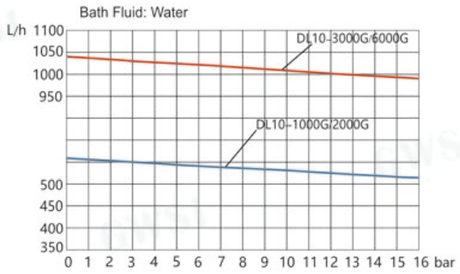
This series of chiller is usually used to provide constant low temperature condition for inspections, chemical, biological and physical experiments which need to be carried on under low temperature, mainly used for medicine and health care, food process, chemical industry and teaching in colleges and research institutes.

Advantages

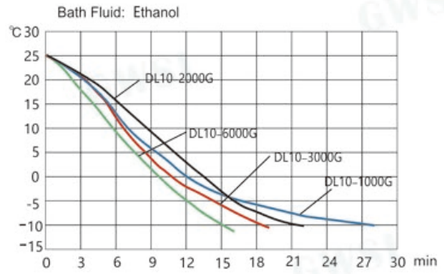
- Applications in Chemistry and Biology, like Atomic absorption, ICP-MS, Nuclear Magnetic Resonance, biological fermenter, chemical reaction vessel (synthetic vessel) etc.
- Material Area: Electron Microscopy, X-ray diffraction, X fluorescence, Magnetron sputtering, vacuum coating machine, Laser machine etc.
- Equipped with world famous brand compressor, ensure low noise, high reliability, stable performance and long life span.
- High performance circulating pump or imported high pressure vane pump with stable and reliable quality. Pump pressure is adjustable.
- Completely closed circulation system prevents bath fluid from evaporation or contamination.
- Built-in filters in circulation hose avoids possible blockage.
- Environmental friendly CFC-free refrigerant meets international standards.
- Compact design with good-looking appearance.
- Designed with liquid level monitor, which make it easier to check the bath fluid left in the tank.
- Pressure of bath fluid can be measured by the pressure gauge which is fixed near the fluid outlet.
- Variable models to meet customer's different requirements.
- Removable side panels for quick and easy cleaning and maintenance.

- Eco-friendly refrigerant meets international environmental protection standard; Intelligent control system will prevent compressor from overloading which will extend its service life; closed circulation system reduced evaporation of refrigerant.

Pump Capacity



Performance Curve of DL10-1000G/2000G/3000G/6000G



Cool-down Time of DL10-1000G/2000G/3000G/6000G

Technical Specifications

Model	DL10-1000G	DL10-2000G	DL10-3000G	DL10-6000G
Working Temperature Range*	-10~25℃			
Temperature Stability	±2℃			
Power supply	220-240V~, 50Hz			3~, 380V, 50Hz
Bath Fluid Filling Volume (L)	10	17	30	40
Cooling Capacity (W)	1000@15℃	2000@15℃	3000@15℃	6000@15℃
Refrigerant	R134a			
Circulating Pump Flow Rate (L/min)	7		16	
Pressure (bar)	1-10			
Hose Connection Size	1/2"			
Dimensions (mm)	435W×690D×720H	465W×690D×820H	495W×760D×860H	650W×1055D×1070H
Net weight (Kg)	73	86	108	195

* Working Temperature ≤ Room Temp-5℃

DL - 400CE Recirculating Chiller

Applications

This compact chiller is particularly designed for lab scale Rotary Evaporator. It is reasonably structured with small foot-print, which can be placed on bench or on floor.

Advantages

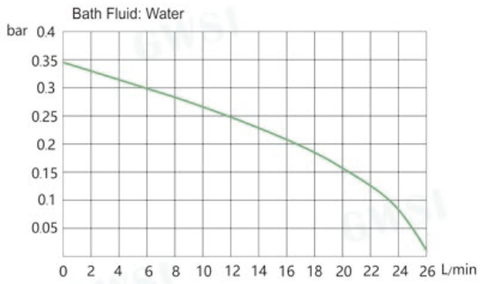
- Circulating joint nozzle can be rotated 360°which makes it easy to connect with corollary equipment.
- All parts contacting refrigerant is made of stainless steel 304 and macromolecule anti-corrosive material.
- World famous brand compressor ensures high reliability and long life-span.

DL-400CE

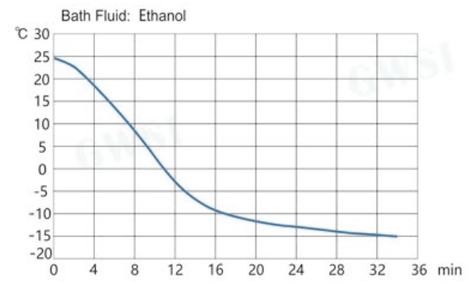
R-3001

MP-201Z

Pump Capacity



Performance Curve of DL-400CE



Cool-down Time of DL-400CE

Technical Specifications

Model	Working Temperature Range (℃)*	Power Supply	Overall Power (W)	Cooling Capacity (W)	Refrigerant	Bath Fluid Filling Volume (L)	Material of bath fluid tank	Circulating Pump Flow Rate (L/min)	Pressure (bar)	Dimensions (mm)	Net Weight (kg)
DL-400CE	-15~25	220-240V~, 50Hz	450	400	R134a	3	Stainless Steel 304	17	0.2	260W×410D×550H	26

* Working Temperature ≤ Room Temp-5℃

Cold Trap

Applications

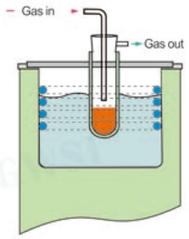
Cold Trap is used to capture water vapor and harmful gases emission from vacuum drying oven and pressure reduced concentration device, improving efficiency of vacuum system, extending life-span of vacuum pump.

Advantages

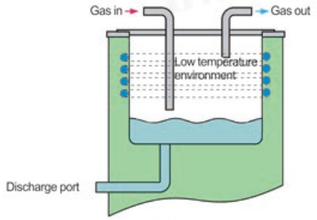
- It can be used in drying system for capacitor, battery pole and battery cell.
- It also can be used as pre-freezing bath and low temperature bath.
- Digital display of bath temperature for better control, which makes it easier to start the vacuum pump at right time.
- Stainless steel 316/304 liquid bath can be used to do water or ethanol cooling experiments. If equipped with glass condenser, it also can be used to deal with acid or organic solvents.
- Designed with drain valve for easy discharge of collected liquid.

CT-40 / CT-80

CT-40x / CT-80x



Indirect Cooling



Direct cooling

Technical Specifications

Model	Min. Temperature of Unloading (℃)	Power Supply	Cooling Method	Cooling Capacity (W)	Refrigerant	Bath Fluid Filling Volume (L)	Material of bath fluid tank	Dimensions (mm)	Net Weight (kg)	Bath Tank Size
CT-40	-40	110V , 60Hz or 220-240V~, 50/60Hz	Indirect cooling	300	R404A	5	SUS 304	350W×470D×811H	45	Φ160*250mm
CT-40x			Direct cooling				SUS 316	388W×454D×781H		
CT-80	-80	110V , 60Hz or 220V , 60Hz	Indirect cooling		R404A, R23		SUS 304	438W×528D×1210H		
CT-80x			Direct cooling				SUS 316	438W×528D×1200H		

Heating Circulator

Applications

This is a water-cooled type heating circulator.The bath fluid is heated up by electricity and transferred to reactors by circulating pump, which can be applied to pharmaceutical plants, chemical industry and petrochemical industry.

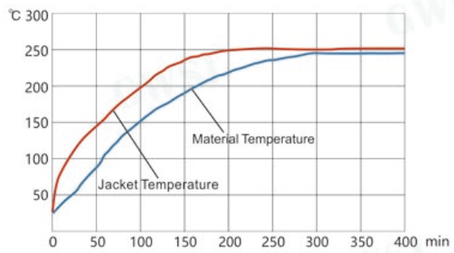
Advantages

- Designed with exhaust valve, which makes it easy and smooth when filling in bath fluid.
- Using oil as bath fluid will extend the service life of circulator.
- Over-temperature alarm, overload protection, overcurrent protection Intelligent PID control with high precision
- Bath fluid tank is made of anti-corrosive stainless steel.
- Heating bath fluid circulates in a closed system, which extends its service time.
- Tap water cooling design can cool down the high temperature bath fluid rapidly.

SY-20-250

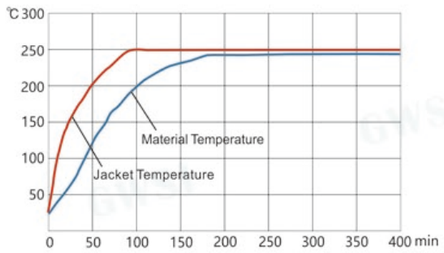
Heat - up Time

Heating Circulator: SY-20-250
Bath Fluid: Polydimethyl Siloxane (PMX-200-50cst)
Jacketed Glass Reactor: GR-20CE (20L)
Material in Reactor Polydimethyl Siloxane (PMX-200-50cst,16L)
Stirring Speed: 100rpm



SY-20-250 & GR-20CE (20L Glass Reactor)

Heating Circulator: SY-100-250
Bath Fluid: Polydimethyl Siloxane (PMX-200-50cst)
Jacketed Glass Reactor: GR-100CE (100L)
Material in Reactor Polydimethyl Siloxane (PMX-200-50cst,80L)
Stirring Speed: 100rpm



SY-100-250 & GR-100CE (100L Glass Reactor)

Technical Specifications

Model		SY-20-250	SY-50-250	SY-100–250	SY-200–200
Maximum Temperature		250℃	250℃	250℃	200℃
Working Temperature Range		RT+5 ~ 250℃			RT+5 ~ 200℃
Temperature Stability		±0.5℃			
Ambient Temperature		5~40℃	5~40℃	5~40℃	5~40℃
Ambient Humidity		≤70%	≤70%	≤70%	≤70%
Power Supply		220-240V~,50Hz	3 ~ , 380V, 50Hz	3 ~ , 380V, 50Hz	3 ~ , 380V, 50Hz
Pump Capacity	Power (W)	370	370	1500	750
	Max Flow Rate (L/min)	42	42	100	165
	Max Pressure (bar)	2.8	2.8	1.5	2.0
Connection Size		3/4"	3/4"	3/4"	1"
Bath Fluid Filling Volume (L)		9	13	17	22
Heating Power (kW)		3	6	12	24
Communication protocol		RS485 interface standard			-
Dimensions (mm)		430W×690D×1075H	430W×690D×1225H	640W×940D×1585H	650W×940D×1585H
Net Weight (kg)		60	120	185	240

Tubing: Insulated stainless steel, hose length is 2 m.

Thermostatic Magnetic Stirring Bath

Features

It can be used as water bath or oil bath. Built-in strong magnetic stirrer in the bath.

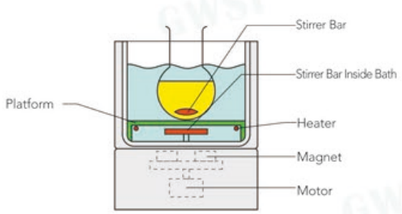
- Stainless steel 316 heater.
- The magnetic stirring system drives the stirrer to rotate synchronistically, so that the solution in the bath can be heated and stirred evenly.
- DC brushless motor ensures stable performance and continuous working.
- High temperature magnet can continuously work at 300℃ without losing magnetism.
- PID temperature controller ensures accurate temperature control.
- Key setting and digital display make it easy to operate.
- Equipped with two sensors make bath temperature and container temperature display alternately.

HWCL-3

HWCL-3S

National Patent

HWCL-5



Technical Specifications

Model	HWCL-3	HWCL-3S	HWCL-5
Temperature Range	Oil bath:RT+5~200℃ Water bath:RT+5~95℃		
Temperature Stability	± 1℃		
Temperature Display	Keypad Input, Digital Display		
Stirring Speed Setting	Knob Setting		
Stirring Speed (rpm)	0 ~ 2000		
Bath Dimensions (mm)	Φ220 × 110	Φ220 ×160	Φ254 × 130
Bath Capacity (L)	4	6	6.5
Heating Power (W)	500	500	1050
Max.Flask can be placed (ml)	3000	3000	5000
Power Supply (V/Hz)	110V~， 60Hz or 220-240V~， 50/60Hz		
Dimensions (mm)	260W × 280D × 230H	260W × 280D × 280H	260W × 280D × 260H
Net Weight (kg)	5	5.5	6

MP Diaphragm Vacuum Pump

Applications

MP series diaphragm vacuum pump provides negative pressure condition for processes of evaporation, distillation, crystallization, drying, sublimation, reduced pressure filtration etc. It can be used to extract a variety of highly toxic, flammable and explosive, strong acid, and alkali sample.

Advantages

- A substitute for water circulating vacuum pump and rotary vane vacuum pump.
- No need of any working medium. No friction between working parts.
- Vacuum level can be adjusted according to experiment requirements.
- All parts that contacting gases are made of PTFE + FV rubber with chemical resistance.
- Valve plate adopts imported materials.
- Motor is supplied by famous manufacturer.
- With reasonable design, transmission runs smoothly.
- With small volume and light weight, easy to move.Saving space.

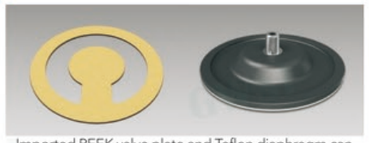
filter

MP-201

National Patent

MP-401

Filter bottle can prevent entry of solid particles and water into pump.



Imported PEEK valve plate and Teflon diaphragm can avoid gas corrosion.

Vacuum regulator can adjust vacuum degree as needed.

Muffler can reduce noise.

Technical Specifications

Model	Motor Power (W)	Power Supply	Inlet Diameter (mm)	Ultimate Vacuum (MPa) / Extreme pressure (mbar)	Pumping Speed (L/min)	Dimensions (mm)	Net Weight (kg)
MP-201	180	220-240V~,50Hz	φ10× φ6	0.095/50	25	310W×225D×168H	10
MP-401	300	220-240V~,50Hz	φ10× φ6.5		45	195W×440D×310H	23

Recommended connection hose: φ12☒φ6

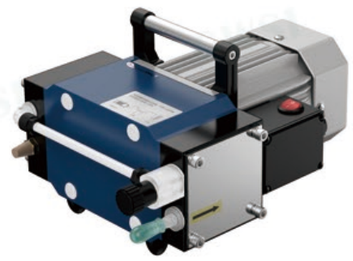
MP Diaphragm Vacuum Pump

Features

It provides negative pressure condition for processes of evaporation, distillation, crystallization, drying, sublimation, reduced pressure filtration etc. It can be used to extract a variety of highly toxic, flammable and explosive, strong acid, and alkali sample.

- After 1500 hours of fatigue testing, it can work stably.
- Low temperature motor, keeps the pump working at low temperature.
- New designed structure improve the vacuum and pumping rate significantly.
- A substitute for water circulating vacuum pump and rotary vane vacuum pump.
- No need of water, clean and eco-friendly.
- All parts that contacting gases are made of PTFE + FV rubber with chemical resistance.
- Valve plate adopts imported materials.
- Small size, light weight, easy to move, save space.
- Easy to maintain and repair.

new



MP-201Z

MP-301E

Technical Specifications

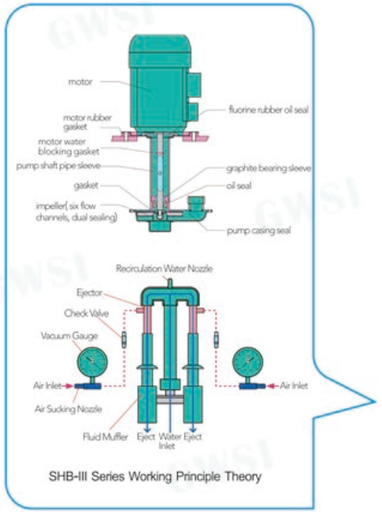
Model	MP-201Z	MP-301E
Motor Power (W)	180	
Power Supply	220-240V~,50Hz	
Inlet Diameter (mm)	φ10× φ6	φ10× φ6.5
Max. Vacuum Degree (Mpa) / Ultimate Pressure (mbar)	0.0992/8	0.0935/65
Max. Pumping Speed (L/min)	25	40
Dimensions (mm)	310W×225D×168H	
Net Weight (kg)	10	

Recommended connection hose: φ12☒φ6

SHB-III/IIIA/IIIS Water Circulating Vacuum Pump

Features

Water Circulating Vacuum Pump takes circulating water as working fluid to create negative pressure by fluid jet.It can provide negative pressure condition for the processes of evaporation, distillation, crystallization, drying, sublimation, pressure-reducing filtration and so on, particularly be suitable for labs and small scale test of industries such as universities and colleges, scientific research institutes, chemical industry, pharmacy, biochemistry, foodstuff,agrochemical, agricultural engineering, biological engineering.



SHB-III Series Working Principle Theory


SHB-Ⅲ

Complete Set


DL-400CE


R-3001


SHB-Ⅲ

SHB-IIIG Water Circulating Vacuum Pump

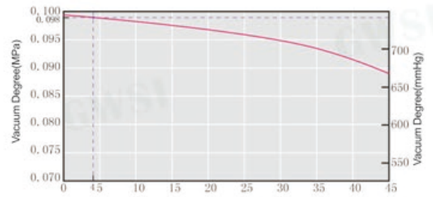
Features

- Spray Paint Teflon (PTFE) plus FV Rubber on the ejector and suction nozzle. Hose is made of fluorine rubber.
- Better corrosion resistance and more reliability and longer service life.

Model	SHB－Ⅲ / ⅢA/ ⅢS/ ⅢG	SHB－Ⅳ
Power (W)	180	250
Power Supply	110V~, 60Hz or 220－240V~, 50/60Hz	220－240V~, 50Hz
Flow (L/min)	80	
Lift (m)	10	
Ultimate Vacuum (MPa)	0.098 （ 2KPa ）	0.098 (2KPa)
Single Tap Air Suction Amount	10L/min	
Number of Tap	2	4
Safety	Check valve, over－current protection	
Water Tank Capacity (L)	15	18
Water Tank Material	PP	PP
Dimensions (mm)	385W × 280D × 420H	470W × 260D × 516H
Net Weight (kg)	11	17


SHB－Ⅲ G


SHB－Ⅳ



Relation Between Vacuum Degree And Water Temperature

Main parts comparison

Material / Model / Part Name	SHB－Ⅲ	SHB－ⅢA	SHB－ⅢS	SHB－ⅢG
Ejector	PP	SUS304	PP	Copper+PTFE
Tee Junction	PP	PP	PP	PP
Check Valve	PP+Copper	PP+Copper	PP+Copper	PP+Copper
Suction Nozzle	PP	SUS304	PP	Copper+PTFE
Pump Body	SUS304	SUS304	PP	SUS304
Impeller	SUS304	SUS304	PA	SUS304
Connection Pipe	NR	NR	NR	FPM


SHB－ⅢA

SHB-B95 Water Circulating Vacuum Pump

Features

Widely applied to research experiments,small scale tests and small scale production with the process of evaporation, distillation, crystallization, drying, sublimation, pressure-reducing filtration.

- Working principle is the same as that of desk-top vacuum pump.
- Compared with desk-top vacuum pump,it meets negative pressure requirements of larger air sucking amount.
- Five taps can be used alone or in parallel. A five-way adapter can connect five taps to increase air sucking amount , which can meet the experiment requirements of large scale rotary evaporator or reactor.
- Motor is supplied by famous manufacturer with fluorine rubber sealing which can avoid the invasion of corrosive gas.
- Water tank PVC material. Housing adopts carbon steel and the surface adopts electrostatic spraying.
- Copper ejector; Tee junction, check valve and suction nozzle are PP material.
- Pump body and impeller adopt stainless steel 304.
- Equipped with casters for convenient moving.
- Replace water regularly to keep water clean to ensure perfect vacuum condition.
- Shorten the water replacing period when it is used to pump corrosive gas.
- SHB-B95T: Housing adopts stainless steel. Other components are the same as that of SHB-B95.

SHB-B95T

SHB-B95

Technical Specifications

Model	Power (W)	Power Supply	Flow (L/min)	Lift (m)	Safety	Housing Material	Ultimate Vacuum (MPa)	Single Tap Air Suction Amount	Number of Tap	Water Tank Capacity (L)	Water Tank Material	Dimensions (mm)	Weight (kg)
SHB-B95	550	110V~,60Hz or 220-240V~, 50/60Hz	100	12	Check valve, over-current protection	electrostatic spraying	0.098 (2KPa)	10L/min	5	57	PE	450W×350D×820H	36
SHB-B95T						SUS304			5	57		450W×350D×820H	36

Common unit conversion table

Conversion table of pressure

Pa	KPa	MPa	bar	mbar	mmH_2O	mmHg	p.s.i
1	10^{-3}	10^{-6}	10^{-5}	10^{-2}	101.97×10^{-3}	7.5×10^{-3}	0.15×10^{-3}
10^3	1	10^{-3}	10^{-2}	10	101.97	7.5	0.15
10^6	10^3	1	10	10^4	101.97×10^3	7.5×10^3	0.15×10^3
10^5	10^2	10^{-1}	1	10^3	10.2×10^3	750.06	14.5
10^2	10^{-1}	10^{-4}	10^{-3}	1	10.2	0.75	14.5×10^{-3}
9.806	9.807×10^{-3}	9.807×10^{-6}	98.07×10^{-6}	98.07×10^{-3}	1	73.56×10^{-3}	1.42×10^{-3}
133.32	133.32×10^{-3}	133.32×10^{-6}	1.33×10^{-3}	1.33	13.6	1	19.34×10^{-3}
6894.76	6.89	6.89×10^{-3}	68.95×10^{-3}	68.95	703.07	51.71	1

Conversion table of flow rate

m^3/s	L/s	m^3/h	L/h	L/min
1	10^3	3.6×10^3	3.6×10^6	60×10^3
10^{-3}	1	3.6	3.6×10^3	60
0.28×10^{-3}	0.28	1	10^3	16.67
0.28×10^{-6}	0.28×10^{-3}	10^{-3}	1	16.67×10^{-3}
116.67×10^{-6}	16.67×10^{-3}	60×10^{-3}	60	1

Commonly used chemical compatibility table

Material / Name	PTFE	PVDF	PP	PPS	EPDM	FPM	FFPM	SS
CH_3COOH (Concentration: 100%)	A	A	A	B	B	C	A	C
CH_3COOH (Concentration: 65%)	A	A	A	-	B	C	A	B
Cl	A	A	C	C	B	A	A	C
H_2S	A	A	A	-	A	A	A	B
HCl (Concentration: 10%)	A	A	A	A	A	A	A	C
HCl (Concentration: 35%)	A	A	A	B	A	A	A	C
H_2O_2	A	A	A	A	A	A	A	A
CH_3OH	A	A	A	A	A	C	A	A
HNO_3 (Concentration: 65%)	A	A	C	C	C	C	A	A
HNO_3 (Concentration: 10%)	A	A	A	C	B	A	A	A
H_2SO_4 (Concentration: 60%)	A	A	A	B	A	A	A	C
H_2SO_4 (Concentration: 95%)	A	A	B	B	A	A	A	A
H_2SO_4 (Concentration: 10%)	A	A	A	A	A	A	A	C
NaOH	A	C	C	A	A	C	A	B
NH_3	A	A	A	A	A	C	A	A
Hg	A	A	A	-	A	A	A	B
CH_3COOH	A	A	A	B	A	C	A	A
HCOOH	A	A	A	A	B	C	B	B

Remark: A: Can tolerate this chemical reagent B: Can tolerate this chemical reagent in limited extent C: Can't tolerate this chemical reagent -: Not tested

International Sales Network

Agents located in USA, Canada, Australia, Russia and South Korea.
Our products have been exported to UK, Italy, France, Spain, Turkey, Israel, Romania, South Africa, Colombia, Brazil, Peru, Uruguay, Thailand, Vietnam, Malaysia, Singapore and other countries.

R&D
Our professional R&D team makes it possible to continuously provide innovative and new products to our customers.

OEM / ODM
We can provide OEM/ODM products with your brand name plate and labels.

Co-marketing
Expand the local market with our agents and distributors together, and support product promotion via internet and exhibitions.

Free Technical Training & Service
We always provide free technical training for our agents and distributors. You can come to our factory anytime.

Price Advantage
Fair pricing structure, leaves agents or distributors with considerable profit margin.

Branding
Branding makes sales easier and brings more additional value.