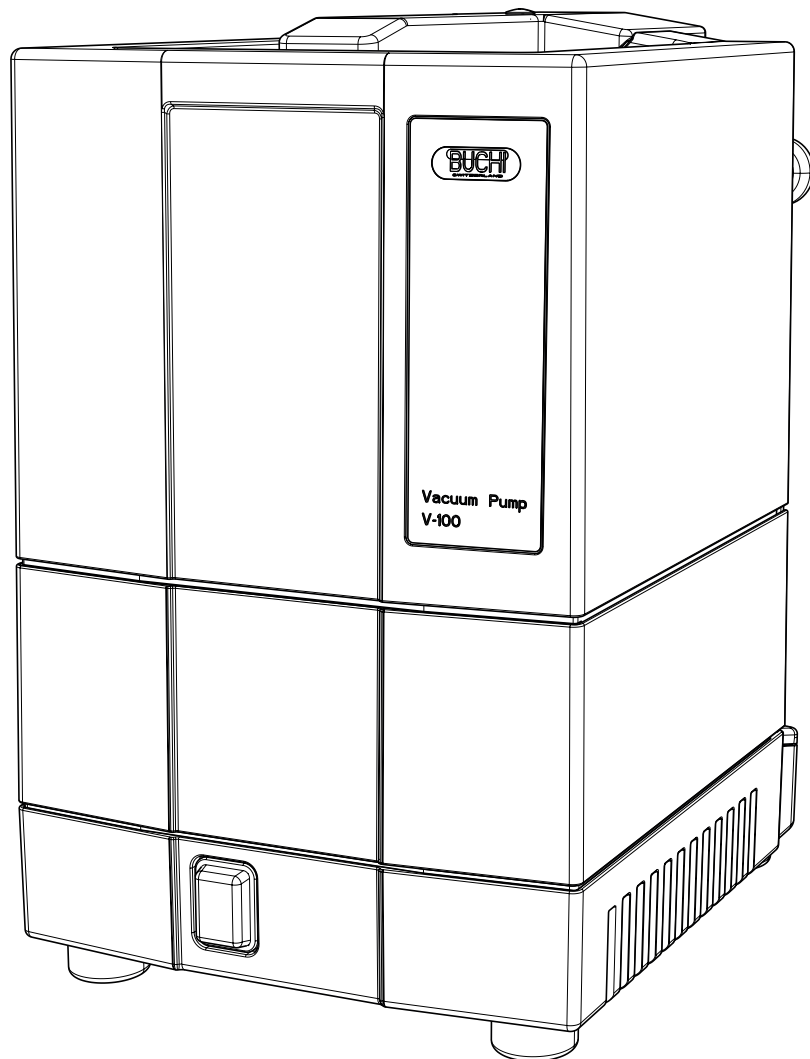




## Vacuum pump V-100

### Technical data sheet

The Vacuum Pump V-100 is an economical and chemically resistant PTFE diaphragm vacuum pump with a space saving design. It covers the essential needs in vacuum generation. On/off-regulated by the Interface I-100, it is optimally suited to work with the Rotavapor® R-100. The ready to use vacuum pump will be delivered with a silencer and 2 m of vacuum tubing.



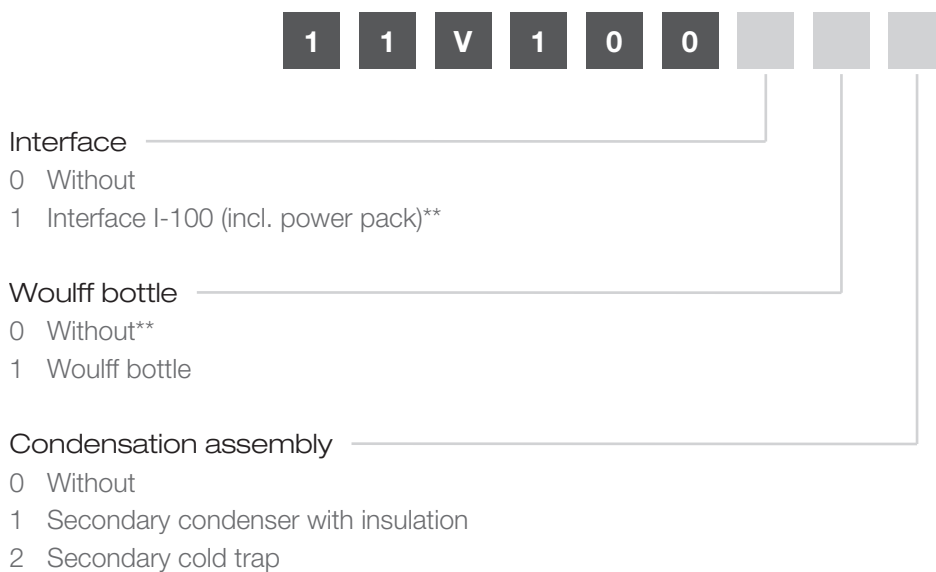
## Scope of delivery

All configurations are supplied ready to use.

Components	V-100
Vacuum Pump V-100	1
Vacuum hose	1
Power cable	1
Silencer	1
Set hose connection	1
Interface I-100	*
Woulff bottle	*
Condensation assembly	*
Communication cable (Mini-DIN)	*

\* Optional, according to order code

## Order code



\*\*When using the vacuum pump with the Interface, the valve unit is not needed, but a Woulff bottle. A Woulff bottle is recommended for any configuration. All required holders are included.

## Recommended combinations of Rotavapor® / vacuum systems

Available instrument.	Recommended vacuum system
R-100 without I-100	V-100 with I-100 and Woulff bottle
R-100 with I-100	V-100 (including Woulff bottle) with additional Mini-DIN cable (11060882)

## Technical data

### Vacuum Pump V-100

Dimensions (W x D x H) V-100	180 x 210 x 275 mm
Dimensions (W x D x H) Shipping box V-100 incl. I-100	340 x 340 x 630 mm
Weight	5,6 kg
Power supply	100 – 240 V, 50/60 Hz
Power consumption	150 W
Power consumption in ECO mode	70 W
Terminal vacuum (absolute)	10 mbar
Pump capacity	1,5 m <sup>3</sup> /h
Vacuum connection	GL14
Motor	Brushless DC motor
Rotation speed	1280 rpm max.
Rotation speed in ECO mode	70 % of max. capacity
Noise level	32 bis 57 dBA 57 dBA with 100% load
Overvoltage category	II
Pollution degree	2
Enclosure rating	IP20
Certificates	CE

### Materials

Component	Material
Pump heads	PPS
Drive unit body	Aluminium
Housing	PBT
Membranes	PTFE/rubber
Valve plate	PEEK
Valve head	PEEK
Pump-head connection piece	FEP
Vacuum tubing	Silicone/natural rubber
Non-return valve O-rings	FFKM

### Compatibility

Compatibility of vacuum pumps with vacuum controllers of different generations

	Compatibility	Working principle	Communication cable
V-100	I-100	yes	on/off control 038010 / 11060882*
	V-850 / V-855	yes	on/off control 038010 / 11060882*
	V-800 / V-805	yes	on/off control 038010 / 11060882*

Regulated: On/Off function - the vacuum pump is switched ON and OFF automatically via the Vacuum Controller / Interface

\* Length of communication cable: 038010 (1.5 m), 11060882 (0.6m)

## Explanation of terms

On/Off control:	the pump is automatically turned On and Off via the interface -> On/Off communication
Speed controlled:	the pump is turned On and Off as well as speed controlled via the interface

## Description of function

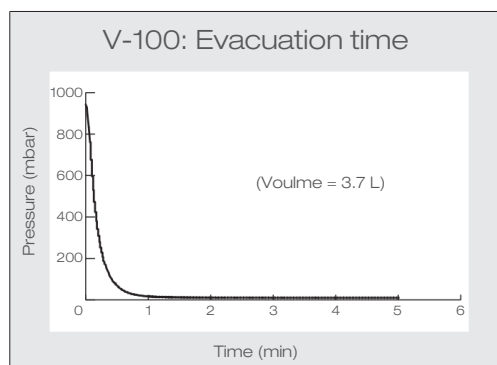
The diaphragm pump is a positive displacement pump that uses a combination of the reciprocating action of a PTFE diaphragm and non-return check valves. The eccentric module lets the diaphragm move strictly axial which increase the durability.

## ECO<sup>2</sup>-mode

The ECO<sup>2</sup>-mode is automatically activated after 1 hour of operation, hence the pump does not work on its full capacity. In the ECO<sup>2</sup>-mode the pump consumes less electrical power and works under reduced stress. As a consequence, the overall maintenance costs will be reduced over the lifetime of the pump.

## Performance characteristics

The graph illustrate the evacuation time of a laboratory as well as an industrial Rotavapor.

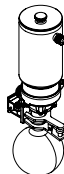


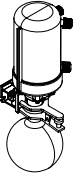
## Upgrade

The Vacuum Pump V-100 can easily be upgraded to a regulated vacuum source by adding the Interface I-100. In addition to the details listed below check the technical data sheet of the Interface I-100 for further information.

## Accessories

### Secondary condensers

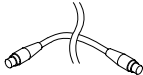

	Order no.	Image
Secondary cold trap, holder, receiving flask, 500 mL Condenses vapor that goes through the pump, is cooled by dry ice	047190	

	Order no.	Image
Secondary condenser, insulation of condenser, holder, receiving flask, 500 mL Condenses vapor that goes through the pump, is cooled by cooling liquid	047180	

## Tubing

	Order no.
Tubing. FEP, Ø6/8 mm, transparent, per m Use: Vacuum, cooling media.	027900
Tubing. Natural rubber, Ø6/16 mm, red, per m Use: Vacuum.	017622
Tubing. Nylflex, PVC-P, Ø8/14 mm, transparent, per m	004113
Tubing. PTFE, Ø8/10 mm, white, per m Use: Vacuum, feeding (industrial Rotavapor®).	027277
Tubing. Silicone, Ø6/9 mm, transparent, per m Use: Cooling media.	004133

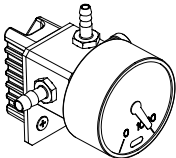
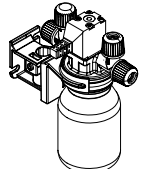
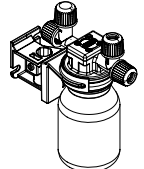
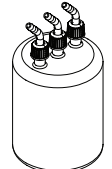
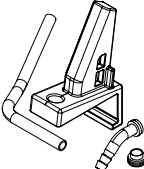
## Communication cables

	Order no.	Image
Communication cable, Mini-DIN, 0.6 m Connection between Interface I-100 and Vacuum Pump V-100	11060882	
Mini-DIN, Y-shielded, 650mm Used when connecting vacuum pump with two vacuum controllers	031920	

## Receiving flasks

	Order no.
Glass, SJ35/20, 250 mL	000423
Glass, SJ35/20, 250 mL, P+G	11060907
Glass, SJ35/20, 500 mL	000424
Glass, SJ35/20, 500 mL, P+G	025264

## Further accessories

	Order no.	Image
Manometer with needle valve. Incl. holder for pump, valve, vacuum gauge For manual vacuum adjustment	047291	
Manometer with needle valve. Incl. vacuum gauge, not incl. holder	047391	
Valve unit, Woulff bottle, 125mL, P+G, holder for lab-stand and vacuum pump Non-return valve and condensate trap	047160	
Woulff bottle, 125mL, P+G, holder for vacuum pump For trapping particles and droplets and for pressure equalization, recommended for stand-alone systems and in combination with a vacuum pump	047170	
Woulff bottle. 3-neck, 800 mL, P+G. For trapping particles and droplets and for pressure equalization.	025519	
Support set, connection tube, mounting device To mount Interface on vacuum pump	11061448	

## Wear parts

### Seals

	Order no.
Seal For cap nut GL14, EPDM seal	038225
Seals, set. 10 pcs, for hose barbs GL14, EPDM, black	040029
Seals, set. 10 pcs, for hose barbs GL14, FPM, green	040040
Seals, set. 10 pcs, for hose barbs GL14, silicone, red	040023

## Hose barbs

	Order no.	Image
Hose barb. Bent, GL14, incl. silicone seal	018916	
Hose barbs. set. 3 pcs, bent, GL14, silicone seal Content: Hose barbs, seals.	041987	
Hose barbs. set. 4 pcs, bent, GL14, EPDM seal Content: Hose barbs, cap nuts, seals.	043129	
Hose barbs. set. 4 pcs, bent, GL14, FEP seal Content: Hose barbs, cap nuts, seals.	040295	
Hose barbs, set. 4 pcs, bent GL14, silicone seal Content: Hose barbs, cap nuts, seals	037287	
Hose barbs. set. 4 pcs, straight, GL14, EPDM seal Content: Hose barbs, cap nuts, seals.	043128	
Hose barbs. set. 4 pcs, straight, GL14, FPM seal Content: Hose barbs, cap nuts, seals.	040296	
Hose barbs, set. 4 pcs, straight, GL14, silicone seal Content: Hose barbs, cap nuts, seals	037642	
Hose barbs. set. 6 pcs, bent (4), straight (2), GL14, silicone seal Content: Hose barbs, cap nuts, seals.	038000	

## Further wear parts

	Order no.	Image
Membrane, membrane clamp, support ring	047153	
Set of membranes, membrane clamp, support ring (10 pcs)	11055214	
O-ring. For secondary condenser, FKM/FEP, Ø28.2/2.6 mm	11057661	
Set of O-rings, FFKM, Ø 15.4/1.55 mm, white (4 pcs)	11057136	
Set of check valves, O-ring (4 pcs)	047156	
Check valves, set. 4pcs, without O-rings	11058389	
Screw caps. set. 5 pcs, GL14	040624	
Cap nuts, set. 10 pcs, screw cap with hole GL14, seal EPDM Content: Cap nuts, seals	041999	
Cap nuts. set. 10 pcs, screw cap with hole, GL14	041956	

## Additional glassware

Additional glassware like evaporating flasks, drying flasks, receiving flasks, beaker flasks, Reitmeyer adapters (bump traps) and distillation spiders can be found in the Laboratory Evaporation Glassware brochure.