Complementary Product for Reactor

Vacuum Filter

	VF20P	VF20S
Type	Pour Type Vacuum Filter	Suck Type Vacuum Filter
Filter Cup (L)	3	3
Sand mesh	40~80μm (grade changeable at request)	
Receiving Flask (L)	20	20
Diamensions (cm)	40x50x130H	40x50x160H
Application	Open system, suitable for filtering general solution.	Closed system, suitable for filtering poisonous, harmful, volatile or dangerous solution.

Constant Temp. Heat Pump

Application: Providing circulated heating liquid (not for chilling)

Lowest operation temp.: RT+10℃			
	DH10-100	DH20-100	DH20-200
Temp. Control Range (℃)	0-99	0-99	0-199
Heating Power (W)	2000	3000	3000
Circulation Flow Rate (L/min)	8	12	12
Bath Capacity (L)	10	20	20
Power	220V, 50Hz	220V, 50Hz	220V, 50Hz
Dimensions (cm)	43x37x46H	41x50x60H	41x50x60H

Safe
Durable
Efficient

ROTARY EVAPORATOR SERIES

Pilot production 10L~50L
Lab use 100ml~5000ml

GLASS REACTOR SERIES

Jacketed Reactor 2L~30L
Multifunctional Reactor 2L~50L

RELEVANT PRODUCTS

Vacuum Controller
Vacuum Pump
Heat Pump
Chilling Pump
Vacuum Filter
Liquid Separator
Overhead Stirrer

Main Products

Rotary Evaporator
Glass Reactor
(Multifunctional/Jacketed)
Vacuum Controller
Vacuum Pump
Heating/Chilling Pump
Vacuum Filter
Liquid Separator
Constant Temperature Heating Bath
Constant Speed Overhead Stirrer

Lab Solution for ROTARY EVAPORATOR

Economy · Practical · High performance-price ratio

Chilling Pump DL-2004	Rotary Evaporator R206B / R206D	Vacuum Controller VC100A	Water Circulation Vacuum Pump SHB-3
500W@10℃ 250W@-10℃	0.1-2L, Ball mouth receiving 100℃(180℃) Heating Bath 4-200rpm, <399Pa H_2O EvapoRate >1.2L/h	Display Accuracy 100Pa	Ultimate Vacuum 2.6kPa
■ Increase evaporation efficiency ■ Save tap water resource	■ Precise Intelligent bath temp. control ■ Temp., Speed and vacuum display	■ Increase EvapoRate ■ Increase Receiving Rate ■ Reduce solvent bumping ■ Protect vacuum pump ■ Decrease escape of solvent vapor into air	■ Resist to corrosion ■ Easy for maintenance ■ Economy and practical

ROTARY EVAPORATOR 10~50L

17 Frequency conversion rotation speed regulation

24 Bump Prevention Tube

26 Ex-Motor Optional

13 PTFE rotary seal assembly

21 Tandem Receiving Auto Shift System. (patent tech.)
For non-stop receiving with no vacuum loss when discharging solvent.

23 Cold Trap equipped
Protect vacuum pump

14 PTFE Cork
no vacuum grease, no pollution to solvent received.

R1002

R2003K

R5003K2

Rotary Evaporator
Evaporating Flask (L)
Design Serial No.
Bath Type
- B: 99.9℃ water bath
- D:180℃ oil bath

R 20 03 K 2 B

Bump Tube
- Null: not equipped
- 2: equipped

Tandem Receiving

/-None, ●-Equipped, ○-Optional (＊-Only available at ordering of unit product, not for separate sale)

			R1002	R2002	R2003K	R2003K2	R5003K2
Parameters	1	Evaporating Flask (L)	10L/ 95#	20L/ 95#	20L/ 95#	20L/ 95#	50L/ 120#
	2	Receiving Flask (L)	5L, Bottom discharge	10L, Bottom discharge			20L, Bottom discharge
	3	Condenser	Dual		Triple		
	4	Rotation Speed (rpm)	3-110	3-110	3-110	3-110	3-110
	5	Evaporating Speed-H_2O	> 3L/h	> 5L/h	> 5L/h	> 5L/h	> 9L/h
	6	Reachable Vacuum Rate	< 399Pa	< 399Pa	< 399Pa	< 399Pa	< 399Pa
	7	Bath Power (kW)	3kW	5kW	5kW	5kW	9kW
	8	Static Temp. Control Range & Wave (℃)	0-100(180)±0.2				
	9	Bath Size, Capacity, Material	Ø35x25H, 22L, SUS304	Ø45x27H, 40L, SUS304			Ø55x32H, 70L, SUS304
	10	Power	220V, 20A	220V, 30A			380V, 3-phase, 20A
	11	Dimensions (cm)	95x50x180H	110x60x210H			130x80x230H
Configurations	12	Digital Display	Bath Temp., Rotation Speed				
	13	PTFE Assembly Seal	●	●	●	●	●
	14	PTFE Discharge Valve	●	●	●	●	●
	15	Taper Joint PTFE Sleeve	●	●	●	●	●
	16	Bath Lift	●	●	●	●	●
	17	Frequency Conversion Speed Regulation	●	●	●	●	●
	18	No-spark Electric Control System	●	●	●	●	●
	19	Vacuum Gauge	●	●	●	●	●
	20	Continuous Charge	●	●	●	●	●
	21	Tandem Type Non-stop Receiving	/	/	●	●	●
	22	Thermometer Neck	/	/	●	●	●
	23	Cold Trap	/	/	●	●	●
	24	Bump Tube	/	/	/	●	●
	25	Evaporating Flask Spanner	●	●	●	●	●
	26	Ex-proof Motor	○	○	○	○	○
	27	Evaporating Flask Unload Handler	/	○	○	○	○
Derived Model			R1002B R1002D	R2002B R2002D	R2003KB R2003KD	R2003K2B R2003K2D	R5003K2B R5003K2D

16

Lift Heating Bath
avoids glassware movement which is safe and easy to operate.
Bath equipped with intelligent temp. controller. Heating temperature up to 100℃ for water bath and 180℃ for oil bath. Temp. wave within 0.2℃.

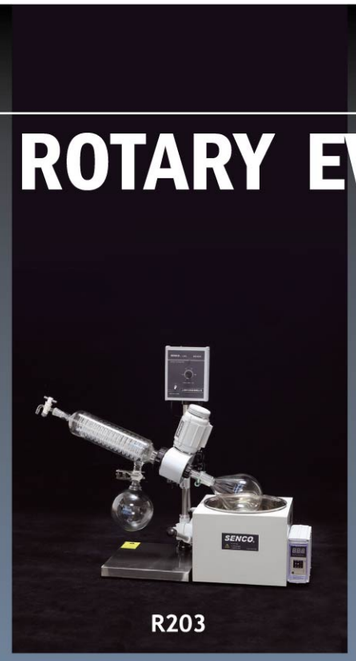
25

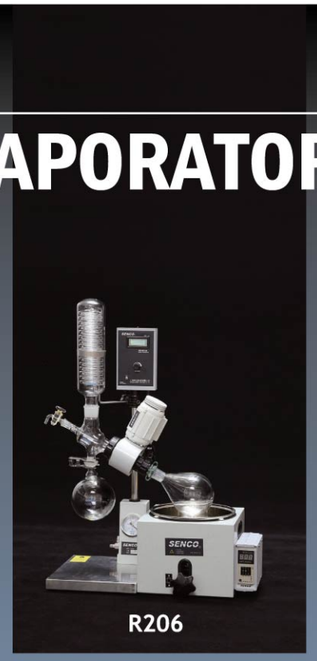
Flask Spanner
helps to secure or release connection of big evaporating flask to rotary head.

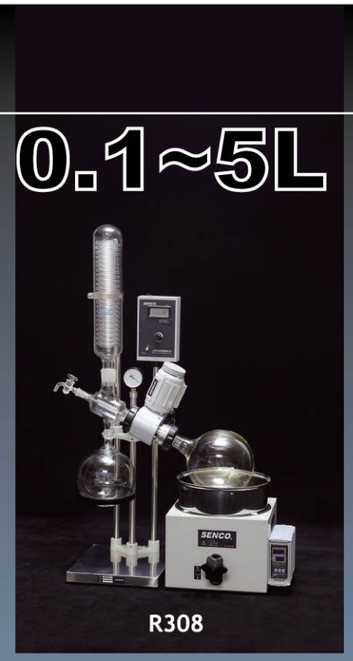
27

Flask Handler
specially designed for handling and unloading big capacity evaporating flask

ROTARY EVAPORATOR 0.1~5L


R203


R206


R308

R503

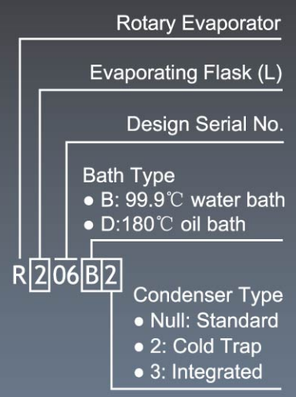
/-None, ●-Equipped, ○-Optional (*-Only available at ordering of unit product, not for separate sale)

			R203	R206	R308	R502	R503
Parameters	1	Evaporating Flask (ml)	500ml+1000ml/29 or 2000ml/29 (alternative)		3000ml / 50#	5000ml / 50#	
	2	Receiving Flask (ml)	1000ml/S35	1000ml/S35	2000ml/S35	3000ml/40, Bottom discharge	3000ml/S35, Bottom discharge
	3	Condenser Type	Diagonal	Vertical			
	4	Rotation Speed (rpm)	10-180	4-200	4-180	2-90	2-90
	5	Evaporating Speed-H_2O	> 1.2L/h	> 1.2L/h	> 1.5L/h	> 2L/h	> 2L/h
	6	Reachable Vacuum Rate (Pa)	< 399Pa	< 399Pa	< 399Pa	< 399Pa	< 399Pa
	7	Bath Power (kW)	1.5kW	1.5kW	1.5kW	2kW	2kW
	8	Static Temp. Control Range & Wave (℃)	0-100(180)±2	0-100(180) ±0.2	0-100(180) ±0.2	0-100(180) ±0.2	0-100(180) ±0.2
	9	Bath Size, Capacity, Material	Ø24x15, 6L, SUS304		Ø26x15, 8L, SUS304	Ø28x17, 10L, SUS304	
	10	Power	220V, 7A	220V, 7A	220V, 7A	220V, 10A	220V, 10A
	11	Dimensions (cm)	88x53x70H	62x33x82H	65x36x95H	84x36x110H	84x36x110H
Configurations	12	Digital Display	Bath Temp.	Bath Temp., Rotation Speed			
	13	PTFE Assembly Seal	●	●	●	●	●
	14	PTFE Discharge Valve	/	/	/	●	●
	15	Taper Joint PTFE Sleeve	/	●	●	●	●
	16	Bath Lift	/	●	●	●	●
	17	Vacuum Gauge	/	●	●	●	●
	18	Continuous Charge	●	●	●	●	●
	19	Evaporating Flask Release Device	●	●	/	/	/
	20	Low Noise	/	●	●	●	●
	21	Reflux	●	○	○	/	●
	22	Thermometer Neck	/	/	/	/	●
	23	Heating Bath Lid	○	○	/	/	/
	24	Bump Bottle/ Transition Joint	○	○	○	○	○
	25	Optional Evaporating Flask (ml)	100ml, 250ml, 2000ml		100ml, 250ml, 500ml, 1000ml	100ml, 250ml, 500ml, 1000ml, 3000ml	
Derived Model			R203B R203D	R206B, R206B2 R206B3, R206D	R308B R308D	R502B, R502B2 R502D	R503B, R503B2 R503D

What is the key performance index for an evaporator?

A: Most important index is Sealing Performance. It counts much to an efficient use of evaporator and serving time. Sealing performance consists of "Reachable Vacuum Rate" and "Vacuum Retaining Ability". Whether it is good or not depends on product design ability, manufacturing technique, sealing parts materials and maintenance job from end user.

SENCO PTFE seal assembly resists corrosion and performs good sealing.



Three type condensers available for different operation needs

- Standard Condenser for normal use
- Cold Trap type for low boiling point solvent condensing.
- Integrated type for high requirement on vacuum sealing or high temp. operation.

Lift Heating Bath
prevents glassware movement which is safe and easy to operate.
Bath equipped with intelligent temp. controller. Heating temperature up to 100℃ for water bath and 180℃ for oil bath. Temp. wave within 2℃ or 0.2℃.

PTFE Sleeve
placed inside taper joint helps to prevent dead seize.

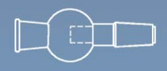
Vacuum Gauge
offers convenience of quick vacuum reading.

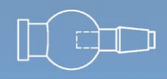
Lid for Heating Bath
is optional for water bath. It brings considerable energy savings and less loss of water by evaporation during use.

ACCESSORIES:

Bump Bottle Transition Joint

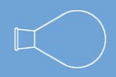
For preventing bump and reflux


29 Taper → 29


50# Flange → 29

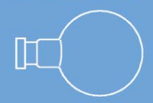
Evaporating Flask

Pear Shape



100ml/29
250ml/29
500ml/29
1000ml/29
2000ml/29

Round Shape



3000ml/50#
5000ml/50#

JACKETED REACTOR 2~30L

One-piece Jacketed Glass Reactor

Excellent sealing performance.
More openings can be added on reaction flask for extra functions.
Easy clean and maintenance with no need of disassembly.
Wash flask thru wide side opening.

11 Bidirectional Stir

18 Safety Valve
Prevent over-pressure in jacketed layer

16 120mm Wide Side Opening
A multifunctional opening reserved for solid feeding, flask cleaning, and other function extension.

1 Integrated Jacketed Reaction Flask
Excellent sealing performance.
Simple and safe clean with no need to remove accessories on top of flask.

F 20 J 2 A
- Reactor
- Capacity (L)
- Jacketed Style
  - Blank: No bottom discharge outlet
  - 2: Bottom Discharge Outlet
- Design Serial No.

/-None, ●-Equipped, ○-Optional (*-Only available at ordering of unit product, not for separate sale)

			F2J2A	F3J2A	F5J2A	F10J2A	F20J2A	F30J2A
Parameters	1	Reaction Flask (L)	2L, bottom discharge	3L, bottom discharge	5L, bottom discharge	10L, bottom discharge	20L, bottom discharge	30L, bottom discharge
	2	Neck No. of Reaction Flask	5	5	5	5	6	6
	3	Condenser	Reflux					
	4	Motor Power (W)	90W	90W	120W	120W	250W	250W
	5	Rotation Speed (rpm)	30-1300	30-1300	40-1700	40-720	40-720	40-720
	6	Dia. for Stirring Rod (mm)	Ø6	Ø6	Ø10	Ø10	Ø10	Ø12
	7	Power	220V, 1A	220, 1A	220, 5A	220, 6A	220, 6A	220, 6A
	8	Dimensions (cm)	50x38 x85H	50x38 x95H	50x38 x105H	50x48 x115H	50x48 x115H	60x52 x130H
Functional Configurations	9	Digital Display	Rotation Speed					
	10	Frequency Conversion Speed Regulation	/	/	●	●	●	●
	11	Auto CW/CCW Stir*	/	/	/	/	○	●
	12	PTFE Assembly Seal	●	●	●	●	●	●
	13	PTFE Discharge Valve	●	●	●	●	●	●
	14	Charging Valve	●	●	●	●	●	●
	15	Temp. Measure Neck	●	●	●	●	●	●
	16	Multi-functional Wide Opening (Dia.120mm)	/	/	/	/	●	●
	17	Vacuum Gauge	/	/	/	●	●	●
	18	Safety Valve	/	/	/	/	●	●
	19	Metal Shield	/	/	/	/	●	●
	20	Drip System (0.5-1L)	/	/	○	○	○	○
	21	Distillation Receiving System*	/	/	○	○	○	○
	22	Liquid Cooling and Separation System*	/	/	/	○	○	○
	23	Sampling Bottle	/	/	○	○	○	○

Integrated Jacketed Reaction Flask of 2~10L

PTFE no-dead angle bottom discharge valve
no reactant accumulation.

Metal Shield
protects body from touch with hot/freezing reaction flask by accident.

Drip System ( )

MULTIFUNCTIONAL REACTOR 2~50L

A New Concept Reactor other than Jacketed Glass Reactor

Incomparable stir effect during reaction.

Equipped with heating and temp. control system, no need to purchase heating pump additionally.

Rich optional function/parts available and they are at cheaper cost.

Easy clean and maintenance with no trouble of disassembly.

26 Drip System

21 Power inclined bidirectional stir (patent tech.)
incomparably perfect stereo-stir performance.

18 Wide Opening

1 Reaction flask
configured stirring, feeding, reflux condensing, temp. measuring, multi-purpose wide opening and non-liquid-accumulation bottom discharge function; Is able to flexibly extend more functions of dripping, N2 bubbling, sample pickup, distilling, liquid separation, etc.

29 Liquid Separation

28 Distilling & Receiving

31 Sample Pickup

8 Intelligent Heating Bath
Bath Temp. up to 180℃ with wave within 0.2℃. Digital display of bath temp. and set temp. Can equip with cooling coil for bath chilling.

32 Underlay Base
Allow one-off complete discharging

F 20 H 2 A
- Reactor
- Capacity (L)
- Multifunctional Style
- Blank: No bottom discharge outlet
- 2: Bottom Discharge Outlet
- Design Serial No.

/-None, ●-Equipped, ○-Optional (＊-Only available at ordering of unit product, not for separate sale)

			F2H	F5HA	F20H	F20H2A	F50H2A
Parameters	1	Reaction Flask (L)	2L	5L	20L	20L,Bottom discharge	50L,Bottom discharge
	2	Neck No. of Reaction Flask	4	5	5	6	6
	3	Condenser	Reflux				
	4	Motor Power (W)	90W	120W	250W	250W	250W
	5	Rotation Speed (rpm)	60-1300	40-1700	40-720	40-720	40-720
	6	Dia. for Stirring Rod (mm)	Ø6	Ø10	Ø10	Ø10	Ø12
	7	Bath Power (W)	1.5kW	2kW	3kW	3kW	6kW
	8	Static Temp. Control Range & Wave (℃)	0-180 ±0.2	0-180 ±0.2	0-180 ±0.2	0-180 ±0.2	0-180 ±0.2
	9	Bath Size, Capacity, Material	Ø24x15, 5L, SUS304	Ø28x20, 11L, SUS304	Ø45x27, 40L, SUS304	Ø45x27, 40L, SUS304	Ø55x32, 70L, SUS304
	10	Power	220V, 7A	220V, 16A	220V, 20A	220V, 20A	380V, 3-Phase, 16A
	11	Dimensions (cm)	36x30x90H	39x33x100H	55x55x120H	55x55x130H	65x65x160H
Functional Configurations	12	Digital Display	Bath Temp., Rotation Speed				
	13	Frequency Conversion Speed Regulation	/	●	●	●	●
	14	PTFE Assembly Seal	●	●	●	●	●
	15	PTFE Discharge Valve	/	/	/	●	●
	16	Charging Valve	●	●	●	●	●
	17	Temp. Measure Neck	●	●	●	●	●
	18	Multi-functional Wide Opening (Dia.120mm)	/	/	●	●	●
	19	Bath Drain	●	●	●	●	●
	20	Vacuum Gauge ＊	/	○	●	●	●
	21	Inclined Stereo Stir	/	/	●	●	●
	22	Auto CW/CCW Stir ＊	/	/	○	○	●
	23	Low Speed Power Stir ＊	/	○	○	○	○
	24	Drip System (0.5L)	/	●	/	/	/
	25	Drip System (1L)	/	/	○	○	○
	26	Drip System (5L) ＊	/	/	○	○	○
	27	Cooling Coil ＊	/	/	○	○	○
	28	Distillation Receiving System ＊	/	○	○	○	○
	29	Liquid Cooling and Separation System ＊	/	/	○	○	○
	30	Bath Cap	/	/	○	○	○
	31	Sampling Bottle	/	/	○	○	○
	32	Underlay Base	/	/	/	○	○

Wide Side Opening
a multifunctional opening reserving for solid feeding, flask cleaning, and other function extension.

Cooling Coil
can be installed in heating bath and perform chilling function by getting through cooling liquid.

Liquid Cooling and Separation facility
Liquid Cooling and Separation facility is able to separate and receive liquid of different weight.

Sampling Bottle
can be installed on bottom discharging valve of reaction flask. It enables sample pickup in middle of reaction.