

Technical data sheet

Vacuum Pump V-80 / V-180

The instrument is an economical and chemically resistant diaphragm vacuum pump with a space saving design. It covers the essential needs in vacuum generation.



Vacuum pump comparison

Specification	Vacuum Pump V-80	Vacuum Pump V-180
Handle	No	Yes
Speed control (with interface)	Yes	Yes
Pump capacity	1.3 m ³ /h	1.5 m ³ /h
Terminal vacuum (absolute)	15 mbar	10 mbar

Scope of delivery

All configurations are supplied ready to use.

Component	V-80 solution	V-180 solution
Vacuum Pump V-80	1	-
Vacuum Pump V-180	-	1
Vacuum tubing	1	1
Power cable	1	1
Tubing connections (set)	1	1
Communication cable (COM)	1	1
Interface I-80 / I-180 (incl. holder and cable)	*	*
Woulff bottle	*	*
Condensation assembly	*	*
Silencer	1	1

* Optional, according to order code

Order code

Choose the configuration according to your needs:



Vacuum Pump

- 080 V-80 (15 mbar, 1.3 m³/min, incl. speed control)
- 180 V-180 (10 mbar, 1.5 m³/min, incl. speed control)

Interface

- 0 Without
- 1 I-80
- 2 I-180

Woulff bottle

- 0 Without
- 1 Woulff bottle

Condensation assembly

- 0 Without
- 1 Secondary V condenser with insulation

Technical data

Vacuum Pump

Specification	Vacuum Pump V-80	Vacuum Pump V-180
Dimensions (W × D × H)	185 mm × 207 mm × 238 mm	185 mm × 207 mm × 285 mm
Dimensions (W × D × H) with secondary condenser, interface and power plug	220 mm × 325 mm × 405 mm	220 mm × 325 mm × 405 mm
Weight	5.5 kg	5.6 kg
Connection voltage	100 – 240 VAC ± 10%	100 – 240 VAC ± 10%
Power consumption	180 W	180 W
Frequency	50 / 60 Hz	50 / 60 Hz
Overvoltage category	II	II
IP Code	IP21	IP21
Pollution degree	2	2
Terminal vacuum (absolute)	15 mbar	10 mbar
Pump capacity	1.3 m ³ /h	1.5 m ³ /h
Vacuum connection	GL-14	GL-14
Motor	Brushless DC motor	Brushless DC motor
Noise level	32 – 57 dBA 57 dBA with 100% load	32 – 57 dBA 57 dBA with 100% load
Minimum clearance on all sides	350 mm	350 mm
Certificate	CB , CE , UL/CSA	CB , CE , UL/CSA

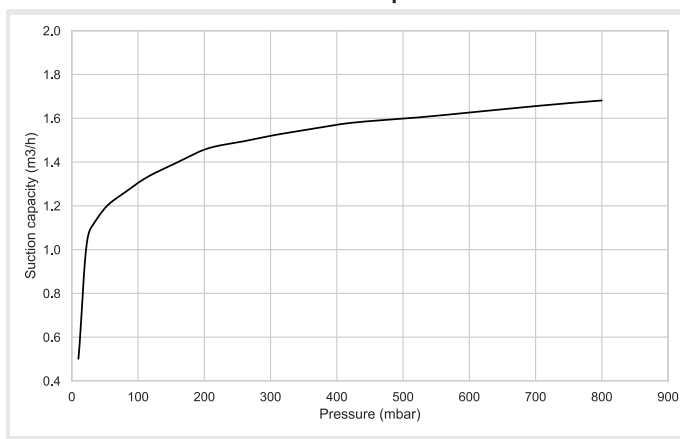
Ambient conditions

For indoor use only.

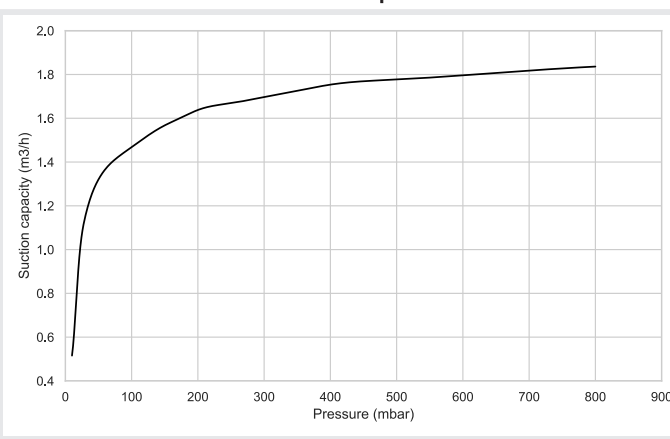
Specification	Value
Max. altitude above sea level	2,000 m
Ambient and storage temperature	5 – 40 °C
Max. relative humidity	80% for temperatures up to 31 °C decreasing linearly to 50% relative humidity at 40 °C

Suction capacity against pressure

Vacuum Pump V-80



Vacuum Pump V-180



Spare parts and accessories

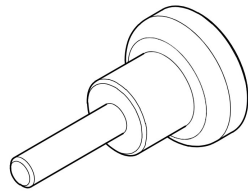

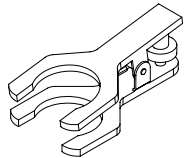

Use only genuine BUCHI consumables and spare parts in order to ensure correct, safe and reliable operation of the system.

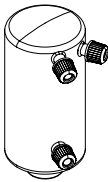

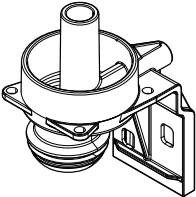
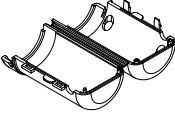
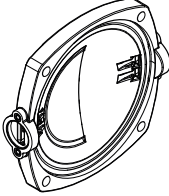
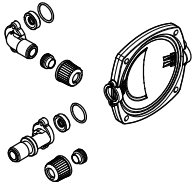
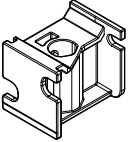
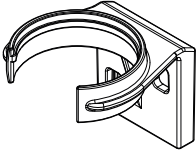


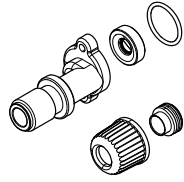
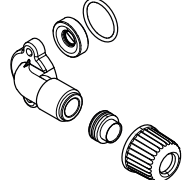
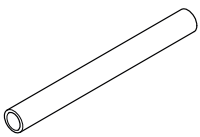
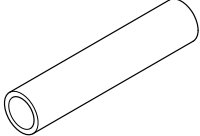
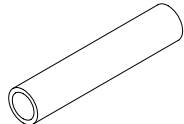
NOTE

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

Spare parts

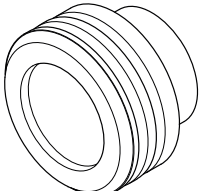
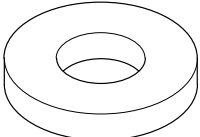
	Order no.	Image
Knurled screw M5	046683	
Silencer	11080471	
Ball joint clamp. For BJ 35/20 To fasten receiving flask on condenser/secondary condenser.	003275	
Receiving vessel, GL 40, 125 mL, P+G For Woulff bottle	047233	

	Order no.	Image
<p>Secondary condenser V. Glass condenser</p> <p>Condenses remaining vapors after the vacuum pump outlet. Used with a recirculating chiller or tap water. Content: Secondary V condenser, cap nut GL14 (3 pcs.). Does not include holder and insulator.</p>	11059902	
<p>Secondary condenser V. Glass condenser, incl. Insulator, excl. Holder</p> <p>Condenses remaining vapors after the vacuum pump outlet. Used with a recirculating chiller or tap water. Content: Secondary V condenser, cap nut GL14 (3 pcs.) and condenser insulation. Does not include the holder.</p>	11063841	
<p>Support secondary condenser V. Incl. holder, EPDM seal, connection piece</p>	11055584	
<p>Support condenser V/C. Holder</p>	047182	
<p>Insulator. For secondary condenser (11059900)</p> <p>Insulation cover of the secondary condenser prevents condensation.</p>	11059903	
<p>Pump head</p> <p>For Vacuum Pump</p>	11061577	
<p>Pump head, set.</p> <p>For Vacuum Pump</p> <p>Content: Pump head, set connection piece straight, set connection piece angled</p>	11061578	
<p>Mounting rail</p> <p>Adapter to mount the Woulff bottle or the secondary condenser to the pump or a lab stand.</p>	11080481	
<p>Woulff bottle holder</p>	11075161	

	Order no.	Image
<p>Connection piece. Straight, for pump head</p> <p>Content: Connection straight, valve, O-ring, cap nut GL 14, EPDM seal</p>	11061580	
<p>Connection piece. Bent, for pump head</p> <p>Content: Connection bent, valve, O-ring, cap nut GL 14, EPDM seal</p>	11061579	
<p>Connection piece. FEP, Ø6/8 mm</p> <p>Center tube between the pump heads</p>	047066	
<p>Connection piece. FEP, Ø6/8 mm</p> <p>Tubing between secondary condenser and vacuum pump</p>	047186	
<p>Connection piece. FEP, Ø6/8 mm</p> <p>Tubing between Woufff bottle and vacuum pump</p>	11059909	

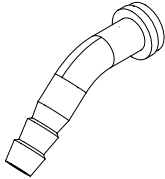
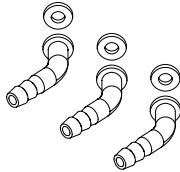
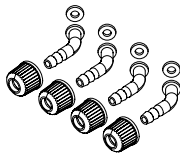
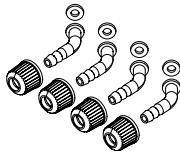
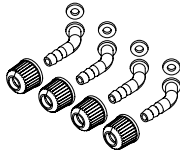
Wear parts





Seals

	Order no.	Image
<p>Seal</p> <p>For cap nut GL14, EPDM seal</p>	038225	
<p>Seals, set. 10 pcs, for hose barbs GL 14, EPDM, black</p>	040029	

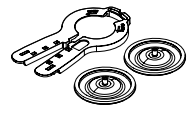

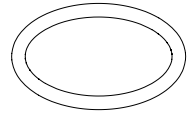
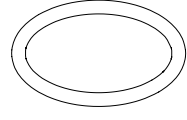
	Order no.	Image
Seals, set. 10 pcs, for hose barbs GL 14, FPM, green	040040	
Seals, set. 20 pcs, for hose barbs GL 14, silicone, red	040023	
Seal Woulff bottle	047165	

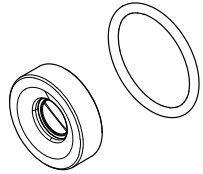
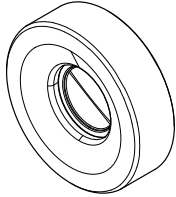
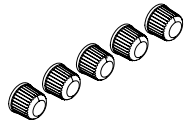


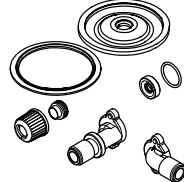
Hose barbs

	Order no.	Image
Hose barb, bent, GL 14, incl. silicone seal	018916	
Hose barbs, set. 3 pcs, bent, GL 14, silicone seal Content: Hose barbs, seals.	041987	
Hose barbs, set. 4 pcs, bent, GL 14, EPDM seal Content: Hose barbs, cap nuts, seals.	043129	
Hose barbs, set. 4 pcs, bent, GL 14, FPM seal Content: Hose barbs, cap nuts, seals.	040295	
Hose barbs, set. 4 pcs, bent GL 14, silicone seal Content: Hose barbs, cap nuts, seals	037287	

	Order no.	Image
Hose barbs, set. 4 pcs, straight, GL 14, EPDM seal Content: Hose barbs, cap nuts, seals.	043128	
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	

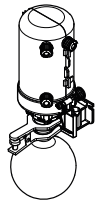
Further wear parts

	Order no.	Image
Membrane, set. 2 pcs, incl. support rings and membrane clamp Content: 2 membranes with support rings and 1 membrane clamp.	11065776	
Membrane, set. 10 pcs, incl. support rings and membrane clamp	11055214	
O-ring. For secondary condenser, FKM/FEP, Ø28.2/2.6 mm	11057661	
O-ring for check valve, set. 4 pcs, FFKM, Ø 15.4/1.55 mm	11057136	

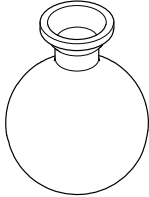
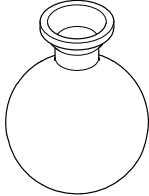
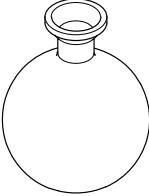
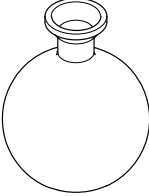
	Order no.	Image
Check valve, set. 4pcs, with O-rings	047156	
Check valve, set. 4 pcs, without O-rings	11058389	
Screw caps, set. 5 pcs, closed with PTFE seal, GL 14	040624	
Cap nuts, set. 10 pcs, screw cap with hole GL14, seal EPDM Content: Cap nuts, seals	041999	
Cap nuts, set. 10 pcs, screw cap with hole, GL 14	041956	
Set wear parts. Membranes, hose barbs Content: Membrane 2 pcs, support ring 2 pcs, check valve 4 pcs, connection piece, set seals 10 pcs, set hose barbs.	11062144	

Accessories





Secondary condenser

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

Receiving flask

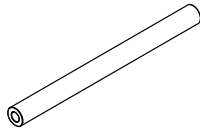
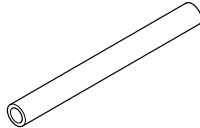
	Order no.	Image
Receiving flask Glass, BJ 35/20, 250 mL	000423	
Receiving flask Glass, BJ 35/20, 250 mL, P+G	11060907	
Receiving flask Glass, BJ 35/20, 500 mL	000424	
Receiving flask Glass, BJ 35/20, 500 mL, P+G	025264	

Communication cable

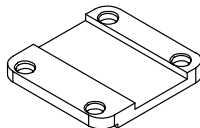
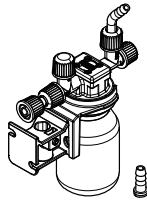
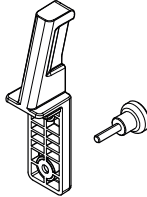
	Order no.	Image
Communication cable. BUCHI COM, 0.3 m, 6p	11058705	
Communication cable. BUCHI COM, 0.9 m, 6p	11070540	
Communication cable. BUCHI COM, 1.8 m, 6p	11058707	
Communication cable. BUCHI COM, 5.0 m, 6p	11058708	

	Order no.	Image
Communication cable. BUCHI COM, 15 m, 6p	11064090	
Communication cable. Mini-DIN, Y-piece, with double-sided connectors, 2 m To connect 2 Rotavapor® systems with valve unit to 1 vacuum pump	11080283	

Tubing

	Order no.	Image
Tubing, synthetic rubber, Ø6/13 mm, black, per m Use: Vacuum	11063244	
Tubing, silicone, Ø6/9 mm, transparent, per m Use: Cooling media	004133	

Other accessories

	Order no.	Image
Adapter plate For stacking vacuum pumps.	11074923	
Woulff bottle, 125 mL, P+G, incl. holder For trapping particles and droplets and for pressure equalization.	11075622	
Interface holder To install the Interface I-80 / I-180 on the Vacuum pump V-80 / V-180	11075588	



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Quality Systems ISO 9001

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