

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

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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 |

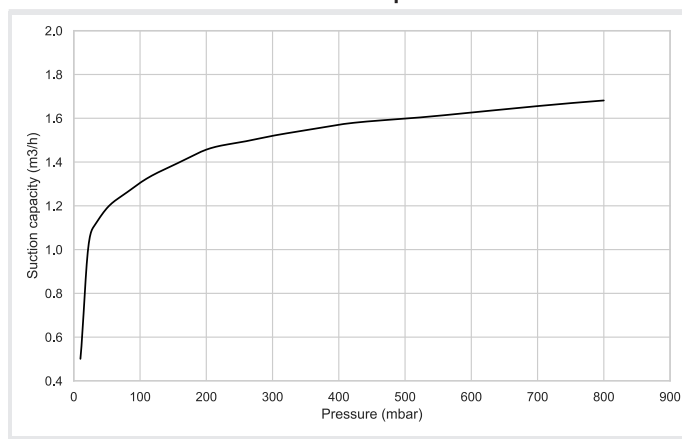
Ambient conditions

For indoor use only.

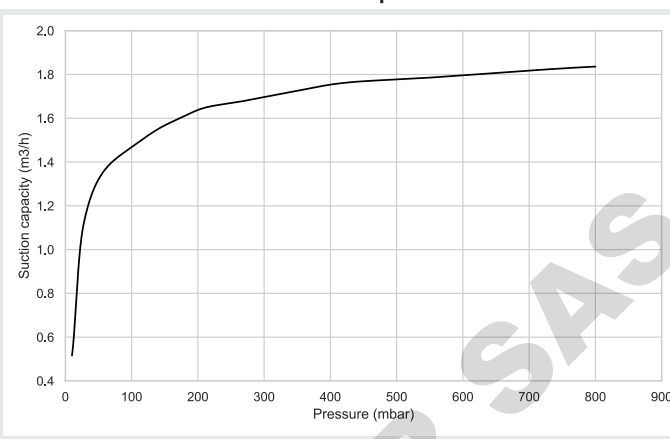
| Specification | Value |
|---------------------------------|--|
| Max. altitude above sea level | 2,000 m |
| Ambient and storage temperature | 5 – 40 °C |
| Max. relative humidity | 80% for temperatures up to 31 °C decreasing linearly to 50% relative humidity at 40 °C |

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.


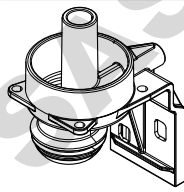

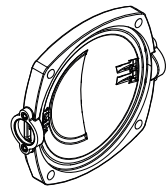
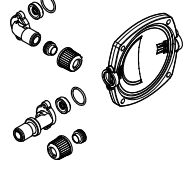
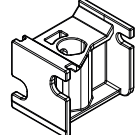
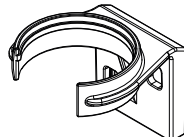
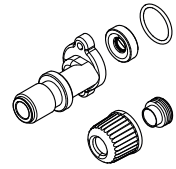
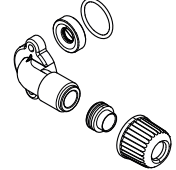


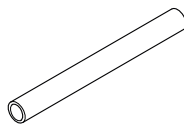
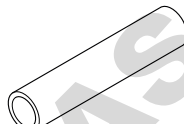
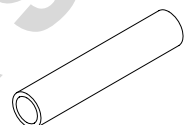
NOTE

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

Spare parts

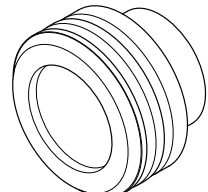
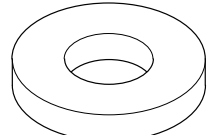
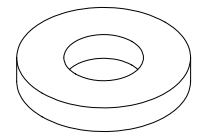
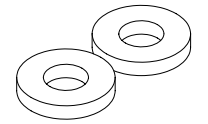
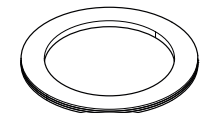
| | Order no. | Image |
|--|-----------|---|
| Silencer | 11080471 |  |
| Ball joint clamp. For BJ 35/20 To fasten receiving flask on condenser/secondary condenser. | 003275 |  |
| Receiving vessel, GL 40, 125 mL, P+G For Woulff bottle | 047233 |  |
| Secondary condenser V. Glass condenser Condenses 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. | 11059902 |  |

| | Order no. | Image |
|---|-----------|---|
| <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 |  |
| Support secondary condenser V. Incl. holder, EPDM seal, connection piece | 11055584 | |
| Support condenser V/C. Holder | 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 |  |
| Woulff bottle holder | 11075161 |  |
| <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 |  |

| | Order no. | Image |
|--|-----------|---|
| Connection piece. FEP, Ø6/8 mm Center tube between the pump heads | 047066 |  |
| Connection piece. FEP, Ø6/8 mm Tubing between secondary condenser and vacuum pump | 047186 |  |
| Connection piece. FEP, Ø6/8 mm Tubing between Woulff bottle and vacuum pump | 11059909 |  |

Wear parts

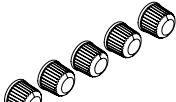
Seals


| | Order no. | Image |
|---|-----------|---|
| Seal For cap nut GL14, EPDM seal | 038225 |  |
| 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. 10 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 |  |
| 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 |  |

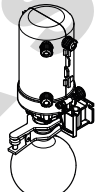
Further wear parts

| | 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 |  |
| 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 |  |

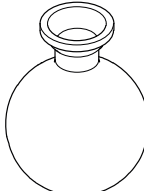
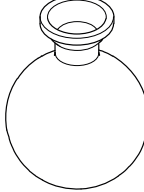
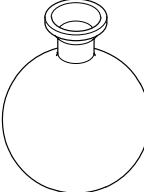
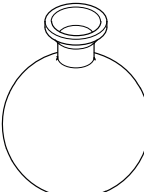
| | Order no. | Image |
|--|-----------|---|
| Set wear parts. Membranes, hose barbs Content: Membrane 2 pcs, support ring 2 pcs, check valve 4 pcs, connection piece, set seals 10 pcs, set hose barbs. | 11062144 |  |

Accessories

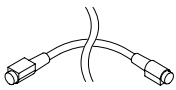

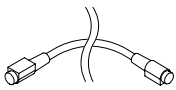
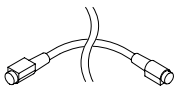
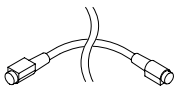
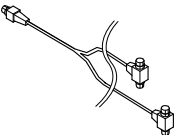
Secondary condenser

| | 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 |  |

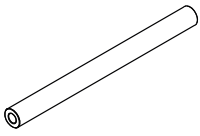
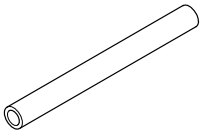
Receiving flask

| | 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 |  |

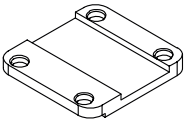
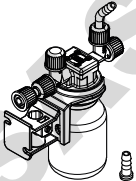
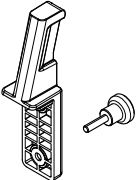
Communication cable

| | 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 |  |
| 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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