Rotary Evaporators

Rotary evaporators are commonly used for separating solvents, the Stuart® range offers simple control and a variety of glassware configurations, vertical, diagonal and cold finger condensing depending on your requirements. All configurations are available with plastic coated glass.

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- Recirculating cooler

THE BENCHTOP EQUIPMENT HYGIENE SOLUTION Protected by BioCote®

Rotary evaporators

- Simple, counterbalanced lift mechanism
- PTFE/glass liquid pathway for chemical inertness
- Sparkless induction motor
- Long life graphite impregnated PTFE vacuum seal
- Efficient flask and vapour tube ejection system

Rotary evaporators are distillation units that incorporate an efficient condenser with a rotary flask system. As the flask containing the solvent is rotated it continually transfers a thin layer of liquid over the entire inner surface. This gives a very large surface area for evaporation that is effected by heating from the accessory waterbath (see page 79).

They are the ideal tools for many everyday laboratory applications including:-

- Concentration of solutions
- Reclamation of solvents
- Vacuum drying of wet solids
- Degassing liquids

The rotating system is fitted with a special seal that allows the apparatus to be placed under vacuum. This reduces the boiling point of the solvents and removes the vapour phase making the process much more efficient.
See page 80 for details of the vacuum pump.
Each unit is also provided with an easy to use vacuum release and a continuous feed system, which allows more solvent to be drawn into the rotating Florentine flask without the need to stop the operation.
There are three patterns of condenser available depending on the application and space available (see page 77 for full list of components included in each set).

- Rotary evaporator with diagonal glass condenser for standard distillations.
- Rotary evaporator with vertical glass condenser for distillation of solvents with higher boiling points. 20% narrower than RE300 saving space.
- Rotary evaporator with cold finger glass condenser for use with ice or dry ice for volatile or low boiling solvents. No cooling water required. Unique drain to empty the large 1 litre trap very easily.

For each condenser pattern, there is also a plastic coating option for extra safety when using the glassware under vacuum. It acts as a safety screen, contains the glassware pieces and gives the operator sufficient time to transfer any potentially dangerous chemicals to a suitable vessel without spillage.

See page 114 for guide to solvent evaporation temperatures.

RE300 & RE300DB

Rotary Evaporators

RE301 & RE300DB

RE302 & RE300DB

Glass set 00

Diagonal coil condenser, vapour tube for diagonal condenser, receiving flask 1000ml, Florentine flask 1000ml, feed tube with stopcock, vacuum seal, conical joint clip, spherical joint clip.

Glass set 01

Vertical coil condenser, vapour tube for vertical condenser, receiving flask 1000ml, Florentine flask 1000ml, feed tube with stopcock, vacuum seal, conical joint clip, spherical joint clip.

Glass set 02

Cold finger condenser, drain for cold finger condenser, vapour tube for cold finger condenser, receiving flask 1000ml, Florentine flask 1000ml, feed tube with stopcock, vacuum seal, conical joint clip, spherical joint clip.

Glass set 00P

Diagonal coil condenser plastic coated, vapour tube for diagonal condenser, receiving flask 1000ml plastic coated, Florentine flask 1000ml plastic coated, feed tube with stopcock, vacuum seal, conical joint clip, spherical joint clip.

Glass set 01P

Vertical coil condenser plastic coated, vapour tube for vertical condenser, receiving flask 1000ml plastic coated, Florentine flask 1000ml plastic coated, feed tube with stopcock, vacuum seal, conical joint clip, spherical joint clip.

Glass set 02P

Cold finger condenser plastic coated, drain for cold finger condenser, vapour tube for cold finger condenser, receiving flask 1000ml plastic coated, Florentine flask 1000ml plastic coated, feed tube with stopcock, vacuum seal, conical joint clip, spherical joint clip.

Technical Specification

Speed range	20 to 190rpm
Vacuum	< 1 mmHg
Lift distance	150mm
Dimensions, mm (w x d x h)	385 x 335 x 470-610 (excluding glassware)
Electrical supply	220V-240V, 50/60Hz, 50W
IP Rating	30

Ordering Information

Model	Description
RE300	Rotary evaporator complete with glass set 00
RE301	Rotary evaporator complete with glass set 01
RE302	Rotary evaporator complete with glass set 02
RE300P	Rotary evaporator complete with glass set 00P
RE301P	Rotary evaporator complete with glass set 01P

Glassware accessories and spares

Anti splash protector

- Adapter to protect against liquid ingress into the condenser in the event of "bumping". Also useful with liquids which have a tendency to foam. 29/32 cone and socket.

Ordering Information

Model	Description
RE200/SA	Anti-splash protector

RE200/SA

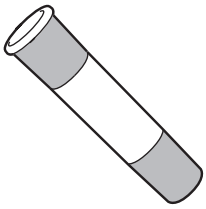
Extension adapter for small flasks

- In order for small capacity evaporating flasks to reach the liquid level in the water bath this extension adapter should be fitted between the vapour tube and the flask. 29/32 cone and socket.

  For use with flasks of 50ml or 100ml capacity

Ordering Information

Model	Description
RE100/EA	Extension adapter



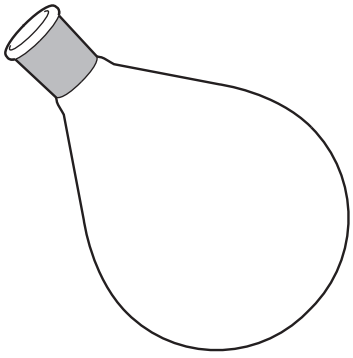
RE100/EA

Evaporating (Florentine) flasks

- Florentine type flasks for use with all glassware sets. 29/32 socket.

Ordering Information

Model	Description
FD50/4RE/1	Evaporating flask 50ml
FD100/4RE/1	Evaporating flask 100ml
FD250/4RE/1	Evaporating flask 250ml
FD500/4RE/1	Evaporating flask 500ml
FD500/4REP	Evaporating flask 500ml plastic coated
FD1L/4RE/1	Evaporating flask 1000ml
FD1L/4REP	Evaporating flask 1000ml plastic coated
FD2L/4RE/1	Evaporating flask 2000ml
FD2L/4REP	Evaporating flask 2000ml plastic coated



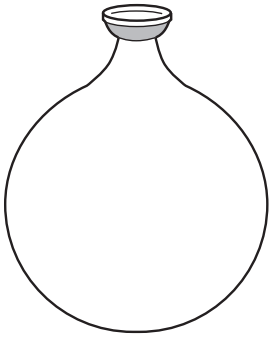
FD:/

Receiving flasks

- Receiving flasks for use with all glassware sets
- S35 spherical socket.

Ordering Information

Model	Description
RE100/RF/50	Receiving flask 50ml
RE100/RF/100	Receiving flask 100ml
RE100/RF/250	Receiving flask 250ml
RE100/RF/500	Receiving flask 500ml
RE100/RF/500P	Receiving flask 500ml plastic coated
RE100/RF/1L	Receiving flask 1000ml
RE100/RF/1LP	Receiving flask 1000ml plastic coated

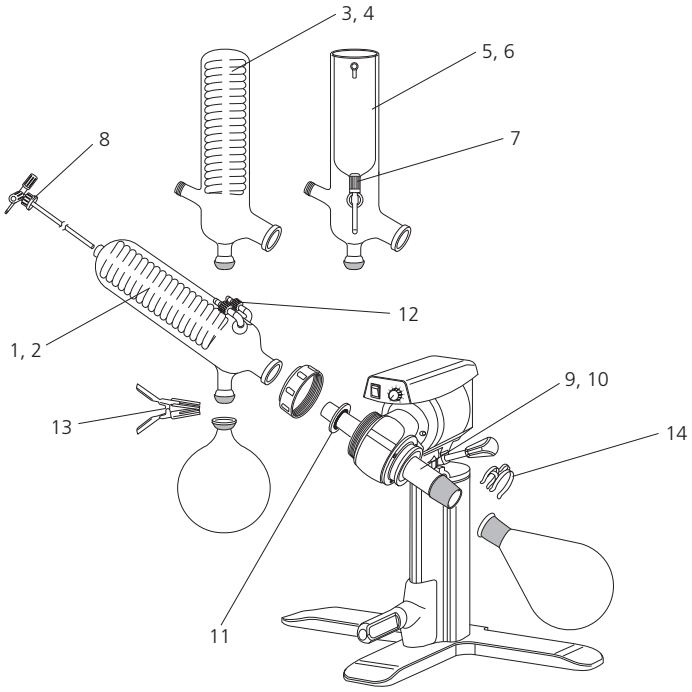


RE100/RF:

Replacement parts for glassware sets

Ordering Information

Part	Model	Description
1	RE100/CO	Diagonal condenser, glass set 00
2	RE100/COP	Diagonal condenser, plastic coated, glass set 00P
3	RE200/VC	Vertical condenser, glass set 01
4	RE200/VCP	Vertical condenser, plastic coated, glass set 01P
5	RE200/CF	Cold finger condenser, glass set 02
6	RE200/CFP	Cold finger condenser, plastic coated, glass set 02P
7	RE200/CFD	Drain for cold finger condenser, glass sets 02 and 02P
8	RE100/VR	Feed tube/ vacuum release, all glass sets
9	RE100/VT	Vapour tube diagonal condensers, glass sets 00 and 00P
10	RE100/VT/CF	Vapour tube for vertical coil and cold finger condensers, glass sets 01, 01P, 02, 02P
11	RE100/VS	Vacuum seal, all glass sets
12	4510/04/1	PTFE screwthread connectors, all glass sets, pack of 10
13	JC35/1	Spherical joint clip for receiving flask, all glass sets
14	KCM29	Metal joint clip for evaporating flask, all glass sets



Digital baths, RE300DB and RE300OB

- Digital temperature display
- Corrosion resistant stainless steel bowl
- Cool touch outer case

These attractive water baths are specifically designed to be used with the Stuart® rotary evaporators to give maximum efficiency for the smallest footprint. The clear LED digital display shows the actual bath temperature or the set temperature. The RE300DB is suitable for lower temperature applications whereby the RE300OB can be used with oil for higher temperature evaporations. Outer case's are made from chemically resistant polypropylene.

RE300DB

Technical Specification

	RE300DB	RE300OB
Temperature range	Ambient to 95°C	Ambient to 180°C (Oil)
Display resolution	1°C	1°C
Temperature control	±1.5°C	±1.5°C (Water) ±3°C (Oil)
Capacity	3 litres	6.2 litres
Heater power	1000W	1400W
Dimensions, mm (w x d x h)	260 x 260 x 240	284 x 300 x 258
Electrical supply	230V, 50-60Hz	230V, 50-60Hz
IP Rating	32	32

Ordering Information

Model	Description
RE300DB	Digital water bath
RE300OB	Digital high temperature oil bath

Vacuum pump, RE3022C

- Quiet operation, no vibration
- Long life PTFE heads and diaphragm
- Vacuum regulator for easy adjustment
- Integral catch pots. No maintenance dry system

The RE3022C is a powerful, compact vacuum pump. Constructed with solid PTFE heads, PTFE diaphragms and Kalrez® valves, the pump is designed to withstand the challenging role of a chemical laboratory pump. The pump is useful for any applications requiring vacuum generation and is ideal for use with the Stuart® rotary evaporator. By reducing the pressure within the glassware of the rotary evaporator solvents can be evaporated off at lower temperatures ensuring the bath can be kept at a safer temperature. The RE3022C includes vacuum regulator and catch pots to protect the pump from liquid ingress, as standard.

RE3022C

Technical Specification

	RE3022C
Ultimate pressure	12mbar
Flow rate	21 litres/minute
Net weight, kg	9.6
Dimensions, mm (w x d x h)	172 x 352 x 223
Electrical supply	230V, 50Hz, 150W

Ordering Information

Model	Description
RE3022C	Vacuum pump

Recirculating cooler, SRC3

- Digitally set temperature
- Easy to read LED display
- Quiet operation
- Powerful 450W cooling capacity
- Safety cut out feature

The recirculating cooler offers powerful cooling for an external device. By accurately controlling the temperature of your cooling medium down to -20°C, efficiency of operations such as condensing can be greatly improved. A recirculating cooler is not only much more powerful than conventional water cooling, but is also an ideal alternative when water consumption is an issue for economical, environmental or practical reasons.

SRC3

Technical Specification

	SRC3
Cooling capacity	450W at 10°C
Temperature range	-20 to +20°C
Control accuracy	±2°C
Bath capacity	3 litres
Pump rate	10 litres / minute
Net weight, kg	25
Dimensions, mm (w x d x h)	206 x 401 x 540
Electrical supply	230V, 50Hz

Ordering Information

Model	Description
SRC3	Recirculating cooler, 3 litre capacity