

#### **Technical data sheet**

# Rotavapor® R-180

The Rotavapor® R-180 is a high-quality rotary evaporator to meet the essential needs in classical laboratory applications. The central turnable interface presents all distillation parameters at a glance and an electric lift together with a cable-free, movable bath ensures reliable, quick and ergonomic positioning of the evaporating flask.



### Scope of delivery

All configurations are supplied ready to use.



#### NOTE

The scope of delivery depends on the configuration of the purchase order.

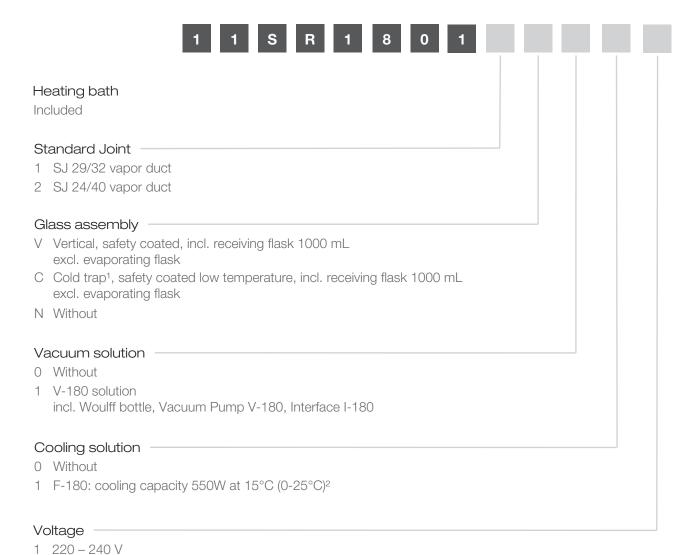
Accessories are delivered as per the purchase order, order confirmation, and delivery note.

Components	Rotavapor® with glass assembly	Rotavapor® without glass assembly	Rotavapor® with vacuum solution
Rotavapor® R-180	1	1	1
Heating Bath R-180	1	1	1
Condenser (according to order code)	1	-	1
Vapor duct (with Combi-Clip)	1	1	1
Vacuum seal (VS22)	1	1	1
Evaporating flask (max. 3 L)	-	-	-
Receiving flask (1 L)	1	-	1
Woulff bottle	-	-	1
Set of required cooling/vacuum tubes and connectors	1	-	1
Power cable	1	1	1
Interface I-180 (Vacuum Interface)	-	-	1
Vacuum Pump V-180	-	-	1
Recirculating Chiller F-180	*	*	*

<sup>\*</sup> Optional, according to order code

#### Order code

Choose the configuration according to your needs:



<sup>1 220 - 240</sup> V

2 100 – 120 V

<sup>&</sup>lt;sup>1</sup>When ordering the glass assembly C, a recirculating chiller is not needed

<sup>&</sup>lt;sup>2</sup>Cannot be purchased with glass assembly C

#### **Technical data**

#### Rotavapor® R-180

Specification	Value
Dimensions (W $\times$ D $\times$ H)	450 mm × 350 mm × 645 mm
Dimensions (W $\times$ D $\times$ H) with V condenser and power plug	505 mm × 400 mm × 800 mm
Weight with V condenser	12 kg
Connection voltage	100 - 120 VAC ± 10% 220 - 240 VAC ± 10%
Frequency	50 / 60 Hz
Power consumption	1,500 W
Fuse	T 12.5 A H 250 V (100 – 120 V) T 8 A H 250 V (220 – 240 V)
Overvoltage category	II
IP Code	IP42 <sup>1</sup>
Pollution degree	2
Minimum clearance on all sides	none
Display type	3" Dark segment display
Heating power	1,300 W
High temperature cut-out	140 °C
Heating bath temperature range	Up to 95 °C
Heating bath adjustment accuracy	±1°C
Heating bath regulation precision	± 2 °C
Heating bath inner diameter	225 mm
Heating bath capacity	4.2 L
Heating bath fluid	Water
Typical heating-up time (20°C to 95°C)	20 min
Max. flask size	3,000 mL
Max. flask capacity	2,500 g
Immersion angle	15 – 52.5°
Rotation speed range	10 – 330 rpm
Adjustable lift height	180 mm
Cooling surface (V condenser)	1,500 cm <sup>2</sup>
Cooling temperature display range	-99 – 99 °C
Certificate	CB, CE, UL / CSA

<sup>&</sup>lt;sup>1</sup> The IP42 rating indicates a level of protection against solid objects greater than 1 mm and dripping water when tilted up to 15°. This rating was determined under specific operation conditions, including horizontal installation, the correct positioned heating bath, and the connected mains plug. Ensure the conditions to maintain the IP42 protection level.

### **Ambient conditions**

For indoor use only.

Specification	Value
Max. altitude above sea level	2,000 m
Ambient and storage temperature	5–40 °C
Max. relative humidity	80% for temperatures up to 31 °C
	decreasing linearly to 50% relative hu-
	midity at 40 °C

### Spare parts and accessories

Use only genuine BUCHI consumables and spare parts in order to ensure correct, safe and reliable operation of the system.



#### NOTE

Any modifications of spare parts or assemblies are only allowed with the prior written permission of BUCHI.

### **Spare parts**

	Order no.	lmage
Aeration cap	046574	
Flange nut with pressure spring	11062387	
Ball joint clamp. For BJ 35/20	003275	
To fasten receiving flask on condenser/secondary condenser.		Tro Control of the Co
Lid. For C condenser, PETP	027479	
Gasket complete	027462	
For C condenser, PTFE/EPDM		
Drain sleeve, set 5 pcs.	040822	
Condensate trap, grey	11062955	
Condenser V and HP, TPE, hose connector Ø8 mm. Collects and drains condensate which may accumulate on the condenser.		

	Order no.	Image
Navigation control knob	11074581	
Sliding ring	032005	
Encircles the installed vapor duct.		
Base R-180 100 – 120 V, complete  Send the serial number of the device with this order	11084922	
Base R-180 220 - 240 V, complete  Send the serial number of the device with this order	11084923	
Interface R-80 / R-180, complete	11080629	
Rotary drive arm R-180, complete	11082708	
Heating bath R-180 100 – 120 V, complete	11082590	
Heating bath R-180 220 – 240 V, complete	11082589	

	Order no.	Image
Gas spring, complete	11083854	8
Cable and tubing fixtures. Set. 3 pcs.	11080633	
Content: Rubber strips, screws		
Height adjustment stopper	11075153	
Combi-Clip	11075539	
Combi-Clip with snap lock mechanism to fasten evaporating flask on vapor duct. Vapor duct not included.		
Beaker fastener, Connection with bayonet mount, for 500 mL	11059810	0
For beaker flask 500 mL		
Sieve for cooling water valve, Ø18 mm	011514	
Woulff bottle holder	11075161	
Receiving vessel, GL 40, 125 mL, safety coated For Woulff bottle	047233	

	Order no.	lmage
Fuses, set. 10 pcs. T 12.5A H 250V (100 – 120 V), 20 mm, Ø5 mm	047939	
Fuses, set. 10 pcs. T 8A H 250V (220 – 240 V), 20 mm, Ø5 mm	11083921	
Packaging R-180, complete	11650265	
Tubing. PTFE, Ø3/4 mm, white, 600 mm Use: To introduce solvent into evaporating flask during distillation.	028096	
Tubing. PTFE, Ø4.7/5.5 mm, transparent, 330 mm  Use: To introduce solvent into evaporating flask during distillation.	000646	
Drain disc. PTFE, Ø5.1/14 mm  Use: To prevent backflow of condensate along feeding tube	040625	
Cross sleeve (1 pc.) Use: Part of condenser holder	027344	
Rubber band Use: To fasten condenser on holder	032013	

### Wear parts

#### Vacuum seal

vacuum seai		
	Order no.	lmage
Vacuum seal VS 22, PTFE base, NBR O-ring, FDA compliant	11075810	
Seals		
	Order no.	Image
Seals, set. 10 pcs, for hose barbs GL 14, EPDM, black	040029	
Seals, set. 10 pcs, for hose barbs GL 14, FPM, green	040040	
Seals, set. 20 pcs, for hose barbs GL 14, silicone, red	040023	
Seal Woulff bottle	047165	
Hose barbs		
	Order no.	lmage
Hose barb, bent, GL 14, incl. silicone seal	018916	
Hose barbs, set. 2 pcs, bent (1), straight (1), GL 14, silicone seal	041939	 ⊚ ©

Content: Hose barbs, cap nuts, seals

	Order no.	lmage
Hose barbs, set. 3 pcs, bent, GL 14, silicone seal Content: Hose barbs, seals.	041987	
Hose barbs, set. 4 pcs, bent GL 14, silicone seal Content: Hose barbs, cap nuts, seals	037287	TO THE WAY OF THE PARTY OF THE
Hose barbs, set. 4 pcs, bent, GL 14, EPDM seal Content: Hose barbs, cap nuts, seals.	043129	O O O O O O O O O O O O O O O O O O O
Hose barbs, set. 4 pcs, bent, GL 14, FPM seal Content: Hose barbs, cap nuts, seals.	040295	
Hose barbs, set. 4 pcs, straight, GL 14, EPDM seal Content: Hose barbs, cap nuts, seals.	043128	COM
Hose barbs, set. 4 pcs, straight, GL 14, FPM seal Content: Hose barbs, cap nuts, seals.	040296	
Hose barbs, set. 4 pcs, straight, GL 14, silicone seal Content: Hose barbs, cap nuts, seals	037642	
Hose barbs, set. 6 pcs, bent (4), straight (2), GL 14, silicone seal  Content: Hose barbs, cap nuts, seals.	038000	O DO

### Miscellaneous wear parts

	Order no.	Image
Cap nuts, set. 10 pcs, screw cap with hole, GL 14	041956	
Screw caps, set. 5 pcs, closed with PTFE seal, GL 14	040624	

### Glass parts

### Condenser

	Order no.	lmage
Condenser C. cold trap, 500 cm2, 30° tilt angle, safety coated low temperature, incl. lid and stopcocks	11085410	
Condenser V. Vertical condenser, 1500 cm <sup>2</sup> , 30° tilt angle, safety coated	11082282	
Cold finger. For condenser C/CR	000672	
Condenser C outer part, safety coated low temperature	040643	

# Vapor duct

	Order no.	Image
Vapor duct	11075727	
For V/C cond., Ø22 mm, SJ 24/40, incl. Combi-Clip		

	Order no.	Image
Vapor duct	11075728	
For V/C cond., Ø22 mm, SJ 29/32, incl. Combi-Clip		

# **Evaporating flask**

	Order no.	Image
Evaporating flask Glass, SJ 24/40, 50 mL	008750	
Evaporating flask Glass, SJ 24/40, 100 mL	008751	
Evaporating flask Glass, SJ 24/40, 250 mL	008754	
Evaporating flask Glass, SJ 24/40, 500 mL	008758	
Evaporating flask Glass, SJ 24/40, 1000 mL	000440	
Evaporating flask Glass, SJ 24/40, 2000 mL	008765	
Evaporating flask Glass, SJ 24/40, 3000 mL	008767	

	Order no.	lmage
Evaporating flask Glass, SJ 29/32, 50 mL	000431	
Evaporating flask Glass, SJ 29/32, 100 mL	000432	
Evaporating flask Glass, SJ 29/32, 250 mL	000433	
Evaporating flask Glass, SJ 29.2/32, 500 mL	000434	
Evaporating flask Glass, SJ 29/32, 1000 mL	000435	
Evaporating flask Glass, SJ 29/32, 2000 mL	000436	
Evaporating flask Glass, SJ 29/32, 3000 mL	000437	

# **Drying flask**

	Order no.	lmage
Drying flask	011579	
Glass, SJ 24/40, 500 mL		
With 4 indents for better mixing/drying.		

	Order no.	lmage
Drying flask Glass, SJ 24/40, 1000 mL With 4 indents for better mixing/drying.	000420	
Drying flask Glass, SJ 24/40, 2000 mL With 4 indents for better mixing/drying.	011580	
Drying flask Glass, SJ 29/32, 500 mL With 4 indents for better mixing/drying.	000452	
Drying flask Glass, SJ 29/32, 1000 mL With 4 indents for better mixing/drying.	000453	
Drying flask Glass, SJ 29/32, 2000 mL With 4 indents for better mixing/drying.	000454	

### Beaker flask

	Order no.	Image
Beaker flask, Drying, bayonet type, flat bottom, SJ 24/40, 500 mL	11063159	
Bayonet mount type Ø75 mm. With 4 indents for better mixing/drying. Working volume 150 mL. Content: 1 coupling piece, 1 seal, 1 flask and 1 beaker fastener.		
Beaker flask, Evap., bayonet type, flat bottom, SJ 24/40, 500 mL  Bayonet mount type Ø75 mm. Working volume 150 mL. Content: 1 coupling piece, 1 seal, 1 flask and 1 beaker fastener.	11063155	
Beaker flask, Evap., bayonet type, flat bottom, SJ 24/40 1500 mL	11063157	
Bayonet mount type Ø110 mm. Content: 1 coupling piece, 1 seal, 1 flask and 1 beaker fastener.		

	Order no.	lmage
Beaker flask, Drying, bayonet type, flat bottom, SJ 24/40, 1500 mL	11063161	
Bayonet mount type Ø110 mm. With 4 indents for better mixing/drying. Content: 1 coupling piece, 1 seal, 1 flask and 1 beaker fastener.		
Beaker flask, Evap., bayonet type, round bottom, SJ 24/40, 1500 mL	11065719	
Bayonet mount type Ø110 mm. Use: Easy cleaning and collection of solid residue. Content: 1 coupling piece, 1 seal, 1 flask and 1 beaker fastener.		
Beaker flask, Drying, bayonet type, flat bottom, SJ 29/32, 500 mL	11063158	
Bayonet mount type Ø75 mm. With 4 indents for better mixing/drying. Working volume 150 mL. Content: 1 coupling piece, 1 seal, 1 flask and 1 beaker fastener.		
Beaker flask, Evap., bayonet type, flat bottom, SJ 29/32, 500 mL	11063154	
Bayonet mount type Ø75 mm. Working volume 150 mL. Content: 1 coupling piece, 1 seal, 1 flask and 1 beaker fastener.		
Beaker flask, Evap., bayonet type, flat bottom, SJ 29/32 1500 mL	11063156	
Bayonet mount type Ø110 mm. Content: 1 coupling piece, 1 seal, 1 flask and 1 beaker fastener.		
Beaker flask, Evap., bayonet type, round bottom, SJ 29/32, 1500 mL	11065718	
Bayonet mount type Ø110 mm. Use: Easy cleaning and collection of solid residue. Content: 1 coupling piece, 1 seal, 1 flask and 1 beaker fastener.		
Beaker flask, Drying, bayonet type, flat bottom, SJ 29/32, 1500 mL	11063160	
Bayonet mount type Ø11 mm. With 4 indents for better mixing/drying. Content: 1 coupling piece, 1 seal, 1 flask and 1 beaker fastener.		

# Receiving flask

	Order no.	lmage
Receiving flask Glass, BJ 35/20, 500 mL, safety coated	025264	

	Order no.	Image
Receiving flask Glass, BJ 35/20, 500 mL, safety coated low temperature Application temperature: -70 to 40 °C.	040774	
Receiving flask Glass, BJ 35/20, 1000 mL, safety coated	020728	
Receiving flask Glass, BJ 35/20, 2000 mL, safety coated low temperature Application temperature: -70 to 40 °C.	040776	
Receiving flask Glass, BJ 35/20, 2000 mL, safety coated	025265	
Receiving flask Glass, BJ 35/20, 2000 mL, safety coated low temperature Application temperature: -70 to 40 °C.	040776	

# **Bump trap adapter**

	Order no.	lmage
Bump trap adapter Glass, Reitmeyer, SJ 24/40, 150 mm	036577	
Bump trap adapter Glass, SJ 24/40, 175 mm	11056919	
Bump trap adapter Glass, Reitmeyer, SJ 29/32, 135 mm	036576	

	Order no.	lmage
Bump trap adapter Glass, SJ 29/32, 160 mm	11056920	

### Stopcocks

	Order no.	Image
For condenser C/CR, glass, SJ 18.8/38	040628	
For aeration of the system. For cold trap outer part.		
Standard, glass, SJ 18.8/38	040627	
For aeration of the system.		
Stopcock, Analytic PTFE/25% glass fiber, SJ 18.8/38	11069607	
For feeding of solvents and aerating the system. Less cross-contamination compared to standardstopcock. For applications where grease should be avoided.		
Content: PTFE stopcock (no tubing included).		U
PTFE, incl. 3-way valve	11058814	
For feeding of solvents and aeration of the system. For applications when grease should be avoided. Used instead of standard-stopcock (040627). Content: Inlet tubing 300mm, backfeed tubing 600mm, cap nut GL10.		

### Accessories

	Order no.	Image
Woulff bottle, 125 mL, safety coated, incl. holder	11075622	
For trapping particles and droplets and for pressure equalization.		
Cooling water valve, 24 VAC Valve opens cooling water feed during distillation.	031356	*

	Order no.	lmage
Cooling water temperature sensor	11075306	
Flask holder, EPDM, slip free	048618	
Holder for round-bottom flasks (50 – 5000 mL)		The second secon
Flask holders, set. 5 pcs, EPDM, slip free	11059916	
Holder for round-bottom flasks (50 – 5000 mL)		
Heating bath balls, 450 pcs, PP, Ø10 mm	036405	
o reduce energy consumption of heating bath and for less evaporation of the heating medium. For temperatures up to 100°C.		
ubing, synthetic rubber, Ø6/13 mm, black, per m	11063244	
Jse: Vacuum		
ubing, silicone, Ø 6/9 mm, transparent, per m	004133	
Jse: Cooling media		
Condenser holder R-180 complete	11083883	
Back-feeding valve, cpl.	11085537	UU
Set earthquake fastener. Lug for backside	11062386	
o fasten instrument on lab bench.		
Dewar container, not incl. adapter	11066645	
For sample preparation in freeze drying. To be used with dry ice and ethanol / isopropanol / acetone or separately with liquid nitrogen. To be used with adapter and Rotavapor®.		

Order no.	Image
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11085088	
11084320	_
	11084286



